

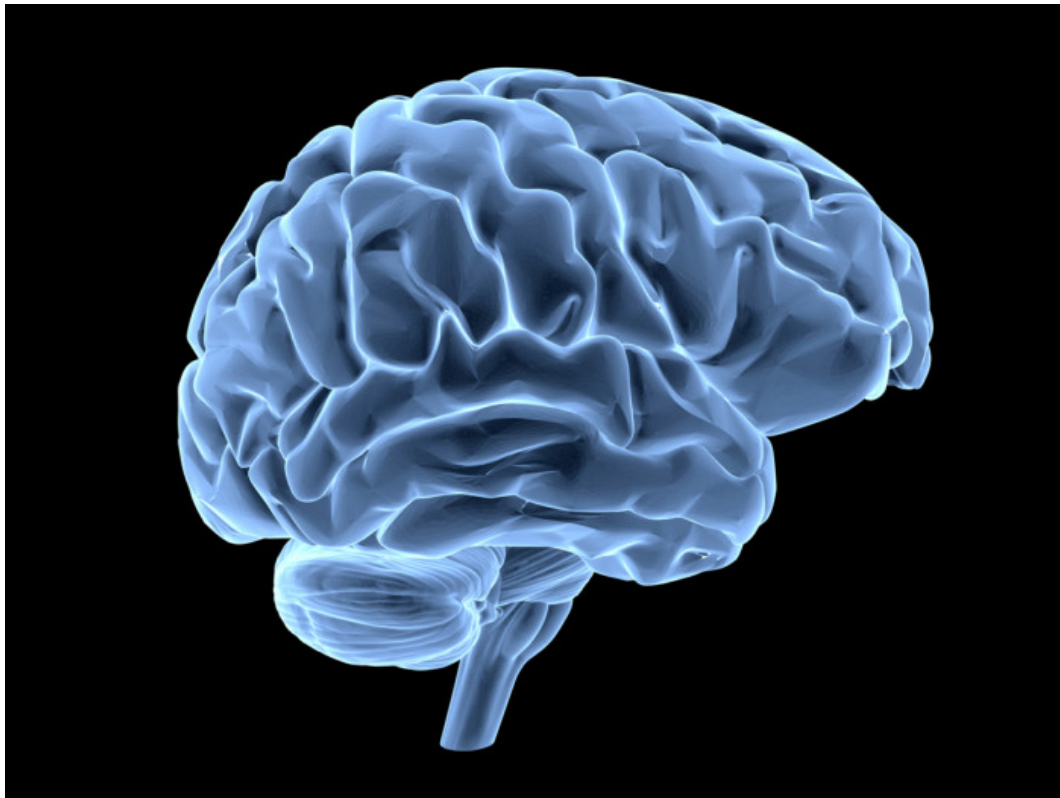


WashU Medicine

Electromagnetic field therapy may improve glioblastoma survival

New treatment option may extend patients' survival time significantly

by Andrea Mongler • April 30, 2015



Newly diagnosed patients with a form of brain cancer known as glioblastoma face a bleak prognosis: survival averages just over a year even with aggressive chemotherapy. But a new treatment option may extend survival time significantly.

Investigators at Washington University School of Medicine recently teamed up with several other institutions to study the use of Tumor Treating Fields (TTFields) therapy in newly diagnosed glioblastoma.

TTFields therapy is delivered by a portable, noninvasive medical device that creates a low-intensity alternating electric field that slows and reverses tumor growth by inhibiting the division of cells.

The results of the study were so positive that the FDA approved early termination of the trial and allowed crossover of patients from the control to the treatment group.

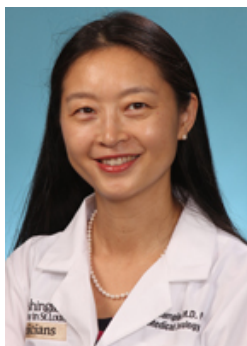
“The study was not designed for crossover, but because the Tumor Treating Fields worked so well, the FDA quickly gave control patients a chance to receive the treatment,” says oncologist Jian Li Campian, MD, PhD, who was part of Washington University’s research team.

Phase III trial for the newly diagnosed

The study was a phase III clinical trial of newly diagnosed glioblastoma patients. Participants in the control group received the chemotherapy drug temozolomide, and remaining patients received TTFields therapy from the NovoTTF-100A delivery system in combination with temozolomide.

Researchers performed an interim analysis on the first 315 patients – approximately half of the targeted study population – and found that those treated with the TTFields experienced a significant increase in survival: 19.6 months compared with 16.6 months for those who received temozolomide alone. In addition, 43 percent of patients in the TTFields group were alive at two years, but just 29 percent in the temozolomide-only group survived for two years.

The research was presented at the Society for Neuro-Oncology’s annual meeting in November 2014.



Oncologist Jian Li
Campian, MD, PhD.

NovoTTF-100A is already approved for use in adults with recurrent glioblastoma but is still limited to investigational use for newly diagnosed glioblastoma. Campian says the manufacturer is applying to the FDA for approval in newly diagnosed patients.

Campian and colleagues will soon be taking part in a multicenter trial that looks at the use of NovoTTF-100A in combination with another anti-cancer drug, bevacizumab, in patients with recurrent glioblastoma. Bevacizumab is often used in glioblastoma patients who were previously treated with other drugs. The aim of the study is to see whether the TTFields therapy improve patients’ response to the medication.

“We are going to continue to explore the best way to use this device in patients with brain tumors,” Campian says.

Read more about the device on the [FDA's website](#).

A version of this story appears in Innovate Oncology, a magazine published by Barnes-Jewish Hospital and Washington University Physicians highlighting the latest clinical and research advancements offered by these two institutions.



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