ACR BULLETIN

Fighting Frostbite With Imaging

Changing America’s Mind About Radiologists
Registries: Metrics That Matter
Beyond Boundaries: Treating Breast Cancer

QUALITY IS OUR IMAGE
www.acr.org
Save Time —
Renew Online

Pay your 2009 dues online using the ACR’s new online renewal system. It’s easy, convenient, and fast for members only! (Please note that hard copy invoices will still be mailed.)

Five Easy Steps to Renew Online

2. Click on “My Profile” (located on the top blue bar).
3. Log in using your user name and password. While here, take time to ensure your address, profile, and demographic information are up-to-date.
4. Click on “My Membership Orders.” Your 2009 dues order information will appear on this screen.
5. Follow the prompts to complete your renewal and submit payment.

For login assistance or dues questions, contact the ACR Membership Department at membership@acr.org or call 800-347-7748.

Be sure to retain your valuable ACR membership benefits.

Renew online today!

Support the organization that supports you. Renew your membership today.
TABLE of CONTENTS

Features

6 Advancing Radiology
Meet the stars of radiology, the new ACR Gold Medalists and Honorary Fellows.

10 Profiles in Radiology: Learning by the Sea
Katarzyna Macura, diagnostic radiologist, scuba diver, sailor, and computer scientist, embraces life through science and family.

14 Seeing Cancer More Clearly
ACRIN® reveals how research and approaches to cervical cancer have changed over the last decade.

17 Advocate: Economics and Government Relations
Medicare updates for 2009; the FDA studies Alzheimer’s disease; NRC committee meets on medical uses of isotopes; decision on Maryland self-referral case imminent; and new RADPAC® chair looks forward to upcoming opportunities.

Plus

2 From the Chair: Celebrating the ACR’s Gold Winners

3 Guest Columnist: Setting the Stage for 2009

4 ACR Headlines

9 Decisions, Decisions

12 Discover a Body of Knowledge

13 A Matter of Life and Limb

16 A Commanding Presence

21 Measuring Quality of Care

22 Changing America’s Mind

23 The Secret Life of Residents

24 The Real World of Breast Cancer

26 On Target

27 CPT® 2009 Code Update

28 RADLAW: On the Record

30 Job Listings

ACR Bulletin is published 10 times a year to keep radiologists informed on current research, advocacy efforts, the latest technology, relevant education courses and programs, and ACR products and services. It provides a forum for members to share lessons learned, news and events, and achievements.
Celebrating the ACR’s Gold Winners

One of the highlights of the ACR’s Annual Meeting and Chapter Leadership Conference (AMCLC) is the awarding of gold medals and honorary fellowships. The 2009 gold medalists are James P. Borgstede, M.D., FACR, from Colorado Springs; William J. Casarella, M.D., from Atlanta; and Robert R. Hattery Jr., M.D., FACR, from Tucson. Honorary fellows are Adrian K. Dickson, M.D., from England; Carl-Gustaf Standertskjold-Nordenstam, M.D., Ph.D., from Finland; and Maximilian F. Reiser, M.D., from Germany. Each honoree is profiled in this issue of the *ACR Bulletin*.

I have had the personal pleasure of knowing our gold medalists for many years and have had the opportunity to work with each of them extensively in different organizations devoted to radiology. They are truly outstanding individuals. Each has served as president or chair of one of the leading professional radiology societies, including the ACR, the Radiological Society of North America, and the American Roentgen Ray Society. All three have served on the American Board of Radiology. This is truly a stellar lineup, and their inclusion in the ranks of the ACR’s gold medalists adds luster to an already impressive group.

Our international honorees are no less distinguished. Each is a major leader in his own country as well as in the European radiology community, and each is recognized as a leader internationally. I look forward to the AMCLC’s spring ceremony, when we will extend formal recognition to all of the honorees for their accomplishments.

This issue of the *ACR Bulletin* also highlights important ongoing strategies, such as the “Face of Radiology” branding campaign. As you may recall, the College has been working with outside consultants to obtain feedback from focus groups in representative areas of the country about the public’s views of radiologists. We specifically included Washington, D.C., in the market research because it is vital for congressional members and staff to recognize radiologists as physicians and understand what we do.

The market research has provided mixed messages. When people understand that radiologists are physicians and have had extensive special training, they indicate a preference for having radiologists interpret their images. That is good news. However, only about half of the people in the sample populations identified radiologists as physicians. That is not good news. We clearly have ground to cover, and you will hear more about the Face of Radiology campaign.

**When people understand that radiologists are physicians and have had extensive special training, they indicate a preference for having radiologists interpret their images.**

Branding radiology and raising the public’s awareness of what radiologists do require broad participation of the radiology community. The College cannot undertake these tasks unilaterally. Achieving these efforts will also take time. We need to participate through our own practices at local levels. The College has prepared various materials that groups can use in this campaign (visit [www.mypatientconnection.com](http://www.mypatientconnection.com)). Please take advantage of these materials and join the campaign effort.

From the Chair

James H. Thrall, M.D., FACR, BOC Chair
Setting the Stage for 2009

In 2008, the ACR faced many challenges and opportunities. Staff in all areas of the College — advocacy, quality and safety, education, and clinical research — have been extremely busy on your behalf meeting the challenges. Certainly, advocacy has been the focus of many of our challenges, whereas issues in quality and safety, clinical research, and education have provided us with opportunities.

The College is fortunate to have outstanding staff working directly with countless, tireless ACR members who volunteer their time for the profession. I want to thank the volunteers and especially the leadership for a spectacular job in guiding the ACR.

We cannot diminish the work that the staff of the Government Relations and Economics and Health Policy Departments have done to advocate the point that quality must underpin any attempts for utilization control. Cutting per-case reimbursement just incentivizes the self-referrers to increase utilization. Our success is demonstrated by the passage of the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA). This act mandates an accreditation process for the advanced imaging modalities beginning in 2012 and a demonstration project of appropriateness criteria. We have traction on our key issues, and radiology is on the right side of quality issues.

Advocacy has been the focus of many challenges, whereas issues in quality and safety, clinical research, and education have provided us with opportunities.

The Quality and Safety Department has taken a leading position in the development of registries. In some instances, the registries are based on reimbursement (e.g., the National Oncology PET Registry), but most registries are driven by radiologists’ demand for quality in imaging. The Dose Index and the General Radiology Improvement Database registries are in pilot testing, and we will soon be able to offer products that you can use in your practices for quality improvement purposes. These are benchmarking tools that allow you to compare your practice with a cohort of similar practices.

Another key initiative that has come to fruition this past year is the development of the ACR Education Center. The goal of the center — the crown jewel of radiology education — is for each attendee to “own” the knowledge. This hands-on, interactive learning center, which can simulate your working environment, allows you to meet the ACR’s practice guidelines and earn a certificate of proficiency. We believe that the latter will be useful in demonstrating to hospital credentialing committees and third-party payers the quality that radiologists bring to the health care enterprise.

Reviews by the center’s course attendees have been uniformly outstanding. I invite you to attend the upcoming courses in CT colonography, cardiac CT angiography, breast MRI, or PET/CT. This year, we are developing courses in body MRI, musculoskeletal radiology, and MR imaging of congenital and pediatric cardiovascular disorders.

Our Philadelphia office has been equally busy, reapplying for continued funding for the Radiation Therapy Oncology Group® and the ACR Imaging Network®. Particularly exciting is the initial success of ACR Image Metrix™, an imaging contract research organization. ACR Image Metrix uses imaging as a biomarker in clinical cooperative trials — with 14 projects and counting — for the development of various drugs and devices. The hoped-for profits from this activity further enhance our research mission.

We recognize the demands on individuals practicing radiology, radiation oncology, nuclear medicine, and interventional radiology and are working diligently to provide support services. Please share your thoughts with me via e-mail at hln@acr.org or phone at 800-227-5463, ext. 4901.
2009 PQRI Measures Announced

The 2009 Medicare Physician Fee Schedule lists performance measures for the Physician Quality Reporting Initiative (PQRI) in 2009. Eight new measures were developed in late 2007 for diagnostic radiology; only two of these are included in PQRI 2009. The National Quality Forum reviewed the measures but declined to endorse six of them.

In addition to the two existing “Stroke” measures for 2009, two new radiology measures are “Inappropriate Use of BI RADS 3” and “Exposure Time Reported for Procedures Using Fluoroscopy.” Additionally, there are seven measures that may be reported by interventional radiologists — six for radiation oncologists, and one nuclear medicine measure.

Visit [www.cms.hhs.gov/PQRI/](http://www.cms.hhs.gov/PQRI/) for a complete list of measures and program information. For additional radiology-specific information and updates, visit the ACR Web site. Send questions to [P4Pquestions@acr.org](mailto:P4Pquestions@acr.org).

CME in JACR This Month!

Beginning this month, each issue of the *Journal of the American College of Radiology* will contain one article for CME credit. Read the January article, “Incidental Extracolonic Findings on CT Colonography: The Impending Deluge and Its Implications,” by Lincoln L. Berland, M.D., answer a few questions, and earn 1 AMA PRA Category 1 Credit™. This new feature is free for ACR members and provides a quick, convenient way to earn CME.

Radiologists Share Strategies

The ACR held two sessions of the Third Annual Group Practice Leaders Meeting (Oct. 4-5 in Arlington, Va., and Nov. 1-2 in Marina del Rey, Calif.) to overwhelming success.

Attendees listened to and participated in presentations by experts discussing “Strategic Planning for Radiology Practices,” “Contracting and Group Legal Issues,” “Group Governance,” and others. Practice leaders spoke about issues faced within their respective practices and solutions used to resolve problems. Ideas mentioned during the many expert Q&A sessions provided leaders new strategies and tools to use in their practices.

Access Free Coding Information

The *ACR Radiology Coding Source* is now accessible to all at no charge (i.e., no subscription required). Making this coding advice readily available will help reduce inappropriate denials by payers generated from misinformation posted on the Web.

Open access will also afford radiology certified coders (RCCs) an inexpensive way ($25/CEU) to receive the continuing education units necessary to maintain their RCC certification.

In addition, to receive the latest in coding information, purchase one of the ACR’s coding user’s guides by visiting the “ACR Store” at [www.acr.org](http://www.acr.org).

Welcome the New Educational Fellow

Stephanie K. Patterson, M.D., associate professor of radiology for the University of Michigan Health System, has been selected as the 2008–2009 Valerie P. Jackson Education Fellow. Patterson is a clinical image reviewer for the ACR Mammography Accreditation program. She hopes to develop a computer program that would allow learners to evaluate mammography image quality, identify any problems, and choose the appropriate corrective measures. Her one-week fellowship will begin within the next few months.

The deadline for fellowship applications for 2009–2010 is May 15, 2009. For more information, contact Dave Hanna at 800-227-5463, ext. 4571, or e-mail [dhanna@acr.org](mailto:dhanna@acr.org).

Are You Blogging Yet?

Have you visited the ACR Blog? This is a great venue where new ideas can be explored and where information can be exchanged on topics important to members and the wider radiology community. Some of the recent topics include:

- How Will the ABR’s Changes to Diagnostic Radiology Boards’ Structure and Timing Affect You?
- Scanning for Truth: New Opportunities for fMRI
- The Face of Radiology Is Coming to You
- How Can Radiologists and Equipment Manufacturers Work Together to Provide Better Pediatric Imaging Care?

To start participating in the blog, visit [www.acr.org](http://www.acr.org) and click on “ACR Blog.”
ACR Department Sets Record Wins

The ACR’s Marketing, Communications, and Public Relations team has won 15 awards — the most the department has ever received — through the 2008 MarCom and the Communicator Awards programs. Both programs are annual, international competitions that evaluate writing, design, and overall communication efforts for print, visual, and audio materials. The awards received include:

2008 MarCom Awards

Platinum Awards
• Overall Excellence — May 2008 ACR Bulletin
• Magazine Design — May 2008 ACR Bulletin
• Writing/Feature Article — “Through the Looking Glass,” July/August 2008 ACR Bulletin
• External Communication Campaign — Image Gently™ Campaign

Gold Award
• Overall Excellence — July/August 2008 ACR Bulletin
• Magazine Design — July/August 2008 ACR Bulletin
• Writing/Feature Article — “Preparing for Radiology’s Perfect Storm,” April 2008 ACR Bulletin
• Overall Excellence — September 2008 ACR Bulletin
• Marketing/Promotion/Corporate Branding Campaign — “Face of Radiology” branding campaign

Honorable Mention
• Magazine Design — February 2008 ACR Bulletin
• Writing/News Article — “MRI-Safe Pacemakers?” May 2008 ACR Bulletin

2008 Communicator Awards
• Award of Distinction — ACR Education Center Brochure
• Award of Distinction — ACR’s 2006–2007 Annual Report
• Award of Excellence — ACR Daily News Scan Feature Article

ACR’s Standouts

Individuals with diverse talents are necessary to carry out a clinical trial and publish results. The dedication and hard work of scientists, physicians, statisticians, clinical research associates, data managers, project managers, and others is critical.

An important component of the ACR’s Fall Meeting is the recognition of individuals who made significant contributions to both ACR’s research agenda and the institutions that excel in performing ACR trials.

Outstanding Contribution Award Recipients Researchers
National Lung Screening Trial (NLST) Physicists: Christopher Cagnon, Ph.D.; Dianna Cody, Ph.D.; Michael McNitt-Gray, Ph.D.; J. Anthony Seibert, Ph.D.; Phil Judy, Ph.D.; Janet Saffer, Ph.D.; Suzanne Lenz, M.A.; Gale Christensen; Ferdinand Osuagwu, M.D.; Timothy Mosher, M.D.; David Mankoff, M.D., Ph.D.; Lalitha Shankar, M.D., Ph.D.

ACR Biostatics Center
Ilana Gareen, Ph.D.; JoRean Sicks, M.S.; Amanda Adams, M.P.H.

ACRIN Headquarters
Jamie Downs, A.A.; Dena Flamini, R.T. (R)(MR)(M)

Career Achievement Recognition
Etta Pisano, M.D.; Don Mitchell, M.D.

Jo-Ann D’Amato Award of Excellence
Lila Camara, R.T.(R)(CV)

Network Chair’s Institutional Achievement Award

<table>
<thead>
<tr>
<th>Institution</th>
<th>Site Principal Investigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henry Ford Hospital</td>
<td>Donald Peck, Ph.D.</td>
</tr>
<tr>
<td>National Cancer Center, Korea</td>
<td>Seok-ki Kim, M.D.</td>
</tr>
<tr>
<td>Penn State Milton S. Hershey Medical Center</td>
<td>Nabeel Sarwani, M.D.</td>
</tr>
<tr>
<td>Radiology Consultants Inc.</td>
<td>Richard Barr, M.D.</td>
</tr>
<tr>
<td>The University of Oklahoma Health Sciences Center</td>
<td>Susan M. Edwards, M.D.</td>
</tr>
<tr>
<td>UCLA Medical Center</td>
<td>Denise Aberle, M.D.</td>
</tr>
<tr>
<td>University of California, San Francisco</td>
<td>Ronald Arenson, M.D.</td>
</tr>
<tr>
<td>University of Pennsylvania School of Medicine</td>
<td>Mitchell Schnall, M.D., Ph.D.</td>
</tr>
<tr>
<td>University of Pittsburgh Medical Center</td>
<td>Kent Kwoh, M.D.</td>
</tr>
</tbody>
</table>
Advancing Radiology

The ACR recognizes its gold medalists and honorary fellows.

