



Improving accessibility to antiretroviral drugs: A south-south collaboration

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Adults and children estimated to be living with HIV at the end of 2000



Total : 36.1 million

Source: World Health Organization

HIV Infections worldwide - 2000

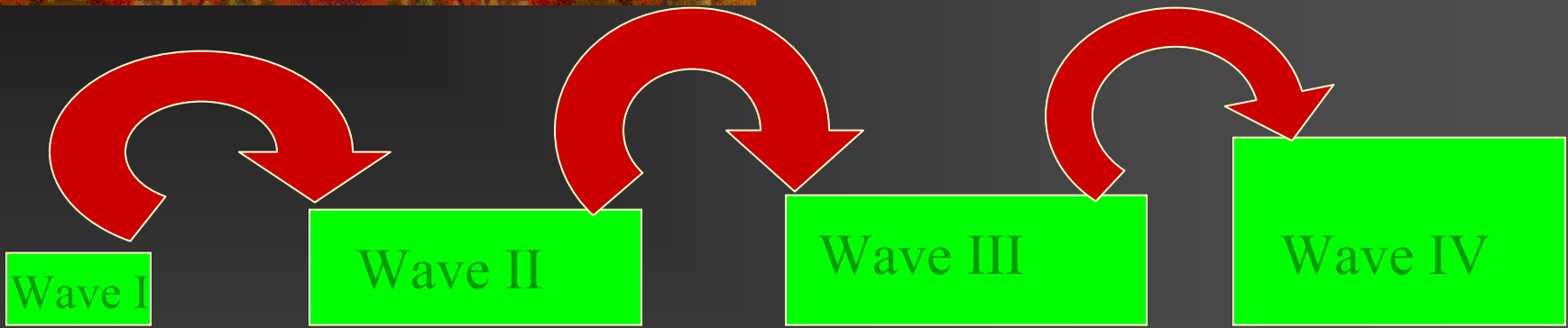
- More than 15000 new HIV infections every day.
 - >95% are in developing countries
 - 1600 infections among children <15 yrs age
 - About 14000 infections are between 15-49 yrs age group, of whom;
 - >40% are women
 - >50% are 15-24 yrs old
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HIV/AIDS : Global Overview

UNAIDS June 2000

Country	HIV Estimate	Adult Rate (%)	AIDS Deaths	AIDS Orphans
Botswana	290,000	35.8	24,000	66,000
Swaziland	130,000	25.3	7,100	12,000
Zimbabwe	15,00,000	25.1	1,60,000	9,00,000
Zambia	8,70,000	20.0	99,000	6,50,000
S Africa	42,00,000	19.9	2,50,000	4,20,000
Namibia	1,60,000	19.5	18,000	67,000
Thailand	7,55,000	2.2	66,000	75,000
India	37,00,000	0.7	3,10,000	?

Waves in HIV Epidemic & its Impact

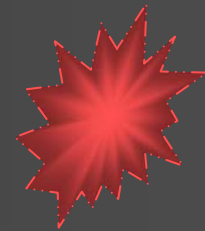


Sex
Workers/
IDUs

Male STD Pts,
Mobile Groups.

