Routine Laboratory Renal Function Screening:
- Estimated glomerular filtration rate (GFR): baseline and at least every 6 months
- Blood urea nitrogen: baseline and at least every 6 months
- Urinalysis: baseline and at least annually
- For patients with diabetes and no previous diagnosis of gross proteinuria: calculation of urine albumin-to-creatinine ratio to detect microalbuminuria: baseline and at least annually
- For patients receiving a tenofovir-containing regimen: estimated glomerular filtration rate: at initiation of therapy, 1 month after initiation of therapy, and at least every 4 months thereafter

Risk Factor Assessment:
- Hypertension
- Diabetes
- Family history
- Hepatitis C co-infection
- Increased HIV viral load
- Reduced CD4 counts
- Black race

With risk factors?
- Ongoing routine screening
- Follow clinically for signs or symptoms

Without risk factors?
- Ongoing routine screening

YES
Normal proteinuria and GFR?

NO

Quantify urinary protein excretion and initiate angiotensin-converting enzyme inhibitor or angiotensin receptor blocker for proteinuric patients according to standard guidelines
- Provide education about the increased urgency of initiating ART for patients with HIV-associated nephropathy
- Perform urinalysis to screen for cells and cellular casts
- Perform careful physical examination
- Perform renal sonogram
- Assess use of nephrotoxic agents
- Refer to a nephrologist when:
  - The diagnosis is uncertain
  - Kidney disease is progressing rapidly
  - Stage 4 to 5 chronic kidney disease is present
  - Kidney biopsy is being considered

a. The Infectious Disease Society of America indicates viral load levels of >4000 copies/mL and CD4 counts of <350 cells/mm³ as risk factors for kidney disease.
b. See Section VI. B. Management of Comorbidities.
c. See Antiretroviral Therapy: III. When to Initiate ART.

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