

HPV: Making the Move to Immunization Advocate; Personal Perspectives & Cancer Prevention

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Financial Disclosures

- Kevin Dahl and Gail Petersen Hock, faculty for this CE activity, have no relevant financial relationship(s) with ineligible companies to disclose.
- None of the planners for this activity have relevant financial relationships to disclose with ineligible companies.
- The Arizona Alliance for Community Health Centers is accredited by the Arizona Medical Association to provide medical education for physicians.
- The Arizona Alliance for Community Health Centers designated the 2025 Arizona Immunization Conference educational activity for a maximum of 11 hours AMA PRA Category 1 Credits Physicians should only claim credit commensurate with the extent of their participation in the activity.
- The Arizona Pharmacy Association is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education.

Objectives

- 1. Summarize the types of HPV related cancers**
- 2. Understand the value of personal stories in the prevention of HPV related cancers**
- 3. Develop a patient/population based strategy to improve HPV immunization rates in practice.**

Terminology

Epidemiology – the study of the distribution and determinants of health-related states in a specified population

Natural history of disease – typical progression of a disease from its onset to resolution, or death, in the absence of any medical intervention.

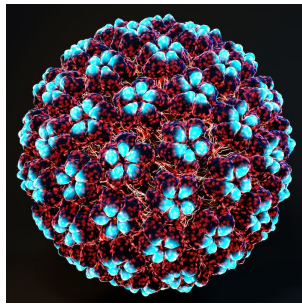
Incidence- number of new cases of a condition in a population in a given time period

Prevalence – proportion of the population with a condition during a specific time period (new and existing cases)

Case – specific criteria for person, place, time and clinical features

Epithelium – type of thin tissue in the body covering all internal and external surfaces

Oncogenic – causing development of a tumor.



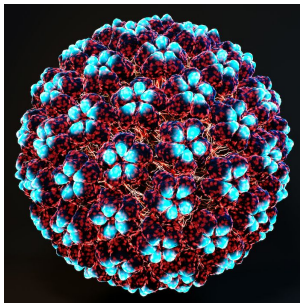
Human Papillomavirus

- Small DNA virus – high communicability
 - Non-enveloped, double -stranded
- More than 200 types identified
- 40 infect mucous membranes
- Transmission – close intimate contact
- Most infections are asymptomatic & transient

"HPV is so common that nearly all sexually active men and women get the virus at some point in their lives."

- **HPV Prevalence**
 - 42 million
- **HPV Incidence**
 - 13 million

Resource retrieved 1-28-2025 from <https://www.cdc.gov/hpv/about/index.html>



HPV Types

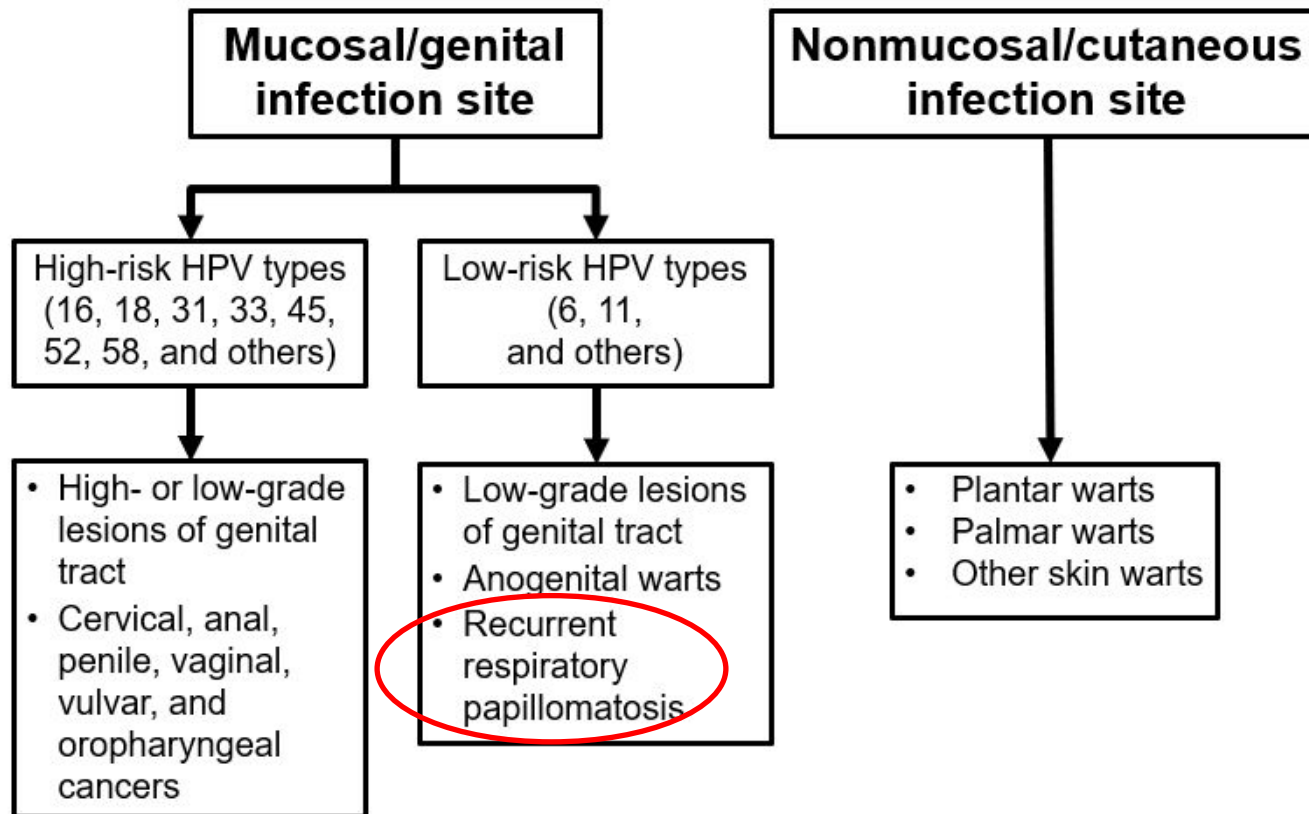
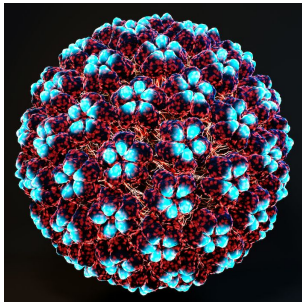


Table retrieved from <https://www.cdc.gov/vaccines/pubs/pinkbook/hpv.html>



HPV Related Cancers

- **Cervical – virtually all**
- **Oropharyngeal – 70%**
- **Anal – 91%**
- **Penile – 63%**
- **Vaginal – 75%**
- **Vulvar- 69%**

CDC (2022, October)

