



CPAL

Central Pennsylvania Alliance Laboratory

Technical Bulletin

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Introduction of Prenatal Quadruple Marker Testing

Starting Date:

April 1, 2005

Ordering Mnemonic must include:

MSAFP, .TRIP1, .DEMOG, .QUAD6

Contact:

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Explanation:

On April 1, 2005, CPAL will offer the Quadruple Marker for prenatal testing for Down Syndrome. The quadruple marker group (AFP, hCG, uE3, and inhibin-A) differs from the currently used triple marker group by the addition of a test for inhibin-A. The quadruple marker is an improvement over the triple marker insofar as it improves the prenatal detection of fetuses with Down Syndrome. The expected detection rate for Down Syndrome increases from around 67% (using the triple marker) to around 77% when ultrasound dating is used. The false positive rate remains around 5%.

The AFP component of the quadruple marker test is used in calculating prenatal risk for neural tube defects (NTD) just as it was in the triple marker test. The addition of inhibin-A testing does not make any changes to the NTD calculations.

The triple marker will continue to be offered. However, if a triple marker test is mistakenly ordered and followed by an order for the quadruple marker test, there will be a charge issued for both tests. Because of the complexity of the risk calculations involved in both the triple and quadruple marker tests, the tests are not even marginally interchangeable. Make certain that the appropriate test has been ordered to avoid delay of testing results and added expense.

Benn, PA, Fang, M, Egan, JFX, Horne, D and Collins, R. Incorporation of Inhibin-A Second-Trimester Screening for Down Syndrome. *Obstetrics and Gynecology*; 101:3; pp451-454. 2003

Knight, GJ, Palomaki, LM, Haddow, JE, Lambert-Messerlian. Clinical Validation Of A New Dimeric Inhibin-A Assay Suitable For Second Trimester Down's Syndrome Screening. *J Med Screen*; 8, pp2-7. 2001.

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For questions about this and other information, call Central Pennsylvania Alliance Laboratory at 1-888-480-1422.