

RSNA *News*



Photo courtesy of James Brink, M.D.

Limits on Resident Duty Hours Have Initial Positive Impact

Also Inside:

- Radiologists Take Steps to Curtail Inappropriate Imaging Utilization
- Landmark Study Compares Renal Artery Interventions to Medications
- Imaging is Prominent in Year One of NIH Roadmap
- RSNA Fellowship Gives Interventional Radiologist a Chance to Build Foundation

RSNA 2004
November 28 – December 3

RSNA *News*

- 1 People in the News**
- 2 Announcements**
- 3 Letters to the Editor**
- 4 RSNA Board of Directors Report**

- Feature Articles**
- 5 Radiologists Take Steps to Curtail Inappropriate Imaging Utilization**
- 7 Landmark Study Compares Renal Artery Interventions to Medications**
- 9 Imaging is Prominent in Year One of NIH Roadmap**
- 11 Limits on Resident Duty Hours Have Initial Positive Impact**

- Funding Radiology's Future**
- 18 RSNA Fellowship Gives Interventional Radiologist a Chance to Build Foundation**
- 19 R&E Foundation Donors**

- 13 RSNA: Working for You**
- 14 Program and Grant Announcements**
- 15 Journal Highlights**
- 16 Radiology in Public Focus**
- 20 Product News**
- 21 RSNA 2004 Lecture Preview**
- 23 Meeting Watch**
- 24 Exhibitor News**
- 25 RSNA.org**

RSNA News

November 2004 • Volume 14, Number 11

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

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*.

Contents of *RSNA News* copyrighted ©2004 by the Radiological Society of North America, Inc.

Letters to the Editor

E-mail: rsnanews@rsna.org

Fax: (630) 571-7837

RSNA News

820 Jorie Blvd.

Oak Brook, IL 60523

Subscriptions

Phone: (630) 571-7873

E-mail: subscribe@rsna.org

Reprints and Permissions

Phone: (630) 571-7829

Fax: (630) 590-7724

E-mail: permissions@rsna.org

RSNA Membership:

(877) RSNA-MEM

EDITOR

Susan D. Wall, M.D.

DEPUTY EDITOR

Bruce L. McClennan, M.D.

CONTRIBUTING EDITOR

Robert E. Campbell, M.D.

MANAGING EDITOR

Natalie Olinger Boden

EXECUTIVE EDITOR

Joseph Taylor

EDITORIAL ADVISORS

Dave Fellers, C.A.E.

Executive Director

Roberta E. Arnold, M.A., M.H.P.E.

Assistant Executive Director

Publications and Communications

EDITORIAL BOARD

Susan D. Wall, M.D.

Chair

Bruce L. McClennan, M.D.

Vice-Chair

Lawrence W. Bassett, M.D.

Richard H. Cohan, M.D.

David S. Hartman, M.D.

Richard T. Hoppe, M.D.

William T.C. Yuh, M.D., M.S.E.E.

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

Board Liaison

CONTRIBUTING WRITERS

Stephen Barlas

Bruce K. Dixon

Joan Drummond

Marilyn Idelman Soglin

GRAPHIC DESIGNER

Adam Indyk

WEBMASTERS

James Georgi

Ken Schulze

2004 RSNA BOARD OF DIRECTORS

Robert R. Hattery, M.D.

Chairman

R. Gilbert Jost, M.D.

Liaison for Annual Meeting and Technology

Theresa C. McLoud, M.D.

Liaison for Education

Gary J. Becker, M.D.

Liaison for Science

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

Liaison for Publications and Communications

Burton P. Drayer, M.D.

Liaison-designate for Annual Meeting and Technology

Brian C. Lentle, M.D.

President

David H. Hussey, M.D.

President-elect

Emory Names New Radiology Chair

Sanjay Saini, M.D., has been appointed the William Patterson Timmie Professor and chair of the Department of Radiology at Emory University School of Medicine in Atlanta.

Dr. Saini, who specializes in gastrointestinal imaging, had previously spent 23 years on the faculty at Harvard Medical School. He was

also the director of computed tomography and vice-chair of radiology for health systems affairs at Massachusetts General Hospital in Boston.

Dr. Saini succeeds **William Casarella, M.D.**, who will continue as executive associate dean for clinical affairs at Emory.



Sanjay Saini, M.D.

Janjan Appointed to Prominent CMS Committee

Nora A. Janjan, M.D., has been appointed to the Medicare Coverage Advisory Committee (MCAC) for the Centers for Medicare and Medicaid Services (CMS). MCAC advises CMS on whether specific medical items and services are reasonable and necessary under Medicare law.

Dr. Janjan is a professor of radiation oncology at the University of Texas M.D. Anderson Cancer Center in Houston. She is the co-founder of the Multidisciplinary Metastatic Bone Pain Clinic, and is a past-chair of the American Society for Therapeutic Radiology and Oncology.

Dr. Janjan is a long-time RSNA volunteer, currently serving on the RSNA Public Information Advisors Network.

To view the MCAC appointees, including radiologists and radiation oncologists, go to www.cms.hhs.gov/mcac/roster.asp.



Nora A. Janjan, M.D.

IN MEMORIAM:

William B. Seaman, M.D.

Accomplished researcher and respected radiology leader **William B. Seaman, M.D.**, has died at the age of 87.

Dr. Seaman, an RSNA member for more than 50 years, was a past-president of many radiology organizations, including the American College of Radiology, American Roentgen Ray Society, Association of University Radiologists, Society of Chairman of Academic Radiology Departments, and Society of Gastrointestinal Radiologists. He was chairman of the Columbia University Department of Radiology from 1956 to 1982, where he spent a great deal of time educating and nurturing his residents.

“The residents who have graduated from Dr. Seaman’s program have all had highly satisfying careers, and many have emulated him by rising to positions of leadership throughout academic and private radiology,” says Jeffrey H. Newhouse, M.D., a professor of radiology at Columbia. “But the most important memories of him must be personal: those who knew him remember him as unfailingly kind, welcoming to all, constantly good-humored and as the essential gentleman.”



William B. Seaman, M.D.

IN MEMORIAM:

Richard H. Greenspan, M.D.

A memorial service was held at Yale University in October for **Richard H. Greenspan, M.D.**, a long-time chairman of Yale’s Diagnostic Radiology Department. Dr. Greenspan died in February after a long struggle with Alzheimer’s disease. He was 78.

“Dick Greenspan was a physician, a teacher and a mentor to many academic radiologists, several chairmen and deans,” says James A. Brink, M.D., interim chairman of diagnostic radiology at Yale. “Dick had a lifelong interest in music and

was an enthusiastic violinist, an avid golfer and tennis player.”

Dr. Greenspan’s career at Yale spanned nearly 20 years. He was chairman from 1973 to 1986, and was associate dean for clinical affairs from 1986 to 1991. In 1994, Dr. Greenspan was named professor emeritus. He retired from active practice in 1999.

Dr. Greenspan was a founding member and president of the Fleischer Society, and was a member of RSNA for nearly 40 years.



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.

Membership Renewal Available Online

RSNA members should have received their 2005 dues notices. Because online access to *Radiology* and *RadioGraphics* is tied to membership status, payment not received by December 31, 2004, will trigger an automatic inactivation of online subscriptions.

Members can quickly and easily renew their membership online. Go to www.rsna.org/renew. Enter your member num-

ber (found on your *RSNA News* address label) and password, and then click on Renew Membership.

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

2005 Membership Dues

	NORTH AMERICA	OUTSIDE NORTH AMERICA
Membership Dues (print and online journals)	\$325	\$415
Membership Dues (online journals only)	N/A	\$325
Retired Members (online journals only) (Print journals available at a reduced subscription rate)	Free	Free
Members-In-Training (online journals)	Free	Free
(reduced subscription rate for print journals)	\$80	\$190

Clinical Trials Methodology Workshop Planned for 2006

RSNA is planning a Clinical Trials Methodology Workshop in January 2006. Thirty imaging scientists are expected to be chosen to train in development of clinical trials protocol through workshop didactic sessions, one-on-one mentoring, discussion sessions, self-study and protocol synthesis.

A subcommittee of the RSNA Research Development Committee is handling the intensive course preparation, application and selection process.

The subcommittee is headed by Daniel Sullivan, M.D., from the National Cancer Institute, and Constantine A. Gatsonis, Ph.D., from Brown University.

The RSNA course was inspired by the annual American Association for Cancer Research-American Society of Clinical Oncology (AACR-ASCO) workshop held in Vail, Colo. Four radiologists participated as students in the most recent workshop. Three radiologists were on the faculty.

Topics to be covered by the RSNA course include:

- Clinical study design
- Biostatistics
- Multi-institutional studies
- Human subjects investigation
- Ethics
- Regulatory processes

More detailed information will be included in future editions of *RSNA News*.

NIH Opens New Clinical Research Hospital

The National Institutes of Health has opened a new hospital dedicated solely to clinical research. The Mark O. Hatfield Clinical Research Center is an 870,000-square-foot facility that connects to the existing NIH Clinical Center.

In the 50 years that the NIH Clinical Center has been opened, more than 350,000 people have participated in clinical studies. Among the accomplishments:

- First cure of a solid tumor with chemotherapy
- First chemotherapy for childhood leukemia and Hodgkin's disease
- Discovery of evidence of a genetic component in schizophrenia
- First use of nitroglycerin for acute myocardial infarction
- First use of hydroxyurea to treat sickle cell anemia
- First gene therapy



- First successful replacement of a mitral valve
- First use of AZT to treat AIDS
- Development of screening tests for AIDS and hepatitis which reduced the transmission rate of transfusion-transmitted hepatitis from 30 percent to near zero

More than 1,000 clinical studies will be conducted in the new clinical research center. NIH says the new hospital will continue to set the pace for developing the most promising medical advances and providing a synthesis of medical knowledge to radically improve human health.

More information is available at www.cc.nih.gov/index.cgi.



Medicare to Cover Carotid Artery Stenting in FDA Study

The Centers for Medicare & Medicaid Services (CMS) says it will expand coverage of percutaneous transluminal angioplasty (PTA) of the carotid artery with placement of an FDA-approved carotid stent. This will allow coverage for participants in a large FDA-mandated post-approval study for the newly approved device.

“We are increasing Medicare beneficiaries’ access to innovative treatment to prevent strokes and supporting the development of better evidence on how our beneficiaries can best use this new treatment,” said CMS Administrator Mark B. McClellan, M.D., Ph.D.

Previously, CMS covered only PTA of the carotid artery concurrent with stent placement in clinical trials being conducted prior to FDA approval.

CMS is also evaluating a separate request for a broader coverage expansion of PTA of the carotid artery concurrent with stent placement for patients at high risk for carotid endarterectomy. The CMS evidence-based review, which will involve public comment on a draft coverage decision, is scheduled to be completed in early 2005.

For more information, go to www.cms.hhs.gov/media/press/release.asp?Counter=1184.

Medicare Expands Coverage of PET Scans for Alzheimer’s Disease

CMS has expanded Medicare coverage of positron emission tomography (PET) to include some Medicare beneficiaries with suspected Alzheimer’s disease and to include other beneficiaries at risk for Alzheimer’s disease who are enrolled in a large and easily accessible clinical trial.

For more information, go to www.cms.hhs.gov/media/press/release.asp?Counter=1200.

