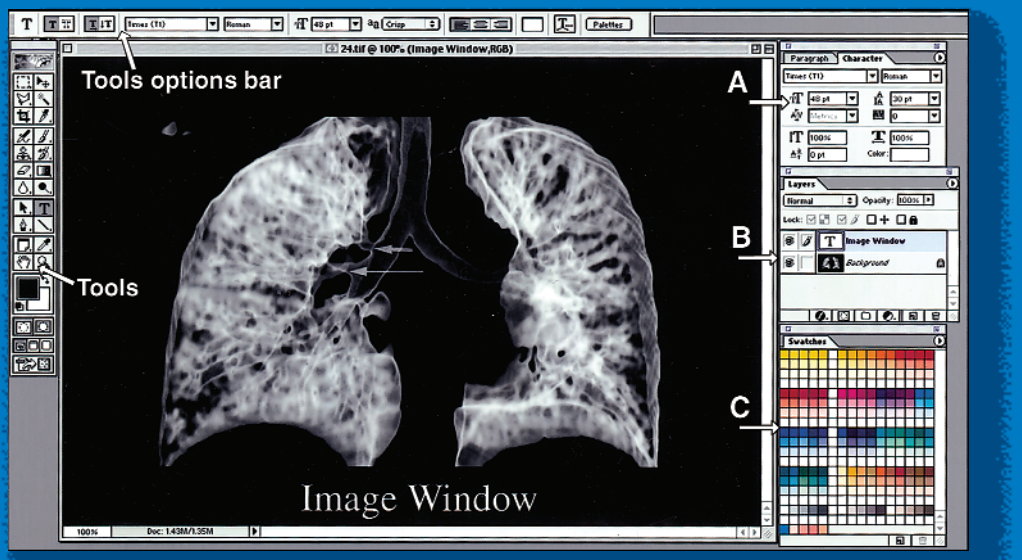
RSNA News

September 2002 ▪ Volume 12, Number 9 | The Newsletter of the Radiological Society of North America

Enhance Quality of Teaching Images with Photoshop



Also Inside:

- Pediatric Imaging May Help Predict Future Disease Risk
- fMRI Tracks Signs of Early Dementia
- Geography Affects the Practice of Radiology
- Li Takes Imaging Sciences Training Program to New Level
- History of the RSNA—Part 19

RSNA News

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RSNA News
The newsletter of the Radiological Society of North America

September 2002 • Volume 12, Number 9

Published monthly by the Radiological Society of North America, Inc., at 820 Jorie Blvd., Oak Brook, IL 60523-2251. Printed in the USA.

Periodical postage pending mailing with postage in Oak Brook, IL 60523, and additional mailing offices. POSTMASTER: Send address correction "changes" to: *RSNA News*, 820 Jorie Blvd., Oak Brook, IL 60523-2251.

Nonmember subscription rate is $20 per year; $10 of active members' dues is allocated to a subscription of *RSNA News*.

Letters to the Editor:
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Oak Brook, IL 60523

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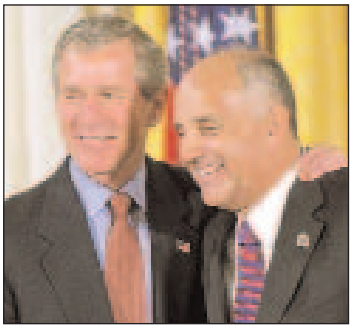
2002 Editorial Fellow

Christoforos Stoupis, M.D.

Christoforos Stoupis, M.D., a staff radiologist and chief of body MRI at the University of Berne in Switzerland, and a lecturer at the University of Athens in Greece, has been selected as the 2002 RSNA Editorial Fellow. During the one-month fellowship, Dr. Stoupis will work closely with *Radiology* Editor **Anthony V. Proto, M.D.**, at the *Radiology* office in Richmond, Va., with *RadioGraphics* Editor **William W. Olmsted, M.D.**, at the *RadioGraphics* office in Bethesda, Md., and with the publications, advertising and marketing communications staff at RSNA Headquarters in Oak Brook, Ill. Dr. Stoupis will also work with the RSNA editors at RSNA 2002 in Chicago. An expanded article on Dr. Stoupis will appear in the September-October issue of *RadioGraphics* and the October issue of *Radiology.*

Carmona Confirmed as Surgeon General



White House photo by Tina Hager

President Bush and Richard Carmona, M.D., M.P.H.

On July 23, the U.S. Senate confirmed the nomination of **Richard Carmona, M.D., M.P.H.,** as U.S. Surgeon General. The trauma surgeon and part-time sheriff's deputy from Arizona succeeds **David Satcher, M.D., Ph.D.**, whose term expired in February. Dr. Carmona completed his residency in surgery and, before that, obtained his M.D. degree at the University of California, San Francisco. There he received the medical school's highest award given to a graduating medical student, the Gold Headed Cane Award, which by vote of the faculty and the graduating class is given to the top student.

The Queen Honors Dr. Husband

Janet Husband, M.D.

Janet Husband, M.D., from the Diagnostic Radiology Department at Royal Marsden Hospital in Surrey, UK, was named in Queen Elizabeth II's Jubilee Birthday Honors List with an OBE (Order of the British Empire) for services to cancer imaging. This award recognizes the contribution that Dr. Husband has made to cancer imaging over the past 25 years, both in the UK and internationally. She has been a corresponding member of RSNA since 1987 and has been a regular presenter within the RSNA refresher course program at the annual scientific assembly.

New CDC Director

Julie L. Gerberding, M.D., M.P.H., has been named director of the Centers for Disease Control and Prevention in Atlanta. Dr. Gerberding is an infectious disease expert and has been leading the CDC's efforts to prepare for counterterrorism. She played a leading role in the CDC's response to the anthrax bioterrorism attacks last fall.

NIBIB Core Establishment Group Receives NIH Director's Award

Seven members of the initial core group that worked to establish the National Institute of Biomedical Imaging and Bioengineering (NIBIB) have received an NIH Director's Award for "outstanding efforts in planning, organizing and developing the newest NIH institute." **Elias A. Zerhouni, M.D.**, a radiologist and new NIH director, presented the group award. Recipients include **Guy Earl Hodgkins, Joan T. Harmon, Christine L. Hollingsworth, Charles Sabatos, Mariaileen D. Sourwine, Richard E. Swaja, Ph.D.,** and **Charles E. Baron.**

ISR Beclere Medals

The International Society of Radiology bestowed its highest honor, the Beclere medal, to five distinguished radiologists during the 22nd International Congress of Radiology held in July in Cancun, Mexico. They are:

- **Peter D. Corr, M.D.,** a professor and chief of radiology at the University of Natal in Durban, South Africa.
- **Anne G. Osborn, M.D.,** a trustee for the RSNA Research and Education Foundation and a distinguished professor of radiology at the University of Utah in Salt Lake City.
- **Josef Lissner, M.D.,** a retired chairman of radiology at the University of Munich in Germany, and founder of the European Association of Radiology.
- **Joseph A. Marasco Jr., M.D.,** a retired clinical associate professor of radiology at the University of Pittsburgh and a past president of the American College of Radiology.
- **Jose Luis Ramirez-Arias, M.D.,** chairman of radiology at the Angeles Hospitals in Mexico City and a 2000 RSNA Gold Medalist.

Continued on next page

Four Earn Diagnosis Please Certificate

For the first time since the Diagnosis Please feature began in *Radiology* in 1998, more than one person has been recognized for submitting the highest number of correct diagnoses for 12 unknown cases. The cases were published in *Radiology* from April 2001 to March 2002. This year's winners are **Mustafa K. Demir, M.D., Milton R. Fuentealba, M.D., Douglas S. Katz, M.D.,** and **Stefanos B. Lachanis, M.D.** Each will receive a Diagnosis Please Certificate of Recognition. For more information, see the September issue of *Radiology.*

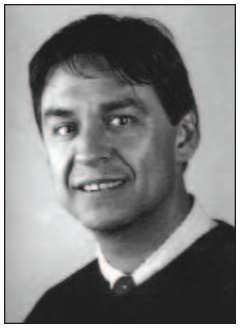

Radiology Diagnosis Please

Certificate of Recognition
Awarded to

who submitted the highest number of correct diagnoses for the 12 unknown cases published in **Radiology** from April 2001 through March 2002.

A.V. Proto M.D.
Anthony V. Proto, MD
Editor, Radiology


Mustafa K. Demir, M.D.


Milton R. Fuentealba, M.D.


Douglas S. Katz, M.D.


Stefanos B. Lachanis, M.D.

Erratum:
The July issue of RSNA News *should have said that* ***William R. Hendee, Ph.D.****, from Milwaukee, Wisc., is the new president of the American Board of Radiology.* ***N. Reed Dunnick, M.D.****, is the newly appointed ABR trustee.*

RSNA News Send your submissions for *People in the News* to *rsnanews@rsna.org*, (630) 571-7837 fax, or *RSNA News*, 820 Jorie Blvd., Oak Brook, IL 60523. Please include your full name and telephone number. You may also include a non-returnable color photo, 3x5 or larger, or electronic photo in high-resolution (300 dpi or higher) TIFF or JPEG format (not embedded in a document). *RSNA News* maintains the right to accept information for print based on membership status, newsworthiness and available print space.

ANNOUNCEMENTS

Category 2 CME Credit

In compliance with AMA policy, RSNA will no longer designate category 2 CME credit for self-study of education exhibits, scientific posters and *infoRAD* exhibits at the RSNA Scientific Assembly and Annual Meeting. However, to serve the continuing professional development needs of RSNA members, these self-study credits will be tracked at RSNA 2002 and then transferred to the RSNA CME Repository (*www.rsna.org/cme/*) self-entered credit category.

For credits to be transferred, members must insert their Expocard into an Expocard reader once every 30 minutes. Expocard readers are located in the exhibit areas. By using the Expocard readers, self-study credits will be recorded immediately, but no print record will be generated. Likewise, please note that credit for self-study of education exhibits, scientific posters and *infoRAD* exhibits will not be listed on the Record of Hours of Attendance distributed after the meeting.

As in the past, RSNA will continue to track category 1 credit and distribute Record of Hours of Attendance to registrants. Once these certificates are processed, RSNA members may also verify their category 1 credit earned at RSNA 2002 by accessing the RSNA CME Credit Repository.