Cervical Epithelium

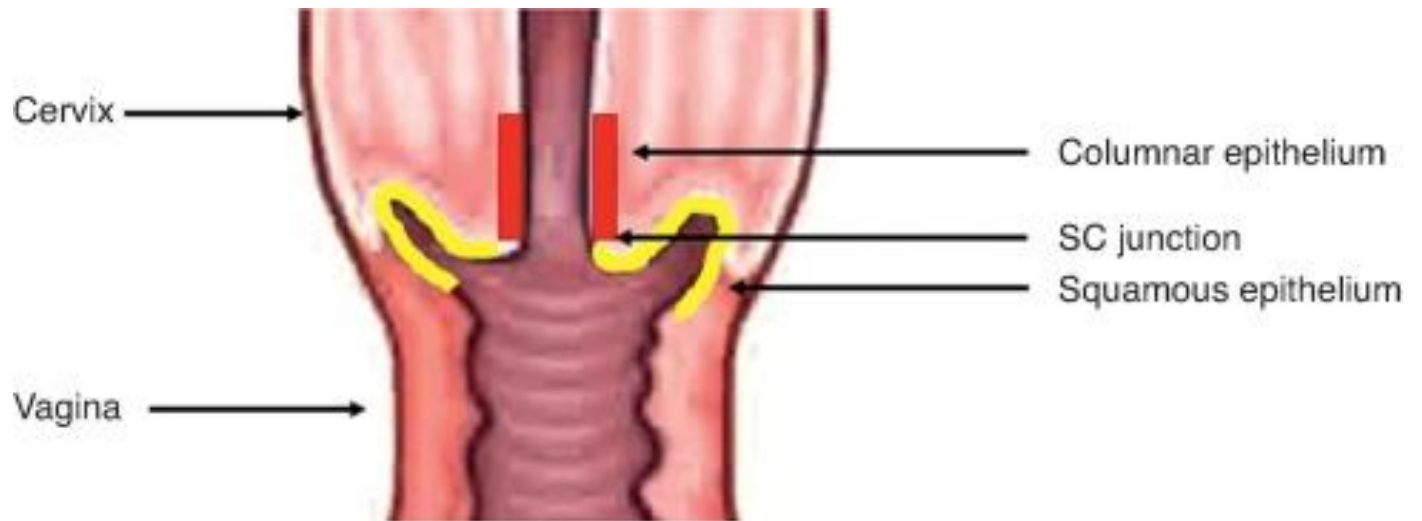
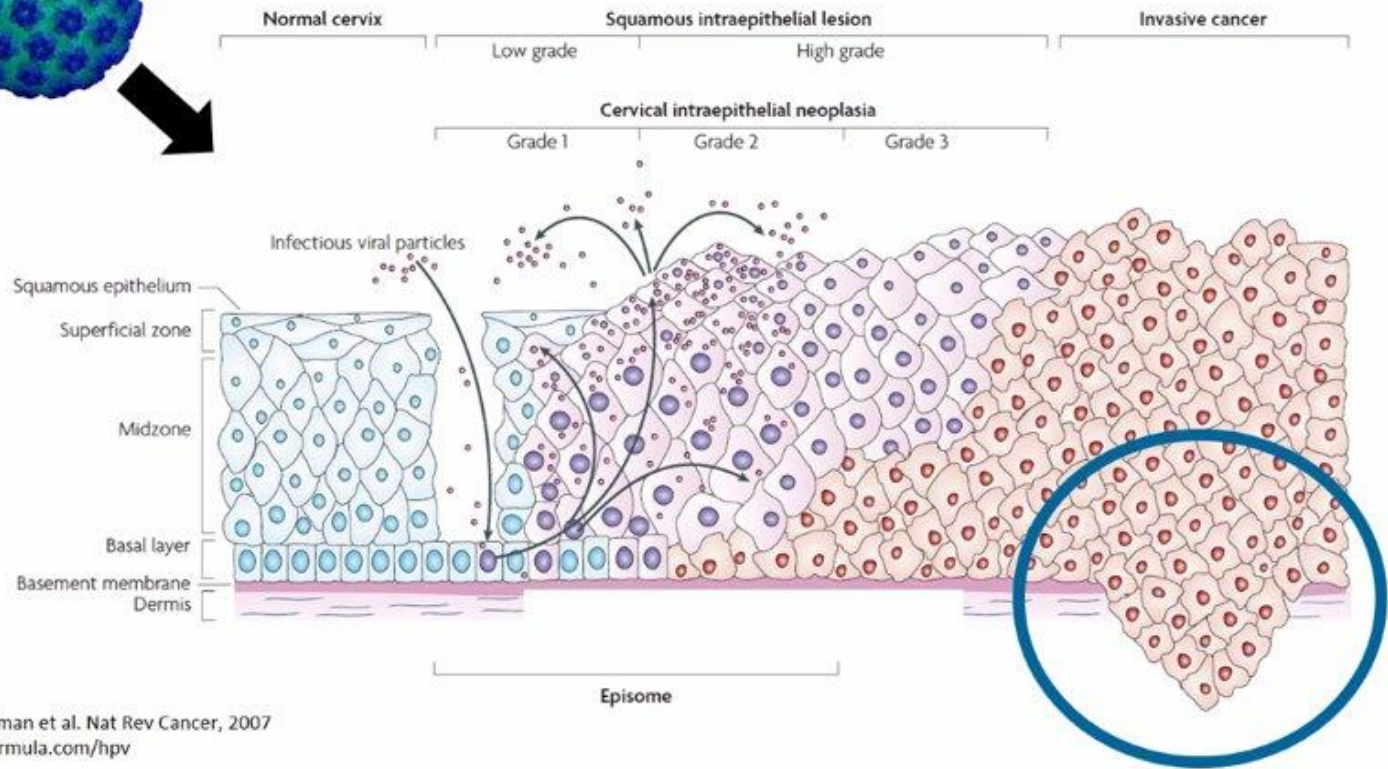
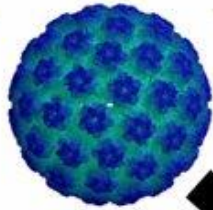


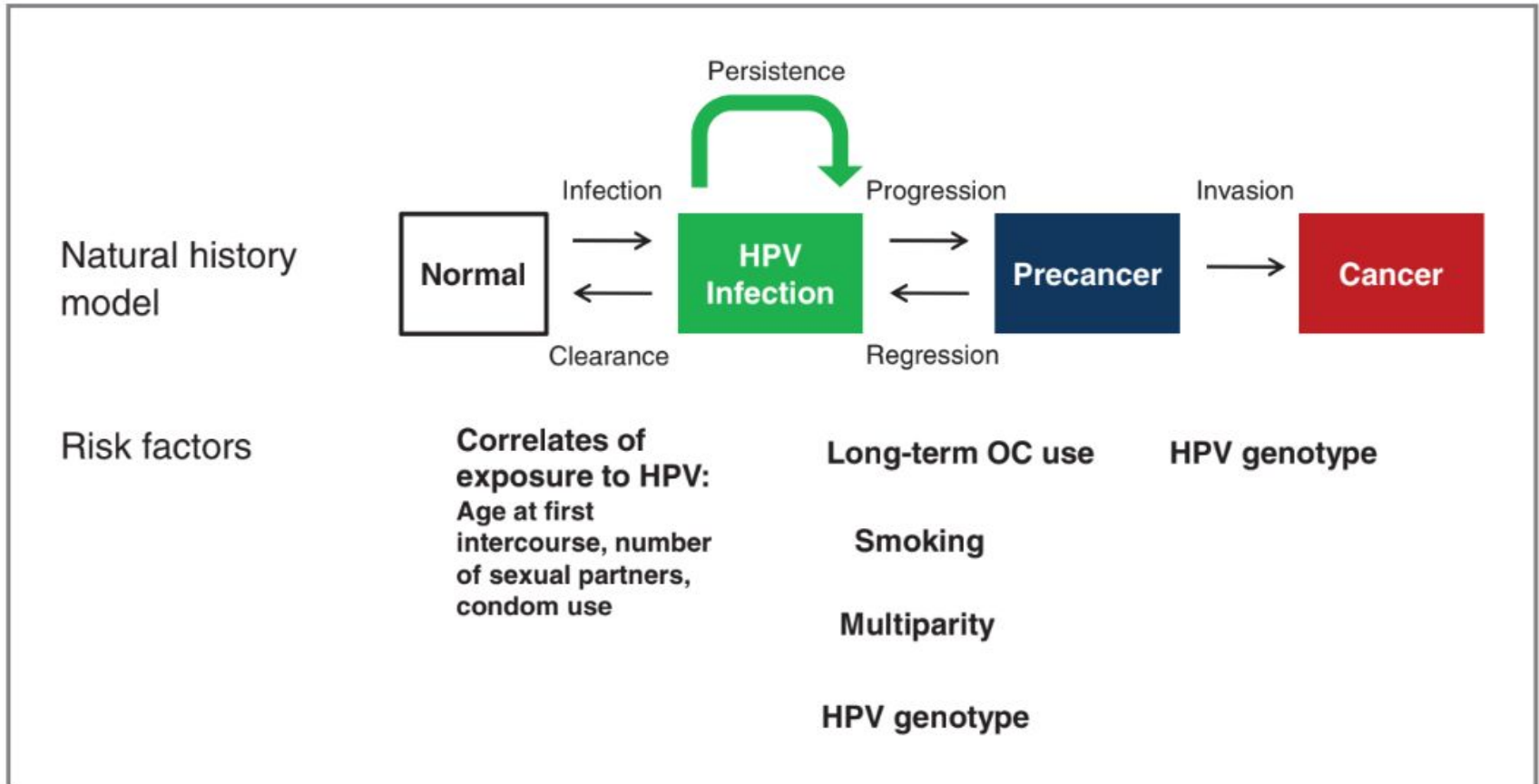
Image retrieved from
<https://www.sciencedirect.com/topics/medicine-and-dentistry/cervix>

