

## Web Team Strengthens Department's Internet Presence

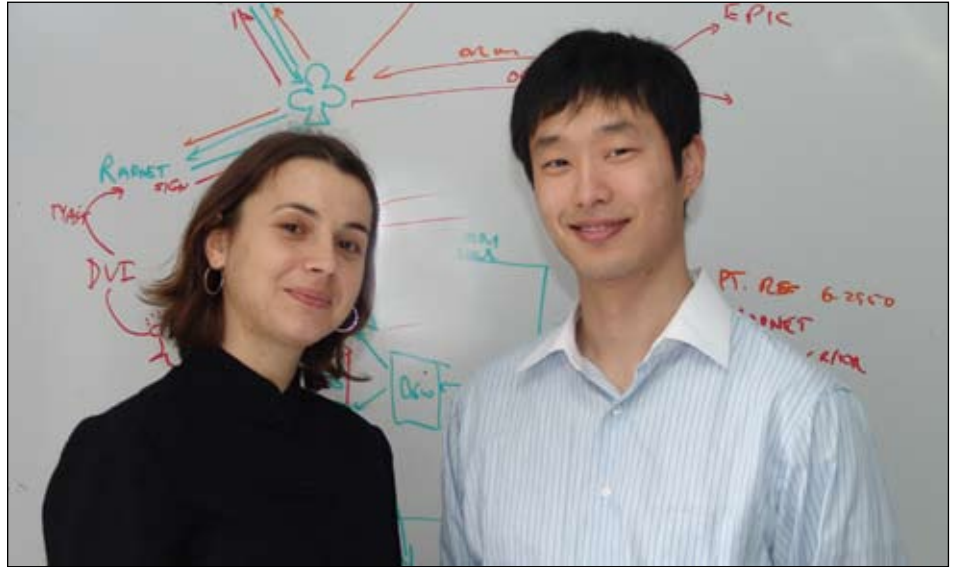
A patient in Kansas learns about a new cancer treatment that has her on the next plane to Chicago. A radiology resident in California finds information about a fellowship program that piques his interest. A clinician in New York downloads a brochure about an upcoming breast imaging course. At every moment of the day or night, these individuals and millions like them have the potential to come into “contact” with Northwestern Radiology without ever meeting or talking to a single person in the department.

“Our Web site is our face to the world,” says Mark Yoon, senior Web applications/software engineer. “More people in more places find out about us through the Internet than we could ever reach by calling, mailing pamphlets, shaking hands, or by word of mouth.”

**‘Brag to us. Tell us what you did today, this week, this month.’**

Most recently working in information systems and project management with the Feinberg School of Medicine, Yoon joined Northwestern Radiology in November. His responsibilities include serving as Web master, developing Web software, and handling projects in Imaging Informatics that relate to or interface with the World Wide Web.

Explains Yoon, “Our goal for the department’s Web site(s) is to know our audiences and give them the information they are seeking in a way that demonstrates our teamwork, expertise, innova-



Northwestern Radiology’s Web team now includes Agnes Stanisiz and Mark Yoon, who recently joined the department as Web master.

tion, compassion, and dedication—all the elements that make us a great department.”

The task of keeping a Web site vibrant, relevant, and current requires a team effort from those who create and maintain to those who provide the Web content. An administrative assistant at Northwestern Radiology for four years, Agnes Stanisiz transitioned to a new role as a Web associate in September. She will be meeting regularly with faculty members to get updates on academic and clinical activities and news.

Holding a bachelor’s degree in operational management and management of information systems and statistics from the University of Illinois, Stanisiz has always had an interest in Web design, development, and management. She plans to create meaningful Web content that not only informs and educates but also allows the department’s core values to shine through.

“Our Web site should help our department make a good impression by anticipating our user’s needs and providing them with simple solutions in an enjoyable and engaging way,” says Stanisiz. “Our site must also convince people to stay awhile and get to know us.”

Both Stanisiz and Yoon look forward to strengthening Northwestern Radiology’s Internet presence. But as they work to make contributing and finding information easier for all involved, they know they can’t do everything on their own.

