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Maas, Esther T.; Juch, Johan N.S.; Ostelo, Raymond W.J.G.; Groeneweg, J. George; Kallewaard, Jan Willem; Koes, Bart W.; Verhagen, Arianne P.; van Dongen, Johanna M.; van Tulder, Maurits W.; Huygen, Frank J.P.M.

published in

Value in Health
2021

DOI (link to publisher)

[10.1016/j.jval.2021.02.013](https://doi.org/10.1016/j.jval.2021.02.013)

document version

Publisher's PDF, also known as Version of record

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citation for published version (APA)

Maas, E. T., Juch, J. N. S., Ostelo, R. W. J. G., Groeneweg, J. G., Kallewaard, J. W., Koes, B. W., Verhagen, A. P., van Dongen, J. M., van Tulder, M. W., & Huygen, F. J. P. M. (2021). Author Reply. *Value in Health*, 24(8), 1235-1236. <https://doi.org/10.1016/j.jval.2021.02.013>

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Conflict of Interest Disclosures: Dr Hambræus reported being the CEO and stock owner of Eques Indolor, a private interventional pain clinic. Dr McCormick reported being on the Board of Directors, Spine Intervention Society. No other disclosures were reported.

Funding/Support: The authors received no financial support for this research.

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Author Reply

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As authors of the study published as “Cost-Effectiveness of Radiofrequency Denervation for Patients with Chronic Low Back Pain: The MINT Randomized Clinical Trials,” we would like to reply to the Letter to the Editor that was recently written about this study.

First, the authors of the letter state that the analysis was based on only 2 of the 16 centers that were included in the randomized controlled trials (RCTs). This statement is incorrect, and patients from all 16 centers in the RCTs were included for the cost-effectiveness analyses as follows: 252 patients in the facet joint trial, 228 patients in the sacroiliac joint trial, and 202 in the combination group trial.

Second, it was suggested that an inaccurate protocol was used for establishing a diagnosis of lumbar facet joint pain, leading to inappropriate patient selection in the Minimal Invasive Treatment (MINT) trials. We acknowledge that diagnosing these patients is a matter of controversy. The MINT study was a pragmatic study in which patient selection and interventions were performed as in Dutch daily practice. A single diagnostic block is recommended in the Dutch guideline.¹ We agree that performing a single block could result in lower specificity and higher false-positive rates.² Nevertheless, defining a positive block as pain reduction of 50% or greater, as was done in our study, is the most frequently used definition in RCTs.³

In 2020, Cohen et al³ published consensus practice guidelines for lumbar facet joint pain. On the basis of a modified Delphi method, an international committee of recognized experts recommends that a pain reduction of more than 50% should be considered a positive block, and a single block is sufficient for diagnosis. This is in line with the methods of the MINT study.

The authors criticized the treatment techniques for all patients with facet joint pain. We have been transparent in the description of the procedures, and we acknowledge that there are differences in techniques and differences between settings and countries. We

used a 22-gauge needle, which is standard practice in The Netherlands and based on scientific literature.^{4,5}

Recently, De Andrés et al⁵ published the results of an RCT in which they compared the perpendicular thin electrode technique used in the MINT study with the parallel thick electrode approach as advocated by the Spine Intervention Society. Although the authors claim limited differences at 6 months in some secondary outcome parameters, they could not find significant differences in the primary outcome parameter pain and secondary outcome parameters Oswestry Disability Index or Roland Morris Questionnaire scores at 1, 3, or 6 months between groups.

Finally, the authors of the letter suggest that “it is important to provide transparency to readers that when more rigorous diagnostic and treatment methods are used in the treatment of low back pain of facet joint origin, substantially higher success rates are obtained,⁶ and cost-effectiveness has been demonstrated⁷.” The first reference refers to a small cohort study of 44 subjects who were all treated with radiofrequency denervation. There is no control group and a cost-effectiveness analysis was not performed. The authors only report that the costs were lower after treatment. This does not show evidence about cost-effectiveness, and the suggestion that “cost-effectiveness has been demonstrated” is strongly overstated. Until now, we have not seen valid published randomized trial data refuting the findings of the MINT study.

We believe that the cost-effectiveness analysis we conducted alongside a large RCT has been performed according to state-of-the-art methodology. The (published) study was designed in collaboration between clinical epidemiologists and members of the Dutch Society of Anaesthesiology.⁸

Debate about the best practices for diagnoses and treatment of patients with chronic low back pain is ongoing and will lead to



optimization of patient care. We welcome initiatives such as those of Cohen et al.³ They clearly show that the role of facet denervation in the treatment of low back pain remains extremely uncertain with all the open questions about how to diagnose facet pain and administer the therapy. For the time being, this is in accordance with the MINT result.

We encourage researchers and clinicians in other settings and countries to evaluate whether these procedures reflect their daily practice.

Article and Author Information

Accepted for Publication: February 7, 2021

Published Online: April 30, 2021

doi: <https://doi.org/10.1016/j.jval.2021.02.013>

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Obtaining funding: Maas

Administrative, technical, or logistic support: Maas

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Conflict of Interest Disclosures: Drs Ostelo, Groeneweg, van Tulder, and Huygen reported receiving grants from The Netherlands Organisation for Health Research and Development during the conduct of the study. Dr Ostelo reported receiving grants from The Netherlands Organisation Scientific Research, Wetenschappelijk College Fysiotherapie/KNGF, Ned Ver Manuele Therapie, European Chiropractors' Union, Amsterdam Movement Sciences, National Health Care Institute, and De Friesland Zorgverzekeraar outside the submitted work. No other disclosures were reported.

Funding/Support: The authors received no financial support for this research.

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