

# HIV and AIDS: The Hope of Effective Treatment and Prevention

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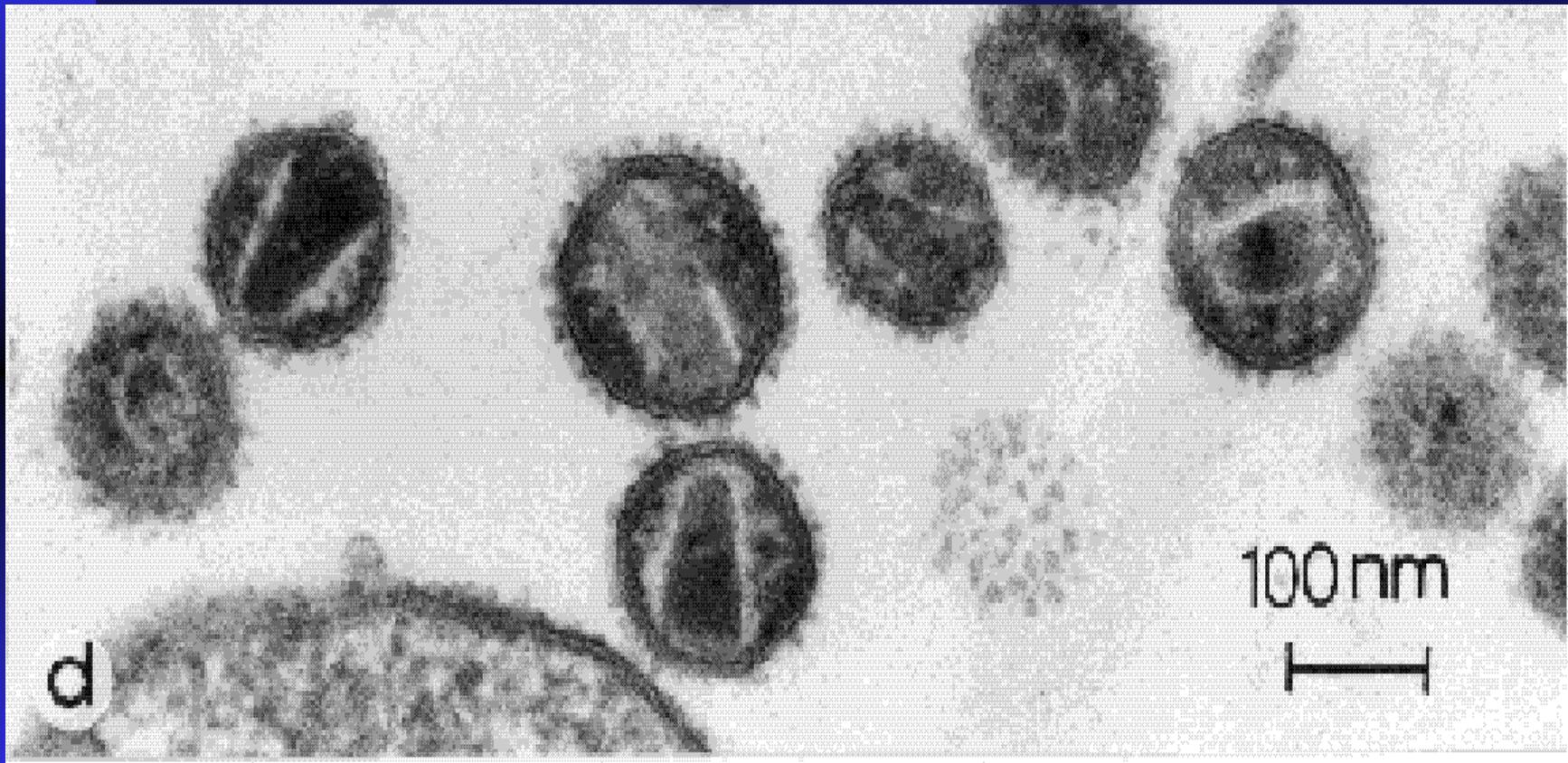
# HIV and AIDS Treatment: Providing Hope in the Face of Despair

## HIV and Stigma

Without specific HIV treatment (ART) *all is lost!*

Understand that HIV often goes along with TB, hopelessness, drug or alcohol addiction....and all can be treated → and so there is hope in the face of despair.

# HIV Virus: A new invader.



Gelderblom, Human Retroviruses and AIDS 1997

# Stigma: HIV is the leprosy of our age. Stigma and denial → stop testing and treatment



Stigma → Hopeless



# HIV testing is the cornerstone of treatment and prevention

You need treatment and support for HIV testing!!!!

