

Innovative diagnostic test could revolutionise cervical cancer screening

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Credit: St. George's University of London

Coinciding with Cervical Cancer Prevention Week, researchers at St George's are working on a field study to fine-tune an exciting new method of human papilloma virus testing that could revolutionise care

for women in low and middle income countries.

The research team have partnered with [molecular diagnostics](#) firm QuantuMDx for the study, using the company's Q-POC platform and its human papilloma virus (HPV) assay. The Q-POC compresses a molecular diagnostics laboratory into a simple-to-use, portable, affordable and battery-operated device that can be used anywhere, from basic rural settings to clinics and hospitals.

The test can identify the presence of high-risk types of HPV, a sexually-transmitted virus which is the main cause of cervical cancer. HPV testing is increasingly being used in cervical screening programmes and offers many benefits over traditional Pap smear testing; particularly in [low-resource settings](#) where access to skilled technicians and expensive tests and equipment is limited. Most deaths from cervical cancer occur in low- and [middle-income countries](#) where routine screening is not widely accessible to women. It is thought that around 300,000 deaths could be avoided by 'screen and treat' programmes wherein women are tested and immediately treated if HPV is detected.

Samples from patients at St George's University Hospital NHS Foundation Trust will be tested in the study. The sample is added to diluants and placed in the machine to run the test, with a highly accurate diagnosis resulting in under an hour.

Professor Sanjeev Krishna, Professor of Medicine and Molecular Parasitology at St George's, University of London, said: "Advances in biotechnology are especially exciting when they aim to benefit the health and wellbeing of women who are in the blind spot of society. This technology, developed by QuantuMDx, can impact on the lives and health of millions of women worldwide."

St George's recently signed a Memorandum of Understanding with the

University of Malaya, and there are plans to expand the study to Malaysia where a collaborative programme – Project R.O.S.E – is being undertaken with experts in the field. The work is being led by the University of Malaya and the Malaysian government. The programme is informing the implementation and scale-up of a national cervical cancer screening programme in Malaysia, to complement the country's HPV vaccination programme.

The device could also have implications for the UK, where cervical screening rates are at their lowest for two decades. Standard smear tests in the UK take from 2-6 weeks to process in a lab and if further investigation is required this takes additional GP visits. The difficulties with smear tests mean that from March this year, the UK will change its [cervical cancer](#) prevention strategy to detection of HPV infections.

Provided by St. George's University of London

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