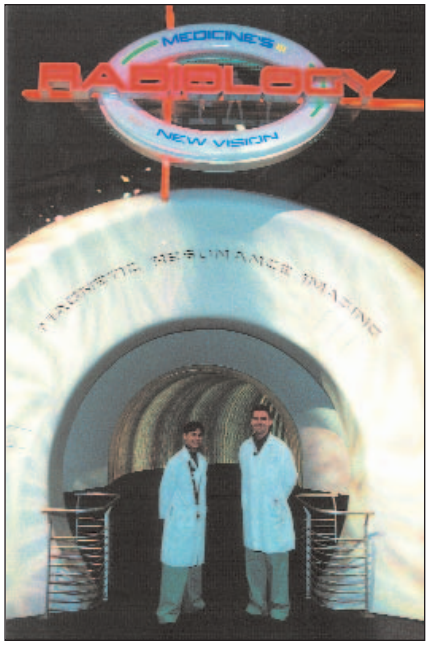
Annual Oration Dedication

The Annual Oration in Radiation Oncology at RSNA 2002 will be dedicated to William Powers, M.D., who died last November at the age of 78. Dr. Powers devoted a great deal of energy and enthusiasm to the development of advanced techniques for the treatment of patients with carcinoma of the uterine cervix and the use of preoperative radiation therapy in patients with head and neck tumors. He was a president of ASTRO and a trustee of the American Board of Radiology.

Epcot® Exhibit Wins Award

For the second consecutive year, RSNA's radiology exhibit at Walt Disney's Epcot® Center in Orlando Fla., has earned a spot on the Associations Advance America Honor Roll. *Radiology: Medicine's New Vision* spotlights the technology used by radiologists, provides an overview of the field of radiology and strives to educate visitors about the contribution of radiologists to medical diagnosis and care.

At the end of this month, RSNA's three-year contract with Disney will expire and the exhibit will close.



AMA Rethinks Allowing CME Credit for Journal Review

Led by RSNA, six medical associations succeeded this June in persuading the American Medical Association's House of Delegates to pass a resolution concerning CME credit.

Earlier this year, the AMA announced that it would no longer authorize the offering of category 1 CME credit for journal manuscript review based on the contention that "manuscripts are generally sent to individuals who likely are already content experts in a particular area. … In addition, the process does not include an interactive session."

RSNA, together with the American College of Radiology, the American Roentgen Ray Society, the American College of Obstetricians and Gynecologists, the American Society of Anesthesiologists, and the American Academy of Facial Plastic and Reconstructive Surgeons, submitted a resolution asking that the decision be reconsidered.

RSNA President-elect Peggy J. Fritzsche, M.D., told the AMA House of Delegates that when RSNA had previously offered category 1 CME credit for manuscript review, the process complied with ACCME guidelines requiring learning objectives and assessment forms. RSNA also had placed a cap on the number of hours that could be claimed (10) in one year.

The AMA Council on Medical Education will now reconsider the decision. The process could take six to nine months.

HIPAA Update

HHS Secretary Tommy G. Thompson has issued the first-ever comprehensive federal regulation that gives patients sweeping protections over the privacy of their medical records. The final regulation, which takes effect April 14, 2003, will ensure strong privacy protections without interfering with Americans' access to quality healthcare, according to HHS.

HHS received more than 11,000 public comments on the proposed modifications issued in March 2002 and, in August, adopted final changes. The final version was published in the August 14 Federal Register and includes some key revisions to address public concerns. The rule is available online at *www.hhs.gov/ocr/hipaa/*.

Strong advocacy by the American College of Radiology (ACR) and other physician organizations convinced HHS to modify certain provisions such as requiring written patient consent for treatment and quality assessment activities.

Meanwhile, physicians, clinics and most other healthcare entities can request a one-year extension to comply with the standards and code sets for electronic data transactions under HIPAA. The deadline for seeking an extension is October 15, 2002. The HIPAA Model Compliance Extension Form is available at *www.cms.gov/hipaa/hipaa2/*.

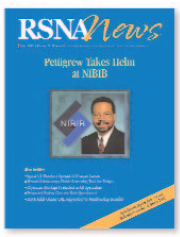
ACR has HIPAA resources on its Web site (*www.acr.org*) as does the American Medical Association (*www.ama-assn.org/go/hipaa*). A webcast from the CMS HIPAA Broadcast on June 18, 2002, will be available on the AMA site until mid-September.

LETTER TO THE EDITOR

Sir/Madame:

A glaring omission in the virtual colonoscopy article (June 2002) is the additional information gained by VC, for example, views of the other organs and tissues of the abdomen, pelvis and even low chest if the examination is done properly. In other respects the article was timely and well done. Thank you.

ARTHUR C. KITTLESON, M.D.
SAN JOSE, CALIF.



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Pediatric Imaging May Help Predict Future Disease Risk

Researchers have uncovered physical differences between prepubertal boys and girls that may help explain future risk of adult diseases.

In the August issue of *Radiology*,[1] researchers in Los Angeles report that it may now be possible to determine if a young girl will be susceptible to bone fracturing as an adult or if a young boy is prone to accumulating visceral fat that could lead him to an increased risk of cardiovascular disease as a grown man.

Using CT to measure fat, muscle and bone in 31 pairs of healthy Caucasian girls and boys matched for height, weight and age (between five and 10 years), Vincente Gilsanz, M.D., Ph.D., a professor of radiology at the University of Southern California Keck School of Medicine, and colleagues found that differences between boys and girls are evident even before puberty.

"Contrary to common belief, a six-year-old girl and a six-year-old boy are not identical, excepting genital anatomy," says Dr. Gilsanz, who also works at Childrens Hospital of Los Angeles. "We found that prepubertal girls have smaller bones, more subcutaneous fat and less muscle than boys. In addition, we found that differences in the size of the bones in the axial skeleton between boys and girls are, for the most part, independent of differences in paraspinous musculature."

Dr. Gilsanz says visceral fat levels were similar between the sexes. Previous research has found that, in general, adult males have more visceral fat than women, indicating that boys will tend to accumulate this fat at a greater rate than girls will.

"We know there are gender differences in the incidence of common adult disorders such as osteoporosis, hypertension, cardiovascular disease and type 2 diabetes," he says. "Men tend to have more fat inside the abdomen, visceral fat, which is believed to be associated with negative health outcomes. Women fracture more because they have less bone than men have. If you go back, this deficiency in bone is certainly related, in part, to the fact that girls accumulate less bone than boys during growth."

Vincente Gilsanz, M.D., Ph.D.
USC Keck School of Medicine

The reasons for the striking sexual dimorphisms in muscle, fat and bone volume in prepubertal children are unknown. But Dr. Gilsanz strongly suspects sex steroids secreted during the first months of life.

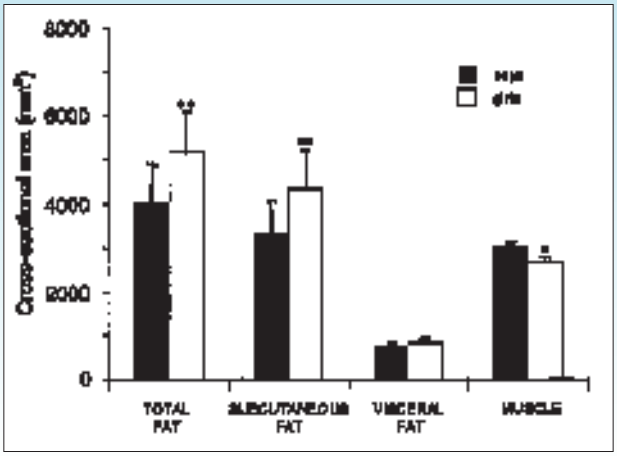
> *In years to come, imaging will play a tremendous role in identifying people at risk for certain diseases.*
> —Vincente Gilsanz, M.D., Ph.D.

He believes that with further study, it may become possible to determine if a girl is at risk for bone disease later in life, or if a boy is liable to accumulate visceral fat that could put him at future risk for cardiovascular disease. Meanwhile, Dr. Gilsanz says, "kids who have low-impact fractures, such as falling from a low height, should probably be examined via bone density measurement to make sure they don't have a deficiency in bone accumulation."

In an earlier study, Dr. Gilsanz and his colleagues found that the amount of bone gained during adolescence is the main contributor to peak bone mass that, in turn, is a major determinant of osteoporosis and fracture risk in the elderly. The data suggest, wrote the authors, "that osteoporosis prevention trials should start in early childhood and should be geared toward those children who have the highest risk for developing osteoporosis and fragility fractures later in life."

As for body fat, Dr. Gilsanz says the connection between childhood obesity and non-insulin dependent (type 2) diabetes is not as well established as bone deficiency is with fracture. "We don't know if the distribution of fat in an obese kid who has type 2 diabetes is different from a similar fat kid who doesn't have type 2 diabetes," he says. "Is the ratio of visceral and total fat different? We need to study that."

Dr. Gilsanz says these findings support a potential future role of imaging as a tool for prevention. "There is no question that in years to come, imaging will play a tremendous



Mean and SD values for CT measurements of abdominal fat and paraspinous musculature in 31 matched pairs of prepubertal children. Although there was a significant sexual dimorphism in subcutaneous fat, total fat, and muscle, no sex-related differences in visceral fat were present. * indicates P = .002, and ** indicates P < .001.

(*Radiology* 2002; 225:338-344)

role in identifying people at risk for certain diseases. We will be able to predict with imaging tools which kids are predisposed to disease that won't manifest until adulthood."

Why is this relevant to clinical practice? According to Dr. Gilsanz, early detection of disease susceptibility through imaging is similar to measuring blood pressure to predict cardiovascular disease. Recognition that, because of her low bone density, a young girl may be predisposed to later fracturing and osteoporosis could lead to very early behavioral intervention to establish habits, such as exercise, to reduce or avoid these later conditions.

Dr. Gilsanz cautions that more data are needed before imaging can be recommended for use as a screening tool in very young children. But, he says, "I wouldn't be surprised if, in the decades to come, pediatricians will deal with deficiency in kids to avoid development of diseases later in life." □

Reference

1. *Radiology* 2002; 225:338-344

The full text of Dr. Gilsanz's study is available at *radiology.rsnajnls.org*.