Without HIV testing,  
prevention is almost impossible

## It Is Time to Implement Routine, Not Risk-Based, HIV Testing

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<sup>1</sup>Brown Medical School and the Lifespan/Tufts/Brown Center for AIDS Research (CFAR), Providence, Rhode Island; <sup>2</sup>Emory University School of Medicine and Emory University CFAR, Atlanta, Georgia; and <sup>3</sup>Johns Hopkins School of Medicine and Johns Hopkins University CFAR, Baltimore, Maryland

***Routine HIV testing is the key***

# Think Global\_Act Local

## A Novel HIV Testing Campaign in Philadelphia

This is an example:

Engaging African American Religious Leaders

**We Have Been Tested for HIV. Have You?**



Imam  
Abdul-Malik Ali

Bishop  
Richard F.  
Norris

Rev. Dr.  
Marguerite E.  
Handy

Rev. Dr.  
Alyn E. Waller

Rev. Jay B.  
Broadnax

**Get Tested  
for HIV**

*To Find A Testing Center Near You Call:*

**1-800-985-AIDS**

Billboard displayed throughout the city

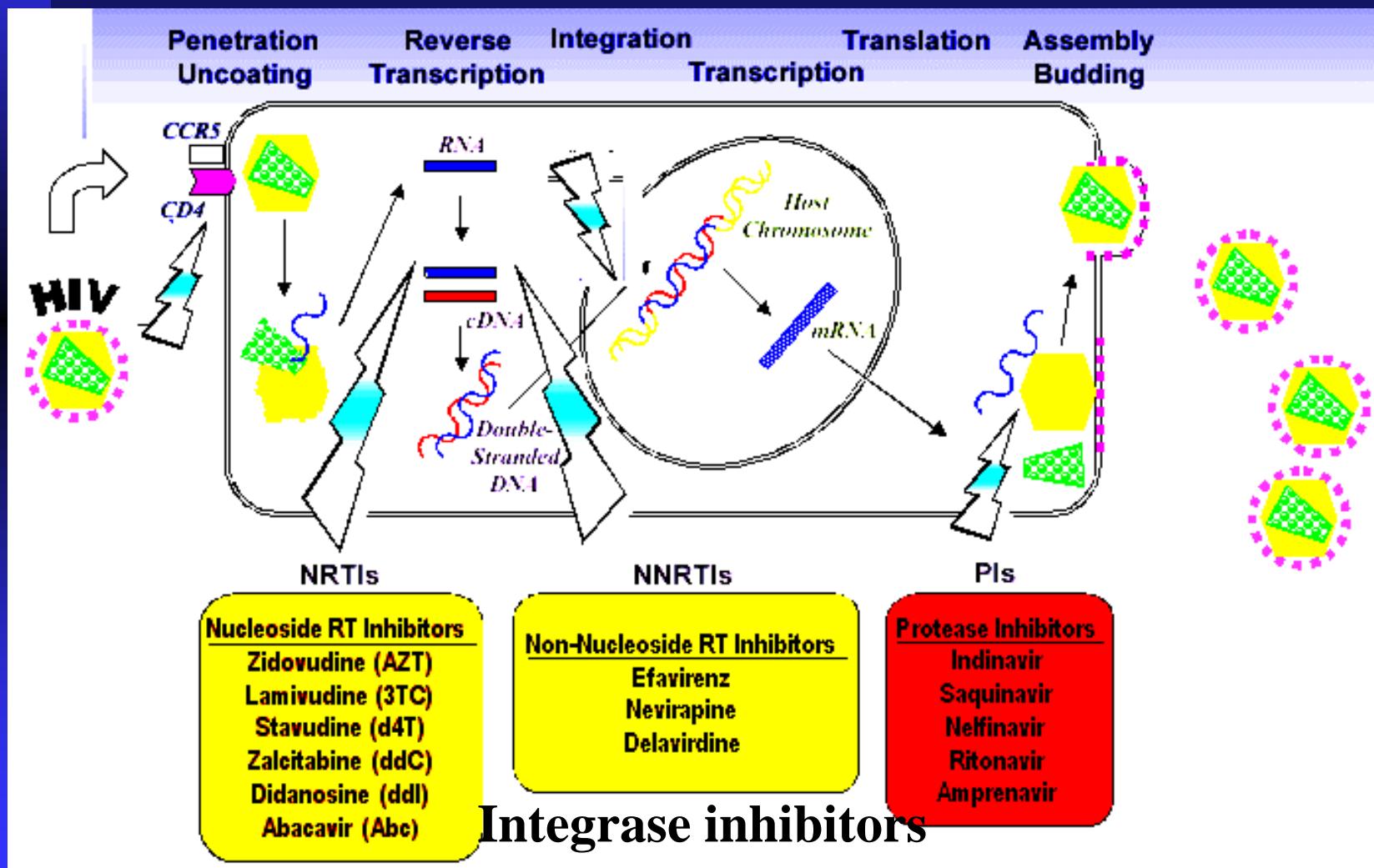
# HIV and AIDS care: Antiretroviral therapy works!



