

# Papilloma virus DNA detection genotyping

## General:

The human papillomavirus belongs to the group of papillomaviruses, which are DNA viruses. More than 100 different types are known. The virus enters into the host cells via microlesions of the epidermis or mucosa.

Infections with papillomaviruses can lead to the appearance of warts of the skin (verrucae vulgaris, transmission in the swimming pool possible). From the clinical point of view they are of low interest since they often disappear spontaneously or are removed surgically. Genital infections (sexually transmitted) as well as laryngeal papillomas caused by papilloma virus are of high importance.

The incubation time of the virus is one to eight months, on average three months. HPV infections of the genital tract are frequent in the age group of 20 to 30 years; the epidemic rate in the population is more than 10%.

An association of specific HPV infections and carcinoma of cervix, vulva and penis has been described repeatedly. HPV16-DNA (high risk) is detected in 50% of these carcinomas. Up to 20% of the cancers contain HPV18-DNA (high risk). In a few cases HPV11-DNA (low risk) has been isolated. 15% of the cancers contain DNA sequences, which cross-react with papilloma viruses and which have not been identified so far. In bowenoid papulosis (intra-dermal thorn cell cancer of the skin) HPV18-DNA is detected in 80% of cases. The test detects the following genotypes:

Low oncogenic risk: 6, 11, 40, 42, 43, 44, 54, 61, 62, 71, 72, 81, 83, 84, and 89;

High oncogenic risk: 16, 18, 26, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 68, 70, 73, 82, and 85.

Indication: suspicious cytology, condyloma acuminata

Material: genital swab

Preanalytics: standard dry swab (cotton) or dried brush (from conventional Pap smears) in a dry transportation tube for PCR examination (without additional substances or liquids), no freezing! Liquid cytology solution (Thinprep, Surepath etc.) can be used as well if Liquid Based Cytology is requested simultaneously. Please note that Liquid based Cytology and HPV genotyping can be performed out of one Liquid Based Cytology Solution vial!

Stability: Thin Prep - 90 days at 2 to 8°C ; Surepath -14 days at 2 to 8°C ; Cervical swab/brush 1 week at 2 to 8°C ; eNAT- 1 month at 2 to 8°C

TAT: 3-5 days, FML

Method: PCR, microarray hybridization

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit  
<http://www.fml-dubai.com/parameter-listings/>