

# Cervical Cancer

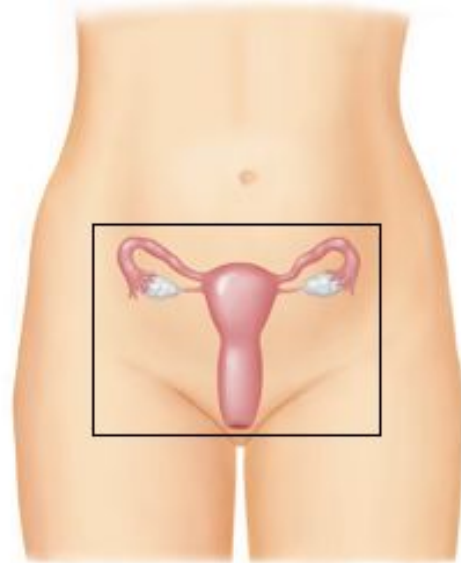
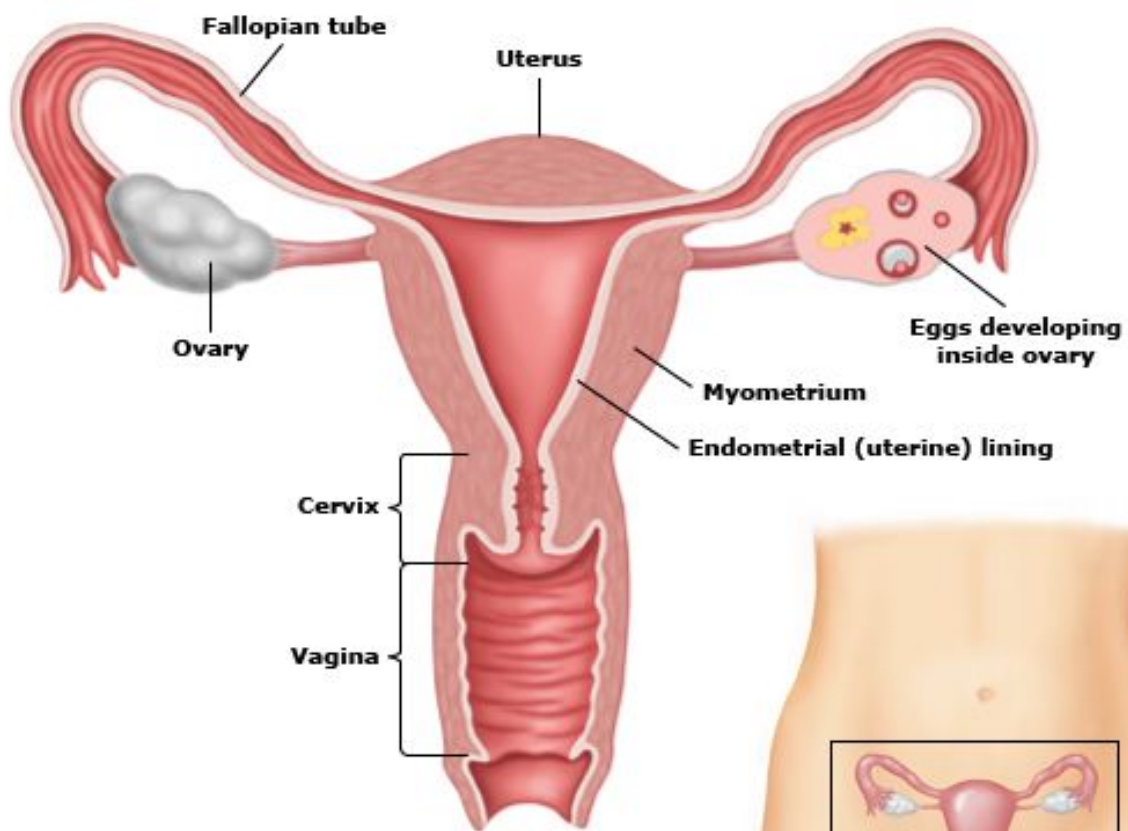
UNC Mini Med School  
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Halei Benefield  
Student Speaker

