

**P0750 Evaluation of the incidence and genetic distribution of human papilloma virus in Skopje area (Republic of Macedonia): a five-year retrospective study**Ivanka Hadji Petrusheva Meloska\*<sup>1</sup>, Konstantin Icev<sup>1</sup>, Anica Hadji-Petrusheva Jankijevikj<sup>2</sup><sup>1</sup> Avicena Laboratory, Skopje, Macedonia, <sup>2</sup> Acibadem Sistina Hospital, Skopje, Macedonia

**Background:** The role of human papilloma virus (HPV) as the main risk factor for development of cervical intraepithelial neoplasia (CIN) is well-recognized. Epidemiological and molecular studies have implicated that each region has its own genetic distribution and prevalence of HPV types. This work is a retrospective study for the prevalence and genetic distribution of main high and low-risk HPV types in women with CIN in Skopje area.

**Materials/methods:** We evaluated a total of 950 non repetitive cervical samples in a period of five years from women in age between 16 and 55 years referred by gynecologist to perform HPV typing with diagnosis CIN I or higher. The DNA extraction was with QIAamp DNA Mini Kit, Qiagene. Anyplex II HPV 28 Detection Assay (Seegene) was used for HPV detection and typing on CFX96 Real-time PCR System (Bio-Rad). The kit simultaneously detects 19 (HR) high-risk (16,18,26,31,33,35,39,45,51,52,53,56,58,59,66,68,69,73 and 82) and 9 (LR) low-risk (6,11,40,42,43,44,54,61 and 70) HPVs.

**Results:** Our data revealed that 246 (29%) of 950 patients were positive for HPV DNA. A single HR-HPV genotype was detected in 91 (37%) of the positive samples, where the most frequently detected types were: 16,33,18,35 and 51 in 34, 25, 16, 9 and 7 patients, respectively. Single LR-HPV types were 6,54 and 70 detected in 15 (6%) patients. Multiple HPV genotype combinations were detected in the remaining 142 (58%) patients. The most frequent combinations were: HPV 16 with 35 (32 cases); HPV 16 with 31 and 35 (27 cases); HPV 16 with 18 and 31 (24 cases); HPV 35 with 33 (18 cases) and HPV 35 with 52 and 45 (11 cases). The remaining 30 patients had different combinations of HPV 31,73,45,11,66, and 6. The most frequent patients 150 (61%) were at the age between 26-45 years.

**Conclusions:** Our analyzed data are for patients not covered with HPV vaccination, introduced in 2009. However, the current vaccination in our country against HPV 16 and 18 doesn't protect the population from other frequently detected HPV types. In order to have a health future population it is necessary to revise national strategies implementing the novel laboratory data.

