NEW IMAGING TECHNIQUE COULD VASTLY IMPROVE CANCER TREATMENT

Imagine you’ve just been diagnosed with a malignant brain tumor and the most popular treatment option has only a success rate of approximately 40 percent. What would you do when faced with such odds? For many people, a cancer diagnosis brings with it many strong emotions, such as anxiety and fear, and choosing among complex treatment options often intensifies these feelings.

Thanks to research being conducted at the University of Michigan Comprehensive Cancer Center, cancer patients will soon be able to make treatment decisions with less worry and more information. Researchers at the Center for Molecular Imaging have identified a special type of magnetic resonance imaging (MRI) scan that can determine the effectiveness of treatment for various cancers much earlier than traditional tests can. As a result, doctors can quickly figure out if a therapy is not working and try a different course of action, improving patient longevity, and sparing patients from ineffective treatment regimens.

The U-M researchers are using the MRI scan, which they call a functional diffusion map, to trace the random movement of water molecules within tumor cells from the start of therapy to one to three weeks later. Since cancer cells slow the diffusion of water molecules, these molecules begin to move more freely as the cancer cells die, explains Brian D. Ross, Ph.D., co-director of the Molecular Imaging Program at the U-M Comprehensive Cancer Center and professor of radiology and biological chemistry.

Researchers have used the diffusion MRI technique to assess treatment response in brain cancer and in advanced prostate and breast cancer. Once the test becomes commercially available, Dr. Ross anticipates that it will vastly improve cancer treatment by helping doctors find the most effective treatment regimen for each patient’s individual condition. “Our ultimate goal,” he says, “is to humanize and personalize the care and treatment given to cancer patients.”

For more information about the Molecular Imaging Program, go to http://www.med.umich.edu/msair/research.htm.
LETTER FROM THE CHAIR’S DESK

Dear Michigan Radiology Alumni, Friends, and Family:

Welcome to the Department of Radiology newsletter. We hope to keep you apprised of major changes at the University of Michigan, especially in the Department of Radiology. In each issue, we will highlight a different aspect of the Department in order to provide a more in-depth discussion of the changes being made and how we expect them to impact our research, teaching, or clinical missions.

Although the State of Michigan has been one of the hardest hit areas of our country by the recent economic downturn, you would not be able to tell that if you visited Ann Arbor. There are construction cranes all over our campus. While the expansion of the football stadium and the construction of the new football practice facility have received the most attention in the lay press, there is even more construction on the medical campus.

Our recently completed Cardiovascular Center is a beautiful facility that includes a five-story, glassed in atrium that functions nicely for social events. We have two angiographic suites, including one CT-Angio room, as well as ten faculty offices there.

The new Children’s and Women’s Replacement Hospital is well underway and the steel infrastructure has been completed. We anticipate occupying this marvelous new building in 2012. Peter Strouse has done a wonderful job planning the radiology department, which will include three magnets, two CT scanners, two nuclear medicine rooms, and an angiography suite, all dedicated to pediatric imaging and intervention.

Our laboratory facilities are also undergoing significant change. When the new Basic Sciences Research Building opened, Brian Ross moved our Molecular Imaging Center into the new facility. Related laboratories including Chuck Meyer and the DIPL lab, as well as Gary Luker’s laboratory, soon followed. We are now working on evacuating the old Kresge Building and moving the remaining cyclotron equipment, Neal Clinthorne’s instrumentation lab, and our entire ultrasound laboratory to newly renovated space in Medical Science I.

Please stop by the department on your next visit to Ann Arbor. There is much we have to show you!

Sincerely.

N. Reed Dunnick, M.D.
U-M researchers are developing CAD methods in the detection and characterization of breast, lung, and urinary tract cancers, and pulmonary embolism and coronary artery disease, and also in the assessment of treatment response to cancer therapies. While several CAD systems for the detection of abnormalities are now commercially available, no CAD classification system is currently on the market. The U-M team is working hard to continue development of new CAD detection and classification technologies, with the hope that these systems will help reduce mortalities from cancer and other diseases.

For more information about the CAD research laboratory, see http://alpha3.rad.med.umich.edu/
A PASSION FOR RADIOLOGY

At 93, Dr. Joseph D. Hanelin is the Department of Radiology’s oldest living alumnus. He is also a prominent national and international figure in the field of radiology, who has guided radiologists worldwide in their research and clinical work. Born and raised in Detroit, Michigan, Dr. Hanelin earned both his undergraduate and medical degrees from Wayne State University. Following medical school, he entered active duty in the U.S. Air Force as a general practitioner.

