Effective March 9, 2009, Laboratory Alliance of Central New York will begin performing in-house testing for the qualitative detection of lupus anticoagulants (LA) in plasma using the Staclot® LA 20 hexagonal phase phospholipid neutralization assay.

**Clinical Significance:**

Lupus anticoagulants (LA) are a heterogeneous group of antibodies directed against phospholipid/protein complexes. Despite the confusing terminology, most patients who test positive for LA do not have systemic lupus erythematosus. In addition, isolated LA is not a risk factor for bleeding. Lupus anticoagulants have been associated with a variety of clinical conditions, including (but not limited to) recurrent spontaneous abortion, thrombosis and infection. Their presence may be either persistent or transitory, depending upon the etiology. Persistent detection of LA in human plasma is the single laboratory criterion conferring the highest risk for arterial and venous thrombosis. Diagnosis is often difficult because of variable reagent sensitivity and the intrinsic heterogeneity of LA. Therefore, the use of multiple different assays is recommended when the clinical suspicion for LA is high.

Lupus anticoagulants have the ability to prolong the clotting times of phospholipid-dependent assays. The Staclot® LA 20 is a two-part aPTT-based assay performed with and without the phospholipid source, hexagonal phase phosphatidyl-ethanolamine (HPE), using a LA-sensitive reagent. HPE neutralizes LA present in the patient plasma, resulting in a shortened clotting time versus the same patient plasma without added HPE. A positive result also confirms the phospholipid-dependent nature of the detected antibody. The aPTT reagent contains a heparin inhibitor, making the test system insensitive to heparin levels up to 1.0 U/mL. However, direct thrombin inhibitors (hirudin, argatroban, etc) may interfere and lead to false-positive results. Normal pooled plasma is also added during the procedure to correct for any factor deficiencies that may be present in the patient sample. Failure of the aPTT to shorten with addition of HPE should prompt a search for factor-specific inhibitors or anticoagulant contamination. A graphic representation of the assay follows:
Test Code: DTHEX

Method: Clot Detection

Specimen Requirements: One adequately filled sodium citrate tube (light blue cap). Draw blood into citrate tube filled to the proper level (1 part anticoagulant to 9 parts blood).

Unacceptable Conditions: Specimens that are clotted, hemolyzed, collected in the wrong tube, less than 90% filled, or non-frozen plasma are unacceptable for testing.

Stability: Ambient: 4 hours; Frozen Plasma: 2 weeks

Storage and Transport: Specimens that cannot be shipped to the laboratory to arrive within 4 hours of collection must have platelet-poor plasma prepared.

Schedule of Testing: Thursday

CPT Code: 85597

Billing Code: 4010488

For More Information:
For questions or concerns regarding this testing, please contact Ms. Anne Chamberlain, Hematology Manager, at 410-7048.