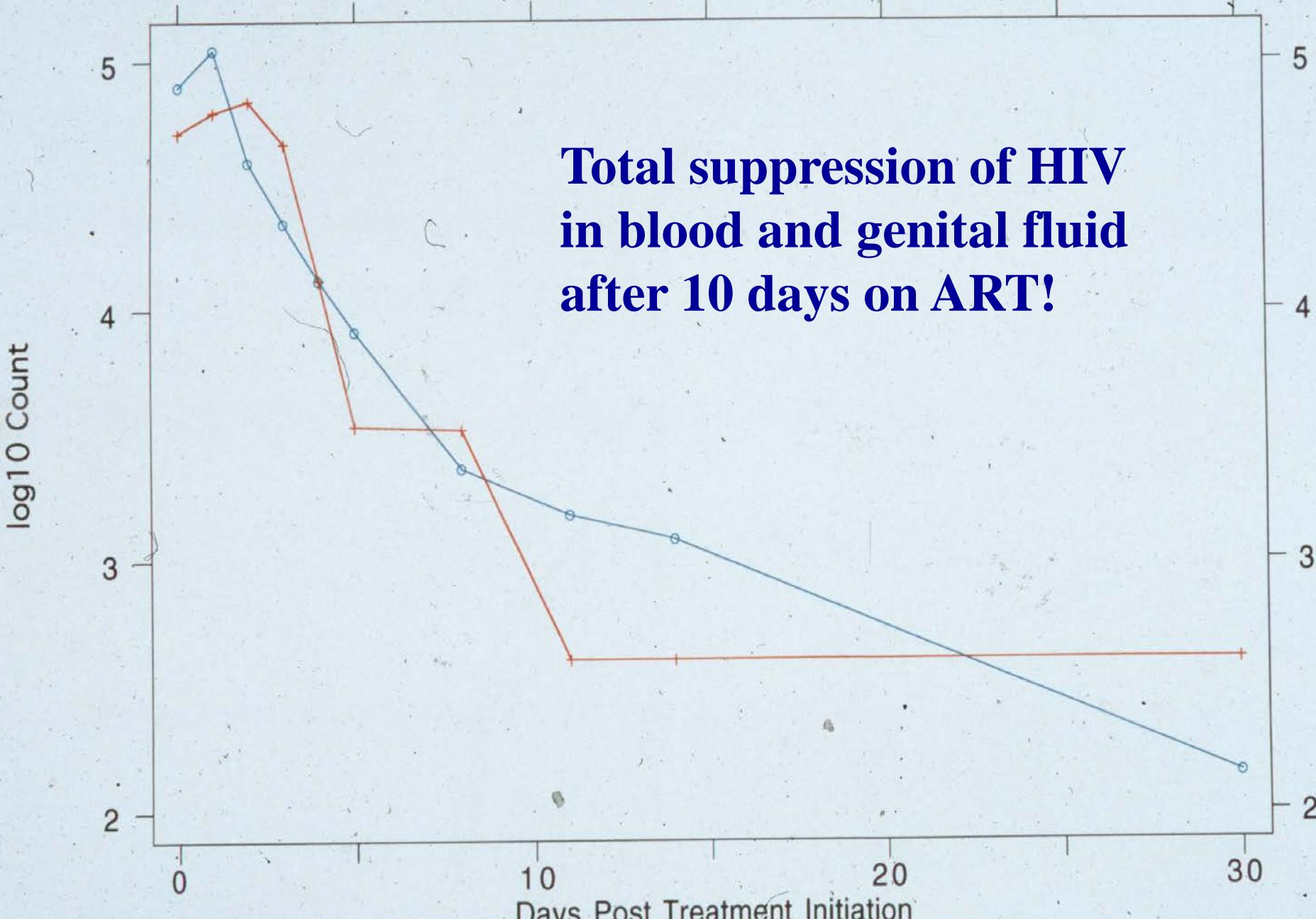
# Success of HIV treatment: ART (AntiRetroviral Therapy)

- Three medicines taken once or twice a day
- Medications can be combined in a few pills
- Produced at low cost and high quality by generic manufacturers. Generic ART is equivalent to brand name ART.
- These medications can totally suppress HIV (not cure the virus but total suppression)
- Cost of ART per person/year can be < 100\$
- Treatment can be effective for a lifetime with total restoration of health

# The Incredible Success of Combination Antiretroviral Treatment (HAART or ART) for HIV infection



Total suppression of HIV  
in blood and genital fluid  
after 10 days on ART!