By Leslie Miller

With so many outstanding contributors to the field of radiology, selecting recipients of the ACR gold medal and honorary fellow awards each year is a daunting but inspiring task. ACR members submit nominations to the College for these awards of distinction, and the Board of Chancellors selected three winners for each award in 2009. Please join us in extending praise to these outstanding individuals for their contributions to advancing radiology.

Going for the Gold

James P. Borgstede, M.D., FACR

University of Colorado, Denver

The outstanding achievements of James P. Borgstede, M.D., FACR, include a professional career spanning three decades of dedicated service to the field of radiology. In his letter nominating Borgstede for the ACR Gold Medal Award, William T. Thorwarth Jr., M.D., FACR, of Catawba Radiological Associates Inc., wrote that Borgstede consistently conducts himself with “… a seemingly infinite desire to contribute his time and efforts to help others, whether they are fellow radiologists, other physicians, his church members, or those in foreign countries who lack quality health care.”

As a man who practices what he preaches, in 1992 and 1993, Borgstede served as a medical missionary to the Philippines and Cameroon, delivering ultrasound equipment and then teaching the local physicians and technologists how to operate it. Currently, he chairs the committee on Maintenance of Certification for the American Board of Radiology (ABR), and he serves on the ABR board of trustees.

Rising through the ranks at the ACR, Borgstede served on or acted as an advisor to 42 committees, task forces, and commissions. As vice chair of the Board of Chancellors, he formed RADPEER™, a peer review system that is now widely used by radiologists around the nation. While serving as board chair, he visited Capitol Hill on a regular basis to raise awareness about radiologists’ issues and concerns. Borgstede also testified before the House Ways and Means Subcommittee on March 17, 2005, at a hearing on managing the use of imaging services. In addition, Borgstede served as president of the ACR from 2006–2007.

Sharing knowledge is a key component of Borgstede’s contributions to the field of radiology. He has published many provocative and practical articles, both peer reviewed and non–peer reviewed, and has given nearly 50 presentations for many, if not all, of the major medical and radiological societies.

William J. Casarella, M.D.

Emory University, Atlanta

During his 40-year career as a physician and radiologist, William J. Casarella, M.D., has influenced radiology education, practice standards, research, and the application of imaging technologies. His scholastic achievements include a Bachelor of Arts degree, cum laude, from Yale University, and a medical degree from Harvard Medical School.

For the past 23 years, Casarella has served as professor and chair of the department of radiology at Emory University School of Medicine in Atlanta. His influence has created one of the largest, strongest academic radiology departments in the nation. Even outside of radiology, his influence has been significant. For the past 10 years, he has worked as the Executive Associate Dean for Clinical Affairs for Grady Memorial Hospital at Emory University School of Medicine.

Casarella’s numerous leadership responsibilities include national commitments at the Society of Academic Radiologists, American Cancer Society, and the U.S. Food and Drug Administration. He has also served as president of the American Roentgen Ray Society, the ABR, and the Society of Chairmen of Academic Radiology Departments.

Thomas S. Harle, M.D., FACR, of Wake Forest School of Medicine, remarked in his letter nominating Casarella, “He exhibits the highest ethical and moral standards that serve as an example for all in the profession of medicine.”

In addition, Casarella also received a gold medal from both the Society of Interventional Radiology and the American Roentgen Ray Society. In 1998, he was an honoree of the Morehouse School of Medicine salute to excellence.
Carolyn Cidis Meltzer, M.D., FACR, of Emory University School of Medicine, summarized Casarella’s career in her letter of nomination as follows: “In summary, Dr. Casarella’s distinguished career is characterized by tireless service to advance undergraduate and postgraduate medical education, evaluate advanced imaging technologies, and support the career development of numerous radiologists and researchers.”

Robert R. Hattery Jr., M.D., FACR
University of Arizona, Tucson

Throughout his career, Robert R. Hattery Jr., M.D., FACR, has helped shape American radiology and medicine through education, leadership, and mentoring. He devoted 30 years of his career to the Mayo Clinic in Rochester, Minn., where he holds the status of professor emeritus. Currently, he is clinical professor of diagnostic radiology at the University of Arizona in Tucson.

As a passionate and energetic educator, Hattery has guided and directed advances in radiology education at the local, regional, national, and international levels. In his letter of nomination, Bernard F. King, M.D., FACR, of the Mayo Clinic, remarked, “… Dr. Hattery … has conveyed his deep passion and commitment to the care of the patient through excellence in diagnostic imaging and intervention.”

From 2002–2007, Hattery was the executive director of the ABR, and he currently acts as the senior adviser to the executive director. He is past president of the Radiological Society of North America (RSNA), the Society of Computed Body Tomography and Magnetic Resonance, the Society of Uroradiology, and the ABR. Hattery’s continuing dedication is also illustrated by his service on the editorial board of RSNA’s journal RadioGraphics and as a scientific reviewer for the prestigious publication Radiology. Additionally, he has authored or coauthored more than 150 publications, including peer-reviewed articles, abstracts, and book chapters.

He is known as “radiology’s radiologist,” a moniker that may explain all of his gold medals. In 2005, he was awarded a gold medal from the Society of Uroradiology; in 2000, he received a gold medal from the American Roentgen Ray Society; and in 1998, he was honored with the Hartman Gold Medal of the Minnesota Radiological Society.

In addition to serving on numerous ACR task forces and other committees, Hattery served on the ACR Board of Chancellors and was chair of the Commission on Education from 1994–1998 and helped advance many educational efforts. He received his ACR fellowship in 1989.

Introducing Our Honorary Fellows

Adrian K. Dixon, M.D.
University of Cambridge, England

Adrian K. Dixon, M.D., is considered one of the giants of radiology. He has been honored by many international radiology organizations; among the honors that he has received are fellowships in New Zealand, Sweden, Ireland, France, and Hungary.

Dixon’s main areas of expertise are computerized tomography and MRI of the abdomen, but he also has special expertise on the cost-effectiveness of cross-sectional imaging. His research interests include the diagnostic performance of new technologies as well as understanding how diagnostic imaging affects the decisions of referring physicians.

Dixon’s literary contributions include 44 books and chapters and 265 peer-reviewed articles. From 1998–2002, Dixon served as the editor of Clinical Radiology, the leading radiology journal in the United Kingdom. Since 2007, he has been the editor-in-chief of European Radiology, also a highly regarded imaging journal.

In 1994, Dixon was professor of radiology at the University of Cambridge and honorary consultant radiologist at Addenbrooke’s Hospital in Cambridge. From 2002–2006, he served as warden of the faculty of clinical radiology at the Royal College of Radiologists. Finally, in 2008, he was appointed medical Master at Peterhouse College in Cambridge.

The recipient of many distinguished awards, Dixon received the Andre Mayer prize for clinical research on obesity in 1987. In 1998, he received the Barclay Medal, and one year later, he was awarded an honorary fellowship by the faculty of radiologists at the Royal College of Surgeons in Ireland. In 2003, he was awarded a fellowship by the Royal College of Surgeons without examination.

In his letter of nomination, Herbert Y. Kressel, M.D., FACR, of Harvard Medical School, penned these powerful words to describe his colleague: “Dr. Dixon is an outstanding radiologist and leader, who has been a pioneer in advancing novel and meaningful approaches to assess diagnostic performance and to apply evidence-based medicine concepts to radiology.”
Honoring Outstanding Radiologists

Carl-Gustaf Standertskjold-Nordenstam, M.D., Ph.D.
University of Helsinki, Finland

Radiology and health care worldwide have greatly benefited from the outstanding contributions of Carl-Gustaf Standertskjold-Nordenstam, M.D., Ph.D. Having served the profession for 40 years as an educator, administrator, and scientist, he has been active in European and Scandinavian radiological societies and has served as copresident of the International Congress of Radiology. At Helsinki University, he held the position of chair to the end of his career.

Now retired, Standertskjold-Nordenstam is well-known as an international leader, researcher, teacher, and administrator in diagnostic radiology and a popular lecturer in Europe. His problem-solving skills are facilitated by fluency in at least six languages. Renate L. Soulen, M.D., FACR, of Wayne State University, who has known Standertskjold-Nordenstam for more than 40 years, said that even though his friend and colleague is world-renowned, “unchanged over all these years are his modesty and warm sense of humor.”

From 1988–2002, Standertskjold-Nordenstam was professor and chair of the department of radiology at Helsinki University, where he incorporated innovative teaching methods into the medical curriculum. He mentored countless medical students and residents and helped to produce an average of four dissertations and 50 to 70 scientific articles per year.

Standertskjold-Nordenstam managed the International Society of Radiology (ISR) for three years until the ACR assumed management responsibilities in 1995. He started out as a volunteer and went on to become secretary-general, president-elect, and then president. During his years of leadership, the ISR blossomed and built liaisons with United Nations health organizations and major radiological societies. In particular, Standertskjold-Nordenstam worked with the World Health Organization to create teaching centers for radiologists and radiographers in Africa, and he traveled to Kuwait to promote radiology education. In 2004, he received the ISR’s highest honor, the Beclere Medal.

Maximilian F. Reiser, M.D.
University of Munich, Germany

Well known as an important leader of European radiology, Maximilian F. Reiser, M.D., is also one of the most respected investigators in musculoskeletal radiology. As professor of radiology and chair of the famous department of clinical radiology at Ludwig Maximilian University in Munich, Reiser is a recognized leader of European biomedical imaging at one of the most prestigious universities in Germany.

Awarded many honors in Europe, Reiser has received the Holthusen Ring award from the German Radiological Society and an honorary doctorate in veterinary medicine from the Ludwig Maximilian University. He has been a fellow of the Cardiovascular and Interventional Radiological Society of Europe, an honorary member of the Hellenic Radiological Society, an honorary member of the Austrian Radiological Society, a fellow of the International Society for Magnetic Resonance in Medicine (ISMRM), and a member of the Leopoldina Academy of Sciences.

Many professional organizations have appointed Reiser to high-level positions. Starting in 1995, Reiser served as president of the European Society of Musculoskeletal Radiology for one year. In 1997, he served as vice president of the German chapter of the ISMRM. From 2005–2007, he served as president of the German Radiological Society. From 2000 to the present, he has served on the board of directors of the European Congress of Radiology while also serving as president of the European Congress of Radiology in 2008. For the past six years, he has served as chair of the Munich University Hospital Breast Center.

An accomplished author, Reiser has published an astounding 737 peer-reviewed articles containing original research and reviews and has accepted four visiting professorships — at the University of Vienna, Stanford University, University of California, and the Memorial Sloan-Kettering Cancer Center in New York City.
Decisions, Decisions
Access the ACR’s latest evidence-based guidance to make the most appropriate decisions.
By Leslie Miller

The ACR continues to meet its commitment to provide up-to-date information to radiologists, radiation oncologists, and referring providers. The College also understands the need for the efficient use of radiologic services. Market forces demand that physicians and provider organizations practice cost-effective medicine while maintaining quality.

The ACR Appropriateness Criteria® (AC) are nationally accepted, evidence-based tools to assist physicians and other providers in making the most appropriate imaging and treatment decisions for specific clinical conditions. Topics are updated regularly using scientific review and consensus techniques.

Updated Version Just Released
More than 50 topics were updated in the AC in 2008. More than 200 experts, including radiologists, radiation oncologists, and representatives from more than 15 nonradiology medical specialty societies, participate in the updating process. Each expert panel is chaired by an individual with leadership capabilities and nationally recognized as an expert in the area of focus.

Funding for the process is assumed entirely by the ACR, with staff providing support to the expert panels.

The latest release includes 159 topics with more than 800 variants addressing breast, cardiac, gastrointestinal, musculoskeletal, neurologic, pediatric, thoracic, urologic, vascular, and women’s imaging, as well as interventional radiology and radiation oncology. It also includes updated relative radiation level (RRL) information for imaging exams. All RRL assignments are based on reviews of current literature and the experience of medical physicists and radiologists.

Easy to Use
The AC are user-friendly and offer the ability to search by condition and procedure. Additionally, the updated database version, which includes CPT® and ICD-9 coding information, is now available for licensing. To inquire, contact Christine Waldrip at 800-227-5463, ext. 4793, or cwaldrip@acr.org.

The AC will continue to play a strong role in promoting high-quality, appropriate radiologic imaging and treatment to improve patient care. These evidence-based tools contain the information you need to make important clinical decisions.

To access the ACR Appropriateness Criteria, visit www.acr.org/ac. For more information, please send an e-mail to acr_ac@acr.org or call 800-227-5463, ext. 4590.

Appropriateness Criteria® Expert Panel Chairs

Michael A. Bettmann, M.D., FACR, Chair, Committee on Appropriateness Criteria
Peter A.S. Johnstone, M.D., FACR, Vice Chair, Appropriateness Criteria Radiation Oncology
Rochelle F. Andreotti, M.D., FACR, Chair, Women’s Imaging
Lawrence W. Bassett, M.D., Chair, Women’s Imaging-Breast
David A. Bluemke, M.D., Ph.D., Chair, Cardiac Imaging
Richard H. Daffner, M.D., FACR, Chair, Musculoskeletal Imaging
Isaac R. Francis, M.D., Chair, Urologic Imaging
Brian S. Funaki, M.D., Chair, Interventional Radiology
Laurie E. Gaspar, M.D., M.B.A., FACR, Chair, Radiation Oncology-Brain Metastases
Richard B. Gunderman, M.D., Ph.D., Chair, Pediatric Imaging
Arfa R. Khan, M.D., FACR, Chair, Thoracic Imaging
Andre A. Konski, M.D., M.B.A., M.A., FACR, Chair, Radiation Oncology-Rectal/Anal
Stephen T. Lutz, M.D., M.S., Chair, Radiation Oncology-Bone Metastases
Benjamin Movsas, M.D., Chair, Radiation Oncology-Lung
Andrea Ka-Min Ng, M.D., Chair, Radiation Oncology-Hodgkin’s Lymphoma
Rachel A. Rabino-vitch, M.D., Chair, Radiation Oncology-Breast
Mack Roach III, M.D., FACR, Chair, Radiation Oncology-Prostate
Max P. Rosen, M.D., M.P.H., Chair, Gastrointestinal Imaging
Beth A. Schueler, Ph.D., Chair, Subcommittee on Relative Radiation Exposure and Dose
Franz J. Wippold II, M.D., FACR, Chair, Neurologic Imaging
E. Kent Yucel, M.D., FACR, Chair, Vascular Imaging
A CR member Katarzyna J. Macura, M.D., Ph.D., has received many awards in the last 10 years of her career. In 2007, she placed fifth in the “Women’s Imaging Specialist” category of the 2007 Medical Imaging Industry Top 10 Awards. Under her tenure as president of the American Association for Women Radiologists (AAWR) in 2005, AAWR was honored with the 2005 Women in Medicine Leadership Development Award from the Association of American Medical Colleges. Additionally, she received the American Roentgen Ray Society 2006 Philips Scholarship, two bronze medals from the American Roentgen Ray Society, a Cum Laude award from the Radiological Society of North America, and the 2005 Outstanding Faculty Teacher of the Year Residents’ award from the Department of Radiology at Johns Hopkins University.

