



CLINICAL GUIDELINES PROGRAM

NEW YORK STATE DEPARTMENT OF HEALTH AIDS INSTITUTE | HIV · HCV · SUBSTANCE USE · LGBT HEALTH

Comprehensive Primary Care for Adults With HIV

February 2021

Table 3: Recommended Laboratory Testing for Adults With HIV				
*Frequency Key: I = initial (baseline) visit; A = annual visit; N = as needed				
Laboratory Test	Comments	Frequency*		
		I	A	N
HIV-1 RNA quantitative viral load	<ul style="list-style-type: none"> Regular monitoring is the most accurate and meaningful measure of effective ART. Check every 3 to 6 months during years 1 and 2, and every 4 to 6 months thereafter. Monitor every 1 to 3 months if adherence is unstable or patient has detectable viral load. <input checked="" type="checkbox"/> See the NYSDOH AI guideline <i>Virologic and Immunologic Monitoring</i> .	I	A	N
CD4 lymphocyte count	<ul style="list-style-type: none"> Check every 3 to 6 months if CD4 count <200 cells/mm³; not indicated if viral load is consistently undetectable (CD4 count >200 cells/mm³). Monitor every 3 months if diagnosis is recent (<2 years), viral load suppression is inconsistent, or CD4 count is close to or below 200 cells/mm³. <input checked="" type="checkbox"/> See the NYSDOH AI guideline: <i>Virologic and Immunologic Monitoring</i> .	I	A	N
HIV-1 resistance testing (genotypic)	<ul style="list-style-type: none"> Perform at treatment initiation. Perform if viral load is >500 copies/mL (archive genotype may be considered if VL below 500 copies/mL). Consult with an expert in HIV care in the event of treatment failure. 	I		N
G6PD	<ul style="list-style-type: none"> Screen for deficiency to avoid use of oxidant drugs, including dapsone, primaquine, sulfonamides. <input checked="" type="checkbox"/> Prevalence of G6PD deficiency is highest among people of African, Asian, or Mediterranean descent, but consider in all patients given diversity of backgrounds.	I		
Complete blood count	<ul style="list-style-type: none"> For patients not taking zidovudine, check at initiation of ART and repeat as clinically indicated. For patients taking zidovudine, check at initiation, and 4 weeks after initiation; follow every 3 months for the first year, then every 6 months. <input checked="" type="checkbox"/> Consider with any change in medication.	I	A	
Estimated glomerular filtration rate	<ul style="list-style-type: none"> For patients taking TDF, check at initiation, then repeat at 4 weeks, 3 months, 6 months, and 12 months for the first year, then every 6 months thereafter. For patients not taking TDF, check at initiation, 6 months during the first year, then annually thereafter. Check after initiation of medication with risk for renal disease (e.g., use of nonsteroidal anti-inflammatory agents, angiotensin-converting enzyme inhibitors). Check if patient has history of diabetes or other renal diseases. 	I	A	N

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Hepatic panel: <ul style="list-style-type: none"> • Aspartate aminotransferase • Alanine aminotransferase • Alkaline phosphatase • Total bilirubin 	<ul style="list-style-type: none"> • Check 3 months after initiation of ART, after initiating medication with risk for liver disease (e.g., statins, azoles), or if there is a history of viral hepatitis, and then at 12 months. • Check every year if patient is stable and without above risks. 	I	A	N
Random blood glucose (fasting or hemoglobin A1c if high)	<ul style="list-style-type: none"> • Check every 6 to 12 months if a patient has risk factors for diabetes (family history, obesity, use of protease inhibitors or INSTIs). • If abnormal, repeat random glucose as a fasting glucose or A1C. ☑ Results are used to diagnose diabetes. See <i>Standards of Medical Care in Diabetes—2019 Abridged for Primary Care Providers</i>. 	I	A	N
Tuberculosis screening	<ul style="list-style-type: none"> • Obtain IGRA TB test (such as T-SPOT or QuantiFERON-TB) or tuberculin skin test (commonly known as PPD) at baseline for diagnosis of latent TB infection, unless the patient has previously tested positive for or has documented TB. • Repeat annually for patients at risk (e.g., unstable housing, incarceration, travel or immigration). ☑ Consider preventive therapy for patients with ≥5 mm reaction to PPD. See: <i>CDC: Treatment of LTB1 and TB for Persons with HIV and Clinical Info HIV.gov > Mycobacterium tuberculosis</i>. 	I	A	
Hepatitis A <ul style="list-style-type: none"> • Anti-hepatitis A immunoglobulin 	<ul style="list-style-type: none"> • Repeat after vaccination to ensure immunity. ☑ See the NYSDOH AI guideline <i>HAV-HIV Coinfection > Prevention</i> for testing and vaccination recommendations. 	I		N
Hepatitis B <ul style="list-style-type: none"> • Surface antibody • Surface antigen • Core antibody 	<ul style="list-style-type: none"> • If HBsAg-positive or if HbCAb-positive but HBsAb-negative, perform HBV DNA viral load test. • Repeat HBsAb after vaccination to ensure immunity. ☑ See the NYSDOH AI guideline <i>HBV-HIV Coinfection > Baseline Evaluation and Screening</i> for testing and vaccination recommendations. 	I		N
Hepatitis C <ul style="list-style-type: none"> • HCV antibody • HCV RNA quantitative viral load 	<ul style="list-style-type: none"> • If patient was previously treated for HCV or is antibody-positive, perform HCV viral load test. • Check at entry to care; repeat as clinically indicated for patients with exposure risk. ☑ See the NYSDOH AI guideline <i>Treatment of Chronic HCV with Direct-Acting Antivirals > Diagnosis of HCV Infection</i>. 	I		N
Measles titer	<ul style="list-style-type: none"> • Vaccinate if patient is not immune and has a CD4 count >200 cells/mm³. 	I		
Varicella titer	<ul style="list-style-type: none"> • For patients with no evidence of immunity and CD4 count >200 cells/mm³, consider vaccination for chicken pox (Varivax; 2 doses, 3 months apart); engage patients in shared decision-making, taking into consideration the potential risks of a live vaccine. • Live vaccines are contraindicated for patients with CD4 counts <200 cells/mm³. • Above 50 years of age, regardless of varicella titer status or CD4 cell count, consider vaccination for Herpes zoster with recombinant zoster virus (RZV; SHINGRIX) two doses 2 to 6 months apart. 	I		

