

INTRODUCTION:

The human papillomavirus, known as **Human Papillomavirus (HPV)**, is a group of more than 200 very common viruses that are mainly transmitted through skin-to-skin contact during sexual activity. It is one of the most common sexually transmitted infections in the world: most sexually active people come into contact with the virus at least once in their lifetime.

HPVs are classified into **low-risk types** and **high-risk types**, based on their ability to cause cancer.

Low-risk HPV

Low-risk strains generally do not cause cancer, but they can cause benign lesions of the skin or mucous membranes. The best known are **types 6 and 11**, which are responsible for most **genital warts (condylomas)**. These lesions can be bothersome but do not develop into cancer. In many cases, the infection is cleared spontaneously by the immune system within months or a few years.

High-risk HPV

High-risk strains, on the other hand, can cause cellular changes that may develop into cancer over time. The most important is **HPV 16**, followed by **HPV 18**, which are responsible for most cases of **cervical cancer**. Some high-risk types are also associated with other cancers, such as those of the **anus, throat, and penis**.

In most cases, HPV infection does not cause symptoms and is eliminated spontaneously by the immune system. However, when the virus persists for many years, it can cause **precancerous or cancerous lesions**. For this reason, the following are essential:

- **Prevention through HPV vaccination**
- **Regular screening with Pap test or HPV test**

**MOLECULAR ANALYSIS REPORT – HPV DETECTION AND TYPING
(HUMAN PAPILLOMAVIRUS)**

Patient: Rossi Mario

Date of birth: 01/02/1000

Sex: M

Date of sample collection: 10/05/2025

Sample type: Urethral swab

Method of analysis: Real-Time PCR that amplifies specific sequences in the L1 region of the Human Papillomavirus (HPV) genome

RESULTS

Pathogen	Result	Interpretation
<i>Human Papillomavirus</i>	NEGATIVE	No infection detected

Clinical Notes:

HPV-DNA negative for all analyzed genotypes of Human Papillomavirus (HPV), including both low-risk and high-risk types.

The amplified products analyzed are the following:

- High risk: 16, 18, 26, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 68, 69, 73, 82
 - Low risk: 6, 11, 40, 42, 43, 44, 54, 61, 70
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