Faulty gene connected to ovarian cancer risk

9 August 2011, by Deborah Braconnier

In a new study published in *Nature Genetics* researchers say that women who possess a fault in a gene named RAD51D have a greater risk of developing ovarian cancer than women who do not have this fault and tests are expected to be available within the next few years for those at highest risk, according to Cancer Research UK.

The recent study conducted by researchers from the Institute of Cancer Research in Britain compared the DNA of women from over 900 families with ovarian and breast cancer. They compared their DNA with DNA from the control group of more than 10000 individuals in the general population.

In the women with a family history of cancer, the researchers found eight faults in the RAD51D gene compared to only one in the control group. Nazneen Rahman, who led the study, said that the results show that women with a faulty RAD51D gene have a one out of 11 chance of developing ovarian cancer compared to one out of 70 in the general population.

It is estimated that 230000 women are receive a diagnosis of ovarian cancer each year and for many, the cancer is not found until it is in the advanced stages. Up to 70 percent of women diagnosed at later stages die within five years of diagnosis. For women who test at a greater risk of developing ovarian cancer with this new test, the option to remove the ovaries would be available.

Researchers hope that this new finding will lead to the creation of drugs designed to specifically target this gene. Preliminary tests show that the gene is sensitive to PARP inhibitors, a new class of drugs that were designed to target faults in two known genes linked to breast and ovarian cancer, BRCA1 and BRCA2. Currently pharmaceutical companies Abbott, AstraZeneca, Merck, Pfizer and Sanofi-Aventis are developing these PARP inhibitors and the hope is that one will be able to be developed for the RAD51D gene.