

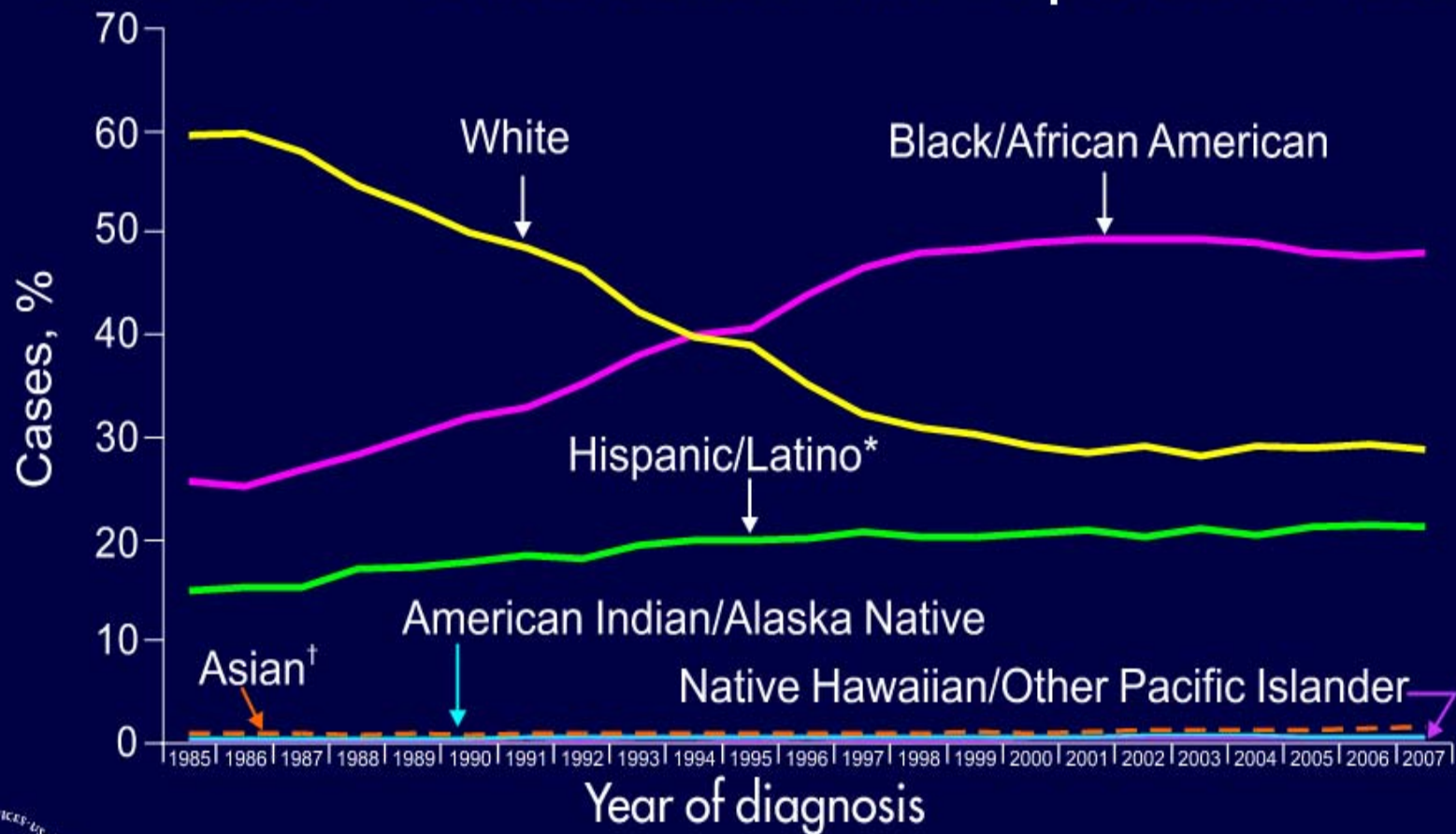
09:30

HIV and Women Update

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National Institutes of Health**

Percentages of AIDS Cases among Adults and Adolescents, by Race/Ethnicity and Year of Diagnosis 1985–2007—United States and Dependent Areas



Note. Data have been adjusted for reporting delays.

*Hispanics/Latinos can be of any race.

†Includes Asian and Pacific Islander legacy cases.



AIDS in Blacks/African Americans

Of the 1,030,832 AIDS cases reported to CDC through 2007, blacks/African Americans accounted for

