

Breast cancer

Breast cancer is the second leading cause of death in women in the UK. Changes in genes such as BRCA1 mean that some women are at a very high risk of developing the disease. We are developing new approaches addressing which changes in the gene are most likely to put health at risk and which are not. Not only is this helpful in managing and improving treatment of the disease, it is also changing our understanding of how breast cancer itself develops.

Around 48,000 new cases of breast cancer are diagnosed in the UK every year, and it costs around 11,000 lives. The 20 year survival rate is still just 64% for women with breast cancer. Improvements have been made, but it is essential we understand the condition in even more depth than ever if we are to continue to make progress and save lives.

Why Birmingham?

With a deep understanding of cancer development, University of Birmingham researchers, based at a world-class super centre for Cancer Sciences, are in a unique position to make a difference to those living with cancer in the UK and worldwide. The research being undertaken into breast cancer at the University of Birmingham is unique, and the scientists involved are in the best position to understand the genetic make-up of breast cancer.



Research at Birmingham will form the bedrock for the development of new breast cancer drugs, and ensure that each individual woman with the condition is treated in the best possible way for her.

Dr Jo Morris (left), Senior Lecturer in the School of Cancer Sciences, is working on a new way to understand and diagnose breast cancer.

"Patients with changes in a gene called BRCA1 are at very high risk of developing breast cancer. By understanding how this mutation causes cancer, we will revolutionise treatment by speeding up diagnosis and therefore improving survival rates. It's amazing to get up in the morning and know you're doing something that matters," says Dr Morris.

This research will provide a unique understanding of the genetic make-up of breast cancer. In a controlled laboratory environment we are developing cellular models of the genetics of breast cancer development. This means that the way cells change and become cancerous can be studied. These studies begin in 'normal' cells so that researchers hope to identify 'markers' of the way cancers develop. These experiments will form the basis of testing tumours in a more accurate way, giving doctors and patients an indication of whether particular tumours will or won't respond to certain treatments. This helps patients' chances of beating the disease, or prevents needless and traumatic treatment if it will not.

Want to know more?

Read our [Ask the Expert](http://alumni/news/items/2013/02/Ask-the-Expert-live-chat-with-Dr-Jo-Morris.aspx) ([//alumni/news/items/2013/02/Ask-the-Expert-live-chat-with-Dr-Jo-Morris.aspx](http://alumni/news/items/2013/02/Ask-the-Expert-live-chat-with-Dr-Jo-Morris.aspx)) live [Twitter](https://twitter.com/birminghamalum) (<https://twitter.com/birminghamalum>) chat with Dr Jo Morris, Senior Lecturer in the School of Cancer Sciences.

Breast cancer and BRCA1: [Read Emma's story](http://alumni/giving/circlesofinfluence/Emmas-story.aspx) ([//alumni/giving/circlesofinfluence/Emmas-story.aspx](http://alumni/giving/circlesofinfluence/Emmas-story.aspx))

Inspired?

With your support, our researchers are in a unique position to make a difference not only to those living with cancer in the UK, but also in developing research in the rest of the world.

£5 a month could go towards providing the antibiotics required to protect the cells needed for breast cancer research.

£12 a month could go towards funding specialised microscope that will allow researchers to see much more detail inside cells than traditional microscopes do.

£20 a month could go towards funding a PhD student in cancer research, providing three years of research support and expertise to our teams.

Donate [online](https://bhamalumni.org/NetCommunity/SSLPage.aspx?pid=210&frcId=1) (<https://bhamalumni.org/NetCommunity/SSLPage.aspx?pid=210&frcId=1>) or text CIRC05 plus your chosen amount to 70070 to give today. Or for more information contact [Laura Fairbanks](mailto:giving@contacts.bham.ac.uk) (giving@contacts.bham.ac.uk) [+44 (0)121 414 8894].