



# Everything A Gastroenterologist Needs To Know About Prevention And Detection Of Anal Cancer

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## Disclosures

Speaker's bureau: Nestle, Abbvie

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# Human Papillomavirus: Perianal skin



## Condylomata

Sources: [www.pixel.com](http://www.pixel.com)

<https://www.wirralurgeon.co.uk/conditions-treated/anal-warts.html>

Image reproduced with permission from patient

# HPV: Perianal skin

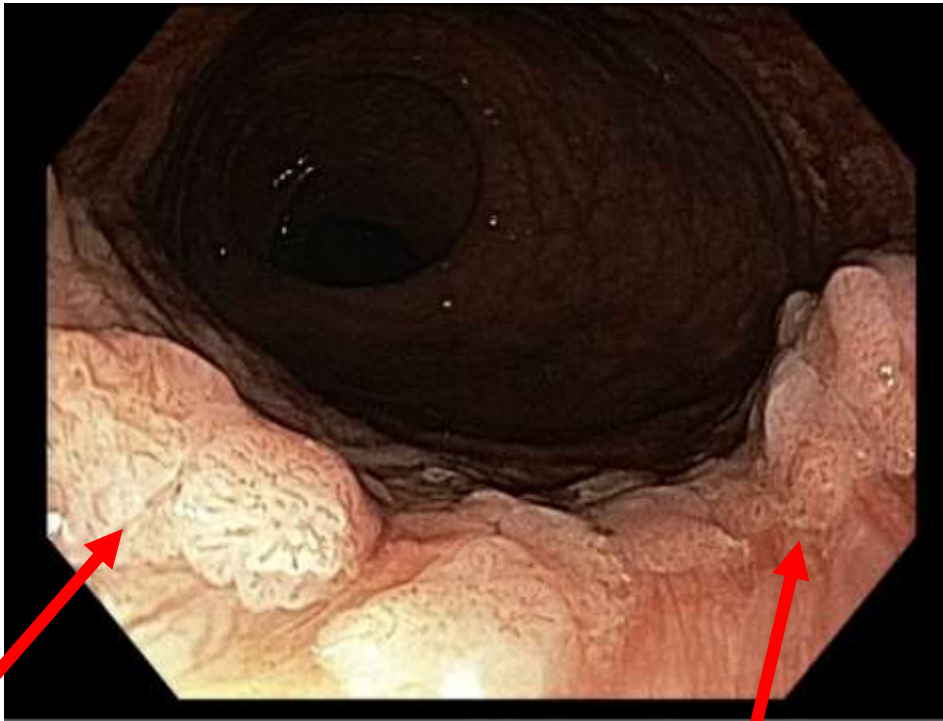


**Invasive squamous cell carcinoma**



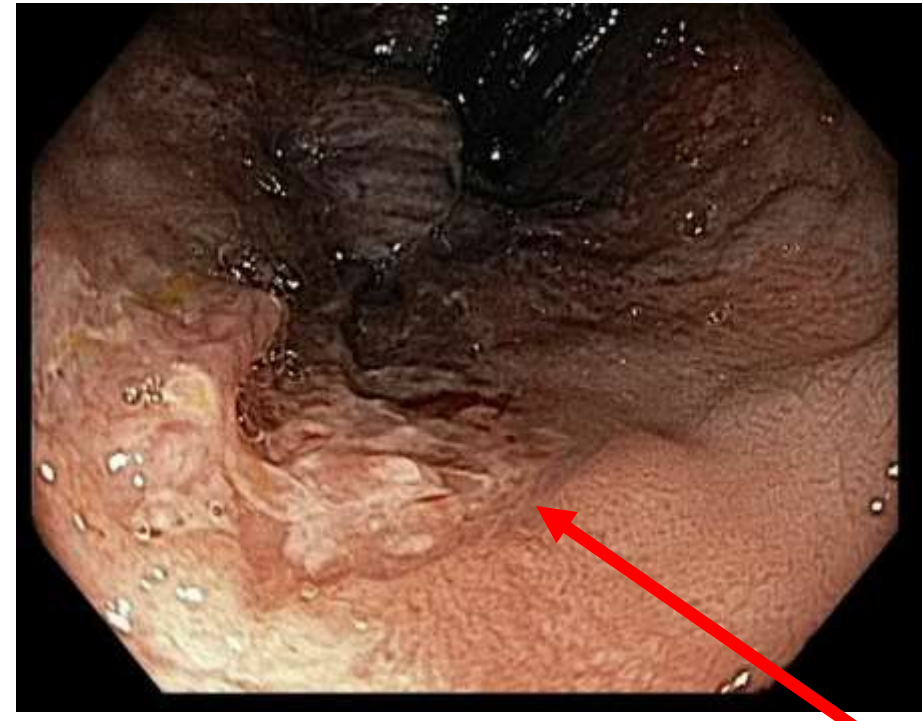
**High grade squamous  
intraepithelial lesion**

