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Anyplex II HPV test in detection and follow-up after surgical treatment of CIN2+ lesions

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Abstract

Human papillomavirus (HPV) tests differ for technology, targets, and information on the genotype and viral load. In this study, we evaluated the performance of the Seegene Anyplex II HPV HR (Anyplex) assay in the detection of cervical intraepithelial lesions (CIN) and as a test-of-cure in the follow-up after surgical treatment. One hundred and sixty-seven women referred to the European Institute of Oncology, Milan, for surgical treatment of CIN2+ were enrolled. A cervical sample was taken before treatment and at the first follow-up visit: on these samples, Qiagen Hybrid Capture 2 (HC2), Roche Linear Array HPV Test (Linear Array), cytology and histology were performed at baseline, HC2, and cytology at follow-up. Anyplex genotyping HPV test was performed on a post aliquot from liquid-based cytology specimens when available. The concordance between Anyplex and HC2 was 93.6% at baseline and 76.7% at follow-up (3-9 months after treatment), respectively. The concordance between Anyplex and Linear Array was evaluable only at baseline (92.9%). No recurrence occurred in women without the persistence of the same genotype at follow-up. Seven women relapsed: six had persistence of the same genotypes (five HPV16, one HPV33, and one HPV39), while one tested negative not only with Anyplex but also with HC2 for the persistence of low-risk genotype infection (HPV73 only detected by Linear Array). Anyplex test represents a valid option for HPV detection and genotyping in order to stratify women at risk of high-grade lesions at baseline and to monitor patients treated for CIN2+ lesions during follow-up.

Keywords: HPV; cervical intraepithelial neoplasia; follow-up; genotyping; real time PCR.