Radiologists Call for National Strategy to Address Medical Imaging Overuse

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OAK BROOK, Ill. – Overutilization of medical imaging services exposes patients to unnecessary radiation and adds to healthcare costs, according to a report appearing online and in the October issue of the journal *Radiology* that calls on radiologists to spearhead a collaborative effort to curb imaging overutilization.

"In most cases, an imaging procedure enhances the accuracy of a diagnosis or guides a medical treatment and is fully justified, because it benefits the patient," said the article's lead author, William R. Hendee, Ph.D., distinguished professor of radiology, radiation oncology, biophysics and bioethics at the Medical College of Wisconsin in Milwaukee. "But some imaging procedures are not justified, because they are unnecessary for the patient's care. These are the uses of imaging that we, as medical physicists, radiologists, radiation oncologists and educators, are trying to identify and eliminate."

The growth in medical imaging over the past two decades has yielded important and life-saving benefits to patients. Medical imaging has allowed millions of patients to avoid more invasive diagnostic and treatment procedures. However, overutilization of medical imaging services can be detrimental to patients by exposing them to unnecessary radiation. Between 1980 and 2006, the annual U.S. population radiation dose from medical procedures increased seven-fold, according to the National Council on Radiation Protection and Measurements.

In August 2009, the American Board of Radiology Foundation hosted a two-day summit with more than 60 participating organizations to examine the causes and effects of imaging overutilization.

The summit identified several key forces influencing overutilization, including payment mechanisms and financial incentives in the U.S. healthcare system, the practice behavior of referring physicians, self-referral, defensive medicine, patient expectations and duplicate imaging exams.
"There are many causes of overutilization of imaging in medicine," Dr. Hendee said. "Some of these causes, such as self-referral to physician-owned imaging facilities and defensive medicine to shield against potential lawsuits, are beyond radiology's influence to correct and must be dealt with more globally within medicine. However, some of the causes do occur within radiology, and the profession is hard at work to address them."

Summit participants offered several suggestions to reduce overutilization, such as a national collaborative effort to develop evidence-based appropriateness criteria for imaging, greater use of practice guidelines in requesting and conducting imaging exams, decision support at the point-of-care, education of referring physicians and the public, accreditation of imaging facilities, management of self-referral and defensive medicine, and payment reform.

The Radiology report outlines several of these suggestions and states that these efforts will require the cooperation and active collaboration of many groups, including radiologists, physicists, oncologists, referring physicians, payers of healthcare services, patient and public interest groups and vendors of medical imaging equipment.

A second summit called "Improving Patient Care through Effective Communicating in Imaging" was held in Washington, D.C., August 5-6, 2010.

In June 2009, the Radiological Society of North America (RSNA) and the American College of Radiology established the Joint Task Force on Adult Radiation Protection to address concerns about patient radiation exposure from medical imaging procedures. The task force subsequently broadened the participating primary member institutions to include the American Association of Physicists in Medicine and the American Society of Radiologic Technologists and is in the process of developing the "Image Wisely" campaign for adult radiation protection.

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"Addressing Overutilization in Medical Imaging." Collaborating with Dr. Hendee were Gary J. Becker, M.D., James P. Borgstede, M.D., Jennifer Bosma, Ph.D., William J. Casarella, M.D., Beth Erickson, M.D., C. Douglas Maynard, M.D., James Thrall, M.D., and Paul E. Wallner, D.O.

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