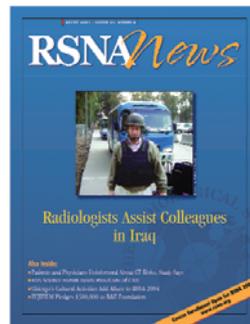
LETTERS TO THE EDITOR

TO THE EDITOR:

The feature, “Patients and Physicians Uninformed About CT risks, Study Says,” in the August issue of *RSNA News* illustrates the need for more education regarding radiation dose and risks associated with CT. The study estimates the radiation dose from one CT ranges from 100 to 250 chest radiographs. Recently, a table published in *Radiology Today* (July 19, 2004) summarized doses from a European Commission report. This table lists the typical effective dose in mSv for CT head

and CT abdomen procedures as 2 and 10 mSv, equaling 100 and 500 PA chest radiographs, respectively. Also, the time period for the same equivalent effective dose from natural background radiation (based on 3 mSv/yr) ranged from 243 days to 3.3 years. This table also lists other procedures compared to an effective dose of 0.023 mSv for a PA film.

While effective dose may vary



according to procedure, patient variables, imaging system and operating technique, the increasing prevalence of CT scanning suggests imaging professionals will need a more sophisticated understanding of the dosimetry and potential risks

associated with this modality.

JAMES BRADLEY SUMMERS, M.D.
UNIVERSITY OF SOUTH ALABAMA,
MOBILE

TO THE EDITOR:

Regarding your item in the August issue of *RSNA News* concerning the appointment of Kaori Togashi, M.D., Ph.D., as the first woman to chair a radiology department at a national university in Japan (Kyoto University’s Graduate School of Medicine), I would also like to recognize the accomplishments of RSNA member Atsuko Heshiki, M.D.

Dr. Heshiki has been a female chair of a radiology department at a private Japanese medical school (Saitama Medical School) for some 17 years.

Dr. Heshiki completed her residency in diagnostic radiology at Johns Hopkins Hospital in the mid ‘60s, at which time I was radiologist-in-charge of the Division of Diagnostic Radiology there. We have been very proud of Dr. Heshiki’s accomplishments. She

recently became president-elect of the Medical Women’s International Association and, in that capacity, was at the United Nations in New York this fall.

B.G. BROGDON, M.D.
UNIVERSITY DISTINGUISHED
PROFESSOR EMERITUS
DEPARTMENT OF RADIOLOGY
UNIVERSITY OF SOUTH ALABAMA
MEDICAL CENTER, MOBILE

RSNA Board of Directors Report

As RSNA and many of our members prepare for the Society's 90th Scientific Assembly and Annual Meeting in Chicago, RSNA committees and staff are already discussing ways to improve the annual meeting educational experience and to help members create educational plans customized for their needs in maintenance of certification (MOC).

MOC and Continuing Medical Education

RSNA is working with the American College of Radiology (ACR) and some other radiology organizations to launch a continuing medical education (CME) gateway. This gateway provides members with a single point to access all of the CME credits they have earned through the participating organizations.

The gateway will be available by the end of 2004. Members are urged to access the gateway as an online tool for keeping professional CME data.

Meanwhile, RSNA members have direct access to the RSNA CME Repository at rsna.org/cme.

The RSNA CME Repository allows members to keep track of their CME credits earned through RSNA. Members will also be able to create records of their MOC activity, including a customized educational plan based on their professional profile. These records can be used to gauge progress toward meeting MOC requirements.

MOC and Peer Groups

Networking with imaging professionals who have similar practices and educa-

tional needs is an important educational experience itself.

RSNA is working with John Parboosingh, M.D., an internationally known leader in developing enhanced learning activities for physicians. Dr. Parboosingh will help RSNA develop new CME programs and reorganize existing ones to meet and exceed the professional needs of RSNA members.

MOC and Self-Assessment

The RSNA Board has approved a proposal to create a general self-assessment module (SAM). A SAM is a tool that can help members assess their knowledge in various general categories or subspecialty areas. By identifying their strengths and weaknesses, members can further customize their professional development plans to meet MOC requirements.

RSNA 2004

As it has throughout RSNA meetings in the past, state-of-the-art technology will help enhance the educational experience at RSNA 2004. In addition to electronic exhibits and posters, audience response systems will help tailor course material to the audience knowledge level for CME.

A pilot is being done using radiofrequency identification to track attendance at case-based review courses.

The RSNA Board has hired an outside firm to analyze how attendees spend their time at the meeting so that the Society can better understand attendees' needs and how to meet them.



Robert R. Hattery, M.D.
Chairman, 2004 RSNA Board of Directors

Attendee feedback will also be important.

Membership Directory Online

The RSNA Membership Directory will soon be available online at rsna.org/directory. Members can log in using their member ID. They will then be able to customize their search for other RSNA members by name, institution or geographic area.

The online directory will always be up to date.

Members who still want a printed copy of the directory can request one. A postcard will be mailed this month with specific instructions. Requests will be taken until January 7, 2005, by phone, fax, mail, e-mail or online at rsna.org/requestdirectory.

R&E Foundation

As the RSNA Research & Education Foundation celebrates its 20th anniversary

Continued on page 8



**90th Scientific Assembly
and Annual Meeting**

November 28 – December 3, 2004
McCormick Place, Chicago

Radiologists Take Steps to Curtail Inappropriate Imaging Utilization

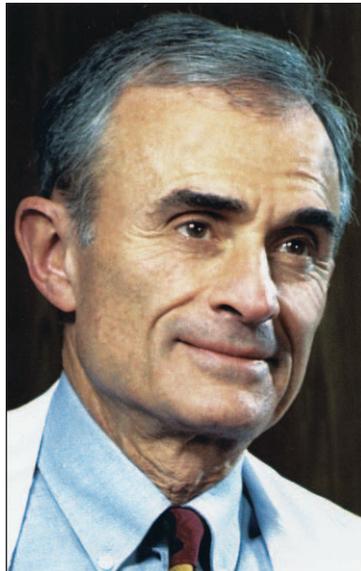
Despite federal legislation against it, self-referral—mainly by non-radiologists—remains a major force behind inappropriate imaging utilization, according to David C. Levin, M.D. “If we’re going to control the costs of imaging in this country, something has to be done to control self-referral,” says the professor and chairman emeritus of the Department of Radiology at Thomas Jefferson University Hospital (TJUH) in Philadelphia.

Dr. Levin and his colleagues, TJUH chairman Vijay Rao, M.D., Andrea Maitino, M.S., and Larry Parker, Ph.D., will present 10 new studies on the subject at RSNA 2004 in Chicago. Their research provides further evidence of the role of self-referral in rising utilization.

“For example, we looked at changes in utilization of cardiac nuclear scans between 1998 and 2002. It turns out that the overall utilization rate per thousand Medicare beneficiaries went up by 43 percent, a sharp rise for this procedure,” explains Dr. Levin. “Separating that out, we find that the utilization rate among radiologists went up by two percent, while among cardiologists it rose by 78 percent—this is all new volume generated primarily by self-referral.”

Other findings by the TJUH team:

- Cardiovascular imaging (CVI) represents 29 percent of the total noninvasive diagnostic imaging (NDI) market. Between 1993 and 2002, the CVI workload grew more than twice as rapidly as all other non-CVI NDI.
- Cardiologists now predominate in CVI, primarily as a result of their high utilization of echocardiography and CV nuclear medicine.
- Among radiologists, the utilization



David C. Levin, M.D.
Thomas Jefferson University Hospital



Vijay Rao, M.D.
Thomas Jefferson University Hospital

rate of NDI (Medicare) dropped almost four percent from 1993 to 1999, but it subsequently rose almost 12 percent from 1999 to 2002. Utilization by non-radiologists grew about twice as rapidly as utilization by radiologists between 1999 and 2002.

- Between 1997 and 2002, interventional radiologists’ share of the percutaneous peripheral vascular intervention market declined substantially, but their total procedure volume continued to grow. This, therefore, continues to be an expanding field for radiologists.
- Rates of growth in reimbursements to orthopedic surgeons for total MR imaging, musculoskeletal MR imaging and spine MR imaging were far higher than the rates of growth for radiologists, according to Medicare

Part B data for 1997 through 2002.

“Since MR imaging by orthopedic surgeons is performed in a largely self-referred setting, this raises the concern that if the trend continues, it could become a significant cost driver for the

Medicare program,” writes the TJUH group.

“Orthopedic surgeons really don’t belong in the business of owning MR scanners,” says Dr. Levin. “That’s a

weakness in the Stark laws and in the healthcare system as a whole. Orthopedic surgeons have no training in how to operate an MR unit, but one of the major problems is that once physicians are licensed to practice medicine in any given state, they can pretty much do whatever they want, even if they’ve never been trained.”

Continued on next page

If we’re going to control the costs of imaging in this country, something has to be done to control self-referral.

David C. Levin, M.D.

Continued from previous page

The Stark Law

Stark II, introduced by Congressman Pete Stark (D-Calif.), prohibits a physician from referring a Medicare or Medicaid patient to an entity in which that physician has a financial interest, whether it's an investment interest or a compensation arrangement, absent regulatory exceptions. One such exemption is the "in-office ancillary service exception," which allows physicians to legally self-refer patients for imaging in their own offices and bill Medicare under their group practice number under specified conditions.

"One of the things that has confused and confounded radiologists is the fact that if the Stark anti-self referral law was adopted for the purpose of trying to curtail the abuse of self-referral, then why does this in-office ancillary service exception exist?" asks Thomas Greeson, J.D., of Reed Smith, LLP, in Falls Church, Va.

"The reason," he explains, "is that Congressman Stark chose to curtail the passive investor/referring physician. An example at the time the law was adopted was the orthopedic surgeon with a limited partnership interest in an imaging center across town or in the same office building where he refers his patients for imaging. The limited partnership interest produced a return merely from the referral of the patient to that imaging center in which the orthopedic physician had an investment interest. This profit solely from a passive referral of patients is what Congressman Stark was trying to prevent. What has transpired, of course, is the proliferation of many imaging arrangements designed to meet the in-office ancillary service exception—hence the growing debate as to whether further steps should be taken to close the in-office ancillary services loophole."

Dr. Levin says he believes it's highly unlikely that Stark II will be toughened soon because there are too many physicians and medical groups who benefit from self-referral who

want to keep the loopholes open.

The only way to counter the influence of special interest groups on Capitol Hill, says Dr. Levin, is for insurers and employers to step up to the plate and take action to limit self-referral. "This responsibility doesn't fall solely on the health plans that keep raising premiums. It also falls on those who are ultimately paying—businesses."

N. Reed Dunnick, M.D., professor and chairman of the University of Michigan Department of Radiology, says a solution must be found soon before over-utilization bankrupts the entire healthcare system. "We don't want to withhold medical care from people," he says. "We want to eliminate those examinations that don't need to be performed in the first place. Our field is changing rapidly and we need to communicate to our colleagues about the appropriate use of our tools. The American College of Radiology (ACR) has done a great job of creating appropriateness criteria, but we all have a responsibility to educate ourselves, our

colleagues and our referring physicians. I think academic medical centers should take the lead on this."

Dr. Dunnick, who also chairs the Intersociety Committee, adds that if

minimum standards existed, it might help to decrease inappropriate utilization, especially that which has been encouraged by self-referral.

"The Mammography Quality Standards Act (MQSA) is an excellent model," he says. "MQSA has improved the quality of mammography. As an unintended consequence, many who had been doing mammography in their offices or as a side-line voluntarily gave up mammography as they did not meet MQSA standards. I believe the pursuit of quality is what is important here."