41% of total

60% of women

59% of heterosexual persons at high risk*

59% of children aged <13 years

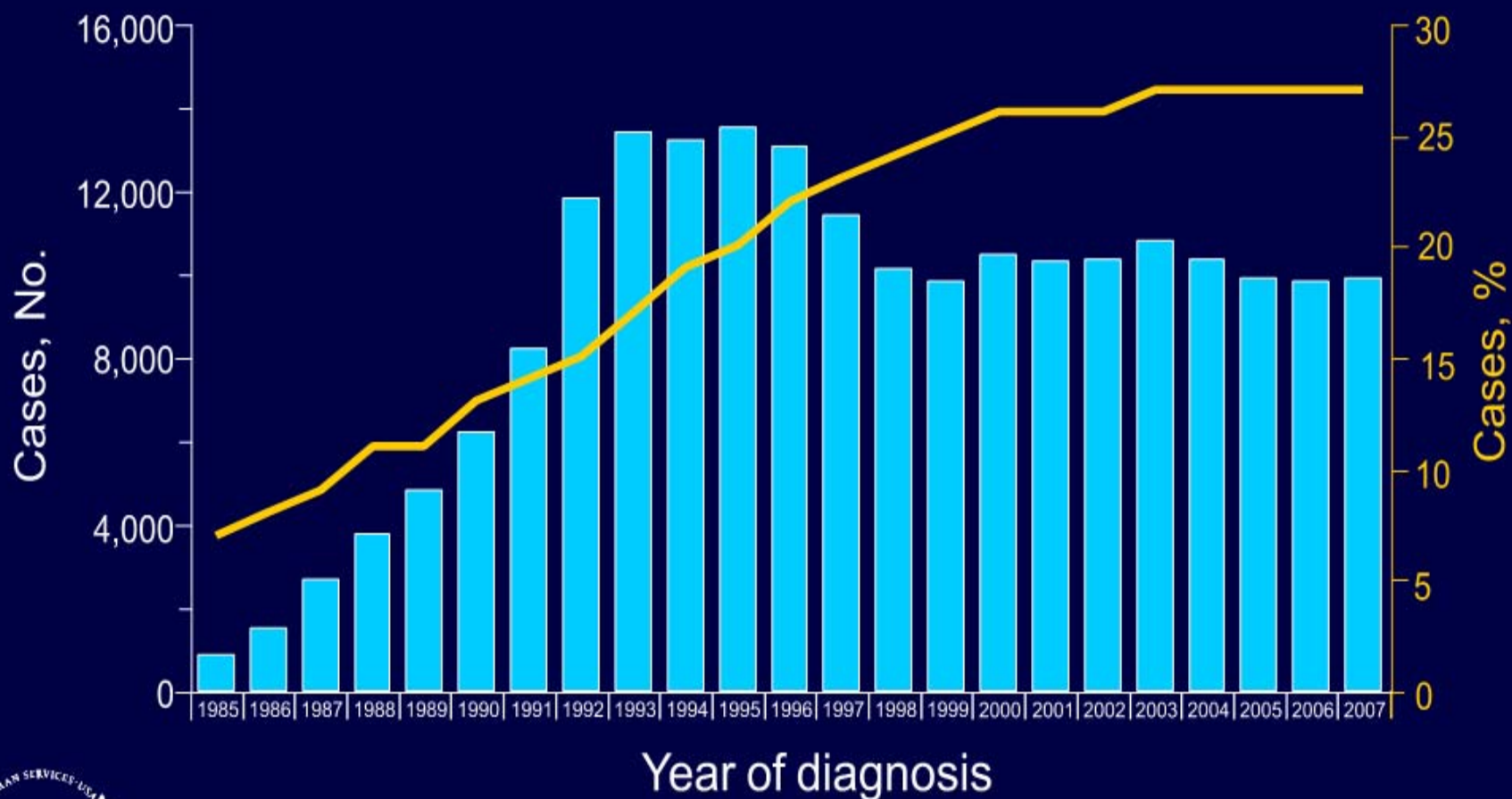
Of AIDS cases reported during 2007, 47% were in black/African American adults and adolescents.



*High-risk heterosexual contact with a person known to have, or to be at high risk for, HIV infection.



Estimated Numbers and Percentages* of AIDS Cases among Female Adults and Adolescents 1985–2007—United States and Dependent Areas



Note. Data have been adjusted for reporting delays.
 *Percentage of all cases that were diagnosed among females.



Estimated Numbers of HIV/AIDS Cases and Rates for Female Adults and Adolescents, by Race/Ethnicity 2007—50 States and DC

Race/Ethnicity	Cases	Rate (Cases per 100,000 population)
American Indian/Alaska Native	68	9.4
Asian*	88	3.5
Black/African American	7,196	60.6
Hispanic/Latino [†]	1,555	16.0
Native Hawaiian/Other Pacific Islander	5	9.0
White	1,971	3.3
Total[‡]	10,977	12.9

Note. Data include persons with a diagnosis of HIV infection regardless of their AIDS status at diagnosis. Data from 34 states with confidential named-based HIV infection reporting since at least 2003. Data have been adjusted for reporting delays.

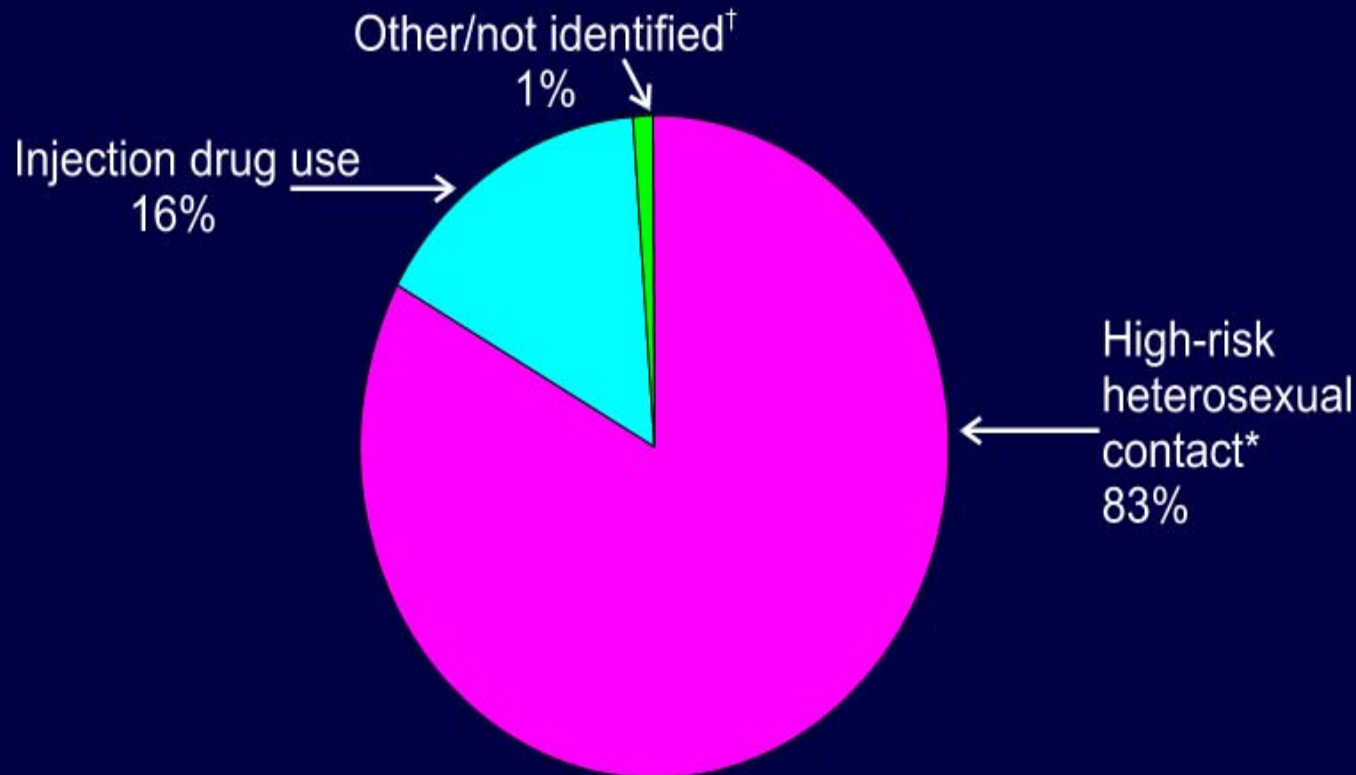
*Includes Asian and Pacific Islander legacy cases.

