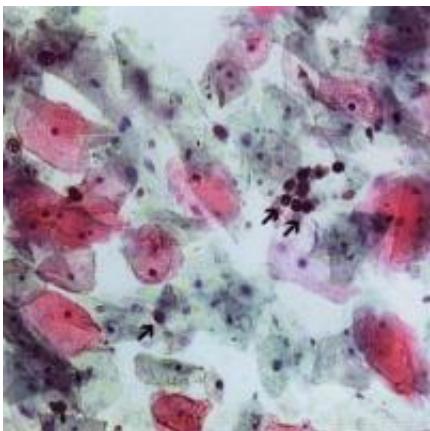


HPV testing followed by smear could improve cervical screening

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(Medical Xpress) -- Testing for the human papillomavirus (HPV) – a virus most women will encounter at some point in their lives – followed by a smear test if they are HPV positive, provides the most effective approach for cervical screening, new research shows today (Wednesday).

The study, published in the [British Journal of Cancer](#), gave around 26,000 women both smear and HPV tests to determine how best to use HPV testing for cervical screening.

Up to 8 out of 10 people in the UK will be infected with the HPV virus at some point in their lives.

Previous studies have shown that HPV testing could be more effective at picking up women with severe cervical cell changes, but there have been some outstanding questions about how an HPV based programme should be implemented. For example, it has been unclear how best to manage women with positive results from an HPV test.

Having carried out these tests, researchers looked at how likely women with different combinations of test results were to have severe cervical cell changes – known as CIN3.

They concluded that using HPV testing as the first line screening test, as well as smear testing for women who received a positive HPV result, could improve the performance of an HPV test for cervical screening.

Using this combination approach would mean that only women with the highest risks of having CIN3 were referred for further tests - reducing unnecessary examinations and picking up more serious cervical cell changes.

Dr. Chris Meijer, study author based at the VU University Medical Centre in Amsterdam, said: “From a health-economic perspective cervical screening with a primary, stand-alone HPV test seems to be preferable based on this study.

“But a smear test is still a very useful way to estimate a woman’s risk of severe cervical changes and can help maximise the benefits of HPV testing in a cervical screening programme.”

Under the new screening process proposed by the researchers, women with a negative HPV test had an extremely low risk of CIN3, regardless of their smear test result, and so could safely return to routine screening every five years.

Those who had a positive HPV test, and whose smear test results showed abnormal changes in the cervix, had a 42 per cent chance of having CIN3 and would be sent for a colposcopy to examine the cervix more closely.

But if smear test results in HPV positive women were normal, the researchers calculated that the woman had a five per cent risk of CIN3. This is too high a risk to safely return to normal screening, but not high enough to warrant an immediate colposcopy, and so the researchers recommended a follow-up smear in a year to monitor the cell changes.

If the result of this second test was also normal, the woman had a 1.6 per cent risk of CIN3 – which is low enough to return to routine screening.

If the second smear result was abnormal, the researchers said there was a 25 per cent risk of CIN3 and the woman would be referred for colposcopy.

Since 2008 in the UK, girls aged 12-13 have been vaccinated against two types of HPV which account for over 70 per cent of cervical cancers in the UK.

HPV testing can still be useful - even among women who have been vaccinated - to catch cervical cell changes caused by other HPV types. It can also protect women who haven't been fully vaccinated.

More research will be needed to confirm the best strategy for cervical screening when most women have been vaccinated.

Sara Hiom, director of information at Cancer Research UK, said: "This study provides a very useful insight into how HPV testing could work if it were used as a major part of cervical screening."

“The findings help answer some of the questions that would need to be considered should the UK refine its highly effective cervical screening program.

“The process outlined in this study would need to be fully tested to see if it is as effective as the study results suggest, and to establish some of the practicalities of using this combination of tests in the UK screening setting.

“The UK’s cervical screening program already saves about 5,000 lives every year, but as with most tests, it is not perfect. So we welcome any new evidence which can help make [cervical screening](#) even more effective.”

More information: Rijkaart, D., et al (2012). HPV DNA testing in population-based cervical screening (VUSA-Screen study): results and implications *British Journal of Cancer* [DOI: 10.1038/bjc.2011.581](https://doi.org/10.1038/bjc.2011.581)

Provided by Cancer Research UK

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