**Results** At least one HR-HPV was identified in 264 HIV-negative men (37.6%, 403 genotypes total) and 164 HIV-positive men (70.4%, 399 genotypes total) at enrollment. Among HIV-negative men, younger and unmarried men were more likely to have higher viral loads. HR-HPV genotypes with high viral load (grade:3–4) at enrollment were more likely to persist than HR-HPV genotypes with low viral load (grade:1–2) among HIV-negative (month 6: adjPRR = 1.80, 95% CI: 1.31–2.47; month 12: adjPRR = 2.04, 95% CI: 1.39–3.01), and HIV-positive men (month 6: adjPRR = 1.33, 95% CI: 1.06–1.67; month 12: adjPRR = 1.70, 95% CI: 1.16–2.50). Long-term persistence of HR-HPV was more frequent among HIV-positive men compared to HIV-negative men (month 24: adjPRR = 2.24, 95% CI: 1.46–3.45), and HR-HPV infections with low viral loads were detected more frequently among HIV-positive men at all follow-up visits (6 months: PRR = 1.81, 95% CI: 1.17–2.97; 12 months: PRR = 1.43, 95% CI: 0.8–2.4; 24 months: PRR = 2.9, 95% CI: 1.53–5.53).

**Conclusions** HR-HPV genotypes with high viral load are more likely to persist among HIV-negative and HIV-positive men, though persistence was more common among HIV-positive men. The results may explain the association between high HR-HPV viral load and transmission to women and increased levels of HR-HPV persistence in HIV-positive men.

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**Abstract P3.223 Table 1** Association of HR genotypes with site, CD4+ count and age in Burkina Faso and South Africa

<table>
<thead>
<tr>
<th>Site</th>
<th>n/N (%)</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burkina Faso</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>285/463 (62%)</td>
<td>1</td>
</tr>
<tr>
<td>South Africa</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>385/492 (78%)</td>
<td>2.24 (1.69–2.99)</td>
</tr>
</tbody>
</table>

**P3.224 EFFECT OF HERPES SIMPLEX VIRUS TYPE 2 (HSV-2) INFECTION ON PROGRESSION OF HIV INFECTION AMONG FEMALE SEX WORKERS IN BURKINA FASO**


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**Background** The effect of HSV-2 on the natural history of HIV-1 remains unclear. Although trials have shown a modest but significant impact of HSV-2 suppression on HIV-1 disease progression, the sub-optimal antiviral efficacy of aciclovir and its potential antiretroviral effect have limited our ability to measure the true effect of HSV-2 on HIV-1 disease progression. This study aimed to assess the effect of untreated HSV-2 infection on the time to ART.

**Methods** From December 2003 to February 2012, HIV-1 infected female sex workers were enrolled in a prospective open cohort in Burkina Faso. At each 3-month follow-up visits, CD4 count and HIV-1 plasma viral load were done. Participants were offered care including ART and psychological support. Participants not on ART and having at least 550 CD4 cells/µl at enrolment (the current CD4 count threshold for ART initiation) were included in this analysis, which was censored at 36 months of follow-up when the assumption of proportional hazard was no longer met.

**Results** Overall, 164 co-infected women and 20 HIV-1 mono-infected women were enrolled in this study. At enrollment, the only difference between the two groups was a younger age of HIV-1 mono-infected women (median age 24 versus 31 years, p < 0.001). In linear mixed models, the age-adjusted mean CD4 count at baseline (intercept) was significantly lower among HSV-2 positive women (~211 cell/µl, p < 0.001), but no difference in baseline CD4-adjusted plasma viral load was observed. During follow-up, 3 out 20 HIV-1 mono-infected women initiated ART versus 52 out of 164 HSV-2 co-infected women. After adjustment for baseline CD4 count and age, HSV-2 infected women were still much more likely to initiate ART over 36 months (HR = 4.6, CI 95%; 1.04–20.5, p = 0.04).

**Conclusion** HIV-1 disease progression, as assessed by time to ART eligibility, was much accelerated for women co-infected with HSV-2.