The Intersociety Committee is preparing a report on inappropriate imaging utilization as a result of discussion at its annual meeting in July. The report will make recommendations on such things as education, generating data, mandating accreditation and extending oversight to outpatient imaging. It is expected to be released in 2005. □

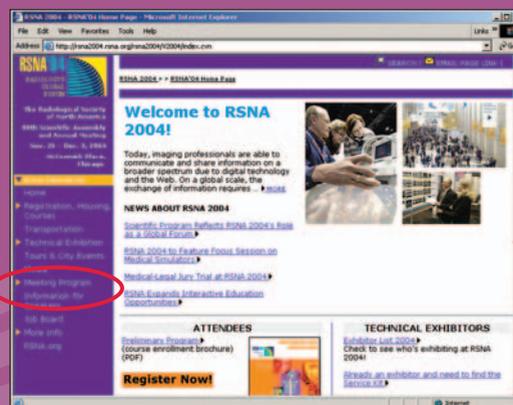
Steps to Curtail Inappropriate Self-Referral

Dr. Levin proposes several strategies for combating self-referral by non-radiologists:

- Lobby for the creation of new federal regulations to make self-referral more difficult.
- Convince insurance companies and other payers that non-radiologists who perform imaging services must be accredited and/or site-inspected to ensure quality.
- Impose privilege limitations on the performance of imaging by non-radiologists.
- Convince payers to reimburse non-radiologists less for imaging than they reimburse radiologists. This makes sense, according to Dr. Levin, because their training is far less.
- Require pre-certification of all self-referred high-tech imaging procedures.

RSNA 2004 Sessions

To search for a schedule of the TJUH team sessions, or any of the sessions at RSNA 2004, go to rsna2004.rsna.org and click on Meeting Program in the left-hand column. For press releases, click on Media in the left-hand column.



Landmark Study Compares Renal Artery Interventions to Medications

Enrollment is about to begin for the Cardiovascular Outcomes in Renal Atherosclerosis Lesions (CORAL) trial, an unprecedented national effort that will involve radiology, cardiology and nephrology.

The \$28 million trial, funded largely by the National Heart, Lung and Blood Institute, will study 1,080 patients with renal artery stenosis. These patients will be randomized over about 100 sites. Each will be followed for three-and-a-half years.

“Half the cohort will get medications and the rest will get non-drug eluting stents plus medications,” says one of the eight co-principal investigators, Timothy P. Murphy, M.D., an interventional radiologist at Rhode Island Hospital and Brown University Medical School in Providence. “We’re going to see who has a

lower incidence of heart attacks, heart failure, strokes and kidney failure. With that study design, we should be able to tell definitively whether there’s any benefit to adding the stent procedure.”

Dr. Murphy says three randomized trials of renal artery angioplasty (RAA) surprisingly found no increased benefit when compared with medications. “At the same time, there has been a 2.4-fold increase in the number of procedures done,” he explains. “So, if a procedure isn’t shown to do any good, why are we dramatically increas-

ing the number of procedures we perform? That’s the impetus for the CORAL study. Instead of looking at a single surrogate endpoint—blood pressure—we’ll examine hard, clinical endpoints.”

Separate studies already under way are gathering similar data for carotid artery stenting. A peripheral artery stenting trial is in the planning stages.

Louis Martin, M.D., a professor in the Department of Radiology at Emory University, will lead the study at his site. “CORAL is an extremely important study,” he says. “RAA and stenting have supplanted surgery. Ninety-five percent of renal arteries that are primarily treated for stenosis are treated by these interventions.

There are millions of people in this patient population. Hopefully, CORAL will give us an idea of who we should treat and when.”

Radiology’s Leading Role

Dr. Murphy is also excited about the

role radiology is playing in CORAL. “This is one of the few multicenter, randomized clinical trials of disease therapy that has had radiology represented from the beginning. In CORAL, radiology is working with cardiology and nephrology as peers to answer this question,” he says. “Many radiologists were integral to getting this study off

Radiologists should be encouraged that obtaining NIH funding for randomized clinical trials of disease management is feasible.

Timothy P. Murphy, M.D.

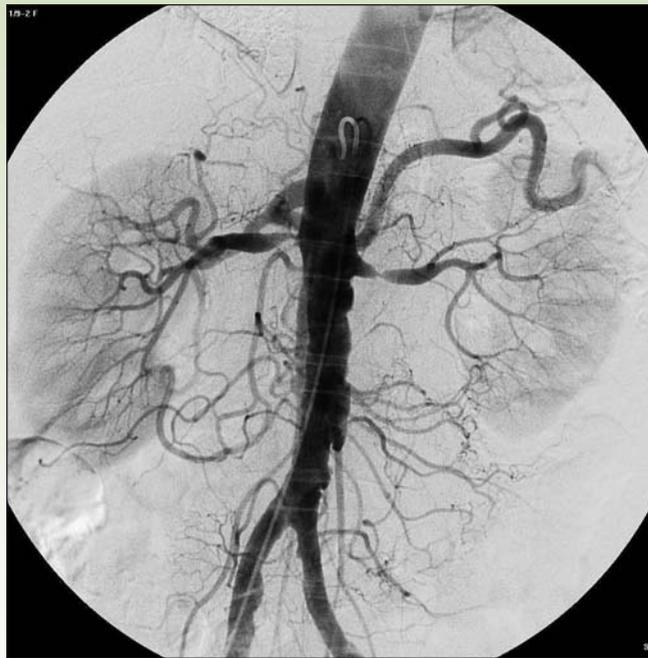


Timothy P. Murphy, M.D.
CORAL Co-Principal Investigator

the ground, from planning and designing to funding and implementation. Radiologists should be encouraged that obtaining NIH funding for randomized clinical trials of disease management is feasible. We should be encouraged to scientifically evaluate our technologies and therapies through NIH funding mechanisms.”

In the September 2004 issue of the *American Journal of Roentgenology*, Dr. Murphy is the lead author of a study showing a dramatic increase in the number of renal revascularizations procedures performed between 1996 and 2000 among Medicare beneficiaries. The total volume increased 62 percent to nearly 22,000 procedures. At the same time, cardiologists increased their annual volume by nearly four-fold.

Continued on next page



(left) Renal artery stenoses before treatment and (right) after stenting procedure.

Images courtesy of Timothy P. Murphy, M.D.

Continued from previous page

The abstract of the article, "Increase in Utilization of Percutaneous Renal Artery Interventions by Medicare Beneficiaries, 1996–2000," is available online at www.ajronline.org/cgi/content/abstract/183/3/561.

See *RSNA News* pages 5-6 for other information on imaging utilization.

For more information on the CORAL trial, go to www.coralclinicaltrial.org. □

RSNA Board of Directors Report

Continued from page 4

sary, the RSNA Board, Foundation Trustees and RSNA staff are developing plans to increase the impact of the Foundation.

One way will be to increase the amount of grant money the Foundation is able to award each year.

The Foundation will announce some new programs at RSNA 2004 that will help achieve this goal.

Other Board Action

- RSNA will jointly administer and finance an effort to identify a research agenda for imaging, along with the Academy of Radiology Research,

American College of Radiology and American Roentgen Ray Society.

- RSNA is working with the Society of Nuclear Medicine on a molecular imaging summit.
- RSNA is collaborating with the Society for Computer Applications in Radiology on collaborative educational programs on digitizing your practice.
- RSNA will participate in the fourth Biomedical Imaging Research Opportunities Workshop, designed to integrate the findings of the first three workshops.
- Three members of the RSNA Electronic Communications Committee will participate in the ACR Image Quality Taskforce.

- The 2005 RSNA media briefing will focus on neuroradiology.

ROBERT R. HATTERY, M.D.
CHAIRMAN, 2004 RSNA BOARD OF DIRECTORS

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



Imaging is Prominent in Year One of NIH Roadmap

One year after National Institutes of Health (NIH) Director Elias Zerhouni, M.D., unveiled his innovative NIH Roadmap, several research initiatives are under way.

Dr. Zerhouni, a radiologist, developed the Roadmap as a way to accelerate bench-to-bedside developments. Extramural grants and intramural programs following the Roadmap stress interdisciplinary efforts and innovative, high-risk, high-impact, groundbreaking research.

Under the Roadmap, funding is divided into three themed research areas:

THEME RESEARCH AREA	FUNDING IN FISCAL YEAR 2004
New Pathways to Discovery	\$64 million
Research Teams of the Future	\$27 million
Re-Engineering the Clinical Research Enterprise	\$38 million

Molecular Libraries and Imaging

New Pathways includes areas of most interest to radiologists—molecular libraries and imaging.

Roderic I. Pettigrew, Ph.D., M.D., director of the National Institute of Biomedical Imaging and Bioengineering (NIBIB), is one of the three co-chairs of the molecular libraries and imaging implementation group. Through molecular imaging, it is hoped that personalized profiles of cell and tissue function can be developed leading to individualized approaches to diagnosing and treating disease.

Belinda Seto, Ph.D., deputy director of NIBIB, says the molecular libraries and imaging implementation group received the most funding in FY 2004. Major initiatives in this area are:



Elias Zerhouni, M.D.
NIH Director



Roderic I. Pettigrew, Ph.D., M.D.
NIBIB Director



Belinda Seto, Ph.D.
NIBIB Deputy Director

- Developing high-specificity/high-sensitivity molecular imaging probes. They are highly specific agents that report on a single molecular event. Molecular imaging probes are also referred to as beacons, reports, tracers, nanoparticles, smart probes and contrast agents. The goal is to improve probe detection sensitivity 10- to 100-fold within five years.
- Creating an imaging probe database describing the specificities, activities and applications of imaging probes for a wide range of diseases and biological functions.
- Opening an imaging probe development center that will produce known imaging probes for the research community in cases where there is no viable commercial supplier. The center will also generate novel imaging probes for biomedical research and clinical applications.

“From our perspective, the

Roadmap is a positive development,” says Ed Nagy, executive director of the Academy of Radiology Research. “Imaging will be competitive for a large number of Roadmap awards, and innovative imaging techniques and technologies will be essential to progress in the broad range of multidisciplinary research supported by the

Taking advantage of these opportunities should be a high priority for the radiology and imaging science communities.

Ed Nagy

Roadmap. Taking advantage of these opportunities should be a high priority for the radiology and imaging science communities.”

Some radiologists are doing just that. The first round of grants for the development of imaging probes for *in vitro* use was awarded

last summer. Applications for the second round are due this month. The second-round research projects will focus on the development of novel and untested “high-risk” approaches to molecular probes.

“We want to fund research that

Continued on next page

Continued from previous page

none of the individual NIH institutes would be able to fund on their own,” explains Dr. Seto. “The Roadmap creates opportunities for researchers to think outside the box.”

This summer, the initial work began on the establishment of a probe database. This is a common database of literature and experimental data through *PubChem*, which is freely available to scientists in the public and private sectors.

Initial work is also under way to develop an intramural center dedicated to producing the probes. “We now have located a building and we are going to lease space in Rockville, Md.,” says Dr. Seto.

Other Imaging Projects

Radiology has followed the Roadmap’s direction into other research areas. For example, in September, the University of Texas (UT) Southwestern Medical Center at Dallas was awarded a planning grant to study the causes of obesity and associated metabolic diseases within an interdisciplinary research center.

The team is lead by Jay D. Horton, M.D., from the Departments of Internal Medicine and Molecular Genetics. Radiologists are among the 24 UT Southwestern team members participating in the study.

“We will use MR methods to quantify fat distribution, particularly in the liver, because liver fat may play a role in causing diabetes,” explains Craig R. Malloy, M.D., a professor of radiology and internal medicine at UT Southwestern. He is trained in cardiology with research interests in diabetes, he says. “Ultrasound and CT give qualitative estimates of liver fat, but MR allows radiologists to quantify fat content. This is important because standard MR scanners can be used for these measurements. Now that MR technology is widely-available, it is important to understand if fat measurements predict the development of type II diabetes or can be used to monitor drug therapy targeting liver fat.”