Natural history of epithelial HPV infection



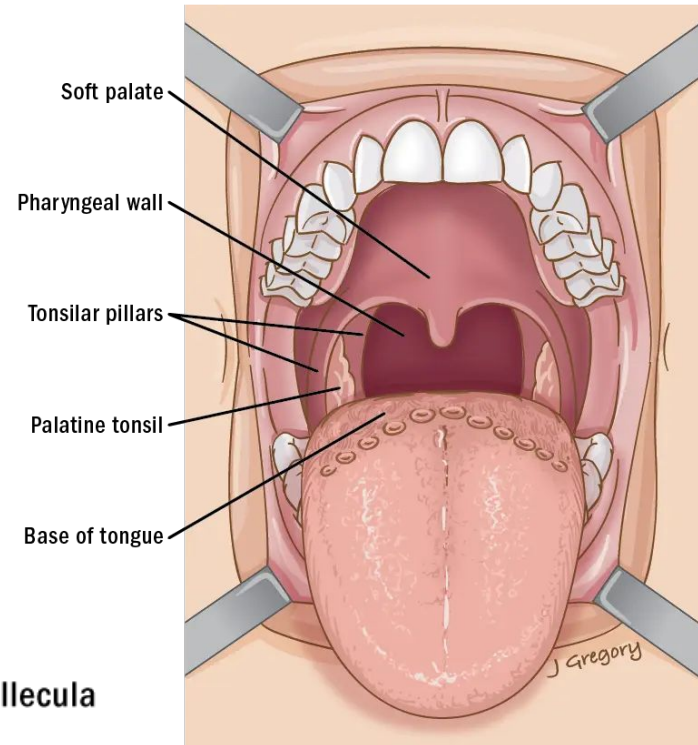
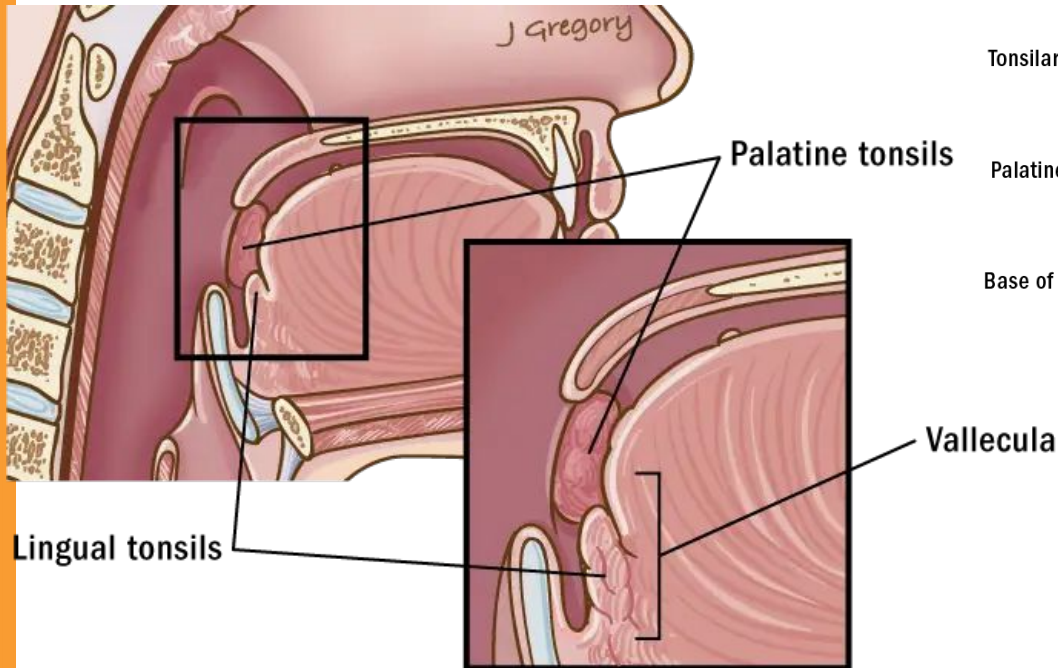
Woodman et al. Nat Rev Cancer, 2007
Scarformula.com/hpv

Natural History Cervical Cancer



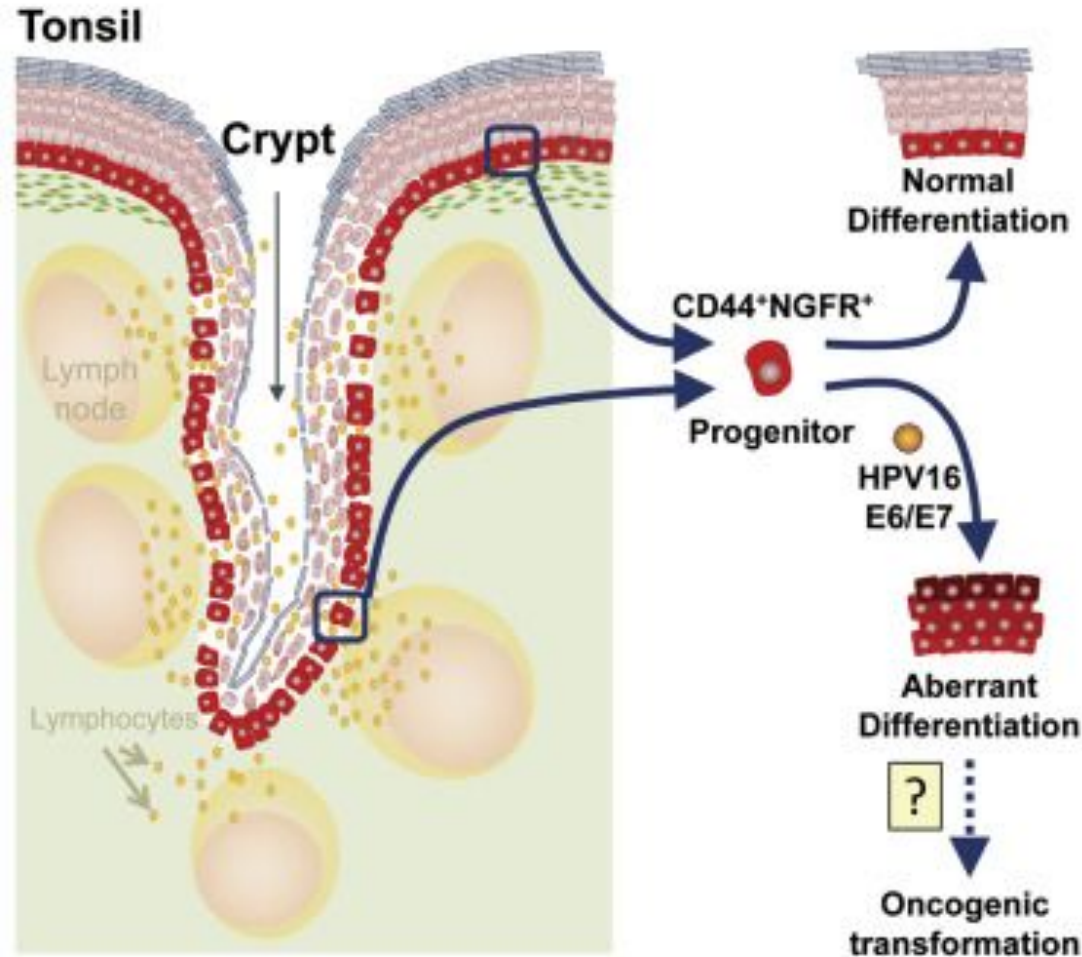
Schiffman & Wentzensen (2013, April). p. 554

