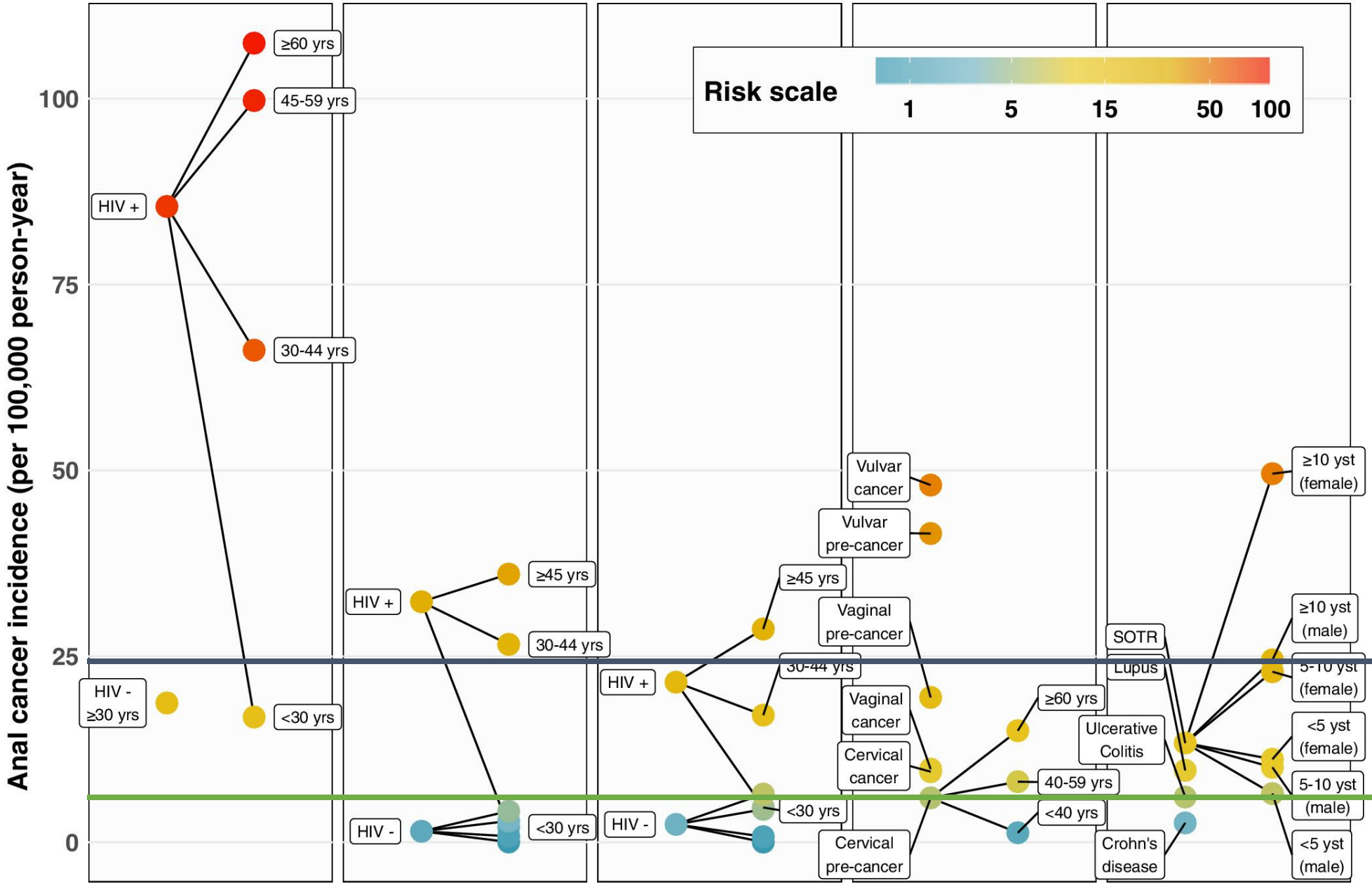
Should we be screening MSM & PLWH for anal cancer in 2025?

Chris Kenyon 2025

INSTITUTE OF TROPICAL MEDICINE ANTWERP



Historic Cervical Cancer

Current Cervical Cancer

Clifford GM, et. al. Int J Cancer. 2021

The Solution = screening

Treatment resulted in a 57% reduction in anal cancer (95% CI, 6% to 80%, P=.029)

Slide: Prof. G Ellsworth Weill Cornell

the ANCHOR study

Palefsky, et. al. N Engl J Med. 2022

EACS 2025

Cancer: Screening Methods(i)

Anal cancer

Person	**MSM and TW age > 35y, men who have sex with women (MSW) and CisW age >45y or previous vulvar HSIL or cancer**
Procedure	Digital rectal exam, anal cytology and HPV16/High-risk HPV
Evidence of benefit	Reduces incidence of anal cancer
Screening interval	1 (up to 2 years if both cytology and (HR-HPV or HPV16) neg)
Comments	Positive cytology or HPV should be followed up with high resolution anoscopy

Some screening programmes can help

All screening programmes can harm

Gerry Bryant

Wilson's Criteria for introducing screening

1. The condition being screened for should be an important health problem
2. The natural history of the condition should be well understood
3. There should be a detectable early stage
4. Treatment at an early stage should be of more benefit than at a later stage
5. A suitable test should be devised for the early stage
6. The test should be acceptable
7. Intervals for repeating the test should be determined
8. Adequate health service provision should be made for the extra clinical workload resulting from screening
9. The risks, both physical and psychological, should be less than the benefits
10. The costs should be balanced against the benefits

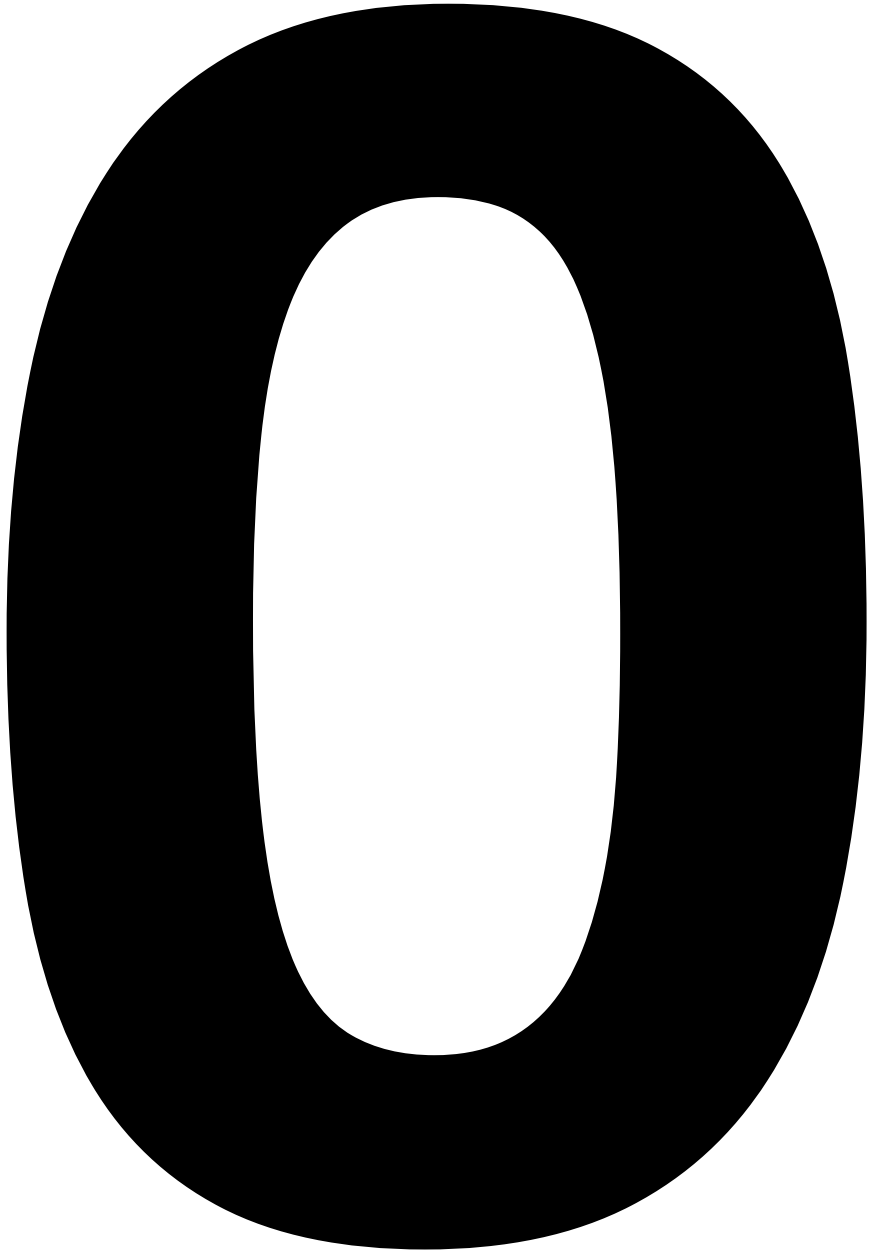
Wilson Principles and practice of screening for disease; 1968

