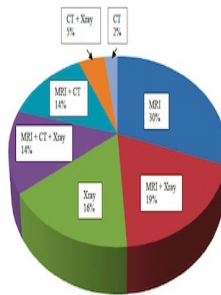




## Appropriateness of Spinal Imaging Use in Canada

Figure 1: Combinations of imaging required for accepting a spine-related referral among respondents who indicated that they require imaging to accompany a new referral (n=43)



A recently published study funded by the Canadian Institutes of Health Research looks at the appropriateness of spinal imaging in Canada, against a background of increasing costs of diagnostic imaging, and the need to find efficiencies.

An estimated 50–80 percent of the adult population will experience spine related complaints such as low back pain in their lifetime, and imaging of the lumbar spine accounts for approximately one-third of all MRI procedures in some Canadian provinces.

This study included a review of the literature, survey of Canadian spine surgeons and provincial utilisation data.

In the 22 studies identified on the appropriateness of spine imaging there was little consensus on what defined appropriateness and little consideration of outcomes important to patients. All studies found some inappropriate use.

The survey of Canadian spine surgeons found that the vast majority (74 percent) require imaging studies for all spine-related referrals. MRI is the most common imaging required. Even when an imaging study is performed, 53 percent of surgeons refused more than 20 percent of all referrals without a consultation, and less than 20 percent of patients who are assessed are candidates for surgery. The study's authors suggest that the current system of referring patients with spine-related complaints for surgical assessment in Canada appears to lead to much unnecessary imaging

Provincial utilisation data showed an increase in MRI imaging for the spine between 2001-2011, but no decrease in x-ray or CT, with x-rays accounting for 40 percent of all spine imaging costs. The authors suggest that improved health system coordination for patients with spinal complaints may help to improve efficiency of spine imaging use (e.g. diagnostic imaging pathways to reduce the need for 'lead-up' testing with x-ray or CT spine before MRI. Standardised assessment of patients with low back pain could streamline referral of appropriate patients for advanced spine imaging and surgical consultation.

**Reference:** Busse J et al. Appropriateness of spinal imaging use in Canada. (2013) Ottawa: Canadian institutes of Health Research. Available at:

<http://nationalpaincentre.mcmaster.ca/documents/AppropriatenessofSpinalImagingFinalReportApril252013.pdf>

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