# HPV on Colonoscopy



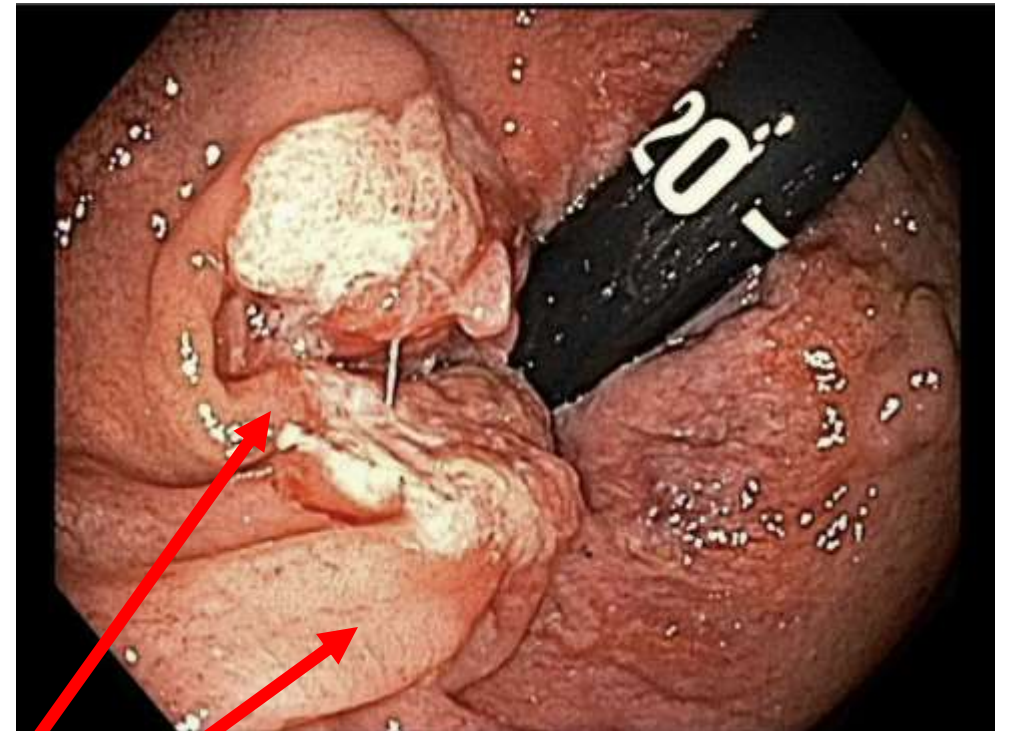
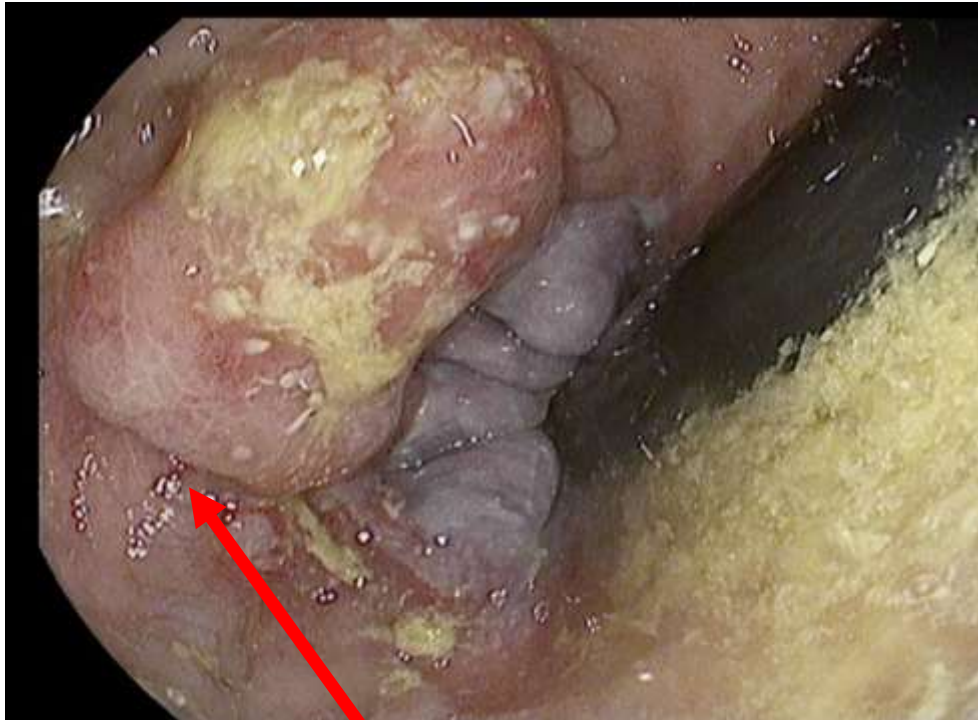
**Condylomata**

**High grade squamous  
intraepithelial lesion**



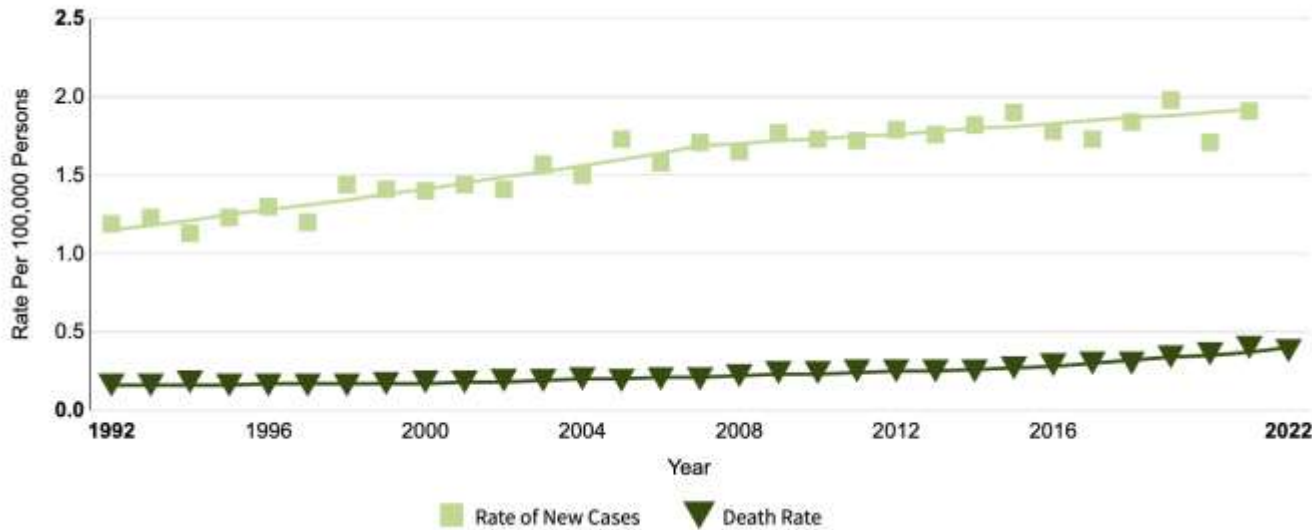
**Invasive squamous cell carcinoma  
of the anus**