[†]Hispanics/Latinos can be of any race.

[‡]Includes 132 female adults and adolescents of unknown race or multiple races.



Percentages of HIV/AIDS Cases among Female Adults and Adolescents, by Transmission Category 2007—34 States



Note. Data include persons with a diagnosis of HIV infection regardless of their AIDS status at diagnosis. Data from 34 states with confidential name-based HIV infection reporting since at least 2003. Data have been adjusted for reporting delays and missing risk-factor information.

*Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.

†Includes blood transfusion, perinatal exposure, and risk factor not reported or not identified.



Percentages of AIDS Cases among Female Adults and Adolescents, by Transmission Category and Age at Diagnosis 2007—United States and Dependent Areas

Transmission category	Age at diagnosis (in years)				
	13–19	20–24	25–34	35–44	≥45
	%	%	%	%	%
Injection drug use	8	12	18	25	28
High-risk heterosexual contact*	47	82	82	74	70
Other/not identified [†]	45	6	1	1	1

Note. Data have been adjusted for reporting delays and missing risk-factor information.

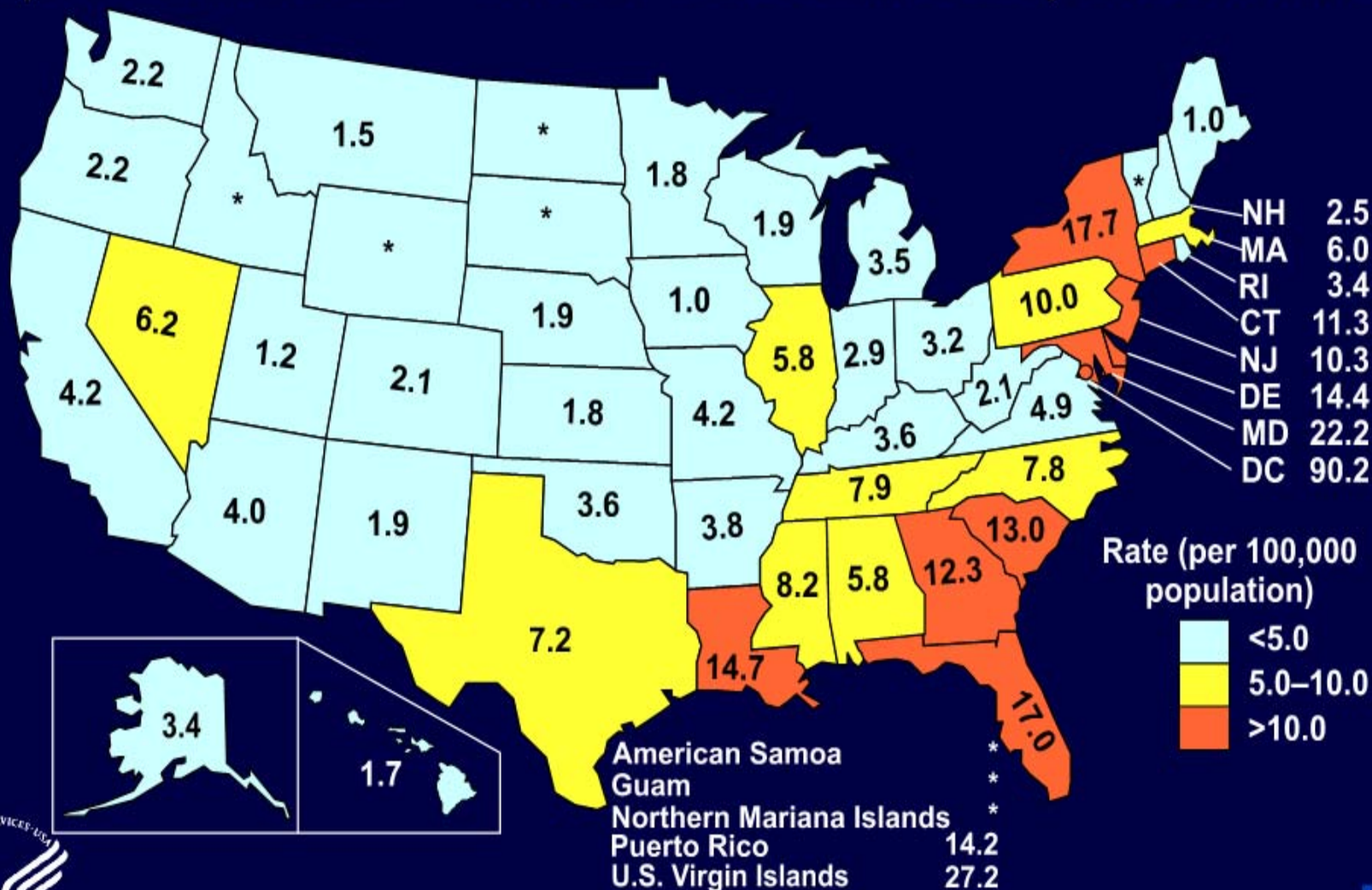
*Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.