Oropharynx Anatomy



Images retrieved from
<https://thancguide.org/cancer-types/throat/pharyngeal/oropharyngeal/anatomy/>

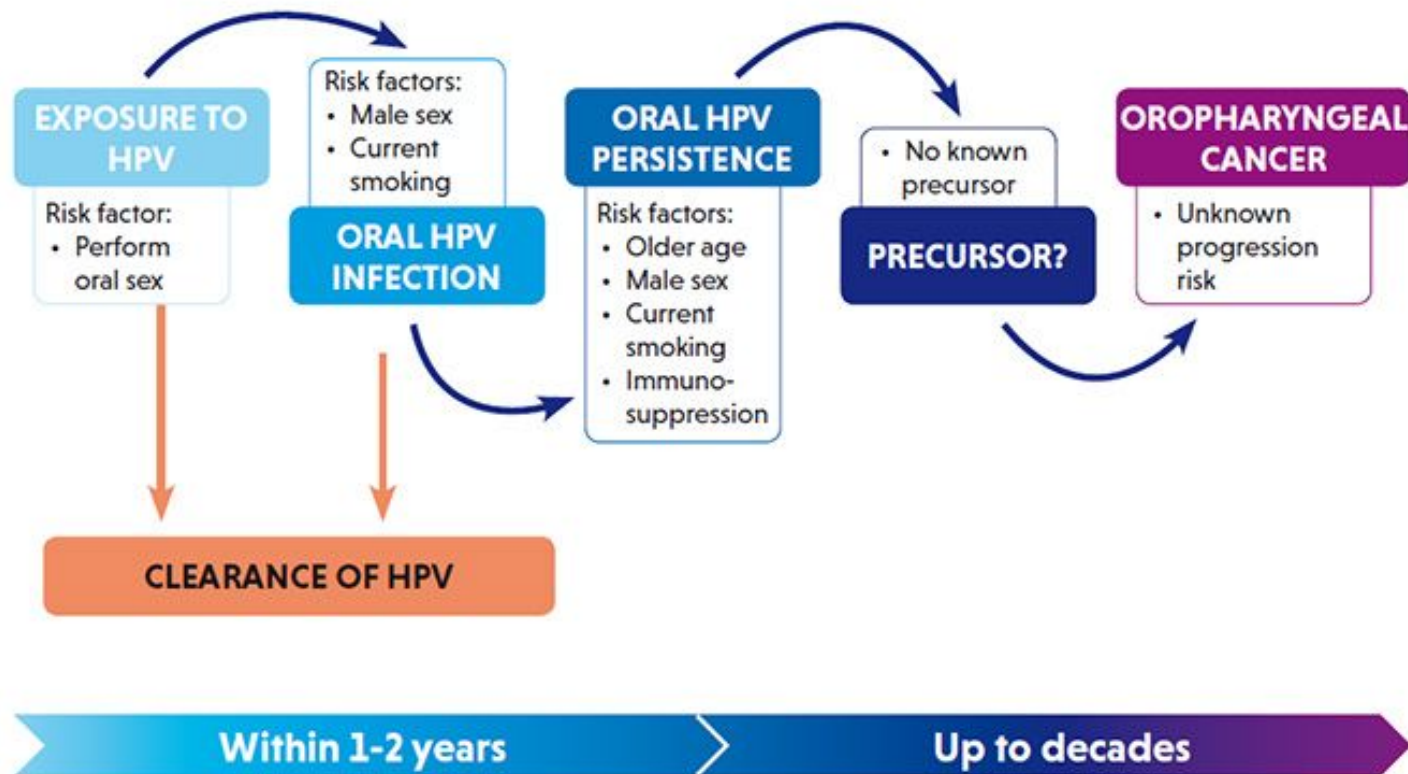
Tonsillar Crypt Epithelium & HPV



Natural History Oral HPV

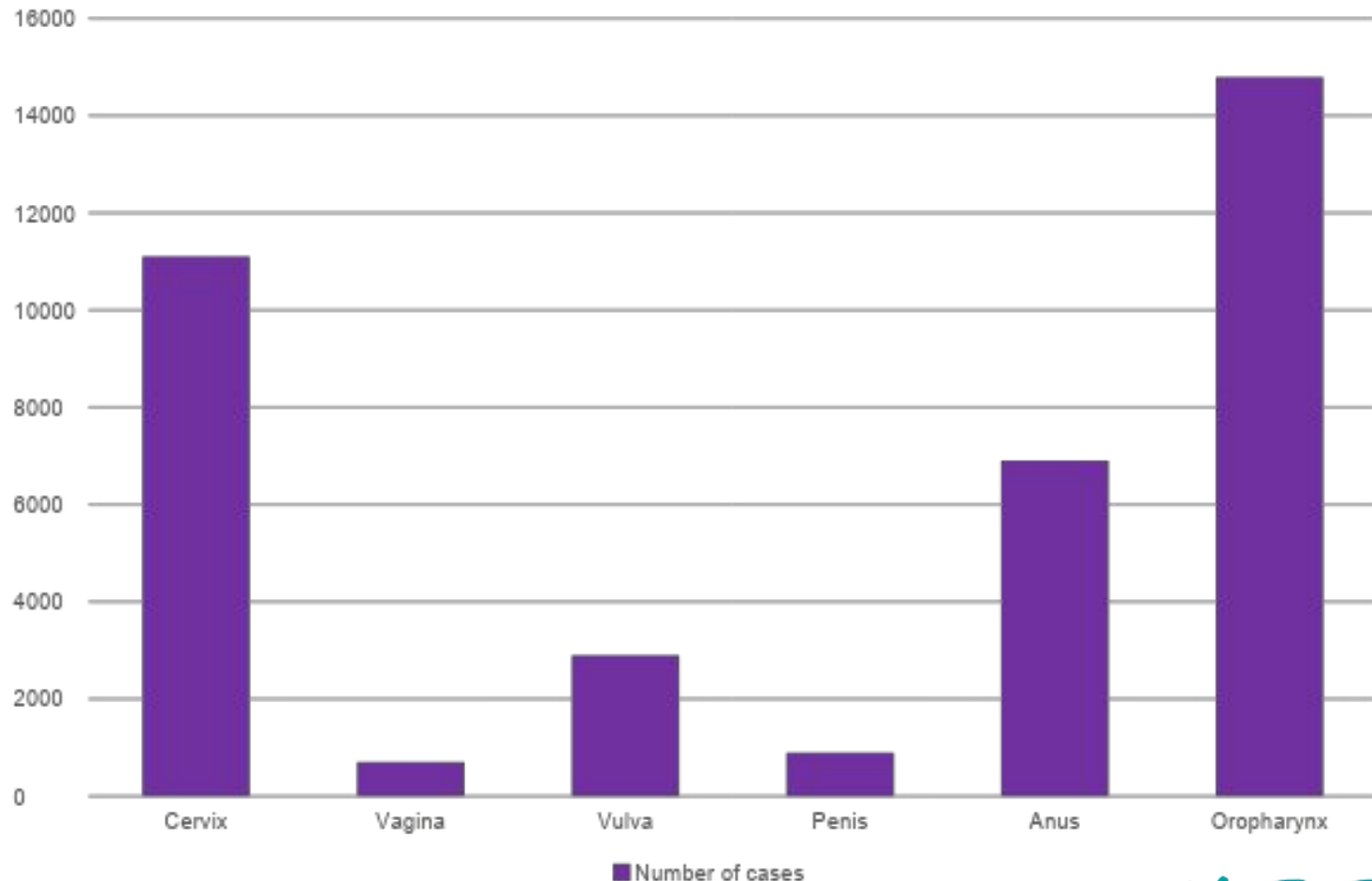
Figure 1

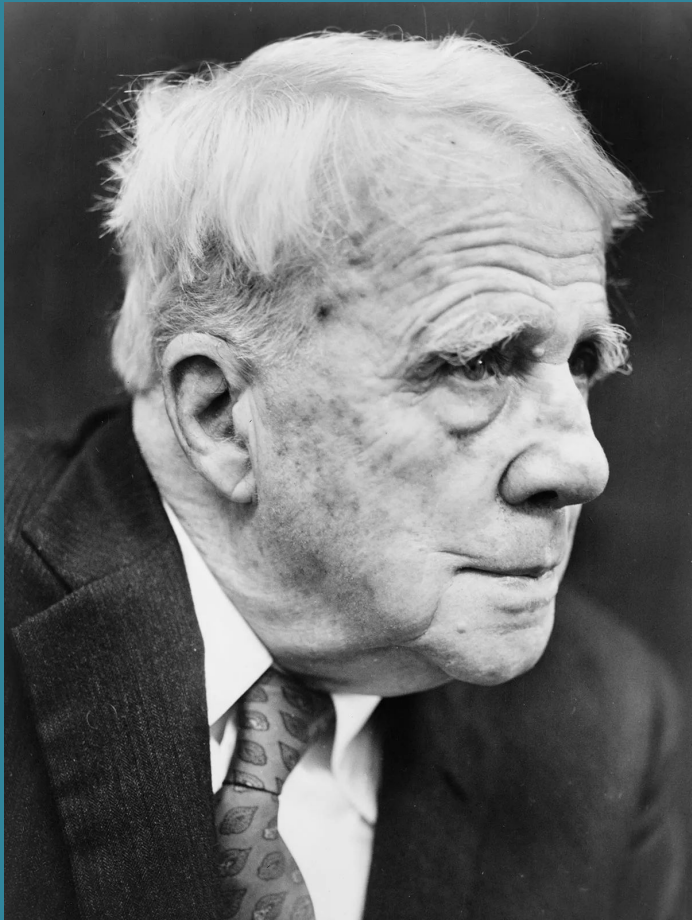
Natural history of HPV-related oropharyngeal cancer: knowns and unknowns.



Annual Estimated (U.S.) HPV Attributable Cancers

Number of Annual HPV CA Cases





"I didn't