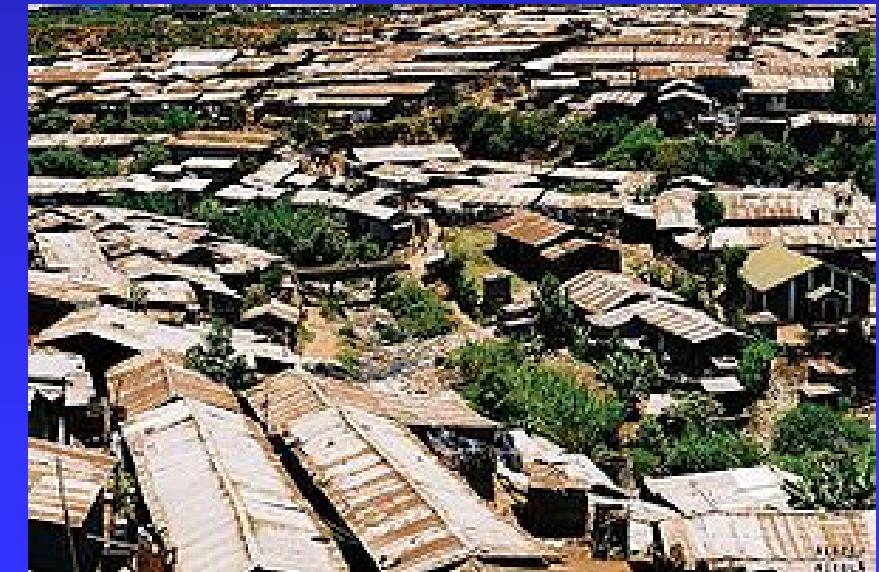
CVL and Plasma HIV-1 RNA Response to HAART: Pt B

# Treatment requires ART and support: both medical and social. Family support very important





Kibera slum in Nairobi, Kenya



They said HIV treatment  
couldn't be done.....  
St Mary Mission Hospital  
In Nairobi, Kenya  
6,500 deliveries → 80% agree to  
HIV testing with excellent  
Treatment and PMTCT

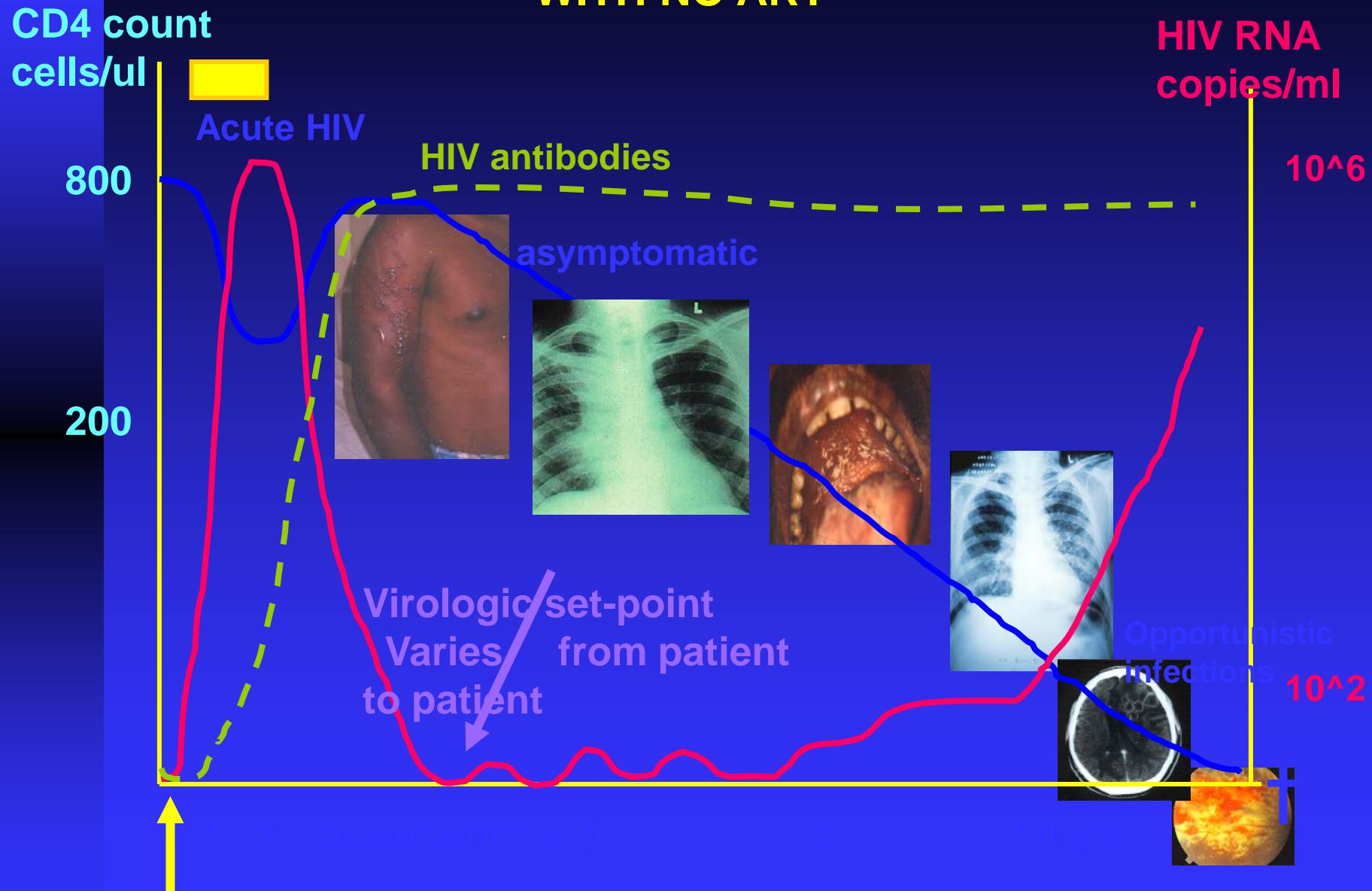
# HIV treatment is prevention!