JOURNALS

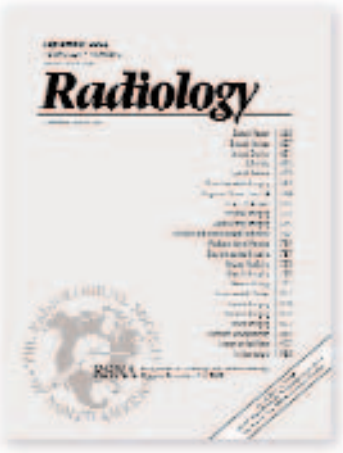
Radiology in Public Focus

A press release has been sent to the medical media for the following scientific article appearing in the September issue of *Radiology (radiology.rsnajnls.org):*

"Elective Endovascular Versus Open Surgical Repair of Abdominal Aortic Aneurysms: Systematic Review of Short-term Results"
A meta-analysis of nine studies finds a clear short-term benefit using endovascular repair rather than open surgical repair of abdominal aortic aneurysms. G. Scott Gazelle, M.D., Ph.D., from Massachusetts General Hospital and Harvard Medical School, and colleagues found that "endovascular repair results in less blood loss, shorter intensive care unit and hospital stays, lower 30-day mortality and lower systemic and/or remote complication rates than those of open surgical repair." However, they add that the long-term effectiveness of endovascular repair is still uncertain.

Currently, almost half of the patients with a ruptured abdominal aortic aneurysm who reach the hospital die, according to information cited in the study. The risk of rupture is related to aneurysm size. Therefore, elective repair of abdominal aortic aneurysms is generally recommended for patients whose aneurysms are larger than 5.0 cm. (*Radiology* 2002; 224:739-747)

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



fMRI Tracks Signs of Early Dementia

Researchers around the world are working furiously to improve the diagnosis of Alzheimer's disease (AD) so that patients can make critical life plans and perhaps even benefit from timely therapy. Much attention is focused on imaging techniques, such as PET, MR imaging and functional MR imaging (fMRI).

A pilot study at Duke University Medical Center in Durham, N.C., demonstrates the potential of fMRI to track early dementia and perhaps even identify young people at risk for AD. The effort has earned Jeffrey R. Petrella, M.D., a $1.8 million NIH grant to conduct a larger study.

"Our preliminary study involved two groups. One was a group of patients with mild cognitive impairment. These patients had an isolated memory impairment, two standard deviations below that of the normal population, yet lacked other cognitive deficits necessary for a diagnosis of dementia. The second group was made up of age-matched controls," explains Dr. Petrella, who was the recipient of a Seed Grant and Scholar Award from the RSNA Research and Education Foundation. "We used functional MRI to determine if we could detect a difference in brain activity or brain activation between these two groups. In and of itself, that's not really useful, but it's a first in a series of steps toward developing an early diagnosis in a pre-symptomatic population."

Dr. Petrella and his colleagues targeted the frontal and temporal lobes, including the hippocampus. "The hippocampus has been found to be particularly sensitive to the early pathologic changes of Alzheimer's disease," Dr. Petrella says. "We presented the men and women with pictures of faces to remember for later identification, then measured changes in brain blood oxygen levels using a 1.5 Tesla field strength MR unit. We found that brain activation was reduced in patients who had mild memory impairment. Specifically, there was decreased activity in the frontal, parietal and posterior temporal lobes."

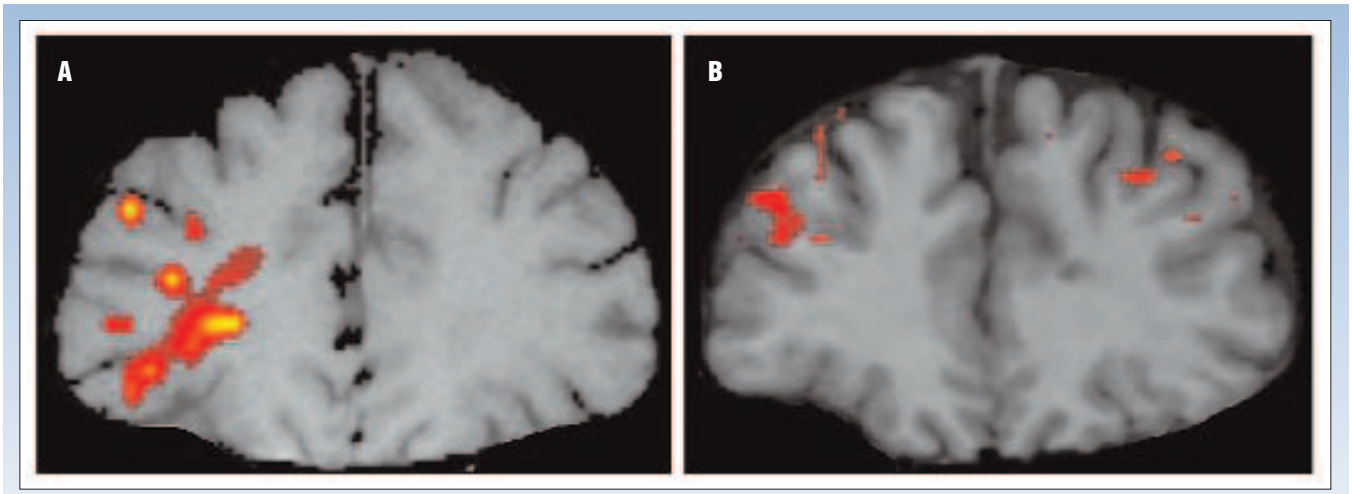
Jeffrey R. Petrella, M.D.
Department of Radiology
Duke Hospital North MRI Center

As these preliminary data are prepared for publication, the Duke team is recruiting patients for a five-year study with a three-year longitudinal component. Three groups will be studied. One group will consist of patients with mild dementia; a second group will include those with mild cognitive impairment, a major risk factor for AD; and the third group will consist of age-matched controls.

"The middle group, those with mild cognitive impairment and other risk factors, will be studied longitudinally. Previous longitudinal studies have shown that approximately 30 percent of patients with mild cognitive impairment will convert to probable Alzheimer's disease over a two- to three-year period," says Dr. Petrella. "After separating subjects into those who convert to Alzheimer's disease from those who remain dementia free, we'll look back at their original fMRI to determine if there were differences in the brain activation patterns which may have predicted conversion to dementia."

RSNA President R. Nick Bryan, M.D., Ph.D., calls the Duke research very important. "It is moving in the right direction from simply trying to make the diagnosis of Alzheimer's disease in patients with dementia when the diagnosis is relatively easy and too late for treatment," he says. "Dr. Petrella's approach combines functional and morphologic measures and should, I think, enable the identification of subjects that are at risk for subsequent Alzheimer's disease."

Dr. Bryan, a neuroradiologist and chairman of the Department of Radiology at the University of Pennsylvania Health System, says one disadvantage of current MR markers are that they are secondary markers, not directly related to the disease pathology. "One would like to have some kind of imaging marker that actually looks at the primary pathophysiology. There are new



Images courtesy of Dr. Petrella

Figure demonstrates brain activation in the right frontal lobe during a memory task in an older normal control subject (a). There is decreased brain activation on the right during the same task with some compensatory activation on the left in a patient with mild cognitive impairment (MCI) (b).

techniques in molecular imaging, many of them in nuclear medicine, where they're developing molecular markers for what may be specific aspects of the disease, such as the abnormal amyloid protein in neurofibrillary plaques. With those techniques now in animal testing, one would be able to image the actual disease—the pathophysiology itself—and the specificity would be much greater than what we have now."

Dr. Bryan adds that fMRI, which gives a relative number, may not be superior to PET, which gives an absolute number. But fMRI is faster, simpler, less expensive and does not require injection of radioactive material.

Dr. Petrella's approach combines functional and morphologic measures and should, I think, enable the identification of subjects at risk for subsequent Alzheimer's disease.

—R. Nick Bryan, M.D., Ph.D.

The physicians agree that when it comes to diagnosing AD, no single imaging technique will dominate. "We'll eventually settle on a multi-spectral approach to diagnosis, using various imaging modalities such as MR and PET," says Dr. Petrella.

"With MR alone, we can look at hippocampal volume with high resolution imaging and brain activation with fMRI. PET will allow us to look at glucose metabolism and cerebral blood flow, as well as various molecular markers." He adds that by identifying those at risk and those with preclinical disease, physicians could prescribe cholinesterase-inhibiting drugs to perhaps delay the loss of neurons.

"Also, by ruling out Alzheimer's pathology you're free to look at other causes for dementia, such as vascular dementia, depression or Korsakoff syndrome."

Is diagnosis of AD getting ahead of treatment? Dr. Petrella doesn't think so, plaining that cholinesterase inhibitors can help patients. He adds that some new therapies in the pipeline are aimed at preventing the development of amyloid plaques and others will prevent the inflammatory cascade resulting from plaque deposition. "But it's important to target these medications to the right population. That's why screening of an at-risk population will be important to differentiate those who can benefit from the drug from those where the risk is not as high. Hopefully, with these new therapies and diagnostic procedures, we'll be able to make progress on preventing and treating this considerable public health problem."

In July, experts attending the international Alzheimer's conference in Sweden announced that the estimated number of Americans with Alzheimer's disease could more than triple to 16 million by the year 2050. Currently, 4.6 million Americans suffer from the disease. □

Geography Affects the Practice of Radiology

Every disease has its cultural ecology, its geographic regionalization and its patterns of diffusion and change.[1]

Can a radiologist improve his or her ability to read and interpret a medical image by knowing the patient's name? Perhaps, suggests Stephen R. Baker, M.D., whose long-standing interest in geography has led him to recognize the importance of place in medical care and delivery. As chairman of the Radiology Department and associate dean of Graduate Medical Education at the University of Medicine and Dentistry of New Jersey (UMDNJ), Dr. Baker is incorporating several innovative ways to improve the training of radiology residents by focusing on the importance of geography in the patient's history.

Stephen R. Baker, M.D.
Chairman, Radiology Department
Associate Dean, Graduate Medical Education
University of Medicine and Dentistry of New Jersey

Medical Geography

Looking at medicine in the context of geography is not new. Indeed, medical geography is a well-established subspecialty in the field of geography that looks at where diseases tend to cluster, how this shapes resource allocation, how access to care relates to disease outcomes and other issues that situate medicine within a context of care. What is not altogether traditional, however, is the link between geography and a specialty like radiology. What does it mean to practice radiology in a geographic context?

What's in a Name?

Placing the practice of radiology in a geographic context includes a number of issues. Some issues relate to recognizing geographical data about the patient to help radiologists improve diagnosis. Other issues pertain to resource allocation, access to care and other healthcare delivery issues, which similarly address ways to improve diagnosis and treatment.