recognize him
I wasn't
looking for him."

Robert Frost

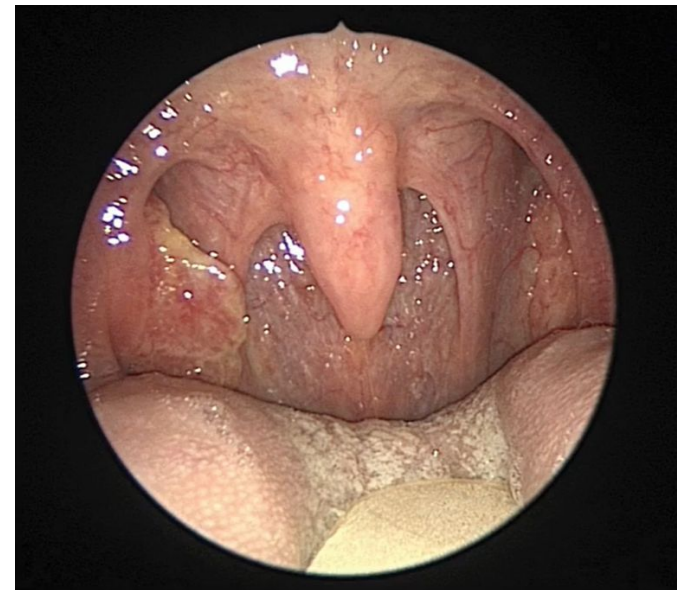
Screening for Oral HPV Cancers

- Early infection has no S & S
- No FDA approved screening tests
- Movement towards more education for dentists, dental hygienists
- Reliant on visual/physical exam

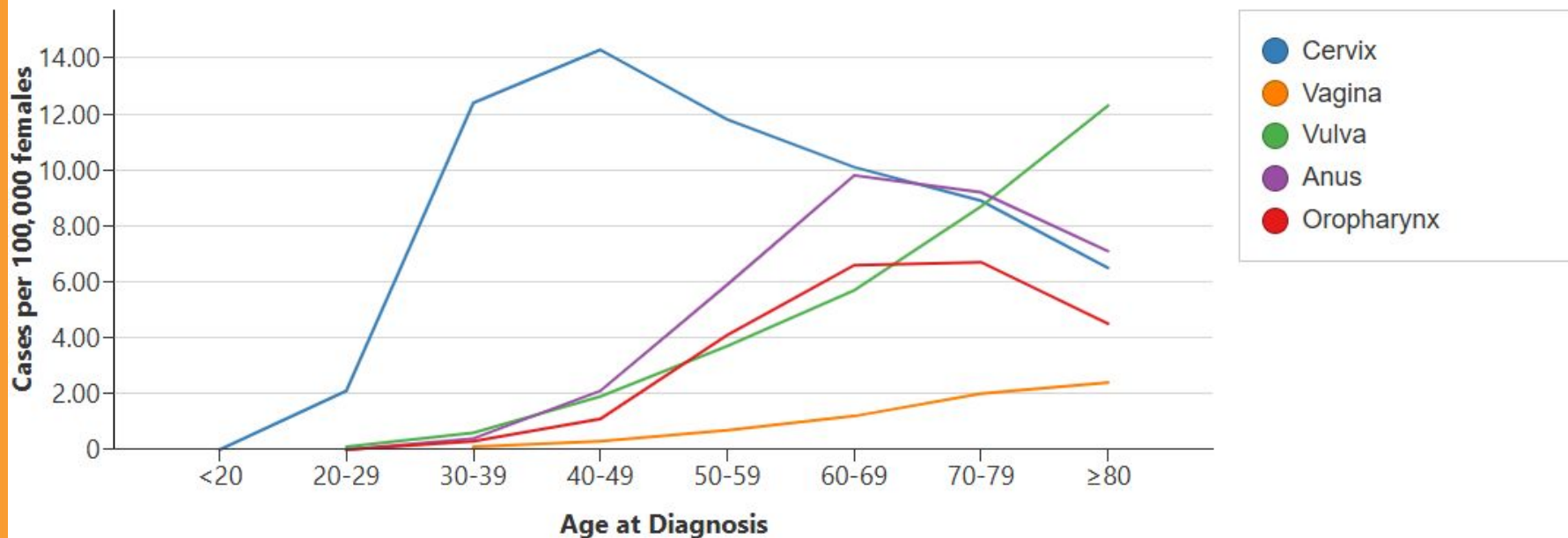


Signs and Symptoms

- **Neck mass (unilateral)**
- **Oropharyngeal asymmetry**
- **Dysphagia**
- **Dysphonia**
- **Otalgia**
- ***Refer to otolaryngology***



