# The Initial HIV Patient Visit

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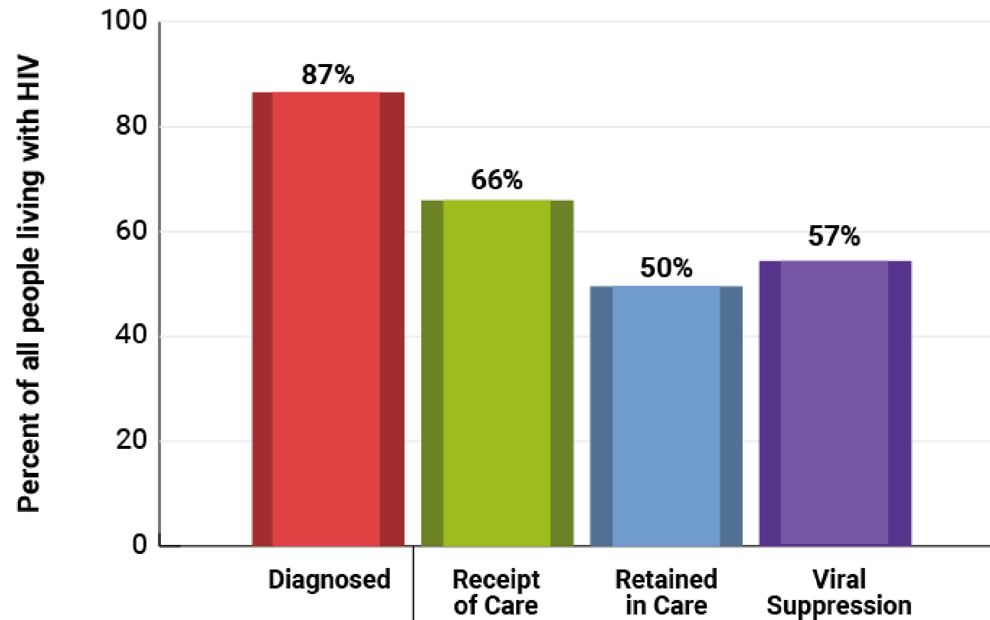
# Disclosures

- Merck Foundation
- Med-IQ
- Eli Lilly

# Learning objectives

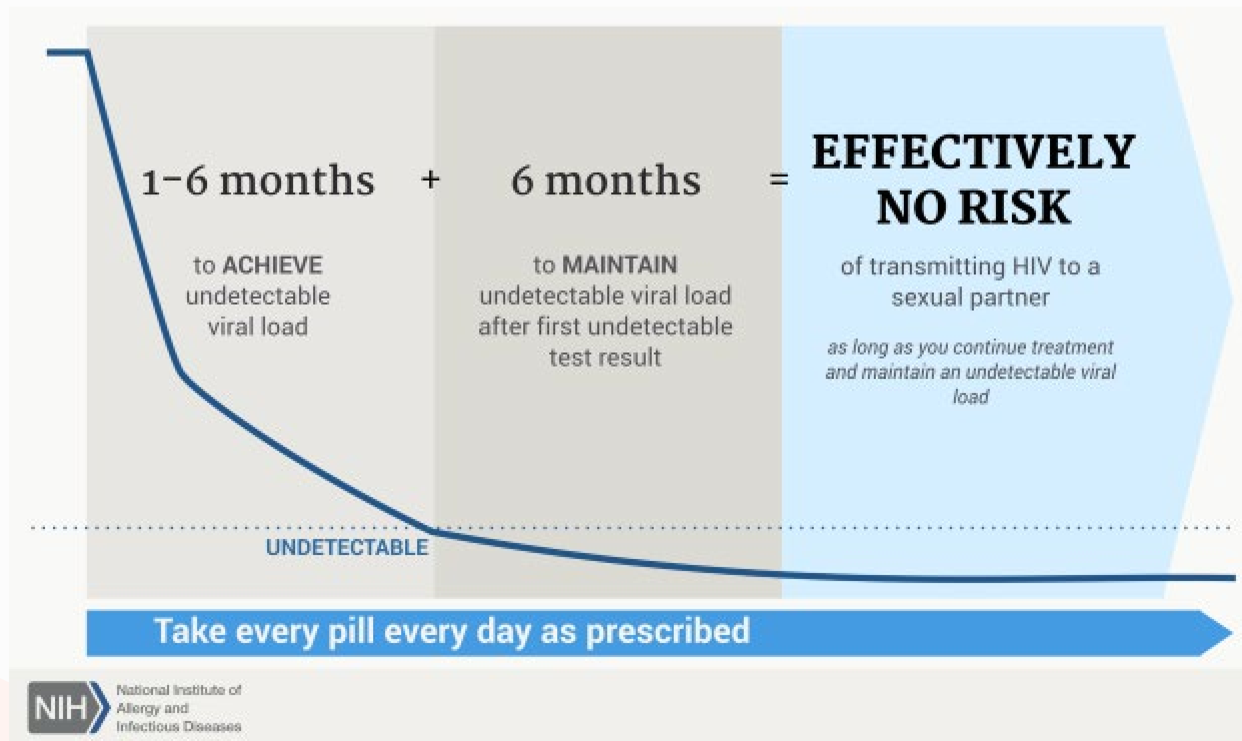
- After engaging in this activity, the learner will be able to:
- Implement a comprehensive initial visit for a patient with newly diagnosed HIV.
- Engage in mutual decision making with patients regarding antiretroviral therapy regimen.
- Recognize and address barriers to ART and visit adherence for people with HIV.