Knowing where a patient lives, where they travel, what type of job they have, where they work and what their genetic heritage is can help the radiologist narrow diagnostic possibilities prior to actually looking at a medical image. Knowing the patient's name is the first clue in this detective work, says Dr. Baker.

Dr. Baker, who taught medical geography for 14 years at Columbia University, is rigorous in demanding that all radiology residents and medical students at UMDNJ know these facts about their patients. "If a patient is described to me as Hispanic, that is not good enough," says Dr. Baker. "I want to know exactly where that patient is from. Diseases that Guatemalans are exposed to are different from diseases Argentineans are exposed to."

Why is this important? Because diseases tend to cluster and knowing where a person lives or where they travel can help narrow the diagnostic possibilities. "For example," explains Dr. Baker, "a 37-year old black man comes in with abdominal pain. If he is from Africa, say Ghana, that should alert the radiologist that he may have hepatocellular carcinoma. If he is from New Jersey, the chances are more likely that he will have acute hepatitis, a gallbladder infection or some other condition but probably not hepatic cancer."

Does placing a patient in a geographic context improve diagnosis? Or said differently, can radiological errors be reduced by training residents to incorporate their knowledge of a patient's name, place of home, work and travel in their review and interpretation of a medical image?

Melinda S. Meade, Ph.D., a medical geographer and author of one of the primary textbooks in the field, suggests that it may be too difficult, particularly in the United States, to link

genetics or other host susceptibilities to location because of the mobility of the U.S. population. "Many of the people developing conditions approached through radiology are older and have lived in multiple locations," says Dr. Meade. "Any screening of population in a location is going to be distorted or diluted by varying proportions of people who did not grow up there."

Although Dr. Meade admits she's not an expert in radiology, she does agree that knowing where a patient has traveled can help diagnosis. "In travel medicine," she says, "physicians might consult regional maps that show risk of schistosomiasis or whether or not there is a risk of yellow fever in the place their patient has been."

A recent study by radiologists at McMaster University Medical Center in Hamilton, Ontario, suggests that knowing the types of infections and microbes endemic to an area can help radiologists recognize patterns of disease.[1] Particularly in some areas of the tropics, where high-quality chest radiographs are not available, radiologists need to rely on recognizing disease patterns associated with geography.

Considering the travel history of a patient or where he or she may live may seem common sense in primary care medicine, but radiologists generally do not think in these terms, says Dr. Baker. "Radiology is not hooked up with any social sciences," he explains. "But just like everyone has a history, everyone also has a geography."

Knowing where a patient lives, where they travel, what type of job they have, where they work and what their genetic heritage is can help the radiologist narrow diagnostic possibilities.

Although Dr. Baker has not officially looked at outcomes, he does think that his residents are more interested and engaged in their work by a larger understanding of the world. He also thinks it's critical to include this larger, more cosmopolitan framework into teaching residents, particularly since he has taught residents from more than 40 countries and their patients are from all over the world.

Technology and Place: Go Where Needed

Other issues raised by placing radiology in a geographic context have to do with healthcare delivery.

1) Is the technology well placed to meet the demands of patients? Does the distribution of radiological equipment meet the diagnostic needs of people in that particular community?
2) If appropriate diagnostic tools are used in areas with high demand based on disease clustering, does this have an effect on outcomes?

Mapping the Internal Body

A more subtle and poetic connection between geography and radiology is looking at the internal body as a map. "Radiology and geography both rely on maps," explains Dr. Baker. "Radiologists and geographers both think spatially. These may seem like disparate activities, but they are related epistemologically."

That both radiologists and geographers arrive at understanding through a knowledge of space is highlighted in the use of medical images to situate a disease or condition in the body. For radiation oncologists, it is in the use of simulations, including 3-D imaging, to pinpoint the appropriate area for treatment.

Dr. Baker takes this one step further. He uses metaphor to help visualize the putative association of disease in space, which in turn may provide clues to what causes disease. For example, in thinking about conditions that affect the colon and rectum, it may help to consider the large intestine as analogous to a river. "The lumen of the large bowel is, in effect, outside the person," explains Dr. Baker. "The lining of the intestine therefore reacts to the internal environment to which it is exposed." That is, fecal matter moves along this river although the percentage of its gaseous, liquid and solid constituents varies at different sites. Flow is also not uniform: it is slower on the right side, picks up speed in the middle of the intestine and slows down in the sigmoid and the rectum. "One can hypothesize," says Dr. Baker, "that carcinogens within feces interact with the colonic wall with spatial difference depending on flow and location. Visualizing this interaction using the riverine analogy may help our understanding of where and why diseases lodge in the intestinal tract. Just as a river's banks are sometimes resistant and sometimes vulnerable, so too is the colonic wall." □

Another Geographical Hint

A patient's social security number may provide another clue to determining medical care and delivery. The first digit of a social security number is assigned by east-west locale. For instance, if your SS# starts with 1, you lived on the east coast at the time of assignment. If it starts with 5, you lived on the west coast at the time of assignment. Hence, 2, 3 and 4 extend east to west across the United States correspondingly.

What is the value of knowing this? Take, for example, the "hint" provided when a patient, whose SS# begins with 5, demonstrates multiple, very small calcified lesions on chest x-ray. Such a patient probably was exposed as a child or young adult to Coccidomycosis because of its prevalence in the western United States.

—Susan D. Wall, M.D.

Dr. Wall is the associate dean for Graduate Medical Education and vice-chairman of the Radiology Department at the University of California, San Francisco. She is also the president of the Society for Gastrointestinal Radiologists and the chair of the RSNA News *Editorial Board.*

References

1. Meade M., et al., *Medical Geography.* Guiford Press: New York; 1988.
2. *Clin Chest Med* 2002;23(2):309-328

Li Takes Imaging Sciences Training Program to New Level

The way King C. Li, M.D., M.B.A., saw it, it was an offer he couldn't refuse. It was the summer of 2001. He was an associate professor of radiology at the Stanford University Medical Center and was also director of its In-Vivo Cellular and Molecular Imaging Program. Dr. Li liked his work at Stanford, a place he had been for 10 years, but because of the confines of the resources available to him at that time, his research horizon was limited in some aspects.

John I. Gallin, M.D., the director of the Clinical Center at the National Institutes of Health (NIH), wanted Dr. Li to take the spot RSNA President R. Nick Bryan, M.D., Ph.D., had just vacated as associate director of radiology and imaging sciences at the NIH Warren Grant Magnuson Clinical Center—the epicenter of world medical research. The clinical center is the Federal government's primary agency for biomedical research. The Institutes conduct clinical trials and related research projects in various medical disciplines, and patients are referred from all parts of the United States and from various foreign countries. One of Dr. Gallin's top priorities was galvanizing the Imaging Sciences Training Program (ISTP), which Dr. Bryan had started in 1998.

When Dr. Li arrived in Bethesda on August 6, 2001, he found three cyclotrons, three PET scanners and a fully equipped mouse imaging facility. "At Stanford, we had one cyclotron, one PET scanner and no animal PET scanner," says Dr. Li, explaining part of the reason for his cross-country move. On NIH turf, Dr. Li had access to 600 acres of facilities and 20,000 top-tier researchers focused on improving the health of our nation and the world. "There is no bigger health-related research facility in the world," he states. "If you want to do cutting-edge research, this is the place to do it."

King C. Li, M.D., M.B.A.
Chair, Imaging Sciences Program
National Institutes of Health

R. Nick Bryan, M.D., Ph.D.
Founder, Imaging Sciences Training Program

The chance to boost the ISTP was also part of the attraction. Radiology had been lagging behind other medical specialties in training enough of its own research scientists. In an article in the June 2002 issue of *Academic Radiology,* Philip O. Alderson, M.D., and Edward Nagy, president and executive director of the Academy of Radiology Research, respectively wrote, "Too few radiologists are being trained to be competitive investigators and too much of the research in radiology fails to meet the high standards that exist in other fields supported by NIH funds."

Dr. Li is hard at work solving that problem. "One of the efforts we need to make is to train the next generation of academic radiologists so they can cross multiple disciplines, such as molecular biology, chemistry and engineering," he says. "There is no better place to do that than at the NIH. And don't forget access to clinical trials. Where else can you go from bench to bedside so easily?"

Moreover, he echoes the beliefs of other eminent radiologists that the profession needs to be more research focused "if we are to stay as a separate discipline," Dr. Li says. The National Institute of Biomedical Imaging and Bioengineering (NIBIB) will be offering extramural grants. "But we lack the researchers to capitalize on that boom in research dollars," notes Dr. Li.

Even after only one year, Dr. Li is well on his way to invigorating the ISTP. There were six ISTP fellows on board when he arrived. They were spread over the four departments that constitute the program: diagnostic radiology, nuclear medicine, positron emission tomography and the laboratory of diagnostic radiology research (LDRR).

At present, there are three fellows who have finished their internship but have not entered a residency program. Another five fellows have completed residencies. Dr. Li says he is really try-

The Chemistry Section of Molecular Imaging in the NIH Imaging Sciences Program.

The Molecular Pathology Section in the NIH Imaging Sciences Program.

ing to find pre-residency fellows because "most of the people who have graduated from residency want to go into private practice because of the income." Pre-residents with the right exposure are more likely to opt for a research career later on, he says.

Dr. Li's recruitment efforts are being aided by the addition of new labs and glimmering new equipment. The brand-new molecular imaging lab opened this spring. It has a laser capture micro-dissection microscope, confocal microscope, complete functional genomics set-up, a 7 Tesla animal MR imaging unit and three different mass spectrometers for doing functional proteomics. Dr. Li hopes to add a 3 Tesla whole body MR imaging unit to the LDRR very soon.

There is no bigger health-related research facility in the world. If you want to do cutting-edge research, this is the place to do it.

—King C. Li, M.D., M.B.A.

Dr. Li is currently having discussions with equipment manufacturers on potential co-development arrangements. This potentially can allow the ISTP fellows, scientists and radiology clinicians to have access to state-of-the-art imaging equipment and engineering support. Dr. Li is a strong proponent of collaborations between government, academia and industry in research endeavors.

Besides the opportunity to work on equipment that may not be easily available in academic imaging departments, fellows can also rub shoulders with top people at the National Cancer Institute (NCI), the National Heart, Lung and Blood Institute (NHLBI) and the other Institutes in Bethesda. That networking comes in very handy post-ISTP.