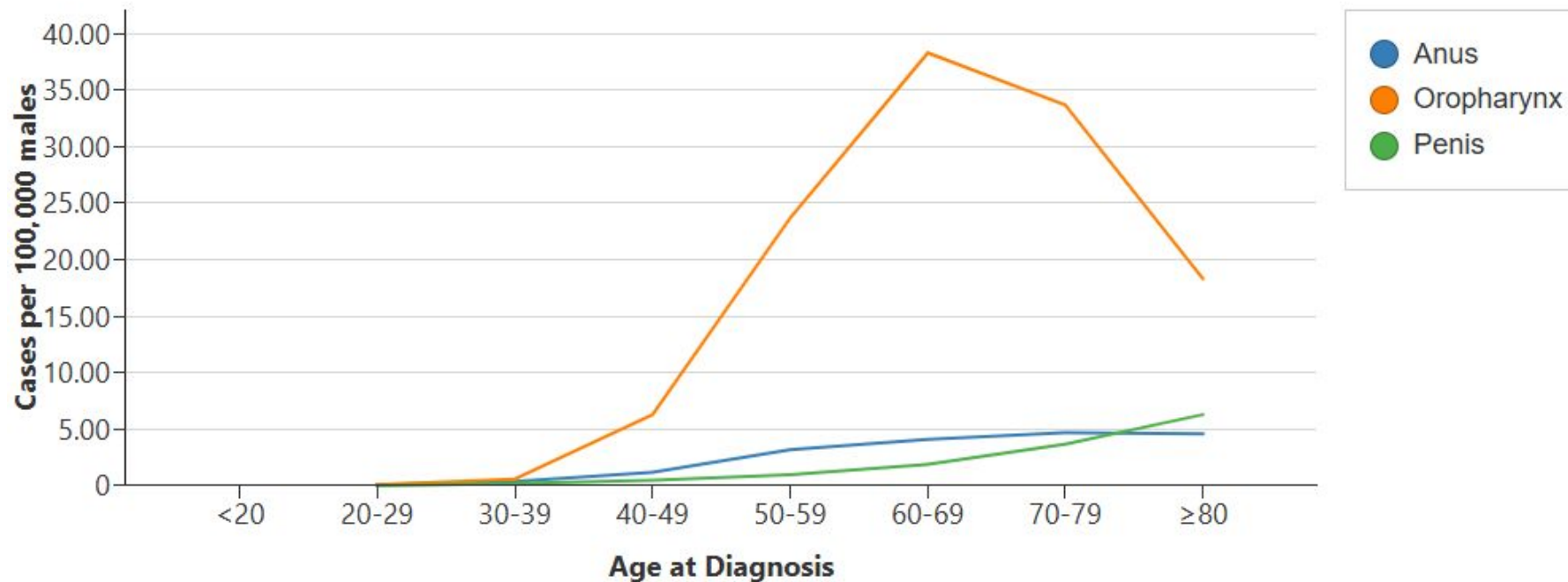
Rates of HPV-Associated Cancers and Age at Diagnosis Among Women in the United States per Year, 2017-2021



Graph retrieved 1-28-2025 from

https://www.cdc.gov/cancer/hpv/diagnosis-by-age.html?CDC_AAref_Val=https://www.cdc.gov/cancer/hpv/statistics/age.htm

Rates of HPV-Associated Cancers and Age at Diagnosis Among Males in the United States per Year, 2017–2021

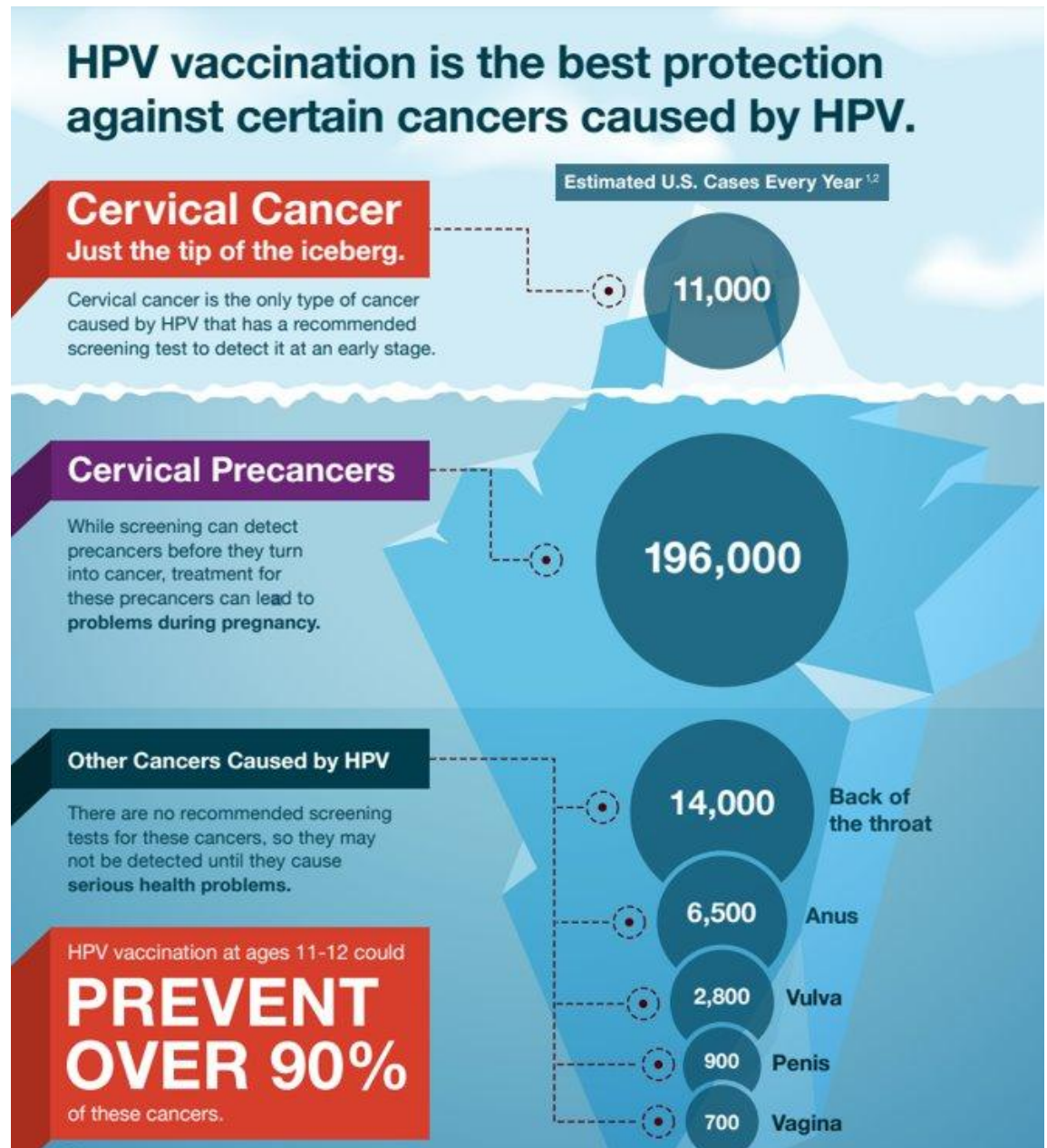


Graph retrieved 1-28-2025 from

https://www.cdc.gov/cancer/hpv/diagnosis-by-age.html?CDC_AAref_Val=https://www.cdc.gov/cancer/hpv/statistics/age.htm

Burden of disease (cancer only) related to HPV

Infographic retrieved from <https://www.cdc.gov/hpv/hcp/hpv-important/infographic-hpv-screening-508.pdf>





Kevin Dahl

Survivor to Advocate



HPV Awareness Day



HPV Awareness Day



HPV Awareness Day



What's Your Role in Reducing the Risk of HPV Related Cancers?



