***Human Papilloma Virus Genotype Distribution Among Young Women in Latvia with Pathological Findings in Cervical Cytology***

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**Backgroud.** Cervical cancer screening and vaccination have been predominant prophylaxis methods in Latvia aiming to battle the cervical cancer. This widespread disease is most commonly caused by human papilloma virus infection. Annualy cervical cancer takes many hundred thousands of working aged womens' lives globally,1 even stressing that the mortality rate from cervical cancer in Latvia has even grown in the recent years.2

**Materials & Methods.** This study calls to highlight the present situation in Latvia regarding human papilloma virus infection rate and genotypical variation among women under 30 years old with pathological findings in cervical cytology. The study process was in accordance with the Declaration of Helsinki, approved by the The Rīga Stradiņš University Research Ethics Committee.

**Results.** In total 32 women under the age 30 with pathological cytological findings were tested for 14 human papilloma virus genotypes. This study population had following cytology findings – 13 women had cytology results A2 (ASC-US), 18 women had cytology results A3 (LSIL) and one women had cytology results A4 (HSIL). Out of these 32 women, 24 women (75,0%) tested positive for human papilloma virus. Of the 24 women who tested negative, 6 had cytology results A2 (ASC-US) and 2 had cytology results A3 (LSIL). Among positive women, 12 tested positive for one HPV genotype, while the other 12 tested positive for human papilloma virus co-infection. The most prevalent human papilloma virus genotype was found to be HPV 66 (25%), HPV 16 and HPV 56 rank second in prevalence (both 21.88%), HPV 51 comes in third (18.75%), then follows HPV 39 (12.5%), HPV 58 (9.32%), HPV 31, HPV 33, HPV 52 (each 6.25%), HPV 18, HPV 45, HPV 59, HPV 68 (each 3.13%) and none of the samples tested positive for HPV 35.

**Conclusions.** Most of the women under 30 with pathological cytology results tested positive for human papilloma virus as well (75%). Most common HPV genotype infection among women under 30 with pathological cytology finding was HPV 66 (25%). None of the available vaccines in Latvia cover this genotype, similarly to other less commonly found genotypes in this study such as HPV 56, HPV 51, HPV 39, HPV 59, HPV 68. The key findings of this study provides insight and suggestions into future human papilloma virus screening, testing, diagnostic algorithms, and vaccine modifications to better suit the needs for this specific geographical region and age group. Collected data statistical analysis and graphical representation was made using Microsoft Office 365 Excel, IBM SPSS Statistics 28. Confidence intervals were calculated using Wilson score method without continuity correction.3

**References.**

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