Currently, Macura is associate professor at Johns Hopkins University, School of Medicine, Baltimore, in the Russell H. Morgan Department of Radiology and Radiological Science. She also serves as imaging core leader at the Office for Imaging Support in Translational Research at the Johns Hopkins University Institute for Clinical and Translational Research.

Macura received her doctoral degree in medical informatics in 1991 from the Medical University of Lodz in Poland, and then she completed a postgraduate doctoral fellowship as a visiting researcher in the artificial intelligence department at the University of Georgia in Athens, Ga.

Here, she translated her doctorate work — a knowledge-based management system for diagnosis of brain tumors — into English and added educational components to improve the assessment of brain tumors on the basis of histopathological information. “I was a physician first, and then I became a computer scientist, and then a physician again,” she says. In 2000, she completed her residency in diagnostic radiology at the Department of Radiology, Medical College of Georgia (Augusta, Ga.). After that, she completed a fellowship in cross-sectional body imaging at the Department of Radiology at Johns Hopkins University.

Despite Macura’s prodigious radiology career and numerous educational and professional successes, her greatest reward is her family. She and her husband, Robert T. Macura, M.D., Ph.D., met in Poland and then moved to the United States to advance their careers and raise their two sons, Tomasz and Wiktor. The boys, who are now 22 and 19, are considered intellectual prodigies.

Learning by the Sea

Katarzyna J. Macura, M.D., Ph.D., shares her wisdom about sailing, scuba diving, and rearing prodigy sons.

A CR member Katarzyna J. Macura, M.D., Ph.D., has received many awards in the last 10 years of her career. In 2007, she placed fifth in the “Women’s Imaging Specialist” category of the 2007 Medical Imaging Industry Top 10 Awards. Under her tenure as president of the American Association for Women Radiologists (AAWR) in 2005, AAWR was honored with the 2005 Women in Medicine Leadership Development Award from the Association of American Medical Colleges.

Additionally, she received the American Roentgen Ray Society 2006 Philips Scholarship, two bronze medals from the American Roentgen Ray Society, a Cum Laude award from the Radiological Society of North America, and the 2005 Outstanding Faculty Teacher of the Year Residents’ award from the Department of Radiology at Johns Hopkins University.

Currently, Macura is associate professor at Johns Hopkins University, School of Medicine, Baltimore, in the Russell H. Morgan Department of Radiology and Radiological Science. She also serves as imaging core leader at the Office for Imaging Support in Translational Research at the Johns Hopkins University Institute for Clinical and Translational Research.

Macura received her doctoral degree in medical informatics in 1991 from the Medical University of Lodz in Poland, and then she completed a postgraduate doctoral fellowship as a visiting researcher in the artificial intelligence department at the University of Georgia in Athens, Ga.

Here, she translated her doctorate work — a knowledge-based management system for diagnosis of brain tumors — into English and added educational components to improve the assessment of brain tumors on the basis of histopathological information. “I was a physician first, and then I became a computer scientist, and then a physician again,” she says. In 2000, she completed her residency in diagnostic radiology at the Department of Radiology, Medical College of Georgia (Augusta, Ga.). After that, she completed a fellowship in cross-sectional body imaging at the Department of Radiology at Johns Hopkins University.

Despite Macura’s prodigious radiology career and numerous educational and professional successes, her greatest reward is her family. She and her husband, Robert T. Macura, M.D., Ph.D., met in Poland and then moved to the United States to advance their careers and raise their two sons, Tomasz and Wiktor. The boys, who are now 22 and 19, are considered intellectual prodigies.

Reaching for the Stars

At the age of 12, both Tomasz and Wiktor scored better than 95 percent of college-bound high school seniors on the SAT®I: Reasoning Test, bypassed high school, and went to college. At 16, Tomasz was one of the youngest graduates of the University of Maryland Baltimore County (UMBC), earning two B.S. degrees in mathematics and computer science.

During his attendance at UMBC, Tomasz received the Barry M. Goldwater Research Scholar award, the Provost Undergraduate Research award, and multiple scholarships. For many of these honors he was the youngest recipient in the history of the awards. As a National Institutes of Health
Oxford/Cambridge Scholar, Tomasz completed an individualized doctoral training program for outstanding science students committed to biomedical research. At 22, Tomasz earned a Ph.D. in computer science from Trinity College, Cambridge University, England. He also authored a book chapter on image data and work flow management in *Microscope Image Processing*. He currently works as a strategist for Goldman Sachs in London to address issues in the changing world economy.

Also a published author, Wiktor, now 19, is currently working as the lead software developer for special projects at Wolfram Research in Urbana-Champaign, Ill. Stephen Wolfram, president and chief executive officer of Wolfram Research, invented a software called Mathematica used for computational modeling, simulation, and visualization in physics, imaging, and biology, as well as in art and music. Wiktor is the company’s youngest employee.

**On Raising Prodigies**

Macura and her husband didn’t have a particular strategy or agenda for homeschooling. Instead, the couple encouraged the boys to develop their own intellectual curiosity, discover their hidden talents, and believe that anything is possible. “I believe, as all parents do, that children are gifted in many ways,” Macura says. “Parents are in the perfect position to provide opportunities to enrich their children’s lives.”

While living in Poland, the couple learned to sail on the Baltic Sea and the great lakes in the northern and eastern parts of the country. Upon arriving in the United States, they purchased a 15-foot racing sailboat and taught the boys to sail. “Sailing was an amazing way of bringing all of us together and providing a hands-on educational experience,” Macura explains. “Not only was it good for family time, but it also helped our children to become independent learners because when you’re sailing, you are constantly trying to improve yourself.”

**Sailing Near the Florida Keys**

The Macuras took the boys sailing through waters along the Florida coast where famous treasure hunter Mel Fisher once sailed. Their most exciting sailing destination was the famous area in Key West known as Dry Tortugas National Park (formerly Fort Jefferson National Monument), which has a Civil War–era fort accessible only by boat or seaplane.

Macura believes that the sailing adventures the boys had when they were young contributed to their development later in life. “I believe that learning by doing instills a certain intellectual independence,” she says. That trip was an experience of a life-time that transcended their youth, and they still talk about the adventures they had.

**Navigating the World in Grayscale**

The Macura family also enjoyed scuba diving together, and this activity also helped shape the boys’ minds. According to Macura, scuba divers are like radiologists because both see the world in grayscale. “The colors are a deep, blue-gray, and much of your recognition is by shape,” she explains. “This perspective, combined with the tranquility and spontaneity of the natural environment, forces divers to be ready for the unexpected. As you navigate more and more challenging environments, you are in a constant state of evolution and this mimics life itself.”

The Macuras taught their sons that achieving success in life is less about memorization and structure and more about knowing what questions to ask. As they participated in family adventures at sea, the boys learned that the world is always changing. This knowledge heightened their intellectual curiosity. “If you think about how kids learn, they have this natural curiosity for learning, but at some point in school, this curiosity gets lost,” Macura says. “The key is to preserve this curiosity and their eagerness to learn throughout their youth.”

**Balancing Work and Family**

Macura is a wife and mother, physician, radiologist, teacher, and researcher. “When I arrived in the United States 17 years ago with two small children, nothing seemed to be easy,” she admits. “I was faced with a new language, a new life style, and new challenges. But from the beginning everything seemed possible and nothing was beyond reach. This was an extremely powerful feeling that was shared by our children. As a family, we focused on proving ourselves, breaking the language barrier, and developing our talents.” It was this bond and the drive to succeed that allowed the Macuras to achieve high honors and recognition.
Discover a Body of Knowledge

Here’s a glimpse of the Third Annual Body MRI Update course.

By Raina Keefer

Learn the most advanced, up-to-date protocols and techniques for magnetic resonance imaging (MRI) in the ACR’s Third Annual Body MRI Update course. Scheduled for March 27-29, 2009, in Washington, D.C., the course will cover the MRI of a variety of body areas, from the chest to the pelvis.

The mission of Diego R. Martin, M.D., program chair for the course and professor and director of MRI at Atlanta’s Emory Healthcare Inc., was to identify leaders in the field as faculty members. “There is a common interest among all of the speakers,” says Martin, “and that is an intense desire to ensure that the highest possible standards are achieved in the [MRI] community. This course is one of the mechanisms that we’re interested in to help offer continuing support so that radiologists have access to us and learn our methods.”

Meeting attendees will interpret real-world cases divided into sessions by organ, including several sessions devoted to MRI of the liver. Topics include imaging of tumors, diffuse diseases, difficult cases, and hepatocellular carcinoma; treatment; and transplantation. Other organs or body areas considered are breast, chest, kidney, pelvis, pancreas, and bowel.

The course will review what Martin calls the “imaging chain.” This chain starts with an optimally configured machine, then continues with technologists and radiologists. Technologists are a key part of the chain; they can attend specialized sessions during the seminar.

Each day, technical review sessions specific to each MRI equipment vendor will be conducted by application specialists who will review the most important elements to successful abdominal MRI, and Martin and his faculty will share their MRI machine protocols. Attendees can also arrange for follow-up meetings with the vendors. “We are trying to offer as much support for the process of MRI as possible,” he says.

For registration and program information, visit www.acr.org, click on “ACR Education,” and then click on “Education on the Road.”

Tools for Learning Now

The ACR offers many MRI-related educational products.

In addition to his role as program chair for the Third Annual Body MRI Update course, Diego R. Martin, M.D., is working with the ACR to develop a Body MRI course for the ACR Education Center. The first session for that course will be offered this summer. But you don’t need to wait until then to hone your MRI skills; MRI-related products are available from the College today, including:

- The ACR Campus™ Web lectures, featuring some of the most respected leaders in radiology, on different organs and diseases that are best imaged with MRI (available at http://campus.acr.org/acr/online_products.aspx)

- The ACR’s MRI Quality Control Manual (2004), a great reference tool for effective scanning; to find this manual and other quality control manuals, visit www.acr.org/4dimensions, click on “Purchase Traditional Products,” and scroll down to “Quality Control Manuals” under “Quality and Safety.”


To the Point

- The Third Annual Body MRI Update course will be held March 27-29, 2009, at the Washington Court Hotel in Washington, D.C.

- MRI technologists can attend specialized sessions during the meeting.

- Attendees will be able to download MRI-machine specific protocols from experts in MRI.
The liquid in your skin, including that in the arteries, isn’t much different from other liquids; it can freeze when exposed to sufficiently low temperatures. Now, George R. Edmonson, M.D., an interventional radiologist with St. Paul Radiology in St. Paul, Minn., has discovered a way to reopen recently frozen, clotted arteries using angiography and clot-busting drugs.

"Recently frozen" is integral to Edmonson’s technique. When a body part sustains severe frostbite, the fluid in the skin freezes; this process creates crystals with many sharp edges that can eventually destroy cell membranes and cause necrosis, or skin death. This is why shaking or slapping the exposed limb to reinvigorate blood flow is not recommended. Much like death in a larger perspective, once skin dies, it can’t be brought back to life.

Frosty Finds

Last March, Edmonson first introduced the results of his small, prospective trial of 17 patients with frostbite at the Society of Interventional Radiology’s 33rd Annual Scientific Meeting. Using angiography, Edmonson and other interventional radiologists confirmed the loss of blood flow to a patient’s hand or toes; then, they used intra-arterial catheters to directly deliver drugs to dissolve blood clots and relax the arteries’ muscular walls.

Although patients began to see results one to three days after treatment, Edmonson assessed their final outcomes six weeks later. “Approximately 80 percent of the patients’ affected limbs, fingers, and toes responded with significant improvement,” he says.

Taking the Chill Out

“Previously, severe frostbite was a one-way route to limb loss,” says Edmonson. “This treatment is a significant improvement. We’re opening arteries that are blocked so that tissues can heal and limbs can be salvaged. We were able to reopen even the smallest arteries, saving patients’ fingers and toes.”

Despite Edmonson’s work on frostbite, in some cases, the frostbite so traumatizes the tissues that the only possible procedure is amputation. However, after decades of patients being offered only one treatment, it’s a leap forward to have another option.

“Previously, severe frostbite was a one-way route to limb loss.
This treatment is a significant improvement.”

— George R. Edmonson, M.D.

A Glacial Celebrity

Because of the enormity of Edmonson’s discovery, he has been deluged with phone calls and e-mails with questions about his trial’s results. “The most unusual e-mail I received included a cell phone picture of a Himalayan climber’s own [frostbitten] fingers, looking for help and advice,” he recalls. Unfortunately for that climber, Edmonson wasn’t able to help because of a delay in seeking treatment.

But, there are many other patients whom Edmonson has helped to escape the severe treatment of amputation, and he plans to continue research into frostbite. In the future, he will focus on why some patients do not respond to treatment in an effort to find more effective treatments or to reduce resources used in ineffective efforts.
January is Cervical Cancer Awareness Month. Each year in the United States, approximately 15,000 women are diagnosed with cervical cancer, and about 5,000 women die of the disease. Imaging plays increasingly important roles in diagnosing, staging, and treating cervical cancer. The American College of Radiology Imaging Network (ACRIN) has been involved in cervical cancer research since its inception; the evolution of this research illustrates how approaches to the disease have changed over the past decade.

ACRIN’s first trial, ACRIN 6651: Role of Radiology in the Pretreatment Evaluation of Invasive Cervical Cancer, focused on comparing cervical cancer staging based on a clinical exam and staging based on imaging. Several publications resulted from this trial; the final one, “Early Invasive Cervical Cancer: MRI and CT Predictors of Lymphatic Metastases in the ACRIN 6651/GOG 183 Intergroup Study,” will appear soon in *Gynecologic Oncology*. That study compared magnetic resonance imaging (MRI), computerized tomography (CT), clinical exam, and histopathological analysis for predicting lymph node involvement in women with cervical cancer.

“The original trial was based on traditional, 20th-century ideas of staging,” says Donald G. Mitchell, M.D., FACR, at Philadelphia’s Thomas Jefferson University Hospital Department of Radiology. “The premise was that the tumor was hard to see, so you had to put people into categories based on indirect methods,” he adds. Mitchell is also the first author of the final publication from ACRIN’s first trial and current member and previous chair of the ACRIN Gynecologic Committee.

“Even at the time ACRIN 6651 was developed, the cancer community had already moved beyond traditional staging in clinical practice, and doctors were relying more and more on imaging — even though the use of imaging had not been officially incorporated into sanctioned systems of clinical staging,” Mitchell says. “Now, this latest publication uses the data from the ACRIN 6651 trial to move beyond the trial’s primary aims and explore how information from cervical cancer imaging can be used to arrive at a prognosis.”