“There are many wonderful things going on that we need to know and learn from others,” says Yoon. “We need everyone’s help. Brag to us. Tell us what you did today, this week, this month.”

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# Northwestern Radiology Faculty and Staff Notes

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## Management Program Taps Yagmai

The Association of University Radiologists (AUR) selected **Vahid Yagmai, MD, MS**, as one of 30 individuals to participate in the 2007 AUR-Kodak Radiology Management Program held in Denver in late April. Featuring management and leadership workshops, the program targets academic radiologists in leadership positions. Every year the AUR selects participants from a pool of nominated candidates.

## Nemcek Becomes ACR Fellow

**Al Nemcek, MD**, along with two other Illinois radiologists, was elected to fellowship in the American College of Radiology (ACR). Dr. Nemcek will be inducted into the fellowship at a convocation to be held at the 2007 ACR annual meeting in Washington, DC, on May 20.

## A Two-Peater for Mendelson

The 26,000 readers of Medical Imaging have cast their votes and ranked **Ellen Mendelson, MD**, among the top 10 women's imaging specialists in the industry—again! Dr. Mendelson, chief of the section of Breast and Women's Imaging, received similar honors in the publication's first-annual "best of the best" survey in 2006.

## Yang Receives Pinsky Award

The Illinois Radiological Society awarded Northwestern Radiology resident **Carina Yang, MD**, the Steven M. Pinsky Resident Research Award at its annual meeting in March. Dr. Yang received a cash prize of \$1,000 for her abstract entitled *Contrast-Enhanced MR Angiography of the Carotid and Vertebrobasilar Circulations*. Promoting careers in academic medicine,

the award encourages resident research and the inter-institutional exchange of information.

## RSNA Award Goes to Rhee

Northwestern Radiology resident **Thomas Rhee, MD**, received the Radiological Society of North America (RSNA) Trainee Research Prize—Resident at the 2006 RSNA annual meeting in Chicago. Dr. Rhee presented an abstract entitled *Rabbit VX2 Tumors as an Animal Model of Uterine Fibroids and for Uterine Artery Embolization*. Abstract co-authors included **R. Ryu, MD; D. Wang, MS; K. Sato, MD; and A. Larson, PhD**.

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## The Beat Goes On with New CT Scanner

If patients undergoing a cardiac study could bypass beta blockers to slow their heart rate to ensure optimal image acquisition, they would probably do it—pun intended—in a heart beat. This May Northwestern Radiology became the first academic institution in the Chicago area to introduce the Siemens SOMATOM Definition CT scanner featuring two x-ray sources rather than the typical one.

A dual source and dual detector CT scanner, the speed and power of this new cutting-edge system allows for enhanced imaging of the heart regardless of how fast or slow it beats. “The Definition CT is the fastest CT scanner in the world, making it possible to freeze-frame the motion of the heart,” says Vahid Yaghmai, MD, NMH medical director of CT. “We will be able to obtain better images in half the time of the fastest 64-slice CT scanners. That’s a huge leap in technology.”

Single-source CT scanners generally require the use of beta blockers—oral or intravenous—to slow a patient’s heart beat to freeze the organ’s natural movement and produce the most reliable and detailed cardiac images. However beta blockers are not appropriate for everyone and administering them can significantly prolong CT scanning and observation time afterwards. “Now patients can show up and go, just like a routine CT scan,” says Dr. Yaghmai. “The scanner throughput will improve with this technology and the number of patients, who aren’t good candidates for beta blockers but could benefit from CT imaging of the heart, will increase as well.”

The new scanner features a temporal resolution of 83 milliseconds compared to 165 milliseconds achieved with a

single-source 64-slice CT scanner. For functional imaging using multi-segment reconstruction, the Definition CT goes down to a temporal resolution of 42 milliseconds. Its scan speed can also reduce a patient’s radiation exposure compared to single-source scanners. With a 78-centimeter gantry bore, the Definition can also accommodate larger patients more



The revolutionary Definition CT will usher in a new era for CT imaging of the heart.

comfortably. Beyond cardiac imaging, the Definition can function in dual energy mode, a novel CT technique that has the potential to improve the quantification of calcium deposits and characterization of many other diseases.

