

POEMs (patient-oriented evidence that matters) are provided by Essential Evidence Plus, a point-of-care clinical decision support system published by Wiley-Blackwell. For more information, see <http://www.essentialevidenceplus.com>. Copyright Wiley-Blackwell. Used with permission.

For definitions of levels of evidence used in POEMs, see [http://www.essentialevidenceplus.com/product/ebm\\_loe.cfm?show=oxford](http://www.essentialevidenceplus.com/product/ebm_loe.cfm?show=oxford).

To subscribe to a free podcast of these and other POEMs that appear in *AFP*, search in iTunes for "POEM of the Week" or go to <http://goo.gl/3niWXb>.

This series is coordinated by Sumi Sexton, MD, Associate Medical Editor.

A collection of POEMs published in *AFP* is available at <http://www.aafp.org/afp/poems>.

## Early Imaging for Low Back Pain in Older Adults Raises Costs Without Improving Quality

### Clinical Question

Does early imaging of older adults with back pain improve outcomes?

### Bottom Line

Among adults 65 years or older who present to primary care clinicians for a new episode of back pain, early imaging (before six weeks) resulted in no improved outcomes at one year, but increased overall health care costs by almost 30%. Indications for early imaging include major risk factors for cancer, signs of cauda equina syndrome, severe neurologic deficits, and fever with a history of intravenous drug use or recent infection. (Level of Evidence = 2b-)

### Synopsis

Early imaging (before six weeks) of adults with back pain is associated with increased costs and worse outcomes (*Ann Intern Med*. 2011;154(3):181-189). However, most studies have included few, if any, adults 65 years or older. These investigators prospectively enrolled 5,239 adults, 65 years or older,

who presented to a participating primary care clinician for a new episode of back pain. Of these, 1,264 patients received early back imaging (within six weeks of the initial visit), including 1,174 who underwent plain film radiography and 349 who underwent computed tomography or magnetic resonance imaging. Patients in the early imaging group were propensity-matched when possible for multiple variables, including sex, race/ethnicity, age, education, smoking status, comorbidities, back pain, leg pain, and various quality-of-life and function scoring tools, with similar patients in the control group not undergoing early imaging (approximately 93% match rate). Outcomes were assessed at three, six, and 12 months using validated back pain-related disability and quality-of-life scoring tools. Complete follow-up occurred for approximately 90% of patients at 12 months.

Although fractures were detected more often in the early imaging group, no statistically significant differences in disability or quality of life occurred between the early-imaging group and the control group at any points in the evaluation process. In addition, no differences occurred in the proportion of patients with cancer diagnoses. Overall costs were approximately 30% higher in the early-imaging group.

**Study design:** Cohort (prospective)

**Funding source:** Government

**Setting:** Outpatient (primary care)

**Reference:** Jarvik JG, Gold LS, Comstock BA, et al. Association of early imaging for back pain with clinical outcomes in older adults [published correction appears in *JAMA*. 2015;313(17):1758]. *JAMA*. 2015;313(11):1143-1153.

DAVID SLAWSON, MD  
Director of Information Sciences  
University of Virginia Health System  
Charlottesville, Va. ■