UK National Screening Committee criteria

There should be evidence from high-quality RCTs that the screening reduces mortality or morbidity

UK National Screening Committee; 2022

Number of RCTs showing screening for anal cancer -> ↓ morbidity/mortality

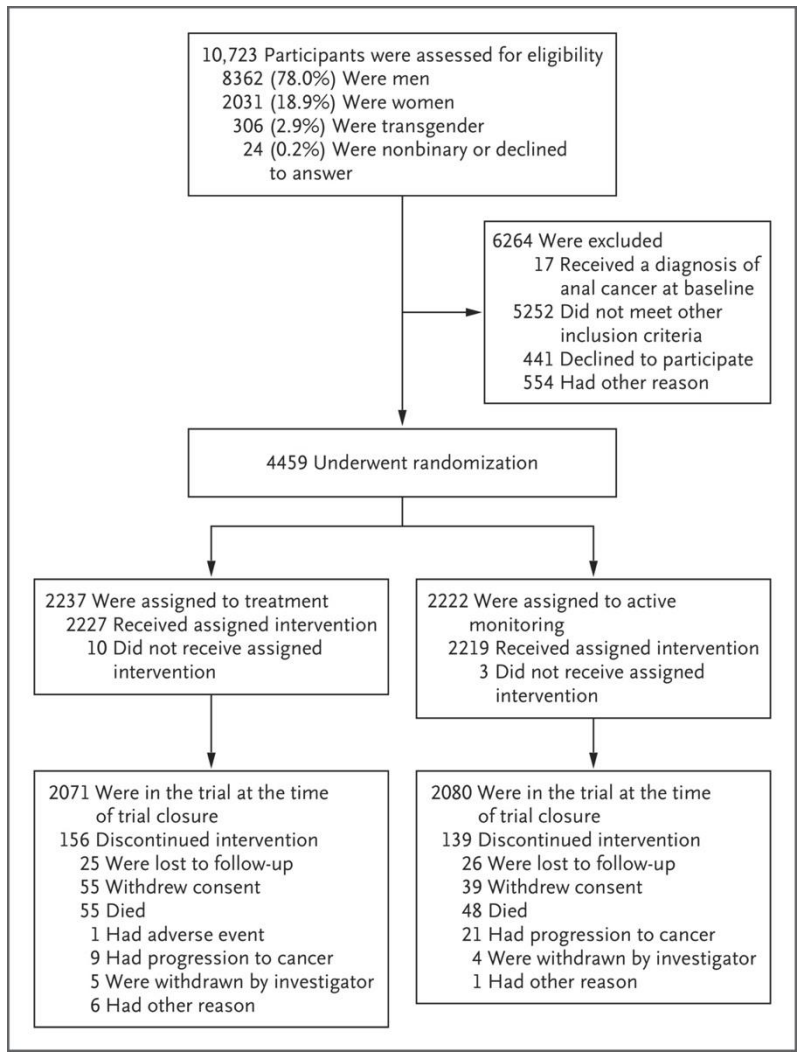


The NEW ENGLAND JOURNAL of MEDICINE

RESEARCH SUMMARY

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

Palefsky JM et al. DOI: 10.1056/NEJMoa2201048



the ANCHOR study

Treatment

The NEW ENGLAND JOURNAL of MEDICINE

RESEARCH SUMMARY

Treatment of Anal High-Grade Squamous Intraepithelial Lesions to Prevent Anal Cancer = ANCHOR Trial

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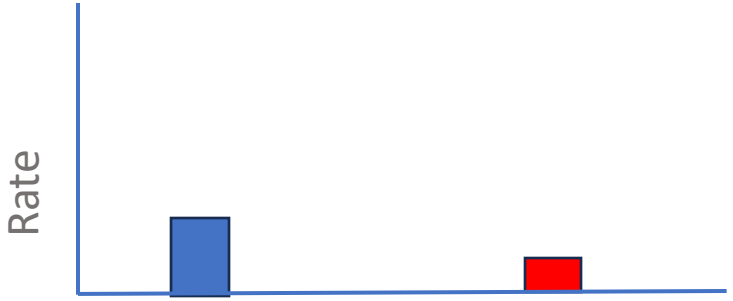
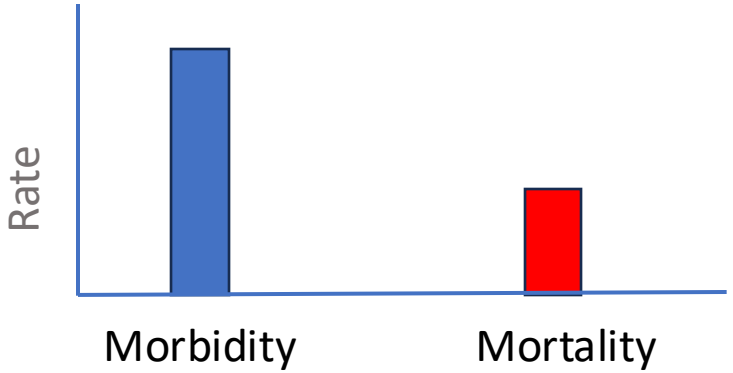
Screen → HSIL → HRA → AIN → Cancer

R/



No Screen



Entry criteria:

- HIV+
- >35 years
- Biopsy pos for AIN3 or p16 pos AIN2

Palefsky JM et al. N Engl J Med2022;386:2273-2282

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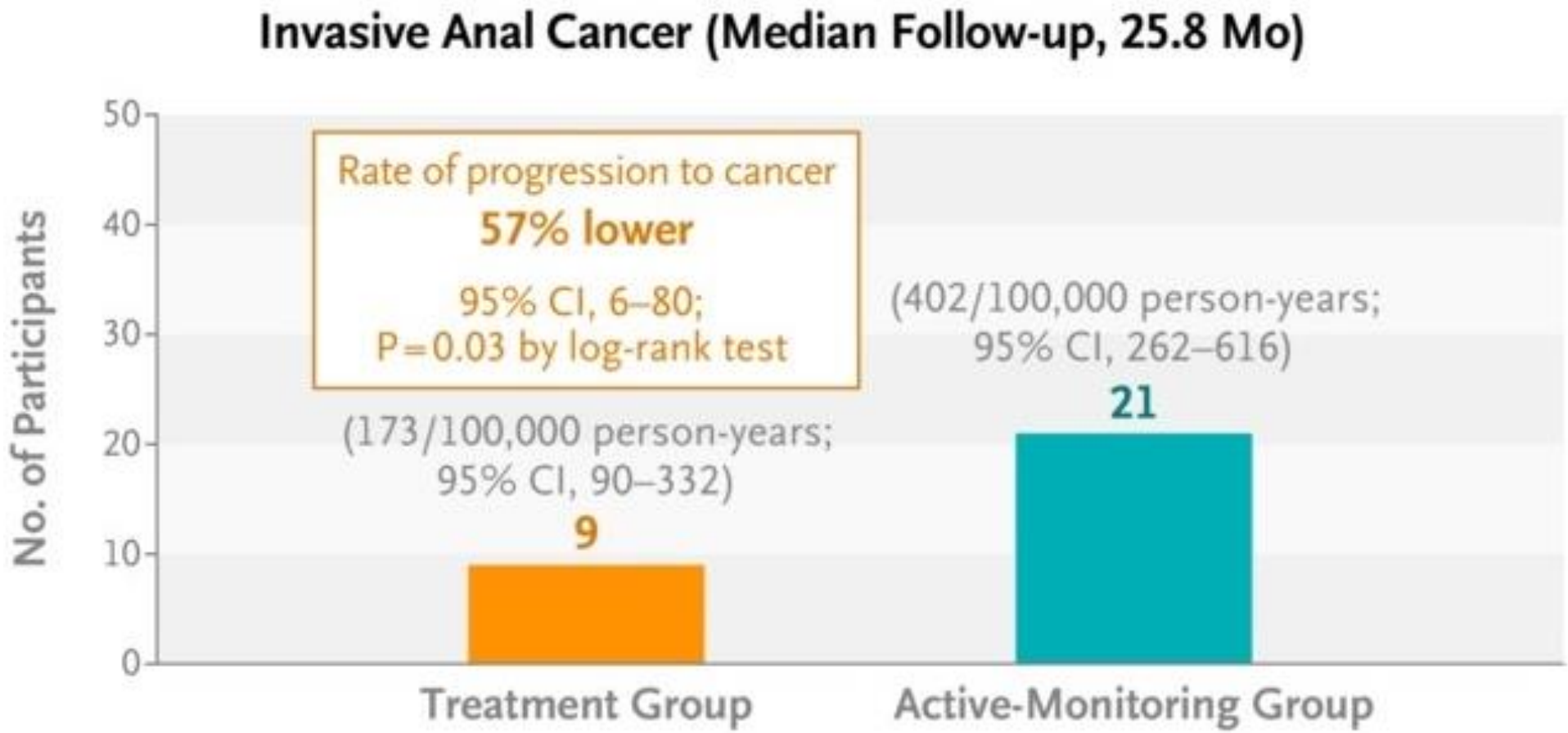
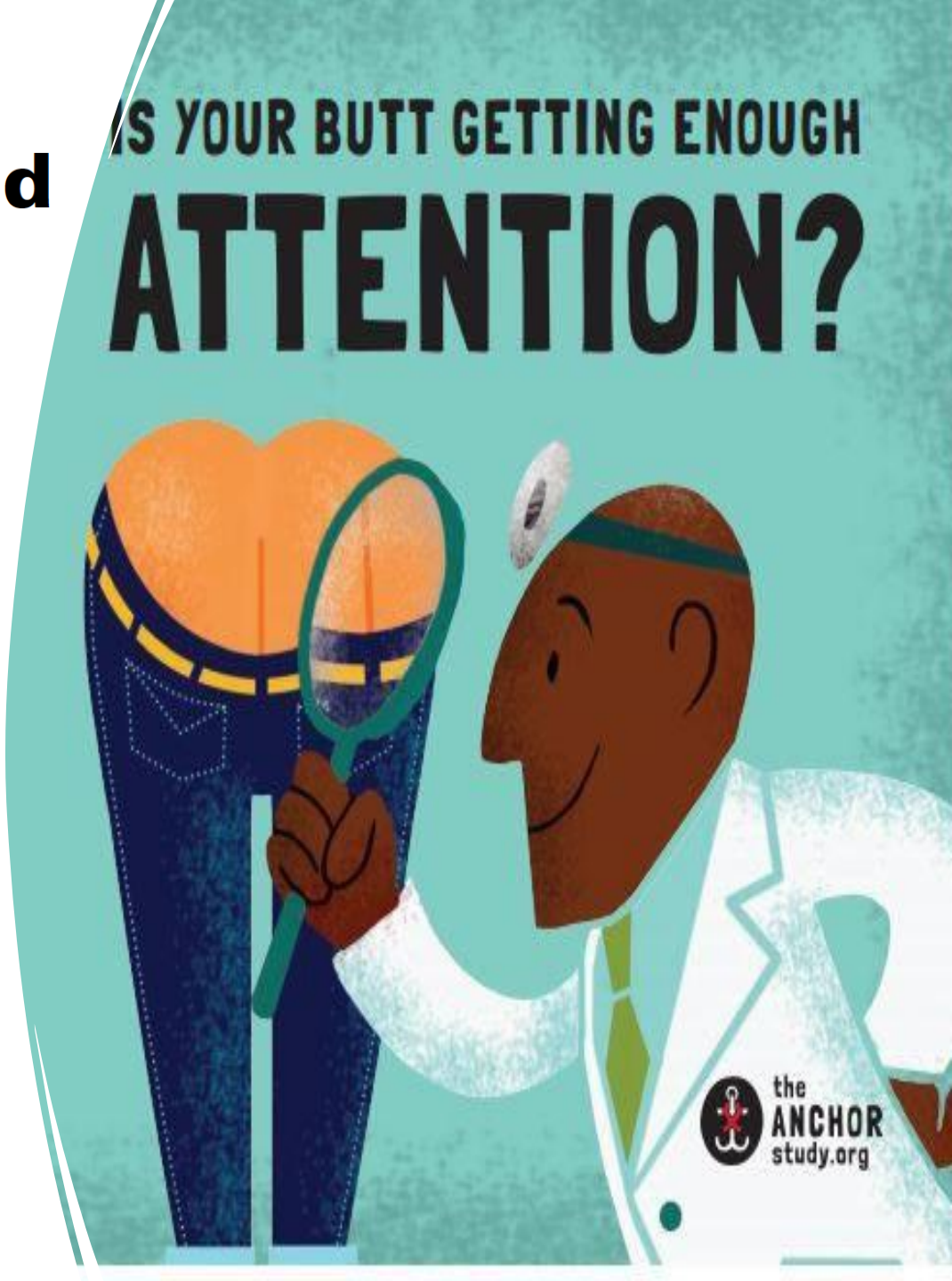