Given its many capabilities, the Definition CT will advance Northwestern Radiology’s state-of-the-art cardiac imaging service, especially for patients with indeterminate cardiac stress test results, persistent chest pain, and/or a family history of coronary artery disease.

“The Definition CT is a good next test before cardiac catheter angiography,” says Dr. Yaghmai. “It provides the least invasive image of the coronary arteries before catheterization and is an excellent negative predictor for coronary artery disease.”



# IMAGES

### INSIDE...

A Few Words from EJR	2
New Radiology Professorship	2
Presenting at SIR, ISMRM	3
World Wide Web Beckons	5



## A Few Words from Eric J. Russell, MD . . .

### Medical Imaging and the Legacy of Lee Rogers

Several weeks ago, I had the pleasure of spending a beautiful Saturday afternoon having lunch with and lecturing to a group of alumni of the Feinberg School of Medicine during the annual Northwestern medical alumni reunion weekend. The topic was *Advances in Radiology at Northwestern*, and I think I succeeded in demonstrating not only our progress as a department, but also the central role that medical imaging plays in patient care. During the well received lecture, I incorporated case studies from many of our faculty and highlighted their contributions to patient care.

Shortly afterward, a former Northwestern medical student in the audience, now many years out in medical practice, related a story about his radiology rotation and his impressions of Lee Rogers, then chair-

man of our department, “holding court” in the reading room. In reminiscing, what he most remembered was how Lee did not stop his questioning of students and residents after the imaging findings were discussed and how he always pressed the trainee to put the imaging findings in context with the patient’s history and physical exam. Lee pushed those he mentored to cultivate a broad understanding of the totality of the illness under review.

**He challenged his residents to become more than ‘film readers.’**

He challenged his residents to become much more than “film readers.”

How critically relevant this perspective is today. Not only do we need to completely understand the diseases we are imaging to maximize our contribution to the

care of the patient, but we also must possess the informative tools that empower us to do so more efficiently than in Lee’s time at Northwestern.

The electronic inpatient and outpatient medical record, for most of our patients, is as close as the third monitor on our PACS workstations. We must consistently use these tools to improve our protocols and interpretations. By fully integrating clinical and imaging data, we more fully understand the questions at hand that generate the request for service, we create more specific reports, and we add value to our role in patient care. As physician specialists, this is our duty and obligation. Few reports in the current era should end with the phrase “clinical correlation suggested.”

Thanks for the lesson, Lee.

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## Professorship Aims to Advance Radiology Education

Lee F. Rogers, MD, valued connecting with patients, shaping the next generation of radiologists, and advancing his specialty. Former chair of Northwestern Radiology, Dr. Rogers was not only an outstanding leader but also an excellent mentor who inspired those who trained with him to achieve similar goals in their professional lives. He encouraged residents in their research pursuits. He emphasized the importance of formal teaching in weekly case conferences. He made x-rays come to life for trainees who never forgot the ultimate goal of their education.

“Dr. Rogers taught me the importance of patient care,” recalls Ellen Mendelson, MD, director of breast imaging, who completed her residency and fellowship during Dr. Roger’s more than 20-year chairmanship of the department. “He would sit with residents and flush out each case so that you would see that a human being was attached to these films. Reading with him was a 3-D experience.”

A Northwestern alumnus, Dr. Rogers transformed the radiology department into an academic powerhouse by leading by example at home and on the national stage. He served as president of the American

Board of Radiology and garnered gold medals for his leadership while serving as president of the Chicago Radiological Society, the Association of University Radiologists, the American Roentgen Ray Society, and the American College of Radiology. His passion for resident education, however, remains an enduring legacy of his contributions to Northwestern Radiology—one that the department hopes to continue in perpetuity with the creation of the *Lee F. Rogers, MD, Endowed Professorship in Medical Education*.

The first of its kind at Northwestern

*continued on page 4*

## Northwestern Radiology Presents at SIR, ISMRM Meetings

The annual meeting of the Society of Interventional Radiology (SIR) held in Seattle this March showcased not only several presentations from Northwestern Radiology but also gave special attention to the work of interventional radiology fellow John Sheehan, MD. His research on the use of MRI in the detection of stroke gained a prestigious spot among 14 featured abstracts at the meeting for its overall quality, timeliness, and content, according to Jeanne LaBerge, MD, chair, 2007 Scientific Program.

