

Lyme diagnostic service provision in the NHS

Some NHS laboratories perform a screening enzyme immunoassay for Lyme disease on site. Only samples which screen positive are sent for reference laboratory confirmation. This approach has been the subject of criticism from patients and advocacy groups who fear the different commercial screening assays are not equal in performance and that there is insufficient external quality assurance. There is no NEQAS service for Lyme serology at present, although there are commercial options available from other countries.

Survey

We sampled 95% of acute hospital trusts in England. 46 (32%) offered initial screening for Lyme disease with an ELISA test in house.

Of the laboratories performing screening, 83% use VIDAS® Lyme as an initial screening test whilst 11% use a LIASON® Borrelia assay (Figure 1). According to the two-tier algorithm a positive result requires confirmatory testing whilst a negative EIA is regarded as a final negative result. 98% of laboratories performing screening send their positive samples to HPA Rare & Imported Pathogens Laboratory for confirmatory testing. A small number use the Scottish reference laboratory in Carlisle, and one Trust provides a complete two-tier serology service to five nearby Trusts with no regular use of reference laboratories.

98 (68%) laboratories in England do not offer screening tests for Lyme disease on site. Of these, the majority (85%) send their samples directly to RIPL. 13 laboratories send their samples to other nearby NHS laboratories for initial screening and they are then sent on to RIPL.

Two laboratories send samples to private laboratories for testing, including one which uses a commercial laboratory service in the USA.

Conclusions

RIPL still provides the majority of Lyme serological testing in England. However the number of laboratories performing local screening may warrant an England or UK EQA scheme for Lyme screening serology. The results of this survey will be passed to UK NEQAS for consideration. The VIDAS assay is the most widely used, and is included in RIPL's on-going evaluation of serological assays, results of which will be published.

Figure 1: Screening EIAs for Lyme disease used by NHS laboratories