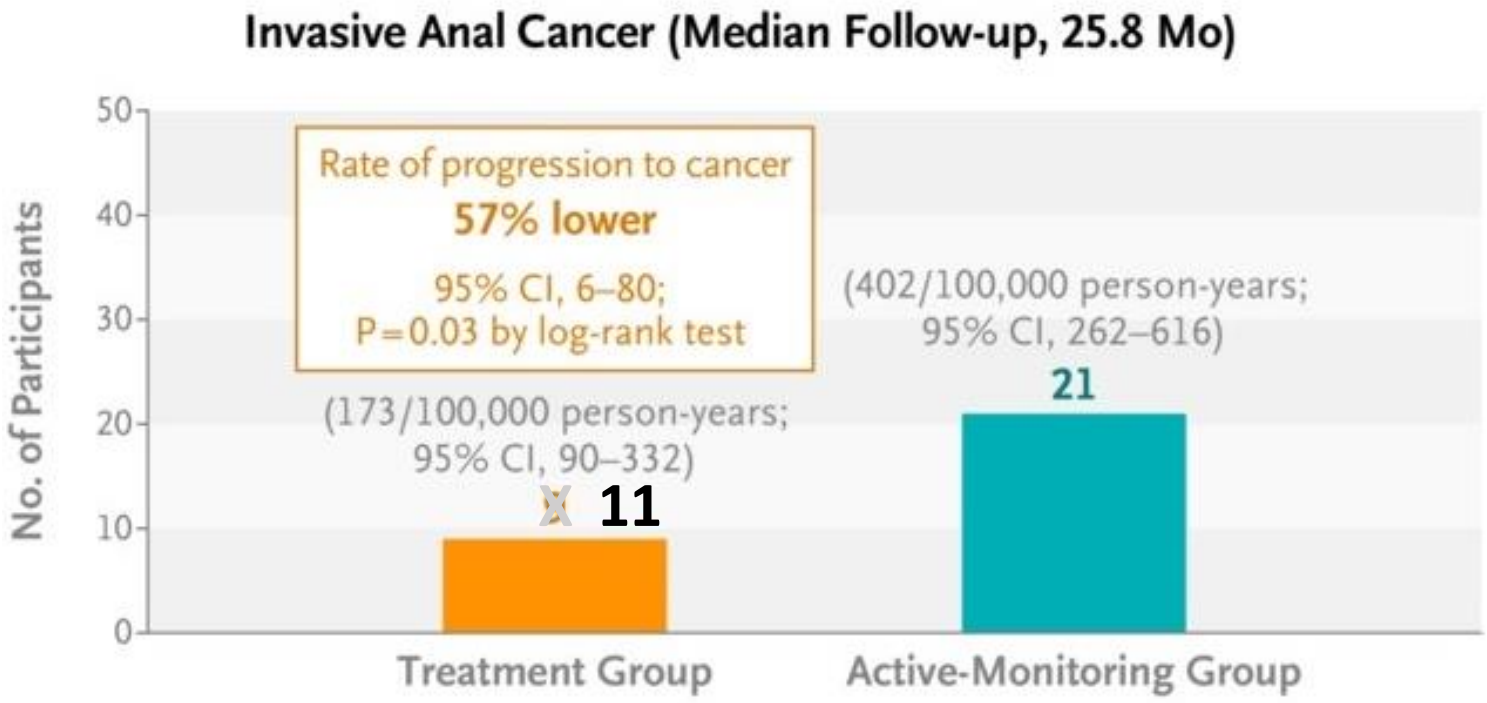
Screening for Anal Cancer Is Associated With Real Harms and Questionable Benefits

Kenyon CID 8 Nov 2025

1. Not a screening RCT
2. Protocol violation
3. Morbidity higher in R/ group
4. Natural regression of AIN
5. Poor R/ efficacy for AIN
6. HRA availabilty



2. Protocol violation



~~P=.03~~ **P>0.05**

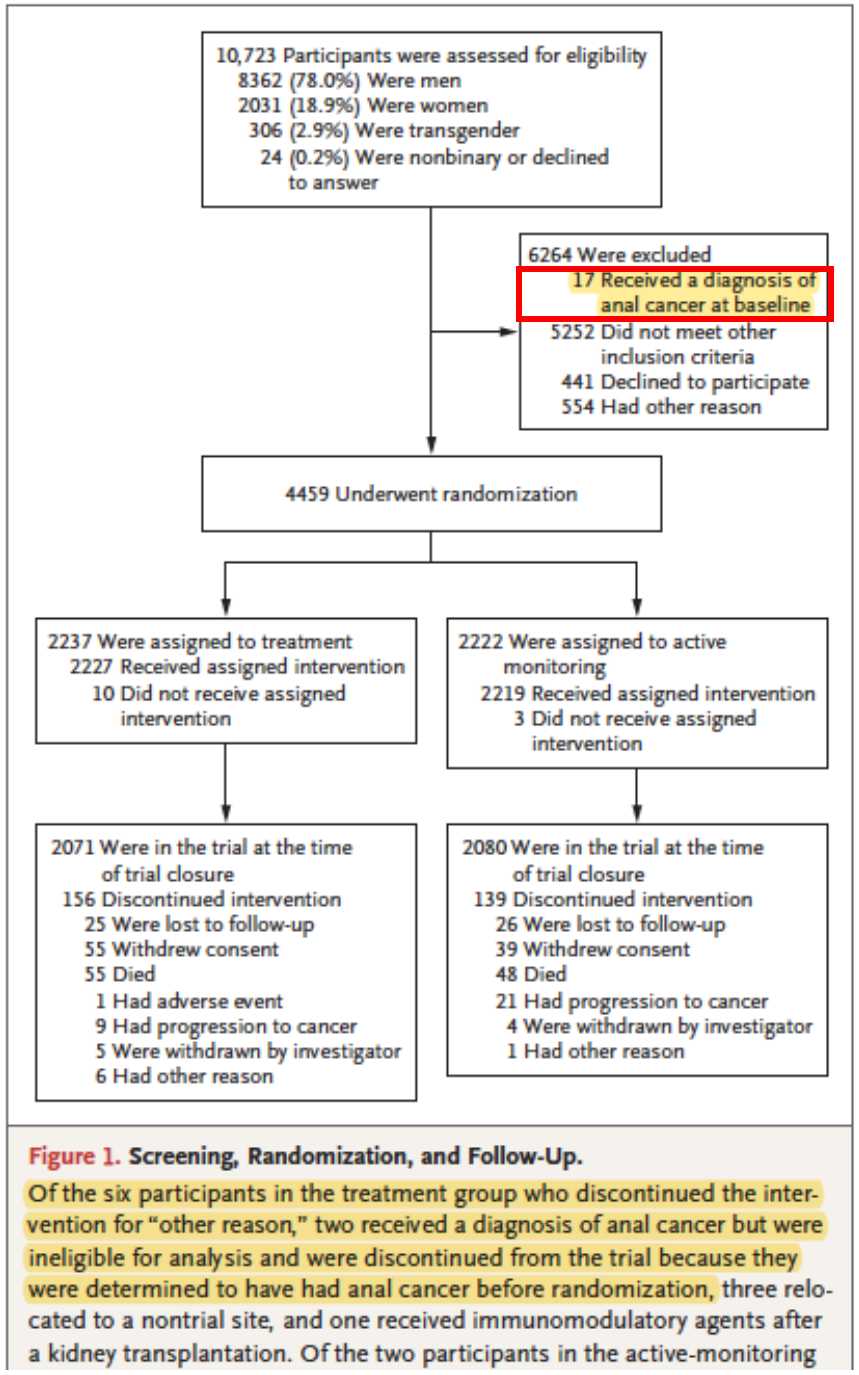
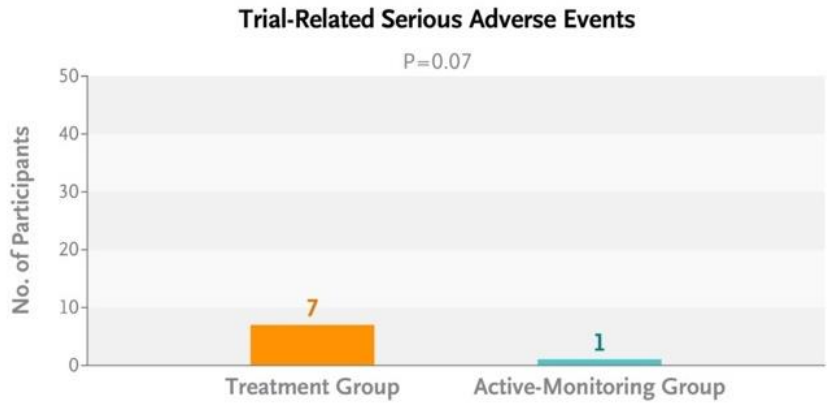


