



Anal Cytology and Digital Anal Rectal Exam (DARE)

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I have no conflicts of interest to disclose



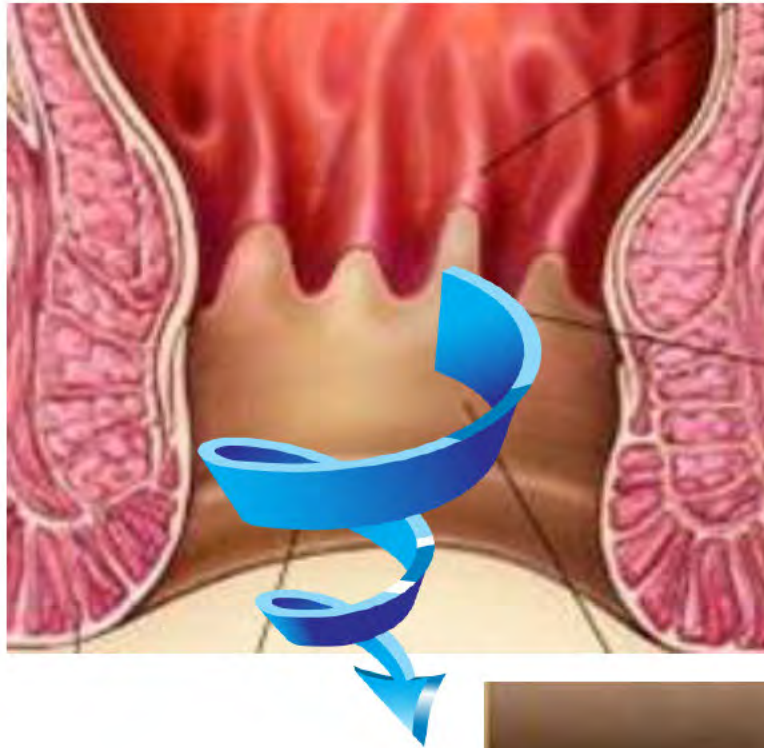
Screening for **anal** cancer with cytology

1. ANAL cytology
2. Abnormal cytology → colposcopy of the anus (aka High Resolution Anoscopy (HRA))
3. AIN2+ on HRA → Treatment procedure

Assume that detection and treatment of AIN2+ → decreased incidence and mortality from ANAL cancer



ANAL CYTOLOGY, (ANAL "PAP")



2cm
(1-3.2cm)*



*Nivatvongs Dis Col Rec 1981



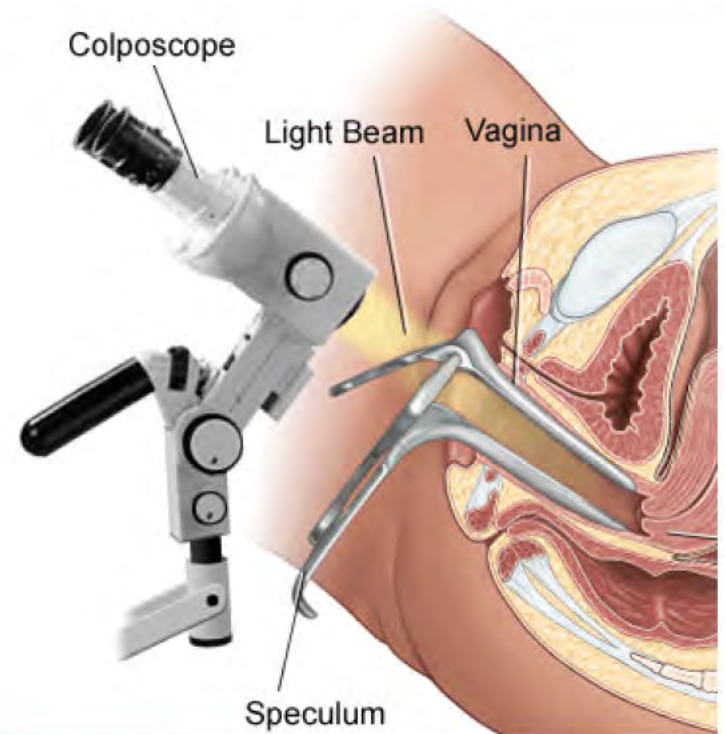
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How “good” is cervical cytology?