https://www.hiv.gov/federal-response/policies-issues/hiv-aids-care-continuum




https://www.hiv.gov/federal-response/policies-issues/hiv-aids-care-continuum

# Treatment as prevention and U=U




Credit: NIAID; https://www.niaid.nih.gov/diseases-conditions/10-things-know-about-hiv-suppression

# Case 1 & 2: First impressions

- A 48 year old transgender woman with newly diagnosed HIV arrives for her first clinic visit. She asks to use the restroom and is directed by the front desk clerk to the men's room. The medical technician puts on gloves to take her blood pressure.

- A 28 year old Latino man with newly diagnosed HIV arrives at the clinic for his first appointment. He is 30 minutes late because he had to take public transportation. He is given an intake form in English. He is rushed to a room and the nurse seems frustrated about him not having a completed form and having to get the video interpreter. The HIV provider seems harried and the first thing they do is counsel him about the importance of being on time for visits.

- How might the first 15 minutes in clinic affect these patients' care?

# The patient perspective

- Unfamiliar environment & people
- HIV stigma/intersectional stigma
- Mistrust of healthcare system
- Structural barriers – transportation, insurance
- Competing stressors
- Acute emotional distress due to new HIV diagnosis
- Mental illness, substance use disorder, trauma
- Information overload

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# Clinic culture and setting the tone

- Positive, non-judgmental, welcoming interactions
- Stigma & discrimination are major barriers to retention in care

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# Clinic culture and setting the tone

- Patients will be affected by verbal & non-verbal communication from all clinic staff as well as clinic environment
- What types of signage are in the clinic?
- How is privacy and confidentiality protected?
- Have all staff members had training in patient-centered care for people with HIV & vulnerable populations?

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# Setting the stage

- Letting patient know up front what to expect at the visit
- Length of visit
- Who they will see
- Lab tests (blood draw, urine sample)
- Starting ART
- Written materials to combat information overload

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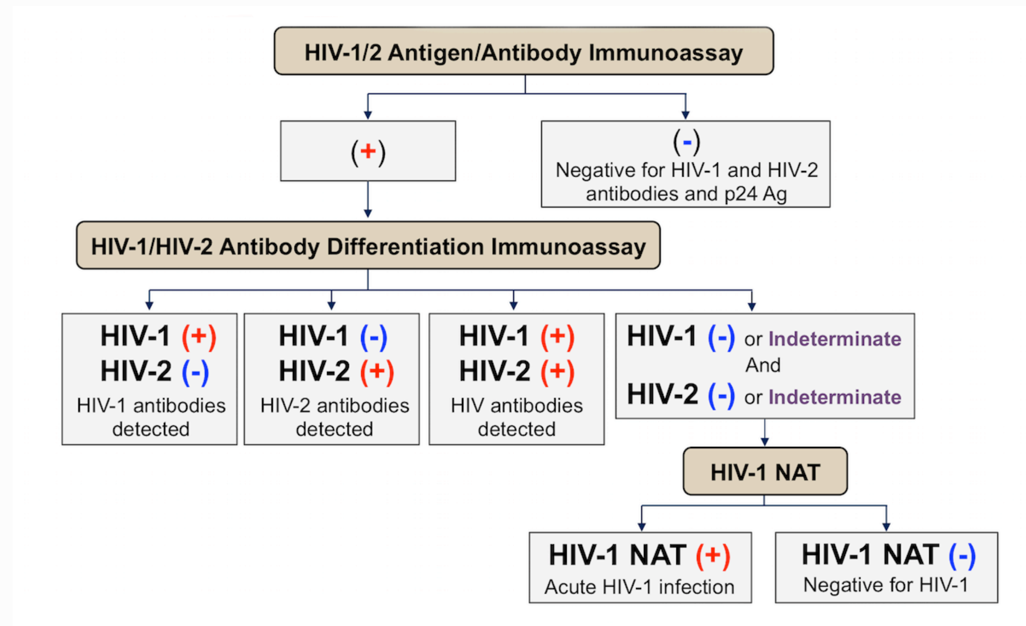
# HIV Diagnosis

- Confirm HIV diagnosis if not yet done
  - Positive home or rapid test
  - Factitious HIV or other unusual situations




https://www.hiv.uw.edu/go/screening-diagnosis/diagnostic-testing/core-concept/all