Common Ground

“Preventing cancer
is better than treating it”

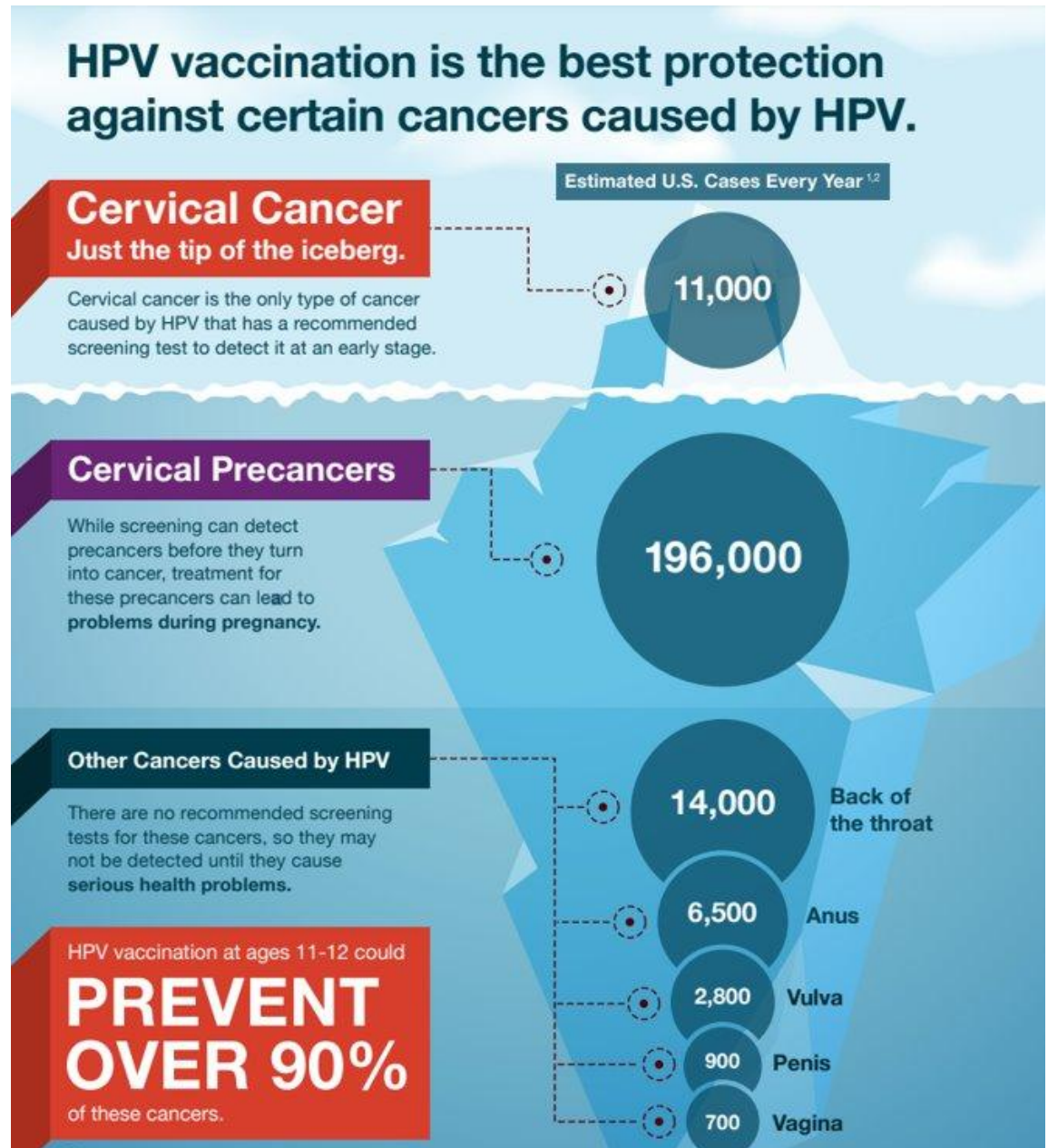
*5/21/2014 – Partnering for Prevention
Sea to Summit, Seattle, WA*

Melinda Wharton, MD, MPH

Acting Director, National Center for Immunization and Respiratory Disease, CDC

Burden of disease (cancer only) related to HPV

Infographic retrieved from <https://www.cdc.gov/hpv/hcp/hpv-important/infographic-hpv-screening-508.pdf>

