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Epidemiology of high risk Human Papillomavirus infection in women in western Burkina Faso

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Background: The human papillomavirus (HPV) infection is one of the most common sexually transmitted infections in the world (Bruni et al., 2010). When high risk type (HR-HPV) is implicated, this infection may persist and lead to cervical cancer which is the most common cancer in women in sub-saharian Africa (Ferlay et al., 2008). Screening for precancerous cervical lesions may help to reduce this cancer's incidence and there are also prophylactic vaccines against cervical cancer. But, vaccines which are available in Burkina Faso target only genotypes HPV 16 and HPV 18. However, previous studies shown these genotypes are not often the most frequent in the capital city of Burkina Faso. What will be the distribution of HR-HPV in other cities ?

Methods: From May to July 2015, three hundred and one (301) women have been included in this study : 181 women at the Sourou Sanou University Hospital of Bobo-Dioulasso and 120 women at the sanitary district of Orodara. Uterine endocervical swabs have been taken in these women. Immediately after sampling, screening for precancerous lesions was done for all women by visual inspection with acetic acid and lugol's iodine (VIA/VILI). DNA obtained by extraction from the samples thus collected was used to determine the prevalence of high risk human papillomavirus genotypes through real-time PCR.

Results: Women's age ranged from 17 to 65 years with an average of 34.8 years. Among this women, 30,6% (92/301) were infected with HR-HPV and 4,7% (14/299) were positive to VIA/VILI. HPV 52 (21.19%), HPV 39 (11.86%) and HPV 33 (11.02%) were the most common genotypes of HPV. The genotype HPV 16 which is the most frequent in the world was not found in women in this study.

Conclusion: The results are consistent with those of other studies conducted in Burkina Faso, which showed that there was a predominance of high-risk HPV other than HPV 16 and HPV 18.

References

Bruni L et al. (2010). Cervical human papillomavirus prevalence in 5 continents: meta-analysis of 1 million women with normal cytological findings. *J Infect Dis*, 202, 1789-99.
Ferlay J et al. (2010). Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. *International journal of cancer Journal international du cancer*, 127 (12):2893-917.

