

## **Evaluation of P16, Human Papillomavirus Capsid Protein L1 and Ki67 in Cervical Intraepithelial Lesions: Potential Utility in Diagnosis and Prognosis**

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**Abstract :** Background: Cervical dysplasia, which is potentially precancerous, has increased in young women. Detection of cervical is important for reducing morbidity and mortality in cervical cancer. This study analyzes the immunohistochemical expression of p16, HPV L1 capsid protein and Ki67 in cervical intraepithelial lesions and correlates them with lesion grade to develop a set of markers for diagnosis and detect the prognosis of cervical cancer precursors. Methods: 75 specimens were analyzed including 15 cases CIN 1, 28 CIN 2, 20 CIN 3, and 12 cervical squamous carcinoma, besides 10 normal cervical tissues. They were stained for p16, HPV L1 and Ki-67. Sensitivity, specificity, predictive values and accuracy were evaluated for each marker. Results: p16 expression increased during the progression from CIN 1 to carcinoma. HPV L1 positivity was detected in CIN 2 and decreased gradually as the CIN grade increased but disappear in carcinoma. Strong Ki-67 expression was observed with high grades CIN and carcinoma. p16, HPV L1 and Ki67 were sensitive but with variable specificity in detecting CIN lesions. Conclusions: p16, HPV L1 and Ki67 are useful set of markers in establishing the risk of high-grade CIN. They complete each other to reach accurate diagnosis and prognosis.

**Keywords :** p16, HPV L1, Ki67, CIN, cervical carcinoma

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