Threshold	Sensitivity CIN2+	Specificity CIN2+	Prevalence CIN2+
ASCUS+	70%	95%	2%

“gold standard”
colposcopy

Mustafa Int J Ob Gyn 2016



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How “good” is an anal pap?

Accuracy assessed by patient's having concurrent anal cytology and HRA





How “good” is an anal pap?

Men who
have sex
with men
(MSM)

	Sensitivity AIN2+	Specificity AIN2+
HIV+	87	47
HIV-	55	76

Berry, Dis Col Rec 2009



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Why so different?

	Abnl cytology	Prevalence AIN2+
HIV+ MSM	70%	43%
HIV-MSM	32%	25%


Differences in

- % abnormal test result?
- Prevalence of disease?
- Size of lesions?
- Prior treatment?

Berry, Dis Col Rec 2009
Nathan, AIDS, 2010



Women's studies...

		Sensitivity AIN2+ %	Specificity AIN2+ %	Abnl cytology %	Prevalence histologic AIN2+ %
Argentina ¹	IN1+	84	84	21	9
Tennessee, USA ²	IN1+	12	95	6	8
France ³		82	76	29	6

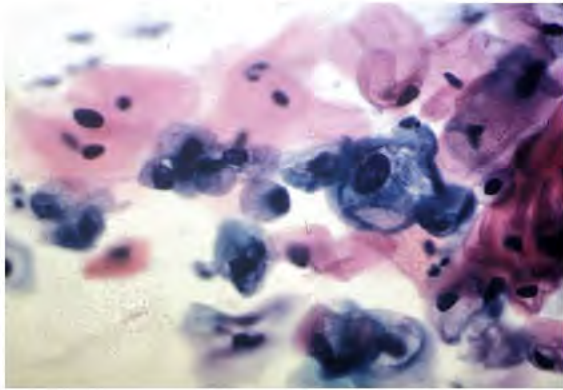
¹Cardinal, Diagn Cytopath 2014

²El Naggat, Gyn Onc, 2014

³Heard CID 2015



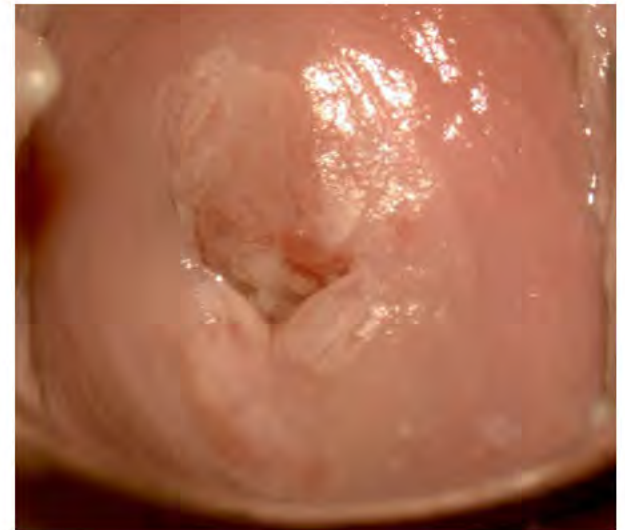
Likelihood of CIN2+ given abnormal cytology



ASCUS/LSIL CERVICAL cytology →
16-18% CIN2+ (HISTOLOGY)

HSIL CERVICAL cytology →
69% CIN2+ (HISTOLOGY)

Katki, J Low Gen Dis, 2013



Abnormal cytology → histologic AIN2+

		HSIL or ASC-H cytology to HSIL histology		ASCUS/LSIL to HSIL histology	
MSM ¹	HIV+	5/6	83%	8/17	47%
	HIV-	5/8	63%	6/18	33%
WOMEN	IN1+ ²	6/6	100%	10/22	45%
	HIV+ ³	6/16	38%	5/ 28?? (may be fewer)	18%
	IN1+ ⁴	1 ASC-H and no HSIL	?	?? 2/17	12%

¹Berry, Dis Col Rec 2009

²Cardinal, Diagn Cytopath 2014

³Heard CID 2015

⁴El Naggar, Gyn Onc, 2014



Adequacy of anal cytology

High rates of unsatisfactory pap tests—

Heard 10%

Robison 14%

Berry → 3% inadequate



ANAL CYTOLOGY RESULTS

Negative for intraepithelial lesions or malignancy (NILM)