- Among HIV + men in treatment on ART:
- → Marked decrease in unprotected sex
- → ART decreases HIV in the blood, semen, and other body fluids with decreased transmission
- CDC estimates >90% reduction in transmission risk among men on treatment

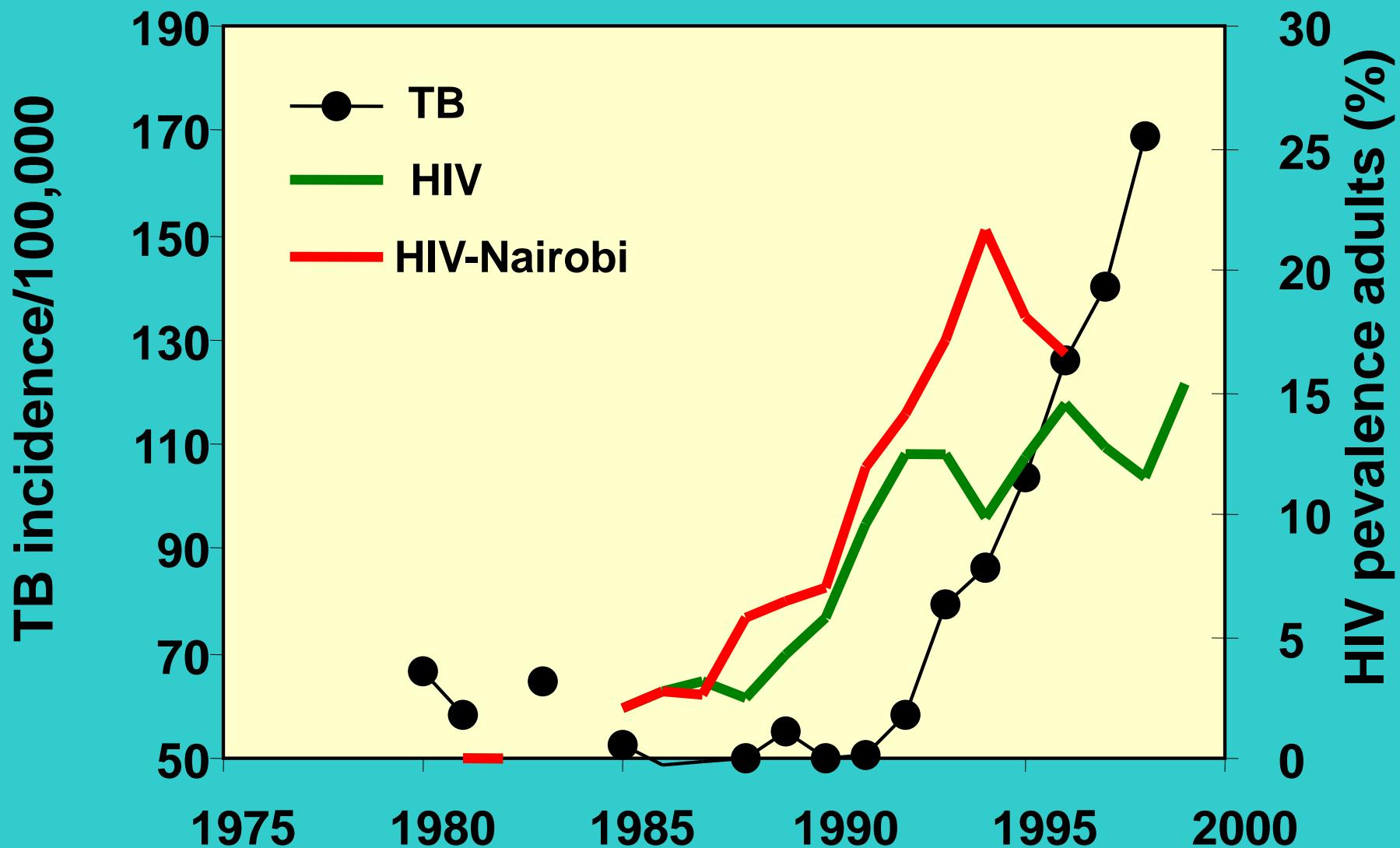
# HPTN 052: Prevention of HIV through treatment

