



The importance of p16Ki-67 in cervical precancerous lesions

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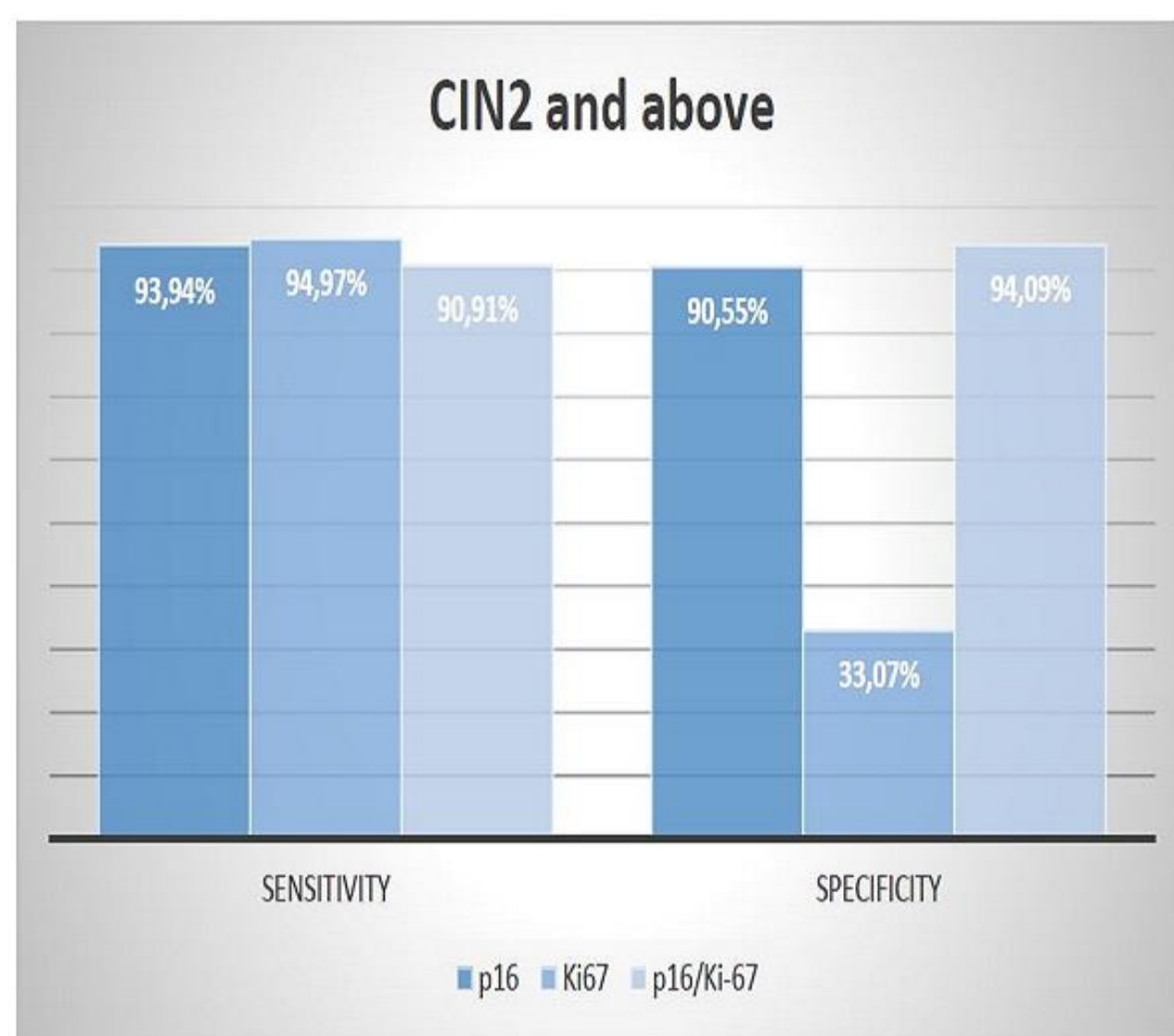
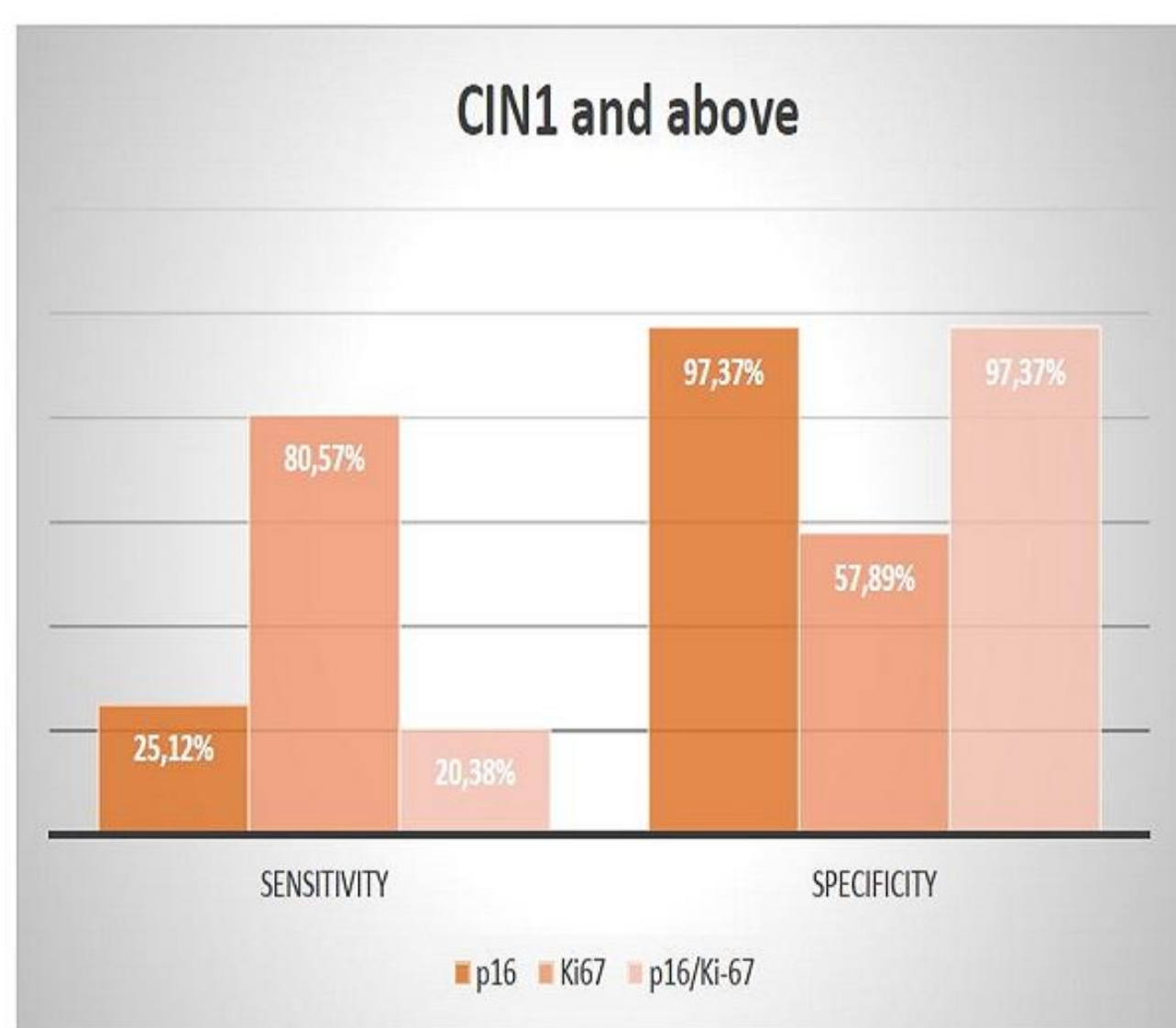
ABSTRACT