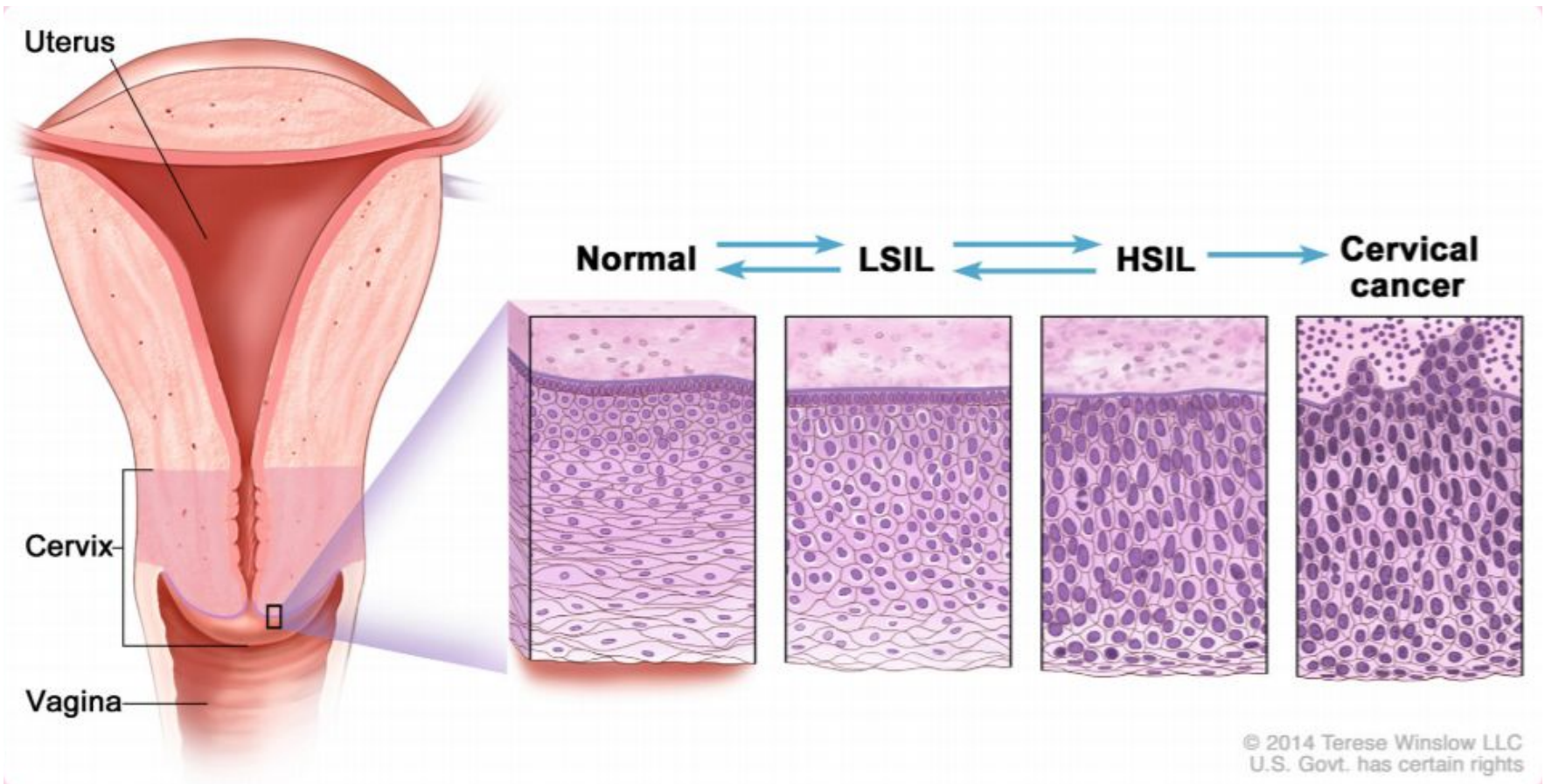
# Overview

- What is the cervix?
- What is cervical cancer?
- What causes cancer in the cervix?
- How do I know if I have it?
- How bad is cervical cancer? How is it treated?
- How do I prevent cervical cancer?
- About me!

