What is HPV?

Human Papillomavirus (HPV) family is a group of viruses with strains that can be divided into low and high-risk types.

**Low-Risk HPV Type**
Commonly cause warts or papillomas in the mouth, throat or genitals.

**High-Risk HPV Type**
Can cause cancers of the oropharynx (throat) and anogenital regions (anus, cervix, vagina, vulva in women; anus and penis in men).

How is HPV transmitted?

HPV is passed by direct contact with infected skin or mucus membranes during oral, anal, or vaginal sex with someone who has the virus and may even be passed through open mouth kissing.

Is HPV common?

- HPV is the most common sexually transmitted disease in America. Nearly all men and women will get some type of HPV at some point in their lives.
- In most cases, the virus is cleared by the body’s immune system.
- When the virus is not cleared (1-2% of cases), the persistence of the virus can put people at risk for the development of papillomas (low-risk HPV) or cancer (high-risk HPV).

What is OPC?

- HPV-related OPC is the most common HPV-related cancer in the United States, recently surpassing cervical cancer.
- HPV-related OPCs most commonly arise in base of tongue and tonsillar region of the throat.
- Cancer in the other regions of the oropharynx (soft palate, uvula, and walls of the throat) commonly are caused by non-HPV-related factors, such as tobacco and alcohol.

Who is at risk for HPV-related oropharyngeal cancer (OPC)?

- HPV-related OPC is more common in men (4:1 male to female ratio)
- Typical presentation is in the early to mid 50s
- High risk groups include those with early sexual debut, a large number of lifetime oral sex partners and partners of individuals who that have a known HPV-related cancer
- While marijuana may increase risk of developing these HPV-related OPC, many patients lack a tobacco smoking history
What is the HPV vaccine and who should get it?

- **Gardasil 9** is the only FDA approved HPV vaccine available in the United States.
- This vaccine protects against 7 high-risk HPV types and 2 low-risk HPV types.
- Per the FDA recommendations, boys and girls ages 9 through 45 years should follow the same dosing schedule as young adults, ideally starting the series at age 11 or 12.
- The vaccine is given as a 2 shot series (3 if started after the 15th birthday) and has been shown to be safe and effective.

How does an HPV-related OPC present?

The **most common** presentation for an HPV-related oropharyngeal cancer is a painless lump in the neck, which is a lymph node harboring the disease.

**OTHER COMMON PRESENTATIONS INCLUDE:**
- Sore throat
- Sensation of something stuck in throat
- Ear pain
- Pain with swallowing
- Trouble swallowing
- Change in voice

**DIAGNOSIS OF THESE CANCERS CAN BE ACCOMPLISHED WITH:**
- Fine needle aspiration of the involved lymph node
- Endoscopic evaluation
- Biopsy of the oropharynx by an otolaryngologist
- If no obvious tumor can be found, tonsil tissue in the throat may need to be removed in an attempt to find the cancer.

How is HPV-related OPC treated?

- Involves surgery, radiation, or chemotherapy, either alone, or in combination with each other.
- Can result in significant short- and long-term side effects such as difficulty swallowing, change in speech, taste disturbance, dryness of the mouth and throat.
- A team of head and neck cancer specialists will determine the best treatment combination for patients based on the extent of the cancer and will result in least amount of side effects.

How can HPV-related OPC be prevented?

- Avoid infection with high-risk HPV. This can be done by avoiding exposure through safe sex practices.
- HPV vaccination also reduces the risk of contracting the virus in select populations.

What are the side effects of HPV vaccine?

**MOST COMMON**
- Pain, redness or swelling at the site of the injection

**OTHER COMMON**
- Dizziness
- Fainting
- Nausea

**SEVERE**
- Is extremely low risk and is similar to other vaccines