Ovarian cancer study offers vital clues for new therapies

April 21 2010

Scientists have taken a major step forward in the understanding of ovarian cancer, which could improve treatment for patients with the condition.

Researchers have found that patients with hereditary ovarian cancer - whose tumours are caused by faulty genes - are more likely to experience secondary tumours in their liver and spleen. This is despite the fact that their overall prognosis is better than other patients.

In non-hereditary cancer, ovarian tumours tend to remain within the lining of the abdomen and pelvis.

A University of Edinburgh study suggests that ovarian cancer patients whose tumours spread to the solid organs such as the liver and lungs should be tested for the faulty genes - BRCA1 and BRCA2 - to ensure they are given the most appropriate treatment.

Researchers say this would improve the detection of these faulty genes as current criteria for genetic testing may miss as many as two-thirds of ovarian cancer patients carrying faulty BRCA genes.

Patients with hereditary tumours, which account for 10 per cent of ovarian cancers, may also be suitable for trials of a new drug called olaparib, which has fewer side-effects than normal cancer treatments.

Improving the identification of BRCA mutations would help relatives of

ovarian cancer patients, who may themselves be at increased risk of developing hereditary cancer.

The research is published in the Journal of Clinical Oncology.

Dr Charlie Gourley, who led the research at the University of Edinburgh, said: "We are beginning to understand the importance of tailoring cancer treatments according to the specifics of each patient's tumour. These findings demonstrate that tumours which arise because of defects in the BRCA1 or BRCA2 genes behave differently to other ovarian cancers. This information should also help us to identify the patients carrying these genetic mutations, give them the most effective treatment for their cancer and offer their relatives genetic counselling."

Provided by University of Edinburgh