

HIV Treatment in Adults and Adolescents

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Positive**Health**Program
HIV/AIDS Division of SFGH

Disclosures



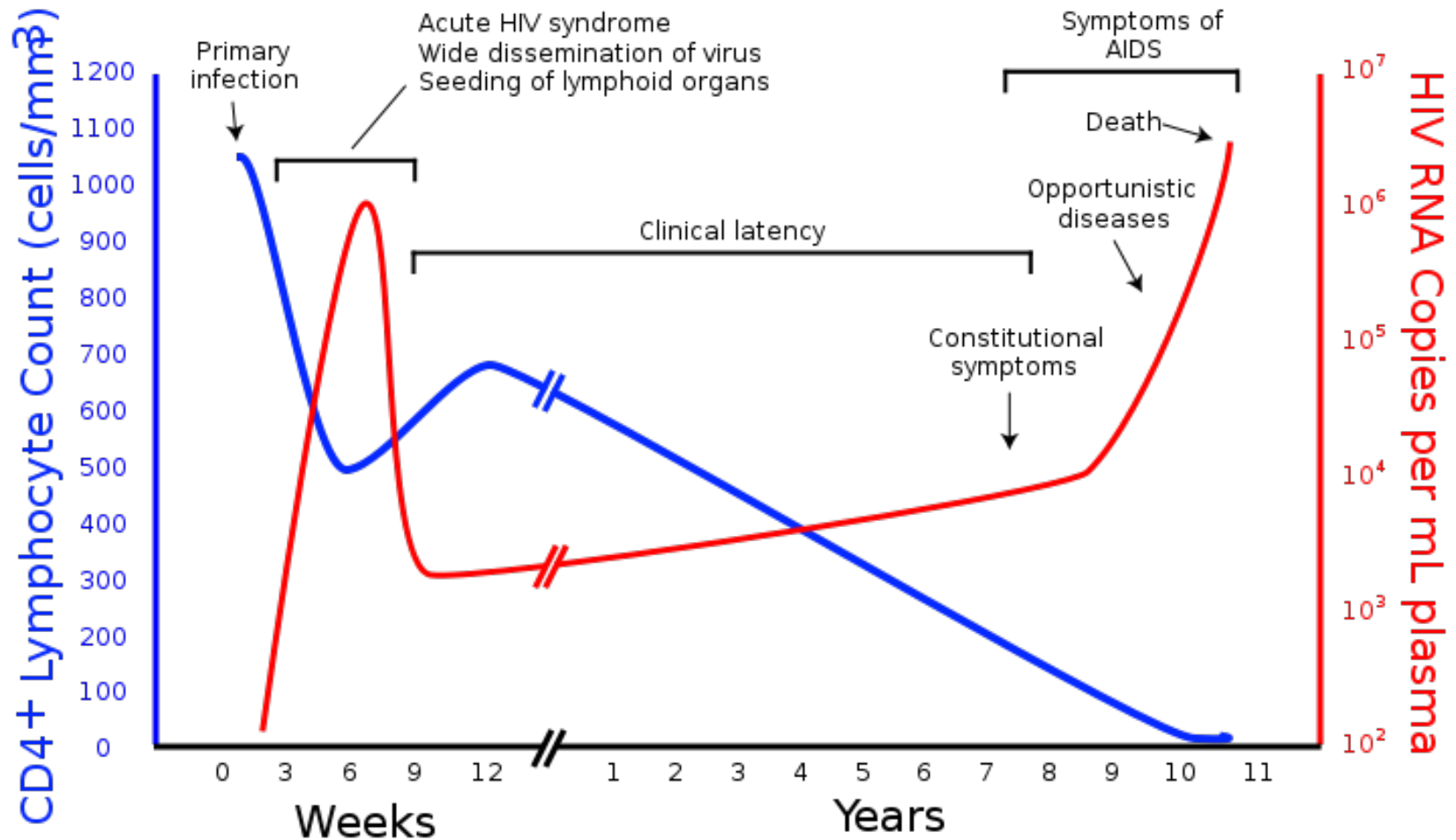
- I have received consultant fees from the following companies:
 - Abbott Pharmaceuticals
 - Bristol-Myers Squibb
 - Gilead Sciences
 - Janssen Pharmaceuticals
 - Merck Pharmaceuticals
 - Viiv Healthcare

Overview/Objectives



- Understand the goals of treatment with antiretroviral therapy (ART)
- Discuss the risks and benefits of earlier ART
- Review the guidelines for ART initiation
 - US Department of Health and Human Services
 - World Health Organization
- Highlight the patient centered approach to HIV treatment and adherence