When he accepted a commanding officer’s request for help with radiology work, he discovered that he had a passionate love for the field. Upon completing his service, Dr. Hanelin entered the residency program in U-M’s Department of Radiology, where he had the good fortune to receive close mentoring from Dr. Fred Hodges, an outstanding teacher and researcher. Dr. Hodges recognized his exceptional talent as a radiologist and recommended him for a fellowship at Massachusetts General Hospital in Boston. Dr. Hanelin went on to join the radiology staff at the hospital, where he remained for 13 years before becoming chair of the Department of Radiology at Newton-Wellesley Hospital. After retiring from Newton-Wellesley in 1981, he continued to work full-time for another 10 years, and then part-time into his late 80s. During his career, he published and reviewed numerous scientific articles in The New England Journal of Medicine, The Journal of Bone and Joint Surgery, The Journal of the American Medical Association, and other acclaimed medical publications.

According to his son Laurence G. Hanelin, M.D., Dr. Hanelin’s interest in radiology and dedication to the field has known no bounds. “After spending long hours at the hospital, my dad would continue to work at home in a lab he had set up for that purpose,” says Laurence. His passion for the profession has rubbed off on his family. Laurence and his three sons, Michael, Joshua, and Joseph, have all followed in Dr. Hanelin’s footsteps. Today, Dr. Hanelin lives in the home in Wayland, Massachusetts, where he and his wife Dorothy raised their three children, Richard, Laurence, and Donna, and where he enjoys spending time with family and friends.

DEPARTMENT OF RADIOLOGY PROFESSORSHIPS

During the past year, our department has been working to establish two collegiate professorships.

The Saroja Adusumilli, M.D. Endowed Collegiate Professorship in Radiology was established to honor our colleague who passed suddenly in 2007. Her family, colleagues, and friends all felt strongly that we should honor her passion and dedication to patient care and education with a lasting remembrance. We are pleased to report that we will inaugurate the professorship on December 10, 2008. Dr. Richard Cohan, Professor of Radiology, will be installed as the first recipient of this professorship. Family, friends, and colleagues will gather to celebrate her life and contributions at a ceremony and reception.

The David E. Kuhl Professorship of Nuclear Medicine in Radiology is being established to honor this world-renowned nuclear medicine clinician and scientist. Dr. Kuhl’s numerous contributions to medical imaging include important technical innovations, the discovery of novel biological radiotracers, and his leadership in implementation of state-of-the-art clinical translational services. The professorship is in its fundraising phase with a goal to install the first recipient in 2009.
Local, regional, and national awards and distinctions continue to recognize the expertise and innovation of our faculty members. Here are highlights of recent recognition received by our faculty.

N. Reed Dunnick, M.D., was elected President of the American Board of Radiology and was appointed to the Board of Directors of the Radiological Society of North America. He was also elected Vice President of the American College of Radiology.

Ruth Carlos, M.D., was elected Treasurer of the Association of University Radiologists (AUR) and was appointed to the AUR’s Board of Directors.

Paul Carson, Ph.D., is this year’s recipient of the William D. Coolidge Award from the American Association of Physicists in Medicine.

James Ellis, M.D., was named President-Elect of the Society of Uroradiology.

Brian Fowlkes, Ph.D., was elected Secretary of the American Institute of Ultrasound in Medicine.

Isaac Francis, M.D., was named President-Elect of the Society of Computed Body Tomography/Magnetic Resonance.

Isaac Francis, M.D., and Leslie Quint, M.D., were appointed to the Board of Directors of the Society of Computed Body Tomography/Magnetic Resonance.

Mark Helvie, M.D., Suresh Mukherji, M.D., Perry Pernicano, M.D., and Douglas Quint, M.D., will receive American College of Radiology fellowships in May 2009.

Ella Kazerooni, M.D., was the second radiology faculty member to receive the Early Distinguished Cancer Award from the U-M Medical Center Alumni Society. She was also named President-Elect of the American Roentgen Ray Society.

Douglas Miller, Ph.D., received the prestigious U-M Collegiate Research Professorship Award.

Suresh Mukherji, M.D., was elected Treasurer of the American Society of Head and Neck Radiology.

Leslie Quint, M.D., was appointed to the Board of Trustees of the International Cancer Imaging Society.

Man (Maggie) Zhang, M.D. (Postdoctoral Fellow) received the Best Paper Award at the Young Investigator Symposium, Great Lakes Chapter, American Association of Physicists in Medicine.
IN GRATEFUL ACKNOWLEDGMENT OF OUR SUPPORTERS, FISCAL YEAR 2008

Dr. Surendranath and Mrs. Swatantra Adusumilli
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How You Can Help

You can help advance radiology education and research.

Contribute to active and established endowments

- Saroja Adusumilli, M.D. Collegiate Professorship in Radiology
- David E. Kuhl Collegiate Professorship of Nuclear Medicine in Radiology
- Basic Radiological Sciences Endowment

- Walter M. Whitehouse Memorial Endowment
- William Martel Professorship
- John F. Holt Collegiate Professorship
- Roger A. Berg Endowment
- Fred Jenner Hodges Professorship

You can also establish an endowment, educational award, research fund, and/or a professorship or collegiate professorship in honor of a faculty member.
Executive Officers of the University of Michigan Health System
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