Rapid Tests for Cervical Cancer

Health need

Cervical cancer is a preventable disease that strikes an estimated 470,000 women each year and kills more than 270,000 of them. While the industrialized world has made good progress in preventing the disease, about 85 percent of cervical cancer deaths occur in developing countries where it is a leading cause of cancer mortality among women. The lack of effective cervical cancer screening and treatment programs in poorer countries, including lack of accurate, easy-to-use, and affordable screening tests that provide rapid results, is the main cause of inequity.

Technology solution

In 2003, PATH began assessing the scientific and economic feasibility of providing new screening tests for the types of human papillomavirus (HPV) that cause most cervical cancers. PATH entered into collaborations with private-sector partners—QIAGEN Inc. (formerly Digene Corporation) and Arbor Vita Corporation—to develop two different rapid tests that would be safe, accurate, affordable, simple, and acceptable to women in low-resource settings. If development of such tests is successful, women would then have highly sensitive alternatives to Pap smear testing and would be able to get test results more quickly. If rapid-results testing revealed that a woman is infected with a high-risk type of HPV, she could receive medical management on the same day, which would greatly reduce her risk of developing cervical cancer.

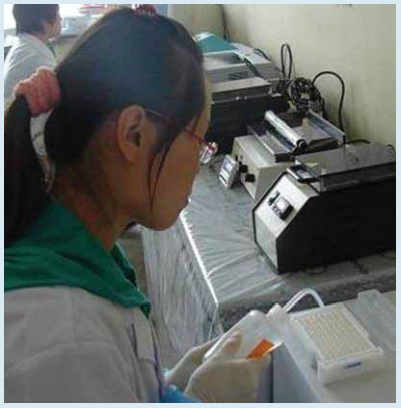
By 2008, PATH and QIAGEN had jointly developed an HPV DNA molecular test, called careHPV™. This test processes dozens of samples in approximately 2.5 hours. The test was evaluated in Shanxi, China, where 2,500 rural women were screened using vaginal and cervical samples, and it yielded good results.

Current status and results

PATH is currently implementing demonstration projects with careHPV™ within public-sector facilities in India, Nicaragua, and Uganda. The results from these projects will be used to inform other countries about the feasibility, effectiveness, and acceptability of careHPV™.

Field testing of a prototype of the Avantage HPV E6 test will begin in China in 2010 to determine its predictive value.

In addition, in order to facilitate establishment of health services that are ready to incorporate the new tests, PATH is closely working with Jhpiego to establish regional centers for training service providers in use of the tests and medical management of test-positive women (the triage and treatments necessary for follow-up). PATH and Jhpiego also are closely collaborating with regional and global health organizations to mobilize support from international and developing-country-based champions of alternative screening and treatment technologies.



CICAM

Lab technician working with the careHPV™ test, Shanxi, China.

Safe, simple, accurate, and affordable biochemical screening tests for cervical cancer may be the breakthrough needed to reduce suffering due to cervical cancer in low-resource settings.

Availability

For more information regarding this project contact start@path.org.

Donor support

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