

The NASCOLA/ECAT Lupus Anticoagulant (LA) and Antiphospholipid Antibody (aPL) Testing Practices Questionnaire

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In 1995 an ISTH SSC communication offered nine recommendations for LA testing of which four became criteria stating that a sample should show each of the following: 1) prolongation of at least one phospholipid-dependent clotting test, 2) evidence of inhibitory activity shown by the effect of patient plasma on pooled normal plasma, 3) evidence that the inhibitory activity is dependent on phospholipid, and 4) LAs must be carefully distinguished from other coagulopathies that may give similar laboratory results or may occur concurrently with LAs. Questions about patterns of practice led us to survey members of NASCOLA and ECAT to determine which LA and aPL tests were commonly used and if ISTH recommendations and criteria were followed.

Method: A detailed, 12-page questionnaire on LA testing was developed and distributed to 198 NASCOLA and ECAT laboratories in 2005. Information from returned questionnaires was entered into a database, anonymous to site. Requested LA test algorithms were also reviewed.

Results: 96% (n=46/48) of NASCOLA and 45% (67/150) of ECAT laboratories participated. LA test algorithms were provided by 90% of sites. LA tests most commonly performed to meet criterion 1 included: activated partial thromboplastin time (APTT) (97%) and dilute Russell Viper Venom Test (dRVVT) (88%). Adherence to criterion 2 was superior for those sites that performed APTTs (97% confirmed inhibitor activity by APTT mixing studies) whereas only 59% of sites that performed dRVVT tests performed dRVVT mixing studies. For mixing studies, 8% of sites failed to use pooled normal plasma. Compliance was high for criterion 3, 94% of sites performed at least one confirmatory test: dRVVT confirm (97%), hexagonal phospholipid test (40%), and/or platelet neutralization procedure (31%). Lowest compliance was seen with criterion 4, only 7% of sites included factor assays to help exclude other coagulopathies.

Conclusion: Most NASCOLA and ECAT laboratories show relatively high compliance to 3 of 4 ISTH criteria, though some concerns linger regarding mixing studies. Further vigilance by laboratories is required to differentiate LA from other coagulopathies.