# Provision of HIV education

- Meet the patient where they are – what do they already know? What questions/concerns do they have?
- HIV transmission, safer sex and U=U
- Pathophysiology of the virus in lay terms
  - Viral load and CD4
- How HIV is treated and effectiveness of treatment
- Prognosis

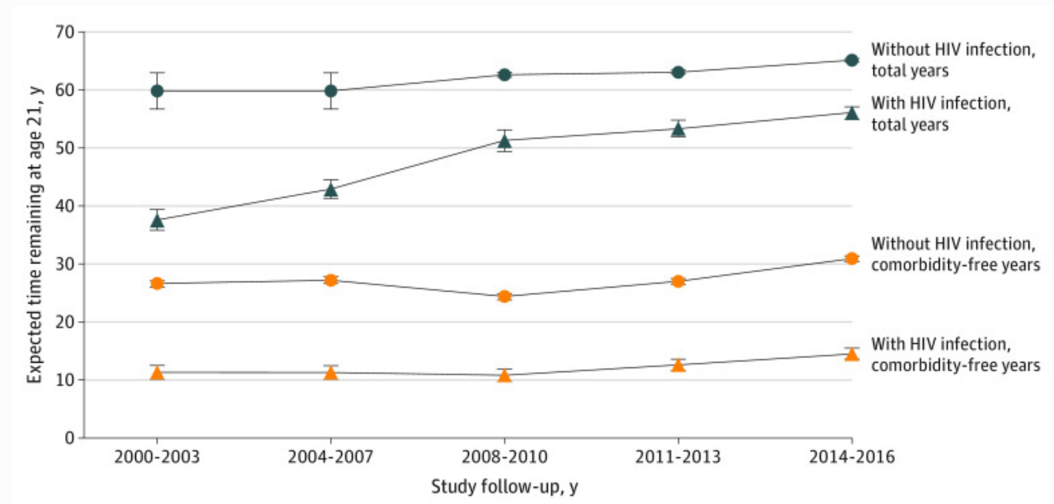
# COMPREHENSIVE HISTORY AND PHYSICAL EXAM

# HIV-Related history

- Date of HIV diagnosis
- Date of last negative test
- History of any opportunistic infections or HIV-related malignancies
- CD4 and viral load if available prior to visit
- History of PrEP use

# Comprehensive history

- Past medical history
- Past surgical history
- Psychiatric history
- Medications
- Allergies
- Family history




Marcus JL, et al. Comparison of Overall and Comorbidity-Free Life Expectancy Between Insured Adults With and Without HIV Infection, 2000-2016. JAMA Netw Open. 2020 Jun 1;3(6):e207954. doi: 10.1001/jamanetworkopen.2020.7954.

# Social history

- Good opportunity to assess for HIV/STI risk factors, potential barriers to care & patient needs
- Current or past tobacco, alcohol, substance use, including IVDU
- Housing status and living situation
- Education and employment
- Social support
- Financial situation
- Food insecurity
- Marital/partnership status
- Sexual history
- Physical, sexual or emotional abuse
- HIV provider & case management can partner in obtaining relevant information

# Review of systems & other assessments

Task Edit View Patient Chart Links Notifications Navigation Help

Menu

Case Management Summary
Diagnoses and Problems
Form Browser
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Oncology View
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Patient Education Summary
PowerTrials
Provider View
Reports and Documents
UM Summary
**Patient Reported Outcomes**

**Patient Reported Outcomes** Full screen Print 3 minutes a

100%

## Patient Reported Outcomes

1917 Clinic

### Sessions

05/30/2019
Signs & Symptoms
1917 Clinic

11/29/2018
Signs & Symptoms
1917 Clinic

**10/25/2018**
**Signs & Symptoms**
**1917 Clinic**

10/12/2017
Signs & Symptoms
1917 Clinic

01/18/2017

### Review Of Symptoms

| | **Selected Session 10/25/2018 10:10** | **Previous Session 10/12/2017 08:10** |
|---|---|---|
| Signs And Symptoms - Last Four Weeks | | |
| Bothers a lot: | Fatigue, Fever, Chills, Sweats, Dizzy, Headache | |
| Bothers some: | Diarrhea, Sadness, Cough / SOB | |
| Bothers a little: | Bloating, abdominal pain, Muscle aches / joint pain | |
| Bothers a little: | | |
| Do not have this sympton: | Numbness / Pain feet, Loss of Memory or forgetfulness, Nausea / Vomiting, | Fatigue, Fever, Chills, Sweats, Dizzy, Numbness / Pain feet, Loss of Memory |

## Over the LAST 4 WEEKS how much did the following symptoms bother you?

| | Do not have this symptom | Have, but doesn't bother | Bothers a little | Bothers some | Bothers a lot |
|---|---|---|---|---|---|
| Fatigue | ○ | ○ | ○ | ○ | ○ |
| Fever, Chills, Sweats | ○ | ○ | ○ | ○ | ○ |
| Dizzy | ○ | ○ | ○ | ○ | ○ |
| Numbness/Pain feet | ○ | ○ | ○ | ○ | ○ |
| Loss of Memory or forgetfulness | ○ | ○ | ○ | ○ | ○ |
| Nausea/Vomiting | ○ | ○ | ○ | ○ | ○ |
| Diarrhea | ○ | ○ | ○ | ○ | ○ |
| Sadness | ○ | ○ | ○ | ○ | ○ |
| Nervous/anxious | ○ | ○ | ○ | ○ | ○ |
| Poor sleep | ○ | ○ | ○ | ○ | ○ |

