What is optimal surveillance after treatment for high-grade cervical intraepithelial neoplasia (CIN)?

ANNUAL PAP TESTING, according to this study. In addition, for women who have a high risk of recurrence, a strategy of colposcopy at 6 months after treatment increased life expectancy and quality-adjusted life expectancy.

Human papillomavirus (HPV) testing and liquid-based cytology increased the cost of surveillance but were not more effective than conventional cytology.

Melnikow J, Kulasingam S, Slee C, et al. Surveillance after treatment for cervical intraepithelial neoplasia: outcomes, costs, and cost-effectiveness. Obstet Gynecol. 2010;116(5):1158–1170.

EXPERT COMMENTARY
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Women who undergo treatment for cervical intraepithelial neoplasia (CIN) 2 or 3 remain at higher risk of recurrent CIN 2 or 3 or invasive cancer than the population at large. A recent review of the literature suggests that the risk of developing invasive cancer remains 10 times higher for these women than for the general US population for at least 20 years after treatment.[1,2] The risk of CIN, on the other hand, declines rapidly over the first 2 years following treatment but remains above the population baseline for 6 to 10 years.[1,3]

In its 2006 consensus guidelines, the American Society for Colposcopy and Cervical Pathology (ASCCP) recommends initial follow-up, after treatment for CIN 2 or 3, with HPV DNA testing at 6 to 12 months or with cytology alone or in combination with colposcopy at 6-month intervals until two consecutive negative results are obtained. After the initial follow-up, they recommend "routine" screening for the next 20 years. For many women, routine screening is cytology with or without HPV DNA testing every 3 years.[4] ACOG, however, recommends annual screening after the initial post-treatment surveillance.[4]

Details of the trial

In this study, Melnikow and colleagues offer a cost-benefit analysis of post-treatment surveillance strategies.[5] They evaluated 12 possible regimens—including yearly versus triennial screening—in a hypothetical cohort of 500,000 women who were treated for CIN 2 or 3 and followed from 30 to 85 years of age. They also compared women with the lowest and highest risk of recurrence, based on the initial diagnosis and treatment modality.[3]

They concluded that a conventional Pap test at 6 and 12 months after treatment, followed by annual conventional cytology, provides the most effective use of resources to reduce subsequent cervical cancers and cancer deaths. In patients who had the highest risk of recurrence, adding colposcopy at the initial post-treatment visit increased life expectancy and was highly valued by patients.

Not much offered here to inform clinical practice

This study offers useful information for those who determine health *policy*. For the

FAST TRACK

In this study, a conventional Pap test at 6 and 12 months after treatment, followed by annual conventional cytology, was the most effective strategy to reduce subsequent cervical cancers and cancer deaths

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practicing clinician, however, the study's limitations pose significant obstacles to its usefulness in practice. For example, the authors excluded women who were initially treated with loop electrosurgical excision procedure (LEEP) who had positive margins. This eliminates a significant proportion of the post-treatment population. They also excluded surveillance strategies that included liquid-based cytology. They explained this exclusion by noting that liquid-based cytology has been shown to have similar sensitivity and lower specificity than conventional cytology but costs more. However, most clinicians in the United States prefer liquid-based cytology to the conventional Pap smear. Therefore, it is unlikely that most American providers will adopt the strategies that the authors found most cost-effective—i.e., those based on annual screening with the conventional Pap test.

The findings of this study could influence policy makers and insurers to encourage more widespread use of the conventional Pap test in post-treatment surveillance.

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WHAT THIS EVIDENCE MEANS FOR PRACTICE

Because of the exclusions described above, this study does not justify a change in current practice. Until more comprehensive data come in, I recommend that women who have been treated for CIN 2 or 3 be followed initially according to ASCCP recommendations (HPV DNA testing at 6 to 12 months or cytology alone or in combination with colposcopy at 6-month intervals until two consecutive negative results are obtained). After the initial post-treatment surveillance, they should be followed according to ACOG, which recommends annual screening for 20 years.

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