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### A Case of Vaccine-Preventable Back Pain

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# A Case of Vaccine-Preventable Back Pain

Gerald Huffles, DO, Tricia James, MD

## The Case

55-year-old male with minimal medical history who presented multiple times over 9 months with progressive and severe gluteal & back pain, ultimately found to be from anal cancer.

**Medical History:** major depressive disorder, anal warts, hypogonadism

- Up to date on all health maintenance

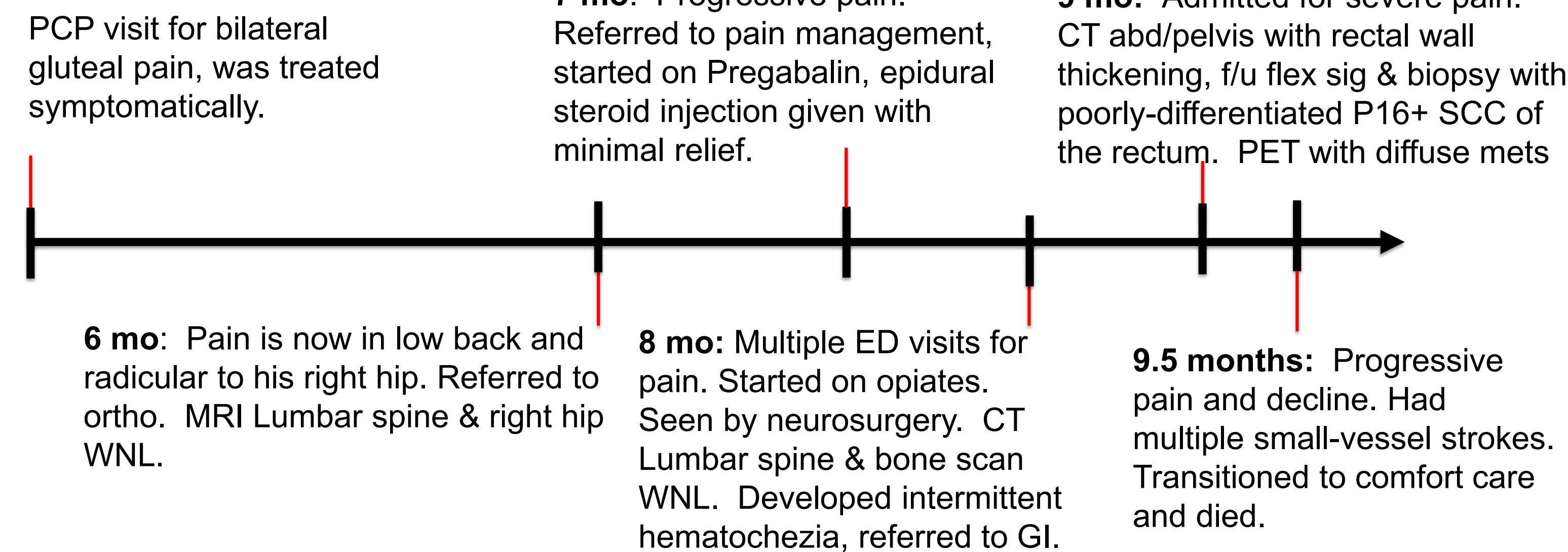
**Social History:**

- Lives with same-sex partner of 15 years, no recent sexual activity.
- Substance Use: Former distant smoker, no recreational drug use, 14 drinks per week

### Initial Physical Exam:

- Neuro:** No neurologic deficits, normal sensation of perineum & upper/lower extremities. Normal DTRs
- Musculoskeletal:** 5/5 strength in all extremities. Tenderness to palpation of ischial tuberosities and coccyx.

## Time Course



## HPV – That Bad, Insidious Bug

### What is it?

- Human Papillomavirus (HPV) is a double-stranded DNA virus of the Papillomaviridae family. Its lifecycle is tied to epithelial tissue.