Imaging will also play a role in at least one of the four newly funded National Centers for Biomedical Computing. These centers will create innovative software programs and other

tools that will permit researchers to integrate and analyze data of different types and sources, opening new pathways for understanding biological processes and human diseases. The National Alliance for Medical Image Computing will develop software programs that integrate analysis and imaging data.

“We know that today’s scientific landscape demands new ways of thinking, and we know we need to introduce new paradigms for the conduct of medical research,” says Dr. Zerhouni. “That’s what the Roadmap is all about—creating a supportive funding environment for scientists and their ideas to come together in ways we’ve never seen before.”

Future initiatives include regional centers for translational research and specialized nanomedicine facilities. In addition, several of the currently funded Roadmap initiatives will be reannounced so that researchers who missed the first opportunity can apply for the next round of Roadmap funds.

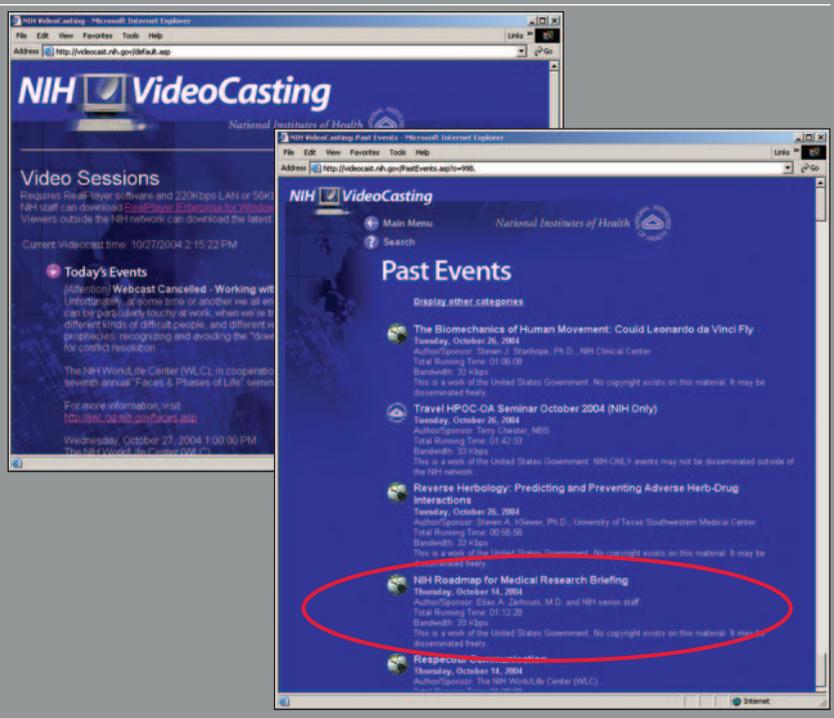
For more information on the NIH Roadmap, go to nihroadmap.nih.gov. □

Roadmap Webcast

On October 14, NIH Director Elias Zerhouni, M.D., and senior NIH staff held a press conference on the progress of the Roadmap over the past year.

The press conference has been archived and is available as a Webcast at videocast.nih.gov/PastEvents.asp?c=998.

Scroll down to Thursday, October 14 and click on the globe next to Roadmap for Medical Research Briefing. The total running time of the Webcast is 1:12:28.



Limits on Resident Duty Hours Have Initial Positive Impact

Residency programs across the country are using innovative scheduling and changes in staffing to meet new duty hour standards set forth in July 2003 by the Accreditation Council for Graduate Medical Education (ACGME). The guidelines limit the number of resident duty hours in the hospital, including time spent on call, to 80 hours per week averaged over four weeks. ACGME hopes this change will protect patients and reduce resident fatigue.

This summer, ACGME reported that most teaching programs are in compliance with the standards. “The Council is gratified by the response of the teaching hospitals in the United States as they met the challenge of implementing the duty hour reforms for residents,” says ACGME Executive Director David C. Leach, M.D. “Major redesign of the healthcare system is still needed and we have a long way to go before we get it right. However, much has been learned in the last year.”

Effect on Radiology

While interventional radiology departments have had to deal with both the duty hour limits and the 24+6 rule, most diagnostic radiology departments have had to make only minor adjustments in the way they handle residency programs. “People have generally been in compliance,” says Carol Rumack, M.D., chair of ACGME’s Diagnostic Radiology Residency Review Committee.

When the new rules came into play, cost had been a major concern but Dr. Rumack says she hasn’t heard radiology departments complain about budgetary woes as a result. “Because the workload has increased dramatically, people are having to come up with



Brian Steele, M.D., chief radiology resident at Loyola University Medical Center, participates in teaching younger colleagues about imaging of the shoulder.

Photo courtesy of Laurie Lomasney, M.D.

plans for call,” she says. “The main impact is the increase in the number of programs using a night float system. With the new rules, residents will be on five or six nights in a row, with no daytime responsibilities, no educational responsibilities and no peer interaction when they add night float rotations to cover call. My concern is that the programs need to pay attention so the resident doesn’t lose too much education and peer interaction.”

The new duty hour standards require that residents work no more than 80 hours a week on average, and get a 10-hour rest period between assigned shifts. Dr. Rumack says some programs may look at moving noon lectures and conferences to an earlier or later time. That way, residents who cover the night shift can review their cases with the attend-

ing radiologist and still attend educational conferences with other residents before they have to leave the hospital to comply with ACGME standards.

Brian Steele, M.D., chief resident in the radiology program at Loyola University School of Medicine in suburban Chicago, believes faculty and physicians take work hour limits seriously. “I think they’re almost hypersensitive to it. I was in the hospital on one occasion and was almost borderline late, and one of the faculty got angry with me for being there,” he explains. “She was clear that I was not to be in the hospital.”

Dr. Steele says Loyola’s radiology department was already in compliance before the standards were put in place. “I think residents generally like the reforms,” he says. “The only problem I

My concern is that the programs need to pay attention so the resident doesn’t lose too much education and peer interaction.

Carol Rumack, M.D.

Continued on next page



Terrence Demos, M.D., shares the stage with the Residency Program Director Laurie Lomasney, M.D., and a skeleton in a teaching conference about anatomy of the upper extremity for radiology residents at Loyola University Medical Center.

Photo courtesy of Laurie Lomasney, M.D.



Third-year resident Robert Demayo, M.D. (left), consults on a case with Robert Goodman, M.D., assistant professor of pediatric radiology at the Yale University School of Medicine.

Photo courtesy of James Brink, M.D.

Continued from previous page

see is when a test is ordered. I'm on at 8 p.m. and by the time the test is done and interpreted, the person who ordered

it might have to leave because of duty hours. If I'm not told whom to contact with the results, I have to do extra legwork—and that can be annoying.”

Dr. Steele's residency program director, Laurie Lomasney, M.D., agrees with his assessment. “We are having to make more of an effort to find the responsible referring physician,” she says. “We also have to create a better method of documentation so that we know who's available and who's going home.”

When new standards were being debated, most concerns were for smaller radiology programs that depended on residents for night coverage. Santa Barbara

Cottage Hospital is a program that had to make some changes. “Our residents used to work a night float in which they'd get off at 10 a.m. and come back at 5 p.m.,” explains Arthur Lee, M.D., director of the hospital's diagnostic radiology residency program. “To meet the required 10-hour rest period, we spread the late duty hours among the staff. We have a staff person stay until 8 p.m. until a resident comes. It's not that bad. It only comes up once or twice a month.”

Dr. Lee says the duty hour rules have improved morale among the residents and haven't really impacted the quality or quantity of cases they get to see. “In fact, the staff in the emergency room and other departments like having an attending here at 7:30 p.m. They get more definitive readings,” he says. “And that's better service.”

Yale-New Haven Hospital was already in compliance before ACGME standards were instituted. It's one of a few departments featuring 24/7 radiology coverage. “We were under pressure from trauma surgeons and emergency physicians to provide a comparable level of service around the clock, so we were almost completely unaffected by the new standards,” says James Brink, M.D., interim chairman of the Department of Diagnostic Radiology.

Dr. Brink says there is increasing pressure on hospitals to prove that radiology services billed were actually performed at the time of the patient's treatment. He believes that trend may again change the dynamics in radiology residency programs with more programs covering with attending physicians who can bill for nighttime services.

Dr. Brink and other faculty agree that the changes in ACGME standards highlight the balancing act residency programs must perform. They must protect patients and physicians from mistakes made due to fatigue, while giving tomorrow's medical professionals experience interpreting diagnostic tests.

“The experience of reading on your own is invaluable,” says Dr. Lomasney. “That's when we have to make decisions and depend on our colleagues in the hospital. It's not isolated learning. Radiology is a consultative service and learning that method of communication is critical.”

ACGME is hoping its newest standards make sure that education takes place while residents and fellows are rested and ready to learn. □

ACGME Duty Hour Limits for Radiology Residents and Fellows

- 80 hours per week
- Call no more than every third night
- Continuous time in the hospital not more than 24 hours with six hours grace time to “catch up” and attend to educational activities but not to care for new patients
- One full day (24 hours) off per week
- 10 hours rest out of the hospital between duty periods
- An educational program involving faculty and residents regarding the signs of fatigue
- A monitoring program and system to respond to resident fatigue
- Pre-approval by the program director for moonlighting (moonlighting within the institution counts toward the 80-hour limit)

Working For You



Special Member Recognition

Last month, RSNA mailed special member recognition ribbons to more than 6,400 people who have been RSNA members for at least 25 years.

The teal and gold ribbons can be attached to the RSNA annual meeting badge so that long-time members are easily recognizable at RSNA 2004.

YEARS OF MEMBERSHIP	NUMBER OF MEMBERS
25–29 years	2,638 people
30–39 years	2,395 people
40–49 years	960 people
50–59 years	372 people
60–69 years	32 people
70+ years	6 people

Retired Member Status

RSNA members can request retired status if they are retired from the practice of medicine or other active involvement in radiology or related fields. To qualify, a member must also have been in good standing with the Society for at least 10 years.

Retired members do not pay dues or assessments. They can still attend the RSNA annual meeting for free with advance registration. They will

also continue to receive a printed copy of *RSNA News* and have free online access to *Radiology* and *RadioGraphics*. Print subscriptions to the journals are offered at a subsidized rate to retired members.

Requests for retired status may be made online at rsna.org/retired, or may be made in writing to the RSNA Secretary-Treasurer at 820 Jorie Blvd., Oak Brook, IL 60523.

RSNA Public Service Announcements

To coincide with breast cancer awareness month in October, RSNA provided public service announcements to radio stations throughout the United States about how medical imaging plays a role in the diagnosis and treatment of breast cancer. As part of the announcements, listeners were instructed to

go to RadiologyInfo.org to learn more about mammography, radiation therapy and other related radiologic procedures.

Public service announcements on virtual colonoscopy will be offered in March 2005 to coincide with national colorectal cancer awareness month.

SERVICE TO MEMBERS:

In addition to being managing editor of *RSNA News*, I am also the assistant director of the Marketing & Communications Department. My specific responsibilities include overseeing the writing and production of *RSNA News*, annual report, membership directory and the *Daily Bulletin*—the official daily newspaper of the RSNA Scientific Assembly and Annual Meeting. I also contribute to the *RSNA Meeting Program* and write and edit a substantial number of print and electronic communications originating in my department.

