



## Q/ Does anal cancer screening reduce morbidity and mortality in men who have sex with men?

### EVIDENCE-BASED ANSWER

**A** | IT'S UNCLEAR whether anal cancer screening benefits men who have sex with men because high-quality studies on this subject are lacking. In the ab-

sence of high-quality data, anal pap smears aren't recommended for routine screening of men who have sex with men (strength of recommendation: C, expert opinion).

### Evidence summary

The National Cancer Institute reports an annual anal cancer incidence of 1.6 per 100,000 and as of November of last year, expected that 5820 men and women would receive the diagnosis in 2011.<sup>1</sup> The 5-year survival rate is 64.9%. For men who have sex with men, the incidence ranges from 35 to 100 per 100,000, with a higher incidence in HIV-positive men.<sup>2</sup>

Men who have sex with men also have a higher prevalence of human papillomavirus (HPV) than the general population.<sup>3,4</sup> HPV is the most common cause of anal squamous intraepithelial lesions. In theory, screening for anal cancer may reduce morbidity and mortality by identifying and treating anal cancer precursors, much as screening has done for cervical cancer.

### Small studies suggest that screening may be effective

One study has demonstrated that anal pap smears are potentially effective as a screening tool for detecting anal intraepithelial neoplasia.<sup>5</sup> The study was limited by small sample size and failure to address patient-centered outcomes, however. It included only 395 subjects, most of whom (54%) were HIV positive. Additional studies evalu-

ated 265 HIV-positive men and 658 men, of whom 407 were HIV positive, with similar findings.<sup>6,7</sup>

### But a larger study shows no impact

The largest study to date, which included 5083 HIV-positive patients (contributing 13,411 patient-years), didn't demonstrate a decrease in invasive anal carcinoma during the screening period.<sup>8</sup> The difference in HPV prevalence between HIV-positive and HIV-negative men who have sex with men (96% vs 58.9%;  $P < .001$ ) limits the ability to generalize the conclusions of this study to all men who have sex with men.<sup>9</sup>

### Recommendations

No consensus guidelines exist on screening for anal cancer in men who have sex with men, regardless of HIV status.

The New York State Department of Health recommends baseline cytology and annual anal cancer screening for all HIV-positive men who have sex with men.

Based on the high prevalence of HPV in the HIV-positive population, some experts suggest anal cancer screening for HIV-positive men who have sex with men.<sup>10</sup> **JFP**

CONTINUED

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## References

1. National Cancer Institute. SEER stat fact sheets: anal cancer. November 10, 2011. Available at: <http://seer.cancer.gov/statfacts/html/anus.html>. Accessed February 24, 2012.
2. Altekruse SF, Kosary CL, Krapcho M, et al, eds. SEER cancer statistics review, 1975-2007. Available at: [http://seer.cancer.gov/csr/1975\\_2007](http://seer.cancer.gov/csr/1975_2007). Accessed February 24, 2012.
3. Chin-Hong PV, Vittinghoff E, Cranston RD, et al. Age-specific prevalence of anal human papillomavirus infection in HIV-negative sexually active men who have sex with men: the EXPLORE Study. *J Infect Dis*. 2004;190:2070-2076.
4. Chin-Hong PV, Berry JM, Cheng SC, et al. Comparison of patient- and clinician-collected anal cytology samples to screen for human papillomavirus-associated anal intraepithelial neoplasia in men who have sex with men. *Ann Intern Med*. 2008;149:300-306.
5. Nathan M, Singh N, Garrett N, et al. Performance of anal cytology in a clinical setting when measured against histology and high-resolution anoscopy findings. *AIDS*. 2010;24:373-379.
6. Scott H, Khoury J, Moore BA, et al. Routine anal cytology screening for anal squamous intraepithelial lesions in an urban HIV clinic. *Sex Transm Dis*. 2008;35:197-202.
7. Palefsky JM, Holly EA, Hogeboom CJ, et al. Anal cytology as a screening tool for anal squamous intraepithelial lesions. *J Acquir Immune Defic Syndr Hum Retrovirol*. 1997;14:415-422.
8. Mathews C, Caperna J, Cachay ER, et al. Early impact and performance characteristics of an established anal dysplasia screening program: program evaluation considerations. *Open AIDS J*. 2007;1:11-20.
9. Gao L, Zhou F, Li X, et al. Anal HPV infection in HIV-positive men who have sex with men from China. *PLoS ONE*. 2010;5:e15256.
10. Silverberg MJ, Chao C, Leyden WA, et al. HIV infection and the risk of cancers with and without a known infectious cause. *AIDS*. 2009;23:2337-2345.



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