New test may improve cervical cancer detection

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Routine smear tests have considerably reduced the number of cases of cervical cancer, but despite intensive screening 250 women in Sweden still die from the disease every year. Researchers at Sahlgrenska Academy, University of Gothenburg, Sweden, have developed new methods of minimising the number of missed cases and making diagnosis more reliable.

Since the introduction of organised screening in Sweden in the 1960s, the number of women being diagnosed with and succumbing to cervical cancer has fallen dramatically. Screening, where a sample of cells is collected from the cervix and examined under an optical microscope, detects early cell changes so that they can be treated before they cause cancer.

However, despite intensive screening 250 women still die from cervical cancer each year in Sweden, and a further 500 develop the disease.

The sensitivity of the current test is low, which means that cell samples must be taken at least every three years. A large number of tests must also be repeated because of unreliable results – something which causes anxiety among patients and additional costs for the health service.

Researchers at Sahlgrenska Academy, University of Gothenburg have now developed a complementary test capable of minimising the number of missed cancer cases.

"Around 70 per cent of all cervical cancer cases are caused by two specific virus types, known as HPV16 and HPV18. We have developed a method that identifies proteins of these oncogenic viruses in cells, enabling a more objective interpretation of the test results," explains Maria Lidqvist, a doctoral student, who presents the method in her thesis.

"This method can hopefully produce a more reliable diagnosis in uncertain cases and reduce the number of missed cancer cases, as well as the number of women who have to be re-called because of cell samples that are difficult to interpret."

The research behind this method has been financed by the Swedish Research Council and conducted at Sahlgrenska Academy, University of Gothenburg, in collaboration with Fujirebio Diagnostics AB in Gothenburg.

Provided by University of Gothenburg