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## Over the LAST 4 WEEKS how much did the following symptoms bother you?

| | Do not have this symptom | Have, but doesn't bother | Bothers a little | Bothers some | Bothers a lot |
|---|---|---|---|---|---|
| Rash | ● | ○ | ○ | ○ | ○ |
| Cough/SOB | ● | ○ | ○ | ○ | ○ |
| Headache | ○ | ○ | ○ | ○ | ○ |
| Poor appetite | ○ | ● | ○ | ○ | ○ |
| Bloating, abdominal pain | ● | ○ | ○ | ○ | ○ |
| Muscle aches/joint pain | ● | ○ | ○ | ○ | ○ |
| Sex problem | ● | ○ | ○ | ○ | ○ |
| Fat deposit/Weight gain | ● | ○ | ○ | ○ | ○ |
| Weight loss/wasting | ○ | ○ | ● | ○ | ○ |
| Hair loss | ● | ○ | ○ | ○ | ○ |

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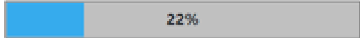


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Waiting for 1917prodweb...

Do you smoke tobacco?

- (●) Yes
- ( ) No

If yes, how many cigarettes do you smoke per day?

- (●) less than 10
- ( ) 10 or more

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## Over the PAST 2 WEEKS how much did the following problems bother you?

Little interest or pleasure in doing things.

- ○ Not at all
- ◉ Several days
- ○ More than half the days
- ○ Nearly every day

Feeling down, depressed, or hopeless.

- ◉ Not at all
- ○ Several days
- ○ More than half the days
- ○ Nearly every day

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Thinking about the PAST 4 WEEKS, on average how would you rate your ability to take all of your HIV antiretroviral medications as your doctor prescribed?

- ○ Very Poor
- ○ Poor
- ○ Fair
- ○ Good
- ◉ Very good
- ○ Excellent
- ○ Currently not taking prescribed HIV antiretroviral medications

< Previous 67% Next >

This portion of the questionnaire is about your use of alcoholic beverages during the PAST TWELVE MONTHS.

How often do you have a drink containing alcohol?

- (•) Never
- ( ) Monthly or less
- ( ) 2 to 4 times a month
- ( ) 2 to 3 times a week
- ( ) 4 or 5 times a week
- ( ) 6 or 7 times a week

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## Throughout YOUR LIFETIME, which of the following substance have you used? (Please check all that apply)

- [x] Cocaine/crack
- [ ] Methamphetamine (crystal meth, speed, Tina)
- [ ] Heroin
- [x] Fentanyl (not prescribed by your Dr.)
- [ ] Narcotic pain meds for NON-MEDICAL use (oxycodone [OxyContin, Percocet], hydrocodone [Vicodin], methadone, buprenorphine, etc.)
- [ ] Sedatives or sleeping pills for NON-MEDICAL use (Valium, Serepax, Ativan, Xanax, Librium, Rohypnol, GHB, etc.)
- [ ] Marijuana for NON-MEDICAL use (pot, weed, hash, cannabis, etc.)
- [ ] Prescription stimulants for NON-MEDICAL use (Ritalin, Concerta, Dexedrine, Adderall, diet pills, etc.)
- [ ] Inhalants (poppers, nitrous oxide, glue, gas, paint thinner, etc.)
- [ ] Hallucinogens (ecstasy, E, LSD, acid, Special K, PCP, mushrooms, etc.)
- [ ] None

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## Over the PAST THREE MONTHS, which of the following substance have you used? (Please check all that apply)

- [ ] Cocaine/crack
- [ ] Methamphetamine (crystal meth, speed, Tina)
- [ ] Heroin
- [ ] Fentanyl (not prescribed by your Dr.)
- [ ] Narcotic pain meds for NON-MEDICAL use (oxycodone [OxyContin, Percocet], hydrocodone [Vicodin], methadone, buprenorphine, etc.)
- [ ] Sedatives or sleeping pills for NON-MEDICAL use (Valium, Serepax, Ativan, Xanax, Librium, Rohypnol, GHB, etc.)
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- [ ] Inhalants (poppers, nitrous oxide, glue, gas, paint thinner, etc.)
- [ ] Hallucinogens (ecstasy, E, LSD, acid, Special K, PCP, mushrooms, etc.)
- [x] None

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# Comprehensive physical examination

- In particular focus on signs of:
- AIDS-related illness in patients with CD4 <200 cells/$mm^3$
- Age-related problems and comorbidities
- STIs
- Oral health
- Mental health

