FALSE-POSITIVE OR INDETERMINATE HIV TESTING DURING PREGNANCY

The U.S. Public Health Service recommends that all women receive routine counseling and voluntary testing for HIV during pregnancy. False-positive and indeterminate HIV test results can be seen in this setting. Some frequently asked questions follow.

What are the current tests for HIV during pregnancy?
- The ELISA test screens for antibody to HIV virus.
- The Western blot test, sent when the ELISA test is positive, confirms that a combination of HIV-specific viral proteins are present. All labs automatically perform Western blots on serum positive by HIV ELISA.
- Quantitative RNA PCR tests (or branched chain DNA tests (bDNA)) are commonly used to follow viral load in adult HIV infection. They measure RNA in the plasma. A high viral load titer (>10,000 copies/ml) makes it more likely that a PCR test is a true positive. **PCR tests are not indicated as screening tests because false-positives occur.**
- P24 antigen is another HIV protein that can be detected in blood.

What is an indeterminate HIV test?
An indeterminate HIV test refers to an ambiguous Western blot test performed in the setting of a positive ELISA. Western blots must demonstrate at least 2 major HIV protein bands. An indeterminate HIV test may be a false-positive or may be seen in someone seroconverting to HIV-positive in the 6 month window period following infection.

Why would someone have a false-positive HIV test?
- As with other serologic tests, some individuals can have antibodies which cross-react with HIV or other blood tests. Transfusions, pregnancy, autoimmune disorders, malignancies, and other medical conditions have been associated with false-positive antibody tests.

What do I do about these results?
- Algorithms to help clinicians manage patients with non-diagnostic HIV testing during pregnancy have been developed. (See Doran TI, Parra E. Arch Fam Med 2000;9(Sept/Oct):924-929.) Additional tests for HIV (e.g. HIV RNA testing) and repeat HIV antibody testing later in pregnancy and after delivery may be indicated.

What other parts of the clinical history will influence what I do about this test?
- The presence of known risk factors for HIV infection will increase the pretest probability that an HIV test result is a true positive and will merit a more aggressive testing strategy.
- Partner testing, if a couple has been monogamous, can sometimes give rapid additional information about a pregnant woman’s risk for HIV infection.
- Clinical illness during pregnancy that might represent an HIV seroconversion illness will sway clinicians to pursue more aggressive diagnostic strategies.
- Since the majority of HIV perinatal transmission is believed to take place during labor and delivery, decision making priority should be given to women with ambiguous HIV tests during their third trimester.

What should I tell my patient about her HIV test results?
- Women with ambiguous HIV tests during pregnancy should be told they do not have HIV infection. They should be counseled about the need for further testing and offered the opportunity to discuss the testing with HIV specialists.