Karen A. Kurdziel, M.D., assistant professor in the Department of Radiology at Virginia Commonwealth University (VCU) and medical director of its Molecular Imaging Center, spent two years as an ISTP fellow. "The time I spent at NIH was worth its weight in gold," she says.

While in the ISTP, she began to work with Bill Eckelman, Ph.D., chief of PET at the Clinical Center, who is evaluating F-18 paclitaxel, a PET tracer, for imaging multidrug resistance. Since her return to VCU in October 2001, she has received an Institutional American Cancer Society grant and received a priority score of 183 on her R21 submission to the NCI. The NCI will notify her in October 2002 on whether she has won a grant there. Both of these are for the continuation of work on F-18 paclitaxel.

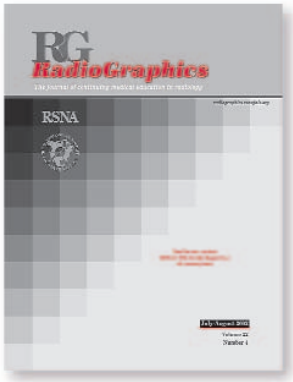
Dr. Kurdziel also met Michael Gottesman, M.D., chief of the Laboratory of Cell Biology. "Everyone I met at NIH was willing to help me and teach me," she emphasizes. "I learned how to do cell culture in one of Michael Gottesman's labs even though it was not his responsibility to teach me. In fact, in many university settings, this kind of training is often viewed as a waste of time."

Actually, she learned nothing formally at the ISTP about writing winning grant applications. Dr. Kurdziel feels that is one area where the program can improve. However, she was lucky enough to rent a room from Barbara Croft, Ph.D., an NCI program director. "She is an excellent teacher and mentor and even held an informal grantsmanship course at her house for myself and other fellows at NIH," Dr. Kurdziel says. □

Enhance Quality of Teaching Images with Photoshop

Radiologists who want to create the best possible images for teaching, research and multimedia presentations will find a treasure trove of information in the July-August issue of RSNA's peer-reviewed education journal, *RadioGraphics*.[1] The authors, from the Russell H. Morgan Department of Radiology and Radiological Sciences at Johns Hopkins University School of Medicine in Baltimore, offer a five-step approach to manipulating digital images, using a desktop scanner and Adobe Photoshop software.

"We tried to make it into a very logical approach," says coauthor Elliot K. Fishman, M.D. "It's meant for the radiologist. Our goal was to have radiologists be involved in this process and also to make it easy."



Dr. Fishman points out that, in the past, getting good quality illustrations was time consuming, difficult and expensive. "I've been in medical education for 20 years. People would draw each diagram from scratch. It would take days and days to draw each diagram," he says. "If a mistake was made and you wanted to change one thing, you had to start from the beginning."

Today's technology makes the process quicker and easier, and allows for repeated use of created materials. "You're able to take one illustration and add or subtract things with a minimal amount of time," Dr. Fishman says. "One of the exciting things about it is that you don't need to be a medical artist to be able to use the software."

Five Basic Steps

Digitizing images and preparing them for publication and computer presentation involves five steps:

- Scanning the image
- Correcting the image
- Editing and labeling the image
- Saving the image
- Producing the final output

The first step is key, because a good image cannot be created from an inferior scan. "The key point is to make sure, whether it's a slide or film, that they're good quality to start with—that you're not using second- or third-generation scans or scratched old slides," says medical artist Frank M. Corl, M.S., lead author of the *RadioGraphics* article.

"Resolution is very important," he continues. "You need to know whether it's going to be for print or for a computer monitor, a Web-based or CD-ROM-based image. If it's for print, you need to scan at a higher resolution: 300 pixels per inch (ppi), or dots per inch (dpi), is optimal for print; for a computer monitor, 72 ppi is standard."

Elliot K. Fishman, M.D.
Department of Radiology and Radiological Sciences, Johns Hopkins University School of Medicine

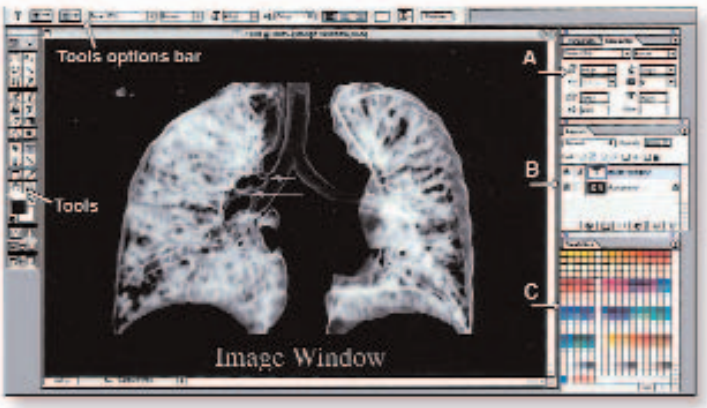
Frank M. Corl, M.S.
Department of Radiology and Radiological Sciences, Johns Hopkins University School of Medicine

Color and size are the other factors to watch for in scanning. "If it's a black-and-white radiology image, you don't want to waste file size by scanning it in color. Just scan it in gray-scale," Corl says. "If you want it to be the same size as the original scanned image, you scan at 100 percent. I would always recommend scanning at at least 100 percent, and then doing all your reductions in a program like Photoshop."

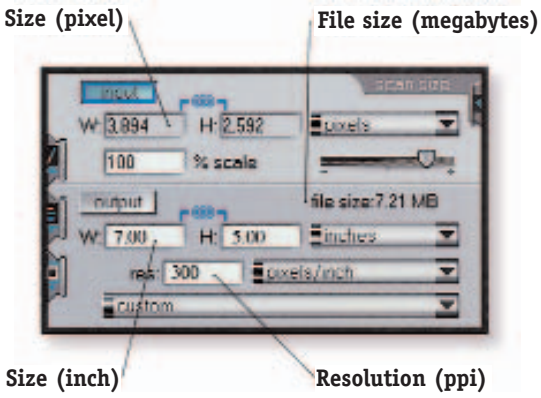
Once the image is scanned, Photoshop allows the user to correct brightness and contrast, remove patient information, and add arrows and other labeling.

The images should be saved as TIFF (tagged image file format) files, rather than JPEG (Joint Photographic Experts Group) files. Corl says this is because users often save, edit and resave files while working on a project.

"A TIFF file is a noncompressed file. You can save it over and over and you don't lose any quality," he says. "Every time you save a JPEG, it recompresses the file. You degrade the image



Desktop of Adobe Photoshop (Macintosh platform) with an image opened shows menus, tools, and palettes. A = Advanced Text Editing Tools, B = Layers palette, C = Color Swatches palette.



Detail of the size and resolution window from the scanner desktop. This window allows the user to adjust the size and resolution of the scan.

(*RadioGraphics* 2002; 22:981-992)

every time you save it."

Taking care with each step of the process will pay off when the user is ready to produce the final output in print or in a computer-based presentation such as PowerPoint.

"You've done all the work that makes the difference when you've picked your resolution and scanned the images," Corl says. "If you don't know what you're going to use it for, and there's a potential of printing it some day, you should just scan everything at a high resolution. Save your originals, put them all on CD and then you'll always have a digital copy of them. It's easier to go back and get that CD than it is to go back and find your slides or films and rescan them."

One of the exciting things about it is that you don't need to be a medical artist to be able to use the software.

—Elliot K. Fishman, M.D.

Learning Opportunities

Dr. Fishman recommends that radiologists who are just getting started with Photoshop take a course. "There's an initial frustration level when you sit down and try to do it from scratch.

He suggests checking out universities, community colleges, libraries and private companies that offer computer software training.

"Again, you don't need to be a medical artist," Dr. Fishman emphasizes. "I think it's a matter of putting time into it. With a little bit of effort, you'll have great results." □

Reference

1. *RadioGraphics* 2002; 22:981-992

For the full-text version of both *RadioGraphics* articles, go to *radiographics.rsnajnls.org*.

Photoshop Step By Step

Ronald D. Caruso, M.D., and Gregory C. Postel, M.D., of the University of Louisville School of Medicine in Kentucky, say they learned to use Photoshop through trial and error. In an effort to help fellow radiologists utilize the software to its best advantage, Drs. Caruso and Postel offer a step-by-step tutorial in the July-August issue of *RadioGraphics*.

The article demonstrates the basic techniques of editing gray-scale cross-sectional images intended for publication and for incorporation into computerized presentations. The authors focus on various functions of Photoshop, including:

- Cropping an image and converting it to 8-bit gray-scale
- Using the "history" palette to undo a step or series of steps
- Creating "macros" that save time for the user by automating an action or series of actions

"Radiologists should find that image editing can be carried out very rapidly once the basic steps are learned and automated," the authors conclude. □

Several hands-on courses in which Photoshop skills can be used are available at RSNA 2002. They include:

- Introduction to PowerPoint Presentations
- How to Prepare and Deliver Electronic Presentations
- How to get Radiologic Images into Your Personal Computer

To check the availability of these courses, go to *www.rsna.org/rsna/advanceregistration/*, e-mail *reginfo@rsna.org* or call (630) 571-7862.

History of the RSNA—Part 19

Return to Chicago

The dramatic growth of healthcare, which in the 1970s had added CT, interventional procedures, nuclear medicine and MR imaging to the radiology armamentarium, began to slow in the 1980s. Important medical news focused on the identification of a new disease that severely compromised the immune system. This condition, which is now known as acquired immune deficiency syndrome (AIDS), was being described by the media as potentially more deadly than cancer.

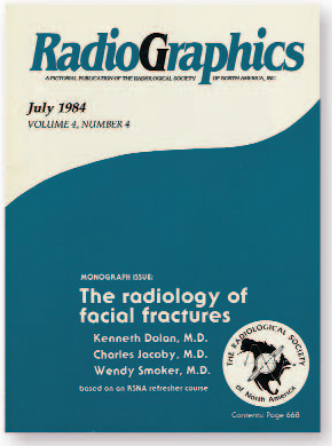
Birth of *RadioGraphics*

RSNA decided it was time to further expand its educational offerings beyond the scientific assembly. William J. Tuddenham, M.D., RSNA's editor of educational materials, suggested to Executive Director Adele Swenson and the Board of Directors that a new journal be started to promote continuing medical education through home or office study. He pointed out that a journal would be more accessible and easier to use than slides and audiotapes. He also saw a journal as the most effective way to promote continuing education internationally.