[†]Includes blood transfusion, perinatal exposure, and risk factor not reported or not identified.



What is “High risk sexual contact”?

AIDS Rates for Female Adults and Adolescents Reported in 2007—United States and Dependent Areas

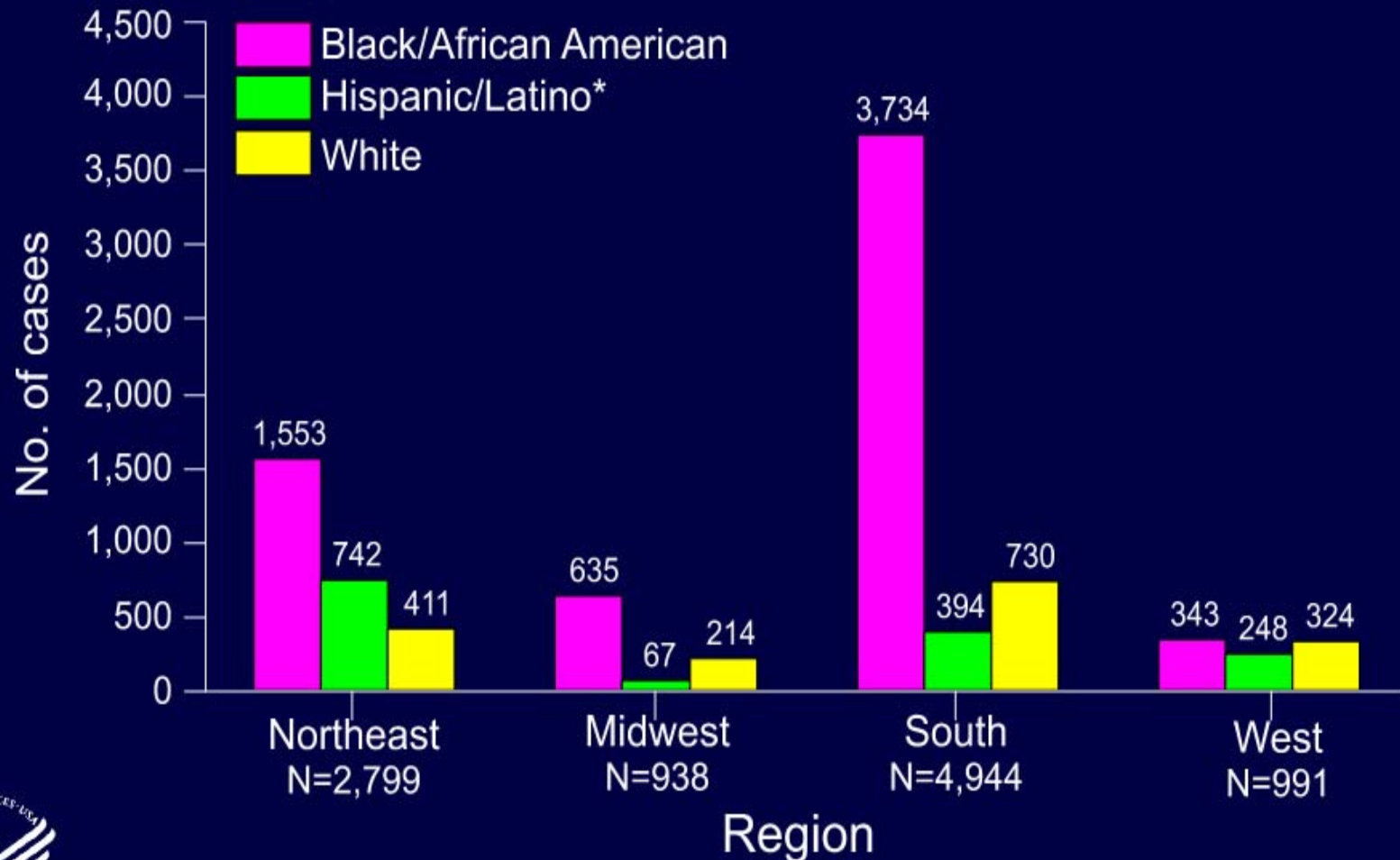


*Rates were not calculated for areas reporting fewer than 5 AIDS cases in females in 2007.



Reported AIDS Cases among Female Adults and Adolescents, by Region and Race/Ethnicity, 2007

50 States and DC

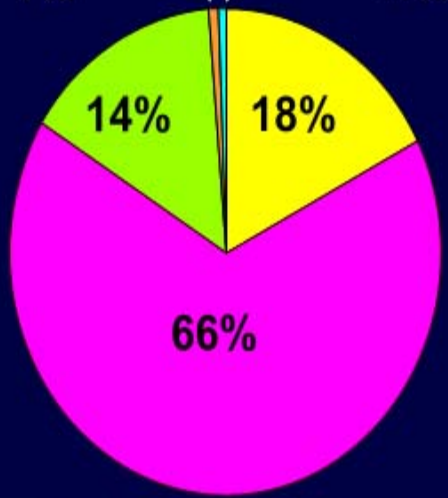


Region totals include 131 females of unknown race or multiple races.
 *Hispanics/Latinos can be of any race.