Figure 1. Screening, Randomization, and Follow-Up.

Of the six participants in the treatment group who discontinued the intervention for "other reason," two received a diagnosis of anal cancer but were ineligible for analysis and were discontinued from the trial because they were determined to have had anal cancer before randomization, three relocated to a nontrial site, and one received immunomodulatory agents after a kidney transplantation. Of the two participants in the active-monitoring

3. Morbidity higher in R/ group

- Mortality
  - Treatment arm: 55
  - Passive arm: 48
- Morbidity higher in treatment arm



P=0.07

P<0.001

P-0.07

Table 2. Adverse Events.

Events	Treatment Group	Active-Monitoring Group
	number	
Adverse events	683	635
Serious adverse events*	586	568
Trial-related adverse events†	43	4
Trial-related serious adverse events‡	7	1

Treatment for AIN is painful

Randomized Trial for AIN: Imiquimod, Topical 5-FU, Electrocautery

- 148 HIV+ MSM (60% HGAIN)
- 16 wks Rx – Imiquimond 3x/wk, 5-FU 2x/wk, electrocautery monthly
- Follow-up at 6 months

	4 Week Response ITT (95% CI)		Recurrence 6 Months	Severe Pain
	Complete	Partial		
Imiquimond	26% (13-39)	13% (6-25)	21%	43%
5-FU	17% (8-30)	13% (5-25)	38%	27%
Electrocautery	41% (28-56)	7 (2-18)	17%	13%

P=.04

Richel, O. CROI 2012

R/ side effects -> inability to work: 3.7 days (mean)

Table 4 Side effects by episodes of treatment

	ECA (*n* = 55)	Imiquimod (*n* = 48)	IRC (*n* = 7)	Surgical (*n* = 3)	ECA+Surgical (*n* = 15)	ECA+Imiquimod (*n* = 9)	IFR+Imiquimod (*n* = 2)	Total of side effect (*n* = 139)
Pain	41.8%	6.25%	0%	0%	46.7%	44.4%	0%	24.5%
Bleeding	25.4%	2%	28.6%	0%	33.3%	33.3%	0%	18%
Infection	9.1%	0%	0%	0%	6.67%	11%	0%	2.1%
Anal irritation	0%	18.7%	0%	0%	0%	33.3%	50%	11.5%
Days of inability to work	7 {0–9}	0 {0–0}	0 {0–7}	0 {0–0}	8 {0–12}	9 {0–13}	4.5 {0–9}	

Treatment of anal dysplasia in HIV-positive men who have sex with men in a large AIDS reference centre

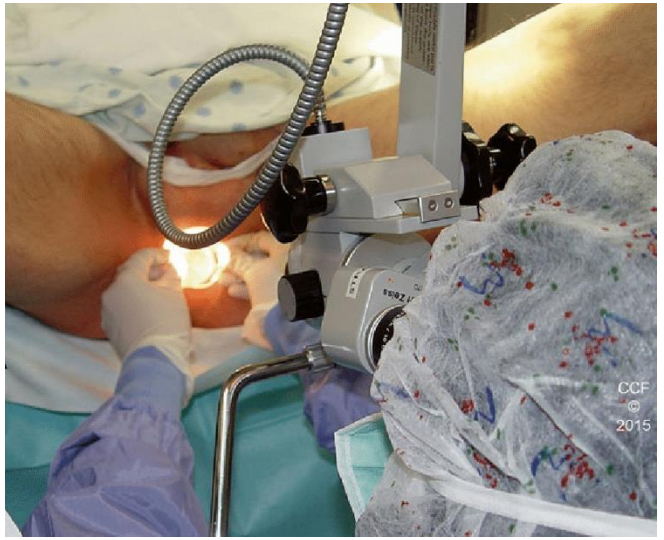
Nathalie Willems, Agnès Libois, Marcel Nkuize, Francesco Feoli, Marc Delforge & Stéphane DeWit

Willems Acta Clin Belg 2016

1/3 to 1/2 MSM need high resolution anoscopy (HRA)

- HSIL prevalence in MSM in Australia
  - PLWH 47% (n=220)
  - HIV- 32% (n=397)

- 617 MSM recruited from the community in Sydney



High resolution anoscopy (HRA)

Machalek Papilloma Res. 2016

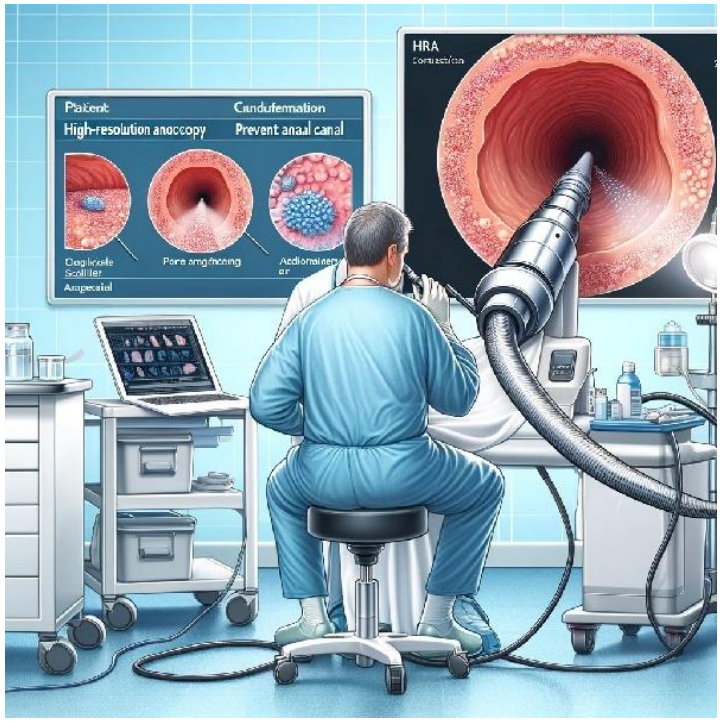
31% Hetero men LWH need HRA

- Prevalence of abnormal anal cytology in MSWLWH
  - Single centre cohort study Mt Sinai, NY, in 2075 PLWH screened for anal ca
  - 31% (67/218) MSWLWH - abnormal anal cytology

High resolution anoscopy (HRA)

27% of Women LWH need HRA

- Prevalence of HSIL was 27% (n=256)
  - Multicentre USA cohort study of women LWH and no prev. diagnosis of AIN
  - RF – anal sex, CD4 <200



High resolution anoscopy (HRA)

Stier CID 2020

4. Do we have the HRA capacity for screening in Belgium?

	N	% LSIL/HSIL	HRA
HIV- MSM	148,081[#]	32	47,386
HIV + MSM	9,498	47	4,464
HIV + non MSM	8,120	29	2,355
SOTR/Immune defic.	12,000[@]	25	3,000
Total	**165,699**		**57,205**

SOTR - Solid Organ Transplant Recip.

