

Self-collection and HPV DNA testing could be an effective cervical cancer screening

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Human papillomavirus (HPV) testing of self-collected specimens may be a more effective way to screen for cervical cancer in low-resource settings compared to visual inspection with acetic acid (VIA) and liquid-based cytology (LBC), according to a study published January 23 in the *Journal of the National Cancer Institute*.

Cervical cancer is the third most common cancer found in women with approximately 530,000 new cases each year resulting in an estimated 275,000 deaths. In developed countries, [cervical cancer](#) incidences have declined, mostly due to cervical cytology screening campaigns, which requires significant medical resources and laboratory infrastructure. Cervical cancer is on the rise in the developing world, with one-seventh of the world's cervical cancer cases in China, where there is no nationwide screening program for the disease yet. There, researchers have proposed that HPV testing of self-collected Pap specimens might serve as an alternative or complementary method of primary cervical cancer [screening method](#).

In order to determine the effectiveness of HPV testing of self-collected Pap specimens (termed "Self-HPV testing" in the report), Professor You-Lin Qiao, M.D., Ph.D., of the Cancer Institute/Hospital at the Chinese Academy of Medical Sciences/Peking Union Medical College and colleagues, assembled individual [patient data](#) from five population-based cervical [cancer-screening](#) studies in China from 1999-2007, in which participants received HPV testing of self-collected Pap specimens, HPV testing of physician-collected Pap specimens, LBC, and VIA. The

researchers then analyzed the pooled data to detect biopsy-confirmed cervical intraepithelial neoplasia grade 2 or more severe (CIN2+) or CIN3+. Of the 13,140 rural [Chinese women](#) screened for cervical cancer, 507 were diagnosed with CIN2+, 273 with CIN3+, and 37 with cervical cancer.

The researchers found that HPV testing of self-collected Pap specimens was more sensitive and less specific than VIA and LBC but less sensitive and similarly specific compared to physician-collected Pap specimens. They conclude that self-collection with HPV testing could help expand China's current screening outreach. "Although it is not specific enough to be a stand-alone test, self-HPV testing provides sensitive results without pelvic exams, medical professionals, or health-care facilities and thus has the potential to serve as a primary cervical cancer screening method for women, regardless of their geographic location or access to health care," the researchers write. Self-sampling procedures were instructed by medical professionals, and it is unclear whether unsupervised self-examinations would give out similar outcomes. Still, the researchers write, "The incorporation of Self-HPV testing in the Chinese government's planning of a national cervical cancer screening program would complement the current program by increasing its coverage of unscreened populations."

In an accompanying editorial, Patrick Petignat, M.D., of the University Hospitals of Geneva, writes that while HPV Self-Sampling for primary cervical cancer screening may help increase the number of women being screened, introducing a new screening method should be met with caution. He feels that determining both the cost effectiveness of the procedure as well as women's personal willingness to undergo self-screening is essential; furthermore, patients need to be properly educated about self-screening. "Efforts are still needed to increase awareness about HPV and cervical cancer, and more information is needed about the reliability of the method," Petignat writes. "Health-care professionals

should provide sufficient support to participants to properly interpret their test results, thus avoiding any delay to follow-up and treatment."

Provided by Journal of the National Cancer Institute

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