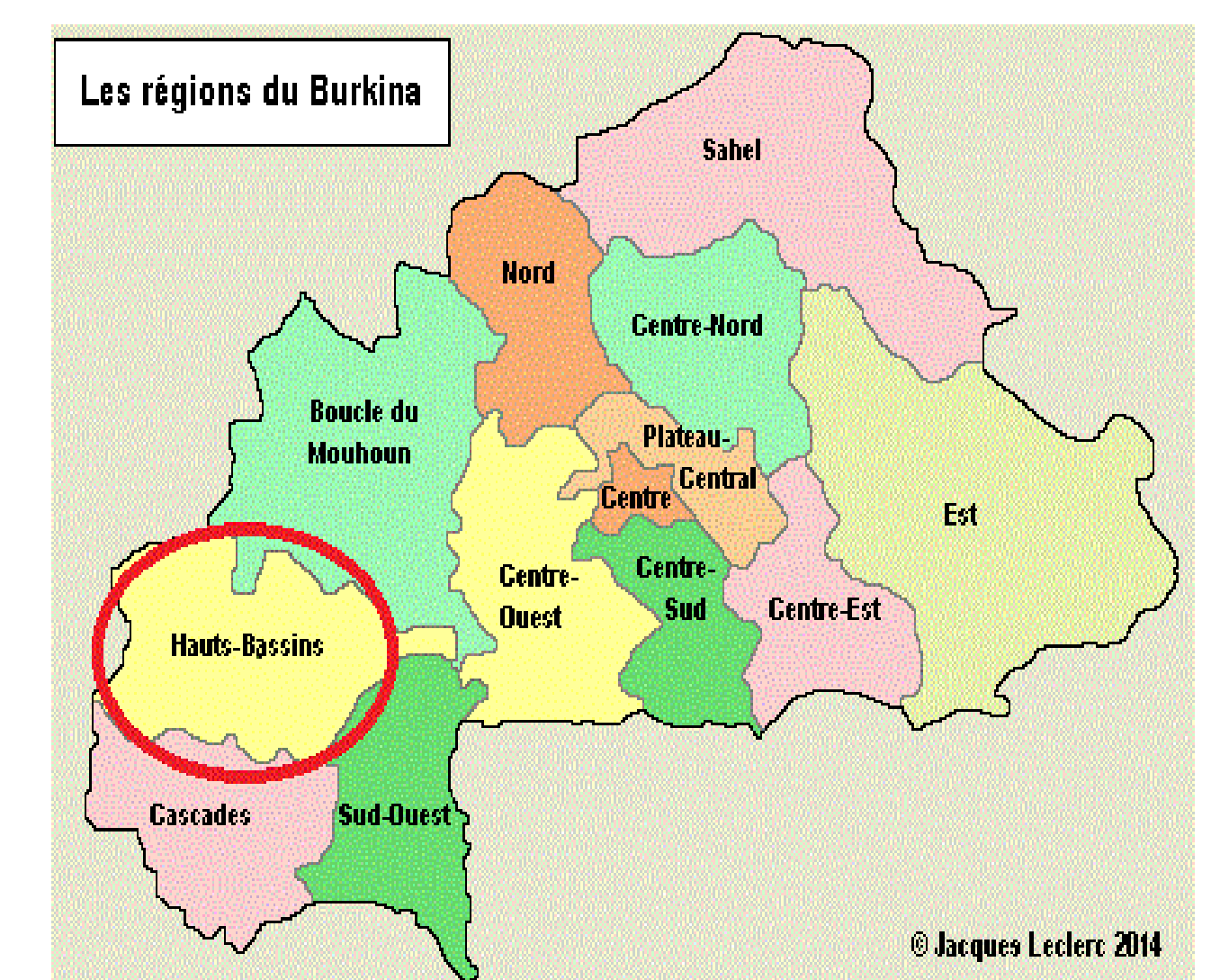


Figure 1: Burkina Faso map, Study area in red circle

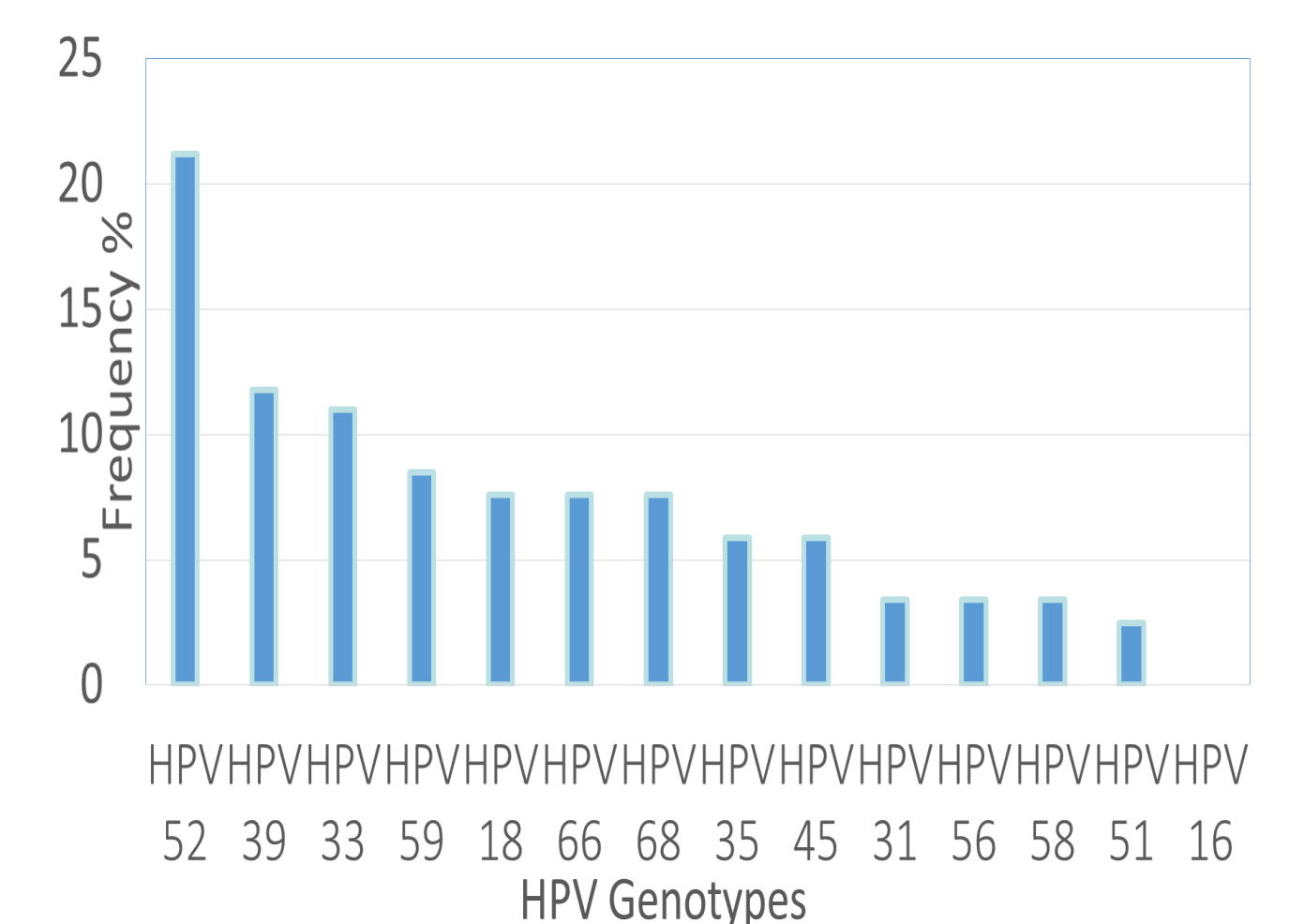


Figure 2: Frequency of high risk HPV among women