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HPV genotyping

The majority of Human Papilloma Virus (HPV) testing in the UK is performed as part of the cervical national screening program and centred on the HPV high risk genotype detection. This is in order to progress on national treatment guidelines (1). Most commercial kits are designed for this specific purpose, many not providing a specific HPV genotype just their presence or absence in very specific sample types.

High risk HPV is also known to cause anal and oropharyngeal cancers and also vaginal, vulvar and penile cancer. In addition, HPV can cause problematic cutaneous and conjunctival papillomas. There is very limited or absent test provision for these sample sites by commercial manufacturers.

HPV genotyping has been performed at Micropathology since 2001. The test is unique in that it has no known restriction on the genotype, of which there are over 170 identified genotypes. The test is successful on a large range of sample types, unlike commercial kits and is valued as one of the few assays available for non-cervical specimens.

There is an increasing realisation of the prevalence of mixed-type HPV co-infection (>35% in cervical samples) (2). Due to the nature of sequencing technology associated with HPV genotyping, determination of mixed-type HPV co-infection is difficult.

In May 2016 we are launching a High risk HPV genotyping assay to run alongside our current HPV genotyping assay. This will allow us to determine the presence low and high risk HPV genotypes with additional specificity for mixed high risk HPV in genital samples. This assay covers HPV genotypes 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 68.

References

1. “Cervical screening: professional guidance” Public Health England 2015, www.gov.uk .

2. van Hamont, Dennis, et al. "Evaluation of the SPF10-INNO LiPA human papillomavirus (HPV) genotyping test and the roche linear array HPV genotyping test." *Journal of clinical microbiology* 44.9 (2006): 3122-3129.