- Randomized controlled study of discordant couples with the HIV+ person CD4>350
- 1/2 received ART ...1/2 were observed until the CD4 decreased and hit treatment threshold...all couples were counseled re safer sex
- 96% reduction in HIV transmission to HIV- partner
- Note...over 50% reduction in TB among HIV+ person on treatment
- ***RECOMMEND HIV ART IN ALL HIV+s***

# Typical course of HIV infection in an untreated person WITH NO ART



# Dynamics of TB and HIV in Kenya



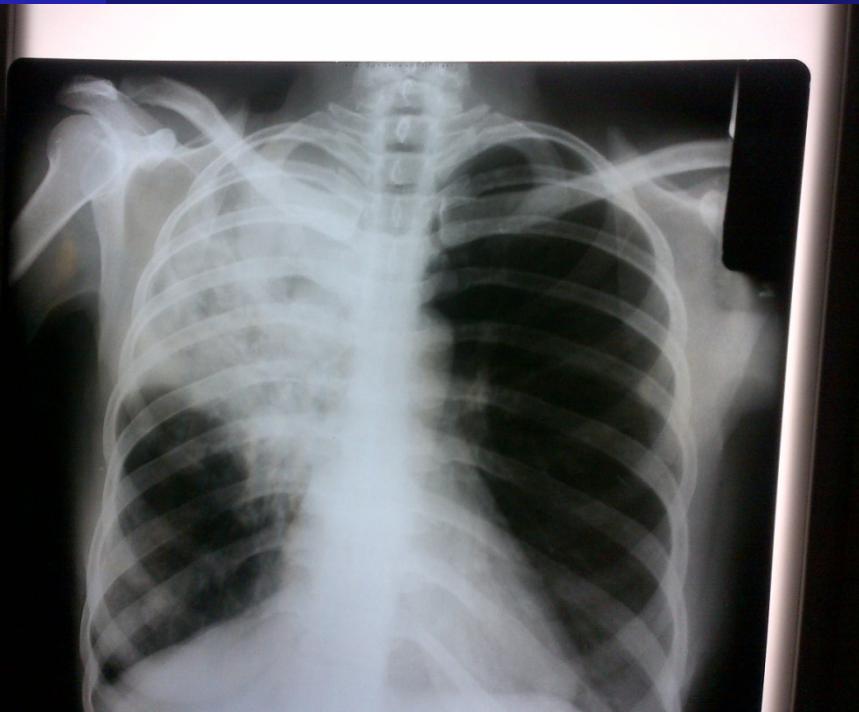
HIV and TB coinflection:  
**Double Trouble!!!!**

**HIV is gasoline on the fire of  
TB**

**HIV and TB epidemics go hand  
in hand**

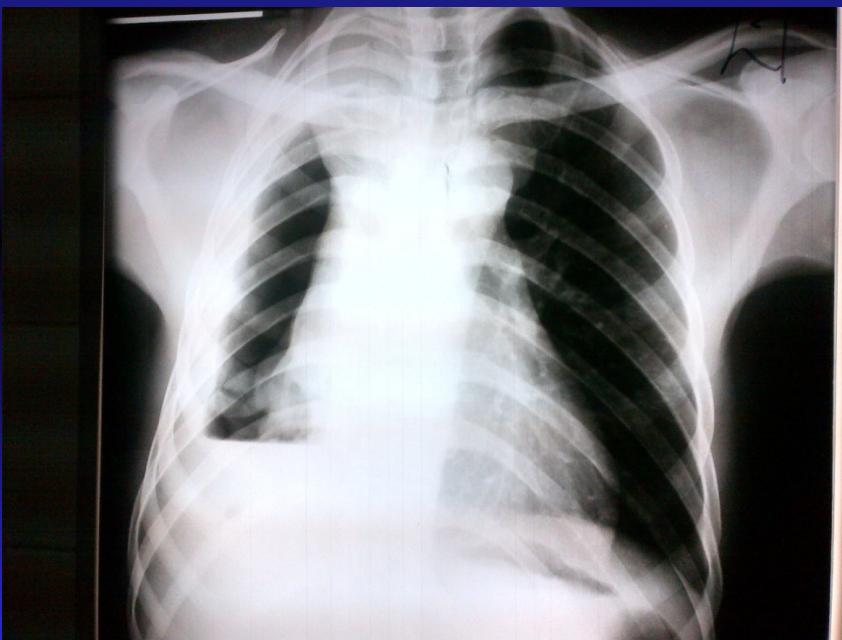
# Classic Pulmonary TB

- Classic RUL Infection
- HIV infection makes a patient much more likely to develop active TB and TB is more aggressive
- Patients with HIV and TB are more likely to spread TB.



Credit: Dr Audrey Forson, Ghana Chest clinic

# Extrapulmonary TB with pleural disease and lymphadenitis



- Diagnosis of TB in advanced HIV can be difficult
  - A high index of suspicion is always needed. Test for HIV in all patients with TB
  - And THINK could there be active TB in all patient with HIV!

