

# Focused ultrasound for treating Parkinson's disease to be tested

12 October 2012



Dr. Jeff Elias, left, is the principal investigator of a new study to investigate the scalpel-free technology's safety and effectiveness in reducing tremor related to Parkinson's disease. Credit: Robert Frysinger

(Medical Xpress)—After a promising clinical trial of focused ultrasound as a potential treatment for essential tremor, the University of Virginia Health System is launching a new study to investigate the scalpel-free technology's safety and effectiveness in reducing tremor related to Parkinson's disease.

The phase 1 clinical trial has been approved by the U.S. [Food and Drug Administration](#) and is expected to enroll 30 subjects with medication-resistant Parkinson's disease. The subjects will undergo an investigational procedure using focused [sound waves](#) delivered within a magnetic resonance scanner to target a small area deep in the brain. Unlike traditional [brain surgery](#), there is no need to cut into the skull.

"We are very encouraged by our initial experience with MRI-guided focused ultrasound. There is a tremendous amount of enthusiasm from our

patients and the public for treatments without [incisions](#)," Dr. Jeff Elias, the trial's principal investigator, said. "Parkinson's disease is the next logical step on our roadmap of investigation."

Elias previously conducted the first focused ultrasound trial for treatment of [essential tremor](#). All 15 trial participants were discharged the day after their procedures, and tremor improvement has been seen throughout follow-up.

"The technology allowed us to safely perform the procedure in all 15 of the patients, and none of them received any anesthesia," Elias said. "They got a similar degree of tremor control that we see with other surgical procedures like deep brain stimulation."

Elias is preparing the full findings of the essential tremor trial, and he expects to proceed to a larger, multicenter and international trial. Because the trial was the first of its kind, more work needs to be done to determine the long-term effectiveness of the procedure in treating essential tremor. As such, it remains investigational and is not yet available as a treatment outside a clinical trial.

The new Parkinson's trial will test focused ultrasound's safety and efficacy in treating tremor related to Parkinson's disease, an incurable, neurodegenerative condition characterized by tremor and uncontrollable movements. Surgery can, in some cases, alleviate symptoms when medications have become ineffective. The current frontline surgical option is [deep brain stimulation](#), which involves drilling holes in the skull and implanting a pacemaker system in the brain.

U.Va.'s new Parkinson's trial is sponsored jointly by the Focused Ultrasound Foundation, the Heller Foundation, the Commonwealth of Virginia and InSightec, the maker of the ultrasound device. Trial participants must have Parkinson's disease with tremor that is resistant to standard medical therapy.

**More information:** To learn more about focused ultrasound at U.Va., visit [uvahealth.com/focusedultrasound](http://uvahealth.com/focusedultrasound). The site includes a link to a database where those interested in being considered for the Parkinson's trial should submit their information.

Provided by University of Virginia

APA citation: Focused ultrasound for treating Parkinson's disease to be tested (2012, October 12) retrieved 22 November 2022 from <https://medicalxpress.com/news/2012-10-focused-ultrasound-parkinson-disease.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*