The final publication from ACRIN’s first trial appears as two new cervical cancer trials are beginning. ACRIN 6671/GOG-0233: Staging Cervical Cancer With Combidex® MRI and PET/CT is designed to examine two new methods for imaging lymph nodes for staging purposes in patients with locoregionally advanced cervical cancer. The trial evaluates the diagnostic accuracies of both preoperative fluorodeoxyglucose (FDG)-PET/CT imaging and preoperative MRI scanning with the contrast agent Combidex (ferumoxtran-10) in order to identify abdominal lymph node metastases and determine the extent of cancer.

“Both FDG-PET/CT and MRI with Combidex offer promise in more accurately diagnosing these metastases in patients with cervical cancer, which could lead to more effective treatment decisions.”

— Mostafa Atri, M.D.

“The conventional means of diagnosing lymph node metastases by size have low specificity and low sensitivity,” explains the principal investigator, Mostafa Atri, M.D., of the University of Toronto. “Both FDG-PET/CT and MRI with Combidex offer promise in more accurately diagnosing these metastases in patients with cervical cancer, which could lead to more effective treatment decisions,” Atri adds. “Since determining the involvement of lymph nodes is important for the treatment of all cancer patients, we are hopeful that this study may also lead to additional research that will benefit patients with many different kinds of cancer.”

A trial in the final stages of development, ACRIN 6682: PET/CT Assessment of Tumor Hypoxia in Cervical Cancer, is designed to use a new contrast agent to label tumor hypoxia. According to the principal investigator, Farrokh Dehdashti, M.D., of the Mallinckrodt Institute of Radiology in St. Louis, “In patients with cervical cancer, tumor hypoxia — or low oxygen content — is an important prognostic factor and predicts decreased overall and disease-
free survival. In part, this is because hypoxic tumors are resistant to chemotherapy and radiotherapy,” she continues.

“In ACRIN 6682, we are using PET with a hypoxic tracer in patients with cervical cancer and extending our previous single-center experience to a multicenter study,” Dehdashti adds. “We will test the ability of hypoxia imaging to predict the behavior of cervical cancer and patient outcome, with the ultimate goal of improving therapy selection for this patient group.”

ACRIN’s patient advocate, Missy Layfield, who serves on both ACRIN’s Experimental Imaging Sciences Committee and the Gynecologic Committee, is very enthusiastic about ACRIN 6671 and ACRIN 6682. “For patients, information is gold,” she says. “Both of these trials are working to improve prognostic information before treatment and, from an advocate point of view, that’s very exciting. I tell people that cancer research is like a big jigsaw puzzle, and each trial gives us another piece. These two trials will provide us with two very important pieces — and the results will affect patient care for cervical cancer.”

“I tell people that cancer research
is like a big jigsaw puzzle, and each
trial gives us another piece.”

— Missy Layfield

Other concepts for cervical cancer imaging research that are being considered by the Gynecologic Committee are in the very early stages of development. Two of them explore brachytherapy, or delivering radiation from an internal source. One is designed to compare MRI and CT as guidance methods. Another is designed to examine the optimal use of dynamic contrast-enhanced MRI and CT for predicting which tumors will respond to treatment. The committee is also considering ovarian cancer research, with the goal of trying to determine imaging’s role in screening high-risk populations.

Since ACRIN began cervical cancer research a decade ago, there have been major changes. The focus shifted first from staging based on indirect criteria to staging based on more direct methods to determine the extent of disease. Now, new research focuses on determining tumor characteristics and defining the precise borders of tumors with the aim of customizing treatment. The ultimate goal is to tailor cervical cancer treatment to patients and thus improve the length and quality of their lives.

Participate in ACRIN 6671

Currently, seven facilities are enrolling patients into the collaborative trial with the Gynecology Oncology Group (GOG). To expedite patient enrollment, ACRIN is soliciting participation by additional facilities. The basic requirements for site participation include:

1. Imaging must be performed by an ACRIN-approved facility in collaboration with a GOG institution. Also, PET and CT scanners used in the study must be credentialed by ACRIN.
   - ACRIN personnel are available to help expedite facility approval and scanner credentialing and to identify potential collaborative GOG researchers.

2. The GOG site must be able to perform the required lymph node dissection.
   - More information about the lymph node dissection is available in the protocol (see link below).


For more information about participating in the study, please contact Project Manager Heather Polley at 215-574-3245 or hpolley@phila.acr.org.

Pathologically proven metastatic inguinal adenopathy. Precontrast image shows two hyperintense lymph nodes in the left inguinal region. Twenty-four hours after the administration of ferumoxtran-10, the medial node shows homogenous uptake and is consistent with benign etiology. The lateral node continues to stay hyperintense with some faint peripheral uptake, which is suggestive of malignant infiltration, which was proven by histopathology.
A Commanding Presence

The ACR struts its stuff at RSNA.

By Raina Keefer

With a new, innovative booth and several new products to showcase, the ACR ventured out to Chicago for the 2008 RSNA Annual Meeting held Nov. 30-Dec. 5, 2008. Visitors to the booth discovered information on the College’s four pillars: advocacy, quality and safety, education, and clinical research; 10 abstracts on various clinical trials were also presented.

Features of the world’s largest medical meeting included:

- More than 58,000 attendees
- More than 2,400 scientific presentations and posters
- More than 1,800 education exhibits and informatics demonstrations
Economic Chairman’s Report

Medicare Updates Disappoint

As we begin a new year of economic activity at the ACR, we need to consider the updates in Medicare payment policy for 2009, which have some important ramifications for radiology. In June 2008, the Centers for Medicare & Medicaid Services (CMS) published its “Notice of Proposed Rule Making With Comment Period (NPRM).” In the notice, CMS addressed many concerns, including the regulation of diagnostic imaging services and physician self-referral, and the ACR was encouraged that CMS was finally addressing these important issues in a robust manner. However, on Nov. 19, 2008, CMS published the final rule for the 2009 Medicare Physician Fee Schedule (MPFS), and, as we have often seen in the past, much of what was proposed for 2009 was not finalized.

In the NPRM, CMS proposed that all physician and nonphysician practitioner organizations providing diagnostic imaging services, including physician offices, enroll as Independent Diagnostic Testing Facilities (IDTFs). The ACR considered this a positive step on CMS’s part to ensure quality, promote patient safety, and create transparency.

As expected, the entire medical community commented that registration as an IDTF would create unnecessary burdens for practices, and in the final rule, CMS deferred indefinitely the implementation of the proposal. CMS stated that since Congress enacted a requirement for accreditation of all facilities providing advanced diagnostic imaging as part of the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) by 2012, registration as an IDTF might not be required. However, CMS plans to continue finalizing the provision in future rule making, if necessary. We continue to focus our efforts with CMS on promoting transparency and a level playing field for all providers of diagnostic imaging services.

The Solution Could Exacerbate the Problem

The issue of physician self-referral was also a prominent section of the proposed rule for the MPFS. For years, the ACR has urged CMS to curb arrangements...
FDA Studies Alzheimer’s Disease

The U.S. Food and Drug Administration (FDA) recently convened an advisory committee meeting for two purposes: to discuss the clinical development of radionuclide imaging products for detecting amyloid to assist in diagnosing Alzheimer’s disease and to consider appropriate clinical trial endpoints for FDA approval of such products. Representatives of three manufacturers — Avid Radiopharmaceuticals Inc., Bayer HealthCare Pharmaceuticals Inc., and GE Healthcare Inc. — are in discussions with FDA in anticipation of beginning phase 3 clinical studies. At the meeting, the manufacturer representatives outlined proposals for those studies.

No Move on Self-Referral

Finally, while all of the outstanding antimarkup issues would be eliminated if CMS decided to exclude advanced imaging from the in-office ancillary exception (IOAE), it took no action on this issue. Once again, the ACR used the opportunity of self-referral provisions in the proposed rule to suggest that CMS develop a proposed rule with comment period to exclude magnetic resonance imaging, computed tomography, positron emission tomography, and intensity-modulated radiation therapy, from the IOAE. Considerable evidence indicates that these services were never meant to be included when the IOAE was developed.

In these situations, CMS will still permit block-lease arrangements, and since both the TC and professional component are exempt from the antimarkup rule under the expanded definition of the “office of the billing physician,” these arrangements may actually become even more common. The ACR will continue its efforts to encourage both CMS and Congress to further strengthen the antimarkup regulations.

Regulatory Affairs Update

By Gloria Romanelli, Esq., and Mike Peters

FDA Studies Alzheimer’s Disease

The U.S. Food and Drug Administration (FDA) recently convened an advisory committee meeting for two purposes: to discuss the clinical development of radionuclide imaging products for detecting amyloid to assist in diagnosing Alzheimer’s disease and to consider appropriate clinical trial endpoints for FDA approval of such products. Representatives of three manufacturers — Avid Radiopharmaceuticals Inc., Bayer HealthCare Pharmaceuticals Inc., and GE Healthcare Inc. — are in discussions with FDA in anticipation of beginning phase 3 clinical studies. At the meeting, the manufacturer representatives outlined proposals for those studies.

No Move on Self-Referral

Finally, while all of the outstanding antimarkup issues would be eliminated if CMS decided to exclude advanced imaging from the in-office ancillary exception (IOAE), it took no action on this issue. Once again, the ACR used the opportunity of self-referral provisions in the proposed rule to suggest that CMS develop a proposed rule with comment period to exclude magnetic resonance imaging, computed tomography, positron emission tomography, and intensity-modulated radiation therapy, from the IOAE. Considerable evidence indicates that these services were never meant to be included when the IOAE was developed.

In these situations, CMS will still permit block-lease arrangements, and since both the TC and professional component are exempt from the antimarkup rule under the expanded definition of the “office of the billing physician,” these arrangements may actually become even more common. The ACR will continue its efforts to encourage both CMS and Congress to further strengthen the antimarkup regulations.

Regulatory Affairs Update

By Gloria Romanelli, Esq., and Mike Peters

FDA Studies Alzheimer’s Disease

The U.S. Food and Drug Administration (FDA) recently convened an advisory committee meeting for two purposes: to discuss the clinical development of radionuclide imaging products for detecting amyloid to assist in diagnosing Alzheimer’s disease and to consider appropriate clinical trial endpoints for FDA approval of such products. Representatives of three manufacturers — Avid Radiopharmaceuticals Inc., Bayer HealthCare Pharmaceuticals Inc., and GE Healthcare Inc. — are in discussions with FDA in anticipation of beginning phase 3 clinical studies. At the meeting, the manufacturer representatives outlined proposals for those studies.

No Move on Self-Referral

Finally, while all of the outstanding antimarkup issues would be eliminated if CMS decided to exclude advanced imaging from the in-office ancillary exception (IOAE), it took no action on this issue. Once again, the ACR used the opportunity of self-referral provisions in the proposed rule to suggest that CMS develop a proposed rule with comment period to exclude magnetic resonance imaging, computed tomography, positron emission tomography, and intensity-modulated radiation therapy, from the IOAE. Considerable evidence indicates that these services were never meant to be included when the IOAE was developed.

In these situations, CMS will still permit block-lease arrangements, and since both the TC and professional component are exempt from the antimarkup rule under the expanded definition of the “office of the billing physician,” these arrangements may actually become even more common. The ACR will continue its efforts to encourage both CMS and Congress to further strengthen the antimarkup regulations.

Regulatory Affairs Update

By Gloria Romanelli, Esq., and Mike Peters

FDA Studies Alzheimer’s Disease

The U.S. Food and Drug Administration (FDA) recently convened an advisory committee meeting for two purposes: to discuss the clinical development of radionuclide imaging products for detecting amyloid to assist in diagnosing Alzheimer’s disease and to consider appropriate clinical trial endpoints for FDA approval of such products. Representatives of three manufacturers — Avid Radiopharmaceuticals Inc., Bayer HealthCare Pharmaceuticals Inc., and GE Healthcare Inc. — are in discussions with FDA in anticipation of beginning phase 3 clinical studies. At the meeting, the manufacturer representatives outlined proposals for those studies.

No Move on Self-Referral

Finally, while all of the outstanding antimarkup issues would be eliminated if CMS decided to exclude advanced imaging from the in-office ancillary exception (IOAE), it took no action on this issue. Once again, the ACR used the opportunity of self-referral provisions in the proposed rule to suggest that CMS develop a proposed rule with comment period to exclude magnetic resonance imaging, computed tomography, positron emission tomography, and intensity-modulated radiation therapy, from the IOAE. Considerable evidence indicates that these services were never meant to be included when the IOAE was developed.

In these situations, CMS will still permit block-lease arrangements, and since both the TC and professional component are exempt from the antimarkup rule under the expanded definition of the “office of the billing physician,” these arrangements may actually become even more common. The ACR will continue its efforts to encourage both CMS and Congress to further strengthen the antimarkup regulations.
The closely watched Maryland self-referral case now rests with the Maryland Court of Appeals, the state’s highest court. On Oct. 6, 2008, the court heard oral arguments on whether it should uphold or reverse a trial judge’s 2007 ruling that the state’s medical board properly interpreted the self-referral law.

The Maryland statute strictly limits computerized tomography (CT), magnetic resonance imaging (MRI), and radiation therapy performed by self-referring physicians. In 2006, a coalition of orthopedic surgeons, urologists, and emergency physicians sued the Maryland State Board of Physicians, which enforces the law, claiming that it misinterpreted how the law applies to various self-referral MRI arrangements. The trial judge in 2007 agreed with the board (e.g., the law’s “ancillary services” exception does not allow orthopedic referrals for MRI or CT scans because the ancillary services definition specifically excludes all physicians except radiologists from performing those scans).

An attorney representing several orthopedic practices argued that the court of appeals should overturn the ruling. However,
In November 2008, I received the baton of RADPAC chair from James H. Thrall, M.D., FACR. Under Thrall’s leadership, RADPAC reached new heights in the number of American College of Radiology Association (ACRA) contributors, contribution dollars received from ACRA members, and contributions made to federal candidates. I will no doubt have big shoes to fill, but I look forward to the opportunities that lay ahead.

For the first time in 16 years, the United States government will see broad Democratic control with the newly elected 111th Congress, which brings an even larger Democratic majority in both the House and Senate, and with Democratic President Barack Obama in the White House. While it is still much too early to determine what specific changes we will see in this new political environment in Washington, D.C., we do anticipate that health care reform will be one of the top legislative priorities in the next several months.

In addition to continuing the education process through RADPAC’s established relationships with many members of Congress, we must initiate the educational process with more than 75 newly elected, first-time members of Congress who will begin their congressional careers this month. Only three of these congressional members are physicians: Rep.-elect Bill Cassidy, M.D. (D-La.), Rep.-elect Parker Griffith, M.D. (D-Ala.), and Rep.-elect David Roe, M.D. (R-Tenn.). These changes will require RADPAC and ACRA members to work together even more diligently to educate new members of Congress on the issues that are most important to the specialty of radiology.

With the addition of new board members — Jonathan Breslau, M.D., from California; William T. Herrington, M.D., FACR, from Georgia; Kevin L. Smith, M.D., from Minnesota; and Scott M. Truhlar, M.D., from Iowa — the RADPAC board will continue to explore new opportunities for ACRA members to reach out to Congress while continuing to expand the very successful congressional site visit program that has resulted in more than 100 facility visits in the past three years.

