Thermal Radiofrequency Neurotomy for the Treatment of Back Pain: Clinical Effectiveness and Safety – a 2020 Update
**Authors:** Diksha Kumar, Ke Xin Li, Suzanne McCormack


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**Funding:** CADTH receives funding from Canada’s federal, provincial, and territorial governments, with the exception of Quebec.

Questions or requests for information about this report can be directed to requests@cadth.ca
Research Questions

1. What is the clinical effectiveness of thermal radiofrequency neurotomy for the treatment of back pain?
2. What is the clinical evidence regarding the safety of thermal radiofrequency neurotomy for the treatment of back pain?

Key Findings

Seventeen systematic reviews (three with meta-analysis) and eight randomized controlled trials were identified regarding the clinical effectiveness and safety of thermal radiofrequency neurotomy for the treatment of back pain.

Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were radiofrequency therapy and back pain. No search filters were applied to limit retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2012 and June 3, 2020. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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<th>Table 1: Selection Criteria</th>
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<td><strong>Population</strong></td>
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<td><strong>Study Designs</strong></td>
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Results

Seventeen systematic reviews\(^1^{1-7}\) (three with meta-analysis) and eight randomized controlled trials\(^8^{18-25}\) were identified regarding the clinical effectiveness and safety of thermal radiofrequency neurotomy for the treatment of back pain. No relevant health technology assessments were identified.

References of potential interest that did not meet the inclusion criteria are provided in the appendix.

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-Analyses


**Review of Systematic Reviews**


**Randomized Controlled Trials**

18. Fischgrund JS, Rhyne A, Franke J, et al. Intraosseous Basivertebral Nerve Ablation for the Treatment of Chronic Low Back Pain: 2-Year Results From a Prospective


Appendix — Further Information

Previous CADTH Reports


Systematic Reviews and Meta-Analyses – Alternative Population


Randomized Controlled Trials

Pulsed Radiofrequency Ablation


Cooled Radiofrequency Ablation


Alternative Comparator

Unclear Comparator

Mixed Intervention

Non-Randomized Studies


PubMed: PM23818771

PubMed: PM22437295

PubMed: PM22270750

PubMed: PM22006423

Cooled Radiofrequency Ablation

PubMed: PM25339501

PubMed: PM22688606

Pulsed Radiofrequency Ablation

PubMed: PM24904787

Review Articles

PubMed: PM31169356

Additional References

   *See: Statement 6*