# HPV and Colonoscopy



**Invasive squamous cell carcinoma of the anus**

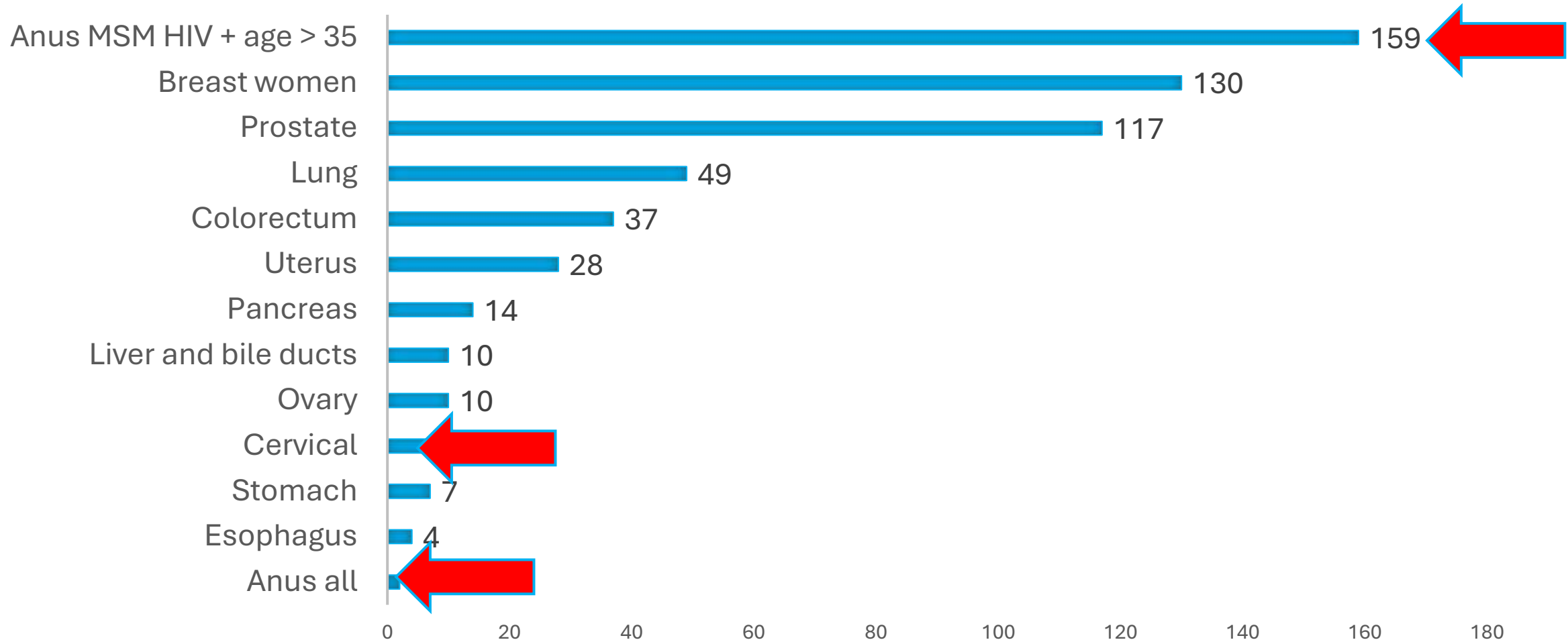
# Anal cancer: the scope of the problem



- Estimated new cases 2024: 10,540
- Estimated deaths 2024: 2,190
- Rates are increasing on avg 2.2% per year

# Annual risk in the US

## ANNUAL NUMBER OF NEW CASES PER 100,000 PEOPLE





# HPV and cancer

Most common sexually transmitted infection in the world

Non-enveloped, double stranded DNA virus

Acquired during skin-to-skin sexual contact

HPV: classified by type (>150 strains)

- Low-risk: 6,11 >90% of condylomata
- High-risk: 16,18 (primarily) highest degree of association with anal, cervical, vaginal, vulvar, penile and oropharyngeal cancer. Found in >90% SCCA

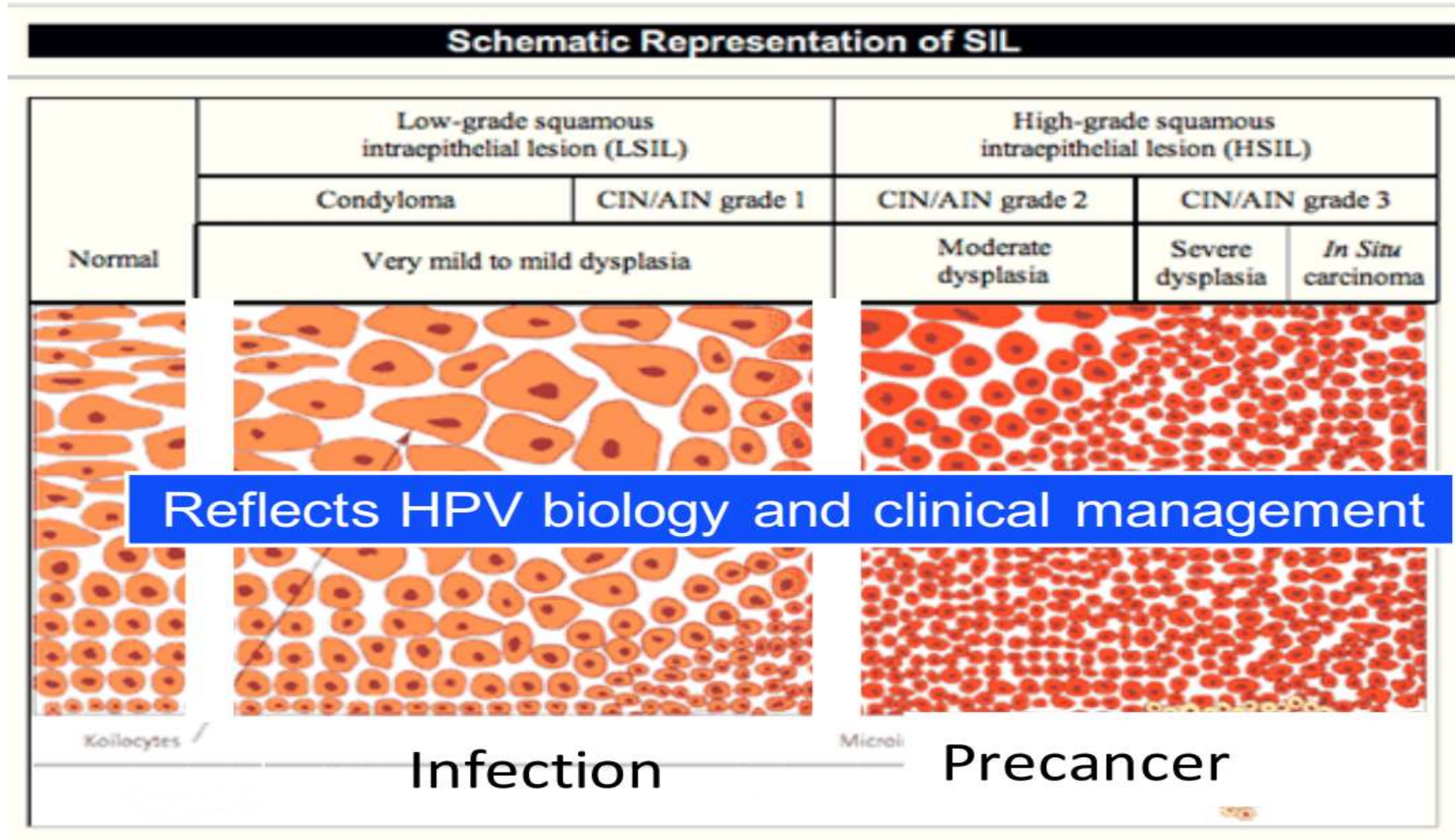
Howley PM, ed. *Fields Virology*. 4th ed. Philadelphia, PA: Lippincott-Raven. 2001;2197-2229.

