

## Why GAO Did This Study

Medicare Part B expenditures—which include payment for advanced imaging services—are expected to continue growing at an unsustainable rate. Questions have been raised about self-referral’s role in this growth. Self-referral occurs when a provider refers patients to entities in which the provider or the provider’s family members have a financial interest. GAO was asked to examine the prevalence of advanced imaging self-referral and its effect on Medicare spending. This report examines (1) trends in the number of and expenditures for self-referred and non-self-referred advanced imaging services, (2) how provision of these services differs among providers on the basis of whether they self-refer, and (3) implications of self-referral for Medicare spending. GAO analyzed Medicare Part B claims data from 2004 through 2010 and interviewed officials from the Centers for Medicare & Medicaid Services (CMS) and other stakeholders. Because Medicare claims lack an indicator identifying self-referred services, GAO developed a claims-based methodology to identify self-referred services and expenditures and to characterize providers as self-referring or not.

## What GAO Recommends

GAO recommends that CMS improve its ability to identify self-referral of advanced imaging services and address increases in these services. The Department of Health and Human Services, which oversees CMS, stated it would consider one recommendation, but did not concur with the others. GAO maintains CMS should monitor these self-referred services and ensure they are appropriate.

View [GAO-12-966](#). For more information, contact James C. Cosgrove at (202) 512-7114 or [cosgrovej@gao.gov](mailto:cosgrovej@gao.gov).

## MEDICARE

# Higher Use of Advanced Imaging Services by Providers Who Self-Refer Costing Medicare Millions

## What GAO Found

From 2004 through 2010, the number of self-referred and non-self-referred advanced imaging services—magnetic resonance imaging (MRI) and computed tomography (CT) services—both increased, with the larger increase among self-referred services. For example, the number of self-referred MRI services increased over this period by more than 80 percent, compared with an increase of 12 percent for non-self-referred MRI services. Likewise, the growth rate of expenditures for self-referred MRI and CT services was also higher than for non-self-referred MRI and CT services.

GAO’s analysis showed that providers’ referrals of MRI and CT services substantially increased the year after they began to self-refer—that is, they purchased or leased imaging equipment, or joined a group practice that already self-referred. Providers that began self-referring in 2009—referred to as switchers—increased MRI and CT referrals on average by about 67 percent in 2010 compared to 2008. In the case of MRIs, the average number of referrals switchers made increased from 25.1 in 2008 to 42.0 in 2010. In contrast, the average number of referrals made by providers who remained self-referrers or non-self-referrers declined during this period. This comparison suggests that the increase in the average number of referrals for switchers was not due to a general increase in the use of imaging services among all providers. GAO’s examination of all providers that referred an MRI or CT service in 2010 showed that self-referring providers referred about two times as many of these services as providers who did not self-refer. Differences persisted after accounting for practice size, specialty, geography, or patient characteristics. These two analyses suggest that financial incentives for self-referring providers were likely a major factor driving the increase in referrals.

**Change in Average Number of MRI Services Referred, 2008 and 2010**

	Average 2008 referred MRI services	Average 2010 referred MRI services	Percentage change
Switchers	25.1	42.0	67.3
Non-self-referrers	20.6	19.2	-6.8
Self-referrers	47.0	45.4	-3.4

Source: GAO analysis of Medicare data.

Note: Pattern observed for MRI services was similar for CT services. GAO defines switchers as those providers that did not self-refer in 2007 or 2008, but did self-refer in 2009 and 2010.

GAO estimates that in 2010, providers who self-referred likely made 400,000 more referrals for advanced imaging services than they would have if they were not self-referring. These additional referrals cost Medicare about \$109 million. To the extent that these additional referrals were unnecessary, they pose unacceptable risks for beneficiaries, particularly in the case of CT services, which involve the use of ionizing radiation that has been linked to an increased risk of developing cancer.