What is the cervix?



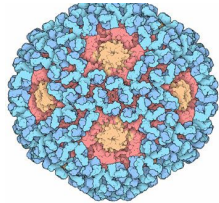
What is cervical cancer?



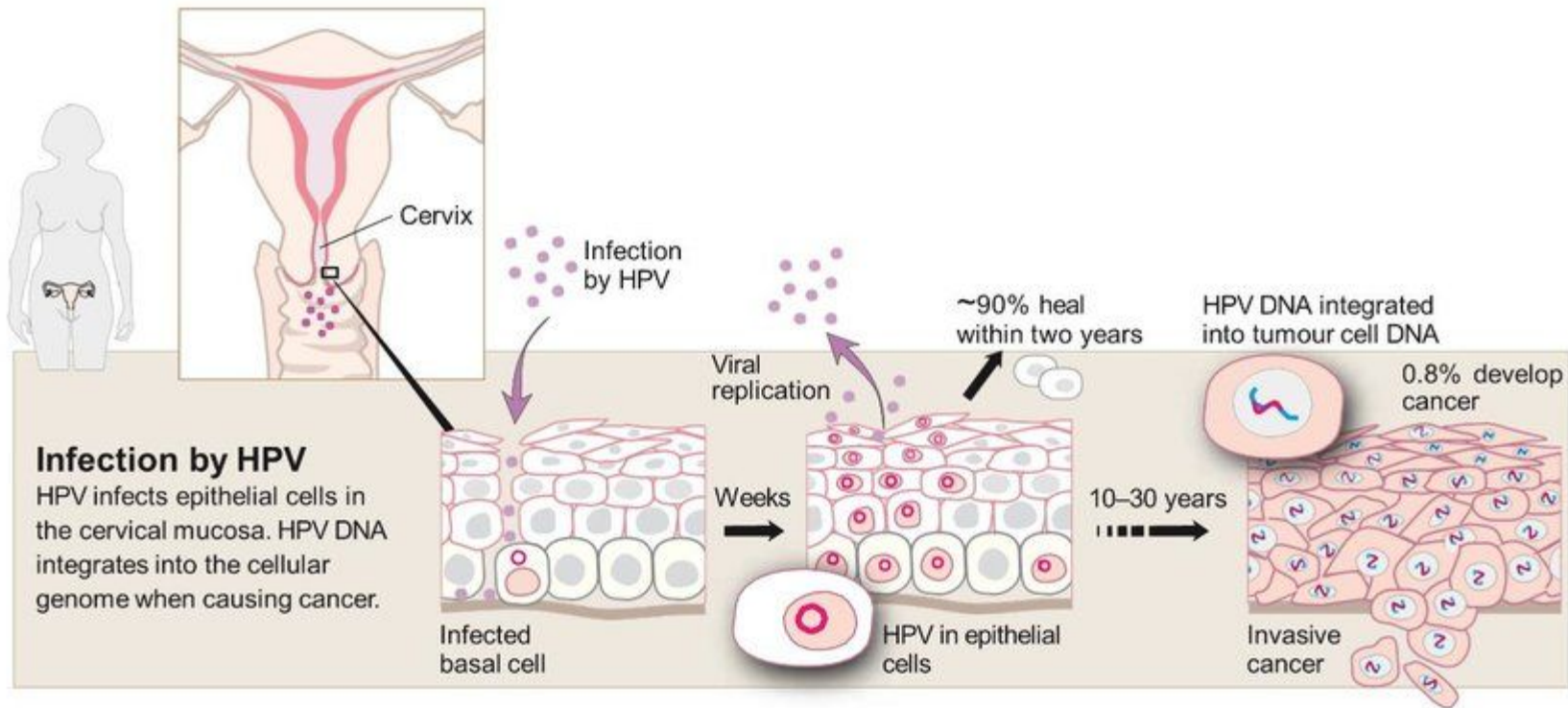
What causes cancer in the cervix?