Schiffman M, Castle PE. *Arch Pathol Lab Med*. 2003;127:930-934.

Saraiya M et al. *JNCI*. 2015; 107(6): djv086.

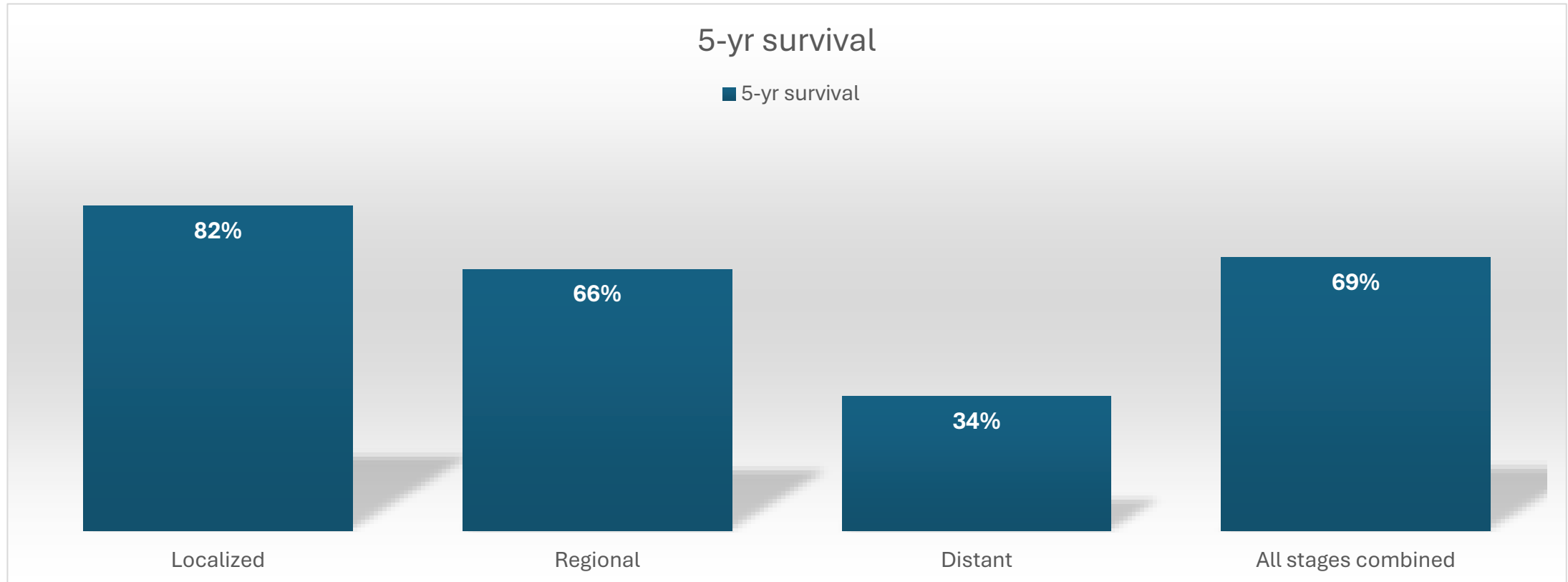
Brickman CB, & Palefsky JM. *Current HIV/AIDS Reports* 2015; 12(1): 6-15.

# HPV classification



Courtesy of Joel Palefsky, MD

Richel et al. J Infect Dis 2014;210:111-120.



**Early detection  
improves survival**

50% of general population presents with localized disease

Deshmukh A et al. J Natl Cancer Inst, 2020, Vol. 112, No. 8  
Howlader N, SEER Cancer Statistics Review, 1975-2017,  
[https://seer.cancer.gov/csr/1975\\_2017](https://seer.cancer.gov/csr/1975_2017),  
posted to the SEER web site, April 2020.

