HIV Treatment Monitoring Algorithm

Before initiating HIV treatment, order HIVQN / HIV-1 RNA Detection and Quantification, Plasma to determine baseline viral load.

Consider for certain patients:

- HIVPR / HIV-1 Genotypic Protease Inhibitor and Reverse Transcriptase Inhibitor Drug Resistance, Plasma (requires minimum HIV-1 RNA level of 500 copies/mL)
- If considering addition of integrase inhibitor therapy, also order HIVI / HIV-1 Genotypic Integrase Inhibitor Drug Resistance, Plasma (requires minimum HIV-1 RNA levels of 500 copies/mL) with or without HIVI

Patient on treatment-monitor every 3 months.

Select 1 of the 2 following options:

- HIVQN / HIV-1 RNA Detection and Quantification, Plasma (This is Mayo Medical Laboratories' standard treatment monitoring assay)
- HIVPR / HIV-1 Genotypic Protease Inhibitor and Reverse Transcriptase Inhibitor Drug Resistance, Plasma (requires minimum HIV-1 RNA level of 500 copies/mL)
- If considering addition of integrase inhibitor therapy, also order HIVI / HIV-1 Genotypic Integrase Inhibitor Drug Resistance, Plasma (requires minimum HIV-1 RNA levels of 500 copies/mL) with or without HIVI

If patient is not responding to treatment (i.e., viral load is not dropping as expected):

Alter treatment as necessary and monitor viral load every 3 months.

Very treatment-experienced patient:

Consider phenotypic drug resistance tests:
- FPHIV / Phenosense HIV Drug Resistance Replication Capacity (for HIV-1 RNA level ≥500 copies/mL)
- FPFUZ / Phenosense Entry HIV Drug Resistance Assay (for HIV-1 RNA level ≥500 copies/mL)
- FFTRP / Trolle Co-Receptor Tropism Assay (for HIV-1 RNA level ≥1,000 copies/mL)
- FFTRO / Trolle DNA Co-Receptor Tropism Assay (for HIV-1 RNA level <1,000 copies/mL)

Relatively treatment-naive patient:

If HIV-1 RNA ≥500 copies/mL:

Order HIVPR and HIVI to guide selection of drug combinations.

If multiple resistance mutations are detected without obvious drug options:

*For newly infected patients (infected within last 12 months) and pregnant women