Credit: Dr. Audrey Forson,  
Ghana Chest clinic

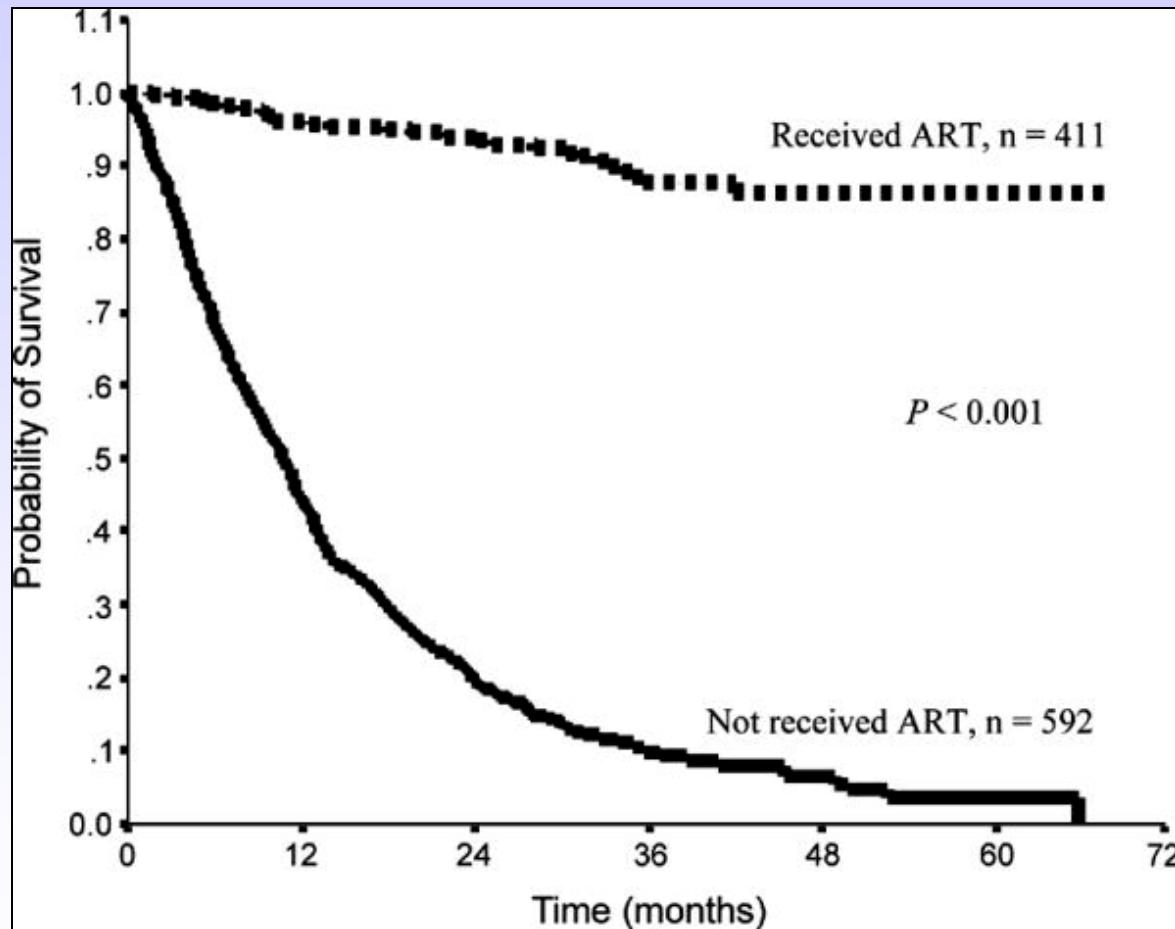
# **EPIDEMIOLOGY OF HIV/TB CO-INFECTION**

Latent TB is very common in HIV infected persons! Persons with HIV and TB coinfection are 20-30 times more likely to get active TB than HIV - persons.

TB is the most common cause of illness and the most common cause of death in HIV + persons.

Drug resistant TB is more common in the setting of HIV infection.

# ART during TB treatment saves lives!



Concomitant HAART markedly improves survival in HIV-infected patients with HIV/TB co-infection. Manosuthi, W et al. JAIDS. 43(1):42-46

