

Changes to the HIV Lab Testing Algorithm

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Reference Sheet

| <u>Test Type</u> | <u>Analytes Detected</u> | <u>Method Name</u> | <u>Method Category</u> | <u>Example Automated Platform</u> | <u>Example Assay</u> |
|------------------|--------------------------|--|--|--|-------------------------|
| 2nd generation | IgG | Enzyme-linked immunosorbent assay (ELISA) | Immunoassay | BioMerieux Vironostika HIV- 1 Microelisa | BioMerieux HIV-1 Plus O |
| 3rd generation | IgG, IgM | Enzyme immunoassay (EIA) | Immunoassay | Bio-Rad EVOLIS | HIV-1/HIV-2 PLUS O EIA |
| 4th generation | IgG, IgM, p24 | Chemiluminescent microparticle immunoassay (CMIA) | Immunoassay | Abbott Architect | Abbott HIV Combo Ag/Ab |
| Viral load | RNA | Reverse-transcription polymerase chain reaction (RT-PCR) | Nucleic acid amplification test (NAAT) | Abbott m2000 | Abbott HIV-1 realTime |

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| Antibody | Antibodies are proteins that are produced by the human body in reponse to infection with HIV. |
| Antigen | Antigens are proteins that make up the physical structure of HIV. They are the target of human antibodies. |
| RNA | Ribonucleic acid is similar to human DNA and encodes the genetic information stored in HIV. It is produced during HIV infection. |
| IgG | Immunoglobulin G is the second set of antibodies produced in response to HIV infection |
| IgM | Immunoglobulin M is the first set of antibodies produced in response to HIV infection |
| p24 | p24 is a protein piece of the HIV capsid. It is produced during HIV infection and is targeted by human antibodies. |

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