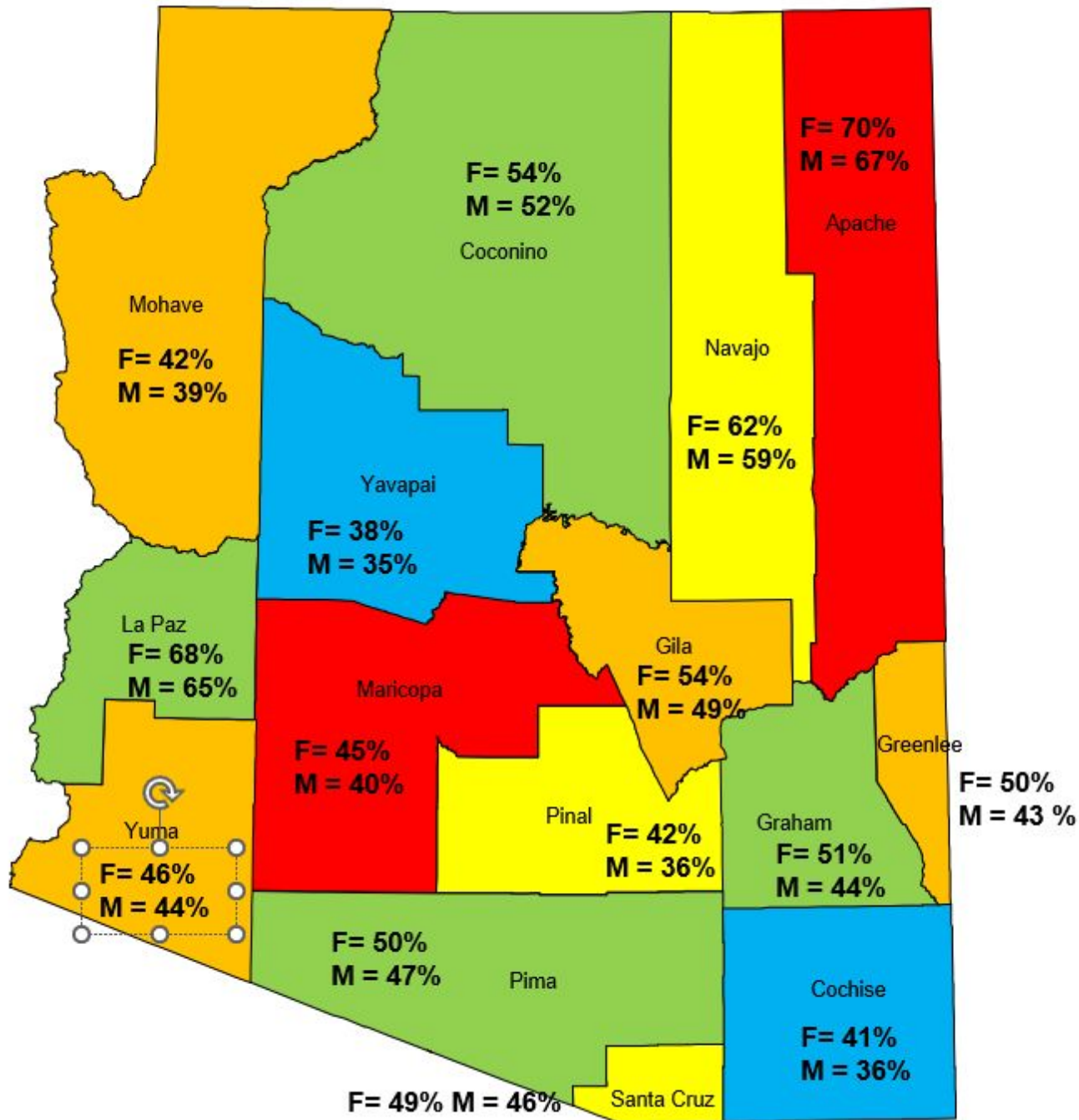




ASIIS data HPV Vaccination Completion

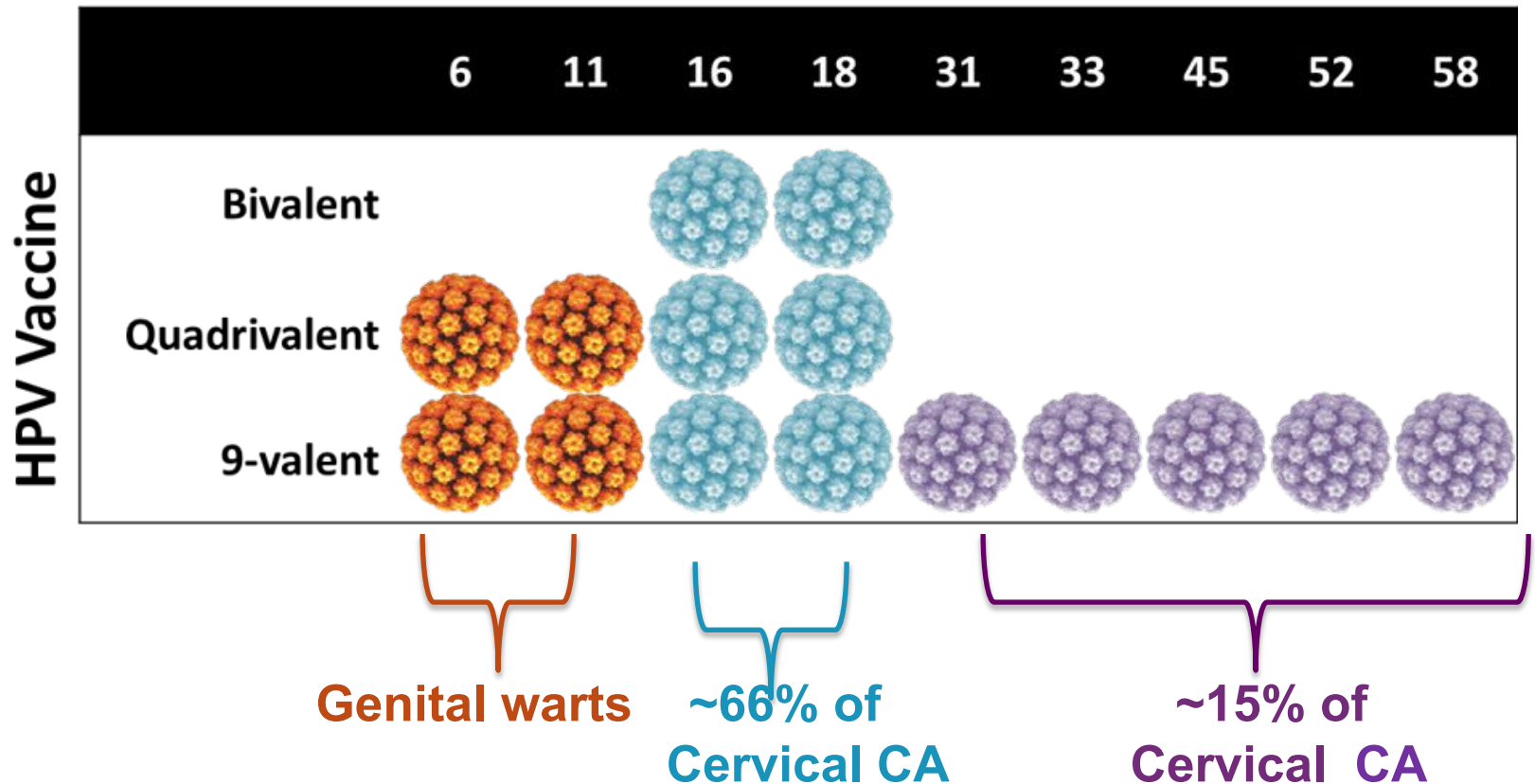
2024 Q4
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ADHS
Bureau of
Immunization
Services



HPV Vaccination

HPV Types Included in Vaccine



Adapted from Petrosky et al. MMWR. 2015.

HPV Vaccine is Cancer Prevention

- **Potential to prevent 33,700 HPV related cancers annually**



Image & resource retrieved from:
<https://www.cdc.gov/hpv/parents/vaccine/six-reasons.html>

Routine Adolescent Vaccination Series

- Meningococcal serogroup A, C, W, Y (dose 2 at 16 years)
- Meningococcal serogroup B (see dosing schedule)
- Tdap – Tetanus, diphtheria & acellular pertussis
- **HPV – Human papillomavirus**
 - 2 doses if started prior to age 15
 - 3 doses if started at or after age 15
- Annual influenza

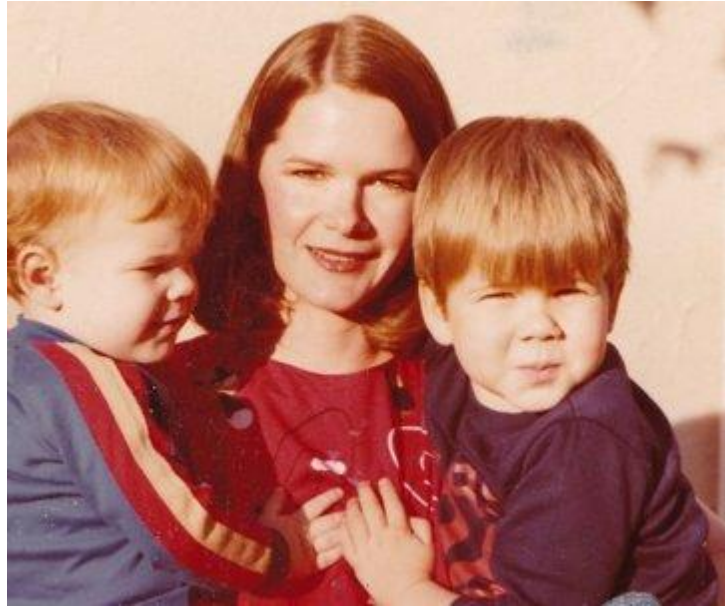


Start at 9!

Adult HPV Vaccination

- Ages 15-26
 - 3 dose series
- 27 - 45 years
 - Shared clinical decision making
 - 3 dose series

Thank you!



**“When we miss an opportunity for
HPV vaccine,
we create an opportunity for Cancer”
Gail Petersen Hock**

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