Background Rates of anal cancer from HPV infections are significantly higher in HIV-positive men-who-have-sex-with-men (MSM) compared to the general population. Recent estimates in the US and Europe report the incidence of anal cancer amongst HIV-positive individuals to be 75–137 cases/100 000 person-years, a rate 30–100 times higher than the general population. Despite the restoration of immune function with modern antiretroviral therapy, the incidence of anal cancers is increasing amongst HIV-positive MSM. We report the results of an anal cancer screening program in HIV-positive MSM in Calgary, AB, Canada from October 2014 to December 2018.

Methods HIV-positive MSM attending the Southern Alberta Clinic and STI Clinic were offered an anal pap smear. Patients with abnormal cytology were examined with digital anorectal exam and High Resolution Anoscopy (HRA) to detect anal intraepithelial neoplasia (AIN). Dysplastic areas were biopsied and sent for histopathology. High-grade AIN II-III were treated using infrared coagulation.

Results A total of 214 patients were examined with HRA. 87 patients (40.7%) had biopsy-proven AIN I, II, or III. Asymptomatic internal anal warts (AIN I) were detected in 60 patients (28%). Twenty-five patients had AIN II-III (11.7%) and 2 patients had invasive squamous cell cancer. High-risk oncogenic HPV was identified in 100% of the biopsy specimens.

Conclusion High rates of anal HPV infections causing AIN I, II, and III were identified in HIV-positive MSM, supporting ongoing use of HRA for anal cancer screening programs in this population. High rates of asymptomatic internal anal warts were incidentally found. These rates of anal HPV infections support consideration of offering HPV vaccination to HIV-positive MSM on clinic intake as a preventative tool.

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