

Electronic cap treatment improves brain tumour survival

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Credit: Cancer Research UK

Applying low frequency electric fields to the scalp of people with an aggressive type of brain tumour improves survival, according to a clinical trial.

Researchers from the Northwestern University Feinberg School of Medicine in the say their device offers "promising results" in the trial.

The device delivers low-intensity electricity to the brain through 9 insulated electrodes, placed on the patient's shaved scalp using a cap. These doses of electricity, called Tumour Treating Fields (TTFields), interfere with the molecular machinery inside cancer cells that helps them divide.

Published in the Journal of the American Medical Association, the study included 695 [patients](#) with glioblastoma who had surgery to remove their tumour and radiotherapy. Two thirds of patients received the electric cap treatment plus the chemotherapy drug temozolomide (Temodal). The remaining third just had the drug.

Overall survival in patients who had the drug with the electric therapy was 20.9 months on average, compared to 16 months on average with chemotherapy alone.

The average amount of time where the cancer didn't get worse was 6.7 months for patients who had the drug with the electronic cap treatment. This was 4 months for patients who just took the [drug](#).

Cancer Research UK-funded glioblastoma expert, Dr. Colin Watts, said: "These results are promising because glioblastoma is so hard to treat and overall survival is stubbornly low."

Patients who received the electrical treatment wore the device on their head for around 18 hours a day for 5 days over a 28-day period. This was repeated between 6 and 12 times.

Patients were trained to operate and maintain the [portable device](#) themselves at home.

Dr. Watts added that the side effects of this new treatment were also relatively minor compared to [chemotherapy drugs](#) and patients who

respond less well to chemotherapy also seemed to benefit.

"The next step will be to work out which patients would benefit most from this new technique," he added.

But the potential price of the [treatment](#) has been raised as possible issue.

Experts in the field are discussing whether this [device](#) is a cost-effective option for healthcare systems and patients.

More information: Roger Stupp et al. Effect of Tumor-Treating Fields Plus Maintenance Temozolomide vs Maintenance Temozolomide Alone on Survival in Patients With Glioblastoma, *JAMA* (2017). [DOI: 10.1001/jama.2017.18718](#)

Provided by Cancer Research UK

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