

RSNA Press Release

Self-Referral Leads to More Negative Exams for Patients

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CHICAGO—Physicians who have a financial interest in imaging equipment are more likely to refer their patients for potentially unnecessary imaging exams, according to a study presented today at the annual meeting of the Radiological Society of North America (RSNA).

"Self-referral," whereby a non-radiologist physician orders imaging exams and directs patients to imaging services in which that physician has a financial interest, is a concerning trend in medicine and a significant driver of healthcare costs.

"Self-referred medical imaging has been shown to be an important contributor to escalating medical costs," said Ben E. Paxton, M.D., radiology resident at Duke University Medical Center in Durham, N.C.

"Attempts to date at reducing healthcare spending on medical imaging have come in the form of across-the-board cuts that threaten to reduce access to vital imaging services," said the paper's senior author, Ramsey Kilani, M.D., associate faculty member at Duke. "We believe patients would be better served if we instead eliminated underlying drivers of unnecessary imaging spending."

Between 2000 and 2005, ownership or leasing of MRI equipment by non-radiologists grew by 254 percent, compared to 83 percent among radiologists. The U.S. Government Accountability Office (GAO) reported that the proportion of non-radiologists billing for

At A Glance

- Imaging self-referral leads to increased medical costs and potentially unnecessary imaging exams for patients.
- From 2000 to 2006, private office imaging utilization rates by non-radiologists grew by 71 percent.
- Forty-two percent of patients referred for diagnostic lumbar spine MRI exams by physicians with a financial interest in the equipment had negative scan results.
- There were 86 percent more negative scans in the financial interest group than in the group with no financial interest in the equipment.



Ben E. Paxton, M.D.

in-office imaging more than doubled from 2000 to 2006. During that same time period, private office imaging utilization rates by non-radiologists who control patient referral grew by 71 percent.

For the study, the researchers set out to determine if utilization of lumbar spine MRI differs, depending on the financial interest of the physician ordering the exam. They reviewed 500 consecutive diagnostic lumbar spine MRI exams ordered by two orthopedic physician groups serving the same community. The first group had financial interest in the MRI equipment used (FI group), and the second had no financial interest in the equipment (NFI group).

For each group, the researchers analyzed the number of abnormalities per positive scan, the mean age of the patients and the negative exam result rate.

The results of the study showed that among the 500 MRI exams (250 per group), between the two groups there was no significant difference in the number of abnormalities per positive scan. However, the mean age among patients in the FI group was 49.6, compared to 56.9 for the NFI group.

There were 86 percent more negative scans in the FI group than the NFI group, indicating a significantly higher number of potentially unnecessary exams. Of the 163 negative exams, 106 belonged to the FI group, compared to 57 for the NFI group. In the FI group, 42 percent of patients referred for exams had negative scans, compared to 23 percent of the NFI group.

"Orthopedic surgeons with financial interest in the equipment had a much higher rate of negative lumbar spine MRIs," Dr. Paxton said. "In addition, they were much more likely to order MRI exams on younger patients. This suggests that there is a different clinical threshold for ordering MRI exams in the setting of financial incentivization."

Dr. Paxton added that increased imaging utilization due to self-referral may not yield medically useful information and may place the patient at risk for potential adverse consequences.

"It is important for patients to be aware of the problem of self-referral and to understand the conflict of interest that exists when their doctor orders an imaging exam and then collects money on that imaging exam," he said.

Coauthors are Matthew Lungren, M.D., Sin-Ho Jung, Ph.D., and Peter Kranz, M.D.

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