# WHO recommendation, 2010: When to start ART in adults with TB/HIV?

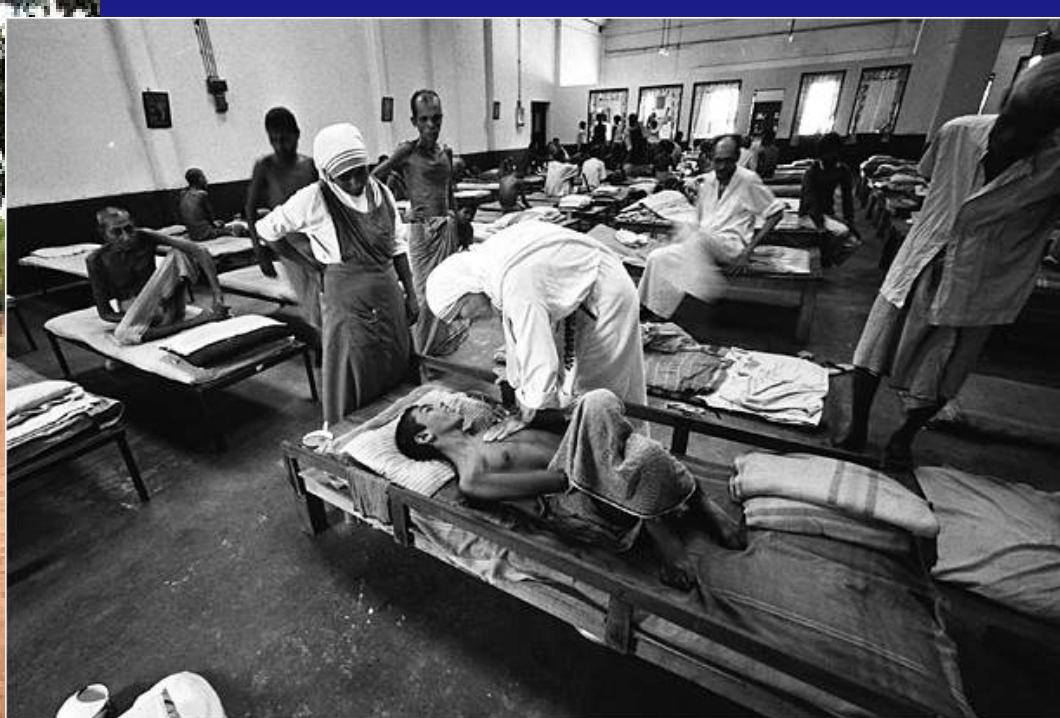
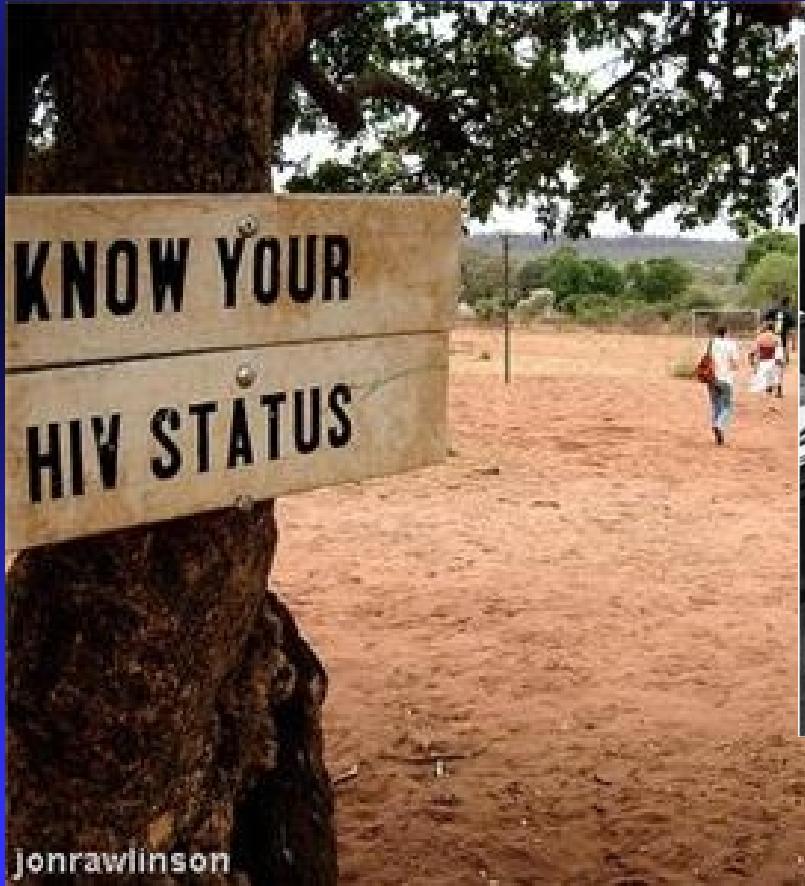
- ART should be initiated *as soon as possible* in all HIV/TB co-infected patients with active TB
  - ART works just as well in patients with HIV and TB as in patients without TB
  - In patients with low CD4counts (ie under 50 cells) → IRIS will be more common
  - HIV and TB doctors have to work together
- <http://whqlibdoc.who.int/publications/2010/9789241599701.pdf>

Care and treatment provides hope  
and combats stigma most effectively

*It is almost impossible to combat stigma  
without a **kind word** and **ART** and **TB  
treatment***



Stigma is linked to abandonment, lack of testing and treatment, and spread of the HIV epidemic



Love and acceptance are the antidotes to stigma “We can not do great things on this earth...only small things with great love”

Mother Teresa of Calcutta



# Thank you very much!

## ■ Questions and Discussion:

