Genital and Anal Cytology-HPV Co-Testing Results From 381 Women Living With HIV

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BACKGROUND

- Women living with HIV (WLH) are at increased risk for high-risk human papillomavirus (HR-HPV)-associated cervical and anal cancer.
- While cervical cancer screening has been accepted standard of care, anal cancer screening has not yet been universally adopted.
- Comparative data on cervical and anal HR-HPV positivity and cytological abnormalities are sparse among WLH.

METHODS

- Clinicopathological data were analyzed from 381 WLH, including initial anal and cervical/vaginal cytology/HR-HPV co-testing results obtained within 6 months of one another.
- Rates of and correlation between cervical/vaginal and anal abnormalities were analyzed.
- Significant predictors from logistic regression models were used to create prediction nomograms for anal HR-HPV and HPV16/18 infection.

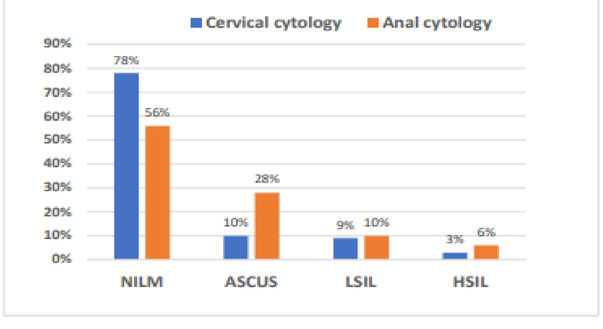
Anal cytology: HSIL



RESULTS

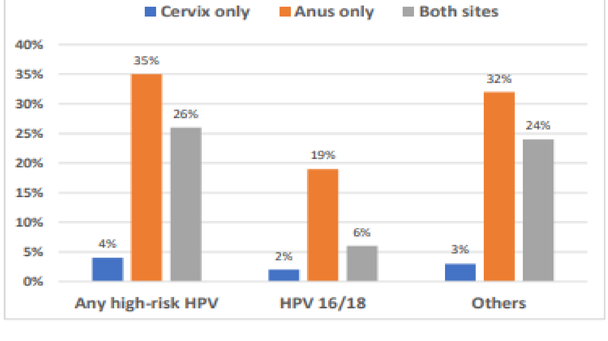
Figure 1: **Anal and cervical/vaginal screening results.** Data presented as percentage of participants in each category.

A. Cytological diagnoses (47 inadequate samples were excluded).



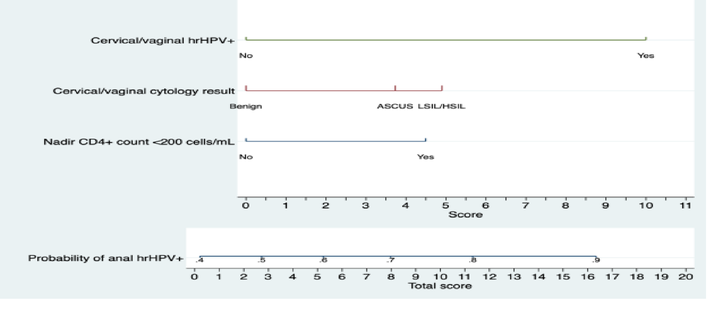
B. High-risk HPV testing results

Others: HPV31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, and 68



- Median age was 49 years (range: 20-81)
- Cytological diagnosis of ASCUS or worse (≥ASCUS) was more prevalent in anus than cervix (44% vs. 22%).
- HR-HPV and HPV16/18 were detected in 65% and 27% of participants, more frequently in anus than cervix (61% vs. 30% and 25% vs. 8%).

Figure 2: Nomogram predicting anal high-risk HPV infection.
To calculate the probability of anal high-risk HPV infection, add the score of each risk factor and then determine the probability based on the total score axis.



A nomogram predicting anal HR-HPV infection based on nadir CD4 T-cell count < 200 cells/mm3, cervical/vaginal cytology ≥ASCUS and cervical/vaginal HR-HPV positivity yielded prediction probabilities ranging from <40% (all predictors absent) to >90% (all predictors present).

CONCLUSIONS

High prevalence of anal HR-HPV infection and cytological abnormalities among WLH underscore the importance of anal cancer screening independent of preceding or concurrent genital disease. Clinical and cervical/vaginal cytological data can help stratify the risk of anal disease via prediction nomograms, although further prospective validation is warranted.