

Effectiveness of an individualized vibration training on symptom reduction of chemotherapy-induced peripheral polyneuropathy

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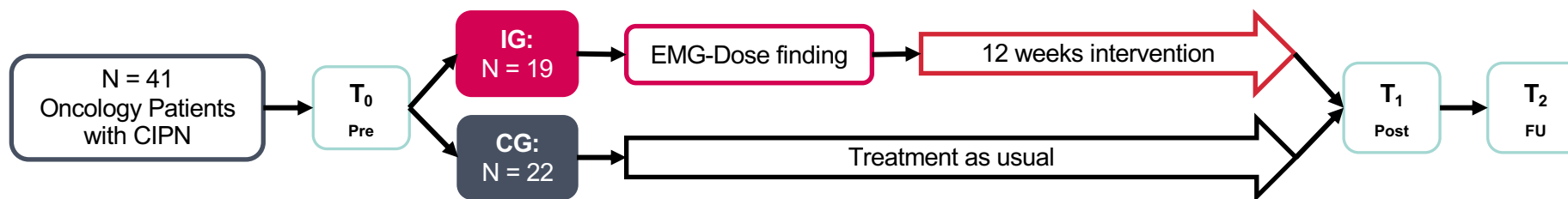
Background

Chemotherapy-induced peripheral polyneuropathy (CIPN)

- Long-term **side effect** of cancer treatment with sensory and motor symptoms¹
- Often **dose-limiting factor** during cancer therapy²
- **Therapy options are lacking**

Methods

- *Design*: Prospective, multicenter, two-armed, RCT
- *Dose finding*: reaching for highest possible neuromuscular responses
- *Intervention*: Individualized vibration training
- *Assessment*: Self reported CIPN-Symptoms & functional measures

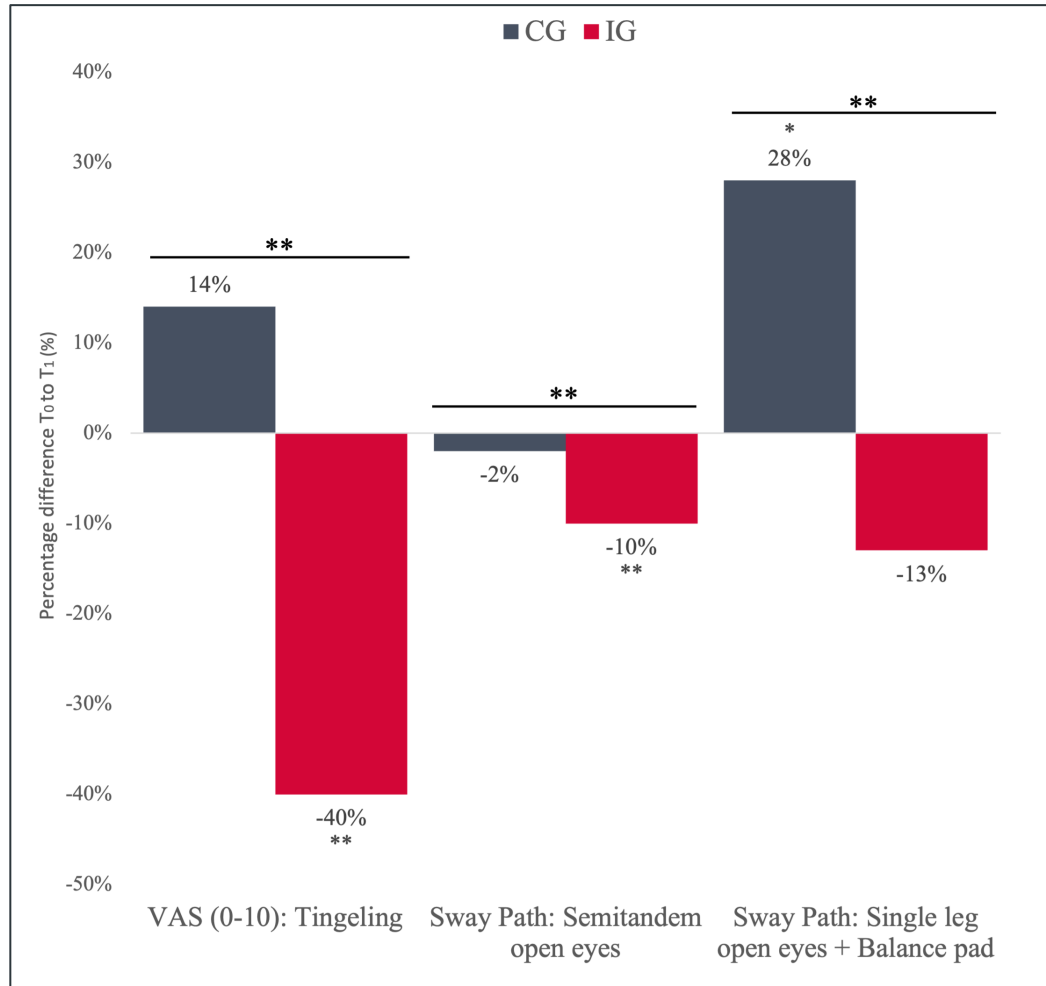


¹Seretny, M., Currie, G. L., Sena, E. S., Ramnarine, S., Grant, R., MacLeod, M. R., Colvin, L. A., & Fallon, M. (2014). Incidence, prevalence, and predictors of chemotherapy-induced peripheral neuropathy: A systematic review and meta-analysis. *Pain*, 155(12), 2461–2470.

²Stubblefield, M. D., Burstein, H. J., Burton, A. W., Custodio, C. M., Deng, G. E., Ho, M., Junck, L., Morris, G. S., Paice, J. A., Tummala, S., & Roenn, J. H. V. (2009). NCCN task force report: Management of neuropathy in cancer. *JNCCN Journal of the National Comprehensive Cancer Network*, 7(SUPPL. 5).

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Results



Conclusion

- Vibration training, individualized to the highest possible neuromuscular response, can be considered as a **potential treatment option** to reduce sensory symptoms of CIPN
- Frequency of **30-35Hz**, amplitude of **4mm**, and vibration set duration of **60 seconds**
- Vibration training is **feasible** and considered to be **well tolerable** for CIPN patients



Relative changes ($\Delta T_1 - T_0$) of all outcomes showing at least a significance level of $p < .10$ in Tukey-corrected post hoc analyses. Percent reductions are associated with symptom reduction, respectively improvement in balance control
* $p < .10$ ** $p < .05$