



**A Strategy Symposium
March 24-25, 2009 – Berkeley, California**

**HPV INFECTIONS AND CERVICAL LESIONS IN HIV-1 AND HIV-2 INFECTED
SENEGALESE WOMEN**

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We conducted a prospective study of HSIL (high-grade squamous intraepithelial lesions) development among women with and without HIV-1 and/or HIV-2 infection and high-risk HPV infection in Senegal. Study subjects included 627 women who were assessed every 4 months for SIL and HPV DNA over a mean follow-up of 2.2 years. During follow-up, 71 (11%) of the 627 women developed HSIL as detected by cytology. HIV-infected women with high-risk HPV types were at greatest risk for development of HSIL. In multivariable Cox regression modeling, persistent infection (hazard ratio [HR] = 47.1, 95% confidence interval [CI] = 16.3 to 136) and transient infection (HR = 14.0, 95% CI = 3.7 to 54) with oncogenic HPV types were strongly associated with HSIL risk. In univariate analyses, HIV-positive women infected with HIV-2 were less likely to develop HSIL (HR = 0.3, 95% CI = 0.1 to 0.9) than HIV-positive women infected with HIV-1. HIV-positive women with CD4+ cell counts (CD4 counts) between 200 and 500 cells per milliliter (HR = 2.2, 95% CI = 0.8 to 6.3) or less than 200 cells per milliliter (HR = 5.5, 95% CI = 2.0 to 15.2) were at greater risk of HSIL than HIV-positive women with CD4 counts of more than 500 cells per milliliter. High plasma HIV levels were associated with increased HSIL risk (HR for each order of magnitude increase in the level of HIV plasma RNA = 1.4, 95% CI = 1.1 to 1.7). HIV-1 and HIV-2 are associated with increased risk for development of HSIL. This risk appears to be primarily associated with the increased HPV persistence resulting from immunosuppression related to HIV-1 and/or HIV-2 infection. In another study, we studied 2,065 consecutive patients aged 35 years or older, presenting to community health clinics in Dakar, who had not been screened previously for cytologic abnormalities or HPV. Cytologic diagnosis and HPV detection were accomplished using a ThinPrep Pap and a polymerase chain reaction-based reverse-line strip assay, respectively. Odds ratios

(OR) and associated 95% confidence intervals (CI) were estimated using polynomial logistic regression. Cytologic abnormalities were found in 426 women (20%), including 254 (12%) with atypical squamous cells of undetermined significance, 86 (4%) with low-grade squamous intraepithelial lesions, 66 (3%) with high-grade squamous intraepithelial lesions (HSIL) and 20 (1%) with invasive cancer. HPV infection was detected in 18% among women with negative cytology findings, the prevalence of high risk but not low risk HPV types increased with age. HPV16 (2.4%) and HPV58 (1.6%) were the most frequently detected HPV types in this population, as well as being the most strongly associated with risk of HSIL/cancer. These data suggest that in addition to HPV16, HPV58 should be considered in the strategic planning of vaccination against cervical cancer in this geographic region.