Objective
The aim of this study was to evaluate the diagnostic performance of P16/Ki 67 dual stain cytology for the detection of underlying cervical intraepithelial neoplasia (CIN2+) in women with atypical squamous cells of undetermined significance (ASCUS) and low grade of squamous intraepithelial lesion (LSIL) cytology results.

Methods
One hundred and fifty-nine (n=159) consecutive pap tests were collected with liquid-based cytology (ThinPrep) from women of all ages, diagnosed with ASCUS (n=58) and LSIL (n=101) cytology results. From the residual material of ThinPrep’s vial were performed both HPV genotyping by CLART HPV3 method and dual stain P16/Ki 67(DS) immunochemistry. One case of DS cytology was excluded as unsatisfactory. All women were referred to colposcopy and the biopsy results of intraepithelial neoplasia CIN2+ were used as clinical endpoints.

Results
Out of 58 cases diagnosed with ASCUS cytology, 4 cases were histologically confirmed as CIN2+ (prevalence rate 6.8 %), as well as 19 were also histologically diagnosed with CIN2+ from the group of 101 cases with LSIL cytology results (prevalence rate 18.81 %). Furthermore, in the group of ASCUS cytology, the three cases, diagnosed with CIN2+ by histology, were identified by using the CLART HPV 3 (positivity 75 %) comparable to the two cases obtained by the DS cytology correspondently (positivity 50 %). Finally, in the group of LSIL cytology, two cases were missed by using the DS cytology (positivity 89.47 %), in comparison with the one case missed by the CLART HPV3 (positivity 94.73 %).

Conclusion
The dual stain P16/Ki67 cytology provided high accuracy for the detection of underlying CIN2+ lesions in women with ASCUS and LSIL cytology results. Nevertheless, additional studies should be conducted to further access of DS cytology, as an efficient tool, for triaging the ASCUS and LSIL cytological diagnoses.