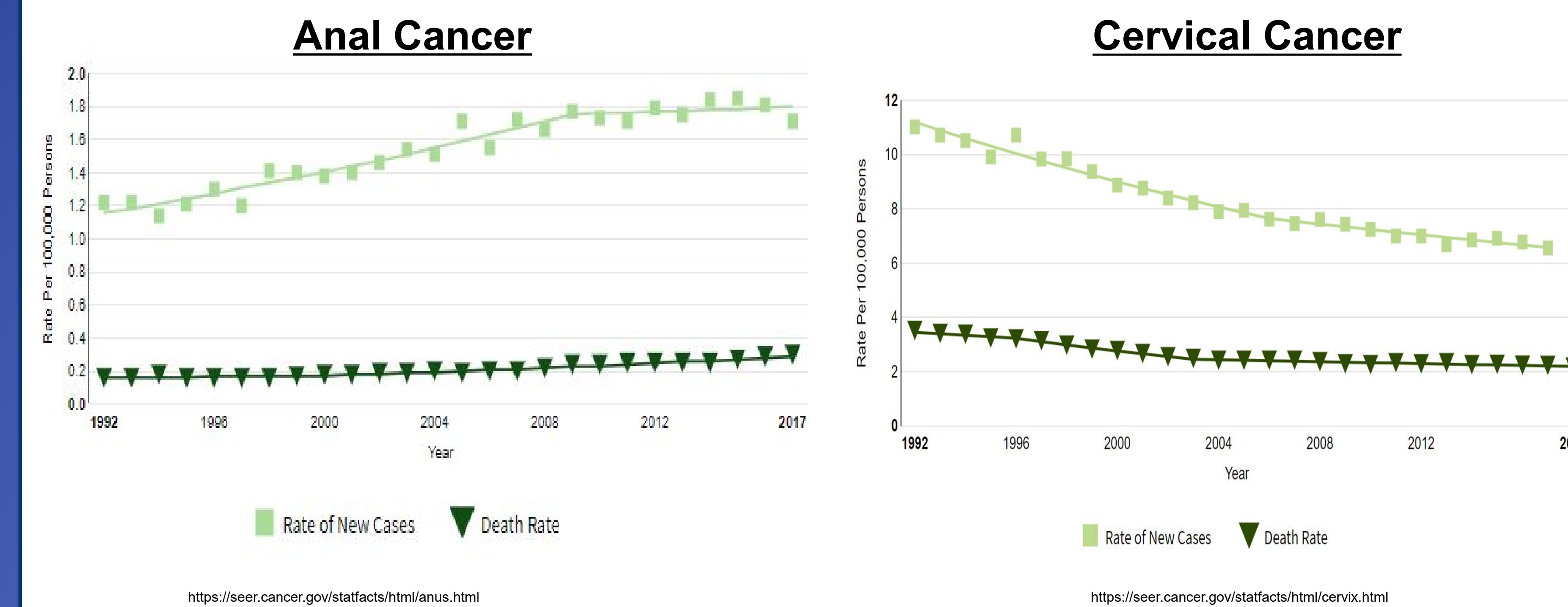
### Why do we care?

- HPV is associated with warts (including condyloma acuminatum) and cancer
- Approximately 45,000 HPV-associated cancers occur in the US each year
  - 7,083 - anal cancer
  - 12,143 - cervical cancer
  - 19,975 - oropharyngeal cancer