I have more than 25 years of experience in communications. I spent 16 years as a radio news reporter in Chicago before joining the American Medical Association as a senior public information officer in charge of pro-

moting *The Journal of the American Medical Association*, the *Archives* family of specialty journals, and other science news. I was also the director of public relations and marketing for a video production/distribution company that specializes in educational programming and novelty television programs, such as *The*

Honeymooners and *Dark Shadows*.

These past experiences help me provide a unique perspective and make tangible contributions to the

Marketing & Communications Department and its mission to promote RSNA as the world's premier source of radiology science and education.

WORK PHILOSOPHY:

Work hard, maintain your integrity, be flexible and find enjoyment in both your personal and professional experiences.



NAME:
Natalie Olinger Boden

POSITION:
Managing Editor,
RSNA News

WITH RSNA SINCE:
February 7, 2001

Working
for you
PROFILE

Continued on next page

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

Program and Grant Announcements

Grants Available for Biological Scientists of the Future

The Howard Hughes Medical Institute (HHMI) and the National Institute of Biomedical Imaging and Bioengineering (NIBIB) are joining forces to provide start-up funds and sustain support for graduate training programs that integrate the biomedical sciences with the physical sciences and engineering.

HHMI will award up to 10 three-year grants of as much as \$1 million each to support the development and early phases of the interdisciplinary programs. NIBIB will provide five additional years of support to the HHMI grantees through peer-reviewed institutional training grants.

"NIBIB is excited to enter into this historic alliance with HHMI to support training of the biomedical scientist of the future, one skilled in interdisciplinary research," says NIBIB Director



Roderic I. Pettigrew, Ph.D., M.D.
"These scientists will be better equipped to meet the complex challenges of 21st century medicine."

The grants will be awarded in November 2005. HHMI is now accepting applications from U.S. institutions that grant Ph.D. degrees.

For more information, go to www.hhmi.org or to www.nih.gov/news/pr/sep2004/nibib-27.htm.

Registration Open for BIROW 3

Register online for the third Biomedical Imaging Research Opportunities Workshop (BIROW 3), scheduled March 11–12, 2005, in Bethesda, Md.

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:

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



**Biomedical
Imaging
Research
Opportunities
WORKSHOP 3**

Category 1 continuing medical education (CME) credits are available and an application for medical physics continuing education credits (MPCEC) has been submitted. For program information or to register, go to www.birrow.org.

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

Reminder:

The RSNA Research & Education Foundation grant deadlines are:

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

For more information, go to www.rsna.org/research/foundation or contact Scott Walter at (630) 571-7816 or at swalter@rsna.org.

RSNA MEMBER BENEFITS

Continued from previous page

Webcast of the Sunday Image Interpretation Session

RSNA members who cannot attend RSNA 2004 can still participate in one of the most popular sessions at the annual meeting—the Sunday Image Interpretation Session.

Registration is now open to view the live Webcast on Sunday, November 28, 2004, at 4:00 p.m. (Central Time). Go to rsna.org/sunday and click on the registration area in the lower right-hand box.

This year's moderator is Burton P. Drayer, M.D., from New York City. The panelists are George S. Bisset III, M.D., from Durham, N.C.; Michael N. Brant-Zawadzki, M.D., from Newport Beach, Calif.; Elliot K. Fishman, M.D., from Baltimore; Nancy M. Major, M.D., from Durham, N.C.; and Georgeann McGuinness, M.D., from New York City.

The live Webcast offers 1.75 continuing medical education (CME) credits toward the AMA Physician's Recognition Award.

Last year, viewers in more than 30 countries watched the live session.

The Webcast will be archived for later viewing, but CME will not be offered.

Journal Highlights

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

Cancer Risks among Radiologists and Radiologic Technologists: Review of Epidemiologic Studies

Large numbers of professional and technical personnel in medicine, dentistry, and veterinary medicine are exposed to radiation while administering various radiologic procedures.

Radiology

In a review article in the November issue of *Radiology* (rsna.org/radiology/jnl), Shinji Yoshinaga, Ph.D., and colleagues from the Division of Cancer Epidemiology and Genetics at the National Cancer Institute, discuss the cancer risks to workers as a result of exposure to human-made sources of radiation.

While they found an increased risk of mortality from leukemia among workers employed before 1950 when radiation exposures were high, they found no clear evidence of an increased cancer risk in medical radiation workers exposed to current levels of radiation.

Calendar Year Period of Employment	No. of Years Worked in Each Calendar Year Period*			P Value for Trend†
	0 (referent category)	1-4	5 or More	
Breast cancer				
Before 1950	1.0 (37)	2.17 (35)*	2.08 (29)*	.018
1950-1959	1.0 (57)	1.18 (67)	1.08 (63)	NS
1960-1969	1.0 (63)	1.06 (79)	0.97 (106)	NS
1970-1979	1.0 (81)	0.75 (34)	0.76 (143)	NS
Lung cancer				
Before 1950	1.0 (95)	0.86 (57)	0.72 (53)	NS
1950-1959	1.0 (64)	0.97 (73)	1.04 (130)	NS
1960-1969	1.0 (70)	0.79 (43)	0.92 (173)	NS
1970-1979	1.0 (90)	1.14 (42)	0.86 (156)	NS
Leukemia‡				
Before 1950	1.0 (5)	1.46 (3)	4.95 (7)	.05
1950-1959	1.0 (14)	0.27 (3)	0.54 (10)	NS
1960-1969	1.0 (10)	1.47 (9)	1.03 (17)	NS
1970-1979	1.0 (4)	1.76 (3)	3.20 (29)	NS

Relative Risk of Mortality due to Selected Cancers According to Number of Years Worked in Specified Calendar Year Periods Among U.S. Radiologic Technologists

Data are relative risk, with number of deaths in parentheses. NS = not significant. $P < .05$. Excluding chronic lymphocytic leukemia.

(*Radiology* 2004;232: 313-321) © 2004 RSNA. All rights reserved. Printed with permission.

tion doses.

They write: "Given a relatively short period of time for which the most recent workers have been followed up and in view of the increasing uses of radiation in modern medical practices, it is important to continue to monitor

the health status of medical radiation workers."

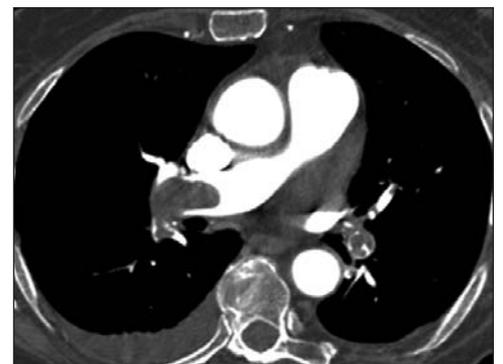
This article also includes "Essentials" or highlighted points to help busy readers recognize important information at a glance.

CT Angiography of Pulmonary Embolism: Diagnostic Criteria and Causes of Misdiagnosis

Pulmonary embolism is the third most common acute cardiovascular disease after myocardial infarction and stroke, and results in thousands of deaths each year because it often goes undetected.

RadioGraphics

Pulmonary angiography is the diagnostic standard of reference for confirming or refuting a diagnosis of pulmonary embolism, but while the technique remains under-



Acute Central Pulmonary Embolism in Asymptomatic 87-Year-Old Woman

(left) Unenhanced CT scan demonstrates subtle regions of hyperattenuation (arrow). (right) Confirmatory CT pulmonary angiogram demonstrates acute pulmonary embolism within the right main and left interlobar pulmonary arteries.

(*RadioGraphics* 2004;1219-1238) © 2004 RSNA. All rights reserved. Printed with permission.

Continued on page 17

Radiology in Public Focus

A press release has been sent to the medical news media for the following items appearing in the November issue of *Radiology* (radiology.rsna.org):

MR-guided Percutaneous Sclerotherapy of Low-Flow Vascular Malformations: Qualitative and Quantitative Assessment of Therapy and Outcome

MR imaging can improve treatment of low-flow vascular malformations.

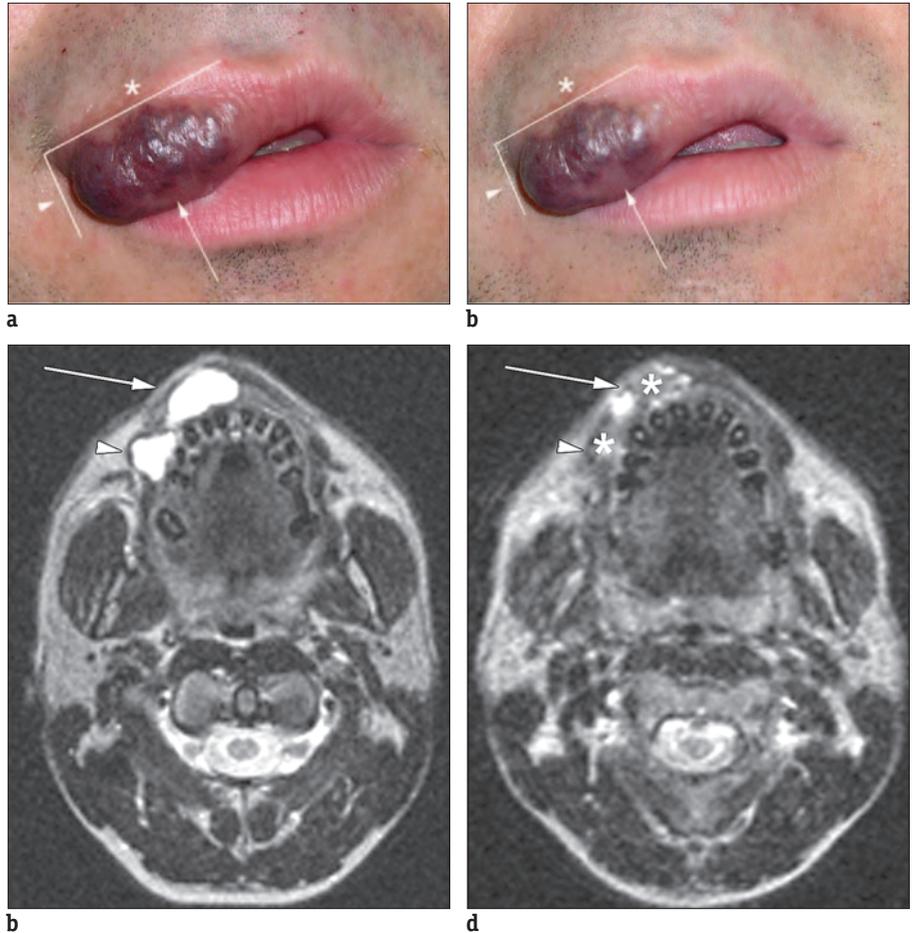
Daniel T. Boll, M.D., formerly of Case Western Reserve University in Cleveland, and colleagues analyzed

76 percutaneous sclerotherapy treatments performed by one radiologist under real-time MR guidance on 15 patients with vascular malformations in the head and neck.

All procedures were completed

successfully, the patients reported minimal discomfort and reported an improvement in cosmetic appearance, especially a decrease in facial swelling and skin discoloration.

The researchers write, "MR-guided sclerotherapy succeeds in treating predominant symptoms of congenital low-flow vascular malformations in a safe and efficient manner and allows the quantitative verification of therapeutic success during follow-up examinations."