Excludes FU HRAs

Wilson's Criteria for introducing screening

8 Adequate health service provision should be made for the extra clinical workload resulting from screening

[#]Marcus BMC PH 2013;
[@]https://irodat.org/?p=database&c=BE

5. Natural regression of AIN

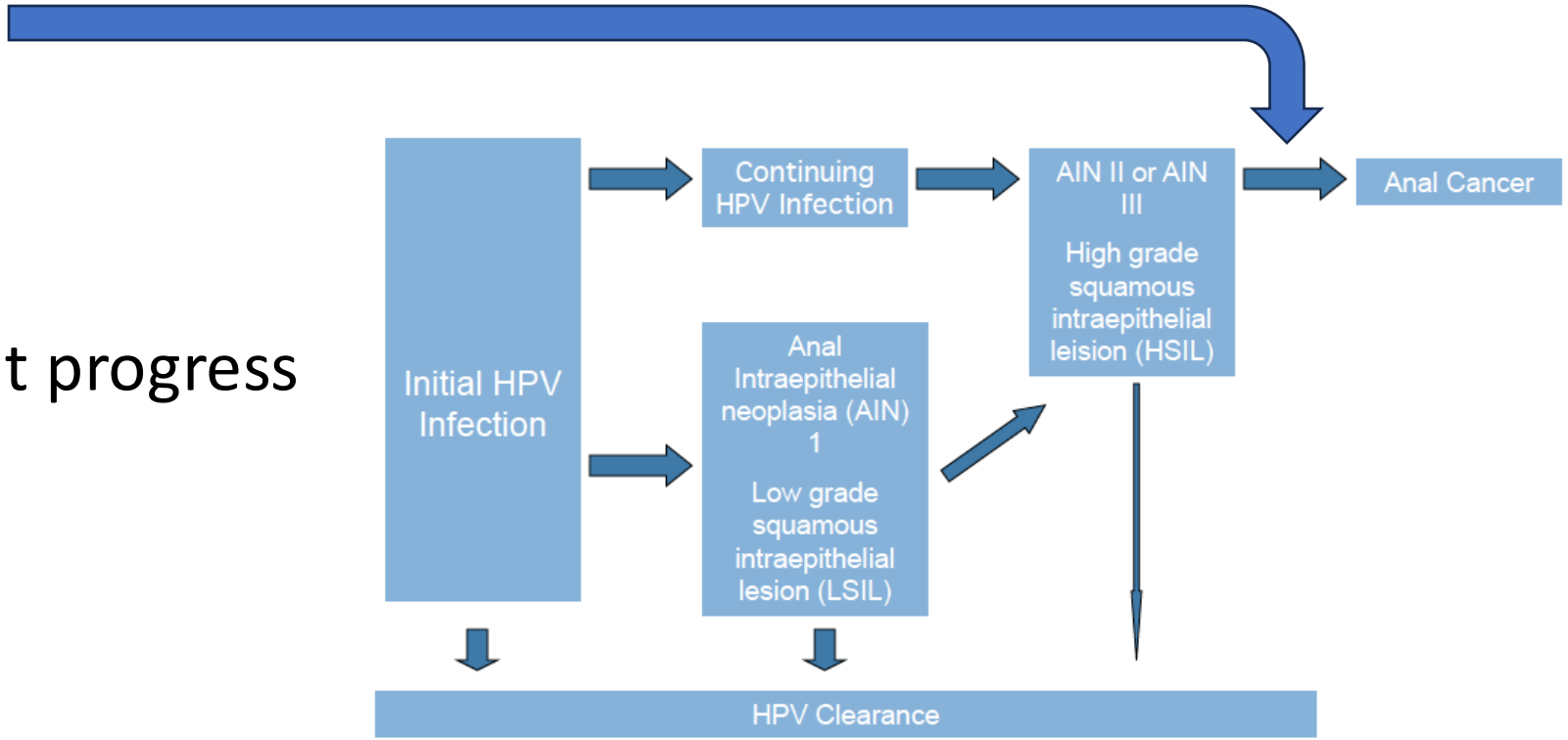
Progression of high-grade AIN/CIN to cancer/year:

Anal cancer:

- PLWH MSM: 1 in 633
- HIV- MSM: 1 in 4196

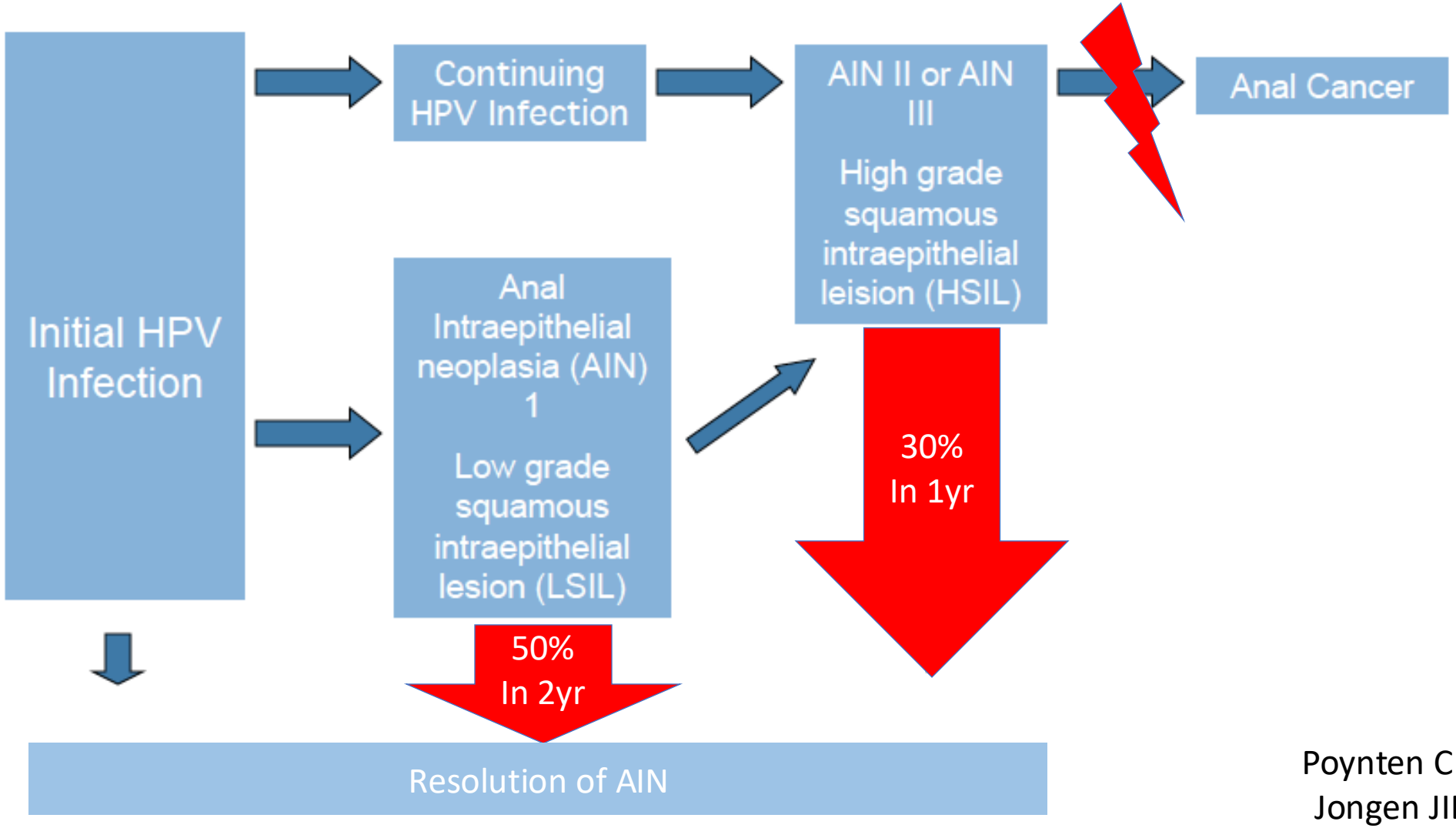
Cervical cancer:

- CIN 3: 12 to 40 percent progress to invasive cancer



Poynten CID 2021; Br J Cancer. 2003;89(6)

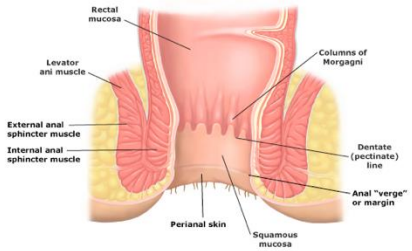
Natural history of regression of AIN



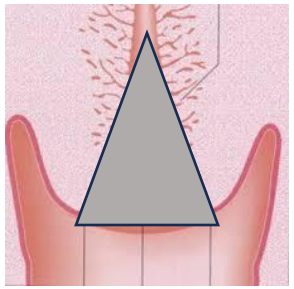
Poynten CID 2021
Jongen JID 2020

6. Low treatment efficacy of AIN vs. CIN

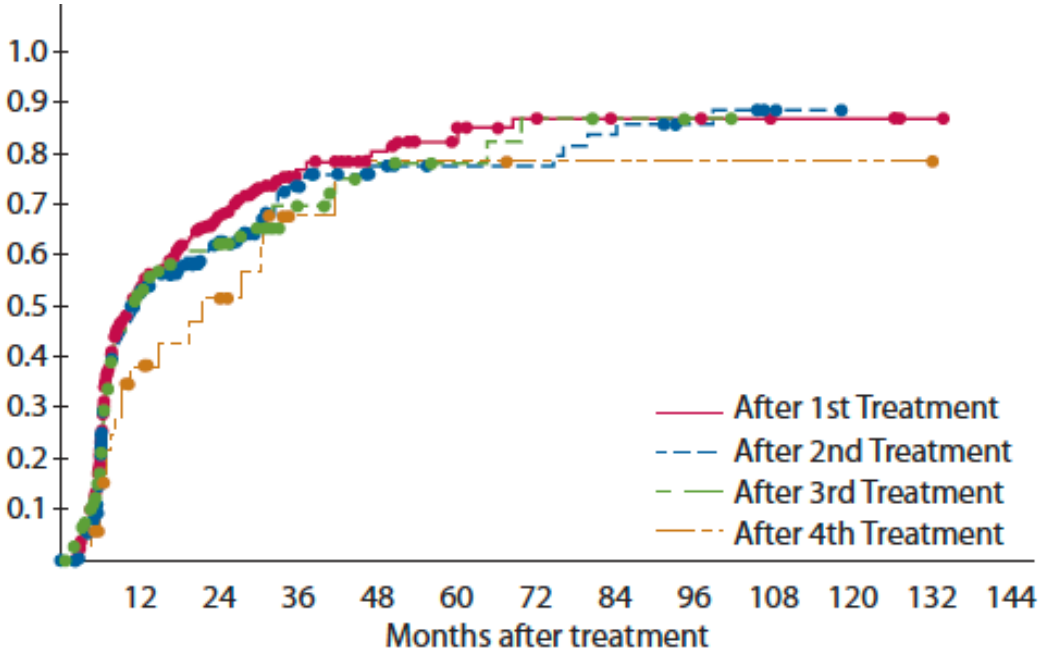
Anus/AIN



Cervix/CIN



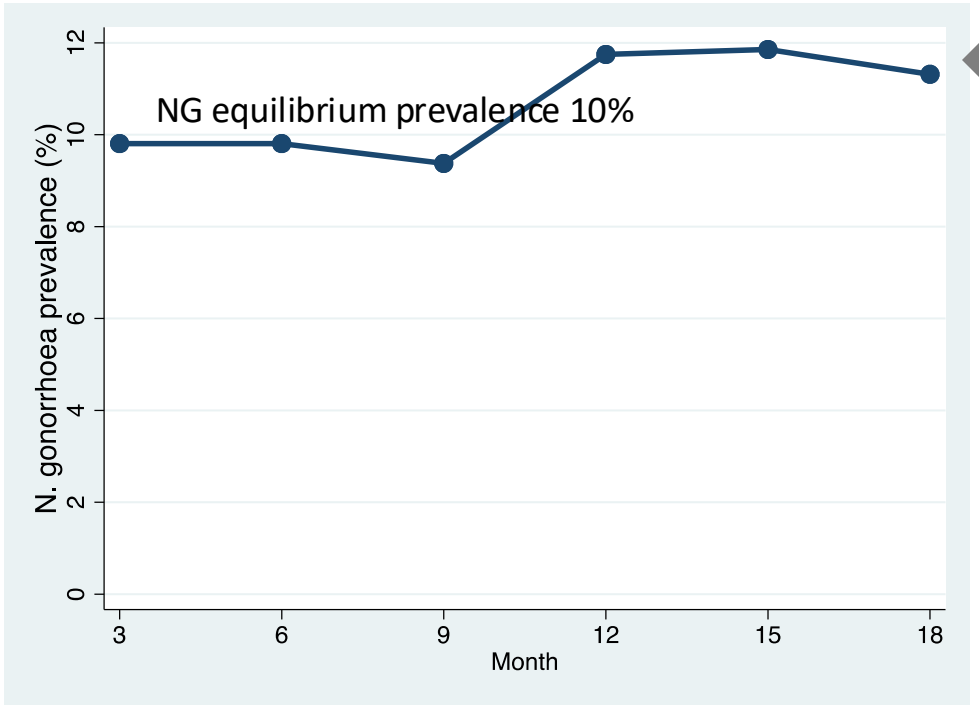
Probability of recurrence of HSIL in PLWHA