# Almost all cervical cancer is caused by human papillomavirus (HPV)

- Virus spread by sexual activity and close skin-to-skin contact
- Virtually all sexually active adults have been exposed
- Infection is typically transient and resolves on its own with no symptoms
- HPV also causes non-genital warts (pictured below), anogenital warts, and cancer of the vulva, vagina, anus, and penis







# How is it possible that everyone has had HPV??

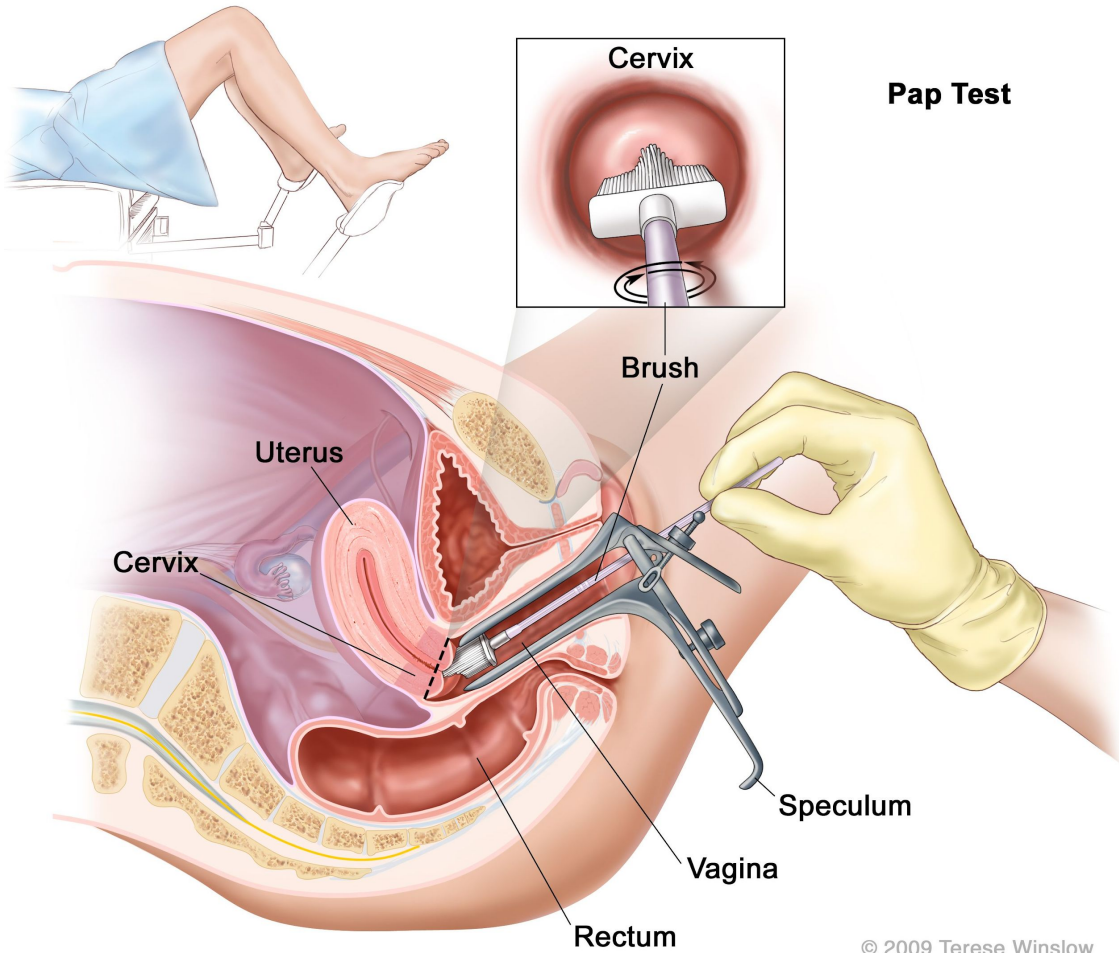
- Infection is brief and causes no symptoms, often goes undetected
- Over 40 strains of HPV
- Only a handful have been shown to cause cancer
- Risk factors for cervical cancer are those that cause prolonged HPV:
  - Immunocompromised status or immunosuppression
  - High risk sexual behavior
  - History of vulvar or vaginal cancer

