

Personalized breast cancer program launches in Cambridge

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A new personalised breast cancer programme which will map patients' DNA and RNA to tailor treatment for individuals launches at the Cancer Research UK Cambridge Institute.

The [project](#), which was launched with £1.1 million funding from Addenbrooke's Charitable Trust (ACT), will analyse the genome and all expressed genes of tumour cells from 250 [breast cancer patients](#) to improve diagnosis and tailor treatment.

Finding out what genes have become faulty in [breast cancer cells](#) will help researchers understand more about how cancer develops and spreads. It will also help doctors choose the best treatment for their patient.

Breast [cancer patients](#) are treated based on the broad types of cancer, for example, those that are likely to respond to hormone therapies, but it can be difficult to predict how individual patients will respond to treatment.

The researchers hope to find out how this personalised diagnosis and treatment programme could be implemented in the National Health Service's (NHS) breast cancer unit in Cambridge and hope that one day this will extend around the UK.

Professor Richard Gilbertson, director of the CRUK Major Cancer Centre at Cambridge University, said: "The Personalised Breast Cancer Project is truly ground-breaking. By sequencing the entire tumour

genome of women with breast cancer in our clinic and integrating this extensive data with other biological and clinical observations, we will assign patients to optimal therapy, changing the way we treat breast cancer forever."

Professor Carlos Caldas, project lead at the Cancer Research UK Cambridge Institute, said: "We already know that there are around 10 different types of breast cancer, as we reported in 2012, and these respond differently to the available treatments. We're looking at ways to predict this response ensuring individual patients get the best treatment for them. We hope that this project will accelerate progress in developing personalised treatment for breast cancer patients."

Dr Jenny Longmore, Director of Research at Addenbrooke's Charitable Trust (ACT), said: "ACT is pleased to have been able to support the initiation of this clinical research project with more than £1.1 million of funding from many generous supporters. The project will involve patients from the Cambridge Breast Unit at Addenbrooke's Hospital, and we expect that the outcomes of the research will be valuable to patients both nationally and internationally in years to come."

Sir Harpal Kumar, Cancer Research UK's chief executive officer, said: "Today eight in 10 women with [breast cancer](#) survive their disease for at least 10 years. The ability to tailor treatment to individual patients will help ensure this number continues to rise and should help reduce side effects. This project will bring us closer to making personalised medicine a reality in the NHS and beyond."

Provided by Cancer Research UK

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