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Results of a screening, therapeutic and prophylaxis programme for AIN2+ lesions in HIV-MSM (2010-2016)

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- **BACKGROUND:** Anal squamous cell carcinoma (ASCC) is one of the most frequent non-AIDS-defining malignancies in HIV-infected MSM.
- **AIMS:** To analyze the prevalence and incidence of HSIL and ASCC (AIN2+lesions) in HIV-positive MSM, and risk factors related to these lesions, after initiating a program for diagnosis, treatment and prevention of ASCC.
- **PATIENTS AND METHODS:** This is a longitudinal study conducted between May 2010-July 2016. Baseline and each visit enclosed samples of anal mucosa (liquid medium) for HPV PCR genotyping (Linear Array HPV Genotyping Test,), cytology (ThinPrep® Pap Test), and high-resolution anoscopy (HRA) (Zeiss 150 fc ©); as well as medical history, sexual habits, CD4, and HIV viral load; and it was carried out implement use of condom, and administered to 64 patients from May of 2012 to May of 2014 the quadrivalent HPV vaccine. Patients diagnosed with LSIL or normal HRA were monitored annually; patients diagnosed with HSIL were treated (mucosecotmy/ fulguration (n=49) or Imiquimod intranal x16 weeks (n=19); and subjects diagnosed with ASCC were sent to the Oncology Service. The cytological and histological classification was Bethesda's and LAST Project for HPV-Associated Lesions, respectively.

- **RESULTS:**

Table 1. Baseline Characteristics

	N=319
Age, mean (DS)	36.7 (10.2)
Sexual partners, 12 months, median (IQR)	1 (1-7)
Anal Warts, n(%)	83 (26)
Condom use, n(%)	248 (77.7)
HCV/HBV	11(3.4)/9(2.8)
Syphilis	72 (22.6)
Smoking, n(%)	160 (50.2)
ExUPD	2 (0.6)
Time Of Kwon HIV, (months), median (IQR)	31 (9-91)
AIDS stage, n(%)	89 (27.9)
Nadir CD4, mean (DS)	361 (234.6)
Current Cd4, mean (DS)	685 (507.8)
History HAART, n(%)	273 (89)
Virological failure,n(%)	5 (1.8)

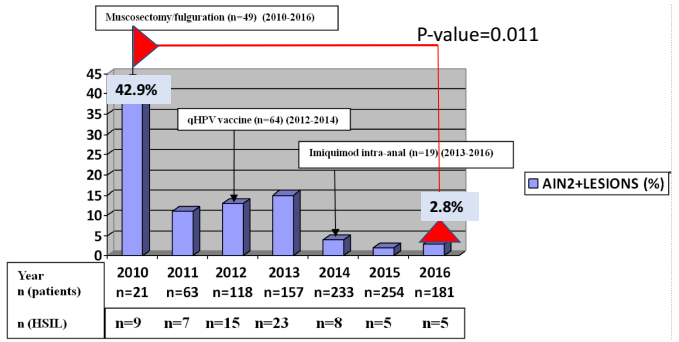
MSM: men who have sex with men; **ExUDP**: ex - user to parenteral drugs; **HRA:** high resolution anoscopy; **HR-HPV:** high-risk human papillomavirus; **LW-HPV:** low-risk HPV; **AIN2+ leions** (AIN2/3, and ASCC); **AIN:** anal intraepithelial neoplasia

Table 2. Genotypes of most frequent HPV

n (%), IC 95%	n= 311
HR-HPV	255 (81.9), (78-86)
LR-HPV	221 (71.1), (66-76)
HR and LR- HPV	185 (59.5), (54-65)
Median of HR-HPV	2 (1-3)
Median of LR-HPV	1 (0-2)
HPV 6	55 (17.7)
HPV 11	56 (18)
HPV 16	102 (32.9)
HPV 18	44 (14.1)
HPV 31	45 (14.5)
HPV 42	56 (18)
HPV 45	43 (13.5)
HPV 51	51 (16.7)
HPV 55	50 (15.7)
HPV 59	39 (12.2)
HPV 62	40 (12.9)
HPV 68	41 (13.2)
HPV 81	36 (11.3)

91.9% of AIN2+lesions appeared in patients aged under 50 years (29% < 30y, and 61.4% 30-50y).
According to the multivariable analysis, the oncogenic HPV-68 genotype was a risk factor associated with the development of AIN2+lesions, (OR 3.58; 95% CI 1.26-10.21), whose prevalence was 13.2%.

Graph 1. Prevalence of AIN2+ lesions in our cohort (2010-2016)



2010: 1 ASCC, 8 HSIL
2013: 1ASCC, 22 HSIL (1ASCC exitus en 2014)

During monitoring (2 years IQR (0-3), 28 new cases of AIN2+ lesions developed:
- Incidence of HSIL: 33.3x1000 p-year.
- Incidence of ASCC:111 x100.000 p-year)
- In the multiple logistic regression analysis, we discovered that previous AIDS-defining illnesses was a predictive factor of new cases of HSIL (OR 4.5; 95%CI 1.3-15.6).

CONCLUSIONS: Routine screening of HPV and ASCC in HIV MSM patients should be implemented, especially in middle aged patients, with HR-HPV genotypes, in our patients primarily HPV-68, and previous history of AIDS; as well as therapeutic and prophylaxis programs for HPV and AIN2+ lesions. We have noticed that together these measures could decrease the prevalence of theses lesions.