In less than a year, a volunteer editorial board was formed, and Dr. Tuddenham set out to create a publication that would feature notable scientific exhibits from the RSNA meetings. The first issue of *RadioGraphics* was May 1981. A special edition released at the end of the year featured a review of the technical exhibits presented at the 67th Scientific Assembly and Annual Meeting in Chicago. The special edition included concise statements and photographs of key elements of each technical display prepared from material provided by the exhibitor. It also included editorial commentary on trends and new developments prepared by a panel of expert radiologists. The publication was an instant success.

Computer-dependent Advances

The 1981 meeting at McCormick Place showed that future advances in radiology practice would depend primarily on computer technology. For example, attendees saw how CT could be used not only for diagnosis but also to improve treatment planning for radiotherapy. Also on display was the hardware used to perform digital subtraction angiography—a procedure in which powerful computers digitized images and "removed" certain parts of the anatomy from the images for clearer views.



Nevertheless, in spite of these advances, Laurens Ackerman, M.D., a radiologist and expert in the cutting-edge use of computers in radiology, warned that hardware and software were not being manufactured according to a universal standard. Consequently, he foresaw problems with information transfer since computers produced by different manufacturers could not communicate with each other.

Radiology Layout Revamped

As radiologic imaging became increasingly critical to diagnosis and therapy, 1982 RSNA President Theodore A. Tristan, M.D., and the Board of Directors believed greater attention should be paid to the reproduction of images in *Radiology* since a slight variation in inking or paper quality could obscure an important area of interest. Throughout the year, Editor William R. Eyler, M.D., Managing Editor Donald A. Stewart, Swenson, and representatives from Mack Printing met to monitor and improve the printed quality of the images in *Radiology.* The layout of the publication was also redesigned.

The Board of Directors also noted increased RSNA meeting attendance by radiologists from overseas. Subsequently, Swenson developed relationships with international radiologic organizations and encouraged financial support for RSNA refresher course faculty to lecture at foreign scientific meetings.

Holding Together the Field

Society leaders understood that as medical sciences developed, radiologists could no longer be experts in all fields and were becoming subspecialists. This subspecializing threatened to fragment radiology. By the 1980s, more than 30 subspecialty associations had formed. They were based on the patient's age (Society for Pediatric Radiology), the organ system studied (Society of Gastrointestinal Radiologists), the modality used (Computerized Radiology Society), or the type of practice (Association of University Radiologists).[1]

The RSNA Board of Directors believed the Society had a responsibility to hold radiology together by serving as a broad-based medical organization for all imaging specialists and to provide continuing medical education to

the general radiologist and subspecialist. Efforts were made to represent all subspecialties on RSNA committees and the editorial boards of *Radiology* and *RadioGraphics.* The Board of Directors also committed itself to maintaining communications with the officers of the subspecialty organizations to make certain RSNA refresher courses, scientific sessions and scientific exhibits pertained to each subspecialty. In addition, new organizations, such as the American Association for Women Radiologists, received encouragement and support from RSNA as they became important members of the radiology family.

Recognizing the Volunteers

Over the decades, the success of RSNA had always been dependent on the willingness of radiologists and allied scientists to devote time and energy to the Society. By the 1980s, the annual meetings could not have been possible without volunteers serving on committees, which together oversaw every aspect of the scientific assembly. In September 1982, the Board of Directors appointed a committee to develop ways to award elected officers, volunteer leaders and annual meeting faculty. Headed by Douglas W. MacEwan, M.D. from Winnipeg, Manitoba, this committee presented final recommendations to RSNA President Richard G. Lester, M.D., and the Board approximately one year later. The committee clarified the provisions by which the Board could award the Gold Medal and Honorary Membership. In addition, the outgoing RSNA president was to be recognized by the formal presentation of an official president's pin and a replica of a gavel-shaped piece of mastodon ivory. (The actual gavel was made from ivory preserved in glacial ice for 25,000 years. George E. Pfahler, M.D., gave it to RSNA in 1929 as a symbol of the durability of the Society's work.)

Arrangements were also made to recognize key committee members, longstanding refresher course faculty, and RSNA staff at significant employment anniversaries.

1982 RSNA President Theodore A. Tristan, M.D., passes the presidential gavel to 1983 RSNA President Richard G. Lester, M.D., at the 68th Scientific Assembly and Annual Meeting at McCormick Place in Chicago.

Overall, the committee believed RSNA members should contribute to Society efforts without tangible reward and that recognition of key volunteers should be the ongoing responsibility of the Board of Directors. However, the committee also realized that social activities were an important form of recognition. Subsequently, a president's dinner, a president-elect's reception and a leadership reception were planned during each scientific assembly for the Society volunteers. Over the years, they became popular RSNA soirées and have honored Society volunteers in venues such as museums and historical sites.[2]

Mid-November Meeting

The 1983 Scientific Assembly at Chicago's McCormick Place began on November 13. For the first time, an official printed program, labeled a special issue of *Radiology,* was mailed to all RSNA members and *Radiology* subscribers so that the scientific content of the meeting was available to the widest possible audience. The nearly 400-page publication reflected the previous two decades of growth in radiology. In his welcome remarks to meeting attendees, printed on the program's first page, Dr. Lester noted that the number of papers being presented at the meeting had nearly doubled from 389 in 1976. He stated that this was "due to the proliferation of technologic advances in the radiologic field and the continuing importance of the RSNA meeting as a forum for scientific exchange."[3] □

References

1. McCort JJ. Building links with subspecialty groups. [In] *RSNA Remembered: Reminiscing with Adele—1985.* Oak Brook, IL: RSNA, 1985: 91–93.
2. Campbell RE. RSNA formalizes its recognition of the volunteer contribution. [In] *RSNA Remembered: Reminiscing with Adele—1985.* Oak Brook, IL: RSNA, 1985: 49–51.
3. Lester RG. Welcome. *Scientific Program of the 69th Scientific Assembly and Annual Meeting of the Radiological Society of North America,* Chicago, Nov 13–18, 1983. Oak Brook, IL: RSNA, 1983:1.

The entire *History of the RSNA* series, to date, is available on our Web site at *www.rsna.org/about/history/index.html.*

RSNA Grant Recipient Participates in Multi-Ethnic Study of Atherosclerosis

Early success in grant writing and a good mentor are the keys to a long and fulfilling career as an academic radiologist, says David A. Bluemke, M.D., Ph.D., a diagnostic radiologist at the world-renowned Johns Hopkins Hospital in Baltimore.

Dr. Bluemke says through the RSNA Research and Education (R&E) Foundation Seed Grant Program, he learned how to apply for a grant, and now he's participating in an exciting new government-sponsored study of atherosclerosis. "RSNA offers a kinder, gentler approach to grant writing versus 25-page government grants," he says. "It is an excellent program."

Dr. Bluemke was the recipient of a Foundation Seed Grant in 1994 for his research on "Avascular Necrosis of the Hip: Evaluation with MR Imaging and Spectroscopy."

Elias A. Zerhouni, M.D., was Dr. Bluemke's mentor at Johns Hopkins. Today, Dr. Zerhouni is the new director of the National Institutes of Health (NIH).

Dr. Bluemke says junior level researchers should seek out mentors who, like Dr. Zerhouni, are willing to show them the ropes for grant writing. "You need someone to share the unwritten rules for success at writing and receiving grants," he says.

Funding helps give you a feeling of independence and accomplishment. It helps your hospital and academic department identify and track you as a person committed to research.

—David A. Bluemke, M.D., Ph.D.

Multi-Ethnic Study of Atherosclerosis

The focus of Dr. Bluemke's work at Johns Hopkins has shifted from bone marrow imaging to cardiovascular disease. Today, he's taking part in an exciting study sponsored by the National Heart, Lung and Blood Institute at NIH. Johns Hopkins is one of six research centers in the country participating in MESA, the Multi-Ethnic Study of Atherosclerosis or hardening of the arteries. The $68 million, 10-year study seeks to determine the factors leading to heart disease and stroke among African-American, Asian, Caucasian and Hispanic men and women.

David A. Bluemke, M.D., Ph.D.
1994 RSNA R&E Foundation Seed Grant Recipient

MESA research participants between the ages of 45 and 84 undergo a 30-minute MRI of the heart, a CT scan of the chest, an ultrasound of the carotid artery and a blood serum workup. Dr. Bluemke says participants have a genetic screening and are surveyed about their lifestyle habits to see what roles genetics and lifestyle may play in cardiovascular disease.

Then and now, Dr. Bluemke is looking at what leads to disease and how MR can help catch problems faster than currently used and more invasive methods.

Academic Radiology versus Private Practice

Among today's junior level radiologists, Dr. Bluemke says he sees a lot of residents interested in academic radiology, at first. "However, the hurdles to get over are very difficult, not to mention the financial draw of private practice," he says. "A little bit of success or early mentorship helps a lot," when it comes to keeping younger radiologists interested in academic radiology, he adds.

His advice for junior researchers is to find early success by seeking out grant programs, like RSNA's R&E Foundation Seed Grant Program. "Funding helps give you a feeling of independence and accomplishment. It helps your hospital and academic department identify and track you as a person committed to research," he says.

Dr. Bluemke remains a committed volunteer for RSNA. "R&E scholarship and grant recipients become mentors to the next group of junior level faculty," he says. Dr. Bluemke is a member of the Foundation's Seed Grant Review Panel and of the RSNA Scientific Awards Committee in the cardiovascular section. He's also a reviewer for *Radiology* and *RadioGraphics.* At RSNA 2001 in Chicago, Dr. Bluemke presented three scientific exhibits, "MRI of the Female Urethra Using an Endourethral MR Coil: Preliminary Experience"; "Acute Aortic Syndromes: Focus on Pathogenesis"; and "In Vivo

Intravascular MR Imaging: State-of-the-Art." Since 1990, Dr. Bluemke has participated in 11 of 12 RSNA scientific assemblies.

Dr. Bluemke is an associate professor of diagnostic radiology at Johns Hopkins University School of Medicine and the clinical director of the MR Division in the Department of Radiology at Johns Hopkins Hospital. He earned his bachelor of science degree in chemical engineering from the University of Wisconsin in Madison. He earned his Ph.D. in biophysics from the University of Chicago. He also received his medical degree from the University of Chicago. Dr. Bluemke's residency in diagnostic radiology and his fellowship in cross-sectional imaging took place at Johns Hopkins University School of Medicine. □

The RSNA Research Seed Grant Program

...is designed to assist young investigators by funding the preliminary studies required to gain experience in the testing of hypotheses and defining objectives before they apply for major grants from corporations, foundations or government agencies. Research Seed Grants support up to $30,000 for a specific research project. The deadline for applications is January 15. To apply, applicants need not be residents or citizens of a North American country. For information on this and other RSNA Research and Education Foundation grants and awards, contact Scott Walter at (630) 571-7816 or *walter@rsna.org* or look on the RSNA Web site at *www.rsna.org.*

PROGRAM AND GRANT ANNOUNCEMENTS

NEW!