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# Physical exam

- General: including body habitus, evidence of obesity, wasting, lipodystrophy, assessment of frailty, and ambulatory ability
- Skin: seborrheic dermatitis, ecchymoses, purpura, petechiae, Kaposi sarcoma, herpes simplex or zoster, psoriasis, molluscum contagiosum, onychomycosis, folliculitis, condylomata, cutaneous fungal infections, acanthosis
- Lymph nodes: generalized or localized lymphadenopathy
- Eye: retinal exudates or cotton wool spots, hemorrhages, pallor, icterus
- Oropharynx: oral hairy leukoplakia, candidiasis (thrush, palatal erythema, angular cheilosis), aphthous ulcers, gingivitis, periodontal disease, Kaposi sarcoma, tonsillar or parotid gland enlargement

Aberg JA et al. *Clinical Infectious Diseases*, Volume 58, Issue 1, 1 January 2014, Pages e1–e34, https://doi.org/10.1093/cid/cit665; Thompson MA et al. *Clinical Infectious Diseases*, Volume 73, Issue 11, 1 December 2021, Pages e3572–e3605, https://doi.org/10.1093/cid/ciaa1391

# Physical exam

- Cardiovascular: heart exam, peripheral pulses, presence/absence of edema or bruits
- Chest: lung examination
- Breast: nodules, nipple discharge
- Abdomen: hepatomegaly, splenomegaly, masses, tenderness
- Genitourinary: ulcers, warts, chancres, rashes; gynecologic exam including bimanual exam, discharge; if born male: testicular exam; evaluation for hernia
- Anorectal: warts, fissures, internal or external hemorrhoids, masses, Kaposi sarcoma; prostate exam when appropriate
- Neuropsychiatric: depression, mania, anxiety, signs of personality disorder, difficulties in concentration, attention, and memory, signs of dementia, speech problems, gait abnormalities, focal deficits (motor or sensory), lower extremity vibratory sensation (distal sensory neuropathy, abnormal reflexes)

Aberg JA et al. *Clinical Infectious Diseases*, Volume 58, Issue 1, 1 January 2014, Pages e1–e34, https://doi.org/10.1093/cid/cit665; Thompson MA et al. *Clinical Infectious Diseases*, Volume 73, Issue 11, 1 December 2021, Pages e3572–e3605, https://doi.org/10.1093/cid/ciaa1391

# LABORATORY TESTS

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## What do my lab results mean?
### HIV and Laboratory Tests

You want your CD4 count to be **HIGH**

**CD4 Cell Count**

CD4 cells are specialized cells of the immune system destroyed by HIV. A CD4 cell count measures how many CD4 cells are in your blood. The higher your CD4 cell count, the healthier your immune system.

CD4 cells

HIV

**HIV Viral Load Test**

An HIV viral load test, also called an HIV RNA test, tracks how many HIV particles are in a sample of your blood. This is called your viral load.

You want your viral load to be **LOW**

Taking a combination of HIV medicines every day prevents HIV from destroying CD4 cells and helps lower your viral load.

What are some other important tests?

**DRUG RESISTANCE TEST**

HIV can change form, making it resistant to some HIV medicines. A drug resistance test helps your health care provider choose the HIV medicines that will work for you.

**TESTS FOR OTHER INFECTIONS**

HIV weakens the immune system, leaving people vulnerable to other infections. Health care providers test for tuberculosis, hepatitis B and C infections, and other potential illnesses. The treatment for another infection may affect HIV treatment.

**COMPLETE BLOOD COUNT**

This test measures how many red blood cells, white blood cells, and platelets are in your blood. This helps health care providers keep track of your overall health and spot infections or other potential medical problems.

**BLOOD CHEMISTRY TESTS**

This group of tests measures several different chemicals in your blood to help monitor the health of your organs, especially your heart, liver, and kidneys. Health care providers use blood chemistry tests to look for side effects caused by HIV medicines.

