

New test for ovarian cancer patients

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Scientists have developed a new test to select which patients with ovarian cancer will benefit from new drugs called PARP inhibitors, according to research presented at the National Cancer Research Institute Cancer Conference in Liverpool.

PARP inhibitors are the first targeted treatment to be developed for women with inherited forms of breast and ovarian cancer carrying faults in a BRCA gene. Early results from clinical trials are showing promise for patients with the rare inherited forms of these cancers.

But this new test shows that even more patients - 60 per cent of all patients with ovarian cancer - may benefit from PARP inhibitors.

Inherited ovarian cancer accounts for up to 15 per cent of all cases of the disease. Ovarian cancer is the fifth most common cancer in females in the UK. There are around 6,850 new cases of ovarian cancer diagnosed

each year in the UK - around 130 women every week.

Dr. Asima Mukhopadhyay, presenting the results, said: “Our results show that this new test is almost 100 per cent effective in identifying which ovarian cancer patients could benefit from these promising new drugs.

“We have only been able to carry out this work because of the great team we have here which includes both doctors and scientists.”

The team based at Queen Elizabeth Hospital, Gateshead and the Newcastle Cancer Centre at the Northern Institute for Cancer Research, Newcastle University collaborated with Pfizer Inc to develop the new assay to test tumour samples taken from [ovarian cancer](#) patients when they had surgery.

The test, called the RAD51 assay, scans the cancer cells and identifies which tumour samples contain defective DNA repair that can be targeted by the PARP inhibitor. The PARP inhibitor studied, PF-01367338 - formerly known as AG-14699 - was found to selectively block the spread of tumour cells with low RAD51 expression.

The test has been used to examine tumour samples in the laboratory and is not yet suitable for routine clinical practice but the team hope to refine it for use in patients.

Dr. Mukhopadhyay added: “Now we hope to hone the test to be used directly with patients and then carry out [clinical trials](#). If the trials are successful we hope it will help doctors treat patients in a personalised and targeted way based on their individual tumour.”

It is also now hoped that PARP inhibitors will be useful for a broad range of cancers and we hope this test can be extended to other cancer

types.

Dr. Lesley Walker, Cancer Research UK's director of cancer information, said: "It's exciting to see the development of promising new 'smart' drugs such as PARP inhibitors. But equally important is the need to identify exactly which sub groups of patients will benefit from these new treatments.

"Tests like this will become invaluable in helping doctors get the most effective treatments quickly to patients, sparing them from unnecessary treatments and side effects."

Provided by Newcastle University

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