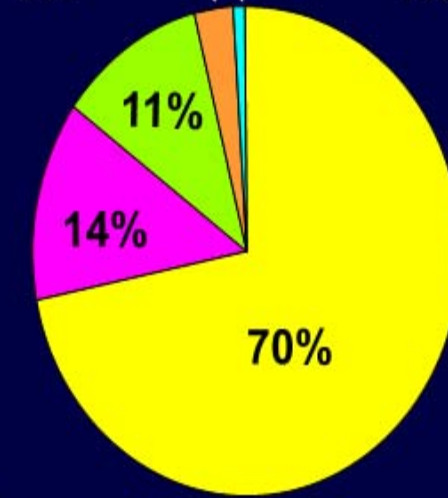


Percentages of HIV/AIDS Cases and Population among Female Adults and Adolescents, by Race/Ethnicity 2007—34 States

HIV/AIDS cases
N = 10,977*



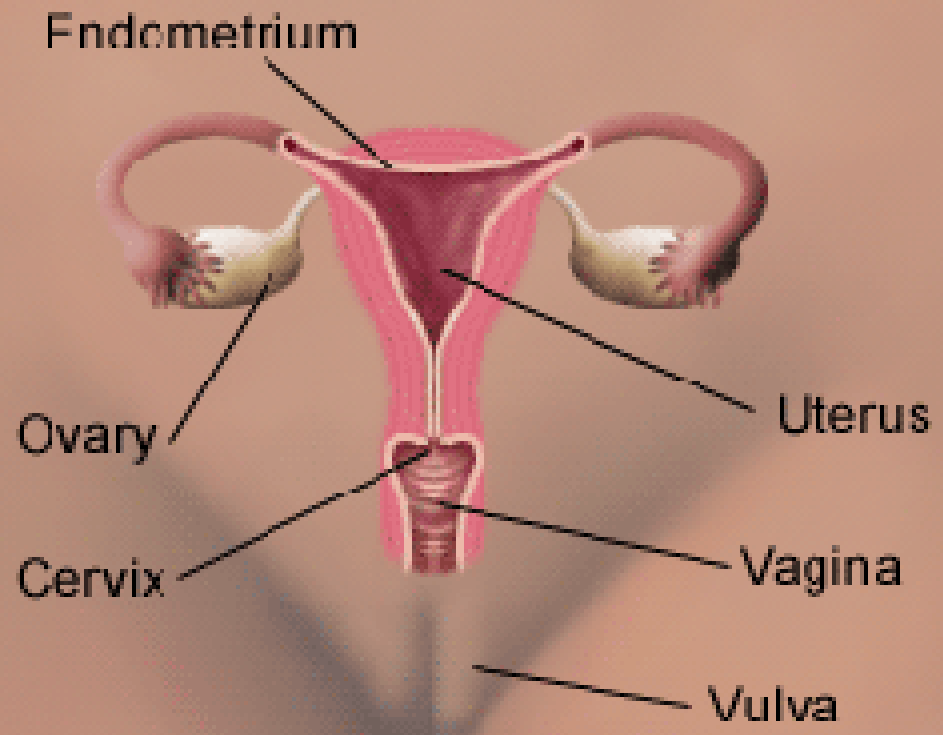
Female Population, 34 States
N = 85,031,796

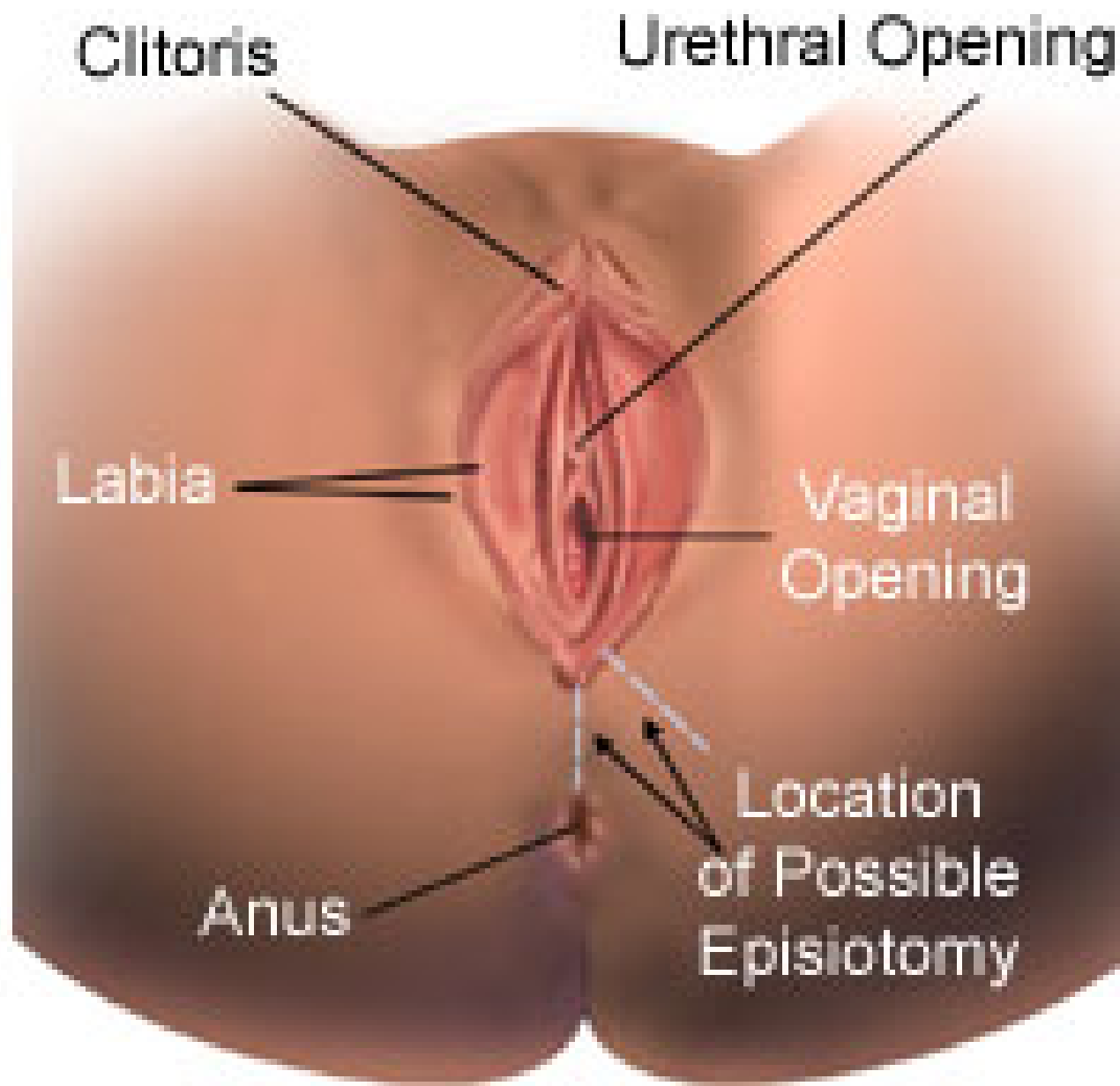


Note. Data include persons with a diagnosis of HIV infection regardless of their AIDS status at diagnosis. Data from 34 states with confidential name-based HIV infection reporting since at least 2003. Data have been adjusted for reporting delays.
*Includes 95 female adults and adolescents of unknown race or multiple races.
[†]Hispanics/Latinos can be of any race.
[‡]Includes Asian and Pacific Islander legacy cases.