For more information, visit HIVinfo.NIH.gov

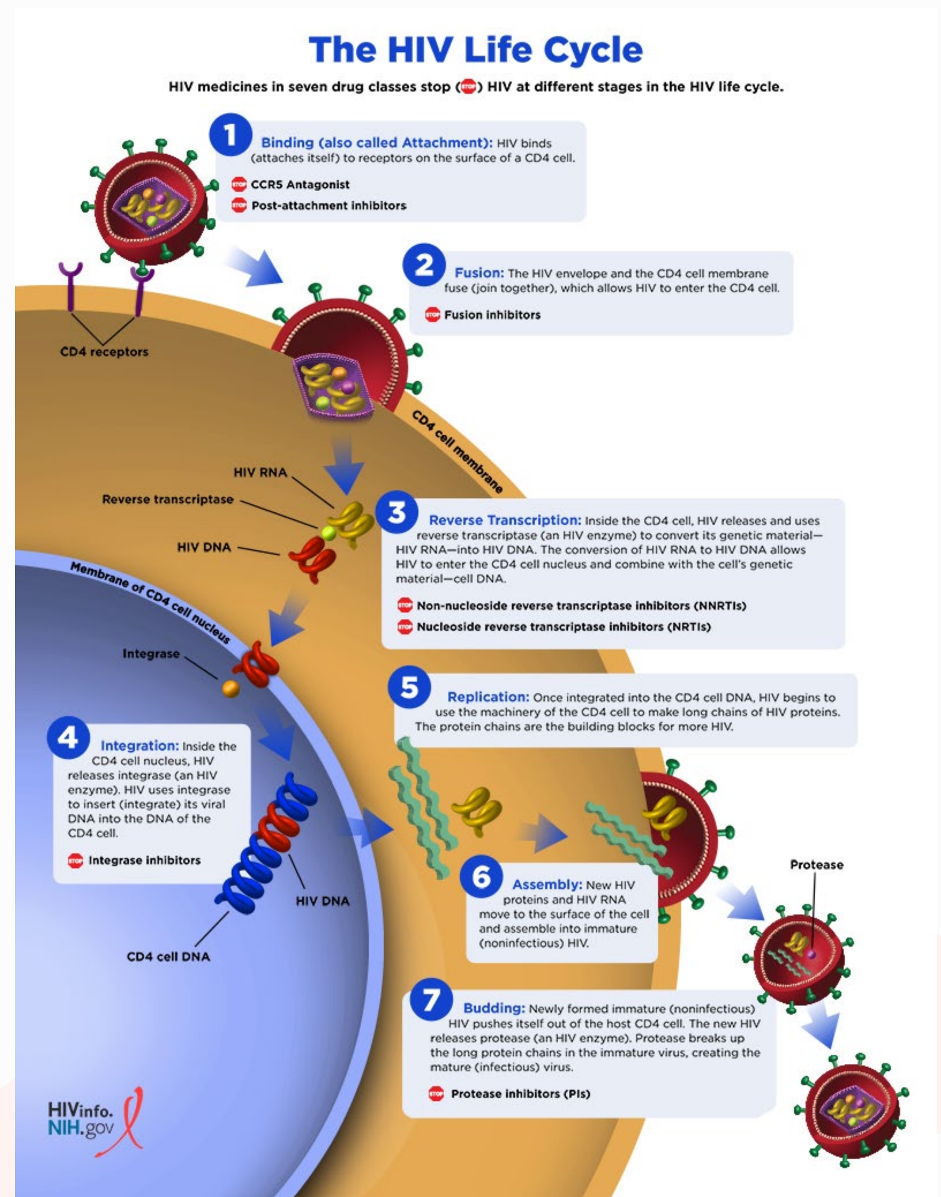
- Lipid panel
- Urinalysis
- STI testing
- HLA-B*5701
- G6PD
- Toxo IgG
- Pregnancy test

https://www.hiv.gov/hiv-basics/staying-in-hiv-care/provider-visits-and-lab-test/lab-tests-and-results/

# HIV TREATMENT

Mechanism of action of antiretroviral medications

Main principle of treatment: use 2-3 active agents to target virus at different points in the life cycle




https://hivinfo.nih.gov/understanding-hiv/fact-sheets/hiv-life-cycle

# When to start ART

- ALL people diagnosed with HIV should be started on treatment with antiretroviral therapy (ART) as soon as possible
- INSIGHT START randomized control trial, Apr 2009-Dec 2013, 215 sites in 35 countries
  - 4685 asymptomatic patients with CD4 >500 cells/$mm^3$
  - 2326 assigned to receive immediate and 2359 deferred ART
  - Deferred = until CD4 is ≤350 cells/$mm^3$ or development of AIDS or other condition requiring ART
  - Decreased risk of mortality, serious AIDS-related events and serious non-AIDS related events

# Recommended first regimens

- Bictegravir (BIC)/tenofovir alafenamide (TAF)/emtricitabine (FTC)
- Dolutegravir (DTG)/abacavir (ABC)/lamivudine (3TC) – can be used for patients who are HLA-B*5701 negative and do not have chronic hepatitis B virus (HBV)
- Dolutegravir (DTG) plus (tenofovir alafendamide (TAF) or tenofovir disoproxil fumarate [TDF] plus emtricitabine (FTC) or lamivudine (3TC)
- Dolutegravir (DTG)/lamivudine (3TC) - can't be used in patients with HIV RNA >500,000 copies/mL, HBV coinfection, or when starting ART prior to results of baseline genotype

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/what-start-initial-combination-regimens?view=full; https://www.hiv.uw.edu/page/treatment/drugs;

# Case 3

- 27 year old cisgender male with newly diagnosed HIV
- You have his HIV test results but no other lab work
- He has no underlying medical conditions
- Takes a multivitamin with minerals daily

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# What is the next best step regarding ART?