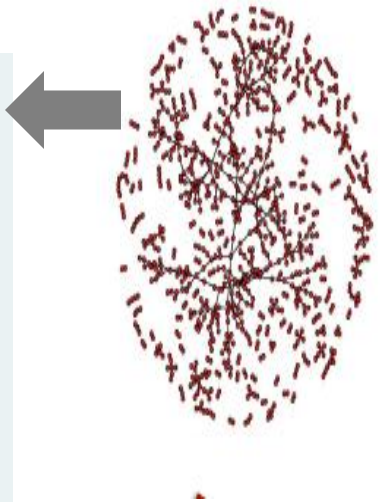


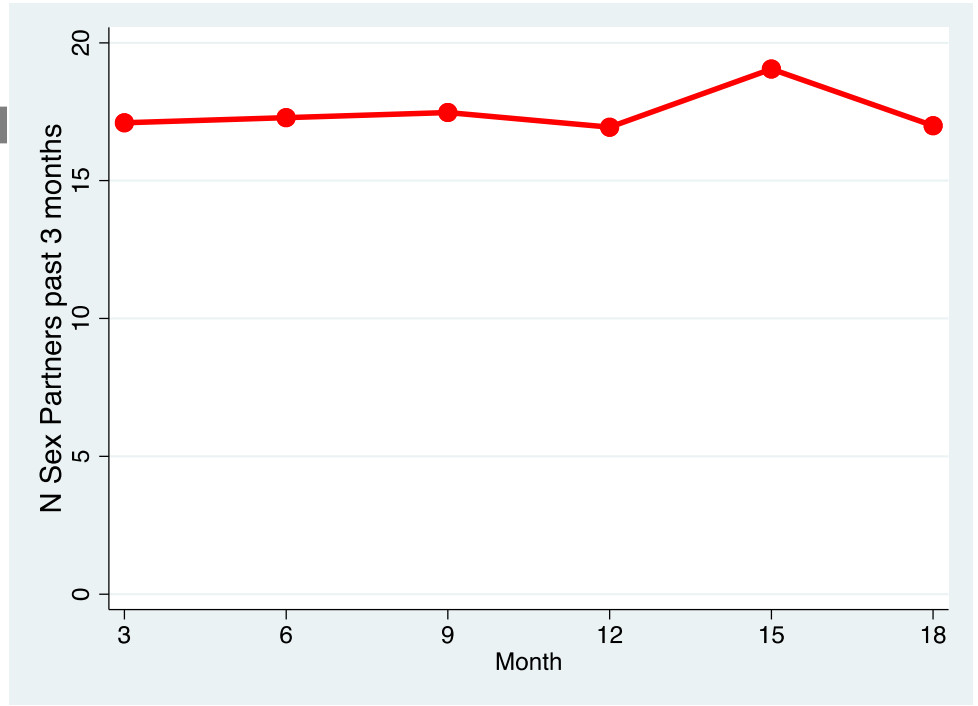
- Cohort study of CIN2/3 treated with conization
- N=804
- Mean FU 77 months
- Recurrent CIN – 1%
- Cancer - 0

Goldstone Dis Col Rect 2014; Lili Medicine 2018

Dense sex network drives high HPV/*N. gonorrhoeae* prevalence in MSM PrEP cohort

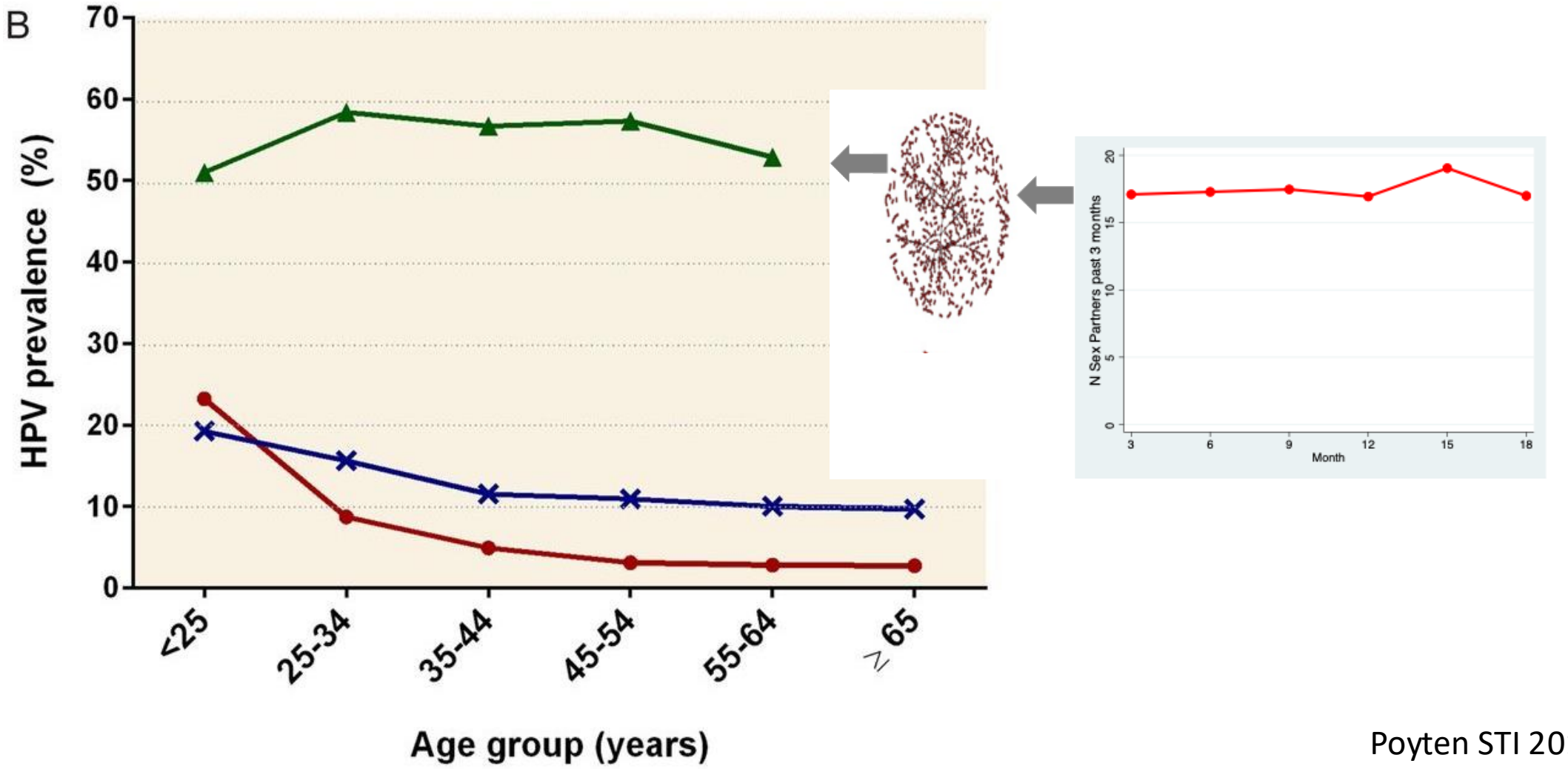






Kenyon Emerging Infec Dis 2018; Molina Lancet HIV 2022

Dense sex network drives high HPV prevalence in MSM



Poyten STI 2015

We need an screening RCT to show efficacy before we advocate screening