

New trial to investigate whether breath test can detect cancer earlier

11 July 2017

Scientists in Cambridge are to run a PAN cancer clinical trial to see if breath samples can be used to detect cancer in its early stages, the Cancer Research UK (CRUK) Cambridge Centre and Owlstone Medical announced today (10 July, 2017).

The large scale clinical trial will be carried out by researchers at the CRUK Cambridge Centre, the University of Cambridge and Cambridge University Hospitals NHS Foundation Trust in collaboration with diagnostics company, Owlstone Medical.

As part of the trial, patients with a suspected cancer diagnosis who are referred to Addenbrooke's Hospital for assessment through the standard NHS cancer care pathway, will be asked to give a breath sample in addition to routine tests.

The breath samples will be collected in clinic using Owlstone Medical's CE-marked ReCIVA Breath Sampler, then sent to the world's first Breath Biopsy clinical laboratory for analysis at



Cambridge. The trial will compare the breath

samples of patients with and without cancer to assess whether breath contains reliable biomarkers that may be used in future to detect cancer earlier.

The PAN Cancer trial aims to develop breath biopsy tests for the early detection of bladder, breast, head and neck, kidney, oesophageal, pancreatic and prostate cancers and brain

tumours, with the ultimate aim of detecting and diagnosing cancer much earlier, when more treatment options are available and the chances of surviving are much higher.

Professor Rebecca Fitzgerald, co-lead of the CRUK Cambridge Centre Early Detection Programme, Professor of Cancer Prevention at the MRC Cancer Unit, and an Honorary Consultant in Gastroenterology and General Medicine at Addenbrooke's Hospital, Cambridge, said: "New tools that can help to detect and diagnose cancer earlier are urgently needed and we are very pleased to collaborate with Owlstone Medical to evaluate Breath Biopsy for use in early detection. The PAN Cancer trial forms part of our Early Detection Programme, a flagship initiative of the Cancer Research UK Cambridge Centre that aims to devise better means of detecting cancer and diagnosing it in the early stages, which can lead to improved outcomes for cancer patients."

One in two people in the UK will be diagnosed with cancer at some stage in their lives, but the good news is that more people are surviving the disease today than ever before. Cancer survival has doubled since the early 1970s and Cancer Research UK's work has been at the heart of that progress. But for some types of cancer, like pancreatic cancer, which is often diagnosed at an advanced stage, there has been little improvement in survival.

Professor Duncan Jodrell, Director of the Cambridge Cancer Trials Centre (CTCC) and Professor of Cancer Therapeutics at the University of Cambridge, commented: "In pancreatic cancer, for example, only 1% of patients will survive for 10 years - a figure which has changed very little in the last 40 years. New and improved methods for early detection will be crucial to enable us to diagnose and treat pancreatic cancer earlier and help more patients survive."

Professor Richard Gilbertson, Li Ka Shing Chair of Oncology, Director of the Cancer Research UK Cambridge Centre and Head of the Department of Oncology at the University of Cambridge, said: "In the east of England alone, around 33,600 people are diagnosed with cancer every year. Some cancers are diagnosed very late when there are few treatment options available. Non-invasive detection of cancer in breath samples could make a real difference to survival. As a Cancer Research UK Major Centre, Cambridge is working hard to realise CRUK's vision of diagnosing more cancers earlier so that we can work closer to the day when all patients are cured of cancer."

Owlstone Medical's Breath Biopsy platform is already being assessed in trials for early detection of lung and colon cancer. This latest trial will widen the scope of the research.

Billy Boyle, co-founder and CEO at Owlstone Medical, commented: "Positive results from the PAN Cancer trial could be game-changing in the fight against cancer: Breath Biopsy tests for cancer detection and diagnosis have the potential to greatly improve survival across a range of cancers. Our Breath Biopsy platform is already being assessed in large scale clinical trials for the non-invasive, early detection of lung and colon cancer, and it will be exciting to see

how its use can be extended to other cancer types. Success in this study would make a real difference to the lives of millions of people, and supports our vision of saving 100,000 lives and \$1.5 billion in healthcare costs.”

“We are very proud to have the opportunity to work with these world-leading research teams on this ground breaking trial, which could have a great impact on improving cancer survival.”