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Hierarchical optimization of settings for medical devices

An algorithm for selecting settings on medical devices based on population data and incorporating patient preference and/or benefit of therapy delivered at tested settings.

IP Status: Issued US Patent; Patent No.12,343,540

Applications

- Optimization of medical devices
- Personalized neurostimulation

Technology Overview

Patient settings for medical devices used to treat neurological diseases are usually selected based on small clinical trials and doctor experience. Researchers at the University of Minnesota have developed a method for using patient responses to a small set of stimulation parameters to develop a response model based on prior patients to settings beyond those tested. This approach optimizes individual medical device parameters for the patient, decreasing the associated cost and time for tailoring neuromodulation settings.

Phase of Development

TRL: 5-6
Working prototype tested and used with clinical data

Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

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Researchers

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