Images obtained in a 34-year-old man with congenital vascular malformation in the right upper lip. (a) Initial preinterventional photograph shows extension of initial skin discoloration (arrow) and cosmetic disfigurement. **(b)** Preinterventional transverse T 2-weighted MR fast SE shows the cavernous anterior portion (arrow) and the lateral portion (arrowhead) of the vascular malformation with high signal intensity and without apparent flow voids. **(c)** Photograph obtained 6 weeks after intervention shows decrease in size in the low-flow vascular malformation and partial regaining of physiologic lip vermilion (arrow). **(d)** Follow-up transverse T 2-weighted MR fast SE image shows intravascular thrombus (*) within the larger portion of the vascular malformation (arrow) and complete thrombosis of smaller portion (arrowhead) with substantial overall shrinkage.

(*Radiology* 2004;233:377-385) © 2004 RSNA. All rights reserved. Printed with permission.



Multiple Magnet Ingestion Alert

Swallowing more than one magnet poses a serious health threat and may require emergency surgery, according to Alan E. Oestreich, M.D., from Cincinnati Children's Hospital Medical Center.

In a letter to the editor of *Radiology*, Dr. Oestreich expressed his concern: "All radiologists should be on the alert. Moreover, if the possibility of magnets in the abdomen exists, MRI is to be stringently avoided lest damage be done."

He explains that when two magnets lie in adjacent bowel loops, they may attract each other across the walls, leading to necrosis and eventually perforation and peritonitis.

While swallowing magnets is not nearly as common as swallowing coins, jewelry or toy parts, there have been a number of reported cases of multiple magnet ingestion over the past five years. According to information gathered during the press release process, nine incidents have been reported in the United Kingdom involving children who swallowed industrial-strength magnets worn to resemble body piercings.

(*Radiology* 2004;233:615)



New Radiology Manuscript Procedure Saves Time to Publication

Using a portable document file (PDF) system, manuscript editors for RSNA's peer-reviewed science journal *Radiology* are able to communicate with manuscript authors more easily and efficiently. Instead of faxing or mailing manuscript revisions to the authors, the manuscript editors are now using a PDF system to e-mail the documents.

"This new procedure cuts in half the time it takes for authors to receive, review and return copyedited manuscripts," says *Radiology* Managing Editor John Humpal, M.A. "The PDF system, combined with other time-saving measures and the immediacy of the Internet, means more cutting-edge scientific information is published on *Radiology Online* prior to the release of the printed journal."



RSNA press releases are available at www.rsna.org/media.

CT Angiography of Pulmonary Embolism: Diagnostic Criteria and Causes of Misdiagnosis

Continued from page 15

used, CT pulmonary angiography is becoming the standard of care at many institutions.

In an article in the September-October issue of *RadioGraphics* (rsna.org/radiographics), Conrad Wittram, M.B.,Ch.B., and colleagues from Massachusetts General Hospital and Harvard Medical School in Boston:

- Describe the technique of CT pulmonary angiography

- Explain the diagnostic criteria for acute and chronic pulmonary embolism
- Review the causes of misdiagnosis of pulmonary embolism, such as patient-related factors, technical factors, anatomic factors and pathologic factors

The authors add: "The radiologist needs to determine the quality of a CT pulmonary angiographic study and whether pulmonary embolism is pres-

ent. If the quality of the study is poor, the radiologist should identify which pulmonary arteries are rendered indeterminate and whether additional imaging is necessary."

This article meets the criteria for 1.0 category 1 CME credit.

RSNA Fellowship Gives Interventional Radiologist a Chance to Build Foundation

When Richard Shlansky-Goldberg, M.D., considered a career in radiology, he was drawn to interventional radiology. Why? "I enjoy working with my hands and playing with gadgets," he answers.

Dr. Shlansky-Goldberg is an associate professor of radiology at the Hospital of the University of Pennsylvania. He is certified in radiology and interventional radiology. His areas of interest include uterine artery embolization, uterine fibroid embolization, thrombolysis and pharmacology in interventional radiology.

He was a 1990 RSNA Research & Education Foundation Research Fellow for his work on "Temporary Vascular Stenting."

Early in his career, Dr. Shlansky-Goldberg was interested in stent technology and what causes restenosis. In fact, on his fellowship application, he wrote, "My career goals are to become an academic radiologist at a major university teaching center dividing my time between my clinical practice and research interests in cardiovascular and interventional radiology."

But when he saw cardiologists performing angioplasties and inserting stents, he switched his focus. "I like a lot of patient contact, the camaraderie with other physicians, and involvement in clinical trials," he says. "Working with such a large group in an academic center, I can always talk to a colleague if I need more information on an unfamiliar medical topic."

Dr. Shlansky-Goldberg graduated cum laude in biology and psychology at the University of Rochester in New York, where he also received his med-

ical degree. He interned in surgery at Mount Sinai Hospital in New York City and completed his radiology residency at Thomas Jefferson University Hospital in Philadelphia. He was a fellow in cardiovascular and interventional radiology and an instructor in the Department of Radiology at the Hospital of the University of Pennsylvania before his RSNA fellowship.

Why did he intern in surgery? "From the start, I planned to go into interventional radiology," Dr. Shlansky-Goldberg explains. "I got the surgery internship because I have always enjoyed performing procedures. Plus it gave me additional training in interventional radiology."

Dr. Shlansky-Goldberg says he likes the creativity of interventional radiology. He also likes being able to collect data, test his hypothesis and then actually perform the procedure, "I can see how the procedure changes the outcome."

RSNA Fellowship

One reason Dr. Shlansky-Goldberg is grateful for his RSNA fellowship is that it gave him the opportunity to build on his education. "It gave me an additional year to study basic clinical and lab research," he says. "I was able to do things like take a physics course—which I probably could not have done without the fellowship."

RSNA continues to play a role in his

career. He attends the annual meeting and attends refresher courses. "It helps keep me aware of what is going on in radiology," he says.

Dr. Shlansky-Goldberg is a fellow of the Society of Interventional Radiology (SIR) and is the 1996 SIR recipient of the Dr. Gary J. Becker Young Investigator Award.

In May 2004, Dr. Shlansky-Goldberg was named to *Philadelphia Magazine's* Top Docs issue. He's also been

There has been a lot of good press about fibroid embolization procedures, but the gynecologists aren't as accepting. . . . It is one of my goals to make this a more accepted procedure and build referrals.

Richard Shlansky-Goldberg, M.D.

recognized in Castle Connolly's America's Top Doctors in 2003 and 2004.

Vision for the Future

His advice to medical students, residents, interns and fellows is to take time early in their careers to build a foundation. "Take the year off to reflect, hone your education and your research skills," he says.

Dr. Shlansky-Goldberg plans to continue what he's doing in interventional radiology, but hopes to build acceptance of uterine artery embolization and uterine fibroid embolization within the gynecology community. "There has been a lot of good press about fibroid embolization procedures, but the gynecologists aren't as accepting. They're skeptical and concerned about the loss of turf. It is one of my goals to make this a more accepted procedure and build referrals," he says.

He also says he hopes to discover new techniques to make thrombolysis more widely available. □



Research & Education Foundation Donors

THE BOARD OF TRUSTEES of the RSNA Research & Education Foundation and its recipients of research and educational grant support gratefully acknowledge the contributions made to the Foundation **August 31–September 29, 2004.**

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

VANGUARD GROUP

Philips Medical Systems



\$100,000

A Vanguard Company since 1990

EXHIBITOR'S CIRCLE

DeJarnette Research Systems



BRONZE \$1,000

RSNA PRESIDENT'S CIRCLE MEMBERS

\$1,500 per year

Alice & Ernest J. Ferris, M.D.
Peter C. Hentzen, M.D., Ph.D.
Jose T. Medina, M.D.
Claudia & Levon N. Nazarian, M.D.

A. Orlando Ortiz, M.D., M.B.A.
Diana & Robert G. Parker, M.D.
Sharon Schubach, M.D. &
Gregg Schubach, M.D.

COMMEMORATIVE GIFTS

Sindy & Mark Alson, M.D.
In honor of Dennis Alsofrom, M.D. & Gary Alsofrom, M.D.

Beatriz Amendola, M.D. & Marco Amendola, M.D.
In memory of Howard Pollack, M.D.

Samuel Cade, M.D.
In honor of Drs. Jerome H. Arndt, William Greenough, Joseph Hawkins, G.E. Plum, Roger Rian and A.D. Sears

Nancy J. & Robert E. Campbell, M.D.
In memory of Mary Jane McCort

Stephen Chan, M.D.
In memory of Sadek K. Hilal, M.D.

Alice & Ernest J. Ferris, M.D.
In memory of Zamia Ferris

Theodore C. Larson III, M.D.
In honor of O. Wayne Houser, M.D.

Vernon L. Medlin, M.D.
In honor of Robert Sloan, M.D.

Thomas C. Mick, M.D.
In honor of Theodore Keats, M.D.

Patricia A. Randall, M.D.
In memory of Betty Heitzman

Renate Soulen, M.D.
In honor of Mary Fisher, M.D. & Patricia Borns, M.D.

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

Nora A. Janjan, M.D. & Jack Calvin
Karen E. & Glendon G. Cox, M.D.
David C. McMurray, M.D.

GOLD (\$500 - \$999)

Jose A. Bauza, M.D.
Shobha P. Desai, M.D. & Paresh
Desai, M.D.
Robert C. Gibbs, M.D.
James S. Jelinek, M.D.
Charles H. Kuntz, M.D.
Constance Lehman, M.D., Ph.D.
Linda & Alan Pollack, M.D., Ph.D.
Barry A. Sacks, M.D.
Jean M. Weigert, M.D.

SILVER (\$200 - \$499)

Algis Babusis, M.D.
Harold F. Bennett, M.D., Ph.D.
Karen S. & Scott Burstein, M.D.
Elizabeth T. Cancroft, M.D.
Yoon Oh Chang, M.D.
Anthony J. De Raimo, M.D.
Tony M. Deeths, M.D.
Daniel W. Eurban, M.D.
Christopher D. Goeser, D.C., M.D.
Phyllis & Barry B. Goldberg, M.D.
Wayne D. Harrison, M.D.
Eric A. Hyson, M.D.
John B. Kamp, M.D.
Karsten F. Konerding, M.D.

John W. Laude, M.D.
Ellen & Michael J. Levitt, M.D.
Jean & Joel E. Lichtenstein, M.D.
Angelique & James L. Lowry, M.D.
John J. McIntyre IV, M.D.
David R. Payne, M.D.
Fanny & Bruce A. Porter, M.D.
Erica & Michael A. San Dretto, M.D.
Sari & Neil F. Schneider, M.D.
Ann & Lester D. Shook, M.D.
Alan H. Stolpen, M.D., Ph.D.
Risa Kent, M.D. & Jeffrey C.
Weinreb, M.D.
Andrej J. Zajac, M.D.
Darryl A. Zuckerman, M.D.

BRONZE (\$1 - \$199)

Eugene C. Anandappa, M.D.
A. Rhett Austin, M.D.
Kyongtae T. Bae, M.D., Ph.D.
Maurice L. Bogdonoff, M.D.
Melvin V. Boule, M.D.
Charles W. Bower, M.D.
Lamont D. Brown, M.D.
Sandra & Philip Cascade, M.D.
Jack P. Fink, M.D.
Richard B. Gunderman, M.D., Ph.D.
Diane G. & R.S. Lyle Hillman, M.D.
John A. Hodak, M.D.
George F. Hogan, M.D.
Barry D. Julius, M.D.