The RADPAC board has set several ambitious goals for the 2009–2010 election cycle. One of these goals is to obtain 20 percent RADPAC participation from ACRA members. Since RADPAC’s inception, member participation has steadily increased. In 2007 and 2008, RADPAC participation from ACRA membership hovered around 10 percent. One hundred percent of all ACRA members are directly impacted by health care legislative initiatives decided by congressional members, but only one out of every 10 ACRA members supports the efforts of RADPAC. I understand that radiologists are faced with myriad requests for society dues and contributions, but it is important for ACRA members to recognize that RADPAC is the only entity that specifically works to advance legislative initiatives important to the radiology profession.

In future messages, I will share with you the strategies that the RADPAC board has designed to achieve our goals and ask for your enthusiastic participation in shaping the political future and preserving the stability of your specialty.
Measuring Quality of Care

ACR’s NRDR provides evidenced-based benchmarks for practicing radiology.

By Leslie Miller

The College is becoming increasingly active in helping radiologists develop and report measures for monitoring the quality of patient care. Although many radiology facilities have quality improvement programs that monitor and measure the quality of patient care over time, it is difficult to know how these results compare with those of other facilities of the same type, in the same area, or with those of the nation as a whole.

In 2007, the ACR developed the National Radiology Data Registry (NRDR™), a compilation of registry databases that provides evidence-based health outcomes and radiology facility process data used to compare results with regional and national benchmarks for the purpose of quality improvement. The ACR is currently enrolling interested facilities in two of the newest NRDR registries: the Computerized Tomography Colonography (CTC) registry and the General Radiology Improvement Database (GRID).

Climb Onto the GRID

The GRID registry is used to collect and aggregate performance indicators from imaging facilities for the purpose of quality improvement. Every month, GRID participants submit a variety of performance data from their sites. Every six months, they receive a report comparing quality metrics from their sites with metrics from all other participants during the same period. By accessing GRID, facilities and physicians can compare their turnaround times, patient wait times, patient satisfaction, and many other measures with those of other facilities and practices that are similar in size, type, or region.

Other measures include rates of attended and unattended falls, deaths, code blue rates, nosocomial infections, and wrong exams. Outcomes include rates of nondiagnostic liver and lung biopsies, extravasation from CT exams with contrast agents, and nonconcordant stereotactic breast biopsies. The reports also show reacquisition rates arising from repeat exams that result in additional exposure to the patient due to inadequate imaging techniques.

Ensure Quality CTCs

With the CTC registry, facilities can compare their practice’s performance with regional and national benchmarks to target areas for improvement. Participants submit data from all CTC procedures performed at their sites, and every six months, they receive a report comparing quality metrics for their sites with the metrics received from all other participants of similar type or size during the same period. Using this report, participants can then document the quality of their services for selected third parties and develop individualized quality improvement measures.

The NRDR not only offers radiologists the opportunity to determine the effectiveness of processes, protocols, and procedures, but it also provides an evidence base for practicing radiology. It’s important for radiologists to take the lead in developing, collecting, and reporting measures believed to be important; otherwise, others will decide what should be measured and reported for radiology.

For more information on the NRDR, please visit http://nrdr.acr.org. To enroll in either CTC or GRID, contact Luther Meyer, the NRDR administrator, at 703-648-8958 or nrdr@acr.org.

To the Point

- NRDR is a compilation of registry databases that provides evidence-based health outcomes and radiology facility process data that allows facilities to compare their results with regional and national benchmarks.
- The CTC registry, for facilities providing CTC exams, allows facilities to compare their practice’s performance with regional and national benchmarks to target areas for improvement.
- GRID, a registry used to collect and aggregate performance indicators, allows facilities to compare data and outcomes related to their radiology processes with those of other facilities similar in size or type.
Imagine this scenario: you step into the elevator at work, and standing next to you is a patient on her way to the eighth floor. She notices your name tag and asks, “What do you do here?”

Perhaps you’d respond as follows:

I’m a radiologist, a medical doctor who specializes in the diagnosis and treatment of disease and injury by using medical imaging technologies like MR and CT.

She might say, “Oh really? I thought a radiologist was a technician or something.”

Then, you might explain:

Actually, a radiologist must complete at least 13 years of training, including medical school, an internship, a four-year residency and, in my case, a one-year fellowship of specialized training.

Next, she might become excited because she is on her way to an appointment with an orthopedic surgeon to discuss her MRI results. You could use this elevator encounter as an opportunity to educate, ending the conversation with this:

As a radiologist, I might be able to see your problem early by interpreting the results of your imaging study, and I can provide an accurate diagnosis to your physician. And as minimally invasive procedures and other emerging technologies continue to grow, radiologists like me will play an increasingly significant role in other aspects of your care.

Changing the Public’s Opinion

The scenario described above is an example of how to use the “elevator speech” created by the ACR with the help of Edelman, the public relations firm involved in the ACR’s branding campaign, “The Face of Radiology.”

If you could communicate with five patients per day in this way, how might that help change the public’s opinion? This type of engaged communication could help change Americans’ views, one patient at a time, by your personal involvement in shaping their opinions.

A great way to engage the public is to use the marketing materials that the ACR has provided free of charge at www.mypatientconnection.com. We encourage you to use these complimentary materials to promote your practices, residency programs, and the radiology profession as a whole.

For example, you can download camera-ready art of the “Your Radiologist” print advertisement and customize it by inserting your own practice logo. You can also download the “Your Radiologist” poster and have it printed professionally at a local print shop. The “My Radiologist” brochure is also available in both English and Spanish for downloading, printing, and distributing to your patients.

Formulating Your Next Steps

The bottom line is that we can’t change the public’s misperception about radiologists through advertising alone. We encourage you to visit the two campaign-related Web sites (www.mypatientconnection.com and www.myradiologist.com) regularly and begin preparing your own marketing materials. You can distribute customized ads, posters, and brochures throughout your practice and to your patients; show “The Radiologist’s Story” video in your office waiting room; tell your patients who you are and what you do; and share tips about how you’ve improved communication with your patients by filling out the form found on www.mypatientconnection.com under “Connecting With Your Patients.”

By Leslie Miller

The ACR explores how we can all work together to influence public opinion.

Changing America’s Mind
The Secret Life of Residents

Residents reflect on the decision to enter radiology.

By Raina Keefer

Do you find yourself forgetting names of pets or children? Perhaps you’ve learned to sleep standing up? You must be a resident. After landing a spot in the world of highly competitive residency programs, radiology residents are faced with hours of being on call, overnight shifts, and the possibility of significant others forgetting their names. But many residents are happy to make the situation work.

From Emergency to Radiology

Originally an emergency medicine physician, 39-year-old Kevin Bradley, M.D., will graduate from the University of South Alabama Medical Center radiology residency program in June. An ankle injury that Bradley sustained in his 20s was aggravated after undergoing surgery and compounded by the busy patient-to-patient trek typical in an emergency medicine setting. Concerned about the amount of medication that he was taking to cope with the ankle pain, Bradley was forced to rethink his emergency medicine roots.

“I had to ask myself some questions,” says Bradley. “Do I continue in a career causing me a lot of pain?” After years of studying radiology and his initial career in emergency medicine, Bradley understands the reasons clinicians order specific tests. “I know a lot more now. I do not get frustrated like some of my colleagues when various tests are ordered. When they say, ‘Gee, I can’t believe this patient got this test; it’s worthless,’ I feel that I know why their doctor ordered it. Clinicians do want our input to select the appropriate study.

With all of radiology’s advanced technology, it’s difficult for them to know what study to order.

“Going from my prior job, where I used to be in charge, to taking an order from someone 15 years younger … it was hard at first. Knowing what I know now, I wish I would have focused on radiology straight out of medical school.”

Drawn Together

The toughest challenge for resident Reza Zinati, M.D., is being on call for 30 hours straight. “I think it’s too much,” Zinati says. His residency program is understaffed, a fact that makes his reflection on choosing radiology even more amazing: He wouldn’t trade it for anything.

“You’re busy and stressed [on call], and regardless of the time, you’re supposed to read like you’re 100 percent,” Zinati says. “But, if I had to make a choice again, I’d pick radiology over and over again. I don’t think there’s anything like it … it’s perfect for me.”

At one time, Zinati thought he might follow in the steps of comic book artist and legend Jim Lee, until he discovered the art in radiologic images. To supplement his creative desires, Zinati provides medical illustrations for journal articles. The people managing his residency program were so supportive of this endeavor that they invested in graphic software to help Zinati further develop his artistic skills.

“Comic book graphics are hard; to draw a liver or the biliary tree is a walk in the park,” he adds.

A third-year resident, Zinati is currently planning his career path, possibly in pediatric radiology. “I really think,” he says slowly, “even in those last two hours in the morning when I’ve been up for hours straight, I still love what I’m doing, and I couldn’t imagine doing anything else.”


The Real World of Breast Cancer
Radiologists travel abroad to raise awareness of mammography and breast cancer.

By Raina Keefer

When Richard N. Hirsh, M.D., FACR, a radiologist at the Summa Health System in Akron, Ohio, told a patient in Nicaragua that her mammogram was abnormal and that she needed to come back for a biopsy, her reply was frank: “I can’t come back,” she said. “No money to pay for boat fare.”

The patient’s home — an island off the Caribbean coast — was a two- to three-hour open boat ride from the hospital. Her initial trip had been paid for by the country’s minister of health, but she didn’t have the $15 or $16 necessary for a follow-up trip.

“It caught me off guard,” Hirsh says. “I was a little stunned, very upset for her, and I didn’t say anything.” It’s unusual for Hirsh to be shocked silent. He’s been all over the globe with his nonprofit organization, Radiology Mammography International (RMI), donating equipment, teaching, and lecturing about how mammography saves lives and how others can learn to save lives.

After regaining his composure, Hirsh told his new patient, “You are in luck. We have a special fund to supplement transportation costs for patients.” So he wouldn’t wound her pride, he left the room, took out his wallet and some money, returned to the room, and handed it to her. “That was a very emotional experience for me,” he recalls.

Nicaragua is only one of the places to which Hirsh has traveled in the last decade, including India, Cuba, Nepal, China, Vietnam, Serbia, Macedonia, Honduras, and many others. Worldwide, the danger of breast cancer has varying degrees of immediacy, but “for the women in these countries who are aware of breast cancer, it is of great concern to them,” says Hirsh.

Matchmaking
Hirsh began RMI after he discovered that there were no organizations dedicated strictly to mammography, breast cancer, and women’s health in developing and underserved regions. His job, in addition to being a diagnostic radiologist, is to travel abroad and educate physicians and technologists about mammography.

After an initial site assessment of the proposed hospital or clinic in which he will teach, Hirsh occasionally encounters challenges in a country’s leadership. “Sometimes, the
Teaching by Example

During planned missions to Kenya and Mexico in the next 12 months, Hirsh will take with him RMI’s stellar reputation — just look at the “Letters to Dr. Hirsh” on the RMI Web site (www.radiologymammography.org) — as an organization that focuses on training. “When I was in medical school,” he says, “in order to completely understand a procedure, the mantra was ‘see one, do one, teach one.’” Hirsh also adds to the regimented training by almost insisting that those whom he trains to perform mammography receive an exam themselves, often for the first time. “We are showing mammography by example,” he says.

Beyond Boundaries

When discussing cultural and religious boundaries in his work, Hirsh says, “Breast cancer is apolitical and nonpartisan. It knows no cultural, ethnic, or religious boundaries. It respects nothing and nobody. It is an equal-opportunity disease.”

However, cultural boundaries influence women seeking treatment for breast cancer or even an initial screening mammogram. TIME magazine featured an article about Nigerian breast cancer survivor Betty Anyanwu-Akeredolu; in an interview, she revealed a cultural stereotype of women with breast cancer. “[Mothers in my country],” she said, “are reluctant to reveal that they have breast cancer, fearful that if they do, no one will want to marry their daughters.”

Making Ends Meet

The attitude in Nigeria toward breast cancer is exactly what Hirsh is trying to change by educating people in developing countries. He’s making inroads, but there are too many countries and even more cases of breast cancer. Fortunately, he has help from Marcela Böhm-Vélez, M.D., FACR, a fellow radiologist from Weinstein Imaging Associates in Pittsburgh.

An Argentinean herself, Böhm-Vélez uses her vacation time to lecture on women’s imaging in such countries as Brazil, Colombia, Argentina, Peru, and Mexico. In Peru, for example, she lectured on breast imaging and performed breast biopsies on poor patients. “In most of these places, due to a lack of funding, they do not have the basic technology available for a breast cancer screening program,” she says. “I was very impressed how much the breast imagers are able to accomplish with their limited resources. In Argentina, they reuse sterilized core-biopsy needles over and over again,” she adds.

How to Succeed

Many patients in the countries Böhm-Vélez visits will not have a mammogram unless they present with a palpable abnormality. By that time, the cancer is in a late stage, treatment options are limited, and the prognosis is poor. The main problem is a general lack of awareness of the importance of breast cancer screening. According to Böhm-Vélez, a successful breast cancer screening program in a developed or undereducated community needs to:

• Educate the public and primary care physicians about the need for annual mammograms and physical exams
• Reach women at high risk (more than 40 years of age)
• Improve the health service infrastructure
• Communicate results in a way that patients can understand — patients often are more comfortable with someone who speaks their language and understands their culture
• Develop a reliable system that would allow for follow-up of abnormal results and refer patients for treatment

The physicians who attend Böhm-Vélez’s lectures are essentially “sponges” for knowledge. “The level of attention of the physicians attending these lectures was incredible,” she says. “They are in the lecture hall from early in the morning to late at night. They are eager to learn and are very appreciative that I am able to lecture and answer their questions in Spanish, if necessary. There is great satisfaction in knowing that I can give back to my profession and help increase awareness of women’s health issues.”

ENDNOTE

On Target

Noninvasive interventional radiotherapy treats cancer at the source.

By Leslie Miller

Interventional radiology techniques offer the latest advances in treating cancer through emerging imaging technology. Physicians can now pinpoint the specific location of a tumor and treat it without damaging the surrounding healthy tissue. Cancer centers worldwide are using these techniques to apply treatments directly to the disease source.

Traveling Tiny Glass Beads

One new interventional technique uses an image-guided catheter to send millions of microscopic radioactive glass beads into blood vessels to deliver radiation directly to the tumor site. This nonsurgical outpatient therapy, known as selective internal radiation therapy, requires a small incision in the leg so that a catheter can be inserted.

The catheter is guided through the blood vessel system until it reaches the tumor site, and the beads are released. The beads, which are smaller than the diameter of a human hair strand, emit radiation for about two weeks. Injecting radioactive beads directly into the tumor destroys cancer cells while reducing damage to healthy tissue.

Choke Deadly Tumors

Another technique, chemoembolization, is most often used to treat liver cancer. Through an image-guided catheter, chemotherapy is delivered directly to diseased tissue while also suffocating the tumor by blocking blood vessels carrying nutrients. Some patients have experienced success with this treatment even if their cancer has spread to other areas of the body.

Former president of the ACR, Barry D. Pressman, M.D., FACR, is a neuroradiologist, a head and neck radiologist, and chair of the S. Mark Taper Foundation Imaging Center at Cedars-Sinai Medical Center, Los Angeles. During more than 40 years of practice, Pressman has seen major advances in interventional radiology, and he is encouraged by the subspecialty’s latest innovations.

