



FOCUS ON CERVICAL BIOPSY

New guidance has focused on cervical cytology screening intervals and the role of human papillomavirus (HPV) testing—but has not addressed optimal colposcopy and biopsy practices. In this pair of

studies on biopsy at the time of colposcopy, investigators focus on whether multiple biopsies improve the diagnostic yield when lesions are seen, and whether a single biopsy helps when they aren't.

► EXPERT COMMENTARY

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Are multiple lesion-directed biopsies better than one at detecting cervical cancer precursors?

Yes. In this observational study of 690 women referred to colposcopy for abnormal cervical screening results, the sensitivity of biopsy in the detection of high-grade squamous intraepithelial lesions (HSIL) increased from 60.6% (95% confidence interval [CI], 54.8–66.6) for a single biopsy to 95.6% (95% CI, 91.3–99.2) for three biopsies.

Wentsensen N, Walker JL, Gold MA, et al. Multiple biopsies and detection of cervical cancer precursors at colposcopy [published online ahead of print November 24, 2014]. J Clin Oncol. pii:JCO.2014.55.9948.

HSIL (which included cervical intraepithelial neoplasia [CIN] 2 and 3 and invasive

Recent updates of cervical cancer screening protocols have altered the way we screen women but have not changed colposcopic practices, which vary widely in the United States. Investigators funded by the National Cancer Institute studied 690 women (median age, 26 years; range, 18–67 years) who underwent as many as four directed biopsies of distinct acetowhite lesions.

Dr. Kaunitz reports that he receives grant or research support from Bayer and Teva, and is a consultant to Actavis, Bayer, and Teva.

WHAT THIS EVIDENCE MEANS FOR PRACTICE

When HSIL is missed at colposcopy, the patient is subjected to delayed treatment and repeat assessment. Although multiple biopsies can increase patient discomfort and costs, these findings add to other published data underscoring their value. Instead of biopsying only the worst-appearing lesion, obtain at least two or three biopsies when distinct lesions, including acetowhite areas, are noted.

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FAST TRACK

The yield is greater when multiple lesion-directed biopsies are obtained at colposcopy

cancer) represented the gold standard for the sensitivity of the cervical biopsies.

Colposcopists performed a median of one, three, and four biopsies in women with no observed lesions, acetowhite lesions only, and low- or high-grade colposcopic impressions, respectively. More than 95% of HSIL was found in women noted to have a colposcopic impression of at least low-grade disease.

Although multiple biopsies increased the diagnostic yield in all groups, the greatest increase in yield was observed in women with HSIL cytology, positivity for HPV 16, and a colposcopic impression suggesting HSIL. Similar trends were observed for each of the six colposcopists (all well trained and highly experienced), each of whom performed at least 60 colposcopies in the study population.

How useful is random biopsy when no lesions are seen?

Useful. It identifies approximately 20% of otherwise undetected cases of CIN 2, CIN 3, or worse. The absolute risks of disease associated with the random biopsy were higher for women positive for HPV 16 or 18, according to this large post hoc analysis.

Huh WK, Sideri M, Stoler M, Zhang G, Feldman R, Behrens CM. Relevance of random biopsy at the transformation zone when colposcopy is negative. Obstet Gynecol. 2014;124(4):670-678.

When performing colposcopy for abnormal cytology results or high-risk HPV, clinicians often are faced with an absence of visible lesions. This situation prompts the question: Is a random biopsy warranted?

Details of the study

In a multicenter US study of more than 47,000 women—conducted to assess HPV diagnostics between May 2008 and August 2009—nonpregnant women aged 25 or older with an intact uterus underwent colposcopy after a finding of atypical squamous cells of undetermined significance or higher-grade cytology results or high-risk HPV. Patients and colposcopists were blinded to the results. In women who had satisfactory colposcopy results but no visible lesions, one random biopsy of the squamocolumnar junction was obtained.

Among 2,796 women (mean age, 39.5 years) who underwent random biopsy,

the findings were normal, CIN 1, CIN 2, and CIN 3 in 90.0%, 5.7%, 1.3%, and 1.4%, respectively. Among all participants aged 25 and older, random biopsies accounted for 20.9% and 18.9% of the CIN 2 or worse and CIN 3 or worse cases, respectively.

Among women positive for HPV 16 or 18, the likelihood of the random biopsy detecting CIN 2 or worse was 24.7% and 8.6% for those with abnormal cytology or normal cytology, respectively. 📌



Among women positive for HPV 16 or 18, the likelihood that a random biopsy will detect CIN 2 or worse was 24.7%

WHAT THIS EVIDENCE MEANS FOR PRACTICE

This post hoc analysis underscores the limitations of colposcopy, as have other reports. Just as the findings of Wentzensen and colleagues demonstrate that two or more lesion-directed biopsies increase the diagnostic yield over a single sample, this large study points out the substantial benefit of random biopsy of the squamocolumnar junction when no colposcopic lesions are identified.

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