

# Human papillomavirus detection by penile site in young men from Kenya

## Abstract:

Limited data are available on whether sampling from the penile shaft or urethra increases detection of penile HPV infection in men beyond that found in the glans and coronal sulcus. **METHODS:** Within a randomized clinical trial, a validation study of penile sampling was conducted in Kisumu, Kenya. Young men (18-24 years) were invited to provide penile exfoliated cells using prewetted Dacron swabs to determine the best site for HPV detection. beta-Globin gene PCR and HPV DNA type GP5+/6+ PCR status were ascertained from 3 anatomical sites. **RESULTS:** A total of 98 young HIV-seronegative, uncircumcised men participated. Penile HPV prevalence varied by anatomical site: 50% in penile exfoliated cells from the glans, coronal sulcus, and inner foreskin tissue; 43% in the shaft and external foreskin tissue; and 18% in the urethra ( $P < 0.0001$ ). For each anatomical site, over 87% of samples were beta-globin positive. Beyond that found in the glans/coronal sulcus, urethral sampling resulted in no increase in HPV positivity and shaft sampling resulted in an additional 7.3% of overall HPV positivity. The prevalence of high-risk HPV positivity varied by anatomical site: 39% in glans/coronal sulcus, 31% in shaft, and 13% in the urethra ( $P < 0.0001$ ). HPV 16 was the most common type identified. **DISCUSSION:** Penile HPV prevalence was approximately 50% among young men in Kisumu, Kenya. Urethral sampling for HPV detection in men added no sensitivity for HPV detection over that found from sampling the glans/coronal sulcus and penile shaft. These data will help inform studies on HPV transmission dynamics, and on the efficacy of HPV prophylactic vaccines on penile HPV carriage in men.