Natural History of Untreated HIV Infection



Goals of HIV Treatment



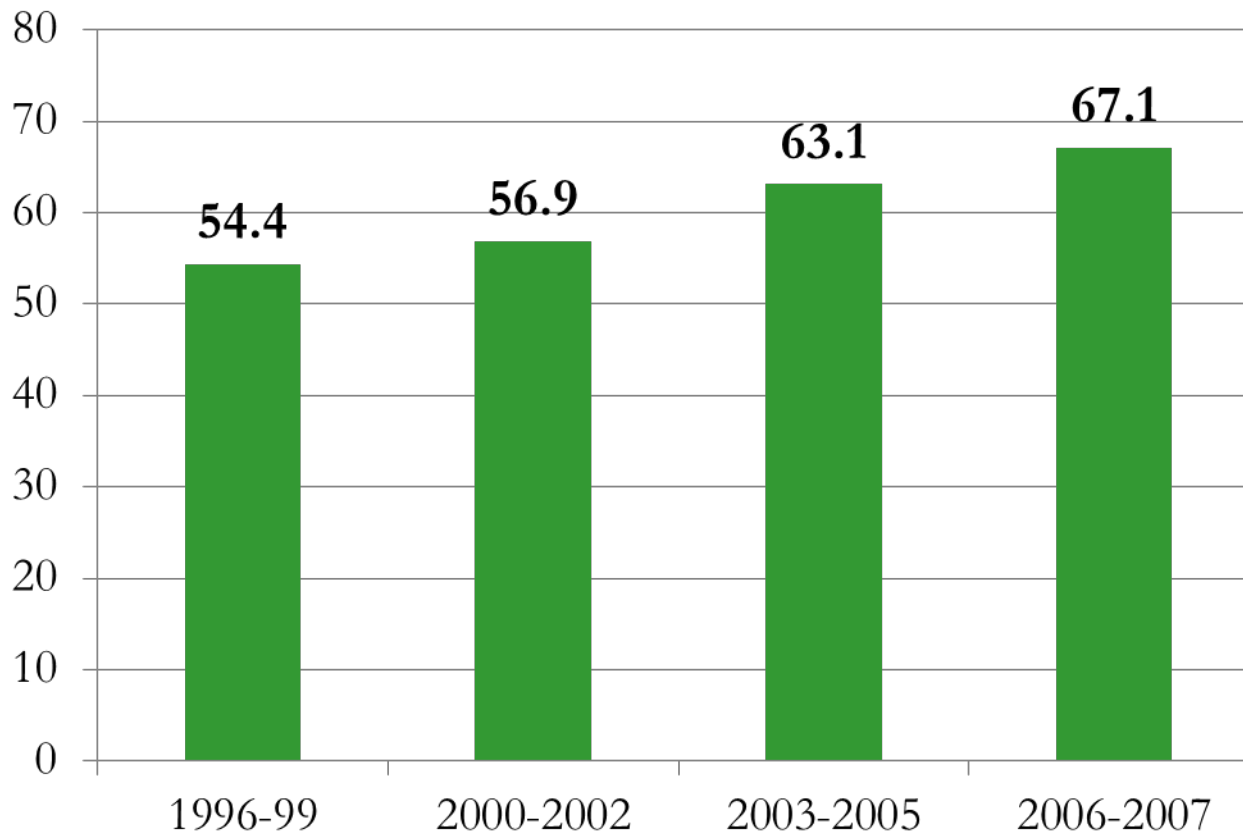
- The primary goals for initiating antiretroviral therapy (ART) are to:
 - Reduce HIV-associated morbidity and prolong the duration and quality of survival
 - Restore and preserve immunologic function
 - Maximally and durably suppress plasma HIV viral load
 - Prevent HIV transmission

