A clinical study of the 9vHPV vaccine given to men to prevent long-lasting infection of the mouth (V503-049)

Protocol title: A Phase 3, International, Multi-center, Randomized, Double-blind, Placebocontrolled Clinical Trial to Study the Efficacy, Immunogenicity, and Safety of the 9vHPV Vaccine, a Multivalent L1 Virus-like Particle Vaccine, in the prevention of oral persistent infection with HPV Types 16, 18, 31, 33, 45, 52, or 58 in adult males, 20 to 45 years of age

Why is this study needed?

Human papillomavirus (HPV) is a common virus that can cause an infection in the mouth (also called **oral HPV infection**). Most people's immune systems can clear oral HPV infection and it goes away without treatment. For some people, oral HPV infections can last longer and may cause cancer 20 years later. Oral HPV infection from 7 HPV types (16, 18, 31, 33, 45, 52, and 58) can cause head and neck cancer. These cancers happen more often in men than in women.

Researchers found that a vaccine called **9vHPV** (also called the Human Papillomavirus 9-valent Vaccine, Recombinant) helps a person's body make HPV antibodies (proteins that the immune system creates to fight illness and infection). The 9vHPV vaccine protects against 9 types of HPV (6, 11, 16, 18, 31, 33, 45, 52, and 58), including the 7 HPV types that cause most HPV-related head and neck cancers. Studies have not shown whether 9vHPV vaccine can prevent oral HPV infection.

Researchers want to learn if fewer people who get 9vHPV vaccine have oral HPV infections that lasts 6 months or longer (long-lasting infection) compared to people who get placebo. A **placebo** looks like the study vaccine but does not contain any active vaccine. Using a placebo helps researchers better understand if the vaccine works.

Who will take part in this study?

About 6,000 healthy men who are 20-45 years old will take part in this study. They will:

- Have had at least 1 sexual partner at some time during their lives
- Never have had HPV-related head and neck cancer or an HPV anal or external genital lesion (wart or cancer)

What vaccines are being given?

People will be assigned by equal chance to get 3 doses of one of these:

- **9vHPV vaccine** given in the arm as a shot on Day 1, Month 2, and Month 6
- Placebo given in the arm as a shot on Day 1, Month 2, and Month 6

How is this study designed?

The study is designed in 2 parts, the base study and the extension study. Each person will give blood and other samples, and answer questions during the base study. People who received placebo or did not receive all 3 doses of 9vHPV vaccine during the base study may receive up to 3 doses of 9vHPV vaccine during the extension study. No person will receive more than 3 doses

of 9vHPV vaccine during the entire study. Neither the people in the study nor the researchers will know who is getting 9vHPV vaccine or placebo (**double-blind study**).

Each person will be in this study for up to 5 and a half years (66 months).

What are the goals of this study and how will they be measured?

Main goal	How it will be measured
To learn if fewer people who get 9vHPV vaccine have long-lasting oral HPV infections compared to people who get placebo. This main goal looks at the 7 HPV types that are known to cause most head and neck cancers (high risk types).	The number of people who got an oral HPV infection caused by HPV types 16, 18, 31, 33, 45, 52 or 58 that lasts 6 months or longer
Other goals	How they will be measured
To learn if fewer people who get 9vHPV vaccine have long-lasting oral HPV infections compared to people who get placebo. This goal looks at 2 HPV types that are not as high a risk for causing cancer.	The number of people who got an oral HPV infection caused by HPV type 6 or 11 that lasts 6 months or longer
To learn how well the immune system	At Month 7:
responds to 9vHPV vaccine by making antibodies	 The number of people who have antibodies to each HPV type The average level of antibody to each HPV type
To learn if 9vHPV vaccine is safe and well-tolerated	 Up to 5 days after any shot, the number of people who had: Certain adverse events (AEs) including pain, redness or swelling where they got the shot. Adverse events are health problems that happen or worsen during a study. A high body temperature (fever)
	 Up to 15 days after any shot, the number of people who had: An AE anywhere in their body A serious adverse event (SAE). SAEs are serious health problems that happen or worsen during the study.
	By Month 66, the number of people who had an SAE that the researchers think may be related to the 9vHPV vaccine.

What are the possible benefits and risks?

The 9vHPV vaccine has been shown in other studies to be well-tolerated and work to prevent HPV infection and HPV-related diseases caused by 9 types of HPV. The 9vHPV vaccine may or may not prevent people from getting oral HPV infection. This study has an external group of experts that monitors the overall risk and benefit of the study.

More information about the benefits and risks is in the Investigator Brochure, Protocol, and Informed Consent documents.