Introduction/Background Introduction: Cervical cytology is an established method for screening of cervical cancer, but there is a lack of consensus regarding management of low grade smears. This study was undertaken to compare the performance of HPV 16/18 genotyping with p16/ki67 Dual staining for the detection of High Grade Cervical intraepithelial Neoplasia (HG CIN) in women with low grade cytology.

Methodology: 89 women between the age of 30–65 years, who had a Cervical Cytology report of ASCUS or LSIL were included. All cases were triaged with Human Papiloma Virus (HPV) 16 and 18 testing and also with P16/Ki 67 Dual Staining. All women also underwent Colposcopy and Biopsy from abnormal areas if detected or random cervical biopies were taken. A histopathology report of CIN 2 or 3 was considered as true positive. The performance of both methods was evaluated.

Results: HG CIN was found in 3.7% of ASCUS cases and 11.5% of LSIL cases. 26.2% of the study population were HPV 16/18 positive (in ASCUS cases 21.2% and in LSIL cases 33.2%) and 18.8% were Dual Stain Positive (in ASCUS cases 13.4% and in LSIL cases 27.2%). Overall the Sensitivity, Specificity, Negative predictive Value and Accuracy of HPV 16/18 genotyping to detect HG CIN was 66.7%, 77.1%, 90.1% and 76.2% whereas for Dual staining it was 66.6%, 84.8%, 97.1% and 83.5% respectively. For ASCUS cytology, Dual staining had a higher Accuracy than HPV 16/18 genotyping at 86.5% versus 78.5% 16/18 genotyping for the detection of HG CIN. Similarly for LSIL cytology, Dual Staining had a higher Accuracy at 78.8% versus 72.7% with 16/18 genotyping.

Conclusion: Both HPV 16/18 genotyping and Dual Staining are effective triage methods for the detection of HG CIN in women with Low Grade Cytology, but Dual Staining has a higher Specificity and Accuracy than HPV 16/18 genotyping.