

Table 3. Laboratory Monitoring for Patients Prior to and After Initiation of Antiretroviral Therapy

Note: The following is a schedule for baseline and follow-up laboratory parameters to monitor prior to and after antiretroviral therapy initiation, for assessment of treatment response and detection of laboratory abnormalities. Some laboratory testing may require more frequent monitoring as clinically indicated.

| | Entry into care | Follow-up before ART | ART initiation or switch ¹ | 2-8 weeks post-ART initiation | Every 3 -6 months | Every 6 months | Every 12 months | Treatment Failure | Clinically indicated |
|------------------------------|-----------------|----------------------|---------------------------------------|--|---|---|-----------------------------------|---------------------------------------|----------------------|
| CD4 T-cell count | √ | Every 3-6 months | √ | | √ ² | | | √ | √ |
| HIV RNA | √ | Every 3-6 months | √ | √ | √ ² | | | √ | √ |
| Resistance testing | √ | | √ ³ | | | | | √ | √ |
| HLA-B*5701 testing | | | √ (if considering ABC) | | | | | | |
| Tropism testing | | | | | | | | √ (if considering CCR5 antagonist) | √ |
| Basic chemistry ⁴ | √ | Every 6-12 months | √ | √ | √ | | | | √ |
| ALT, AST, T. bili, D. bili, | √ | Every 6-12 months | √ | √ | √ | | | | √ |
| CBC w/ differential | √ | Every 3-6 months | √ | √ (if on ZDV) | √ | | | | √ |
| Fasting lipid profile | √ | If normal, annually | √ | √ (consider after starting new ART) | | √ (borderline or abnormal at last measurement) | √ (normal at last measurement) | | √ |
| Fasting glucose | √ | If normal, annually | √ | | √ (borderline or abnormal at last measurement) | √ (normal at last measurement) | | | √ |
| Urinalysis ⁵ | √ | | √ | | | √ (patients with HIVAN) | √ (if on TDF) | | √ |
| Pregnancy test | | | √ (if starting EFV) | | | | | | √ |

¹Antiretroviral switch may be for treatment failure, adverse effects, or simplification.

²For adherent patients with suppressed viral load and stable clinical and immunologic status for >2-3 years, some experts may extend the interval for CD4 count and HIV RNA monitoring to every 6 months

³For treatment-naïve patients, if resistance testing was performed at entry into care, repeat testing is optional; for patients with viral suppression who are switching therapy for toxicity or convenience, resistance testing will not be possible and therefore, is not necessary.

⁴Serum Na, K, HCO₃, Cl, BUN, creatinine, glucose (preferably fasting); some experts suggest monitoring phosphorus while on tenofovir; determination of renal function should include estimation of creatinine clearance using Cockcroft & Gault equation or estimation of glomerular filtration rate based on MDRD equation.

⁵For patients with renal disease, consult "Guidelines for the Management of Chronic Kidney Disease in HIV-Infected Patients: Recommendations of the HIV Medicine Association of the Infectious Diseases Society of America" (*Clin Infect Dis* 2005; 40: 1559-85).

Abbreviations: ART = antiretroviral therapy; HIVAN = HIV-associated nephropathy; ABC = abacavir; TDF = tenofovir.