Screening of Anal Premalignant Lesions through HPV16 Detection in People Living with HIV

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BACKGROUND

- Screening for anal premalignant lesions related to human papillomavirus (HPV) is now recommended in France (National Society of Coloproctology 2022, French HIV Guidelines 2024) in men ≥ 30 years living with HIV, who have sex with men and women ≥ 30 years, with a history of vulvar or cervical high-grade lesions or solid organ transplanted for more than 10 years. *(Clifford et al. Int J Cancer 2021 Fig. 1)*
- The management algorithm depends on the detection of HPV16.
- Our objective was to provide virological, cytological and histological clinical feedback at the Bordeaux University Hospital over two years, following the implementation of these recommendations at the end of 2023.

METHODS

- Anal swabs were collected by self-sampling during HIV outpatient visits, (Anex® Brush (Rovers®)), Preservcyt medium (Hologic®)) from November 1, 2023.
- We analyzed all swabs sent up to October 31, 2025, i.e. over two years.
- The HPV16 test was performed with the Cobas® HPV Kit (Roche Diagnostics).When it was positive, a reflex cytology was performed;
- In the presence of abnormal cells, the patient was referred to the proctologist for clinical examination +/- anal biopsy under high-resolution anoscopy (HRA).

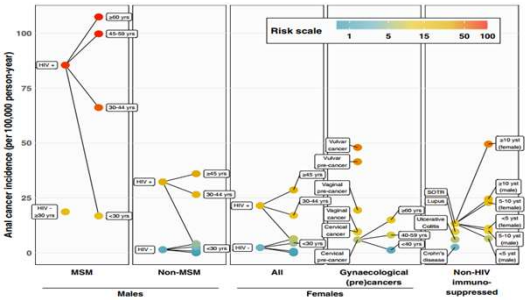
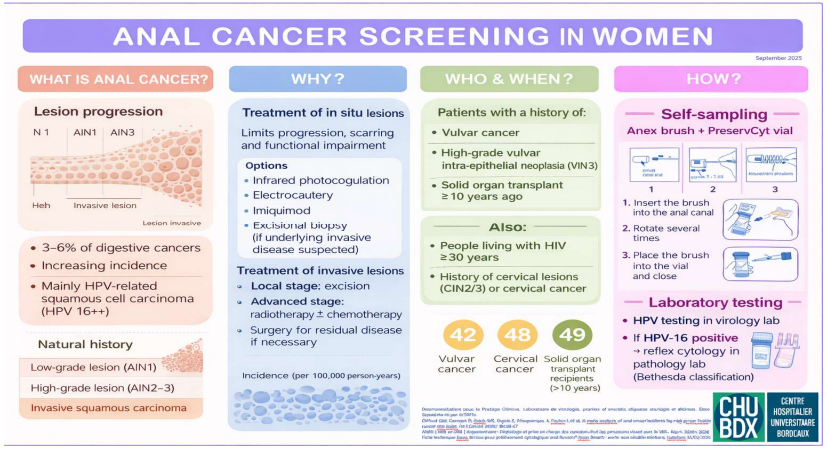


Fig 1. Clifford's Anal cancer risk scale.
CI, confidence interval; MSM, men who have sex with men; MSW, men who have sex with women. yrs, years old; yst, years since transplant

Screening for anal premalignant lesions is facilitated by self-sampling detection of HPV-16

RESULTS

- A total of 689 anal swabs, involving 641 patients (44 patients had more than one smear due to initially invalid results) were analyzed in virology: 608 (95%) MSM and 33 (5%) WLHIV.
- 48 men (8%) and 5 women (15%) had invalid results at the time of the analysis (samples not yet renewed)
- HPV16 was positive in 129/560 swabs in men (23%), and in 4/28 in women (14%)
- Of the 129 reflex cytology tests in men, 28 (22%) were paucicellular and required re-examination. 37 (29%) showed no abnormal cells, 19 (15%) were ASCUS, 37 (29%) LSIL, 10 (8%) ASC-H and 5 (4%) HSIL.
- Of the 4 cytology tests in women,1 was ASCUS and 3 LSIL.
- **A total of 75 of the 588 patients evaluated (13%) required a HRA (HPV16+ and abnormal cytology)**
- An HRA was performed in 28 patients (37% of cytologic abnormalities)
- A biopsy was performed in 29 patients (39% of cytological abnormalities); 18 (64% of biopsies) showed an abnormality: 8 AIN1 (29%), and 7 AIN2 (25%) and 3 AIN 3 (11%)
- **Overall, a severe dysplasia (needing treatment) was found in 10 patients (10/28: 36%)**
- Cyto-histological discrepancies were noted: 1 AIN2 and 1 AIN3 on cytological ASCUS, 6 AIN2 and 2 AIN3 on cytological LSIL, 1 AIN1 on a cytological HSIL



CONCLUSIONS

- HPV 16+ levels were in agreement with the literature *(Alberts et al. JID 2020, Wei et al. JID 2023)*
- The implementation of the national recommendations in our university hospital highlighted key challenges:
  - An under-representation of women, leading us to implement a memo intended to practitioners in infectious diseases, gynecology and transplantation departments.
  - A high rate of invalid samples both virological and cytological, which we currently attempt to reduce (by improving the instructions given to the patient for self-sampling and testing other swab equipments)
  - Difficult access to biopsy under HRA (high number of patients waiting for an appointment). Only one center throughout the Nouvelle Aquitaine region (6M inh.) has this equipment.
  - However, once the care pathway was established, self-sampling during HIV follow-up visits proved to be a valuable secondary prevention tool, enabling broader patient engagement and improved detection of anal premalignant lesions, particularly among those reluctant to undergo systematic proctology visits

PLAIN LANGUAGE SUMMARY

Self anal sampling with detection of HPV-16 during HIV visits in MSM > 30 years and women with a history of cervical or vulvar high-grade lesions may prevent end stage anal cancer by detecting and treating anal lesions