Spouses &
Children of
Male STD Pts

Adolescents



Spread of HIV
STD Patients

Trauma, Illness
& Death
STD & TB Patients

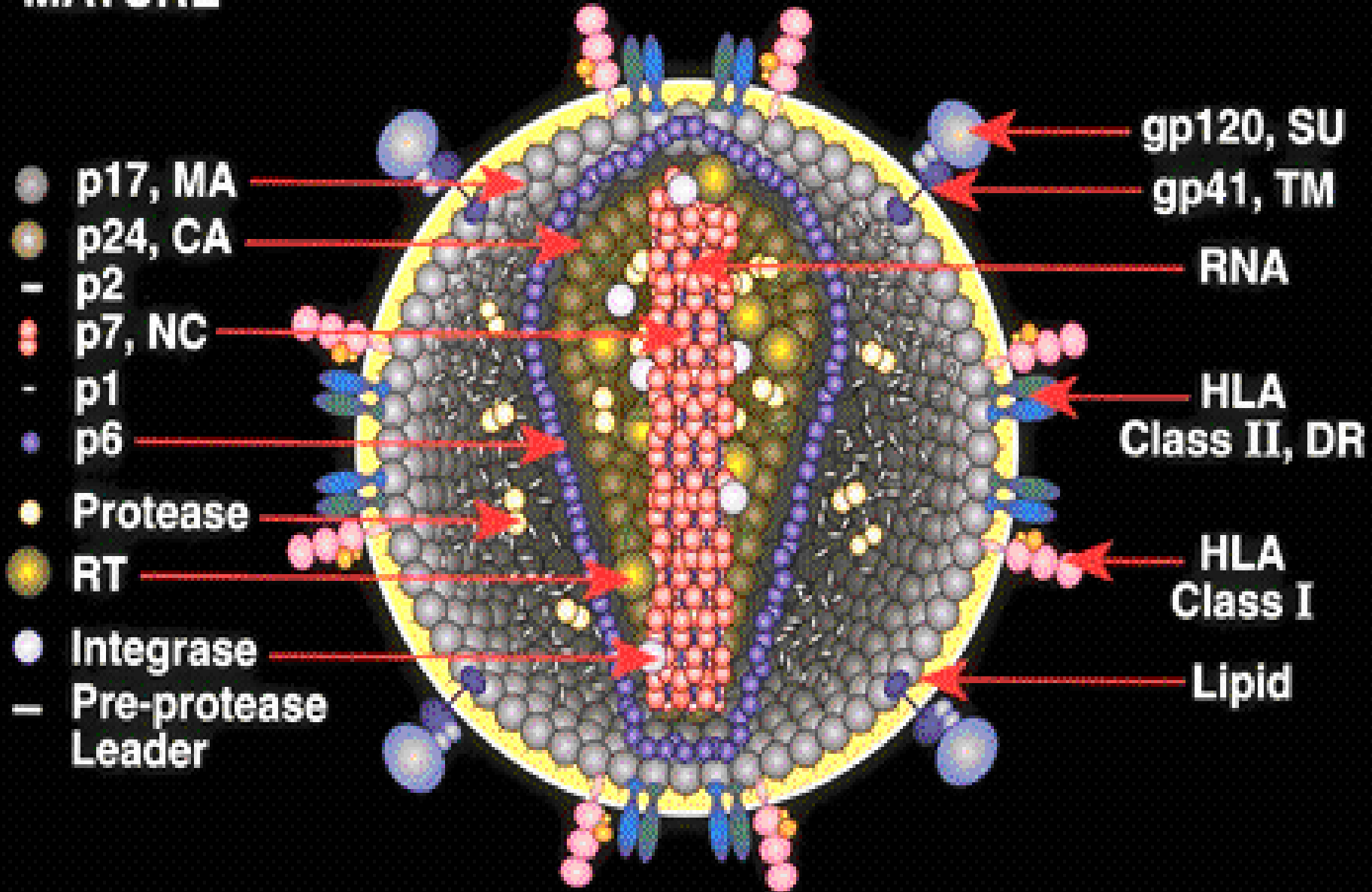
Survivors
AIDS Pts, ANCs,
Pediatric AIDS