Richard A. Kiszonas, D.O.
Lois & Arthur C. Kittleson, M.D.
Elizabeth & Jay L. Korach, M.D.
Erich K. Lang, M.D.
Alison & Herman I. Libshitz, M.D.
Diana & Otha W. Linton, M.S.J.
Takayuki Masui, M.D.
Sharon & Guy R. Matthew, M.D.
Edward M. Miller, M.D.
Seyed-Ali Mousavi, M.D.
Pamela A. Nugent, M.D.
Seth D. O'Brien, M.D.
Paul F. Pizzella, M.D.
Michelle & Kurian J. Puthenpurayil,
M.D.
Douglas J. Quint, M.D.

Richard D. Redvanly, M.D.
C. Santiago Restrepo, M.D.
Leroy S. Safian, M.D.
Robert E. Schaefer, M.D.
Alan Schlesinger, M.D.
Bernice & Joseph Selman, M.D.
Heather & Justin P. Smith, M.D.
Spencer M. Smith, M.D.
Edward E. Tennant, M.D.
Lorellen & Stephan M. Ticich, M.D.
Scott Walter
Alfred F. Weitzman, M.D.
Luanne & Alan L. Williams, M.D.
Vanessa M. Zayas-Colon, M.D.
Allan Zellis, M.D.



Online donations can be made at
www.rsna.org/donate

Product News

FDA APPROVAL

MR Technology for Targeted Imaging Studies

The Food and Drug Administration (FDA) has given marketing clearance to GE Healthcare to expand its EXCITE™ data pipeline to include an advanced MR imaging technology.

This new technology, for GE Signa® 1.5 T and 3.0 T MR systems, increases speed and power to help clinicians gather more data in shorter periods of time. It also allows a greater range of targeted MR studies, such as of the heart, brain, liver and lower legs.

“These exams, in many cases, will expose patients to lower doses of contrast than are typically required for x-ray or CT studies,” said Dennis Cooke, vice-president of global MR for GE Healthcare.

The new EXCITE release will enable new targeted studies including high-clarity vascular images of the lower legs, extremely high-resolution images of the liver with shorter breath holds and better organ coverage than was previously possible, and Real-CARD real-time imaging of the heart with the resolution of MR at the speed of ultrasound, without the need for breath holding or ECG gating.



NEW PRODUCT

Disposable Endocavity Needle Guide

CIVCO Medical Instruments has introduced a new disposable endocavity needle guide for use with Siemens BE9-4 transducers on the G60 S and G50 ultrasound systems.

The needle guide fastens securely into the locating features of the transducer, directing instruments according to on-screen guidelines. Because the needle guide is disposable, it helps reduce the risks associated with cross-contamination.



FDA APPROVAL

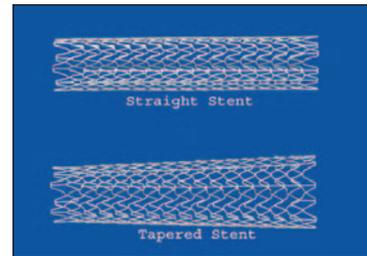
Carotid Stent System

The FDA has also cleared the first carotid stent system designed to reduce the risk of stroke.

Guidant Corporation's RX ACCULINK™ carotid stent system and RX ACCUNET™ embolic protection system were approved for use in patients who have had symptoms of a stroke or whose carotid artery is at least 80 percent blocked, and who are not good candidates for the surgical alternative.

“Stenting is an established therapy that has been used successfully for years to treat heart and peripheral vascular disease. The approval of a carotid stent represents a minimally invasive breakthrough therapy for patients at risk of stroke who are ineligible or at high risk for traditional surgery,” said Beverly Huss, president of endovascular solutions for Guidant.

The FDA is requiring Guidant to conduct post-approval studies to confirm the stent's performance and to assess its long-term safety and effectiveness in preventing strokes.



NEW PRODUCT

Molecular Imaging Tool

Siemens has introduced a new work-in-progress tool for molecular medicine. Developed in collaboration with the Center for Molecular Imaging Research (CMIR) at Massachusetts General Hospital in Boston, the MIPortal* is an information technology platform designed to provide molecular imaging research laboratories with access to archiving and processing of imaging and non-imaging data.

“We expect the research being conducted at CMIR to lead to the discovery of new ways to detect and diagnose disease,” said Mohammad Naraghi, senior vice-president of business



development at Siemens Medical Solutions. “Because we are integrated into the research process, Siemens will be able to bring new molecular imaging solutions to the market more quickly, allowing physicians to implement these advanced technologies in clinical practice, ultimately benefiting patient care.”

*MIPortal is not commercially available in the U.S.

RSNA 2004 Lecture/Oration Preview

Three respected medical leaders will deliver honored lectures at RSNA 2004. They are Michael E. Phelps, Ph.D., from Los Angeles, Harry K. Genant, M.D., from San Francisco, and Brian O'Sullivan, M.D., from Toronto.

Eugene P. Pendergrass New Horizons Lecture

Michael E. Phelps, Ph.D.,

along with his colleague, the late Edward Hoffman, Ph.D., helped bring radiology into the 21st century through their



invention of the positron emission tomography (PET) scanner.

This scanner was the first device to allow noninvasive measurement of the biochemistry and biology of normal organ function and for molecular diagnostics of disease—from cancer to neurologic and vascular diseases.

Dr. Phelps will deliver the New Horizons Lecture on Monday, November 29, on “Molecular Imaging: From Nanotechnology to Patients.”

In his presentation, Dr. Phelps will discuss the revolutionary changes that are occurring through the merger of physical, biological and medical sciences that focus on new approaches to molecular diagnostics and therapeutics and the benefit they will provide to molecular imaging.

He will describe molecular and structural imaging techniques, including PET, MR, CT and optical imaging, that are helping physicians and scientists gain access to the molecular basis of disease for diagnostics and to guide the discovery and assessment of drugs. He will also describe the merger of multiple imaging technologies

into single devices to consolidate structural and biological information for molecular imaging diagnostics.

Dr. Phelps is the Norton Simon Professor and chairman of the Department of Molecular & Medical Pharmacology at the University of California, Los Angeles (UCLA) School of Medicine, where he is also the director of the Institute for Molecular Medicine and director of the Crump Institute for Molecular Imaging. Dr. Phelps is the founder of the Academy of Molecular Imaging and is a member of the Institute of Medicine of the National Academies.

He has published more than 640 peer-reviewed scientific articles, books and book chapters, has been principal investigator of more than \$225 million in grants, and has been recognized through numerous national, international and Presidential awards.

Annual Oration in Diagnostic Radiology

Harry K. Genant, M.D.,

a world-renowned expert in osteoporosis assessment, bone densitometry and musculoskeletal imaging, will deliver the



Annual Oration in Diagnostic Radiology on “The Future of Bone Imaging in Osteoporosis,” on Tuesday, November 30.

Dr. Genant will describe the considerable

Continued on next page

Continued from previous page

progress made in advancing bone imaging for osteoporosis assessment. He'll also outline the challenges that remain.

Standard bone mineral densitometry (BMD) provides important information about osteoporosis diagnosis and fracture risk assessment; however, considerable evidence indicates that BMD only partially explains bone strength and fracture resistance.

Imaging the bone's macro and microstructure can provide information beyond BMD, leading to improved fracture risk prediction, clarification of the pathophysiology of skeletal disease, defining the skeletal response to therapy, and improving the assessment of biomechanical relationships.

Dr. Genant is president of the International Skeletal Society and chair of the World Health Organization Task Force on Osteoporosis. He is a professor emeritus at the University of California San Francisco (UCSF), and is the founder and executive director of the UCSF Osteoporosis and Arthritis Research Group. He is also a cofounder and board chairman of Synarc, Inc., a global contract research organization specializing in management of quantitative imaging and biomarkers in multicenter, multinational, pharmaceutical drug trials.

Dr. Genant has been editor or co-editor of more than 30 books. He has been author or co-author of more than 170 chapters or invited articles, nearly 500 articles in peer-reviewed scientific and medical journals, and more than 1,000 abstracts presented at national and international scientific and professional gatherings.

Annual Oration in Radiation Oncology

Brian O'Sullivan, M.D., broke new ground when he became the first radiation oncologist practicing outside of the United States to examine in the American Board of Radiology.



On Wednesday, December 1, Dr. O'Sullivan will deliver the Annual Oration in Radiation Oncology on groundbreaking efforts in the treatment of soft-tissue sarcoma. His lecture, "Redefining Therapeutic Targets in the Treatment of Soft Tissue Sarcoma," will describe research efforts over the past 15 years in the management of soft-tissue sarcoma and how sarcoma research is at the forefront of molecular-target intervention for solid tumors.

He'll also describe new approaches to multidisciplinary management, including how expertise in diagnostic imaging, pathology, surgical oncology, radiation oncology, and medical oncology provide a model for many cancers.

Dr. O'Sullivan is the Bartley-Smith/Wharton Chair in Radiation Oncology and a professor in the Department of Radiation Oncology at Princess Margaret Hospital at the University of Toronto. He is the vice-chair of the Sarcoma Disease Site Committee of the American College of Surgeons Oncology Group (ACOSOG) and of the Group Radiation Oncology Committee for the ACOSOG clinical trials.

An international expert in cancer staging, Dr. O'Sullivan is a member of the Core TNM Committee of the International

Union Against Cancer (UICC) in Geneva, where he is also the domain expert for sarcoma and head and neck cancer. In this capacity, he represents the UICC for these anatomic disease sites at the American Joint Committee on Cancer.

Some of his recent research emphasis has been on volume delineation and targeting for conformal radiotherapy and intensity modulated radiotherapy (IMRT) for both head and neck cancers and sarcomas. He has also been working on the incorporation of image-guided techniques into enhanced radiotherapy delivery platforms to achieve higher precision and to minimize uncertainty in treatment delivery.

Dr. O'Sullivan has been the author or co-author of more than 130 peer-reviewed articles and nearly 80 scientific papers or book chapters. He has presented nearly 100 invited lectures at national and international medical meetings.

New!

The RSNA 2004 *Daily Bulletin* will be online! Go to rsna.org each day, Sunday–Thursday, of the annual meeting to read about the latest news from the largest medical meeting in the world.

News about RSNA 2004

Press Conferences at RSNA 2004

About 200 members of the medical news media typically attend the RSNA annual meeting. More than 15 press conferences will be held highlighting scientific papers and posters.

Some of the scientific paper titles that will be included are:

- The Added Cancer Yield of MRI in Screening Women at High Risk for Breast Cancer: Results of the International Breast Magnetic Resonance Consortium (IBMC) Trial
- Air Trapping Detected on End-Expiratory High-Resolution CT in Symptomatic World Trade Center (WTC) Rescue and Recovery Workers
- Complications of Image-guided Percutaneous Lung Radiofrequency Ablation: Experience with 126 Patients (Total of 163 Lesions Treated) in 6 Years
- Ultrasound Guided Transurethral Injection of Adult Stem Cells for Treatment

of Urinary Incontinence: First Clinical Results

- Limited by Body Habitus — Economic and Quality Control Issues in the Ability of a Radiology Department to Provide Diagnostic Imaging to a Fattening Population
- Payments to Orthopedic Surgeons for Magnetic Resonance Imaging
- Imaging Markers of Bipolar Disease: Evaluation of Proton Magnetic Resonance Spectroscopic Imaging at 3 T
- Sensitivity of Personal Homeland Security Radiation Detectors to Medical Radionuclides and Implications for Counseling of Nuclear Medicine Patients
- Protected Carotid Artery Angioplasty and Stenting: Acute and Long Term



Outcomes in 180 Patients

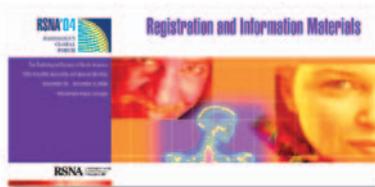
- Functional MRI of Deception and Truth with Polygraph Correlation

Press releases from the annual meeting will be available beginning November 29. To view them, go to rsna2004.rsna.org and click on Media in the left-hand column.

