

# HPV infections epidemiology in MSM group

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## INTRODUCTION AND PURPOSE

*Human papillomavirus* (HPV) infection is the primary risk factor for anal cancer and the incidence is particularly high among populations of Men who have Sex with Men (MSM). HPV16 is the most common genotype detected, representing 73% of all HPV-positive tumours. This study has been carried at Sexually Transmitted Infections (STI) Center, A.A.S.2 "Bassa Friulana-Isontina", Gorizia (Italy) to evaluate the distribution of HPV genotypes in high risk population of MSM.

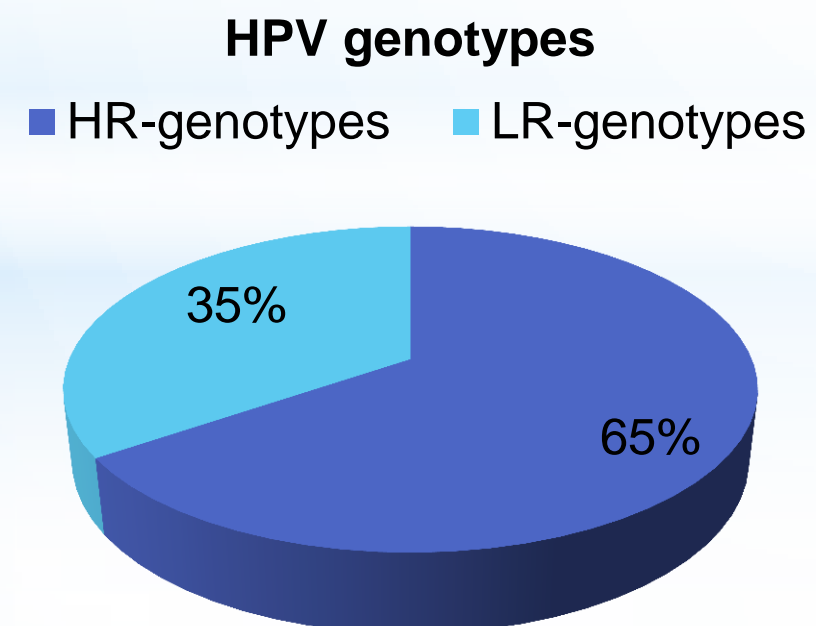
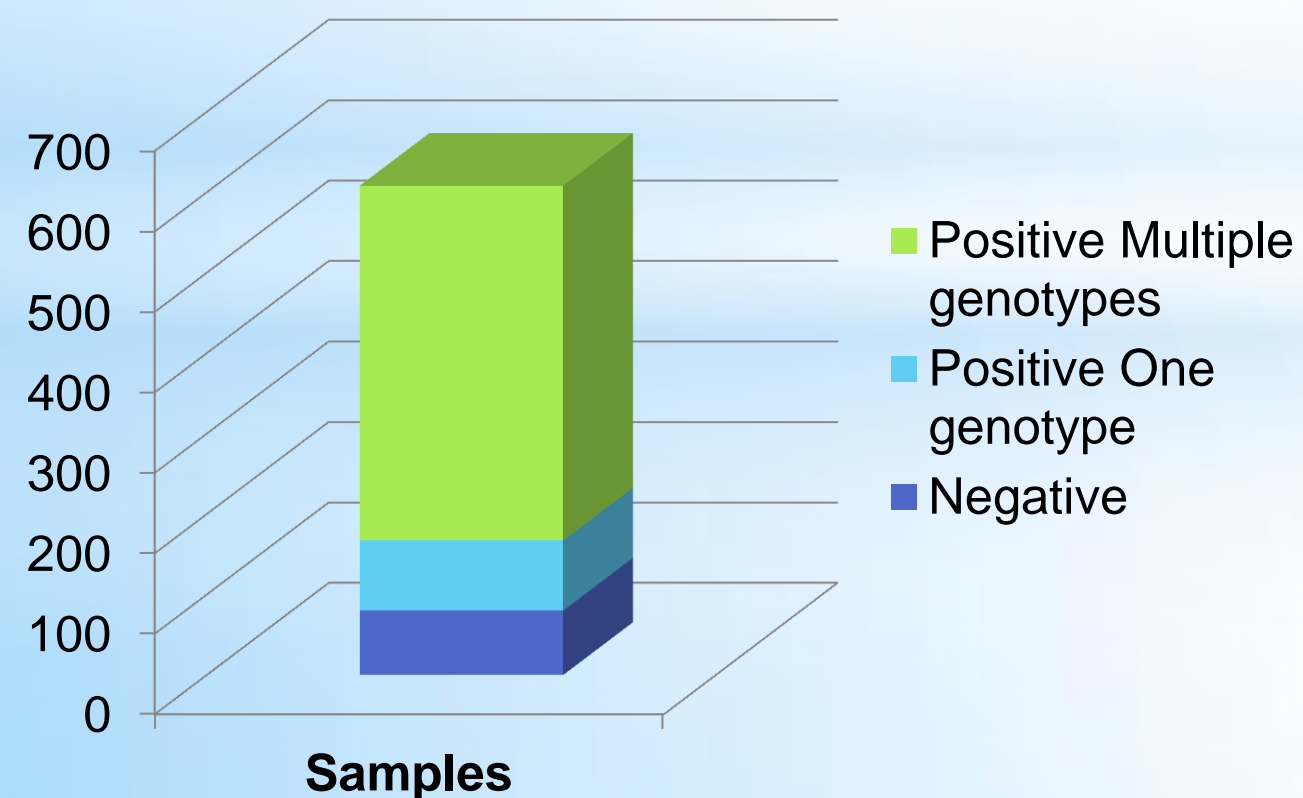
A questionnaire was given to patients: the survey included sociodemographic factors and behavioral questions about risk factors.

