

# Self -Collection for Anal Cancer Screening in Gay Men

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## Background

- Anal cancer is rare in the general population (0.8 cases per 100,000 person-years)
- However, anal cancer is estimated to be 80 times more common in gay and bisexual men
- Screening for early detection of abnormal cells in the anal canal might reduce the mortality from invasive anal cancer as do Pap smears for cervical cancer
- **Self-screening using liquid-based cytology samples may:**
  - reduce costs of large, prospective natural history studies
  - expand the reach of future screening initiatives

## Study Objectives

Compare self- versus clinician-collection procedures with regard to:

1. Adequacy of the cytological specimen
2. Detection of cytological abnormalities
3. Client's subjective experiences

## Methods

### 1. MSM Study Population - HIV-1 Seronegative (n=194) and Seroconverters (n=28)

- The Vanguard Project is a prospective, open cohort study begun in 1995 of community-recruited men who have sex with men (MSM) ages 18-35 in Vancouver
- This study was cross-sectional, July 2003 - March 2004 ( n = 222)

### 2. Cytologic Specimen Collection and Examination

- Randomized assignment of collection order (self versus clinician)
- Illustrated instructions were provided for self-collection
- Liquid-based (ThinPrep™) Pap specimens collected with Dacron swab
- Cytologic examination blind to self versus clinician collection

### Results grouped

- Inadequate versus Adequate
- Detection of cytologic abnormality
  - Yes (ASCUS, AIN 1, AIN 2/3)
  - No (Normal, Inadequate)

### 3. Self-administered Questionnaire (post sampling)

- Clients' subjective comparison of self versus clinician collection procedures
- Five-point scale (1 = not at all, 5 = a lot)
- Six domains measured:
  - Pain
  - Embarrassment
  - Discomfort
  - Privacy
  - Understanding of the collection
  - Capability in collecting specimen

- Self/clinician differences assessed using Wilcoxon rank test for paired samples

### 4. Men with any Pap abnormality referred for high-resolution anoscopy and possible biopsy

## Results

### Study Objective #1

#### Adequacy of Anal Swab Specimens for Cytological Assessment

CLIENT-Collected	CLINICIAN-Collected	NUMBER	%
INADEQUATE	INADEQUATE	10	(4.5)
ADEQUATE	ADEQUATE	178	(80.2)
ADEQUATE	INADEQUATE	7	(3.2)
INADEQUATE	ADEQUATE	27	(12.2)
		222	(100)

- Overall, clinician adequate = 92% (n=205) versus patient adequate = 83% (n=185), p = 0.006, kappa = 0.30

### Study Objective #2

#### Detection of Cytological Abnormalities

CLIENT-collected	CLINICIAN-collected	NUMBER	%
NO ABNORMALITY	NO ABNORMALITY	142	(64.0)
ABNORMALITY	ABNORMALITY	26	(11.7)
NO ABNORMALITY	ABNORMALITY	26	(11.7)
ABNORMALITY	NO ABNORMALITY	28	(12.6)
		222	(100)

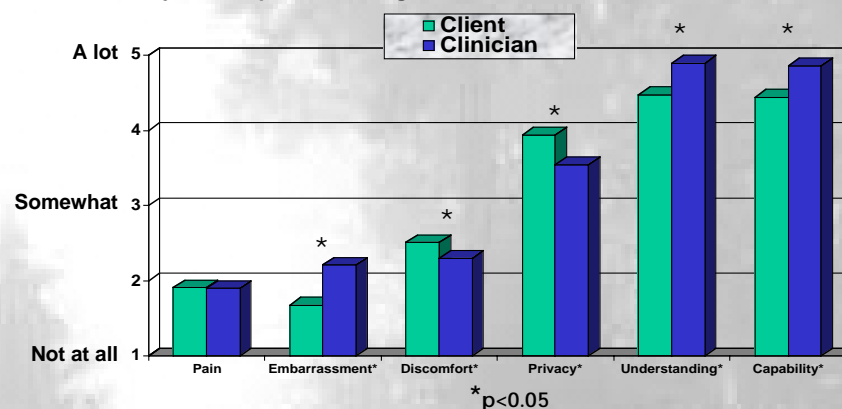
- Overall, clinician abnormal = 24.3% (n=52) versus patient adequate = 24.3% (n=54), p = 0.79, kappa = 0.33

#### Findings in HIV-1 Seropositive men (median 26 months infected)

- 28 men were HIV-1 seropositive
  - 14 had abnormal Paps
    - biopsy results available so far for 8 of the 14 men
    - *in situ* squamous cell carcinoma in one biopsy
    - moderate/high-grade (AIN 2/3) in additional 3 biopsies

### Study Objective #3

#### Clients' Subjective Experience Using a Five-Point Scale



#### Compared to clinician collection, clients on average rated their own swab collection as:

- No different with regard to pain
- More uncomfortable
- More private
- Less embarrassing
- Less well-understood
- Less capably performed

## Summary

### 1. Adequacy

- Client-collected swabs were, on average, less adequate than clinician- collected swabs

### 2. Detection of Cellular Abnormalities

- Overall, self and clinician collection procedures were not significantly different

### 3. Compared to clinician collection, clients on average rated their own swab collection as expected, except slightly more uncomfortable.

## Conclusions

- Self-collection of anal swab specimens in research (and possibly clinical) settings is feasible and acceptable to clients
- Follow-up studies should aim to further improve the cytologic adequacy of self-collected specimens
- Consideration should be given to using high-resolution anoscopy for initial screening of such men [the vast majority of HIV+ MSM has a cytologically abnormal first (or subsequent) anal Pap smear]
- However, treatment trials and other studies are needed prior to initiating screening programs