Dr. Sheehan's abstract, *Evaluation of Patients with Suspected Cardioembolic Stroke with Cardiovascular MRI-Comparison with Echocardiography*, was highlighted in the SIR meeting printed program and during its presentation in the Scientific Session. In addition, an invited expert gave a brief commentary about the study, which found that MRI detects nearly twice as many sources of stroke in the heart than echocardiogram alone. The study also demonstrated the ability of MRI to reveal the underlying cause of stroke and prevent it from occurring again, said Dr. Sheehan, lead author of the study.

Other presentations from Northwestern Radiology faculty and staff included:

*Practice Development: Lessons Learned in Developing an Oncology Practice*, A. Courtney, R. Salem, R. Lewandowski.

*Evaluation of the Embolic Agent Bead Block in the Treatment of Uterine Fibroids with Uterine Artery Embolization*, S. Dhand.

*Use of a Combined MR-Interventional Radiology Suite for Intra-Procedural Monitoring of Uterine Artery Embolization*, A. Vin.

*TIPS Workshop Faculty*, R. Ryu.

*Physician Assistants*, T. Faundeen.

*Practice Development: Lessons Learned in Developing an Oncology Practice*, A. Courtney, R. Salem, R. Lewandowski.

*Evaluation of Patients with Suspected Cardioembolic Stroke with Cardiovascular MRI-Comparison with Echocardiography*, J. Sheehan.

*The Transition from Private Practice to Academics: the Good, the Bad, and the Ugly*, R. Ryu.

*Feasibility of MR Imaging Assessment of Renal Function during Endovascular Stent Therapy for Renal Artery Stenosis in Swine*, J. Park.

*Hepatic Arterial Interventions in Liver Transplant Patients: Long-Term Biliary Complications and Re-Transplantation*, J. Minocha.

*Functional Transcatheter Intraarterial Perfusion MRI Monitoring of Chemoembolization*, A. Larson.

*The Economic Impact of an Interventional Radiology Clinic on a Diagnostic Radiology Department*, S. Rajeswaran.

*Real-Time MR Imaging Tracking of Iron-Labeled Radioembolization TheraSpheres: Phantom and Animal Model Feasibility Studies*, A. Larson.

Northwestern Radiology faculty will present 27 posters and 16 oral presentations at the May 19-25 annual meeting of the International Society for Magnetic Resonance in Medicine (ISMRM) to be held in Berlin, Germany. The department's contributions to this meeting represent a whopping 1 percent of all abstracts that were accepted by the ISMRM!

The oral presentations from Northwestern Radiology include:

*Semi-Automated Carotid Arterial Morphometry from Sub-Millimeter Isotropic Spatial Resolution Diffusion-Prepared SSFP Data: A Feasibility Study*, I. Koktzoglou, D. Li.

*Development of a Dark Blood MRI Protocol for Femoral Plaque Imaging*, V. Mani, I. Koktzoglou, Y. Chung, C. Calcagno, D. Samber, R. Jerecic, D. Li, Z. Fayad.

*Super-Resolution for Whole Body Diffusion-Weighted MRI*, X. Yin.

*Multi-Shot Diffusion-Weighted Split-Echo Propeller MRI of the Abdomen*, J. Deng.

*Quantification of Liver Tumor Necrotic Fraction Using Diffusion-Weighted Propeller MRI*, J. Deng.

*MRI Tracking of Iron-Labeled Radioembolization TheraSpheres: Phantom and Animal Model Feasibility Studies*, T. Gupta.

*Transcatheter Intraarterial First-Pass Perfusion (TRIP): MRI Monitoring of Liver Tumor Embolization in VX2 Rabbits*, D. Wang.

continued on page 4

## Radiology Education

continued from page 2

University to be dedicated to medical education, the professorship will help support a faculty member devoted to advancing the department's educational goals.

