

# Advancing Anal Cancer Screening: Evidence-Based Approaches and Real-World Challenges

## Experiences from Puerto Rico

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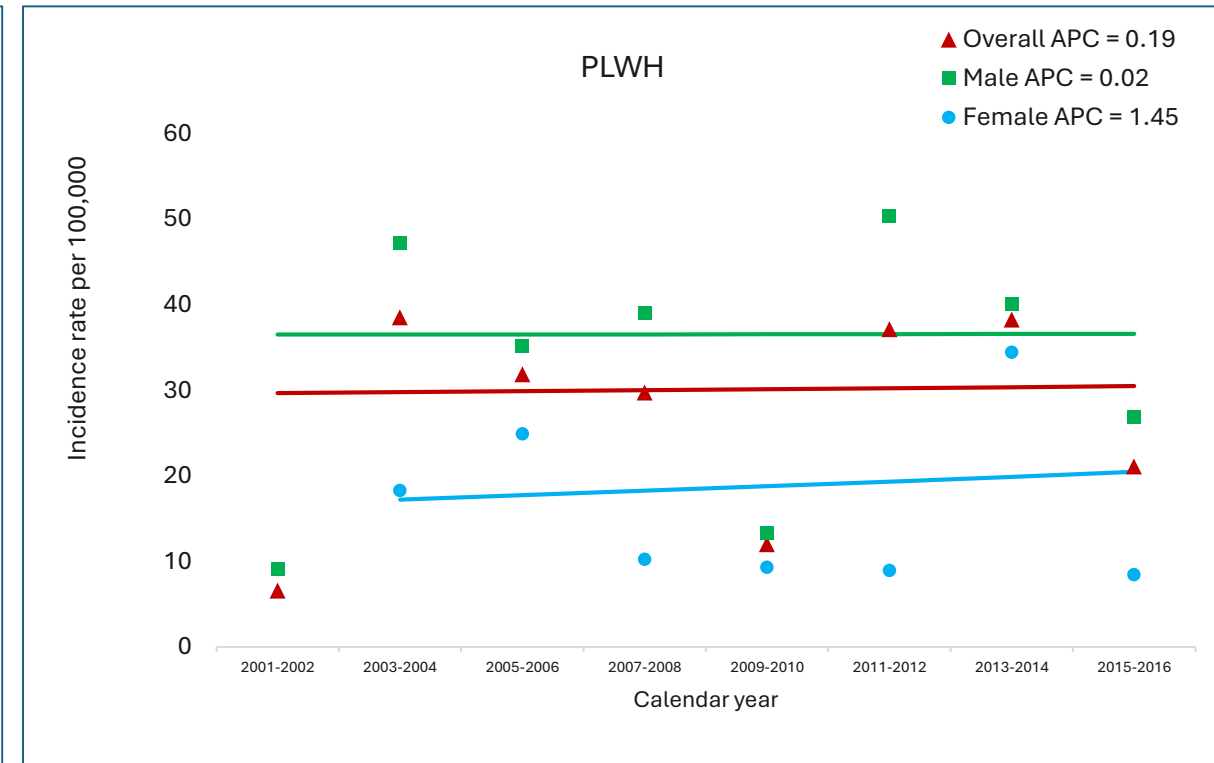
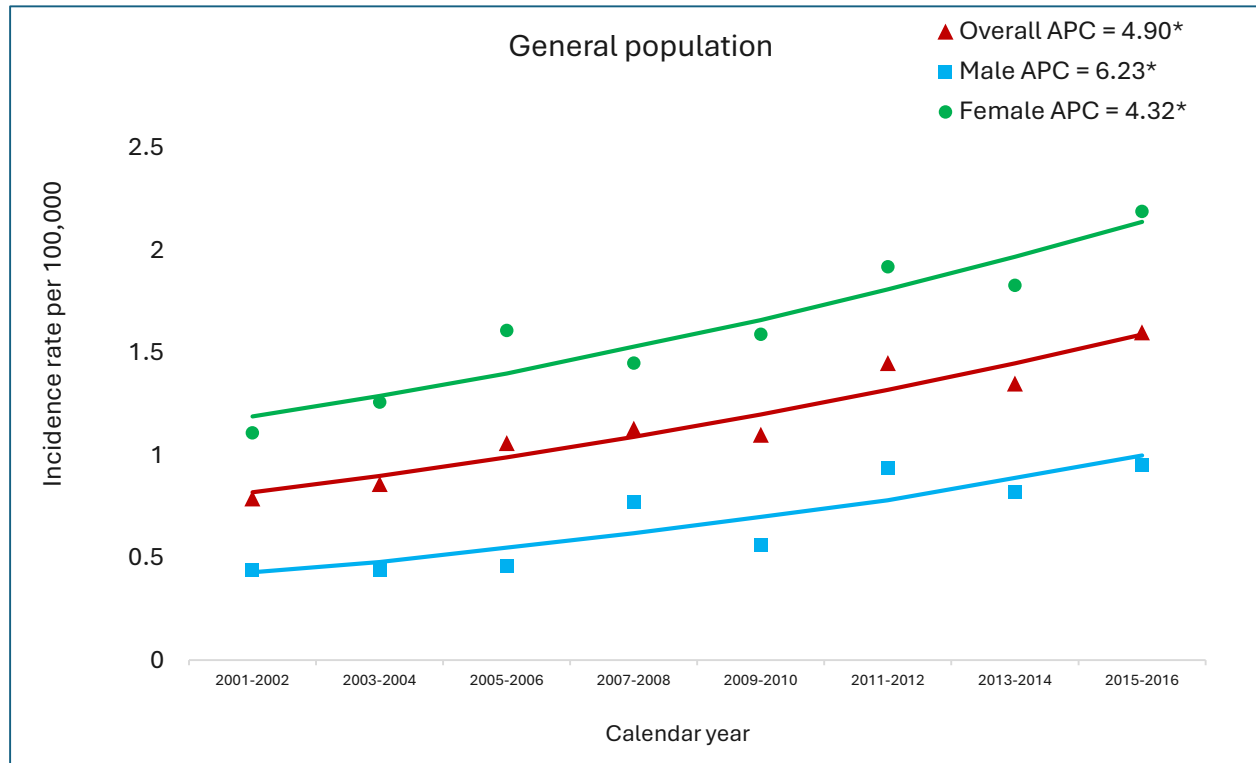