Long-term Socio-
economic impact
Orphans

Impact of HIV/AIDS

- Mainly affects the economically productive age group
 - In Africa has had an effect on productivity and slowing of economies
 - Reduction in average life expectancy
 - Shortage of both unskilled and skilled workers e.g. teachers
 - Long term medical, economic and social consequences
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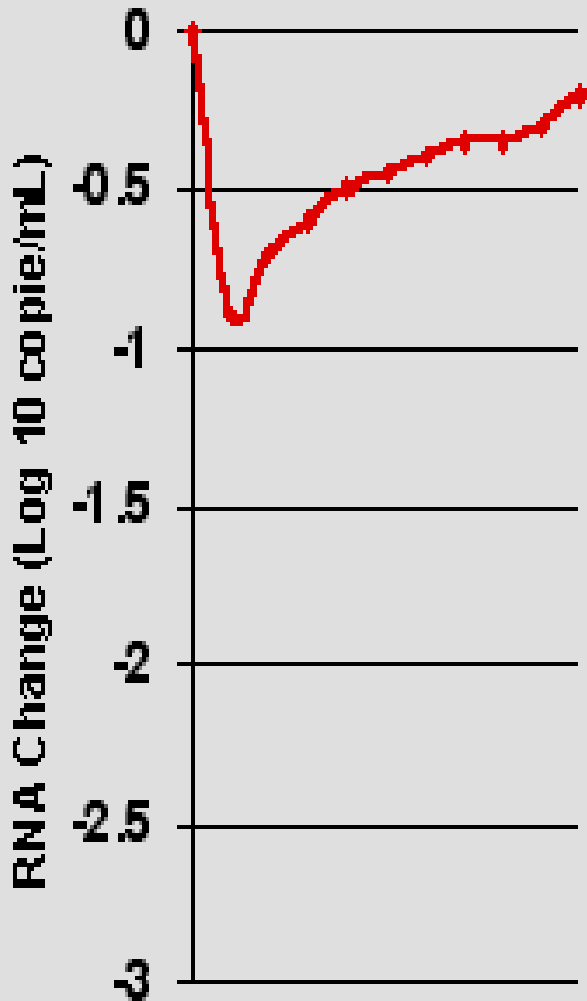
MATURE



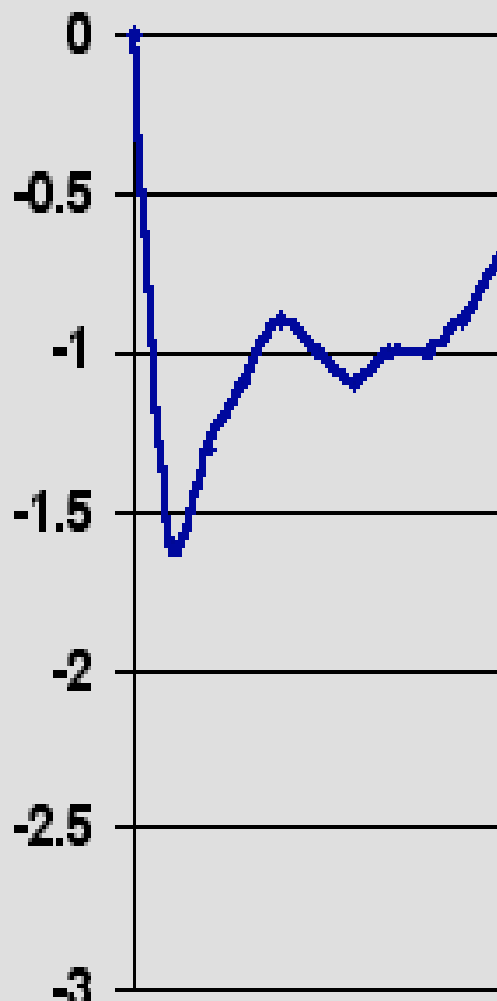
Management of HIV/AIDS

- Diagnosis based on clinical suspicion and laboratory evaluation
 - Treatment and prevention of opportunistic infections
 - Regular monitoring
 - Antiretroviral therapy
 - Patient counseling
-