Objective: In the presence of high risk HPV, E7 oncogene causes the overexpression of p16 and Ki67 is an indicator for cell proliferation(1,2). This study aims to evaluate HPV positive women in aspect of p16 and Ki67 presence in tissues.

Methods: This is a retrospective review of 287 patients who tested positive for HPV DNA.

Results: Colposcopic biopsies revealed normal histopathological findings in 28 patients (9.8%), cervicitis in 48 patients (16.7%), cervical intraepithelial lesion (CIN) 1 in 178 patients (62.0%), CIN2 in 26 patients (9.1%), CIN 3 in four patients (1.4%) and cervical cancer in three patients (1.0%). Cervical tissue positivity for p16 was 2.6% in patients with benign histopathological findings, 16.3% in patients with CIN 1, 92.3% in patients with CIN 2, 100% in patients with CIN 3 and 100% in patients with cervical cancer. Cervical tissue positivity for Ki67 was 42.1% in patients with benign histopathological findings, 77.5% in patients with CIN 1, 96.1% in patients with CIN 2, 100% in patients with CIN 3 and 100% in patients with cervical cancer. The sensitivity and specificity of p16 positivity for CIN1, CIN2, CIN3 and cervical cancer were 25.1% (95% CI: 19.4%-31.5%) and 97.4% (95% CI: 90.8%-99.7%) respectively. When p16 positivity was combined with Ki67 positivity, the sensitivity decreased to 20.4% (95% CI: 15.2%-26.5%) and the specificity was 97.4% (95% CI: 90.8%-99.7%). The sensitivity and specificity of p16 positivity for CIN2, CIN3 and cervical cancer were 93.9% (95% CI: 79.8%-99.3%) and 90.6% (95% CI: 86.3%-93.9%) respectively. When p16 positivity was combined with Ki67 positivity, the sensitivity decreased to 90.9% (95% CI: 75.7%-98.1%) and the specificity increased to 94.1% (95% CI: 90.5%-96.7%).

Conclusion: The presence of p16 and Ki-67 in cervical tissues has a significant role in the detection of precancerous lesions and may help to predict the progression of precancerous lesions into malignancy(3,4).



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