- **How do women get infected????**

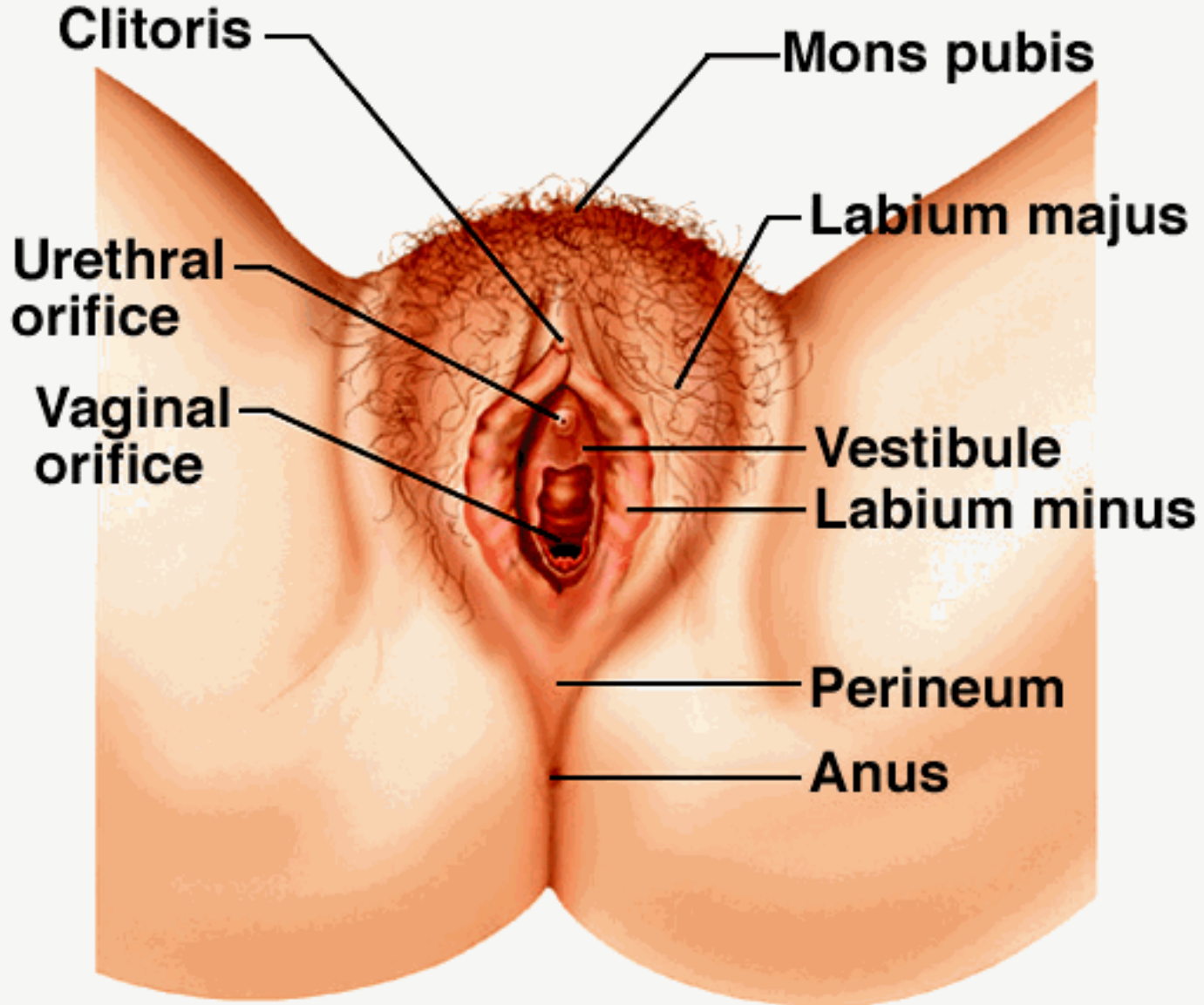




Female Perineum

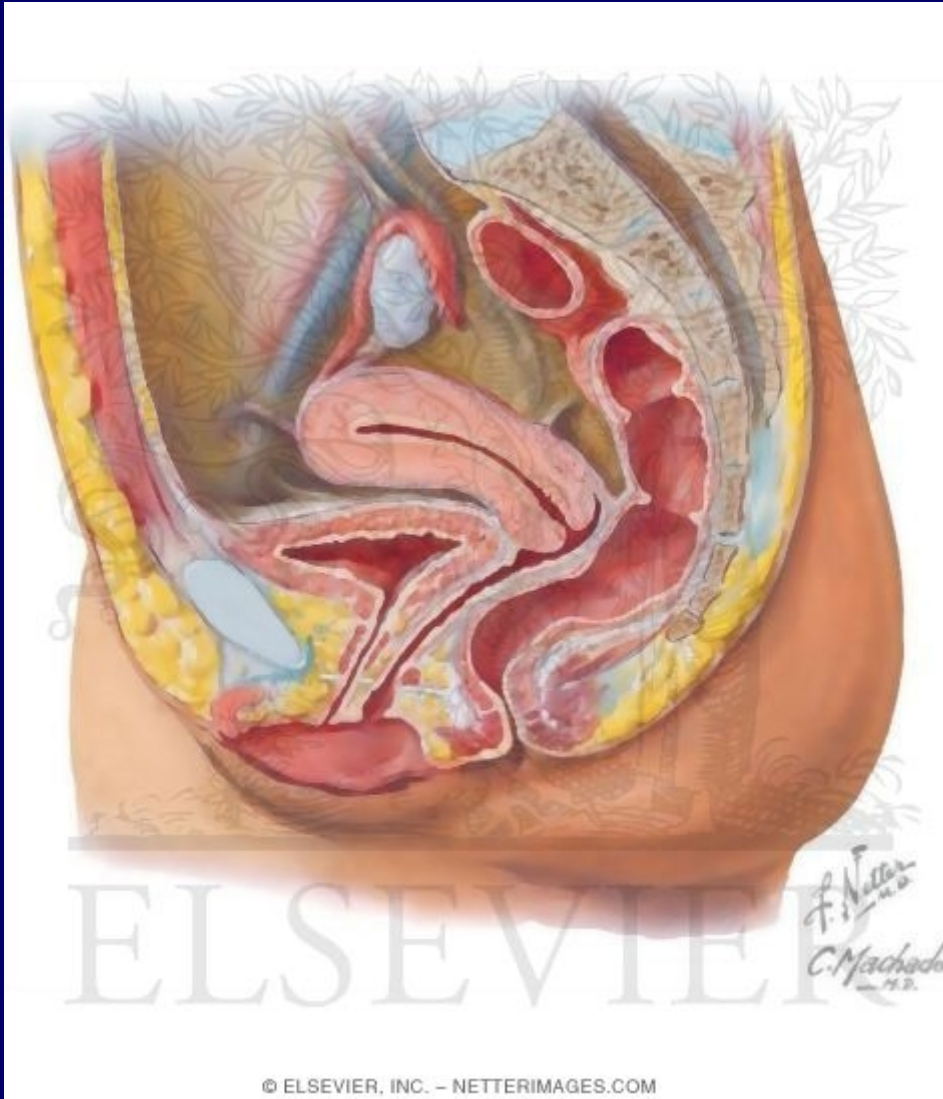
Female External Reproductive Organs

(2)



Anatomy

- **Vaginal intercourse**
 - **Pooling of semen in the vagina**
 - **Longer exposure time to HIV in semen**
 - **CD4 lymphocytes in cervical canal**
- **Receptive anal intercourse**
 - **CD4 lymphocytes in high concentration in anal canal**
- **Uncircumcised male partner**



What's new about women?

- **Risk-biology**
 - **Vaginal ecology**
 - **Yeast**
 - **Bacteria**
 - **pH (acid-base balance)**
 - **Upsetting vaginal ecology**
 - **Infection**
 - **Douching**
 - **Antibiotics**
 - **Other vaginal practices**

What's new with women?

- **Risk immunology**
 - (think fetus as a foreign object that is protected)
 - **Vagina, cervix, lining of uterus, tubes all have immune function**
 - ? **Prevent HIV**
 - ? **Enhance HIV infection**

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What's new with women?

- **Treating vaginal infections?**
- **Preventing vaginal infections**
 - **HSV/acyclovir---It doesn't prevent HIV**
- **Enhancing lactobacilli??**

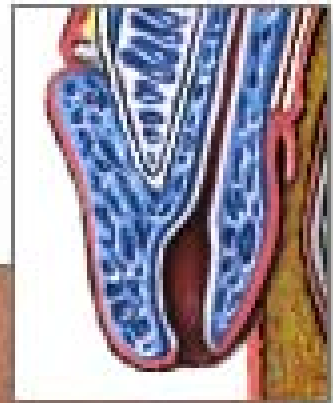
- **Men**
 - **? Circumcision**

Uncircumcised penis



Foreskin

Circumcised penis



What's up with the foreskin?

- **Thinner tissue**
- **Cells that carry HIV close to the surface and in greater concentration**
 - **Easier for HIV to get across**
- **?easily inflamed**

What else is new with women?