How do I know if I have cervical cancer?

# Cervical cancer often causes no symptoms

- In women who do have symptoms, the most common are:
  - Heavy or irregular vaginal bleeding
  - Bleeding after sexual intercourse
- Because it can be asymptomatic, screening for cervical cancer is important

What is cervical cancer screening?



Am I due for my next Pap?

# Screening guidelines are developed by weighing the benefits and harms of testing

## Pros

- Reduces incidence of cervical cancer
- Reduces number of deaths from cervical cancer

## Cons

- Uncomfortable and stressful test
- Cost
- False positives



**Cervical cancer screening recommendations from United States professional organizations\* [1-6]**

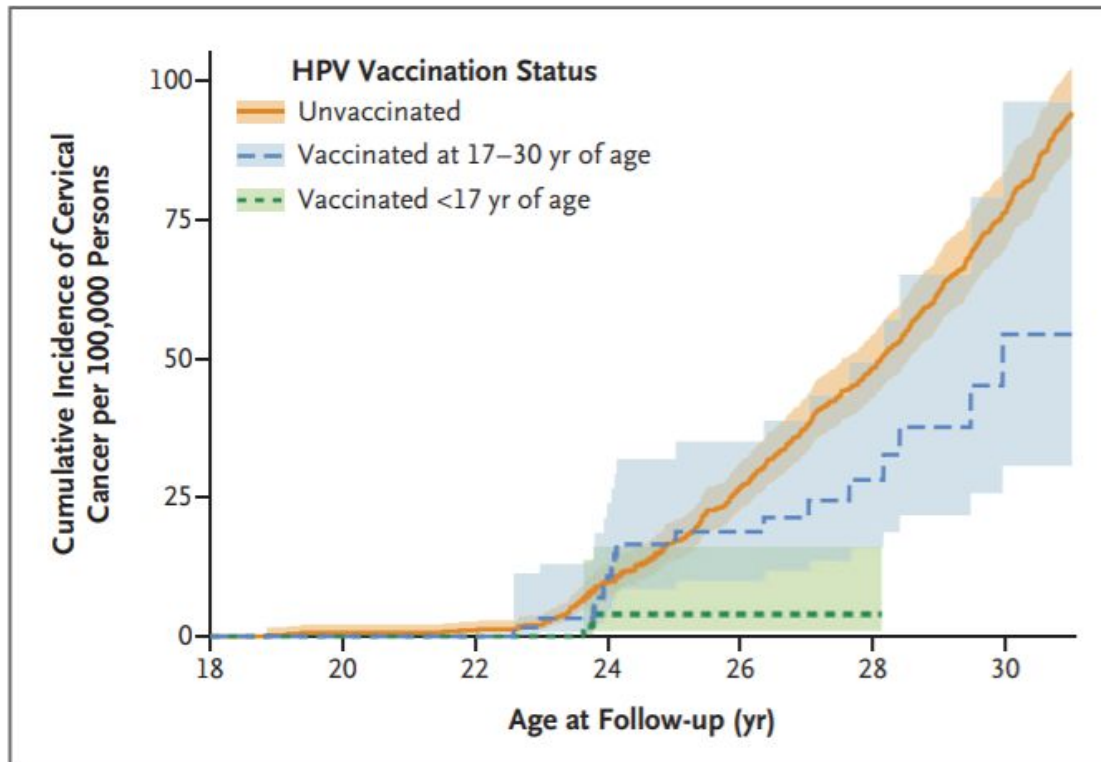
Organization	Age to initiate (years) ¶	Age to discontinue (years)	Recommended screening test and frequency		Post-hysterectomy (with cervix removed) for benign disease	HPV vaccination
<b>In our practice, we use the following guidelines, in order of preference:</b>						
USPSTF (2018)	21	65 <sup>Δ</sup>	<b>Age 21 to 29 years</b> Pap test every 3 years	<b>Age ≥30 years</b> One of these methods: <ul style="list-style-type: none"> <li>▪ Pap test every 3 years</li> <li>▪ Primary HPV testing ◊ alone every 5 years</li> <li>▪ Co-testing (Pap test and HPV testing) every 5 years</li> </ul>	Not indicated <sup>§</sup>	Same recommendations as unvaccinated patients
ACS (2020)	25	65 <sup>¥</sup>	<b>Age ≥25 years</b> One of these methods: <ul style="list-style-type: none"> <li>▪ Primary HPV testing ◊ every 5 years (preferred)</li> <li>▪ Co-testing (Pap test and HPV testing) every 5 years</li> <li>▪ Pap test every 3 years</li> </ul>		Not indicated <sup>‡</sup>	Same recommendations as unvaccinated patients

