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Appointment Category:   _X__House Staff  _____Clin Fellow _____Research Fellow

_____Medical Student _____Graduate Student (Program:___________)

Register for:    __X__ Clinical Research   _____Translational Research   _____Basic Research

Full Poster Title *  _Human Papillomavirus Prevalence and Genotype Correlation with Cervical Cytopathology in Ugandan Women_

Where has the work been presented?
Meeting Name __Conference on Retroviruses and Opportunistic Infections (CROI)  2008___
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*INCLUDE A ONE-PAGE ABSTRACT (including title and all authors) OF THE WORK YOU WILL BE PRESENTING

E-mail COMPLETED Registration form and abstract to:
Stacey Morgan (smorgan9@jhmi.edu) on or before
Friday, March 14th, 2008

If you have questions or problems regarding your submission, please contact Stacey Morgan via e-mail (smorgan9@jhmi.edu)
Human Papillomavirus Prevalence and Genotype Correlation with Cervical Cytopathology in Ugandan Women

Janis Taube, Betty Kamira, Mahnaz Motevalli, Clemensia Nakabiito, Robert Lukande, Deidra Kelly, Patti Gravitt, Francis Mmiro, Danstan Bagenda, J. Brooks Jackson

**Background:** HIV is a known risk factor for human papillomavirus (HPV) prevalence and persistence. The objectives of this study were to obtain baseline HPV genotype prevalence in HIV-positive and HIV-negative women in Kampala, Uganda and to determine which genotypes are associated with cervical pathology in this population.

**Methods:** 200 women aged 18-30 years and 4-12 weeks post-partum at Mulago Hospital were recruited, counseled, consented and underwent rapid HIV testing and a pelvic exam. Liquid-based cervical cytology samples were collected and processed using the Maksem low-cost manual technique. A Digene cervical sampler was used to collect specimens for genotyping by Roche Diagnostics HPV Linear Array. The Fishers exact 2-sided test and the Wilcoxon rank-sum test (with continuity correction) were used to assess the statistical significance of differences observed between proportions and medians, respectively.

**Results:** HIV prevalence was 19%, and HPV prevalence was 65%. The most common high-risk HPV genotypes were 16(9%), 33(9%), 35(6.5%), 45(6.5%) and 58(6%) and the most common low-risk genotypes were 62 (22%), 61(11%), 81(11%), 70(10%), and 53(10%). The prevalence of HPV 6, 11, and 18 was 2.5%, 1%, and 4%, respectively. There was no significant difference between the presence of HPV 16 or HPV 18 and HIV status (positive vs. negative) (13.9% vs. 7.3%, P=0.20 and 3.7% vs. 5.6%, P=0.64, respectively), but HIV-positive subjects were more likely to be infected by other high- and low-risk HPV genotypes than HIV-negative women (72.2% vs. 40.9%, P<0.001 and 63.9% vs. 36.6%, p=0.0046, respectively). HIV-positive women were also infected with a greater median number and range of HPV genotypes when compared to HIV-negative women (median of 2, range 0-8 vs. median of 1, range 0-6, p-value<0.001). Women with HIV were significantly more likely to have an abnormal Pap smear than those who were HIV-negative (43% vs. 11%, P<0.001). HPV prevalence was 58% in women with normal cytology and 97% in women with abnormal cytology. Of note, HPV 16/18 prevalence in women with normal cytology was 9.9% and in women with abnormal cytology was 28%.

**Conclusions:** Our results show that while HPV types 16 and 18 may be seen in association with cervical pathology, preventative or therapeutic vaccines will need to target a broad-spectrum of HPV genotypes to effectively combat cervical disease in this population.