**HUMAN PAPILLOMAVIRUS  
INTEREST GROUP**  
University of Puerto Rico  
Comprehensive Cancer Center



Anal Neoplasia Clinic

# Incidence of squamous cell carcinoma of the anus in Puerto Rico, 2000-2016



# SIR of Secondary Anal Cancer in Women with a Primary HPV-related Gynecological Neoplasm: Puerto Rico, 1987-2013

Primary Neoplasm	Secondary Anal Cancer Cases		SIR	95%CI
	Observed	Expected		
Gynecological				
Overall	14	0.3	48.2	26.4, 80.9
HPV-related Histology <sup>§</sup>	14	0.3	52.9	28.9, 88.8
Cervical	10	0.2	51.6	24.7, 94.8
Vulvar & Vaginal	<6 <sup>‡</sup>	0.1	41.5	11.3, 106.4

† The expected cases were calculated using age-specific rates of anal cancer in women from the general population of Puerto Rico.

§ Inclusion criteria: HPV-Related ICD-O-3 histology codes 8010-8671 & 8940-8941 for cervical cancer and 8050-8084 & 8120-8131 for vulvar and vaginal cancers were included for this analysis.

‡ Data hidden when less than five cases are reported in order to protect the confidentiality of the information.

# Timeline of anal cancer screening infrastructure in Puerto Rico

The UPRCCC submitted a request to become a site of the AIDS Malignancy Consortium (AMC) .

2 providers had already completed the HRA course and were performing the procedures and maintaining their logs.

First visit from the AMC/ ANCHOR Study QA committee (Dr. Naomi Jay) to evaluate the site providers' proficiency.

February 2014

September 2014

December 2013

June 2014

The UPRCCC is designated as an AMC site.

The ANC established in the Puerto Rico Clinical and Translational Research Consortium (NIH funded clinical research clinic).

First provider certified in HRA

First provider certified in anal HSIL treatment.  
2<sup>nd</sup> provider certified in HRA

March 2015

May 2016

December 2014

October 2015

Started recruitment for AMC studies

First participant was enrolled in the ANCHOR: Anal Cancer Prevention Study.

# Anal Neplasia Clinic, UPRCCC



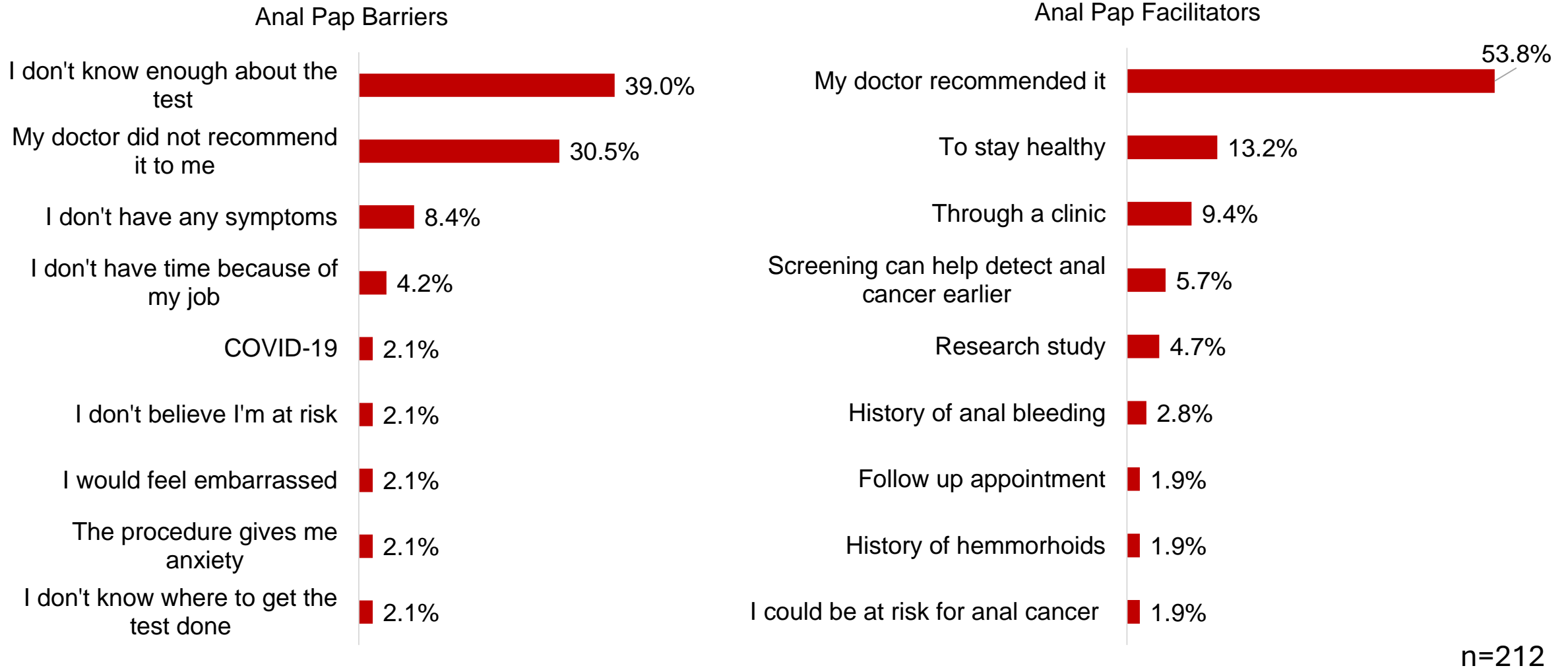
- 6 providers certified in HRA and 2 in HSIL treatment (3 remain active)
- From 2014-2023,
  - 1,417 patients had been evaluated for either HRA or HSIL treatment.
  - 73.8% were people living with HIV (PLWH).
- The clinic has transitioned to be a formal research and service clinical facility within the Hospital of the University of Puerto Rico Comprehensive Cancer Center (started evaluating patients in September 2024)



# Research studies assessing barriers and facilitators for anal cancer screening in Puerto Rico

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# Barriers and facilitators of **anal pap** among PLWH in Puerto Rico

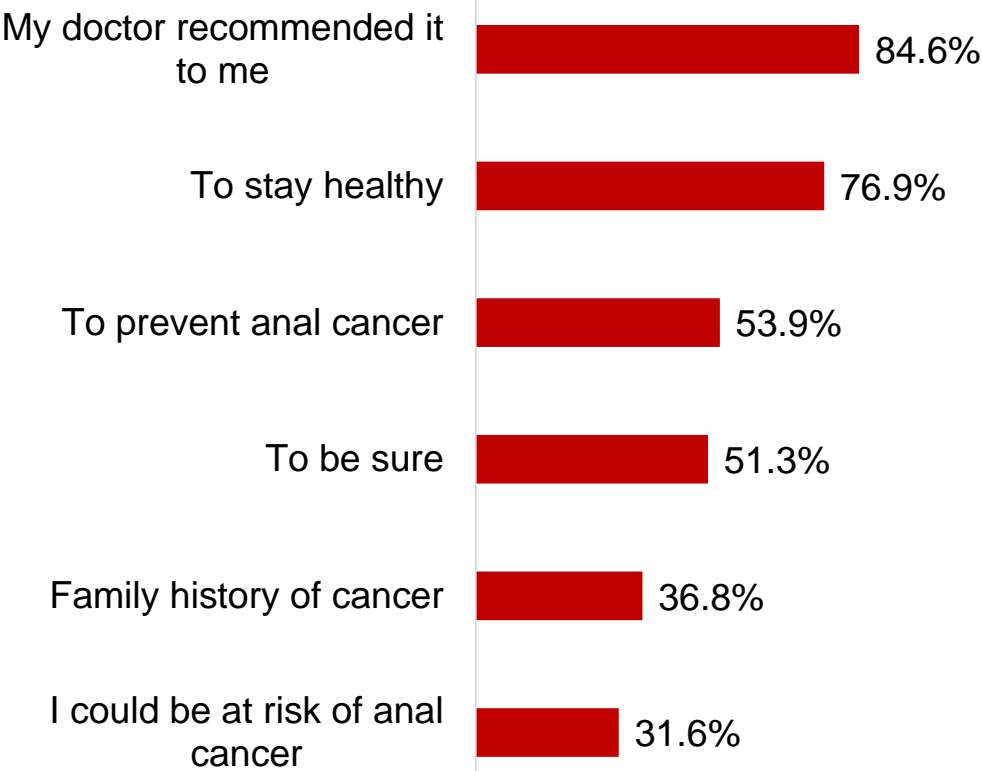


# Barriers and facilitators of HRA among PLWH in Puerto Rico

## HRA barriers



## HRA facilitators



n=212



# Barriers and facilitators of anal cancer screening among PLWH in Puerto Rico.

Generalized linear models of factors associated with anal Pap and HRA uptake among a sample of PLWH in Puerto Rico.

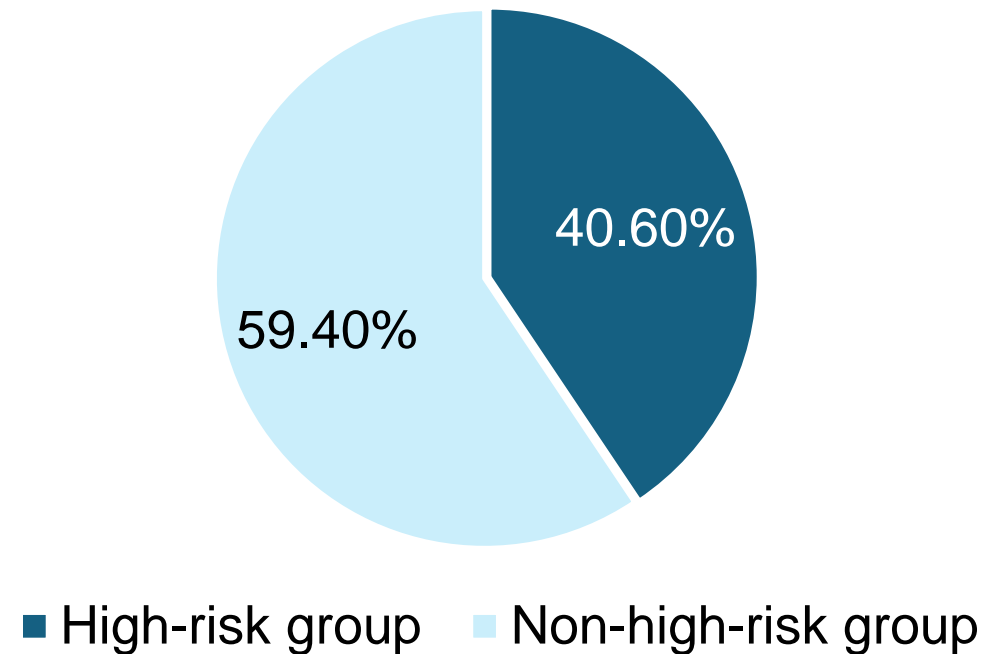
	Anal Pap Uptake Crude OR (95% CI)	Anal Pap Uptake Adjusted OR (95% CI)	HRA Uptake Crude OR (95% CI)	HRA Uptake Adjusted OR (95% CI)
Age (years)				
< 55	1.0	1.0	1.0	1.0
≥ 55	0.88 (0.77–1.01)	0.77 (0.52–1.15)	1.04 (0.93–1.16)	1.18 (1.53–5.24)
Sexual Risk Group				
MSW	1.0	1.0	1.0	1.0
MSM	<b>1.57 (1.33–1.85)</b>	<b>3.04 (1.79–5.19)</b>	1.08 (0.94–1.24)	1.14 (0.62–2.11)
Women	<b>1.49 (1.25–1.77)</b>	<b>3.00 (1.72–5.20)</b>	1.11 (0.96–1.29)	1.33 (0.71–2.51)
Genital Warts history				
No	1.0	1.0	1.0	1.0
Yes	<b>1.45 (1.15–1.81)</b>	<b>2.25 (1.06–4.77)</b>	<b>1.33 (1.11–1.59)</b>	<b>1.96 (1.04–3.70)</b>
"I worry a lot about developing anal cancer"	1.18 (0.99–1.41)	1.39 (0.82–2.36)	<b>1.19 (1.03–1.37)</b>	<b>2.46 (1.14–5.32)</b>
"I know which doctor to go to if I am worried about my anal health"	<b>1.26 (1.09–1.47)</b>	<b>1.92 (1.26–2.92)</b>	<b>1.25 (1.11–1.41)</b>	<b>2.83 (1.53–5.24)</b>

n=212

# Knowledge, Attitudes, and Experiences of Anal Cancer and Anal Cancer Screening Among a Clinic-based Sample of Hispanic Women

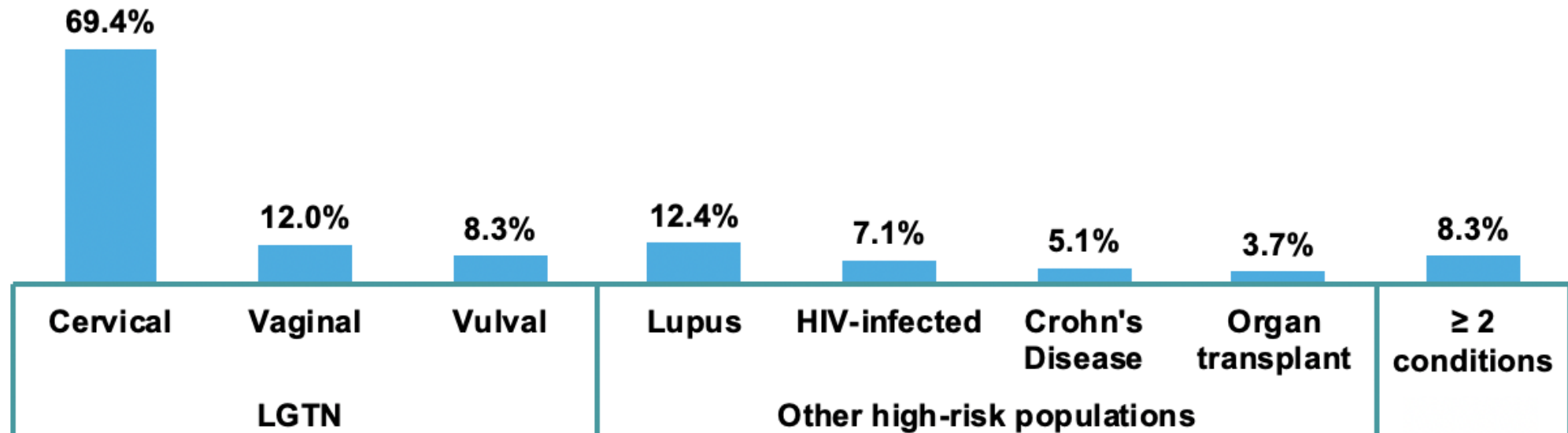
- Study design: Clinic-based cross-sectional study (May 2018- March 2019) among women receiving services at the colposcopy, gynecology oncology and lower genital tract clinics of the University of Puerto Rico.
- Study population: Women visiting the clinic were invited to participate (n=283)
- **High-risk for anal cancer: 40.6%** of women had a diagnosis of LGTN, HIV, Lupus, Chron's disease, or were transplant patients.

Figure 1. Anal cancer risk



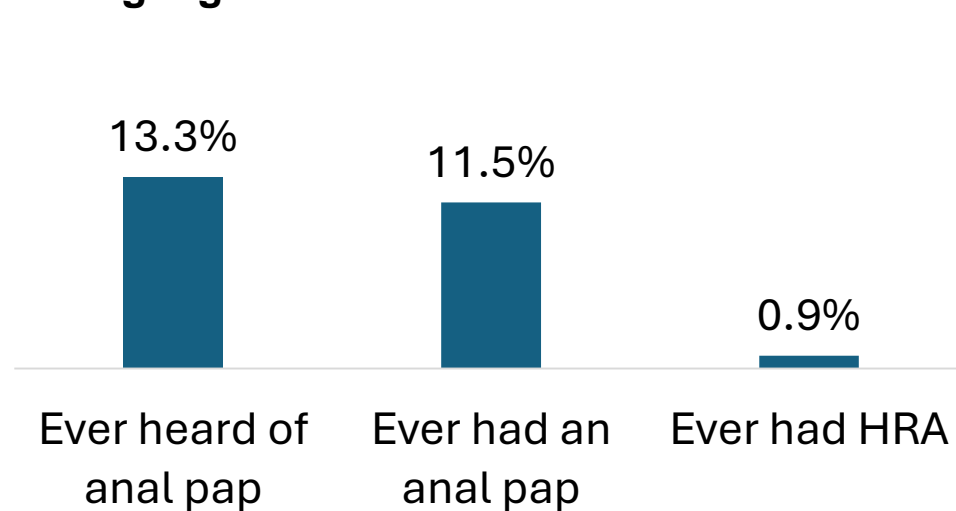
# Knowledge, Attitudes, and Experiences of Anal Cancer and Anal Cancer Screening Among a Clinic-based Sample of Hispanic Women

**Figure 2. Proportion of women at increased risk of anal cancer, by specific health conditions.**

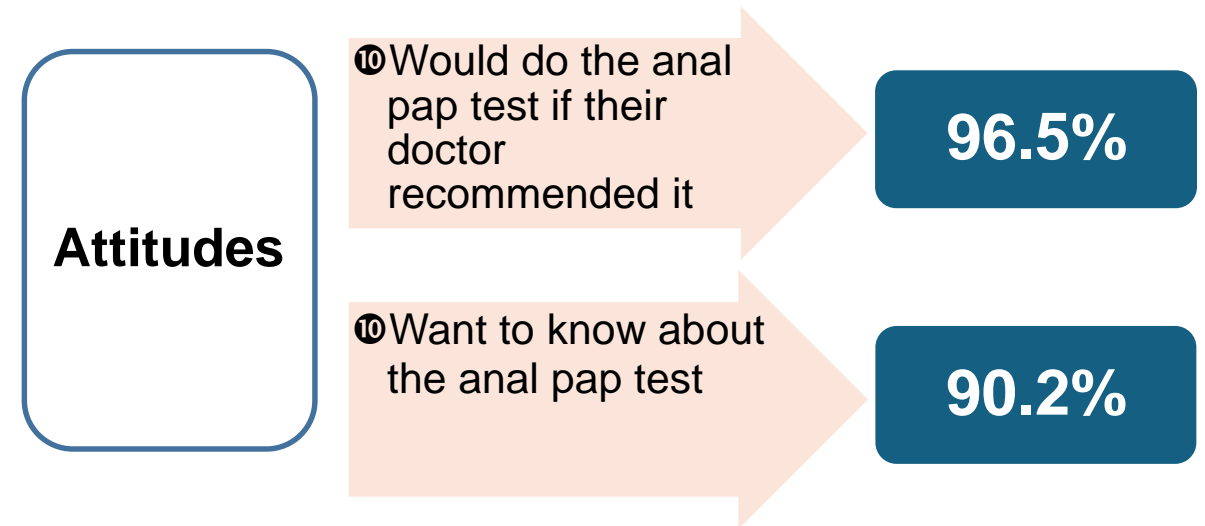


# Knowledge, Attitudes, and Experiences of Anal Cancer and Anal Cancer Screening Among a Clinic-based Sample of Hispanic Women

## Awareness and history of anal cancer screening among high-risk women



## Attitudes toward anal pap test among high-risk women



**Colposcopy and gynecology oncology clinics** are an important venue to **identify women at increased risk for anal cancer**. The high proportion of women at increased risk for anal cancer identified within this setting, as well as their low knowledge and screening experience, supports that this is an ideal setting for clinical and education interventions in this area.

# Ongoing studies on screening optimization

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- **CAMPO Consortium**
- **ULAC-Net 101**
- **Primary aim:** Evaluate screening algorithms to improve the current screening program for detection of anogenital **HPV-related cancers and pre-cancers (cervical and anal)**, in men and women living with HIV in Mexico and Puerto Rico.
- **Recruitment in Puerto Rico:** 250 women and 400 men (>95% recruited).



**Le invitamos a participar en un estudio de investigación**

**Contribuya a la investigación y ayúdenos a prevenir los cánceres asociados a la infección con el virus de papiloma humano (VPH).**



**Propósito del estudio**

Mejorar la detección de cánceres asociados al **VPH** en personas viviendo con **VIH**.



**Pruebas a realizar:**

- Prueba de VPH
- Pap anal
- Pap cervical



**¿Quién puede participar?**

Personas con diagnóstico de VIH de **21 años o más**.



**¿Dónde se realiza el estudio?**

Hospital del Centro Comprensivo de Cáncer, cerca de Centro Médico en **San Juan**.



**Incentivo**

Recibirá un **incentivo económico** por su participación.



Llamando  
(787) 772-8300  
Ext. 1409, 1418  
campopr@cccupr.org



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¡Conecta con nosotros!