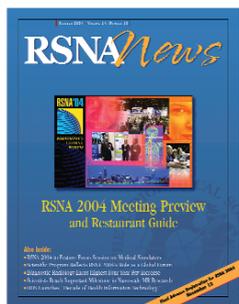
Badge Wallets

Badge wallets will be mailed to North American attendees who registered by November 12 and to attendees from outside of North America who registered by October 29.

The badge wallet contains a name badge, course tickets, attendance vouchers and a coupon book that includes about a dozen promotional offers from RSNA and from the technical exhibitors.



International attendees who registered after October 29 are required to pick up their badge wallet at McCormick Place, Lakeside Center, Level 2, Hall E, Desk A.



Meeting Highlights in RSNA News

The October issue of *RSNA News* contains an extensive listing of highlights and other important information for RSNA 2004, as well as a Chicago restaurant guide. The issue is available on the Internet at rsnanews.org.

Registration Fees

BY 11/12	ONSITE	
\$0	\$100	RSNA Member, AAPM Member
\$0	\$0	Member Presenter
\$0	\$0	RSNA Member-in-Training, RSNA Student Member and Technical Student
\$0	\$0	Non-Member Refresher Course Instructor, Paper Presenter, Poster Presenter, Education or Electronic (<i>infoRAD</i>) Exhibitor
\$110	\$210	Non-Member Resident/Trainee
\$110	\$210	Radiology Support Personnel
\$520	\$620	Non-Member Radiologist, Physicist or Physician
\$520	\$620	Hospital Executive, Commercial Research and Development Personnel, Healthcare Consultant, Industry Personnel
\$300	\$300	One-day badge registration to view only the Technical Exhibits area

For more information about registration at RSNA 2004, visit www.rsna.org, e-mail reginfo@rsna.org, or call (800) 381-6660 x7862.

Continued on next page

Continued from previous page

RSNA Annual Meeting Great \$\$ Value

In addition to being the premier educational event in radiology, the RSNA annual meeting is also a great dollar value.

ORGANIZATION	ANNUAL MEETING	MEMBER RATES		NON-MEMBER RATES		2004 MEMBERSHIP DUES
		PRE-REG	ONSITE	PRE-REG	ONSITE	
RSNA	Nov. 28–Dec. 3, 2004 Chicago	\$0	\$100	\$520	\$620	\$315
American Academy of Pediatrics	October 9-13, 2004 San Francisco	\$450	\$600	\$640	\$790	\$470
American Academy of Family Physicians	October 13–17, 2004 Orlando	\$295/395	\$495	\$595/695	\$795	\$305 national + state and local dues (if applicable)
American College of Cardiology	March 6–9, 2005 Orlando	\$185	\$235	\$695	\$745	\$390
American College of Surgeons	October 10–14, 2004 New Orleans	\$0	\$0	\$590	\$640	\$440

Sources: www.aap.org, www.aafp.org, www.acc.org and www.facs.org/clinicon2004 accessed September 17, 2004.

One-Day Badge

A one-day badge is available to view the technical exhibits area only. The badge can be purchased in advance or onsite for \$300 at the Exhibitor Registration Desk in the Grand Concourse between Halls A and B. Attendance for more than one day requires a full conference purchase at Professional Registration, Lakeside Center, Hall E, Level 2.

Onsite Registration

Attendees who need to register at McCormick Place should go to the Lakeside Center. Onsite registration is on Level 2, Hall E.

Saturday (Nov. 27)	12:00 p.m. – 6:00 p.m.
Sunday–Monday (Nov. 28–29)	7:00 a.m. – 6:00 p.m.
Tuesday–Thursday (Nov. 30–Dec. 2)	7:00 a.m. – 5:00 p.m.
Friday (Dec. 3)	7:30 a.m. – 12:00 p.m. (Lakeside Center, Level 3, Ballroom Help Center)

RSNA 2004 Exhibitor News

NEW!

Meeting Guide

The RSNA 2004 *Daily Bulletin* will have an expanded center section called the Meeting Guide. This guide will include detailed floor maps of McCormick Place, a layout of the technical exhibit areas and a listing of the exhibitors, their contact information and booth number.



The *Daily Bulletin* is distributed to attendees throughout McCormick Place. The Meeting Guide will also be distributed at Help Centers.

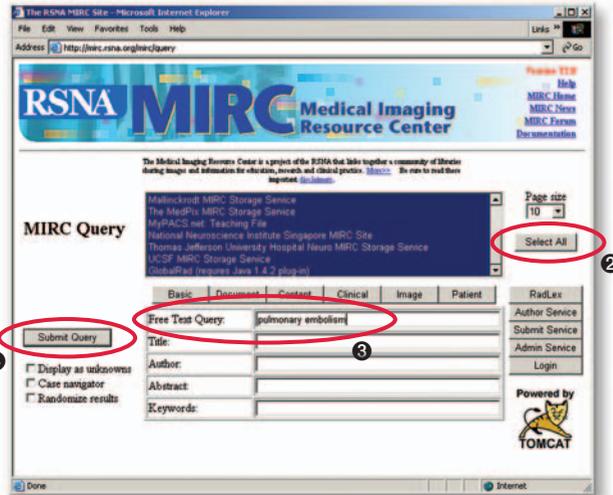
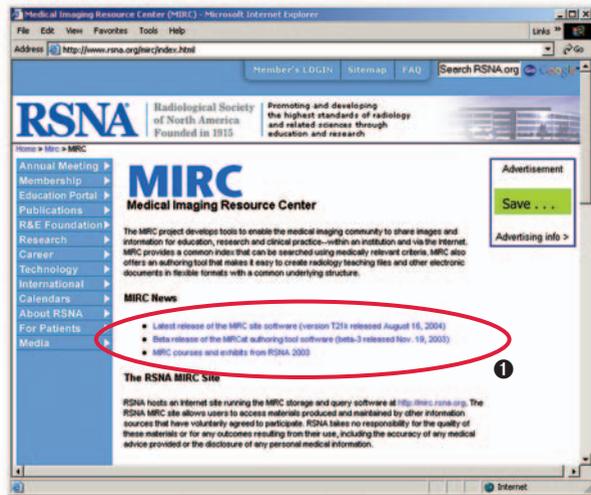
The online Exhibitor List is an expanded listing that includes company contact information, a company profile and a detailed product list. Go to rsna2004.rsna.org. In the bottom right-hand box called Technical Exhibitors, click on Exhibitor List 2004.

Important Exhibitor Dates for RSNA 2004

November 22	Target move-in assignments begin at 5:00 a.m.
November 24	Hands-on Computer Workshop move-in begins
November 26	General move-in begins at 7:00 a.m.
November 28	Hands-on Computer Workshops open at 8:00 a.m. Technical Exhibits must be set by 9:00 a.m. Technical Exhibits open at 10:00 a.m.
Nov. 28–Dec. 3	RSNA 90th Scientific Assembly and Annual Meeting

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

RSNA.org



RSNA Medical Imaging Resource Center

The RSNA Medical Imaging Resource Center (MIRC) is an online system that enables the medical imaging community to share images and information for education, research and clinical practice.

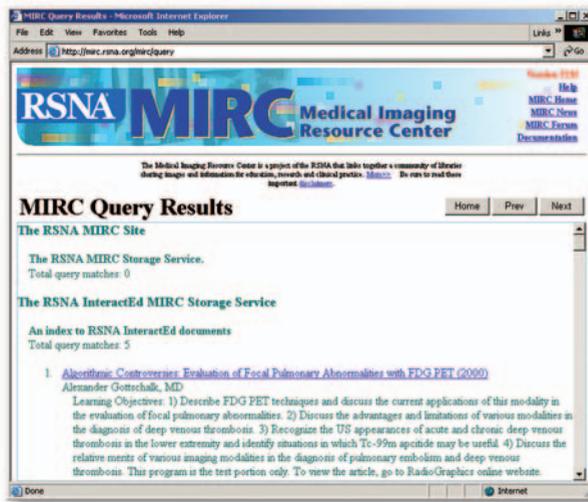
To learn more about MIRC, go to rsna.org/mirc. There you will find links to download the MIRC software and begin using the RSNA MIRC site. ①

The RSNA MIRC site provides access to teaching files and other materials from a large set of research

institutions. If you want to see all of the images related to pulmonary embolism, for example, click on Select All ② at the right side of the page, type in pulmonary embolism under Free Text Query ③, and then click on Submit Query ④ at the left side of the page.

MIRC will search the index of all the affiliated sites and will display the results ⑤ from each site.

Current participants in MIRC include the RSNA Education Center, Indiana University, Mallinckrodt,



Thomas Jefferson University Hospital and the University of California, San Francisco.

Connections Your online links to RSNA

RSNA.org
www.rsna.org
RSNA 2004
rsna2004.rsna.org
Radiology Online
rsna.org/radiologyjnl
Radiology Manuscript Central
rsna.org/radiologyjnl/submit

RadioGraphics Online
rsna.org/radiographics
RSNA News
rsnanews.org
Education Portal
rsna.org/education
CME Credit Repository
rsna.org/cme

RSNA Medical Imaging Resource Center
rsna.org/mirc
RSNA Career Connections
rsna.org/careers
RadiologyInfo™
RSNA-ACR patient information Web site
radiologyinfo.org

RSNA Press Releases
rsna.org/media
RSNA Online Products and Services
rsna.org/memberservices
RSNA Research & Education Foundation
Make a Donation
rsna.org/donate

Community of Science
rsna.org/cos
Membership Renewal
rsna.org/renew
NEW
RSNA Membership Directory
rsna.org/directory

Medical Meetings

November 2004 – May 2005

NOVEMBER 27

RSNA Personal Financial Management Strategies Sessions, McCormick Place, Chicago
• www.rsna.org/education/shortcourses/index.html

NOVEMBER 28–DECEMBER 3

RSNA 2004, 90th Scientific Assembly and Annual Meeting, McCormick Place, Chicago • www.rsna.org

DECEMBER 4–7

American Medical Association, AMA Interim Meeting, Hyatt Regency, Atlanta • www.ama-assn.org

JANUARY 20–23

Radiation Therapy Oncology Group, RTOG Meeting, Sheraton Wild Horse Pass Resort & Spa, Phoenix • www.rtog.org

FEBRUARY 2–6

Mexican Society of Radiology (SMRI), Annual Meeting, Mexico City • www.smri.org.mx

FEBRUARY 27–MARCH 4

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

MARCH 4–8

European Congress of Radiology, ECR 2005, Austria Center Vienna, Austria • www.ecr.org

MARCH 11–12

Biomedical Imaging Research Opportunities Workshop 3 (BIROW 3), Hyatt Regency Bethesda, Md.
• www.birow.org

MARCH 21–25

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

MARCH 31–APRIL 5

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

APRIL 9–14

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

APRIL 19–22

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

APRIL 28–30

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

MAY 3–7

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

MAY 4–7

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

MAY 11–14

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

MAY 15–20

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

MAY 21–27

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

MAY 25–28

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

MAY 25–28

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

RSNANews

RSNA News
820 Jorie Blvd.
Oak Brook, IL 60523
(630) 571-2670
Fax: (630) 571-7837
E-mail: rsnanews@rsna.org

NONPROFIT ORG.
U.S. POSTAGE
PAID
PERMIT #186
EASTON, PA 18042