ART and Survival

North America



Estimated Life Expectancy for HIV-Infected Person at Age 20



Overall population life expectancy = 78.8

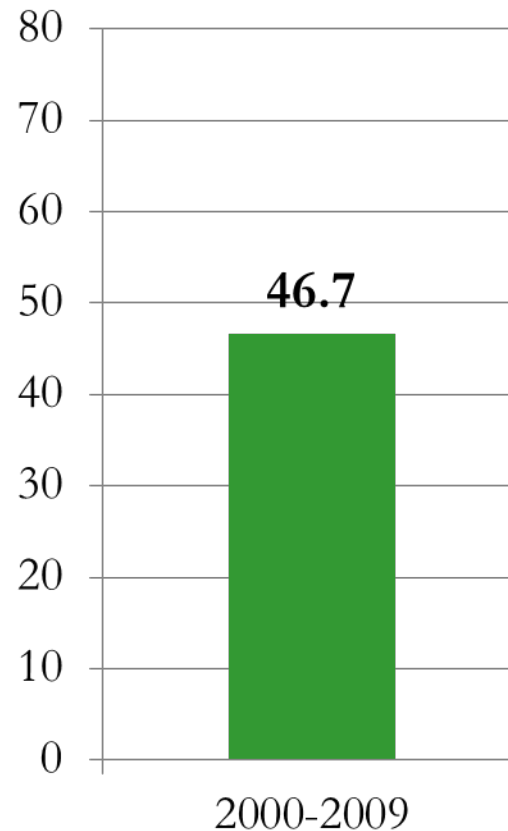
Results affected by gender, race, risk group and CD4 count

ART and Survival

Uganda



Estimated Life Expectancy for HIV-Infected Person on ART at Age 20



Overall population life expectancy = 61.6

Results affected by gender and CD4 count

Risks and Benefits of Earlier ART Initiation

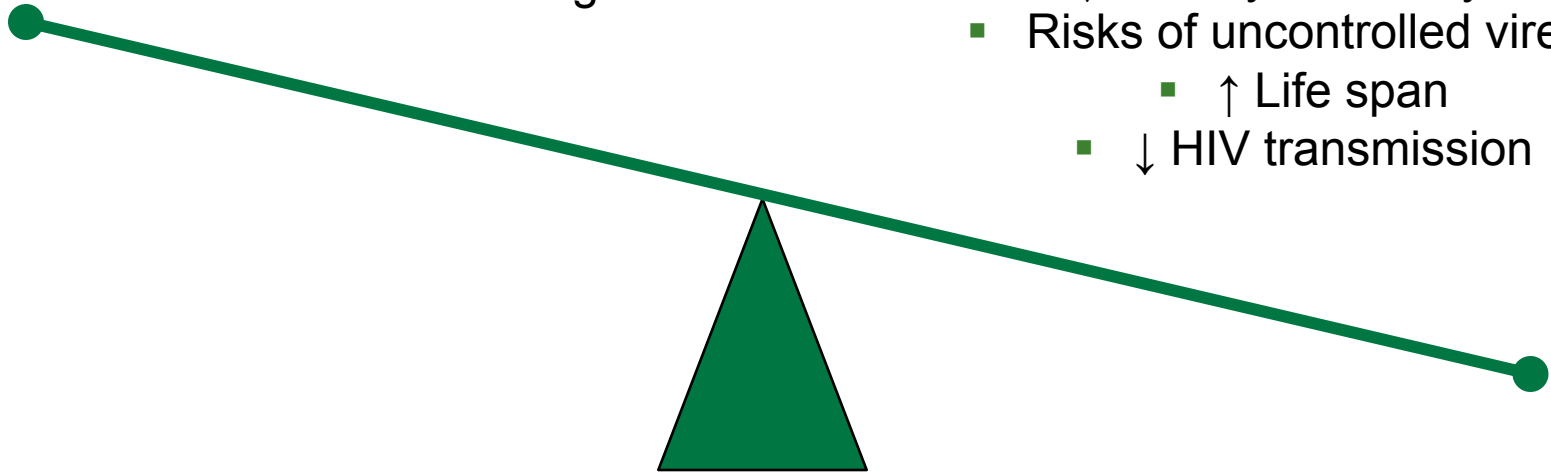


DELAYED ART

- Drug toxicity
 - Safety monitoring and cost
- Preservation of limited ART options
 - Drug resistance
 - Adherence challenges

EARLY ART

- ↑ Efficacy, convenience and tolerability of current ART regimens
 - ↑ Treatment options
- ↓ Emergence of resistance
- ↓ Toxicity with early ART
- Risks of uncontrolled viremia
 - ↑ Life span
 - ↓ HIV transmission



DHHS Treatment Guidelines:



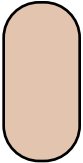

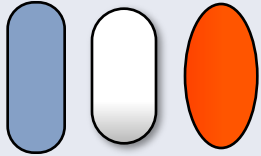
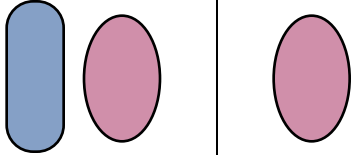
When to Start