“These are excellent technologies for tumor control or eradication in some tumors,” he says. “They are leading the way in research and treatment toward better and more effective tools. They are not the ‘answer’ to cancer but rather a point along a very long road.”

Search and Destroy

Traditionally, certain types of cancers require surgery, but radiofrequency ablation (RFA) is a minimally invasive, image-guided technique used to treat cancer. Through a needle inserted into a tumor, radiofrequency waves are used to heat and destroy cancer cells. This tool for treating cancer produces no scars and allows patients to resume normal activities in a short period of time. Pressman notes, “The kidney RFA procedures are having excellent clinical outcomes that can be equivalent to surgery. RFA of liver cancer in cirrhotics awaiting transplant has been very valuable, since these patients are often too sick to allow for tumor surgical resection prior to the transplant.”

It’s Not Easy

Probes, catheters, and glass beads are replacing certain surgeries to remove or control tumors. These changes are welcomed by patients, who often struggle with the effects of traditional chemotherapy and radiation. For a radiologist considering interventional radiology as a subspecialty, Pressman asserts that the job requires clinical knowledge that completely surpasses a radiologist’s routine knowledge base. He cautions, “This is a very high-pressure business requiring superb technical skills wedded with excellent clinical judgment.”

To the Point

- Radioactive beads can be inserted directly into a tumor to destroy cancer cells while reducing damage to healthy tissue.
- Chemoembolization is an image-guided technique in which a catheter is used to deliver chemotherapy directly to diseased tissue while blocking blood vessels to suffocate the tumor.
- RFA is an image-guided technique in which radiofrequency waves passed through a needle heat and destroy cancer cells.
CPT® 2009 Code Update

The ACR offers highlights of major CPT code changes affecting radiology practices.

Diagnostic Radiology

Contrast Enema — 74270
An editorial change has been made to code 74270. The new descriptor reads Radiologic examination, colon; (e.g., barium) enema, with or without KUB [kidney(s), ureter(s), and bladder] to clarify that this code should be used to report any type of contrast enema procedure, such as barium, water-soluble contrast, or other contrast media.

Intraoperative Ultrasound — 76998
Parenthetical statements following the intraoperative ultrasound guidance code, 76998, and the endovenous ablation therapy (EVAT) codes, 36475–36479, have been updated to indicate that it is inappropriate to report the intraoperative ultrasound guidance code in conjunction with the EVAT codes.

Interventional Radiology

Diagnostic Percutaneous Aspiration (Spine) — 62267
A new spine aspiration code, 62267 (Percutaneous aspiration within the nucleus pulposus, intervertebral disc, or para-vertebral tissue for diagnostic purposes), has been added to describe the percutaneous aspiration of fluid and/or cells for diagnostic purposes.

Insertion of Indwelling Tunneled Pleural Catheter — 32550
The cross-reference following the code for the insertion of an indwelling tunneled pleural catheter has been revised. This code should not be reported with either thoracentesis procedure code, 32421 or 32422. The other codes listed (32551, 32560, 36000, 36410, 62318, 62319, 64450, 64470, and 64475) have been deleted from the cross-reference because they represent separate procedures that do not include the insertion of an indwelling tunneled pleural catheter.

Nuclear Medicine

Nonimaging Gamma Probe Study — 78808
A new code, 78808, has been created to describe a nonimaging gamma probe procedure for which a radio-pharmaceutical is prepared and injected.

Generation of Automated Data — 78890, 78891
The codes for the generation of automated data, 78890 and 78891, which are used to describe computer processing, are obsolete and have been deleted.

Radiation Oncology

Remote Afterloading High-Intensity Brachytherapy — 77785, 77786, 77787
The codes for remote afterloading high-intensity brachytherapy, 77781–77784, differentiated by the number of source positions or catheters, have been replaced by three new codes, 77785, 77786, and 77787, differentiated by the number of channels (i.e., 1 channel, 2–12 channels, or more than 12 channels).

New Subsection on Stereotactic Radiosurgery (Cranial/Spinal)
A new subsection has been created in the CPT code book to describe different types of stereotactic radiosurgery (SRS), such as cranial and spinal. Therefore, cross-references under the new SRS codes and introductory language indicate the appropriate codes that a radiation oncologist should use for stereotactic radiation treatment management in conjunction with the SRS and stereotactic body radiation therapy codes.

Category III Code Changes

The following category III codes were scheduled to be archived as of Dec. 31, 2008:

Code 0027T, which describes endoscopic lysis of epidural adhesions, has been archived and is no longer an active code. The unlisted nervous system procedure code, 64999, should be reported when this type of procedure is performed.

Code 0028T, which describes a dual-energy X-ray absorptiometry body composition study, and code 0060T, which describes an electrical impedance scan of the breast, are no longer active codes. The unlisted diagnostic radiographic procedure code, 76499, should be reported when one of these procedures is performed.


(Current Procedural Terminology® ©2008 American Medical Association. All rights reserved. CPT® is a registered trademark of the American Medical Association.)
On the Record

Recording changes to orders is important.

By Bill Shields and Tom Hoffman

The ACR Legal Department frequently receives questions about whether, why, and how ACR members should record changes to an original imaging exam order. We previously explained that members may change orders, depending on the site of service (study) (see the RADLAW column in the February 2008 ACR Bulletin). Now, we focus on the next step — recording changes.

As with any other part of the medical record, all changes or alterations should be entered, dated, and annotated. We’ll discuss later why those steps are especially important for studies rendered for Medicare beneficiaries in Medicare-participating hospitals.

Why Record Changes?

Recording changes to an original imaging exam order helps protect the practice and the individual radiologist from claims that different, inappropriate, or unnecessary imaging was performed without a proper order. This is no small matter; ordering physicians sometimes accuse radiologists of ignoring or changing original orders. Others say that radiologists engage in “in-house self-referral” by routinely recommending unnecessary, additional tests. If true, either claim could lead to fraud charges against a radiologist or a group that submits a bill for such imaging.

Perhaps even more importantly, such claims could be used by plaintiffs’ lawyers to assert that the test originally ordered would have revealed the patient’s current condition or that the patient could not and would not have given informed consent for an inappropriate or unnecessary examination. An attorney might even assert that the patient was harmed by unnecessary exposure to ionizing radiation.

Application of Changes

The actual recording of changes is somewhat more complicated. Radiology practices currently use paper, facsimile (fax), e-mail, electronic order entry, and a combination of some or all of these to receive and process imaging orders. Practices may receive changes in the same ways or via telephone. Consequently, no single solution can address all of the issues involved.

So, how can practices approach this problem? First, practices should establish a written policy stating that all changes to orders must be recorded. The policy should also specify when and why changes to orders may be made. Then, the policy should list the acceptable means for recording such changes.

For example, a policy may state that a radiologist may unilaterally change only obviously wrong-side or wrong-site orders and that the radiologist must note the reason on the orders and initial it. This simple approach can be used for paper or fax orders but is more difficult to achieve for orders received via e-mail or electronic order entry. In those situations, printing the e-mail and noting the change or replying to the e-mail with the reason for the change may suffice. Order-entry systems should provide standard ways for noting and signing for changes.

But what about situations in which the reason for the change may not be so obvious to the ordering physician or a layperson, such as an attorney or a juror? In those situations, prudence suggests that consulting with the ordering physician is appropriate and beneficial for both the patient and the physicians involved. Such consultation allows for the resolution of any ambiguities, gives the ordering physician an opportunity to explain the logic for the original order, and provides the radiologist with additional background information.

Simultaneously, the radiologist may explain the reason for suggesting an alternative or additional exam or procedure and may reach consensus with the ordering physician, who may then formally order the change. This dialogue also may reinforce the radiologist’s consultative value to the ordering physician. Naturally, the consultation should be recorded whether or not the two physicians reach consensus.

Lessons Learned

Radiology practices should take care to document any developments related to orders. A Florida practice learned this lesson painfully in 2004 when it had to pay the federal government $2.5 million to settle charges that it filed false Medicare claims. The case originated when the practice’s former Medicare coding supervisor brought a lawsuit against the practice under the Federal Civil False Claims Act.
This individual alleged that the group billed for numerous magnetic resonance imaging, ultrasound, and mammography studies that treating physicians did not order or that were otherwise not reimbursable. If the group had documented orders more thoroughly and refined procedures for submitting claims, then it might have addressed the coding supervisor’s concerns and avoided, or at least reduced, liability.

**Medicare Requirements**

Medicare requires that any physician, including a radiologist who changes a service such as a diagnostic study, must sign for an appropriate entry in the patient’s medical record. The good news is that Medicare permits radiologists to record an entry by either handwritten or electronic signature. Medicare further requires that a radiologist or other practitioner who performs radiology services must sign his or her interpretation reports.

Additionally, Medicare rules state that if an order is communicated via telephone, then the treating physician, practitioner, or his or her office and the testing facility must document the telephone call in their respective copies of the beneficiary’s medical records. Although a physician’s order does not require a signature, the physician must clearly document, in the medical record, his or her intent that the test be performed. Therefore, just as a radiologist must document a telephone order from a treating physician, he or she must also document any change to such an order that a treating physician or practitioner communicates by phone.

Although these last requirements apply only to orders for Medicare patients, ACR members may want to consider adopting these sensible policies for all imaging orders.

ENDNOTES

1. Conditions of participation: medical record services. 42 CFR §482.24(c)(1).
2. Conditions of participation: radiologic services. 42 CFR §482.26(d)(1).

**Bill Shields** (bshields@acr.org) is ACR general counsel.
**Tom Hoffman** (thoffman@acr.org) is ACR associate general counsel.

The ACR Legal Office exists to represent the College and to provide legal advice to the College leadership and the executive director, as well as to handle the day-to-day legal activities of the College. The attorneys are not licensed in all 50 states, the District of Columbia, Puerto Rico, Guam, and Canada, and therefore, cannot give direct legal advice to members or represent chapters, practices, or individual members. The office can provide general information of interest to members as well as general guidance on a variety of legal topics. All information is provided with the express understanding that no attorney-client relationship exists and that members, practices, and chapters should always consult their personal or corporate counsel on matters of concern.

**Quality Improvement for Radiation Oncologists**

R-O PEER offers review of patient care activities for ABR MOC requirement.

The ACR's R-O PEER program offers radiation oncologists the opportunity to fulfill “Part IV: Evaluation of Performance in Practice for Maintenance of Certification (MOC)” for the American Board of Radiology. R-O PEER is offered through the ACR's Radiation Oncology Practice Accreditation Program. This program for practice quality improvement requires that at least two cases per physician be reviewed during an on-site survey.

R-O PEER is also offered as a “remote review” program for physicians whose facilities are not applying for ACR accreditation. Data submitted by physicians for review must include documentation of participation in continuous quality improvement activities, such as chart rounds, physician peer review, morbidity and mortality conferences, tumor boards, and focused outcome studies. A team of board-certified radiation oncologists then reviews the patient records and documentation as submitted by such physicians.

A final report and a certificate of satisfactory completion of practice assessment are issued to each radiation oncologist who successfully completes the R-O PEER program. If any corrective-action measures are identified during the review, then the final report requests additional documentation demonstrating that such measures have been appropriately addressed.

Since the goal of R-O PEER is quality improvement, all participants must respond to any recommendations received in this report and submit a plan for improvement within 90 days. The improvement plan will serve as evidence of compliance with the quality improvement recommendations. Upon receipt of your satisfactory response, the ACR will issue a certificate documenting successful completion of the practice assessment component of Maintenance of Certification.

**Fees**

**R-O PEER With ACR Accreditation**

ACR members: $200 Nonmembers: $300

**R-O PEER Remote Review**

ACR members: $500 Nonmembers: $750

For more information about the R-O PEER program, contact Trudie Cushing at 703-715-4384 or tcushing@acr.org.
Classified Ads

These job listings are paid advertisements. The ACR offers a bundled advertising package entitling advertisers who purchase an online and ACR Bulletin classified ad to a 15 percent discount on a classified ad in the Journal of the American College of Radiology. To learn more about this bundled offer, e-mail careercenter@acr.org.

Rates:
ACR members: $50 per online and Bulletin ad, maximum 50 words. Nonmembers: $125 per online and Bulletin ad, maximum 50 words. Advertising instructions, rate information, and complete policies are available at www.acr.org under the “Jobs” on ACR tab.

Publication of a job listing does not constitute responsibility for accuracy of information or liability for any personnel decisions and selections made by the employer. These job listings previously appeared on the ACR Professional Web site. Only jobs posted on the Web site are eligible to appear in the ACR Bulletin, on a space-available basis.

ARIZONA - Fort Mohave - General Radiologist - Part-time position (28-32 wks a year). Join solo radiologist in a new 70-bed hospital, all modalities performed, PACS, no call, work 1 Sunday/month. Resort area along the Colorado River with boating & hiking. Competitive salary. Contact: William Kelley at 928-208-4525 or by e-mail at nmkelley1@mac.com.

ARIZONA - Phoenix -Mammography Medical Director - Full-time, BC, experienced mammography certified radiologist to function as medical director of the Laura Dreier Breast Center. This is a full-time mammography position with the opportunity to participate in diagnostic radiology if desired. Contact: Holly Aurelio at 602-640-3888 or by e-mail at holly.aurelio@bannerhealth.com.

ARIZONA - Tucson - Academic Body Imaging Radiologist - University of Arizona Department of Radiology seeks BC/BE cross-sectional radiologist for its level I trauma center. The Arizona Cancer Center is the only NCI-designated comprehensive center in the state with a large number of active clinical & research programs. Contact: Tim B. Hunter, M.D., at 520-526-6007 or by e-mail at mstuart@radiology.arizona.edu.

ARIZONA - Tucson - Academic Breast Imaging Radiologist - University of Arizona Department of Radiology seeks BC/BE radiologist for its breast imaging section. Start-up research funds are available; faculty members receive 1 day/week for academic pursuits. Competitive salaries based on academic rank. Contact: Tim B. Hunter, M.D., at 520-526-6007 or by e-mail at thb@ottowers.com.

ARIZONA - Tucson - Academic Interventional Radiologist - University of Arizona Department of Radiology seeks BC/BE cross-sectional radiologist for its level I trauma center. The Arizona Cancer Center is the only NCI-designated comprehensive center in the state with a large number of active clinical & research programs. Contact: Tim B. Hunter, M.D., at 520-526-6007 or by e-mail at mstuart@radiology.arizona.edu.

ARIZONA - Tucson - Body CT/MR - Medium-size group with 2 partnership-track positions beginning July 2009 due to new 300-bed hospital contract. Proximity in body CT/MR & associated procedures required. Night shifts/equal call, weekends, & benefits from start. Short time to partnership. No mamm. Contact: Mark Yoshino at 520-469-8965 or by e-mail at markyoshino@hotmail.com.

ARKANSAS - Springdale - Interventional Radiologist - Full-time position in northwest Arkansas. Sites include 2 hospitals & 2 clinics, which are equipped with CT (includes 64-slice scanner), MRI, US, mammograms, & fluoro. Hospitals have PACS. Contact: Beverly Teasley at 501-886-2614 or e-mail CV to jpmmd38@hotmail.com.