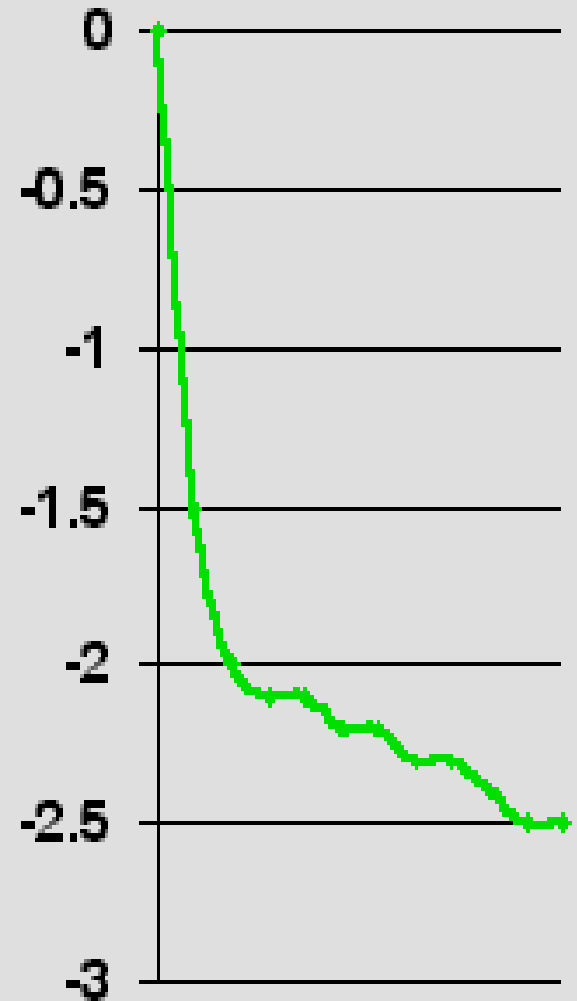
**1987 AZT
Monotherapy**



**1994
Two Drug Therapy**

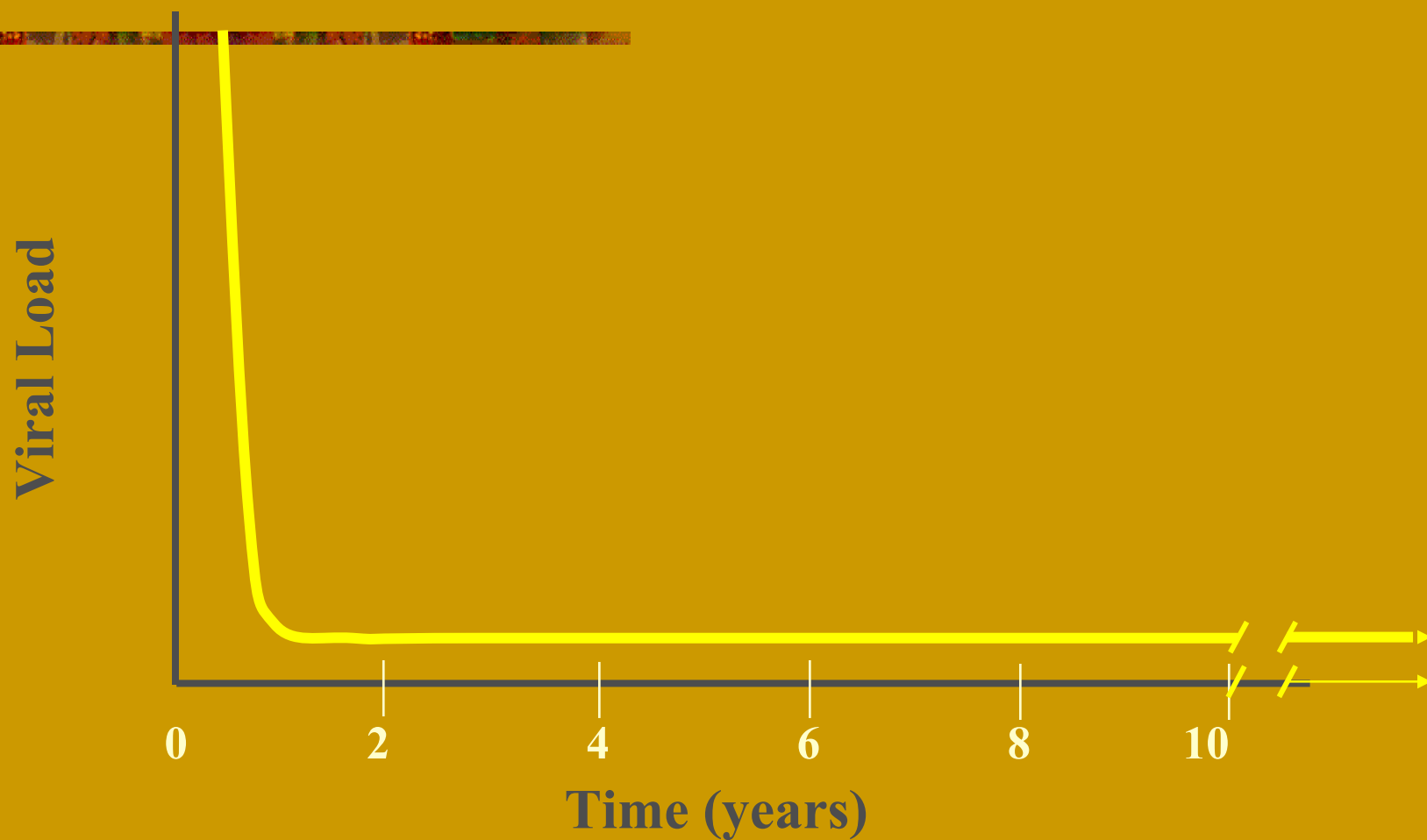


**1997 Combination
Therapy Including
Protease Inhibitors**



24 Week Response

GOAL OF ANTIRETROVIRAL THERAPY



Efficacy of ARV therapy

**Mother to
child
transmission**

**Clinical
Management**