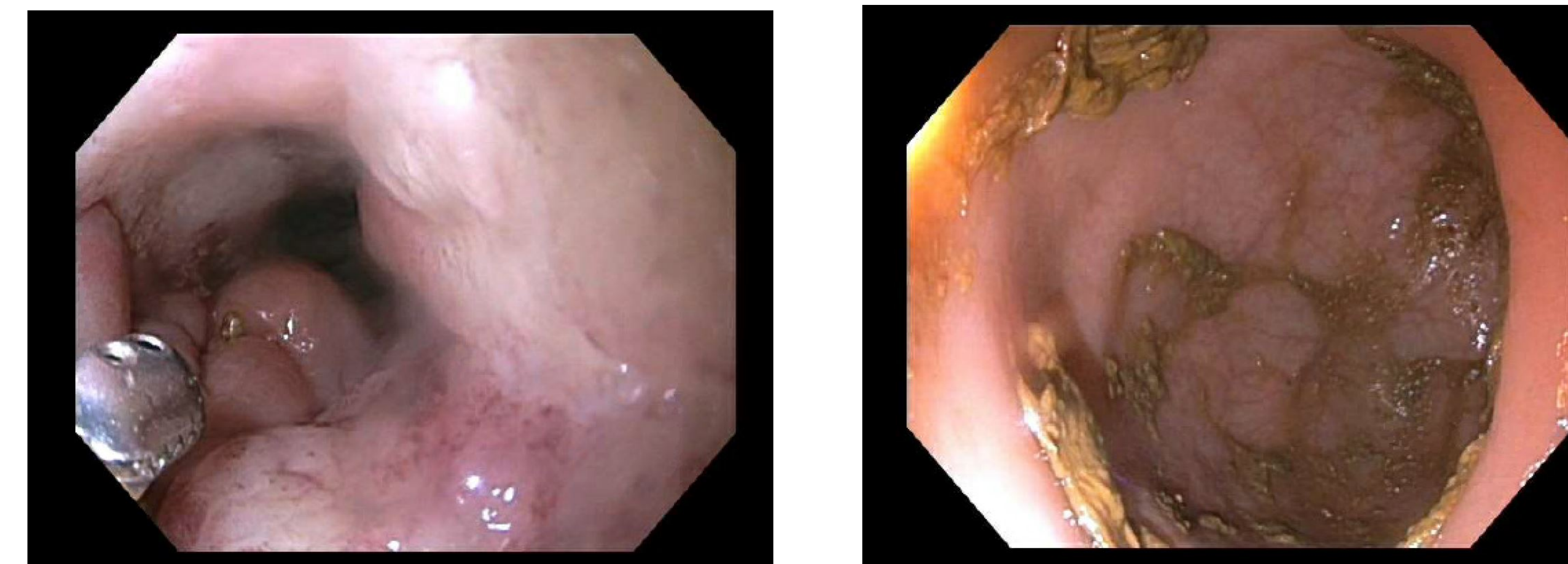
### What About Anal Cancer?

- Affects ~1.6/100,000 women, and 1.0/100,000 men in the United States
- Rates increase in men who have sex with men (MSM) at rates of 35/100,000 of those who are HIV-negative and 70-100/100,000 in those who are HIV-positive
- 5-year survival is 82% if T2N0, 42% survival if T4N+.

## Cancer Rates per CDC Data



## Flex Sigmoidoscopy – Month 9



(A) Rectum

(B) Sigmoid Colon

## Anal Cancer Screening Modalities

	Digital Rectal Exam	High-Resolution Anoscopy	Anal Cytology "Anal Pap"
<b>Benefits</b>	Simple, performed by provider or patient, cost-efficient	Gold standard, allows for visualization & biopsy	Cost-efficient, performed by provider or patient; overall good sensitivity (up to 93%)
<b>Detriments</b>	Not well-validated, not studied formally	Only performed by limited specialized providers	Conflicting data regarding utility

## Anal Cancer – Decreasing the Risk

### Vaccination

- One study showed an incidence rate ratio for HGSIL in females vaccinated for HPV compared to an unvaccinated population was 0.51<sup>6</sup>
  - Likely translates to other HPV-related disease, but further studies are needed

### Screening

- One retrospective study - 39% lower mortality risk in anal SCC in areas with higher anal dysplasia screening rates<sup>1</sup>
- No consensus on who should be screened for anal cancer and what the primary modality should be.
  - Recommended in HIV-infected MSM
  - Consider screening in:
    - HIV+ men & women
    - MSM
    - HIV-negative women over the age of 45 with cervical HPV 16
    - Pts with history of anal warts
    - Women with a history of high-grade cervical, vulvar or vaginal dysplasia or cancer
    - Immunosuppressed patients

## Learning Points

- Anal cancer may present in an atypical fashion. It is important to consider it in the differential of buttock/back pain, particularly for patients with risk factors
- HPV is associated with cancers that are preventable through cancer screening & vaccination.
- No standardized methodology or guidelines exist for evaluation of anal cancer, but studies are underway.
- Certain subpopulations with risk factors that predispose them to an increased risk of anal cancer should be screened for this disease.

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