

KEY POINTS IN ADVOCATING FOR RF NEUROTOMY COVERAGE

Evidence on RF Neurotomy from 2 Studies using Rigorous Selection Criteria

- Study 1: 60% of patients maintained at least 80% relief for 12 months.¹
- Study 2: Complete relief of pain for at least 6 months in 55% of patients, accompanied by restoration of function, return to work, and no need for other health care, for a median duration of 15 months per treatment.²
- Combined: 55-60% experience at least 80% pain relief for at least 12 months on average.

Serious Flaws in the 2017 Juch et al Mint Trials³

RF Technique

- Serious doubt that RF neurotomy was accomplished
 - Small-gauge electrodes
 - Placement of electrodes not adequately described

Patient Selection

- Many patients in the study did not have facetogenic pain, which RF is designed to treat.
- Selection criteria lacked sufficient rigor for a study of effectiveness
 - Blocks not patient specific – all patients treated at bilateral L3-4, L4-5 and L5-S1
 - Study participants – chronic non-specific pain patients, not facetogenic pain patients

Study Design

- RF indicated in patients who cannot tolerate or fail conservative care, including exercise
- Pragmatic trial should reflect options in usual practice
 - Juch study presents options that no patient will face, exercise only or exercise + RF
- No measurement of baseline pain or function following MBB and prior to RF
- Allowed crossover and cointerventions at 3 months
- Failure to provide useful data beyond 3 months – does not address durability of RF

Data Analysis

- Did not follow guidelines on reporting results of studies on back pain treatments
 - Conclusions based solely on between-group mean differences in outcomes
 - Outcome interpretation should be based on categorical analysis of each treatment's success or failure to achieve statistically significant and clinically meaningful change
- Patients lost to follow-up were omitted from the analysis rather than accounted for as treatment failures
- Application of intention-to-treat analysis when many did not receive assigned treatment
- No as-treated analysis – unclear how patients fared with treatments they actually received
- Raw data not provided

Preserving Access – Risks of Alternatives

- RF neurotomy is safe and effective
- No other back pain intervention provides this size of effect at this level of success
- Should be available to patients prior to proceeding to higher risk treatments such as surgery and long-term opioids

References:

1. Dreyfuss P, Halbrook B, Pauza K, Joshi A, McLarty J, Bogduk N. Efficacy and validity of radiofrequency neurotomy for chronic lumbar zygapophysial joint pain. *Spine* 2000; 25:1270-1277.
2. MacVicar J, Borowczyk JM, MacVicar AM, Loughnan BM, Bogduk N. Lumbar medial branch radiofrequency neurotomy in New Zealand. *Pain Med* 2013; 14:639-645.
3. Juch JS, Maas ET, Ostelo RG, et al. Effect of radiofrequency denervation on pain intensity among patients with chronic low back pain: The mint randomized clinical trials. *JAMA*. 2017;318(1):68-81.