LAMELLAR BODY COUNT

Beginning January 9, 2012, the Pathology Center will convert fetal lung maturity testing from fluorescence polarization to lamellar body counts (LBC). Lamellar body count is a laboratory developed quantitative test that may be used to estimate fetal lung maturity. Lamellar bodies are layered spherules of surfactant formed by Type II pneumocytes around the 24th week of gestation that are present in the amniotic fluid. Due to their size, lamellar bodies within amniotic fluid can be counted in the platelet channel of hematology cell analyzers. Lamellar body counts will be performed on the Sysmex XE2100 analyzer at Methodist Women’s Hospital and the Sysmex XE2100 and Sysmex XE 5000 analyzers at Methodist Hospital.

NOTE: The laboratory will be reporting both FLM and LBC at no extra charge to the patient, for the first month of the conversion, to assist clinician adaptation to the different methodologies and values.

ORDERING INFORMATION:

Test Name: Lamellar Body Count

Specimen type: Amniotic fluid

Specimen requirements/stability: 1-2 ml amniotic fluid preferably collected via trans-abdominal amniocentesis. Specimens are stable for one week at ambient or refrigerated temperatures. (Specimens CANNOT be frozen).

Vaginally pooled specimens containing obvious mucous, specimens that are grossly bloody or that contain meconium should not be tested.

Days of testing: 24/7 by physician request only

Methodology: The Sysmex analyzer uses both conventional (direct current) impedance and radio frequency impedance to measure lamellar bodies.

Expected values:
- Immature — 0 to 14 (10 X 3/uL) lamellar bodies
- Transitional — 15 to 49 (10 X 3/uL) lamellar bodies
- Mature — 50 to 999 (10 X 3/uL) lamellar bodies

NOTE: Recommendations outlined in the ACOG Practice Bulletin No. 97: fetal lung maturity, 2008 should be considered in the evaluation of fetal lung maturity in the case of multiple birth pregnancies.

REFERENCES: