

# ***Anal Cancer Risk Factors and Utilization of Anal Pap Smear Screening Among Transgender Persons***

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# Disclosures

- No financial relationships or conflict of interest to disclose

# Background

## **Transgender**

**An umbrella term for persons whose gender identity is different from the sex they were assigned at birth.**

<http://www.hrc.org/resources/glossary-of-terms>

# Background

## Transgender Women (TGW)

- Born XY
- Assigned MALE at birth
- Identify as WOMEN



## Transgender Men (TGM)

- Born XX
- Assigned FEMALE at birth
- Identify as MEN



# Background

*Journal of Lower Genital Tract Disease*

## ORIGINAL RESEARCH ARTICLES: PERIANAL AND ANAL

### Risk Factors for Anal Dysplasia in Transgender Women: A Retrospective Chart Review

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**Objective:** The aim of the study was to assess risk factors for anal human papillomavirus (HPV) infection and anal dysplasia among a cohort of transgender women (TGW).

**Methods:** A retrospective chart review was conducted based on electronic medical records of TGW patients seen in the University of Miami Health System between 2010 and 2016. Outcome measures included risk factors of anal dysplasia, including HIV infection, receptive anal intercourse, and smoking history. Descriptive statistical analysis and  $\chi^2$  testing were used.

**Results:** Sixty-nine TGW patients' charts were reviewed. Patients' ages ranged from 18 to 72 (mean = 38 [15]). Twenty-two (30%) were older than 50 years; 10 (15%) were black/African descent; 20 (29%) reported a smoking history; 6 (9%) were HIV positive, and 28 (72%) among those with known partner preference ( $n = 39$ ) reported male partners. Male partner preference was significantly associated with being black/African descent ( $p = .009$ ) and being single ( $p = .048$ ). Older age was significantly associated with HIV-positive status ( $p = .023$ ). The average number of risk factors per person was 2.10 (0.97). Sixty-one years or older had the highest average number of risk factors (2.90 [0.88]).

**Conclusions:** Because rates of HIV, dangerous sexual behaviors, and other risk factors for anal dysplasia continue to persist among TGW, this study reinforces the need to increase the focus on anal health in the care of TGW and the need for further research to guide patient care and anal dysplasia screening strategies among those individuals.

**Key Words:** transgender, dysplasia, transwoman, anal cancer, HPV, HIV  
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among TGW.<sup>8–10</sup> Other risk factors for STIs stem from sex discrimination and stigmatization experienced by many TGW. Low self-esteem, polysubstance use, and victimization related to transgender identity have all been associated with sexual risk and STI acquisition in TGW.<sup>11–13</sup> In addition, homelessness and poverty are prevalent among TGW, which often leads to survival sex work.<sup>6,14</sup> The global HIV prevalence is 20% among TGW, and rates of new HIV infections are highest in this demographic in the United States.<sup>15,16</sup> When compared with MSM, prevalence of HIV is higher among TGW.<sup>16–18</sup>

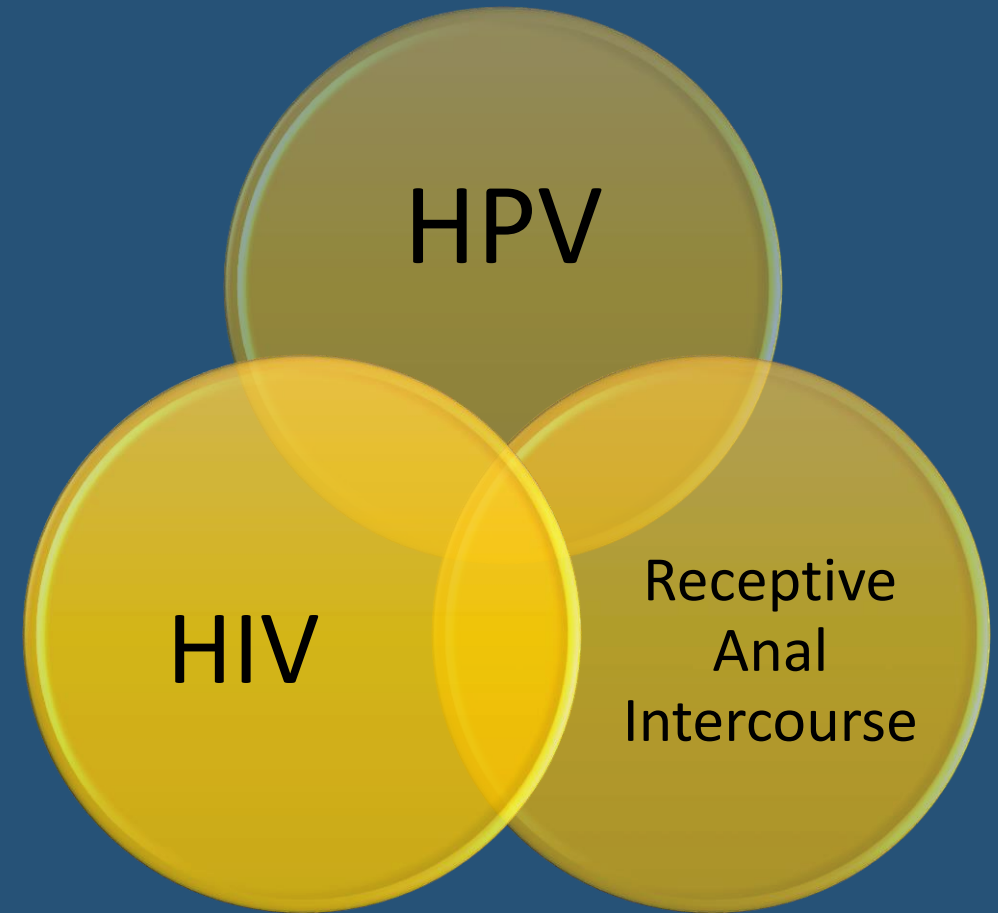
Although data are limited, particularly from US populations, TGW seem to have high rates of HPV infection that could lead to anal dysplasia.<sup>19–22</sup> In the United States, a study of small cohort of HIV-positive TGW revealed a rate of anal dysplasia and abnormal histology similar to that in MSM. Anal cytology was abnormal in 95% of TGW and histology abnormal in 91% of TGW.<sup>23</sup> In addition, the long-term use of high-dose estrogen for cross-sex hormone therapy in TGW could potentially affect the natural history of anal HPV and anal dysplasia in this group. Estrogen has been shown to enhance HPV-related carcinogenesis.<sup>24</sup>

Although anal dysplasia and HPV infection data for TGW in the United States are lacking, data from other countries suggest that investigation is warranted. In a cohort of 119 TGW in Argentina, 97.4% tested positive for anal HPV, 82% with high-risk genotypes. Human papillomavirus infection rates were similar among both HIV-positive and HIV-negative individuals.<sup>22</sup> In a study of Thai MSM and TGW, anal squamous intraepithelial



# Background

***Transgender person are known to have risk factors for anal dysplasia***



Fein, Rosa Cunha, Slomovitz, Potter. 2018. Risk Factors for Anal Dysplasia in Transgender Women: A Retrospective Chart Review. J Low Gen Tract Dis (in press)

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# Background

- ***HIV***

- TGW have highest percentages of newly identified HIV infections
- Global HIV prevalence: 20%

- ***Receptive Anal Intercourse***

- 44% report unprotected, receptive anal intercourse
- 42% survival sex work
- Permissiveness to STIs—higher rates among transgender women

- ***Anal HPV Infection***

- 67-97% transgender women have anal HPV, 82% high risk genotypes
  - HPV infection not always correlated with HIV infection
  - ASIL also found in 43% TGW
  - HIV-positive status was associated with ASIL detection.

- ***Data for TGM are grossly lacking***

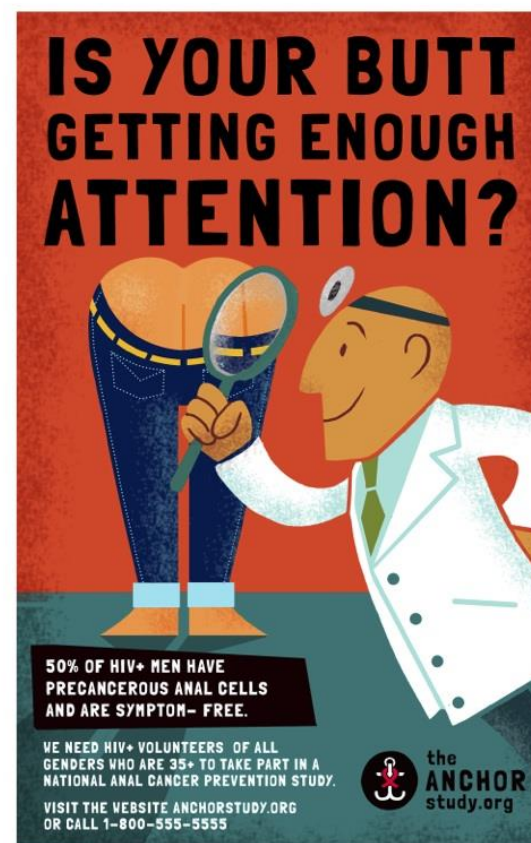
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# Background