Financiado por ULACNet: un Programa del Instituto Nacional del Cáncer de los Institutos Nacionales de Salud de EE.UU. #Grant: U54CA242646-03



# Evaluation of Anal Self-collection Sampling and Molecular Biomarkers to Expand and Optimize Anal Cancer Screening in High-risk Populations

- Collaboration with Dr. Nicolas Wentzensen, US-NCI.
- **Primary aim:** Evaluate anal cancer screening tests in **self-sampling versus clinician-collected samples** among men and women living with HIV and MSM without HIV attending the Anal Neoplasia Clinics of the University of Puerto Rico Comprehensive Cancer Center.
- **Secondary aim:** Evaluate attitudes to and experience with anal self-sampling.
- Starting date: June 2025

## ¡Participa en un estudio sobre cernimiento de cáncer anal!

El propósito del estudio es comparar los resultados de la auto-toma anal con la de una muestra tomada por el médico para el cernimiento de cáncer anal.



### Su participación en el estudio incluirá:

1. Auto-toma de muestra anal
2. Toma de muestra por el médico
3. Contestar una entrevista
4. Incentivo económico de **\$15** por su participación

### ¿Quién puede participar?

Hombre y mujeres de 21 años o más recibiendo servicios de anoscopia de alta resolución en la Clínica de Neoplasia Anal y que cumplan con todos los criterios de inclusión del estudio.



### ¿Dónde se realiza el estudio?

Clínica de Neoplasia Anal ubicada en el Hospital del Centro Comprensivo de Cáncer de la Universidad de Puerto Rico

**INFORMACIÓN CONTACTO**  
**787-772-8300, EXT. 5272, 1145**

Colaboración entre el Instituto Nacional del Cáncer y el Centro Comprensivo de Cáncer de la Universidad de Puerto Rico



# Current Challenges for Anal Cancer Screening

- Location and number of providers certified to perform HRA and treatment
- High demand for anal cancer screening, but low resources (human and infrastructure).





# Translating recommendations into practice

## What has worked

- UPRCCC has developed first Anal Neoplasia Clinic in PR with trained certified physicians
- Pap screening occurring within HIV/community clinics
- Collaboration with HIV clinics for patient referral to our Anal Neoplasia Clinic
- Patient trust in physician recommendations
- Patients want to know more about screening
- Provider and patient education impact screening uptake
- While medical billing was a barrier, new guidelines have facilitated health insurance coverage

## What barriers remain

- Limited number of places to refer to HRA after an abnormal Pap
- Limited number of physicians trained in HRA and HSIL treatment (learning curve varies by physician)
- Limited knowledge of recent screening guidelines
- Incorporation of HRA services within gynecology clinics would help increase uptake in high-risk women





Thank  
you!



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¡Gracias!





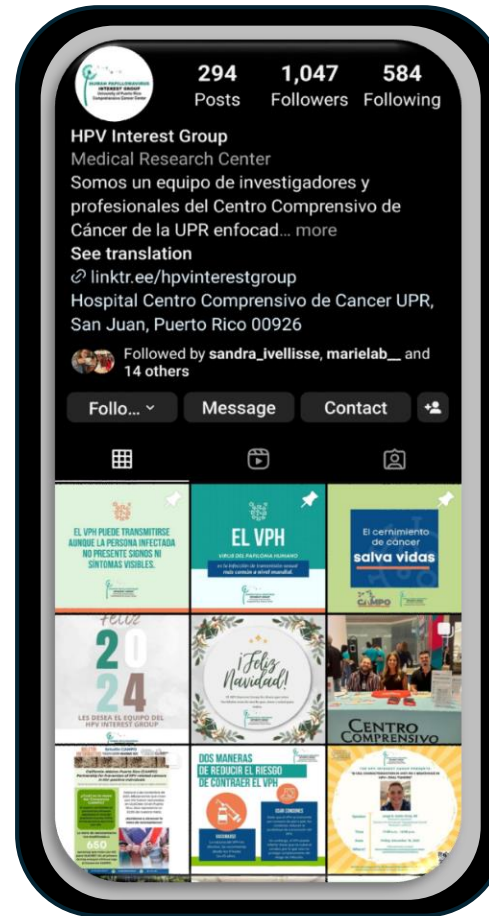
# HPV Interest Group: Our social media

## Social media

 @hpvinterestgroup

 @hpvinterestgroup1

 @GroupHPV



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