Biomedical Imaging Research Opportunities Workshop

This is the first in a series of workshops sponsored by RSNA, AAPM, ARR and several other radiological, engineering and basic imaging science societies. This workshop is intended to identify and explore opportunities for basic science research and engineering development in biomedical imaging as well as related diagnosis and therapy. In addition to providing information and ideas for new investigators, the workshop should:

- support accelerated development of biomedical imaging as a scientific discipline
- facilitate coordinated imaging research

The first workshop will be held January 31 – February 1, 2003, at the Hyatt Regency, Bethesda, Md. For more information, go to *www.birow.org* or send an e-mail to *birow@aapm.org.*

How to Write a Good Grant Application

Deadline for Registration is October 25, 2002

This four-hour workshop will be on November 30, 2002, immediately prior to RSNA 2002 in Chicago. The goal of the workshop is to provide participants with an introduction to writing a grant proposal for NIH, specifically relating to the radiologic sciences. The course is primarily intended for faculty in academic centers who wish to pursue a career in radiologic research. *(Participants must be registered for RSNA 2002 to attend.)* For more information, contact Joseph Koudelik at (630) 368-3758 or *jkoudeli@rsna.org.*

RSNA Research & Education Foundation Program Deadlines

Note: If deadlines fall on a weekend or holiday, the deadline will be the next business day. For additional information, please contact the RSNA R&E Foundation (630) 571-7816.

PROGRAM	DEADLINES
Research Grants	
Research Seed	January 15
Research Resident	January 9
Research Fellow	January 9
Research Scholar	January 9
Medical Student/Scholar Assistant [Must be nominated by Scholar]	Year-round
Medical Student Departmental	Year-round
B. Leonard Holman Research Pathway and RSNA Holman Pathway Research Resident Seed Grant	January 15

PROGRAM	DEADLINES
Educational Program Grants	
Institutional Clinical Fellowship in Cardiovascular Imaging	June 1
Educational Scholar	June 1
World Wide Web-Based Educational Program	June 1
International Radiology Education Program Grant to "Teach the Teachers" From Emerging Nations	June 1
Recognition Awards	
Roentgen Resident/Fellow Research Award	April 1
Outstanding Researcher	June 15
Outstanding Educator	June 15
International Support	
Derek Harwood-Nash International Fellowship	July 1

Research and Education Foundation Donors

THE BOARD OF TRUSTEES of the RSNA Research and Education Foundation and its recipients of research and educational grant support gratefully acknowledge the contributions made to the Foundation between **June 28, 2002 and July 30, 2002.**

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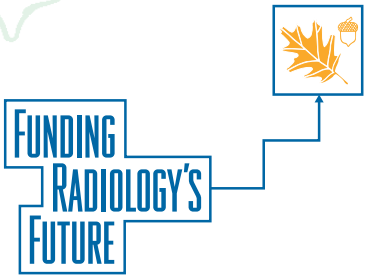


Online donations can be made at *www.rsna.org/research/foundation/donation.*

PROGRAM AND GRANT ANNOUNCEMENTS

NEW!

Retirement Distribution Planning and Investment Seminars

RSNA will sponsor two courses presented by National Tax & Investment Seminars on Saturday, November 30, 2002, at McCormick Place in Chicago.

Effective Retirement Plans and Distribution Strategies

Barry Rubenstein, B.S., J.D., L.L.M.
8:30 a.m. – 11:30 a.m.
Topics to be discussed will include:

- Permissive and Required Distribution from Retirement Plans
- The Taxation of Distribution from Retirement Plans
- The New (2001) IRS Regulations on Retirement Plan Withdrawals
- Protecting the Plan Assets from Creditors
- How Life Insurance Can Play a Part in the Retirement Plan
- Benefiting from a Non-Qualified Retirement Plan
- The New Roth IRA
- The Advantages and Disadvantages of Terminating an Existing Retirement Plan
- Basic Estate Tax Rules and Strategies

Effective Investment Strategies

J. Michael Moody, B.S., M.B.A.
1:00 p.m. – 4:00 p.m.
Topics to be discussed will include:

- Online Trading: Appreciate the Benefits but Watch for the Pitfalls
- Why Money Managers Don't Want You to Know About Index Funds
- Strategies to Protect Investment Returns in Volatile Markets
- Selecting Mutual Funds Suited to Your Needs—Not Wall Street's
- Day Trading: If It's Investing, Why Isn't It Called Investing?

- Exchange Traded Funds: Are They Really Superior to Stock Index Funds?
- Funding the High Cost of Your Children's College Education

Registration is $139 per course for RSNA members ($269 for both courses), $99 per course for members-in-training ($169 for both courses), and $169 per course for non-members ($289 for both courses).

Registration is accepted by fax, mail and on the Internet. For more information or to register online, go to *www. rsna.org/education/shortcourses.* Or, contact the RSNA Education Center staff at (630) 590-7715 or *ed-ctr@rsna.org.*

RSNA: Working for You

Free Online Journals

All Active and Associate members of RSNA receive free online access to the Society's two peer-reviewed journals, *Radiology* and *RadioGraphics*. To activate your subscription, go to *www.rsnajnls.org/subscriptions*.

You will need your 8-digit member/subscriber number, which you can obtain from:

- The mailing label of your print copy of the journals.
- Your membership card.
- The mailing label of *RSNA News*.
- By contacting the subscription department at *subscrib@rsna.org*.

Add zeros to the beginning of the number to make 8 digits.

All RSNA Members-in-Training also have free online access to the journals. They can purchase a subscription to the print journals at the highly subsidized rate of $80.

Membership Renewal Online

RSNA membership renewal is now available online (*www.rsna.org/memberservices/*). This new feature is in the same area of *RSNA Link* where you can update your mailing address for RSNA journals and correspondence, check the CME Credit Repository and search the Education Portal catalog.

Membership renewal uses the RSNA shopping cart, so you can order RSNA education materials and sign up for RSNA short courses during the same online session.

Online Donations to the R&E Foundation

Members and nonmembers can make online donations to the RSNA Research and Education Foundation via *www.rsna.org/research/foundation/donation/*. You may make a general contribution or become a member of The RSNA President's Circle program. Like membership renewal, donations are added to your shopping cart. You can also download, print and mail or fax a donation form. Additional R&E Foundation donation programs are also available.

Residents' Lounge at RSNA 2002

RSNA Members-in-Training and nonmember residents are invited to visit the Residents' Lounge during RSNA 2002, December 1–6, in Chicago.

Leading Medicine's RSNA 2002 Digital Transformation

The Residents' Lounge provides a place to relax and network with colleagues while enjoying complimentary refreshments. Sample issues of *Radiology, RadioGraphics, RSNA News* and the 2002 *Education Center Catalog* will also be available.

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

WORKING FOR YOU PROFILE

NAME:
Kolleen Klein

POSITION:
Director: Membership & Subscription Services

WITH RSNA SINCE:
July 13, 1994

SERVICE TO MEMBERS:
As ambassador for the Society, the Membership & Subscription Services Department responds to member inquiries and provides information or directs them to the appropriate staff for assistance. The membership department processes member applications, verifies membership, updates member data, processes payments for dues, answers journal subscription and online access inquiries and assists members where needed. The staff is actively involved with recruitment and retention of members.

WORK PHILOSOPHY:
Thirty years of customer service experience taught me to listen to the needs of each individual caller with an empathetic ear. Prompt resolution of all queries is essential to member satisfaction.

Through management support and training, staff evolves into a team that is able to efficiently evaluate, analyze and resolve member concerns. Our goal is to make sure members have a positive experience interacting with staff.

Kolleen Klein

News about RSNA 2002

Opening ceremonies at RSNA 2001 were held in the Arie Crown Theater at McCormick Place.

Advance Registration Deadline Nears for Non-North American Attendees

International registration forms must be received by October 11, 2002, for non-North American attendees to receive a badge wallet by mail. Badge wallets contain a name badge, tickets and attendance vouchers. International registration forms received October 12 – November 1 require badge wallets to be picked up at McCormick Place in the South Building, Room S100, Desk A during professional registration hours.

North American attendees who register by November 1, 2002, will have their badge wallet mailed to them in advance of RSNA 2002.

Transportation To and From McCormick Place

Commuting between the Loop and McCormick Place has never been easier. In addition to the free Metra Train System pass that will be included in the badge wallet for the seven days of RSNA 2002, a new bus lane is now open between the Loop and McCormick Place. RSNA shuttle buses will use this new bus lane, dramatically reducing the travel time from Randolph Street to the McCormick Place South Building to only nine minutes—even during rush hour.

On Friday, December 6, shuttle bus service will be available to and from the Lakeside Center only.

CME Opportunities

RSNA 2002 offers up to 80.5 hours of category 1 credit toward the AMA Physician's Recognition Award.

Advance Registration Saves Time & Money

Leading Medicine's
RSNA 2002
Digital Transformation

December 1 – 6
McCormick Place, Chicago

Registration rates increase $100 onsite, so register by November 1 to save money and avoid long lines at McCormick Place. Also, housing reservations are made on a first-come, first-served basis. The sooner you register, the better your chances of booking the hotel of your choice.

For more information on RSNA 2002, call (630) 571-7862 or e-mail reginfo@rsna.org.

Registration Made Easy

Online (24/7)
www.rsna.org/rsna/advance-registration/
New in 2002, all registration categories are eligible to register by Internet. If you request hotel reservations, a hotel room deposit will be charged to your credit card.

Fax (24/7)
(800) 521-6017
(847) 940-2386 outside the United States and Canada

Phone (M – F, 8 a.m. – 5 p.m. CT)
(800) 650-7018
(847) 940-2155 outside the United States and Canada

Mail
ExpoExchange/RSNA 2002
108 Wilmot Rd., Ste. 400
Deerfield, IL 60015-0823

A confirmation will be sent by e-mail, fax or mail for each registration processed and for every change made. Please allow seven days for receipt of confirmation. Contact *rsna@expoedge.com* with your registration questions.