## METHODS

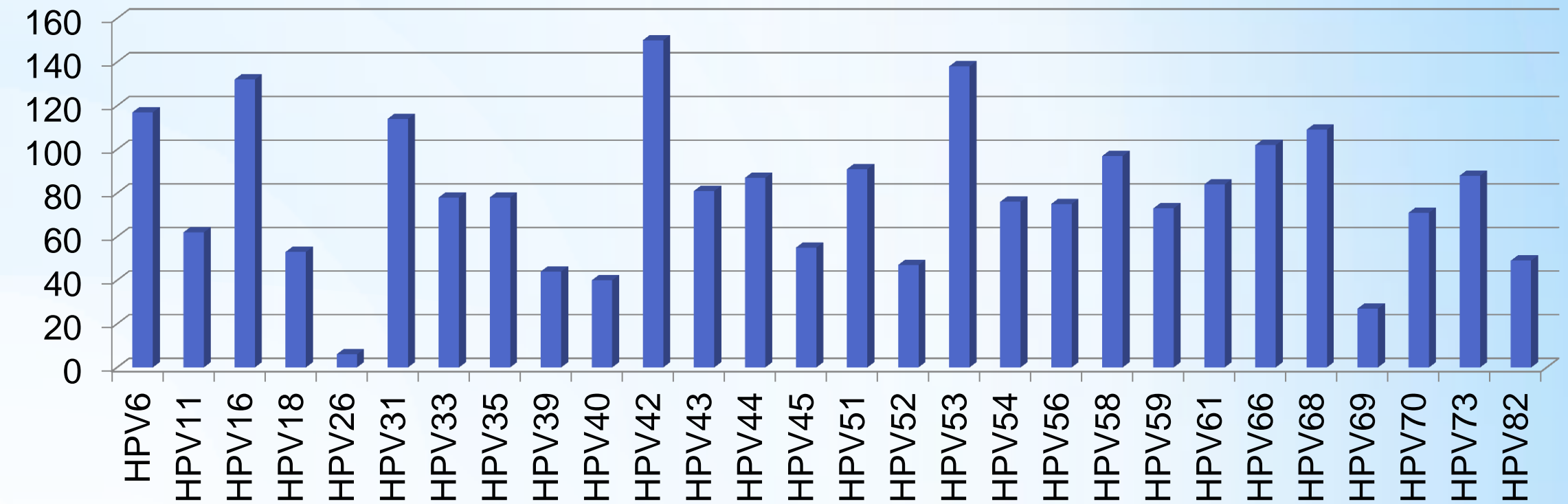
From January 2014 to October 2017 465 MSM patients (16-76 years old, median age 42) were enrolled and 608 rectal swabs were analyzed with Real Time PCR Detection Anyplex<sup>TM</sup> II HPV28 (Seegene®).

## RESULTS

From the questionnaires emerged that 83.2% (387/465) of patients had multiple-partners, 81.9% (381/465) used condom during anal intercourse, 30.3% (141/465) were smokers, 11.8% (55/465) were HPV vaccinated, 3.4% (16/465) were drug users. 86.8% (528/608) of samples were positive for HPV: 16.5% (87/528) for one genotype, 83.5% (441/528) for multiple genotypes. 65.5% (1456/2224) were High Risk (HR) genotypes and 34.5% (768/2224) were Low risk (LR) genotypes.