As training programs embrace competency-based education and outcomes measures, Northwestern Radiology must enhance the teaching of trainees as well as medical students through innovative curriculum and educational tools such as electronic teaching files and a multimedia library. This professorship honoring Dr. Rogers, an emeritus professor of radiology, will allow the department to achieve the level of excellence required of today's

graduate medical education programs as well as ensure its position at the forefront of radiology education.

Efforts are ongoing to raise the necessary funds to fully endow the Rogers named professorship—one of the highest honors a university can bestow upon an individual. To date the Feinberg School has reached about 85 percent of its one million dollar target and welcomes philanthropic contributions at all levels, from stock options to planned giving opportunities. Once the professorship receives full funding, Northwestern Radiology will be able to advance its teaching mis-

sion as well as honor a radiology leader whose passion for teaching touched many department alumni.

“My own educational philosophy as a teacher and mentor was shaped, in part, from what I learned from Dr. Rogers and his commitment to those in training,” says Dr. Mendelson. “He would set us on a path, point the way, and then off you went. His mentorship inspired us to step up and take responsibility as radiologists and function to the best of our abilities as physicians in this specialty.”

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## SIR, ISMRM Meetings

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***Accuracy Evaluation of a Two-Projection Respiratory Self-Gating Technique for Coronary MRA***, P. Lai, A. Larson, X. Bi, R. Jerecic, D. Li.

***Correlation between XRA and Radial Sliding Window MRA of Arteriovenous Malformations***, H. Jeong, T. Cashen, H. Bhatt, M. Shah, H. Batjer, T. Carroll.

***Radial Off Resonance Contrast Angiography***, H. Jeong, T. Cashen, R. Edelman, T. Carroll.

***Visualization of a Passive Intra-Myocardial Needle with Off-Resonance Positive Contrast FLAPS Imaging for Regenerative Myocardial Therapy***, R. Dharmakumar, I. Koktzoglou, R. Tang, K. Harris, D. Li.

***Quantitative Cerebral Blood Flow Measurement in a Canine Stroke Model: Validation with Regional Blood Flow Measurement Using Fluorescent Microspheres***, W. Shin, S. Ali, H. Bhatt, A. Shaibani, T. Carroll.

***Gadolinium-Enhanced Off Resonance Contrast Angiography***, R. Edelman, P. Stoery, E. Dunkle, W. Li, A. Carrillo, A. Vu, T. Carroll.

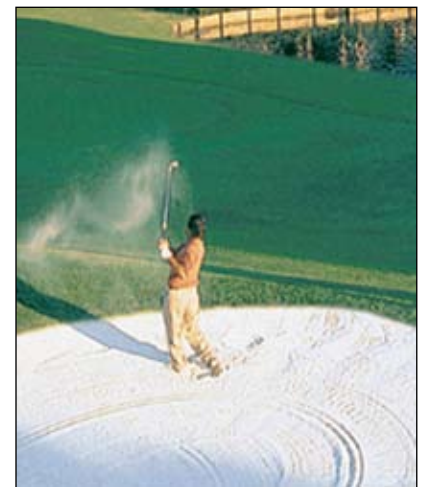
***Optimization of Arterial Input Function Selection for Cerebral Perfusion Imaging with Quantitative Blood Volume Correction***, Z. Wen, K. Vigen, W. Shin, T. Carroll, S. Fain.

***Comparison of Quantitative DSC and ASL Perfusion Methods in Human Subjects at Risk for Alzheimer's Disease***, G. Xu, Z. Wen, C. Carlsson, S. C. Johnson, D. Alsop, H. Rowley, W. Shin, T. Carroll, S. Fain.

***Carotid Artery Imaging at 3T: More Signal from 3D Imaging Using a New Element Coil***, Y. Chung, P. Weale, Q. Zhang, J. Chung, J. Du, J. Sheehan, J. Carr, R. Jerecic.

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### Saddlebrook 2007



Saddlebrook Resort, near Tampa, Florida, served as the setting for a Northwestern Radiology/Evanston Northwestern Healthcare CME meeting. *Imaging at Saddlebrook: Hot Topics in MRI and CT* was held in late March. Mark your calendars for the 2008 Saddlebrook meeting—March 10–14.