Screening for HPV persistence and cervical cancer risk

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Women over the age of thirty who test positive for HPV (Human Papillomavirus) should be re-tested two years later as part of cervical cancer screening, according to a study published online TK in the *Journal of the National Cancer Institute.*

HPV infection is the main cause of cervical cancer, although most women infected with HPV do not have cervical pathology and most HPV infections in women under the age of 25 go away. Screening is recommended for women over age thirty, and the type of HPV strain to screen for is important, since only some are associated with cervical cancer risk. Furthermore, only persistently detectable infections seem to be associated with cervical cancer risk. However, few long-term studies have been done on the persistence of these infections and cervical cancer risk.

To determine the association between persistent HPV infections and cervical cancer risk in women over the age of thirty, Hui-Chi Chen, PhD, of the Genomics Research Center of Academia Sinica in Taipei, Taiwan, and colleagues, followed a cohort of 11,923 women aged 30□□ over a period of 16 years. The women underwent baseline exams that included HPV DNA testing and cytological tests, and the tests were repeated two years later. Incidence of cervical cancer was determined from cancer registries and death registries. In total, 6,666 women participated in both baseline and second visits, whereas the other 3,456 patients underwent only the first exam.

The researchers found that the 16-year risk of cervical cancer was 6.2% for women infected with any carcinogenic strains of the virus. Among women who were persistently infected with carcinogenic HPVs over the 2-year testing period, cervical cancer risk was 12.4%, whereas the risk was only 0.14% for women who repeatedly tested HPV negative. Since the duration of infection, rather than one-time infection, predicts cervical cancer risk, the researchers said it would not be useful to repeat HPV testing more frequently than every two years for HPV-positive women.

The authors write, "Our findings suggest that, if upon testing an HPV infection is found, re-testing 2 years later would provide useful guidance as to the duration of infection and its risk." Furthermore, they say, "The accumulated evidence suggests that it is time to include HPV testing in cancer screening programs for the general population."

The researchers add that genotyping may improve HPV testing since certain carcinogenic HPV strains—namely HPV16 and HPV58—were associated with a higher risk of cervical cancer than others.

In an accompanying editorial, Kevin A. Ault, MD, of the Department of Gynecology and Obstetrics at Emory University School of Medicine notes that "persistent HPV infection is an intermediate step in the development of cervical cancer." He notes the study has several strengths, including long duration of follow-up, a large sample size, and linkage to the national cancer registry. He also adds that the study shows that women with negative HPV tests have a greatly reduced risk of developing cervical disease.

Provided by Journal of the National Cancer Institute