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Urinalysis	<ul style="list-style-type: none"> Evaluate for proteinuria. Check for symptoms of UTI or change in creatinine or other urinary symptoms (including glucosuria for patients on tenofovir). ☑ See the NYSDOH AI guideline <i>Antiretroviral Therapy > Laboratory Monitoring for Adverse Effects of ART</i>. 	I	A	N
Urine pregnancy test	<ul style="list-style-type: none"> Perform for all individuals of childbearing potential who are sexually active. Repeat at patient request. 	I		N
Lipid panel	<ul style="list-style-type: none"> Perform at least every 3 years if patient has increased risk for CVD. Consider annual screening if patient is taking protease inhibitors. For adults >75 years old, initiate discussion of possible benefits of age-appropriate preventive therapies in the context of comorbidities and life expectancy. ☑ HIV is considered a risk-enhancing factor for CVD; clinicians may opt to perform more frequent lipid testing in patients with cardiovascular comorbidities. 	I	+/-	N
Serum thyroid-stimulating hormone	<ul style="list-style-type: none"> Insufficient evidence exists for routine screening of nonpregnant adults. ☑ Adults with HIV have higher incidence of thyroid dysfunction than those without HIV. Discuss annual screening. See <i>USPSTF Thyroid Dysfunction: Screening</i>. 	I	+/-	
Gonorrhea and chlamydia	<ul style="list-style-type: none"> Perform baseline testing at oral, anal, urethral, and cervical sites for MSM and TGW and others as indicated by individual exposure. Repeat based on risk factors and sites of exposure. Repeat every 3 months for MSM and TGW. ☑ See <i>Update to the CDC's Treatment Guidelines for Gonococcal Infection, 2020</i>. 	I	A	N
Syphilis	<ul style="list-style-type: none"> Use same laboratory test consistently. Repeat at least annually Repeat every 3 months for patients with risk of exposure (e.g., MSM). ☑ See the NYSDOH AI guideline <i>Management of Syphilis in Patients with HIV</i>. 	I	A	N
Trichomonas	<ul style="list-style-type: none"> Perform screening test if the patient has a vagina and is sexually active. 	I	A	N
HLA-B*5701	<ul style="list-style-type: none"> Must be performed before initiation of abacavir, otherwise not routine. 			N
<p>Abbreviations: ART, antiretroviral therapy; CDC, Centers for Disease Control and Prevention; MSM, men who have sex with men; CVD, cardiovascular disease; FDA, U.S. Food and Drug Administration; G6PD, glucose-6-phosphate dehydrogenase; HBcAb, hepatitis B core antibody; HBsAb, hepatitis B surface antibody; HBsAg, hepatitis B surface antigen; HBV, hepatitis B virus; HCV, hepatitis C virus; IGRA, interferon gamma release assay; INSTI, integrase strand transfer inhibitor; PPD, purified protein derivative; TB, tuberculosis; TDF, tenofovir disoproxil fumarate; TGW, transgender women; USPSTF, United States Preventive Services Taskforce; UTI, urinary tract infection.</p>				