A. Check baseline labs, CD4, plasma HIV-1 RNA, hepatitis B and C serology, and HIV genotype and have patient return in 2-3 weeks to start ART based on the results

A. Check baseline labs, CD4, plasma HIV-1 RNA, hepatitis B and C serology, and HIV genotype and start ART today

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A. Check baseline labs, CD4, plasma HIV-1 RNA, hepatitis B and C serology, and HIV genotype and have patient return in 2-3 weeks to start ART based on the results

A. **Check baseline labs, CD4, plasma HIV-1 RNA, hepatitis B and C serology, and HIV genotype and start ART today**

# Rapid ART

- Importance of linkage - "fast-tracking"

- Rapid ART
  - Starting ART as quickly as possible after HIV diagnosis (within 72 hours)
  - Also known as immediate ART, same day ART or treatment upon diagnosis
  - Can make history and physical exam more targeted toward starting ART & complete comprehensive H&P at next visit

Image by JohnHoward from Pixabay https://pixabay.com/photos/traffic-highway-lights-night-speed-332857/

https://aidsetc.org/resource/rapid-immediate-art-initiation-restart-guide-clinicians

# Rapid ART

- Who is eligible?
  - Confirmed HIV infection
  - Positive HIV antibody screening test with confirmatory test pending if concern for HIV is high
  - Acute HIV infection

- Who is not eligible?
  - TB meningitis or cryptococcal meningitis – may require short delay in starting ART while underlying infection is treated due to risk of IRIS

NYSDOH AI HIV Clinical Guidelines Program. Rational for rapid ART initiation. https://www.hivguidelines.org/antiretroviral-therapy/when-to-start-plus-rapid-start/#tab_2; https://aidsetc.org/resource/rapid-immediate-art-initiation-restart-guide-clinicians

# Rapid ART

- Potential benefits
  - Studies in resource limited settings – reduced delays in care, improved retention in care & increased likelihood of viral suppression at 10-12 months
  - Reduction in time to U=U
  - In acute HIV, may limit viral reservoir

- Potential issues – more resource intensive

NYSDOH AI HIV Clinical Guidelines Program. Rational for rapid ART initiation.
https://www.hivguidelines.org/antiretroviral-therapy/when-to-start-plus-rapid-start/#tab_2;
https://aidsetc.org/resource/rapid-immediate-art-initiation-restart-guide-clinicians

# Rapid ART - what to start

- Information we lack without labs
  - Plasma HIV-1 RNA (viral load)
  - Hepatitis BSAg
  - HLA-B*5701
  - HIV genotype

# Hepatitis B co-infection and ART

- 5-10% of people with HIV in the US are co-infected with HBV
- Emtricitabine (FTC), lamivudine (3TC), tenofovir disoproxil fumarate (TDF), and tenofovir alafenamide (TAF) are HIV medications that are also active against HBV
- If HBV status is unknown or if a person is HBV co-infected, then FTC or 3TC should not be used without TAF or TDF on board

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/hepatitis-b-virus-hiv-coinfection

# HLA-B*5701 and ART

- Genetic variation linked to abacavir hypersensitivity
- If positive, must avoid abacavir (ABC) and add to patient's allergy list
- Reaction usually seen in first 6-8 weeks
  - Fever
  - GI symptoms (nausea, vomiting, diarrhea, abdominal pain)
  - Rash – can be absent 25-30%
  - Fatigue/malaise
  - Respiratory symptoms less common but can occur – sore throat, cough, shortness of breath
- Can be life-threatening if continued or if patient re-challenged

# Baseline resistance testing

- Transmitted drug resistance (TDR) occurs in 9-14% of people with HIV in high income countries
- Baseline resistance testing (HIV genotype) should be done at entry into care for all people with HIV
- As baseline resistance mutations to INSTIs are uncommon, if the patient has no prior exposure to INSTIs then only resistance testing for RT and PR are needed
- ART does not need to be delayed to await resistance test results; the most common mutations don't preclude most first-line therapies and if needed regimen can be adjusted once results return

# Recommended first regimens

- **Bictegravir (BIC)/tenofovir alafenamide (TAF)/emtricitabine (FTC)**
- Dolutegravir (DTG)/abacavir (ABC)/lamivudine (3TC) – can be used for patients who are HLA-B*5701 negative and do not have chronic hepatitis B virus (HBV)
- **Dolutegravir (DTG) plus (tenofovir alafendamide (TAF) or tenofovir disoproxil fumarate [TDF] plus emtricitabine (FTC) or lamivudine (3TC)**
- Dolutegravir (DTG)/lamivudine (3TC) - can't be used in patients with HIV RNA >500,000 copies/mL, HBV coinfection, or when starting ART prior to results of baseline genotype
- **Another option for rapid ART would be Darunavir/cobicistat/TAF/FTC**

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/what-start-initial-combination-regimens?view=full

# Case 3 continued

- You prescribe BIC/TAF/FTC
- What information should you give the patient about his ART and how to take it?