CALIFORNIA - Fremont - Chief of Radiology - We are seeking a seasoned radiologist with strong clinical & leadership skills to oversee a department at our outpatient facilities & hospitals in Hayward, Union City, & Fremont. Contact: Gordon Leung at 800-777-4912 or by e-mail at Gordon.Leung@kp.org.

CALIFORNIA - Los Angeles - Angiography & Interventional Radiology - Tower Imaging Medical Group, a subspecialty radiology practice, is seeking a fellowship-trained angiographer & interventional radiologist. Ideal applicant will possess the CAQ in this subspecialty. The position will be at least 75% angiography & interventional radiology. Contact: Gerald Roth by e-mail at grotth@towerimaging.com.

CALIFORNIA - Los Angeles - Cardiovascular Imaging Fellowship - Fellowship at Cedars-Sinai Medical Center starting July 2009. We have a high volume of cases & dedicated, personalized training by expert faculty, jointly appointed in the departments of Imaging & Medicine (Division of Cardiology) with fellows participating in both departments. Contact: Submit CV to imaging.housestaff@chsc.org.

CALIFORNIA - Los Angeles -Neuroradiology Fellowship - Cedars-Sinai Medical Center has an unexpected neuroradiology fellowship available for July 2009. A second-year fellowship is also available. Strength of the programs are our high volume of cases. We have about 40 attending radiologists, & dedicated to neuro. Contact: D. Kenneybrew by e-mail at imaging.housestaff@chsc.org.

CALIFORNIA - Los Angeles - Nuclear Radiology Fellowship - Cedars-Sinai Medical Center is offering a fellowship in nuclear radiology, which includes all facets of nuclear radiological procedures, PET, molecular imaging, & fusion imaging — in its state-of-the-art imaging center. Extensive, diverse, patient population with an active research component. Contact: Apply by e-mail at imaging.housestaff@chsc.org.

CALIFORNIA - Northern - Radiology - The Permanente Medical Group has opportunities for general diagnostic, interventional, body imaging, & mammography where you’ll cultivate your career in the forefront of imaging. Contact: E-mail your CV to Gordon Leung at Gordon.Leung@kp.org or call 800-777-4912.

CONNECTICUT - New Haven - Academic Body Imaging Radiologist - Position includes clinical, research, & teaching activities at new facility (beginning Oct. 2009) with new equipment at the Yale-New Haven Medical Center. Contact: Send CV & inquiries to Jeffrey Weinreich, M.D., Yale University School of Medicine, Diagnostic Radiology, P.O. Box 208042, New Haven, CT 06520-8042.

DISTRICT OF COLUMBIA - Body Imaging Fellowship - The George Washington University Medical Faculty Associates has an opening for a body imaging fellow (US, CT, MRI) for 2009/2010. Contact: Michael Hill, M.D., by phone at 202-715-5154, by fax at 202-715-5161, or by e-mail at mhill@fmfa.gwu.edu.

DISTRICT OF COLUMBIA - Radiologist - Shareholder or part-time tracks. Private practice with full range of modalities is recruiting an experienced or fellowship-trained radiologist with expertise in US, Practice has full range of modalities. No call/weekends. Contact: Dr. Barone at 703-641-9133, ext.1110, by fax at 703-280-5098, or by e-mail at jobs@wrappc.com.

FLORIDA - Coastal - Great Partnership on Coast of Florida - Competitive salary, 12 weeks’ vacation, short partnership, relocation provided. Major metropolitan city with cultural activities, professional/collegiate sports. Outstanding public & private schools, easy drive to Disney World, Bush Gardens, & Miami’s famous South Beach. Contact: Larry Achter at 813-675-0405 or by e-mail at lachter@floridaimgassociates.com.

FLORIDA - Coastal - Interventional Radiologist - Our IR team includes some of the areas finest trained & nationally recognized physicians as well as a comprehensive team of nationally certified, highly trained, interventional nurse practitioners. Contact: Larry Achter at 813-675-0405 or by e-mail at lachter@floridaimgassociates.com.

FLORIDA - Hollywood - Mammography Radiologist - Large subspecialized radiology group undergoing significant growth currently seeks breast perfounder. Per diem position, with 4-day workweek & call & mammo rotation schedule only or mammography only full-partnership track. Visit our Web site at www.acr.radinfo.com. Contact: Jill Avendano at 954-437-4800, ext. 2148 or by e-mail at jil.avendano@rahmail.net.

GEORGIA - Atlanta - Abdominal Radiologist - The Department of Radiology, Section of Abdominal Radiology, Emory University School of Medicine, seeks a fellowship-trained abdominal radiologist. Contact: Send CV & qualifications to William C. Small, M.D., Ph.D., chief of Abdominal Imaging, Department of Radiology, Emory University Hospital, 1364 Clifton Rd. NE, Atlanta, GA 30322 or by e-mail at wsma@emory.edu.

GEORGIA - Atlanta - Body MRI Clinical Research Fellowship at Emory - We are currently seeking candidates for July 2008 & July 2009. Contact: Diego R. Martin, M.D., Ph.D.; professor & director of MRI, Department of Radiology, 1365 Clifton Rd. NE, Emory Clinics A, AT622, Atlanta, GA 30322 or by e-mail at dmartin@emory.edu.

GEORGIA - Atlanta - Breast Imaging Faculty - The Emory School of Medicine Department of Radiology is seeking fellowship-trained radiologists for its renowned breast imaging center. Contact: Qualified applicants should send CV to Carl D’Orsi, M.D., by e-mail at cds@emory.edu.

GEORGIA - Atlanta - Cardiothoracic Radiologist - The Department of Radiology is seeking a full-time cardiothoracic radiologist with experience in conventional radiography, multidetector CT, MRI, and/or computer assisted diagnosis. Contact: Qualified applicants should send CV to Arthur Stillman, M.D., Ph.D., director of Cardiothoracic Imaging, 1365 Clifton Rd., NE, Ste. AT 506, Atlanta, GA 30322 or by e-mail at astillman@emory.com.

GEORGIA - Atlanta - Cardiothoracic Radiology Fellowship - A one-year fellowship is being offered by the Emory University School of Medicine specializing in cardiothoracic imaging. Contact: Qualified applicants should send CV to Arthur Stillman, M.D., Ph.D., director of Cardiothoracic Imaging, 1365 Clifton Rd., NE, Ste. AT 506, Atlanta, GA 30322 or by e-mail at astillman@emory.com.

GEORGIA - Atlanta - Chief Quality Officer - The Emory University Department of Radiology is seeking a chief quality officer. Ideal candidate is a radiologist (any subspecialty) with administrative experience, national reputation for work in practice quality improvement, health outcomes, health policy, and/or pay-for-performance metrics. Contact: Qualified applicants should send CV to Carl D’Orsi, M.D., by e-mail at cdo@emory.edu.

July 2009 Volume 64, Issue 1
GEORGIA - Atlanta - Diagnostic Neuroradiologist - The Neuroradiology Division in the Department of Radiology, Emory University School of Medicine, Atlanta, is offering a full-time faculty position. Contact: Interested candidates should send CV to A.J. Fountain Jr., M.D., by e-mail at jack.fountain@emoryhealthcare.org.

GEORGIA - Atlanta - Emergency Radiologist - The Emory University School of Medicine Department of Radiology is seeking an emergency radiologist to do readings for Emory Hospitals & outside health care systems. Contact: Qualified applicants should send CV to William Torres, M.D., 1365 Clifton Rd., NE, Rm. D112, Atlanta, GA 30322 or by e-mail at wtorres@emory.edu.

GEORGIA - Atlanta - Interventional Radiologist - The Emory University School of Medicine Department of Radiology is seeking a full-time academic interventional radiologist for its interventional radiology & image-guided medicine division. Contact: Kevin Kim, M.D., director of Interventional Radiology & Image Guided Medicine. Department of Radiology, 1364 Clifton Rd., NE, D112, Atlanta, GA 30322 or by e-mail at kevin.kim@emory.edu.

GEORGIA - Atlanta - Interventional Radiologists - Emory School of Medicine is seeking a full-time radiologist for its community radiology division — Emory Johns Creek Hospital. The position is for a fellowship-trained interventional radiologist. Contact: Qualified applicants should send CV to William Torres, M.D., 1364 Clifton Rd., NE, Atlanta, GA 30322 or by e-mail at wtorres@emory.edu.

GEORGIA - Atlanta - Interventional Radiology & Image-Guided Medicine - Emory University has a position in our interventional radiology & image-guided medicine fellowship program for July 2009. Contact: Gail Peters, M.D., program director, at gpester2@emory.edu, or Sheila Jefferson, program coordinator, at sjeff2@emory.edu.

GEORGIA - Atlanta - Mammography - Emory School of Medicine is seeking full-time radiologist for its community radiology division — Emory Johns Creek Hospital. The position is a fellowship-trained radiologist with mammography experience to start July 2008. After-hours coverage is provided. Contact: Qualified applicants should send CV to William Torres, M.D., 1364 Clifton Rd. NE, Atlanta, GA 30322 or by e-mail at wtorres@emory.edu.

GEORGIA - Atlanta - MSK Radiology Faculty, Emory University - Emory University Affiliated Hospitals, Atlanta, has a faculty position available. This position requires fellowship or comparable experience in MSK imaging. Contact: Michael Terk, M.D., by e-mail at michael.terk@emoryhealthcare.org.

GEORGIA - Atlanta - MSK Radiology Fellowship - Four one-year fellowships are available for the 2010-11 academic year at Emory University Affiliated Hospitals. Successful completion of an ACMS-accredited radiology residency program is required. Contact: Michael Terk, M.D., by e-mail at michael.terk@emoryhealthcare.org.

GEORGIA - Atlanta - PET Fellow - Emory University has openings for 1-year PET clinical-research fellowships starting July 2009. Contact: Send CV & cover letter to Daniel Lee, M.D., c/o Gail Foster, Emory University, Department of Radiology, Division of Nuclear Medicine & Molecular Imaging, 1364 Clifton Rd., NE, Atlanta, GA 30322 or by e-mail at daniel.lee@emoryhealthcare.org.

GEORGIA - Atlanta - Research Faculty - The Emory Department of Radiology is seeking full-time research faculty to grow its research programs in cardiovascular imaging, MRI methods, medical physics, molecular imaging, & cancer diagnostics, including PET & neuroscience. Contact: Carolyn Cids Mettler, M.D., professor & chair of Radiology by e-mail at cmettler@emory.edu.

GEORGIA - Atlanta - Vice Chair of Research - The Department of Radiology at Emory University is recruiting for a vice chair of research. Contact: John Votaw, Ph.D., chair of the search committee by e-mail at john.votaw@emory.edu with “Vice-Chair” in the subject line.

HAWAII - Honolulu - Radiologists in Hawaii - Busy nuclear medicine department seeks BC nuclear medicine or BC radiologist to join practice. Position requires reading nuclear medicine studies, as well as MRI & CT. Contact: If you are interested in living & working in beautiful Hawaii, please submit CV to eelizagaitz@hhi-com.

IDAHO - Boise - Abdominal Imaging/Interventional Radiologist - Gem State Radiology seeks partnership-track, abdominal imaging, fellowship-trained radiologist with expertise in radiofrequency ablation for summer 2009. Practice includes 16 partners, 5 radiologists, & covers 4 area hospitals. Contact: Nicole Lindauer at 208-367-5672 or by e-mail at lindauern@gemstatemed.com.

IDAHO - Boise - Musculoskeletal Radiologist - Gem State Radiology seeks one musculoskeletal radiologist (partnership track), for summer 2009. Practice includes 16 partners, 5 radiologists, & covers 4 area hospitals — one 24-hour ER & 3 outpatient imaging facilities. Contact: Nicole Lindauer at 208-367-5672 or by e-mail at lindauern@gemstatemed.com.

ILLINOIS - Aurora - BC Radiologist - Established private radiology group located in a desirable western Chicago suburb seeks motivated diagnostic radiologist for permanent position. Strong diagnostic skills in MRI, CT, US & mammography. Contact: A must. Fellowship trained a plus. Contact: Angie at 314-303-9484 or by e-mail at angie burgehill@alcanam.com.

ILLINOIS - Chicago - Interventional Radiologist - Nine-member, well established, private practice group in the Chicago south suburbs seeks full-time IR. Ideal candidate is energetic, outgoing, & hardworking, looking forward to starting a new interventional service. Two-year partnership track/ competitive salary/full malpractice coverage, with 11-12 weeks’ vacation (partners). Contact: Joseph Judge by e-mail at jjudge2219@aol.com.

ILLINOIS - Maywood - Neuroradiologist - The Department of Radiology at Loyola University Chicago, Stritch School of Medicine, is actively recruiting a neuroradiologist, BC in diagnostic radiology & eligible for CAQ in neuroradiology. Fellowship training is preferred. Contact: Holly Nandan, director of Physician Recruitment, by e-mail at hnandan@lunmc.edu.

KANSAS - Kansas City - MRI or MSK Radiologist - Multimodality group (18 person) seeks MSK/MRI radiologist for 383-bed hospital (adding 80 more ICU beds & larger ER) & large, self-owned outpatient imaging center. Preferred providers for area professional sports teams. 75+ IS. 1.5T magnets. Hospital call necessary/nighthawk after 11 p.m. Contact: Dr. Roys by e-mail at punkie1@yahoo.com.

KANSAS - Salina - Radiologist - United Radiology Group seeks BC/BE radiologist for 13-member, well-established practice. Full case load from first day with privileges at several hospitals in Kansas, including a 385-bed, state-of-the-art facility at Salina Regional Health Center. Competitive compensation/benefits package/large signing bonus/collaborative working atmosphere. Contact: Barry Weis at 785-852-6975 or by e-mail at cmills@kschc.com.

MAINE - Lewiston - Interventional Radiologist - Eight-person group seeks IR to perform 75-100% IR procedures at Central Maine Medical Center, a 250-bed tertiary care center north of Portland. Most facets of IR performed. 1 year to partner/above average salary, with 16 weeks off. Potential growth in interventional oncology & venous ablation. Contact: Michael Miller by e-mail at mbmiller58@gmail.com.

MARYLAND - Baltimore - Abdominal Imaging - The University of Maryland seeks a radiologist for a faculty position in the abdominal imaging section (CT, PET-CT, MR, fluoroscopy, US). Contact: David Schuchert, M.D., chair, Department of Radiology at 410-328-3477 or by e-mail at dschuchert@umm.edu.

MICHIGAN - Elko - BC Radiologist - Busy practice with multiple outpatient centers, performing over 60,000 exams/year & a reputation for quality imaging & interpretation, seeks a fellowship-trained MRI, MSK, or neuro BC general radiologist for general imaging, including mammography. Great benefits/no overnight call. Contact: Dr. Roys by e-mail at shilv@elkoaread.org.

MICHIGAN - Ann Arbor - BC/BE Radiologist - Busy group in the Chicago south suburbs seeks full-time IR. Ideal candidate is energetic, outgoing, & hardworking, looking forward to starting a new interventional service. Two-year partnership track/ competitive salary/full malpractice coverage, with 11-12 weeks’ vacation (partners). Contact: Joseph Judge by e-mail at jjudge2219@aol.com.