## Current Guidelines Related to Anal Cancer Screening

Agency	Population	Recommendations
New York State Dept. of HIV AIDS Institute (2007)	High risk HIV infected patients; MSM, history of anogenital warts, history of HPV related cervical dx	Annual DARE and visual inspection for all HIV patients. Annual anal pap for high risk patients
Northwest Pennsylvania Rural AIDS Alliance (2008)	All HIV-infected men and women. MSM considered high risk	Baseline anal pap for all patients. Annual pap for MSM; every 6 -9 mths for CD4 count < 500
CDC (2009)	All HIV infected men and women	Visual inspection with DARE annually. If anal pap done abnormals must be followed with HRA
US Dept. Veterans Affairs (2009)	All HIV infected adults; target high risk individuals	Baseline and annual anal pap. Abnormals must be followed with HRA
National Guideline Clearing House (2011)	HIV infected men and women	Baseline and annual anal pap
Canadian Medical Advisory Secretariat (2007)	HIV infected men and women	Anal pap test should parallel the same approach for cervical pap testing
British HIV Association (2008)	HIV infected patients	All HIV units should have guidelines established for anal Cancer. No specific guidelines on account of lack of evidence

Source: Wells JS et al, 2014; AIDS Patient Care and STDs; 28 (7) 350 - 357





# Purpose

Among transgender persons:

- Identify risk factors and perceived risk for anal dysplasia
- Assess knowledge of anal dysplasia and associated screening
- Assess receptiveness to anal pap smears

# Methods

- Anonymous Internet-based survey designed and distributed via SurveyMonkey.com
- Transgender persons recruited at health fairs, surgical clinics, and self-referral by word of mouth.
- Descriptive statistical analysis was performed.

# Results

- Transgender Women (TGW) n=40

- Mean age 44 years old (20-68)
- Race/Ethnicity
  - **White 28**
  - Black 2
  - Hispanic 2
  - Other/No answer 8
- Education
  - Some high school/GED 6
  - High school diploma 11
  - **College degree 16**
  - Graduate degree 7
- Insurance Status
  - **Insured 32**
  - Uninsured 8

- Transgender Men (TGM) n=26

- Mean age 32 years old (18-59)
- Race/Ethnicity
  - **White 18**
  - Black 3
  - Hispanic 3
  - Other/No answer 2
- Education
  - Some high school/GED 1
  - **High school diploma 9**
  - College degree 7
  - **Graduate degree 9**
- Insurance Status
  - **Insured 22**
  - Uninsured 4

# Results

Risk Factors for Anal Dysplasia	TGW (n=40)	TGM (n=26)
Smoking	17 (43%)	14 (54%)
STI	12 (30%)	4 (15%)
Receptive Anal Intercourse	31 (78%)	9 (35%)
HIV	3 (8%)	0 (0%)
Inconsistent Condom Use	16 (40%)	19 (73%)

## Results

Perceived Risk of Anal Cancer:  
**23% TGW**                      **12% TGM**

How much do you worry about getting anal cancer?

**“Not a lot”**

67% TGW

85% TGM

How does having HIV affect your chances of getting anal cancer?

**“I don’t know”**

45% TGW, 50% TGM

**“Increases chances”**

35% TGW, 46% TGM



# Results

*Which of the following do you think might increase the chances of getting anal cancer?*

Risk Factors for Anal Cancer	TGW	TGM
Stress	17 (43%)	8 (31%)
<b>Smoking</b>	<b>17 (43%)</b>	<b>8 (31%)</b>
Bad family genetics	21 (53%)	11 (42%)
Eating a bad diet	16 (40%)	4 (15%)
Poor personal hygiene	14 (35%)	7 (27%)
Not cleaning enough after bowel movement	9 (23%)	5 (19%)
<b>Infection with a virus</b>	<b>20 (50%)</b>	<b>12 (46%)</b>
<b>Having anal sex</b>	<b>19 (48%)</b>	<b>10 (38%)</b>
<b>High number of sexual partners</b>	<b>12 (30%)</b>	<b>9 (35%)</b>

# Results

- Have you heard of an anal pap test/smear?
  - TGW: Yes: 23% (9/40)
  - TGM: Yes: 31% (8/26)
- Have you ever had an anal pap test/smear?
  - TGW: Yes: 23% (9/40)
  - TGM: Yes: 8% (2/26)
- Would you be willing to get an anal pap test/smear?
  - TGW: Yes: 50% (20/40)
  - TGM: Yes: 42% (11/26)

# Discussion

- Both TGW and TGM have risk factors for anal dysplasia
- Self-perceived risk for anal cancer is low
- Most TG persons are unaware of risk factors for anal cancer and do not know about anal pap testing
- Majority unwilling to undergo anal pap testing

# Discussion

- Limitations
  - Low sample size
  - Homogenous sample

# Discussion

- Transgender persons would benefit from increased awareness of anal cancer risk and screening methods
- Further investigation into the barriers that exist to anal cancer screening among transgender persons is needed





Thank You!