

Poster presentation

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## 60PV Related Lesions in HIV Positive Subjects on HAART: Study of Viral Markers of Cervical Neoplasia Progression

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### Background

As for other slow evolving tumors, the risk of HPV related ano-genital carcinoma, has increased in the era of HAART. We studied HPV related parameters to identify markers of progression and HIV/HPV infections interaction.

### Methods

HIV pos women (N = 410) were followed since 1995 in a longitudinal study. Each one undergo periodic (6–12 months) colposcopy, PAP smear, biopsy if needed, and cervical sampling for HPV testing. HIV related parameters (CD4, HIV-RNA, ART) are recorded and related to cervical disease. HPV typing is performed by reverse hybridisation assays, viral load by in-house real time PCR and viral expression by E6/E7 mRNA detection. The Mann-Whitney rank sum test for non-parametric data and the association between discrete variables by Chi-square test of Fisher exact test were applied.

### Results

Prevalence of high risk HPV (HR-HPV) is 59.3%; high grade lesions (HgSIL) are 8.9% and low grade (LgSIL) 24%. Subjects with lower nadir of CD4 count in their HIV story, show increased rates of these values independently by the efficacious use of HAART. Sixty one pt (15%) underwent surgical resection of high grade lesions or cervical K. HPV load was prospectively studied in 16 of these cases (HgSIL) and 22 HR-HPV positive controls without cervical lesions. In the cervical brush collected at diagnosis, all cases had an HPV load significantly higher than controls ( $p = 0.0004$ ). Decreasing HPV load were observed when comparing pre- and post-surgery samples ( $p < 0.0001$ ). The number and type/s of HPV strains were not statistically different between cases and controls. Mul-

iple infections were detected at baseline in 43.7% of cases and 54.5% of the controls, in 87.5% of the cone biopsies and in 56.25% of the post-treatment sample of the cases.

### Conclusion

Persistence of HR-HPV as a key marker in the development of cervical lesions is poorly informative in HIV positive women due to its high frequency and coinfection with multiple HR-HPV types. Novel clinical biomarkers to identify subjects at true risk for the development of cervical lesions may include viral burden: both total and type specific. High level of HPV DNA is in fact detected in the lesions and is drastically reduced by their removal.