# Radiation to anal canal for localized disease



6 Weeks post radiation



6 Months post radiation



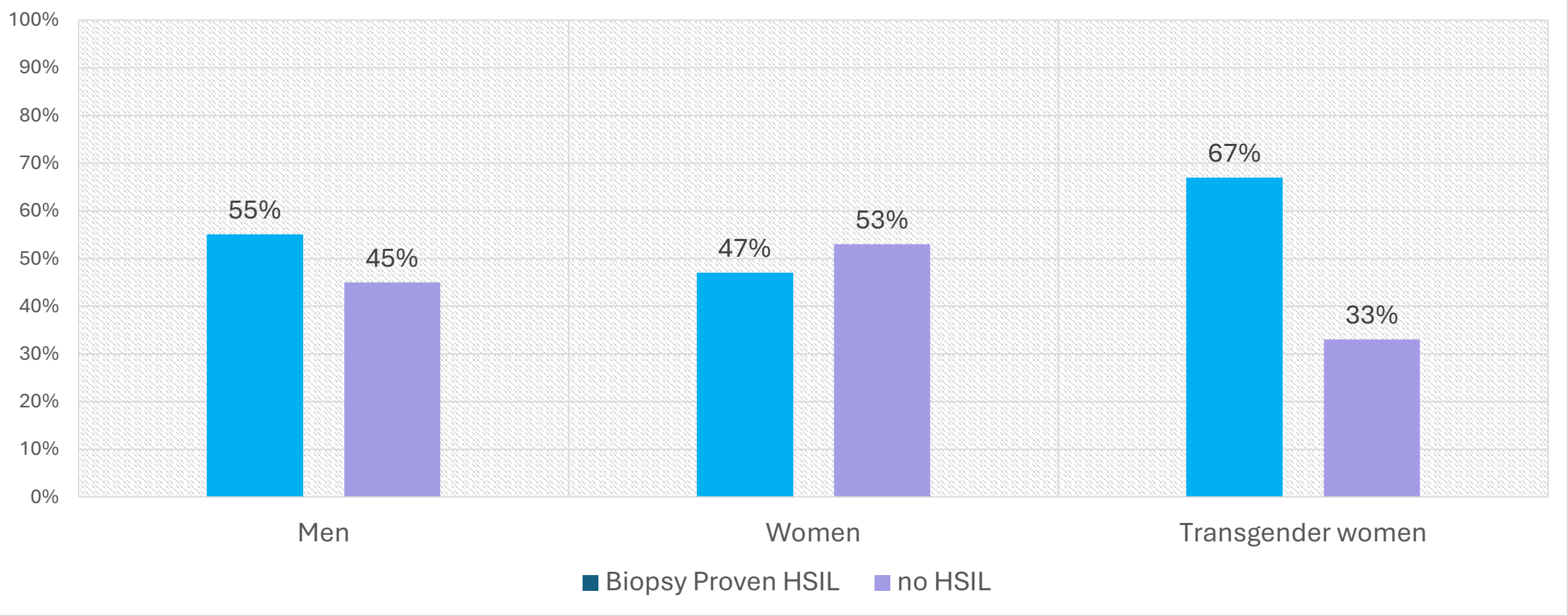
the  
**ANCHOR**  
study

The NEW ENGLAND JOURNAL of MEDICINE

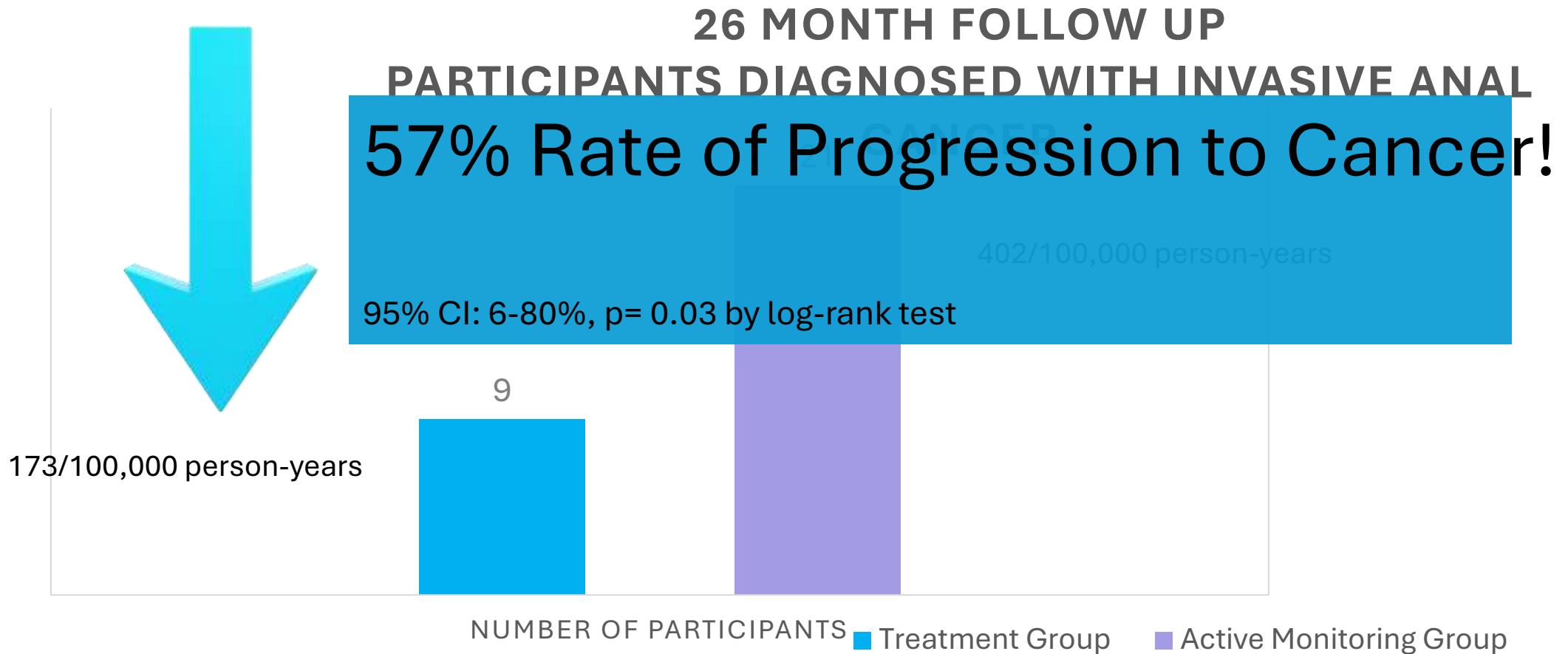
ORIGINAL ARTICLE

# Treatment of Anal High-Grade Squamous Intraepithelial Lesions to Prevent Anal Cancer

J.M. Palefsky, J.Y. Lee, N. Jay, S.E. Goldstone, T.M. Darragh, H.A. Dunlevy, I. Rosa-Cunha, A. Arons, J.C. Pugliese, D. Vena, J.A. Sparano, T.J. Wilkin, G. Bucher, E.A. Stier, M. Tirado Gomez, L. Flowers, L.F. Barroso, R.T. Mitsuyasu, S.Y. Lensing, J. Logan, D.M. Aboulafia, J.T. Schouten, J. de la Ossa, R. Levine, J.D. Korman, M. Hagensee, T.M. Atkinson, M.H. Einstein, B.M. Cracchiolo, D. Wiley, G.B. Ellsworth, C. Brickman, and J.M. Berry-Lawhorn,  
for the ANCHOR Investigators Group\*



# Primary Outcome



# Implications of the study findings

Number need to screen to prevent 1 case of anal cancer is 892 PLWH over 2-3 year period

Number needed to screen to prevent 1 case of cervical cancer is 2,436 over a lifetime of screening



# Guidelines



**31 Jan. 2024**

International Anal Neoplasia Society  
Consensus Guidelines



**15 Aug. 2024**

NIH, CDC, IDSA Panel on Guidelines for  
the Prevention and Treatment of  
Opportunistic Infections in Adults and  
Adolescents with HIV

## Populations to screen

### Risk Category A

Cancer incidence >17/100,000

#### Persons with HIV

- Men who have sex with men (MSM) *age 35+*
- Transgender women (TW) *age 35+*
- Men (not MSM) *age 45+*
- Women *age 45+*