ILLINOIS - Maywood - Neuroradiologist - The Department of Radiology at Loyola University Chicago, Stritch School of Medicine, is actively recruiting a neuroradiologist, BC in diagnostic radiology & eligible for CAQ in neuroradiology. Fellowship training is preferred. Contact: Holly Nandan, director of Physician Recruitment, by e-mail at hnandan@lunmc.edu.

KANSAS - Kansas City - MRI or MSK Radiologist - Multimodality group (18 person) seeks MSK/MRI radiologist for 383-bed hospital (adding 80 more ICU beds & larger ER) & large, self-owned outpatient imaging center. Preferred providers for area professional sports teams. 75+ IS. 1.5T magnets. Hospital call necessary/nighthawk after 11 p.m. Contact: Dr. Roys by e-mail at punkie1@yahoo.com.

KANSAS - Salina - Radiologist - United Radiology Group seeks BC/BE radiologist for 13-member, well-established practice. Full case load from first day with privileges at several hospitals in Kansas, including a 385-bed, state-of-the-art facility at Salina Regional Health Center. Competitive compensation/benefits package/large signing bonus/collaborative working atmosphere. Contact: Barry Weis at 785-852-6975 or by e-mail at cmills@kschc.com.
NEW YORK - Buffalo - Body Image - The Department of Radiology at the Roswell Park Cancer Institute seeks a BC, fellowship-trained, body imager. Roswell Park is a SUNY Buffalo affiliate, with academic appointments for those that qualify & a competitive salary/benefits package. Contact: Peter A. Loud, M.D., vice chair at 716-845-8015 or by e-mail at PeterLoud@Roswellpark.org.

NEW YORK - Buffalo - General Radiologist - Community Radiology covers 2 small community hospitals, 2 multimodality outpatient sites, & a single modality (MRI) office. General radiology with minor IR (biopsies) & PACS/teleradiology experience needed. Contact: David Graves at 724-537-1455 or by e-mail at dgraves@excelahealth.org.

NEW YORK - New York City - Mammographer - Established private practice on Manhattan’s Upper East Side. MR- & US-guided biopsies performed with stereotactic biopsy added shortly. Breast MRI done on high-field-strength magnets, including 3T. Excellent work/family balance with regular office hours & generous compensation/benefits. Contact: Caroline Witt at 212-772-3111 or by e-mail at cwtll@lennrad.com.

NEW YORK - New York City - MBS/Body MI Fellowship - Hands-on clinical experience with all modalities of MBS imaging, including MRA & MRI with additional applications to body imaging on state-of-the-art equipment. BC/BE in diagnostic radiology & active NY state medical license; narcotics license desirable. Contact: Ronald L. Van Heerum, M.D., at 212-305-1948 or by e-mail at mag1@columbia.edu.

OHIO - Toledo - General Radiology Fellowship - Consulting - Radiologists Corp., 18 ABR-certified radiologists (5 IR), expanding due to new agreement with fourth hospital. Fellowship in women’s imaging, MBS, body, IR, & pediatric radiology preferred. Partnership track unless applicants prefer otherwise. Relocation assistance. Contact: Please send e-mail to vinceper2562yahoo.com.

OREGON - Coos Bay - General Radiologist - Large private practice seeks general radiologists for practice on Pacific coast. Extremely competitive compensation, limited weekend call, 10+ weeks vacation. Benefits include CME, medical malpractice, & nighthawk services. Work with 2 other radiologists. Contact: Burt Loesberg, CEO, at 541-681-3582 or by e-mail at bjll@rpcp.com.

PENNSYLVANIA - Abington - Body Image - Radiology Group seeks fellowship-trained imager to join 30 radiologists at Abington Memorial Hospital, a 570-bed community teaching hospital in a desirable suburb of Philadelphia. Partnership, excellent compensation, & time off. Contact: John Breckenridge by e-mail at jbreckenr@jacksonvahl.org.

PENNSYLVANIA - Bryn Mawr - Pediatric Radiologist - Seeking fellowship-trained pediatric radiologist to support large pediatric practices, onsite inpatient pediatrics, busy NICU, & newborn nurseries providing MRI, CT, fluoroscopy, US, neuroradiology, nuclear medicine & general radiology services. Full-time partnership track & part-time opportunities available. Competitive salary/benefits package. Contact: E-mail CV to Campagna@bmsm.com.

PENNSYLVANIA - Greensburg - General Radiologist - A great radiology group needs another person for 4 hospitals & an imaging center in Westmoreland County, east of Pittsburgh. Competitive starting pay/partnership in 1 year/generous benefits package. Vacation & call are equal. Nightwork. Unified PACS across entire system. Contact: David Graves at 724-537-1455 or by e-mail at dgraves@excelahealth.org.

PENNSYLVANIA - Northwestern - General Radiologist - Community Radiology covers 2 small community hospitals, 2 multimodality outpatient sites, & a single modality (MRI) office. General radiology with minor IR (biopsies) & PACS/teleradiology experience needed, fellowship training plus a PA, NY license (eligible) desirable. Contact: Kay Binis at 716-608-7743 or by e-mail at kbinis@presgar.com.

PENNSYLVANIA - Seneca - General Radiologist - Senior radiologist has retired, so this is a replacement position. Open MRI, CT, US, mammography, nuclear, & PET/CT. Nightwork after 9:30 p.m. Benefit package including occurrence malpractice, 10 weeks’ vacation/CME, retirement plan, etc. Contact: Mark Salerno by e-mail at salernomd@upmc.edu.

PENNSYLVANIA - Western Suburbs of Philadelphia - Nuclear Medicine Radiology Opportunity - Seeking nuclear medicine radiologist to provide interpretations for patients & their physicians at Paoli, Bryn Mawr, & Lankenau Hospitals & related outpatient centers using state-of-the-art equipment & PACS. Full-time partnership track/part-time opportunities available. Reasonable call/nighthawk/competitive package. Contact: E-mail Campagna@bmsm.com.

PENNSYLVANIA - Western Suburbs of Philadelphia - Women’s Imaging/Breast Imaging - Practice is seeking breast imagers for 3 imaging centers with state-of-the-art equipment, including digital mammography, MRI, & systemwide PACS. Full-time partnership track & part-time positions available. Reasonable call/nighthawk/competitive salary, vacation, & benefits. Contact: E-mail CV to Campagna@bmsm.com.

RHODE ISLAND - Providence - Women’s Imaging Fellowship - Training includes 9 months of comprehensive breast imaging, including screening & diagnostic mammography, breast US, MRI, & interventional breast procedures, including MRI. The remaining time will be spent in obstetrical & gynecological imaging, including high-risk obstetrical US & pelvic MRI. Contact: Mary Hillstrom, M.D., at Hillstrom@lifespan.org.

SOUTH CAROLINA - Charleston - Body Image - Partnership-track opportunity for fellowship-trained, BC body imager. Progressive 20-member, subspecialized group in Charleston. Duality of life being a group priority, we engage a nighthawk service, IR coverage, & generous time off. Comprehensive salary/benefit package/relocation assistance. Contact: Vicki Hunt by e-mail at vicki@charlestonradiologists.com.

SOUTH CAROLINA - Charleston - Mammographer - Fellowship-trained, BC, Hospital coverage & our new imaging center with women’s imaging open 3T MRI, breast MRI & biopsy w/CAD, digital mammography w/CAD, & US. Partnership-track/comprehensive salary/benefit package. Contact: Vicki Hunt at 843-824-9666 or by e-mail at vicki@charlestonradiologists.com.

SOUTH DAKOTA - Sioux Falls - Interventional Radiologist - Progressive multispecialty physician owned & managed practice seeks full-time, 100% interventional radiologist. Partnership position 33-member solid group, excellent salary/benefits. Provides services for 2 tertiary care hospitals (approx 480 beds each), regional VA hospital, & freestanding PET/CT center. Contact: Pat Tripp at 605-731-7556 or by e-mail at ptrippmedi@cox.net.

SOUTH DAKOTA - Sioux Falls - Pediatric Radiologist - Large multispecialty physician owned & managed practice seeks full-time fellowship-trained pediatric radiologist. Medical X-Ray Center is a solid group that treats their partners well & offers an excellent salary & benefits package. Contact: Pat Tripp at 605-731-7556 or by e-mail at ptrippmedi@cox.net.

TENNESSEE - Jackson - Interventional Needed in TN - Two radiologists needed in 15-member practice (www.jacksonrad.com) – 1 IV & 1 imager (body/breast MRI, & MRS), fellowship trained or demonstrated expertise in these areas. State-of-the-art equipment/facilities. Salary + $50K signing, $90K med school, $10K moving, benefits. Contact: Cheri Spencer at 731-234-1339 or by e-mail at cheri.spencer@wth.org.

TENNESSEE - Knoxville - PET/CT Clinical & Research - University Radiology in Knoxville seeks medical director for PET/CT & molecular imaging. Opportunity for clinical practice, molecular imaging & PET/CT research. Research fund time dedicated. Contact: E-mail inquires & CV to mojcak1@cs.com.

TEXAS - Abilene - General Radiology - Eleven-person group covering multiple hospitals in Abilene & west central Texas, mostly teleradiology. Fellowship training preferred. Interventional capabilities helpful. Practice includes hospital & office settings. Part ownership in imaging center available. Partnership track/salary positions available & benefits included. Above average compensation. Contact: E-mail inquires & CV to mojcak1@cs.com.

TEXAS - Houston - Interventional Radiology - Radiology group (19 members) seeks IR (general radiology but no mammo) for partnership track to cover 3 hospitals in suburban north Houston. Call 1 out of 4 weeks; teleradiology night coverage for non-IR. Contact: Send CV, resume, & references to Larry Grissom, M.D., by e-mail at grissommd@nbcog.net or by fax at 281-440-8549.

VIRGINIA - Roanoke - Radiology - Carilion Clinic is accepting CVs for ABMS/AOA-BC radiologists in diagnostic, vascular/IR, pediatrics, & breast for its 833-bed teaching/hospital. Call 1 out of 4 weeks; teleradiology night coverage for non-IR. Contact: Rhonda Creger by e-mail at rhonda@carilion.com.

WASHINGTON - Moses Lake - BC Radiologist - Wenatchee Valley Medical Center offers excellent opportunity for a BC Radiologist. Join a department of 2 within a multisite team. Interpret plain film, US, CT, mammography, nuclear medicine, & MRI & utilize teleradiology with PACS. Contact: David Weber, M.D., by e-mail at JoinUs@wvmcmedical.com. Learn more at www.wvmcmedical.com.

WASHINGTON - Seattle - Radiologist - Unique opportunity in established, independent imaging center. Our center is dedicated to imaging excellence & patient care. Applicants must be proficient in cross-sectional imaging as well as women’s imaging & mammography. Salary/benefits/partnership track, without the encumbrance of hospital politics. Contact: Brian Jacobs, M.D., at bjacobs@lmimrad.com.

WISCONSIN - Wausau - Body or IR Radiologist - Body imager/Radiologist with strong CT/MR/CTA skills to join expanding central Wisconsin’s premier private practice hospital-based, 10-person group. Fellowship experience preferred. No trampoline driving. Nighthawk coverage 11 p.m. to 7 a.m. Contact: Donald Nwosim at 715-847-2598 or by e-mail at donald@waspirus.org.
CT Colonography: Supervised Case Review
Feb. 23-24, 2009; April 20-21, 2009; July 13-14, 2009
The ACR Education Center, Reston, Va.
Learn the technique, performance, and interpretation of CTC through the supervised review of a minimum 50 cases.
CME: 19.5 AMA PRA Category 1 Credits™

Coronary CT Angiography
The ACR Education Center, Reston, Va.
Optimize your clinical practice skills with this intensive training course interpreting coronary CTA examinations under the supervision of expert faculty.
CME: 28 AMA PRA Category 1 Credits™

Third Annual Body MRI Update
March 27-29, 2009
Washington Court Hotel, Washington, D.C.
This course will help radiologists and MRI technologists develop and apply advanced body MRI techniques in your practice.
CME: 17.25 AMA PRA Category 1 Credits™; 17.25 Category A Credits

ACR-Dartmouth PET/CT Course
April 6-8, 2009; June 29-July 1, 2009; Sept. 14-16, 2009; Dec. 7-9, 2009
The ACR Education Center, Reston, Va.
In this course, you will interpret in a frontline fashion more than 150 PET/CT scans covering all clinical applications.
CME: 33 AMA PRA Category 1 Credits™

ACR/NIOSH Symposium on Radiology of the Pneumoconioses
April 24-27, 2009
Westfields Marriott, Chantilly, Va.
In collaboration with NIOSH and the CDC, this meeting will help physicians increase their ability to diagnose pneumoconioses. Following the meeting, B Reader exams will be administered on-site by NIOSH representatives.

Muscloskeletal MR Imaging: What You Need to Know
May 2, 2009
Hilton Washington, Washington, D.C.
Held during the Annual Meeting and Chapter Leadership Conference 2009, this categorical course will provide information on both beginning and advanced musculoskeletal MR imaging.
CME: 7 AMA PRA Category 1 Credits™; 6.5 Category A Credits

Breast MR With Guided Biopsy
May 19-20, 2009; Aug. 6-7, 2009; Nov. 9-10, 2009
The ACR Education Center, Reston, Va.
This 100-case course provides practicing radiologists with intensive, hands-on experience reading breast MRI under expert supervision.
CME: 19 AMA PRA Category 1 Credits™

To learn about the ACR's broad portfolio of educational products and services, visit www.acr.org/4dimensions.
All*Access Pass for Radiology Practices and Residency Programs
www.acr.org

Now Showing Online:
World-Class Radiologists

Save more than 70 percent off individual lecture prices when you purchase the ACR’s new All*Access Pass. Give all designated members of your practice or residency program access to all of the ACR’s 160+ online video lectures for one full year!

Residents, practices, and individual radiologists will also enjoy these benefits:
• Access to new lectures added within the one-year subscription term
• Earn up to 73.75 AMA PRA Category 1 Credits™ and up to 6 SAM credits per person
• Instantly print your CME certificates
• Individuals can also purchase the lectures at substantial savings

Change the way you view radiology education in cardiac CT, OB ultrasound, pediatric radiology, and musculoskeletal MR. Purchase the All*Access Pass today!

Pricing Information

<table>
<thead>
<tr>
<th>Residency Programs</th>
<th>Radiology Practices</th>
<th>Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>With 20 or fewer residents: $2,640</td>
<td>With 10 or fewer members: $3,795</td>
<td>ACR member: $2,900</td>
</tr>
<tr>
<td>With more than 20 residents: $3,360</td>
<td>With more than 10 members: $4,860</td>
<td>Nonmember: $6,780</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Member-in-training: $1,600</td>
</tr>
</tbody>
</table>

To purchase the All*Access Pass for Radiology Practices and Residency Programs, call 800-227-7762. For more information, visit http://campus.acr.org/acr/aap.aspx.

*All ACR Campus online video lectures

The American College of Radiology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The American College of Radiology designates this educational activity for AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.