

Cannabinoid improves survival rates of mice with pancreatic cancer

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Axial CT image with i.v. contrast. Macrocystic adenocarcinoma of the pancreatic head. Credit: public domain

Mice with pancreatic cancer that were treated with a naturally occurring constituent of medicinal cannabis alongside chemotherapy, survived almost three times longer than those treated with chemotherapy alone, a

new study reports.

The study is published in the journal *Oncogene* and was led by Queen Mary University of London and Curtin University, Australia. It tested the impact of the cannabinoid Cannabidiol (CBD) on the use of the commonly used chemotherapy medication Gemcitabine as a treatment for pancreatic [cancer](#) in mice.

Each year around 9,800 people in the UK are diagnosed with pancreatic cancer. The disease is particularly aggressive and has one of the lowest survival rate of all cancers.

Lead researcher Professor Marco Falasca from Queen Mary University of London said: "This is a remarkable result. We found that mice with pancreatic cancer survived nearly three times longer if a constituent of medicinal cannabis was added to their chemotherapy treatment.

"Cannabidiol is already approved for use in clinics, which means we can quickly go on to test this in human clinical trials. If we can reproduce these effects in humans, cannabidiol could be in use in cancer clinics almost immediately, compared to having to wait for authorities to approve a new drug.

"The life expectancy for pancreatic cancer patients has barely changed in the last 40 years because there are very few, and mostly only palliative care, treatments available. Given the five-year survival rate for people with [pancreatic](#) cancer is less than seven per cent, the discovery of new treatments and therapeutic strategies is urgently needed."

The cannabinoid CBD does not cause psychoactive effects, as opposed to tetrahydrocannabinol (THC) - the cannabinoid known to cause the psychoactive effects in cannabis. As such, CBD is already cleared for use in the clinic, and does not face the same challenges as products

including cannabis oil, which contain controlled substances such as THC.

The researchers add that CBD is also known to improve the side effects of chemotherapy, including nausea, diarrhoea, vomiting, meaning it could also improve the quality of life of patients undergoing [chemotherapy](#).

The research was supported by the UK charity Pancreatic Cancer Research Fund and the Avner Pancreatic Cancer Foundation and also involved researchers from The Beatson Institute for Cancer Research in Scotland.

The study only looked at the effect of this [treatment](#) in mice, and clinical trials in humans are needed to confirm whether or not CBD improves [survival rates](#) of [pancreatic cancer](#) patients.

More information: R. Ferro et al. GPR55 signalling promotes proliferation of pancreatic cancer cells and tumour growth in mice, and its inhibition increases effects of gemcitabine, *Oncogene* (2018). [DOI: 10.1038/s41388-018-0390-1](#)

Provided by Queen Mary, University of London

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