- **There may be hope with microbicides**
 - **Four studies complete**
 - **N-9**
 - **Savvy**
 - **Carreguard**
 - **Cellulose Sulfate**
- **Behavior matters**
- **Community matters**

What did we learn from microbicides studies?

Agent	Lesson
N-9	<ol style="list-style-type: none"><li>1. Just because we want it to be so that doesn't mean it is<li>2. Potential for harm
Savvy	<ol style="list-style-type: none"><li>1. Prevention and treatment collide
Carreguard	<ol style="list-style-type: none"><li>1. Need enough enrollees who use the product to study risk
Cellulose Sulfate	<ol style="list-style-type: none"><li>1. Just because it looks like so it doesn't mean it is

What did we learn from microbicides studies?

Agent	Lesson
N-9	<ol style="list-style-type: none"><li>1. Potential harm when used frequently<li>2. Condoms with N-9 not more effective
Savvy	<ol style="list-style-type: none"><li>1. Need enough HIV incidence to study
Carreguard	<ol style="list-style-type: none"><li>1. Need to demonstrate adherence
Cellulose Sulfate	<ol style="list-style-type: none"><li>1. Our current animal models may not reflect human response
PRO 2000	Glimmer of hope

What about behavior?

- People don't tell strangers all their business
- Women have anal sex
- Some women don't like condoms
- Sexually active has many meanings

HIV and Sex: Exposure Risk

- Insertive oral • 1
- Receptive oral • 2
- Insertive vaginal • 10
- Insertive anal • 13
- Receptive vaginal • 20
- Receptive anal • 100

What about community ?