**Post
exposure
prophylaxis**

Currently available drugs

NRTIs

Azidothymidine

ddI

ddC

Stavudine

Lamivudine

Abacavir

Various combinations

PIs

Saquinavir-SGC

Ritonavir

Indinavir

Nelfinavir

Amprenavir

Lopinavir/ritonavir

NNRTIs

Delavirdine

Nevirapine

Efavirenz

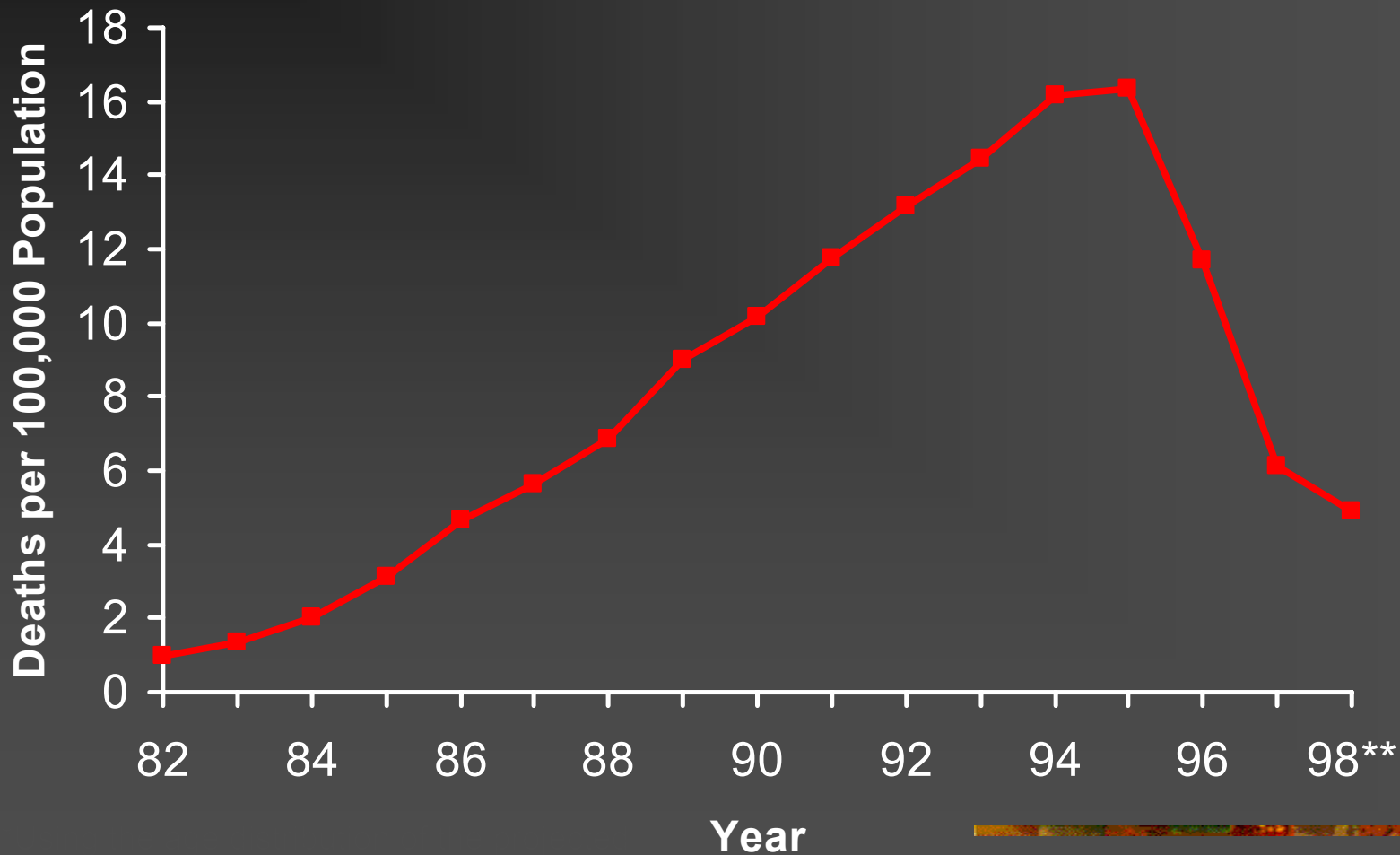
When to start therapy?