ASCUS

LSIL

AIN 1

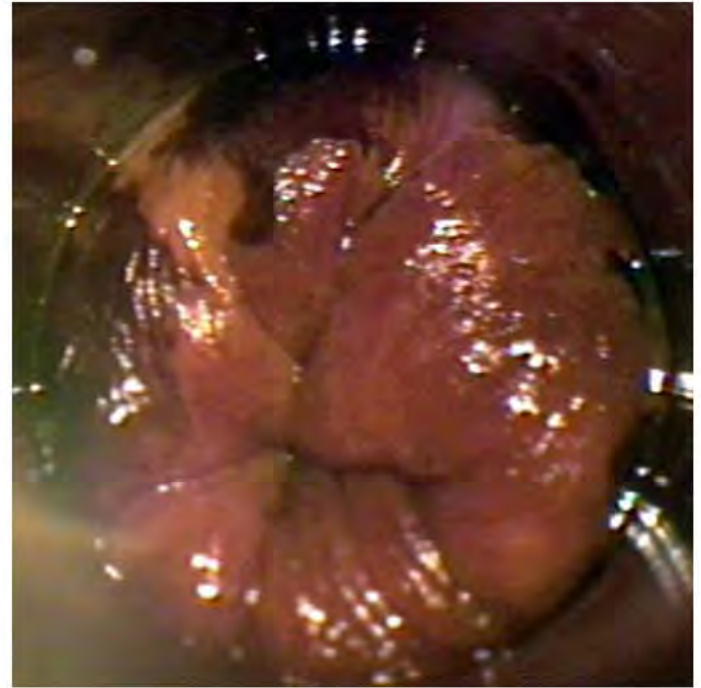
**ASC/H
HSIL**

**AIN 2
AIN 3**

Cancer



**BUT, only 50-74% of women
with abnormal anal cytology
underwent HRA**

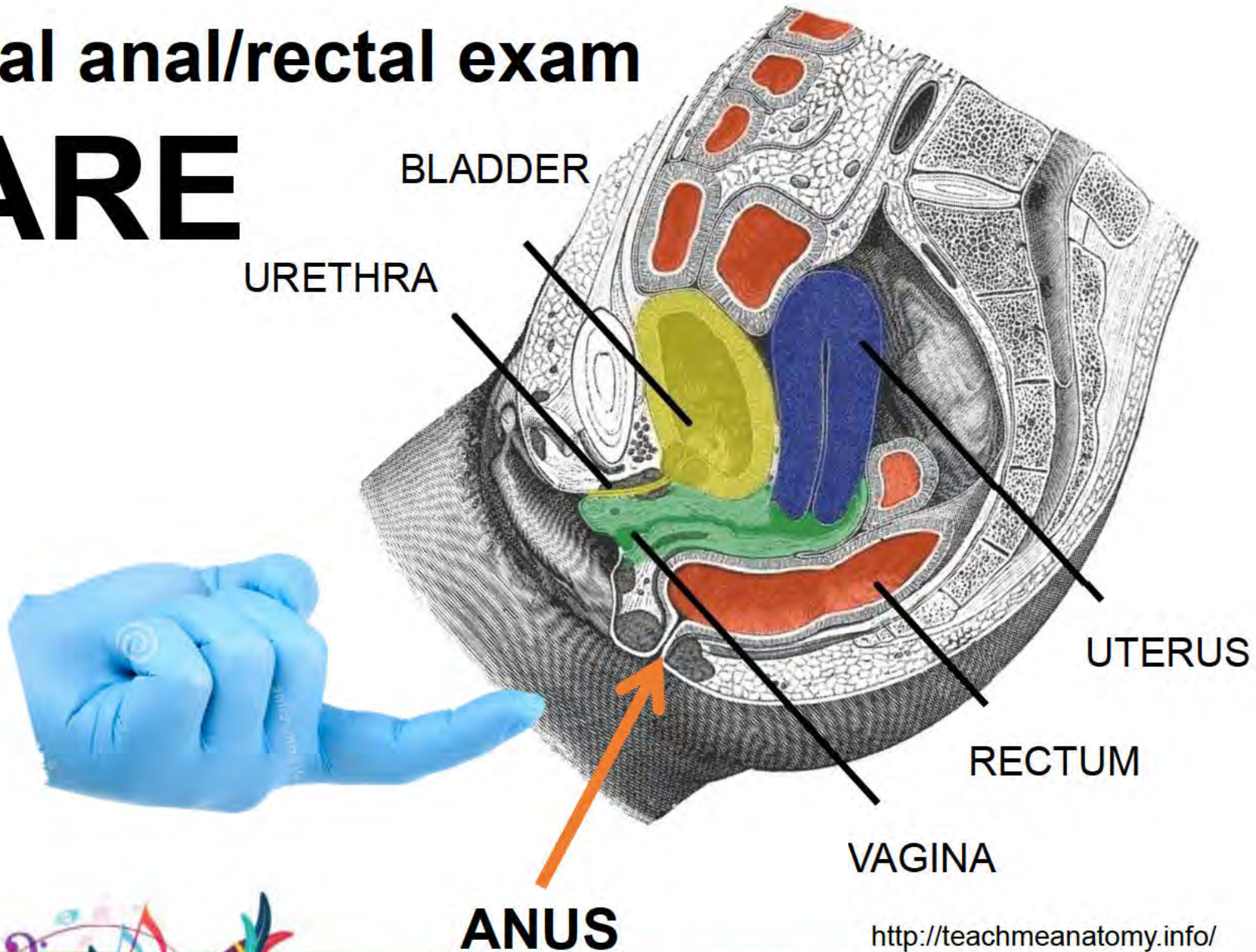


Stier, Am J ObGyn, 2015
Robison, Ob Gyn, 2015



Digital anal/rectal exam

DARE



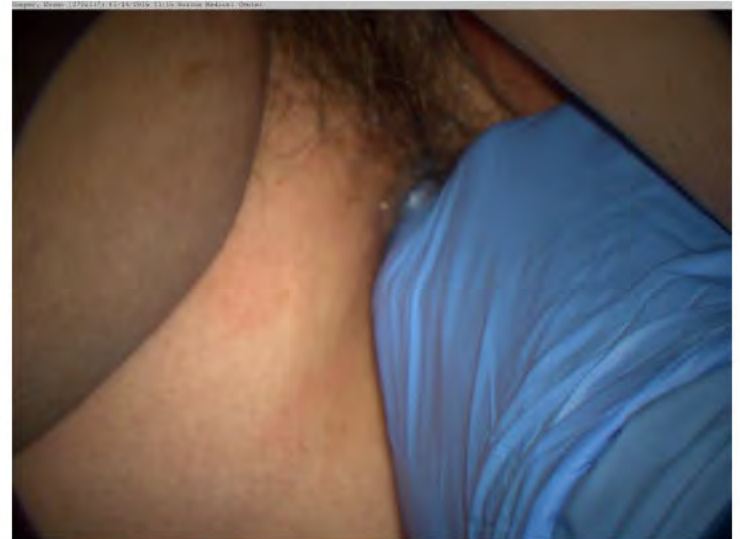
<http://teachmeanatomy.info/>

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Digital anal/rectal exam: DARE



360°



Thank you!

QUESTIONS?

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IMAGINE HELPING ALL THESE BUTTS

An illustration of numerous colorful buttocks (pink, blue, purple, brown) arranged in a cluster. Some are wearing small flags with humorous messages. One flag says 'CHECK ME OUT!', another says 'MY BOTTOM IS AT THE TOP OF MY LIST!', and a third says 'MY BUTT IS GETTING THE ATTENTION IT DESERVES!'. The buttocks are set against a teal background with a green island-like shape at the bottom.

ANAL CANCER IS MUCH MORE EASILY TREATED WHEN CAUGHT EARLY, BEFORE SYMPTOMS DEVELOP.

WE NEED HIV+ VOLUNTEERS OF ALL GENDERS WHO ARE 35+ TO TAKE PART IN A NATIONAL ANAL CANCER PREVENTION STUDY.

VISIT THE WEBSITE ANCHORSTUDY.ORG OR CALL 1-800-555-5555

The logo for the Anchor Study, featuring a stylized anchor inside a circle.

the
ANCHOR
study.org

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