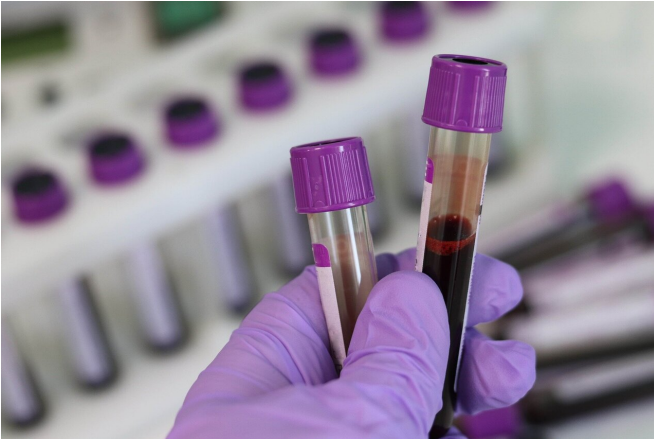


# Researchers develop early detection test for ovarian cancer

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Researchers from Queen's University Belfast have developed a test that may be able to detect ovarian cancer up to two years earlier than current approaches.

The researchers discovered that the presence of four proteins together, known as a biomarker panel, indicates the likelihood of Epithelial Ovarian Cancer (EOC), a type of ovarian [cancer](#). Using these biomarkers the researchers then developed a screening test that initial studies suggest may be able to detect ovarian cancer up to two years before current detection tests.

The research was carried out in partnership with the University of New South Wales Australia, University of Milan, University of Manchester and University College London.

The study, published in *British Journal of Cancer*, involved the analysis of blood samples from 80 individuals across a seven-year period.

Dr. Bobby Graham from the School of Biological Sciences at Queen's University Belfast and lead

author of the study explains: "Firstly, we discovered that the presence of the biomarker panel will enable us to detect EOC. We then developed a screening test to detect this biomarker panel, making this a relatively simple diagnostic test.

"The algorithm designed will screen the [blood sample](#) and flag any abnormal levels of the proteins associated with the cancer. The screening test identifies ovarian cancer up to two years before the current tests allow."

Most ovarian cancers are epithelial [ovarian cancers](#), which is a cancer that forms in the tissue covering the ovary.

In females in the UK, ovarian cancer is the sixth most common cancer. In 2016, 4227 deaths were reported as a result of EOC.

If diagnosed at stage one of EOC, there is a 90 percent chance of five-year survival compared to 22 percent if diagnosed at a stage three or four.

Dr. Graham added: "The results of this study are encouraging, however, we now want to focus on testing it in a wider sample set so that we can use the data to advocate for an ovarian cancer screening programme."

Dr. Rachel Shaw, Research Information Manager at Cancer Research UK, said: "Around half of ovarian cancer cases are picked up at a late stage, when treatment is less likely to be successful. So developing simple tests like these that could help detect the disease sooner is essential.

"At Cancer Research UK, we're working hard to find new ways to detect cancer early and improve the tests already available. It's really exciting to see these encouraging results for this type of ovarian cancer."

**More information:** Matthew R. Russell et al.

Diagnosis of epithelial ovarian cancer using a combined protein biomarker panel, *British Journal of Cancer* (2019). DOI: [10.1038/s41416-019-0544-0](https://doi.org/10.1038/s41416-019-0544-0)

Provided by Queen's University Belfast

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