

Early brain cancer detection breakthrough

August 10 2021



Credit: University of Strathclyde, Glasgow

Early detection of brain cancer has moved one step closer, through a breakthrough by cancer diagnostics firm and University of Strathclyde spinout company Dxcover.

The company has shown that its innovative testing technology, the Dxcover Liquid Biopsy, is effective even in the earlier days of [cancer](#) growth, at a smaller volume and lower stage.

According to Cancer Research UK, 12,000 people in Britain are diagnosed with [brain](#) tumors every year and survival rates are as low as 12% five years after diagnosis.

Earlier detection, when a tumor is smaller, reduces the harm from surgery and other treatments, so people can live better, for longer. By detecting extremely small tumors, this research provides the evidence that Dxcover's diagnostic [test](#) can have a significant impact in shortening the time from symptom onset to diagnosis for patients, supporting primary care doctors in their decision making.

The study has been published in the journal *Cancers*.

Dr. Matt Baker, [chief technical officer](#) and co-founder of Dxcover Limited, said: "This breakthrough is a watershed moment in the development of early cancer detection. The study demonstrates the effectiveness of our Dxcover Brain Cancer Liquid Biopsy at detecting even the smallest brain tumors, which is great news for the care of future brain cancer patients, increasing treatment options and potentially extending life expectancy.

"Clinical tests like this are a crucial part of Dxcover's journey to develop and commercialize a widely accepted Multi-Cancer Early Detection platform to help save lives."

The journal confirmed the Dxcover brain cancer test as being effective in identifying small and low-grade gliomas. The study involved 177 patients with varying sizes of brain tumors providing [blood samples](#) for analysis by Dxcover.

The samples underwent the spectroscopic analysis under infra-red light and processed using machine learning software. The test and analysis were found to be effective in identifying brain tumors in patients with gliomas as small as 0.2 cm^3 .

Dxcover Limited has raised £5.1 million in funding to develop its spectroscopy and artificial intelligence technology as a Multi Cancer

Early Detection (MCED) Platform, to help diagnose brain and other cancers quickly and accurately from a simple blood test.

Dxcover's highly effective early diagnostic tests could revolutionize cancer detection, potentially saving the lives of patients who can be treated more effectively in the early stages of cancer.

The latest breakthrough coincides with the company announcing that it has wholly acquired all of the [intellectual property](#) (IP) rights for its Multi-Cancer Early Detection Platform in a deal with Strathclyde. The IP deal means that Dxcover now owns all of the patents for its MCED technology platform and has no requirement to pay royalties.

Dr. Mark Hegarty, CEO and Co-founder of Dxcover, said: "We have been developing an extensive patent portfolio to protect the commercialisation of our technology. The core patents have been granted in Europe, the U.S. and China and they enable us to develop tests for all types of cancer.

More information: Ashton G. Theakstone et al, Rapid Spectroscopic Liquid Biopsy for the Universal Detection of Brain Tumours, *Cancers* (2021). [DOI: 10.3390/cancers13153851](https://doi.org/10.3390/cancers13153851)

Provided by University of Strathclyde, Glasgow

Citation: Early brain cancer detection breakthrough (2021, August 10) retrieved 12 February 2023 from <https://medicalxpress.com/news/2021-08-early-brain-cancer-breakthrough.html>

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