Vulva Dysplasia or Vulva Cancer

MSM without HIV *age 45+*

TW without HIV *age 45+*

Solid organ transplant recipients  
*10 years post transplant*

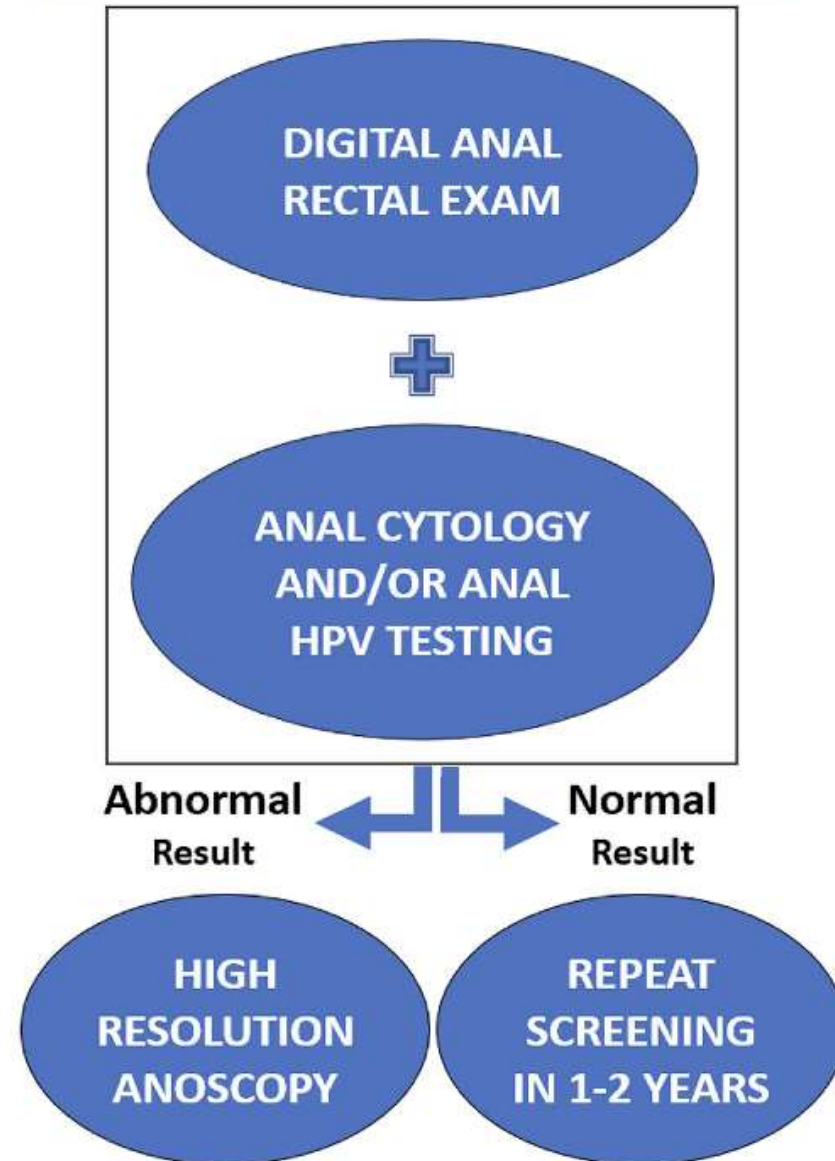
### Risk Category B

Cancer incidence <10/100,000

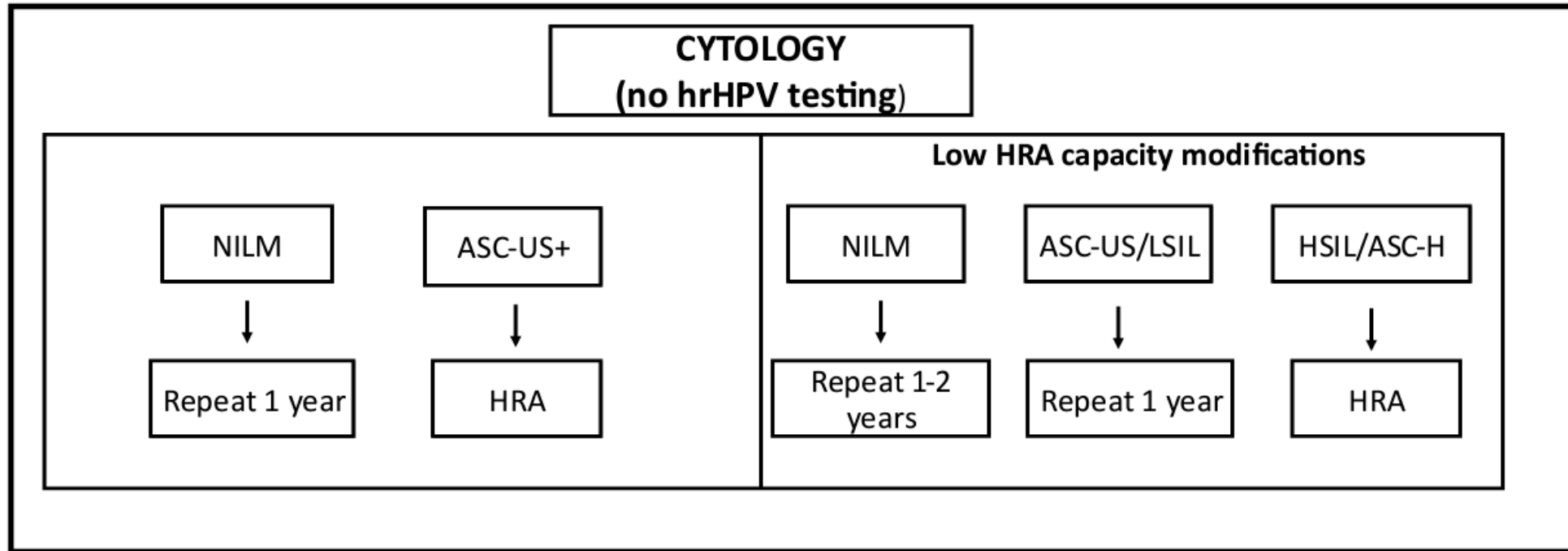
Shared Decision-Making Age 45+  
with history of:

- Cervical/Vaginal HSIL or Cervical/Vaginal Cancer
- Perianal Warts
- Persistent Cervical HPV 16+
- Other immunosuppression or on chronic systemic steroid therapy