	DHHS	IAS	BHIVA
Symp	+	+	+
CD4	<350	<350	<350
PVL	>55,000	>30,000	>55,000

Where are we with HIV therapy today

- 20th year into the epidemic
 - 6th year of HAART
 - 15 drugs
 - Survival time has increased four-fold after diagnosis of AIDS, from 11 months to 46 months
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Trends in Age-Adjusted* Rates of Death due to HIV Infection, USA, 1982-1998



Cost of ART

- USA, Europe – 10,000-12,000 \$ per year per patient
 - India- less than 10%
 - Can further come down by 30-40%
 - Can be repeated in other developing countries
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ART is cost-effective

- ART reduces hospitalizations and the need to visit the hospital frequently
 - Thus ART may actually save money in the long run
 - Demonstrated in developed and developing countries like Brazil
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ART usage

- Benefit more than thrombolytic therapy in patients with AMI/heart attacks
 - More cost effective than non-HIV diseases
 - Radiation therapy for early breast cancer
 - Treatment of hypercholesterolemia for heart disease
 - Dialysis
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Cipla

- Manufactures 6 antiretroviral drugs and those for treating opportunistic infections
 - Plants are approved by many international regulatory agencies like FDA, MCA, TGA, MCC, etc
 - Is poised to supply to some African countries like Nigeria, Cameroon, Ivory Coast, Ethiopia etc
 - With the help of MSF to Cambodia and Guatemala
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MTCT project

- Cipla is currently working with NACO and UNICEF to make available nevirapine for prevention of mother to child transmission of HIV at no cost
 - 2 year project
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Need of the hour

- Collaboration between developing countries for diseases like AIDS which threaten development
 - Generic companies can play a vital role
 - Fast track registration of antiretroviral drugs with possible harmonization of regulatory requirements
 - Development of adequate infrastructure and physician training
 - Encouragement and support government, NGOs and other organizations
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Challenges in HIV/AIDS

- Prevent new infections
 - Those already infected, and can take treatment avert illness and death by maximizing the effectiveness of treatments
 - ***Increase access to greater number of patients who need the treatment***
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AIDS is no longer merely a health issue, but a developmental issue