How do I prevent cervical cancer?

# HPV vaccination

- **VERY EFFECTIVE**
  - 97% effective in those who have not yet been exposed to HPV
  - ~40-50% effective in overall population
- **VERY SAFE**
  - Injection site pain and that's about it
- Reduces the risk of other HPV-related cancers as well as anogenital warts
  - Bonus benefits!





**Figure 2. Cumulative Incidence of Invasive Cervical Cancer According to HPV Vaccination Status.**

Age at follow-up is truncated in the graph because no cases of cervical cancer were observed in girls younger than 18 years of age.

# HPV vaccination guidelines

- Recommended for **all children age 11 - 12 yrs old**, can be given as young as 9
  - Age < 15: two doses at least 6 mo apart
  - Age ≥ 15: three doses, second dose 1 - 2 mo after first, third dose 6 mo after first
- “Catch up” vaccination recommended up to age 26
- FDA approved for use up to age 45, decision should be individualized
- **HPV vaccination is not associated with sexual disinhibition**

How bad is cervical cancer? How is it treated?

# Cervical cancer treatment

- Depends on age, overall health, stage of cancer, and patient and doctor preferences
- Very early stage can be treated with simple hysterectomy or cervical conization
- Early stage can be treated with radical hysterectomy or radiation therapy +/- chemotherapy
- Earliest stage (IA) cervical cancers have 95% survival rate at 5 years, next stage (IB1) is 90% at 5 years

## Take home points:

If you have a cervix, talk to your doctor about cervical cancer screening.

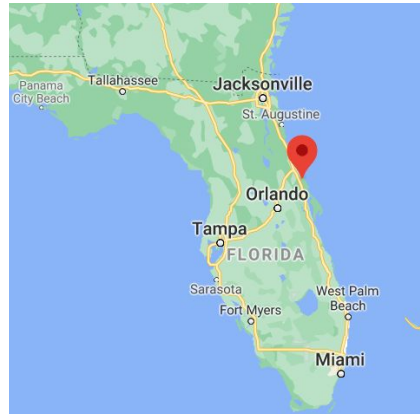
If you are between ages 9 and 45, talk to your doctor about HPV vaccination. It is VERY effective and VERY safe!



# About me!



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A scenic mountain landscape featuring a large, dark blue lake in the middle ground. In the foreground, a white and orange tent is pitched on a rocky, sandy shore. The background consists of rugged, rocky mountains with patches of snow. The sky is clear and blue. The text "Thank you!" is overlaid in the center of the image.

Thank you!