## How to screen



# Management of results



NILM= negative for intraepithelial lesion or malignancy

ASC-US = atypical squamous cells of uncertain significance

LSIL = low grade squamous intraepithelial lesion

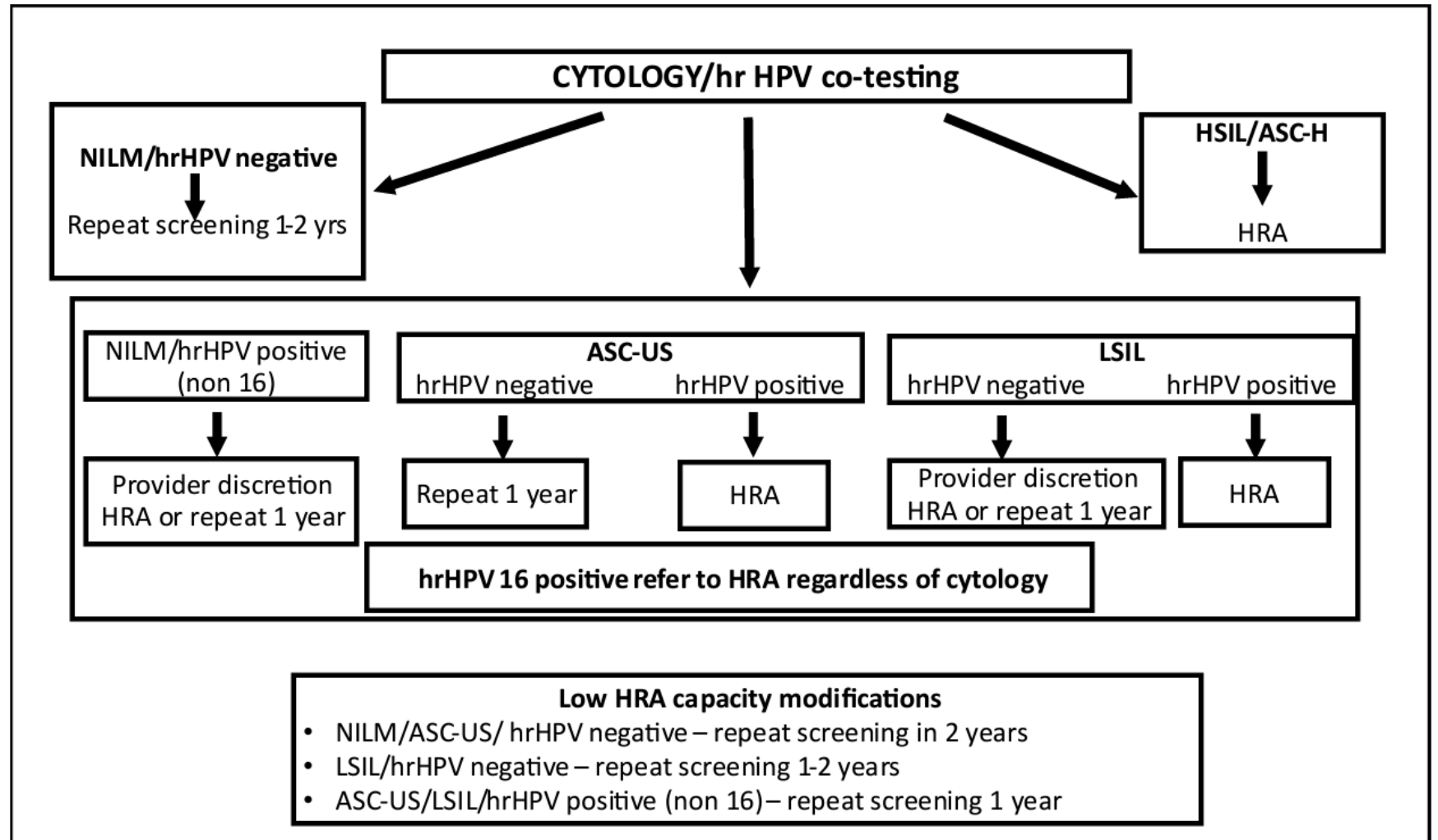
HSIL = high grade squamous intraepithelial lesion

ASC-H = atypical squamous cells, cannot rule out high grade

HRA = high resolution anoscopy

# Management of results

NILM= negative for  
 intraepithelial lesion  
 or malignancy  
 hrHPV= high risk HPV  
 ASC-US = atypical  
 squamous cells of  
 uncertain  
 significance  
 LSIL = low grade  
 squamous  
 intraepithelial lesion  
 HSIL = high grade  
 squamous  
 intraepithelial lesion  
 ASC-H = atypical  
 squamous cells,  
 cannot rule out high  
 grade  
 HRA = high resolution  
 anoscopy



# Screening: How to



If you are comfortable asking questions, patients will be comfortable answering

“I’d now like to ask some questions about your sexual history in order to ensure that I recommend the best preventive care for you.”

“What is/are the gender(s) of the people you have had sex with?”

# Anal Pap Smear: The How To's

- A rayon or polyester swab is moistened with tap water- no lubricant!
- Cotton may not be used as the cells cling to it and decreases cellular yield
- Inserted blindly as far as possible with gentle pressure and rotation until it reaches the wall of the rectal vault