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Photographers: Tamara Fleming, John O'Boyle

# ART Counseling

- It is best to take ART around the same time every day
- ART adherence counseling – importance for suppressing VL, U=U and avoiding resistance
- Potential side effects: in the case of BIC/TAF/FTC, nausea, diarrhea, HA most common; weight gain; increase in serum creatinine
- Drug-drug interactions:
  - Polyvalent cation products can interfere with absorption of bictegravir and dolutegravir
  - Antacids and supplements containing calcium and iron
  - If taken together must take with food; otherwise must separate as per packet instructions

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https://www.hiv.uw.edu/go/antiretroviral-therapy/adverse-effects/core-concept/all;

# Useful links

- University of Liverpool HIV Drug Interactions Checker https://www.hiv-druginteractions.org/checker

- Stanford University HIV Drug Resistance Database
- https://hivdb.stanford.edu/

# Case 3 continued

- How would your management differ if the patient had previously been on long-acting cabotegravir for PrEP?

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Photographers: Tamara Fleming, John O'Boyle

# Prior CAB-LA exposure

- Baseline genotypic resistance testing would need to include INSTI resistance testing in addition to NRTI/NNRTI and PI resistance testing
- If starting ART prior to return of genotypic resistance results, would need to avoid INSTI-based regimens
- Darunavir/cobicistat/TAF/FTC is a good option

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/what-start-initial-combination-regimens?view=full; https://www.hiv.uw.edu/page/treatment/drugs;

# Long-acting injectable ART

- Cabotegravir/rilpivirine (INSTI + NNRTI)
- Approved by FDA in January 2021
- Monthly or every 2 month intramuscular injection
- DHHS Guidelines recommend achieving viral suppression on another regimen first

# Case 4

- A 24 year old cisgender woman newly diagnosed with HIV comes to your clinic for her initial visit. She is currently sexually active with her cisgender male partner of two years. They use condoms sometimes. She doesn't desire pregnancy at this time.

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Her viral load is 120,000 copies/mL and CD4 is 350. She is HBsAg negative and HLA-B*5701 negative. Pregnancy test is negative. Genotype is pending

# What regimen options would you provide for her?

A. Bictegravir (BIC)/tenofovir alafenamide (TAF)/emtricitabine (FTC)
B. Dolutegravir (DTG)/abacavir (ABC)/lamivudine (3TC)
C. Dolutegravir (DTG) plus (tenofovir alafendamide (TAF) or tenofovir disoproxil fumarate [TDF] plus emtricitabine (FTC) or lamivudine (3TC)
D. Dolutegravir (DTG)/lamivudine (3TC)
E. Darunavir/cobicistat/TAF/FTC

# What regimen options would you provide for her?

A. Bictegravir (BIC)/tenofovir alafenamide (TAF)/emtricitabine (FTC)
B. **Dolutegravir (DTG)/abacavir (ABC)/lamivudine (3TC)**
C. **Dolutegravir (DTG) plus (tenofovir alafendamide (TAF) or tenofovir disoproxil fumarate [TDF] plus emtricitabine (FTC) or lamivudine (3TC)**
D. Dolutegravir (DTG)/lamivudine (3TC)
E. Darunavir/cobicistat/TAF/FTC

# Considerations in patients with childbearing potential

- Raltegravir plus TDF/FTC or TAF/FTC can also be used
- Bictegravir (BIC)/tenofovir alafenamide (TAF)/emtricitabine (FTC) is not recommended in pregnancy due to lack of data
- Cobicistat-boosted darunavir and elvitegravir are not recommended in pregnancy as levels may be insufficient in second and third trimesters
- Mutual decision making with patient regarding birth control methods and ART regimen

# ART and visit adherence

- Assess adherence to ART and visits on regular basis
- In patients with issues with adherence, take a nonjudgmental & collaborative approach. Motivational interviewing can be helpful.
- Elicit barriers to adherence & tailor approach to addressing them
- Multidisciplinary approach – provider, case manager or social worker, pharmacist, psychologist/psychiatrist, substance use disorder staff/providers

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/adherence-continuum-care

# Barriers to ART or visit adherence

Behavioral barriers: Alcohol and substance use disorders

Personal barriers: work schedule, family responsibilities; medical beliefs; forgetfulness

Psychological barriers: Stigma, trauma, depression, anxiety, other mental illness

Structural barriers: lack of transportation, homelessness, clinic hours, difficulty getting appointments or refills

System barriers: copays, prior authorizations

Cognitive barriers: lack of knowledge or information; cognitive impairment

Medication related barriers: side effects or concern about side effects, dosing schedule, size of pills

# Opportunistic infection prophylaxis

- CD4 <200 cells/mm$^3$ or CD4% <14% of total lymphocyte count
  - *Pneumocystis jirovecii* pneumonia prophylaxis
- CD4 count <100 cells/mm$^3$
  - Toxoplasma prophylaxis for IgG positive patients
- CD4 count <50 cells/mm$^3$
  - Primary prophylaxis for disseminated Mycobacterium avium complex is no longer recommended for patients who start ART immediately
  - If delay in ART, first rule out disseminated MAC before starting prophylaxis

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/whats-new

# Thank you!