



May 1, 2016

Jeffrey M. Drazen, MD, Editor-in-Chief  
New England Journal of Medicine  
10 Shattuck Street  
Boston, MA 02115

Subject: The value of fusion for degenerative spondylolisthesis

Dear Dr. Drazen:

Clinical guidelines recommend spinal stenosis without instability, intraoperative destabilization or deformity typically should be treated with decompression alone.<sup>1</sup> Despite the widespread acceptance of these principles, Försth performed an RCT evaluating whether fusion improves outcomes in a mixed population with spinal stenosis.<sup>2</sup> As expected, the study showed no benefit to fusion. Subgroup analysis of a heterogeneous population with degenerative spondylolisthesis also failed to show a significant benefit of fusion; however two-year follow-up was only 56%, and the study was underpowered to detect a clinically important difference in ODI.

Simultaneously, Ghogawala published a RCT looking specifically at “stable” degenerative spondylolisthesis patients.<sup>3</sup> They excluded patients with >3 mm of motion and therefore examined a population where the necessity of fusion is controversial. Decompression with fusion improved outcomes and resulted in fewer reoperations than decompression alone.

Not every patient with degenerative spondylolisthesis requires fusion. However, many patients achieve better outcomes and more durable results as a result of fusion.<sup>4</sup> Neurosurgery and orthopaedic surgery leadership disagree with the conclusion that instrumented fusion does not create any value for patients.<sup>5</sup>

Sincerely,

H. Hunt Batjer, MD, President  
American Association of Neurological Surgeons

Gerald R. Williams, Jr., MD, President  
American Academy of Orthopaedic Surgeons

Christopher M. Bono, MD, President  
North American Spine Society

### References

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2. Försth P, Ólafsson G, Carlsson T, et al. A Randomized, Controlled Trial of Fusion Surgery for Lumbar Spinal Stenosis. *N Engl J Med*. 2016 Apr 14;374(15):1413-23.
3. Ghogawala Z, Dziura J, Butler WE, et al. Laminectomy plus Fusion versus Laminectomy Alone for Lumbar Spondylolisthesis. *N Engl J Med*. 2016 Apr 14;374(15):1424-34.
4. Smorgick Y, Park DK, Baker KC, et al. Single- versus multilevel fusion for single-level degenerative spondylolisthesis and multilevel lumbar stenosis: four-year results of the spine patient outcomes research trial. *Spine (Phila Pa 1976)*. 2013 May 1;38(10):797-805.
5. Peul WC, Moojen WA. Fusion for Lumbar Spinal Stenosis--Safeguard or Superfluous Surgical Implant? *N Engl J Med*. 2016 Apr 14;374(15):1478-9.