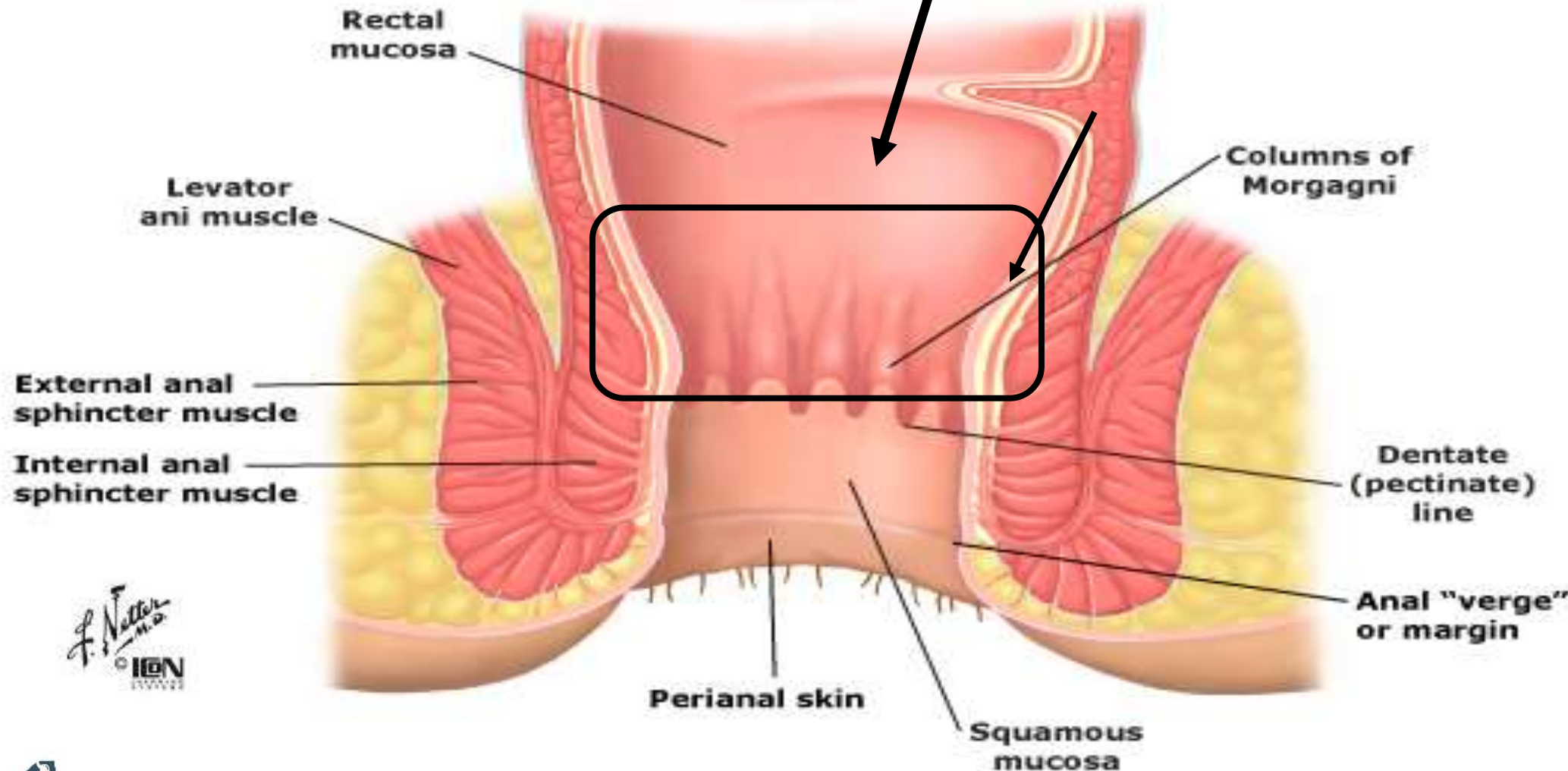


Swab is then rotated 360 degrees with gentle pressure to the walls of the anal canal as the swab is gradually withdrawn

Swab is then placed in liquid cytology media and vigorously shaken to loosen the debris

# Anatomy Review

## Anal Transformation Zone

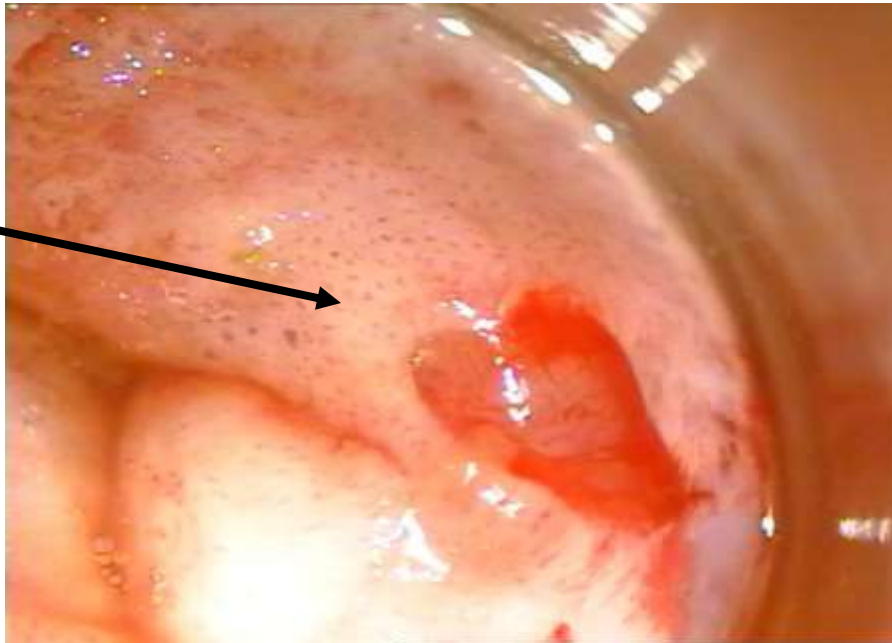


The anal transformation zone (ATZ) is the area between mature squamous epithelium distally and columnar epithelium proximally, and is the site of active squamous metaplasia-90% of neoplasia occurs here.



Colonoscopy

High Resolution Anoscopy



Biopsy= HSIL

## Don't Ignore

- Ignore complaints of rectal bleeding, anal pain or anal itching- HPV related disease could be the culprit!

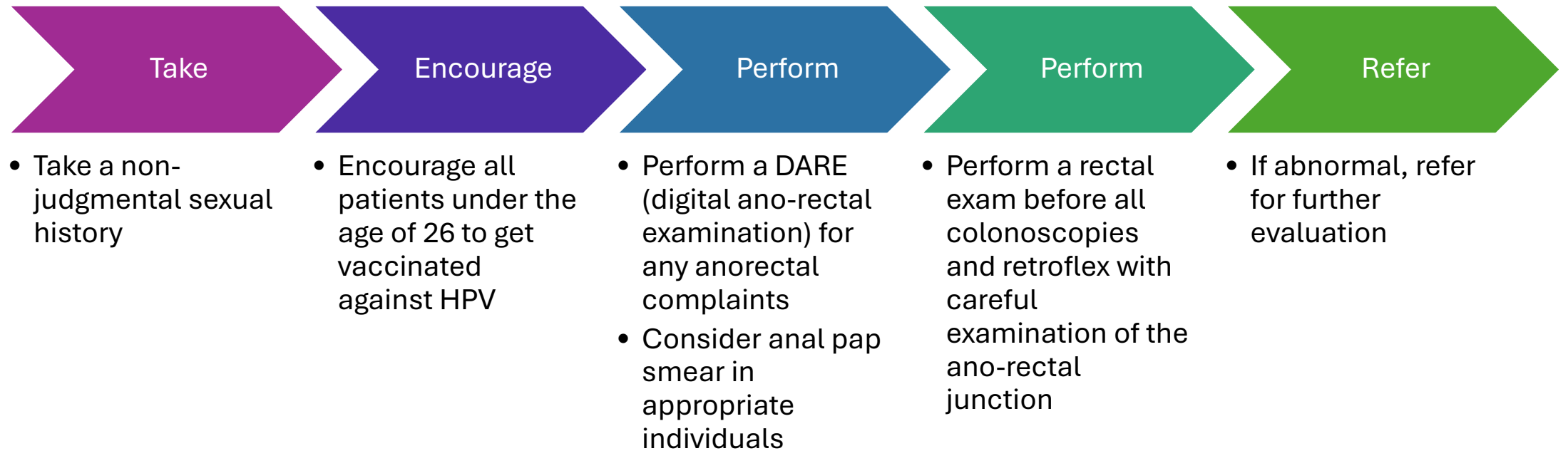
## Don't Embarrass

- Shame patients or judge

## Don't Be Afraid

- Be afraid to biopsy anything proximal to the dentate line

# Do's



Thank You

# IMAGINE HELPING ALL THESE BUTTS