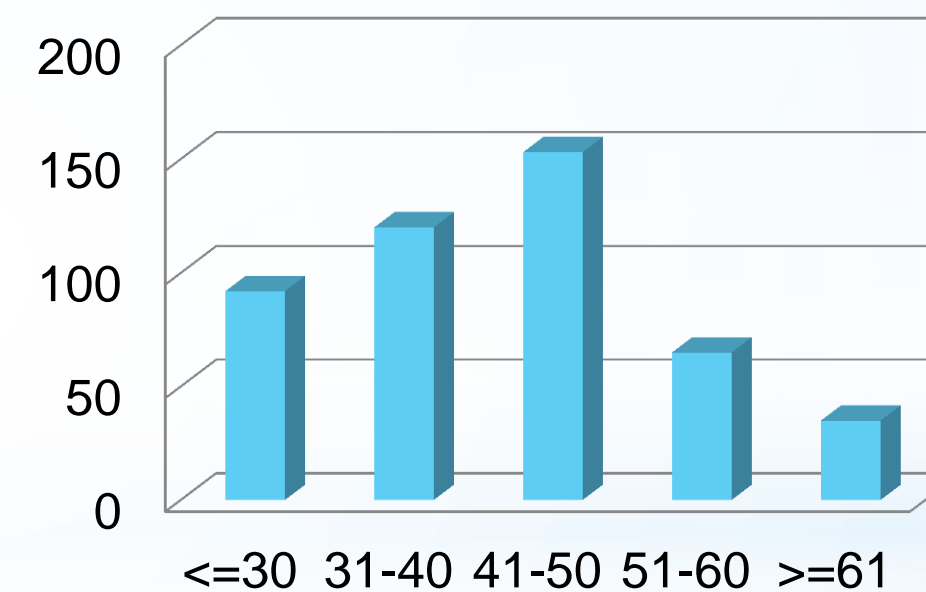


## HPV genotypes

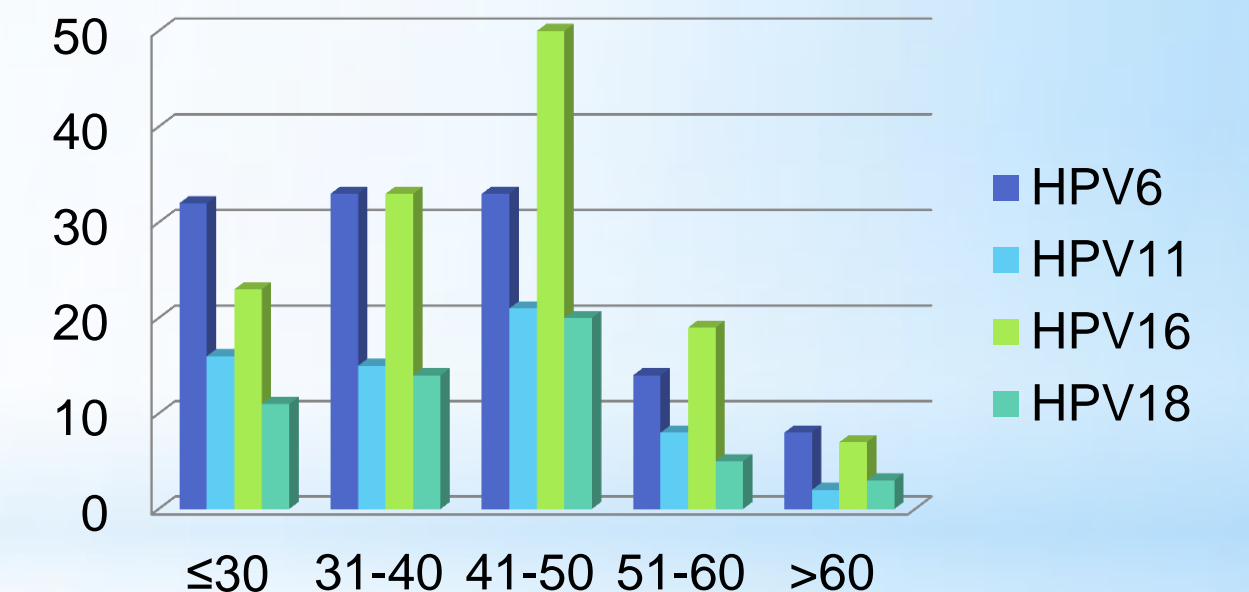


The most prevalent HR genotypes were: HPV53 (138/528, 26.1%), HPV16 (132/528, 25.0%), and HPV31 (114/528, 21.6%). The LR were: HPV42 (150/528, 28.4%) and HPV6 (117/528, 22.2%). The histograms show the distribution of HPV infections and of genotypes covered by quadrivalent vaccine among ages.

## HPV among ages



## HPV covered by vaccine



## CONCLUSIONS

Although the group of patients in this study is selected in an high risk population, we would like to highlight the prevalence of HPV infections, with an high percentage of HPV co-infections (83.5%) and HR-HPV genotypes (65.5%), particularly among adult ages (31-50 years old). Furthermore there is an evidence of a worrying high presence of HPV6 and HPV16 genotypes covered by vaccine, especially in young vaccinated patients (<30 years old): HPV6 (26.9%), HPV16 (19.3%), HPV11 (13.4%), HPV18 (9.2%). Our results enforce the importance of the reduction of promiscuous sexual practices and constant condom use, even if it doesn't provide a complete protection.