HPV screen-and treat-intervention effective in cervical cancer prevention

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Women in South Africa who underwent human papillomavirus (HPV) DNA-based testing or visual inspection of the cervix followed by treatment of test-positive women with cryotherapy had a statistically significant reduction in high grade cervical cancer precursors, compared with women in a control group, according to a study published online Sept. 30 in *The Journal of the National Cancer Institute.*

In many developing countries, especially in sub-Saharan Africa, cytology-based screening is unavailable. To counter this lack of availability, non-cytological screening methods such as DNA testing or visual inspection of the cervix have been developed, methods that do not require the same laboratory infrastructure as cytology and allow for the immediate treatment of women with detected lesions. The approach of screening using non-cytological methods and then treating all test positive women is referred to as "screen-and-treat" and access to such cervical cancer prevention programs may be able to reduce cervical cancer mortality where cytology-based screening is unavailable.

To determine whether HPV DNA-based screening and visual inspection of the cervix reduced cervical cancer, Thomas C. Wright, M.D., of Columbia University, and colleagues, conducted a randomized trial of 6637 unscreened South African women aged 35-56 years, who were assigned to three study arms: HPV DNA screen-and-treat, in which women with a positive HPV test, VIA screen-and-treat in which women with a positive visual inspection test underwent cryotherapy; or a control group, in which further evaluation and treatment were delayed for 6

months. The researchers tested the women for 36 months, and measured cervical cancer lesions of grade two or worse, also known as CIN 2+ for cervical intraepithelial neoplasia.

The researchers found that after 36 months of follow-up, the women who developed CIN2+ included 1.5% in the screen-and-treat arm, 3.8% in the visual inspection-and-treat arm, and 5.6% in the control arm. The authors write, "This study demonstrates that an HPV DNA-based screen-and-treat program for cervical cancer is highly effective and produces a durable reduction in CIN 2+."

Furthermore, they write: "These results suggest that cryotherapy may have long-term implications for low-resource settings where it is difficult and costly to re-screen women at regular intervals."

In an accompanying editorial, Julia C. Gage and Philip E. Castle of the National Cancer Institute write that the advent of accurate low-cost HPV DNA testing bodes well for women in low-income settings—provided political will and monetary investment accompany technological advancement. "With low-cost accurate HPV screening tests coming online, cervical cancer prevention is becoming more effective, affordable, and feasible for low-resource settings," they write.

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