

Significant amount of inappropriate CT and MRI referrals from primary care physicians: study

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A large academic medical center has found that a significant percentage of outpatient referrals they receive from primary care physicians for computed tomography (CT) and magnetic resonance imaging (MRI) studies are inappropriate (based upon evidence-based appropriateness criteria developed by a radiology benefits management company), according to a study in the March issue of the *Journal of the American College of Radiology*.

While overall imaging growth is in line with or below that of other physician services - 2 percent or less annually since 2006 - a significant amount of imaging ordered and/or carried out by non-radiologists may be inappropriate.

"Radiologists, hospitals, health plans, and policy makers have struggled with ways to improve the rate of appropriate utilization of imaging studies, particularly CT, MRI, and PET," said Robert L. Bree, MD, lead author of the study. "Our study looked at a large group of CT and MRI examinations. Evidence-based appropriateness criteria developed by a radiology management company (largely based on ACR Appropriateness Criteria) were used to determine if the examinations were appropriate," said Bree.

The study, performed at Harborview Medical Center in Seattle, WA, included medical records from 459 elective outpatient CT and MR

examinations from primary care physicians that were reviewed. "Of the 459 reviewed, 74 percent were considered appropriate and 26 percent were considered inappropriate. 58 percent of the appropriate studies were positive and affected subsequent management while only 24 percent of inappropriate studies were positive affecting management," said Bree. Examples of inappropriate examinations include brain CT for [chronic headache](#), lumbar spine MR for acute back pain, and knee or shoulder MRI in patients with osteoarthritis.

"Our study shows that CT and MRI examinations ordered in the outpatient primary care setting are frequently not appropriate based on the application of a national radiology benefit management company's evidence-based guidelines. A high percentage of examinations not meeting appropriateness criteria and subsequently yielding negative results suggest a need for tools to help [primary care](#) physicians improve the quality of their imaging decision requests," said Bree.

"This is important information for policy makers as they struggle with physicians and patients who are unhappy with restrictive utilization management programs and payers and the public who are looking for ways to decrease health care costs and increase quality and safety of exams in an era of higher awareness of effects of excess radiation. A reasonable compromise might be found in the newly emerging clinical decision support systems," he said.

More information: www.jacr.org

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