
AJNR

# Reply:

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*AJNR Am J Neuroradiol* 2013, 34 (1) E9
doi: https://doi.org/10.3174/ajnr.A3444
http://www.ajnr.org/content/34/1/E9

This information is current as of August 12, 2025.

**REPLY:**

We thank Professor Fitzgerald for his interest in our study and for sharing his reflections on one of our recommendations.[1] The concerns he voices open a worthy debate.

We believe that radiologists' decisions on the findings that should be included in their reports should stem from the evidence on clinical relevance and not from their reporting patterns or personal styles. This implies that the findings that should be reported may vary with time, following the appearance of new robust evidence.

The evidence currently shows the following:

1) Vertebral endplate changes (VEC) are not associated with low back pain (LBP) and are found in most asymptomatic subjects older than a certain age.[1,2]

2) The lifetime prevalence of LBP among the general population is >70%,[3] and >80% of subjects show VEC (irrespective of whether they report LBP or a history of LBP).[1]

3) Spinal fusion is an aggressive form of treatment, while its effectiveness appears to be similar to that of intensive exercise.[4]

4) Nevertheless, some surgical societies recommend spinal fusion for patients who present with VEC and report LBP[5]; if one takes into account points 2 and 3, this means that most of the population would qualify for spinal fusion at some point in their lives.

5) In fact and despite the cumulative evidence in the past years,[4] the rate of spinal fusion in the United States is very high, this rate is rising more rapidly than other types of surgery,[6] and the rate of reoperation is not decreasing.[7]

6) Failed back surgery syndrome is a serious and incapacitating condition, for which few treatments have been shown to be effective, and the most effective preventive measure is to avoid surgery when not indicated.[8]

7) MR imaging identifies many findings that are clinically irrelevant[9-11] but that appear to be misinterpreted and lead to unnecessary spinal fusion.[1,2,4,5]

8) Including epidemiologic data in radiologic reports underlines the clinical irrelevance of such findings and actually improves clinical management.[12]

Therefore, we think that including epidemiologic data or omitting clinically irrelevant findings from radiologic reports may contribute to protecting patients from aggressive unnecessary forms of overtreatment.[1]

It is indeed advisable for examination requisitions to include relevant clinical information, but its absence would not be an obstacle for these approaches because it is the responsibility of the medical referral personnel to assess the concordance between clinical and potentially relevant radiologic findings (eg, disk herniation or spinal stenosis).

Despite the available evidence,[1,2,4] clinically irrelevant imaging findings are being considered an indication criterion for (inappropriate) spinal fusion,[5] leading to overuse and unnecessary harm to patients.[6-8] In this scenario, it would be unethical to not address this situation.[6-8] We believe that the approach proposed, far from being paternalistic, is an evidence-based strategy that empowers patients to effectively participate in a well-informed, shared decision-making process.

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http://dx.doi.org/10.3174/ajnr.A3444