- **People have sex within their community**
 - **HIV risk is a community issue**
 - **Upstate NY**
 - **NC college age men**
 - **NYC communities with prison as an issue**
 - **Drug use**

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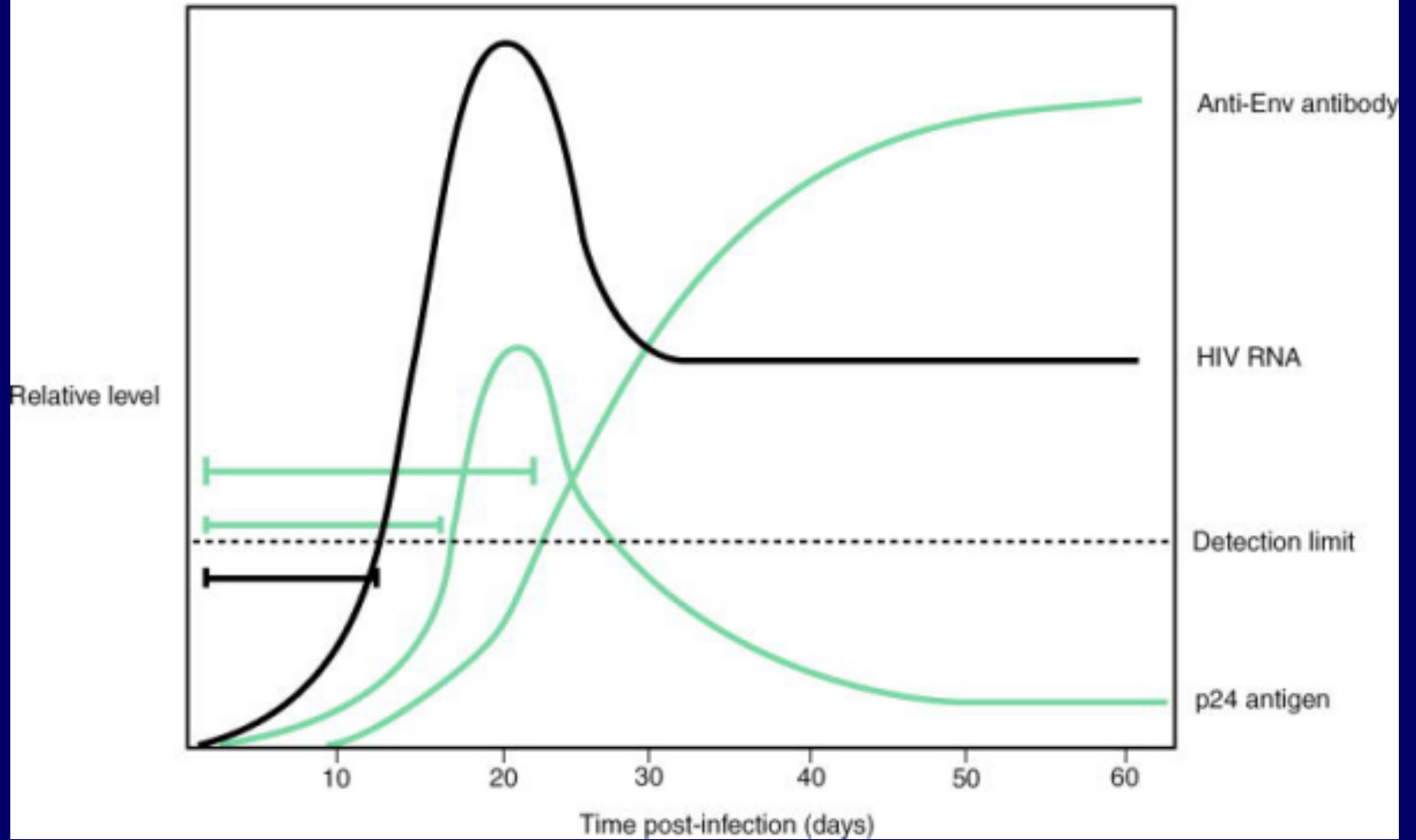
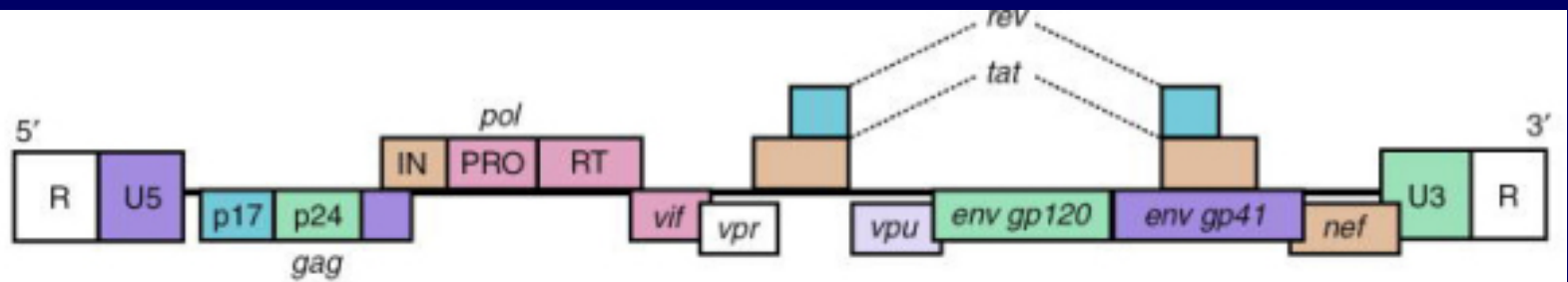
What's Next?

- **Better understand innate immunity**
- **Better understand how women do and do not become infected**
- **Impact of male interventions on women's risk**
- **Microbicides-vaginal, rectal,**
- **PrEP—Pre-exposure prophylaxis**
- **Integration of basic, behavioral, social and clinical science in research**

What is next?

09:30

Every 9 ½ minutes someone in the United States is newly infected with HIV



CDC Initiative

- **National campaign**
- **Raise awareness**
- **HIV testing**
- **Community and individual education**
- **Test and treat for prevention**

Other approaches by Gov't agencies

- **New and innovative research**
 - **Microbicides**
 - **PrEP**
 - **Basic sciences**
 - **Integrated research**
 - **Understanding “normal”**
 - **Immunology**
 - **Biology**
 - **Behavior**
 - **Acceptability**

Where to get info

- www.cdc.gov
- www.ppfa.org
- www.aidsinfo.org
- www.malecircumcision.org
- www.kff.org
- www.ppfa.org