Important Dates for RSNA 2002

October 11	Registration Deadline for Non-North American Attendees to Receive Badge Wallet by Mail
November 1	Final Advance Registration Deadline
December 1-6	RSNA 88th Scientific Assembly and Annual Meeting

NEW!

One-Day Badge to View Technical Exhibits

For the first time, RSNA is offering a one-day badge to view the technical exhibits floor at the annual meeting. The badge allows entrance to the technical exhibits only—not the *info*RAD area or any of the scientific sessions. The one-day pass can be purchased onsite for $150 per day at the professional registration desk in the McCormick Place South Building, Room S100.

Technical Exhibit Hours

Sun., Dec. 1 – Wed., Dec. 4
- 10:00 a.m. – 6:00 p.m.

Thurs., Dec. 5
- 10:00 a.m. – 2:00 p.m.

House Lights at McCormick Place

The Education Exhibits at RSNA 2002 will be illuminated by stronger house lighting at McCormick Place this year. Viewbox exhibits and front lighting of backboard panels are being discontinued. While this change may not be noticeable to attendees, it will result in considerable cost savings.

Bone Densitometry Education Lectures

The International Society for Clinical Densitometry (ISCD) will host bone densitometry education lectures and a certification exam for the clinical and technical tracks December 7–8, 2002, immediately following RSNA 2002 at McCormick Place.

Bone densitometry education lectures and certification exams are available for physicians, Ph.D.s, technologists/allied healthcare professionals, nurse practitioners and physician assistants.

For more information, contact ISCD at (202) 367-1132 or *www.iscd.org*.

Year after year, the technical exhibition portion of the RSNA Annual Meeting is ranked as the largest medical trade show in the United States and Canada, according to *Trade Show Weekly*.

Important Exhibitor Dates – RSNA 2002

Sept. 16	Deadline for RSNAnet Network service application/contract and floor plan drop location
Sept. 23	Target floor plan mails
	Non-refundable block housing deposits due
	Block housing deposits and rooming lists are due
Oct. 11	Deadline for Exhibitor Appointed Contractor Request Forms
	Deadline for Exhibitor Badge Order Form
Oct. 14	Block Housing attrition clause initiated
Nov. 1	Deadline for housing changes and cancellations
	Deadline for Exhibitor Individual Housing Forms and suite requests
	Deadline for Function Space Requests
Nov. 25	Target move-in begins
Nov. 29	General move-in begins
Dec. 1-6	RSNA 88th Scientific Assembly and Annual Meeting

Ron Schramm

Buckingham Fountain in Chicago's Grant Park is the world's largest illuminated fountain.

Source: City of Chicago Department of Planning and Development, 2001

Technical Exhibits Installation

Installation	
Mon., Nov. 25*	8:00 a.m.–6:00 p.m.
Tues., Nov. 26*	8:00 a.m.–6:00 p.m.
Wed., Nov. 27*	8:00 a.m.–6:00 p.m.
Thurs., Nov. 28 (Thanksgiving Day)	6:00 a.m.–2:30 p.m.
Fri., Nov. 29	8:00 a.m.–6:00 p.m.
Sat., Nov. 30	8:00 a.m.–6:00 p.m.
Sun., Dec. 1	6:00 a.m.–8:00 a.m.

Dismantle	
Thurs., Dec. 5	2:30 p.m.–8:00 p.m.
Fri., Dec. 6	8:00 a.m.–6:00 p.m.
Sat., Dec. 7	8:00 a.m.–4:30 p.m.
Sun., Dec. 8	Hall Closed
Mon., Dec. 9	8:00 a.m.–4:30 p.m.

**Target Move-in (refer to the Target Floor Plan mailed in mid-September).*

www.rsna.org

RSNA Link Redesigned

This spring and summer, an RSNA staff committee evaluated *RSNA Link* for its visual appeal and usability. As a result, major changes were made to help site visitors quickly find what they need and to highlight areas and specific resources deep within the site.

Most of the site has a new look and feel. On the home page, emphasis has shifted from a portal concept, in which the center of the page had many links to interior pages, to a targeted focus on information and articles within the site.

The membership area, the RSNA Research and Education Foundation and information for patients have new prominence with a navigation button for each. Other resources are consolidated in new categories. For example, IHE, RadLex, MIRC and DICOM are all linked in the new "Technology" section.

The "Career" section includes links to radiologic organizations, practice resources and resources for residents, fellows and medical students.

RSNA 2002 materials for the medical news media are posted in a new area of the "Annual Meeting" section.

One technical improvement is an interactive navigation scheme with drop-down menus and submenus available across most of the site. These menus make it easier to jump from one area of RSNA Link to another in one or two clicks. Some dexterity with a mouse is required.

Visitors with browsers more than two-years old may need to upgrade their browsers. Current browsers such as Internet Explorer 6.x, Netscape 6.x, Mozilla 1.0, and Opera 6.x should work fine, because these have best conformity with current Web standards.

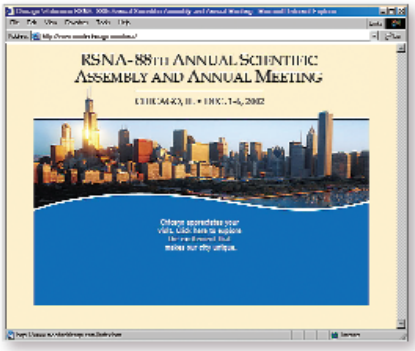
Depending on the speed of your Internet connection and the processing power of your computer, you might find that some pages take longer to download than in the past because the drop-down menus are driven by scripts that your browser has to download along with images and text. Some browsers store these scripts in memory. Others request them from the server every time you click on a link to a different page of *RSNA Link.*

The "Online Products & Services" subsite (which includes membership renewal, InteractED listings, the RSNA CME Repository and an area to make an online donation to the R&E Foundation) retains the old look and feel but will be reformatted to meld with the main site.

Online Support for Meeting Presenters

Do you plan to give a presentation at RSNA 2002? Presenter materials for education exhibits, *info*RAD, refresher courses, scientific paper and scientific posters are available in the "Annual Meeting" section: *www.rsna.org/rsna/documents/index.html*

Welcome to Chicago Guide



For RSNA 2002 attendees, a Welcome to Chicago city guide of the Chicago Convention and Tourism Bureau is available in Spanish, French and German as well as in English. You can choose the Spanish, French, or German version on the first page after the splash page: *www.meetinchicago.com/rsna/*

In all three non-English versions, the navigation bar, its target pages and the search page are in English only, but the eight informational pages linked to the welcome page have been translated.

Free Access to Online Journals

As of July 1, 2002, RSNA Members-in-Training have free access to the online versions of *Radiology* and *RadioGraphics.* Full members also have free online access to the journals. To activate your online subscriptions, go to *www.rsnajnls.org/subscriptions/.* You will need to input your membership number.

Medical Meetings
November 2002 – March 2003

NOVEMBER 8–13
Association of American Medical Colleges (AAMC), Hilton San Francisco & Towers, the Westin St. Francis and the Renaissance Parc 55, San Francisco • (202) 828-0400

NOVEMBER 30
How to Write a Good Grant Application (prior to RSNA 2002), McCormick Place, Chicago • (630) 368-3758 or *ord@rsna.org*

DECEMBER 1–4
Introduction to Research (during RSNA 2002), McCormick Place, Chicago • (630) 368-3758 or *ord@rsna.org*

DECEMBER 1–6
RSNA 2002, 88th Scientific Assembly and Annual Meeting, McCormick Place, Chicago • *www.rsna.org*

DECEMBER 7–8
International Society for Clinical Densitometry (ISCD), Bone Densitometry Certification Lectures and Exam, McCormick Place, Chicago • (202) 367-1132

DECEMBER 8–11
American Medical Association (AMA), Interim Meeting, New Orleans Hilton & Towers, New Orleans • (312) 464-5000

JANUARY 4–7
Indian Radiological & Imaging Association (IRIA), 56th Annual Congress, Jaipur, India • *www.56iriajaipur.net*

JANUARY 23–26
Radiation Therapy Oncology Group (RTOG), Hyatt Regency Houston • (215) 574-3189

JANUARY 31 – FEBRUARY 1
Biomedical Imaging Research Opportunities Workshop (BIROW), RSNA/ARR/AAPM, Hyatt Regency, Bethesda • *www.birow.org*

FEBRUARY 1–5
Mexican Society of Radiology and Imaging (SMRI), XXVII Annual Course of Radiology and Imaging, Sheraton Hotel Centro Historico, Mexico City

FEBRUARY 8–15
American Board of Radiology (ABR), Winter Meeting, Hualalai Resort, Kona, Hawaii • *www.theabr.org*

FEBRUARY 16–21
Society of Gastrointestinal Radiologists (SGR), 32nd Annual Meeting, Fiesta Americana Grand Coral Beach, Cancun, Mexico • *www.sgr.org*

MARCH 2–6
Society of Thoracic Radiology (STR), Annual Meeting and Scientific Session, Loews Hotel, Miami Beach, Fla. • (507) 288-5620

MARCH 7–11
European Congress of Radiology (ECR), Vienna, Austria • *www.myecr.org*

MARCH 12–16
3rd Annual PACS Conference, "Integrating the Healthcare Enterprise," University of Rochester Department of Radiology, Westin Riverwalk Hotel, San Antonio, Texas • (585) 275-1050 or *www.urmc.rochester.edu/pacs2003*

MARCH 24–28
Society of Computed Body Tomography and Magnetic Resonance (SCBT/MR), 23rd Annual Course, Westin Mission Hills Resort, Rancho Mirage, Calif. • (507) 288-5620

MARCH 27 – APRIL 1
Society of Interventional Radiology (SIR), Convention Center, Salt Lake City, Utah • *www.sirweb.org*

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radiology.rsnajnls.org

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radiographics.rsnajnls.org

Education Portal
www.rsna.org/education/etoc.html

CME Credit Repository
www.rsna.org/cme

RSNA Index to Imaging Literature
rsnaindex.rsnajnls.org

***RadiologyInfo*™**
ACR-RSNA public information Web site
www.radiologyinfo.org

RSNA Online Products and Services
www.rsna.org/member services

2001 RSNA Annual Report
www.rsna.org/about/annualreport.html

RSNA 2002 Exhibitor Prospectus
www.rsna.org/rsna/te/prospectus/

Advance Registration for RSNA 2002
www.rsna.org/rsna/advanceregistration/