- **Antiretroviral therapy (ART) is recommended for all HIV-infected individuals to reduce the risk of disease progression**
 - The strength and evidence for this recommendation vary by pretreatment CD4 cell count: CD4 count <350 cells/mm³ (**AI**); CD4 count 350 cells/mm³ to 500 cells/mm³ (**AII**); CD4 count >500 cells/mm³ (**BIII**)
- ART also is recommended for HIV-infected individuals for the prevention of transmission of HIV
 - The strength and evidence for this recommendation vary by transmission risks: perinatal transmission (**AI**); heterosexual transmission (**AI**); other transmission risk groups (**AIII**)

DHHS Treatment Guidelines:

What to Start: Preferred Regimens



Class	Therapy	Pill Burden
NNRTI-Based	Efavirenz-Tenofovir-Emtricitabine	
PI-Based	Ritonavir + Atazanavir + Tenofovir-Emtricitabine	
	Darunavir + Ritonavir + Tenofovir-Emtricitabine	
INSTI-Based	Raltegravir + Tenofovir-Emtricitabine	

DHHS Treatment Guidelines:

What to Start: Alternative Regimens



- **NNRTI-Based Regimens**
 - Efavirenz + Abacavir/Lamivudine
 - Rilpivirine/Tenofovir/Emtricitabine
 - Rilpivirine + Abacavir/Lamivudine
- **PI-Based Regimens**
 - Atazanavir + Ritonavir + Abacavir/Lamivudine
 - Darunavir + Ritonavir + Abacavir/Lamivudine
 - Fosamprenavir + Ritonavir (once or twice daily) + Abacavir/Lamivudine or Tenofovir/Emtricitabine
 - Lopinavir/Ritonavir (once or twice daily) + Abacavir/Lamivudine or Tenofovir/Emtricitabine
- **INSTI-Based Regimen**
 - Elvitegravir/Cobicistat/Tenofovir/Emtricitabine
 - Raltegravir+ Abacavir/Lamivudine

WHO Treatment Guidelines:

When to Start



When to Start ART in Adults and Adolescents	
Target Population	Recommendation
Severe/Advanced HIV Infection (WHO Clinical Stage 3 or 4)	Initiate ART in all individuals regardless of CD4 cell count
HIV Infection (WHO Clinical Stage 1 or 2)	Initiate ART if $CD4 \leq 500$ cells/mm ³ ($CD4 \leq 350$ cells/mm ³ as a priority)
TB Disease	Initiate ART in all individuals with active TB disease regardless of CD4 cell count
Hepatitis B Coinfection	Initiate in all individuals with $CD4 \leq 500$ cells/mm ³ and regardless of CD4 cell count in the presence of severe chronic liver disease
HIV Serodiscordant Couples	Provide ART to all partners infected with HIV regardless of CD4 cell count (to reduce the risk of HIV transmission to the negative partner)

WHO Treatment Guidelines:

What to Start



First-line ART for adults

(including pregnant and breastfeeding women and people with TB and HBV coinfection)

Preferred Regimens	Tenofovir + Lamivudine (or Emtricitabine) + Efavirenz
Alternative Regimens	Zidovudine + Lamivudine + Efavirenz (or Nevirapine) Tenofovir + Lamivudine (or Emtricitabine) + Nevirapine
Special Circumstances	Regimens containing ABC, d4T and boosted PIs

Patient Centered Approach to ART Adherence



- Involve patient in ART decision-making process
- Build a trusting relationship with open communication
- Proactively identify potential challenges to ART adherence and address them
- Choose regimens that are convenient to patient's lifestyle and minimize chances for toxicities
- Ask about ART adherence using standardized tools at every visit

Summary



- Antiretroviral treatment has revolutionized the care of individuals living with HIV
 - For most individuals, HIV can be managed as a chronic condition that currently requires life-long treatment
- Modern ART regimens are highly efficacious, convenient and well-tolerated
- Having multiple ART options allows for individualizing treatment
- Supporting patients to initiate and continue ART results in improved health outcomes, survival and quality of life

Resources



- HIV Insight: <http://hivinsite.ucsf.edu/InSite>
 - Comprehensive, up-to-date information on HIV/AIDS treatment, prevention, and policy from UCSF
- US Department of Health and Human Services HIV Treatment Guidelines:
<http://aidsinfo.nih.gov/guidelines#>
- World Health Organization HIV Treatment Guidelines:
<http://www.who.int/hiv/pub/guidelines/arv2013/download/en/index.html>