



To: Penn Medicine Physicians and Staff

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From: Malek Kamoun, MD, PhD
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Re: CSF Immunoblot EIA-IMUGEN Labs test code

To evaluate patients for CNS infections with *B. burgdorferi*, the bacterium that causes Lyme disease, a test that compares antibodies in the CSF to serum is optimal. For this reason, Penn Medicine Pathology and Laboratory Medicine test code **CSF Immunoblot EIA-IMUGEN Labs (86618B)** has been discontinued, because it does not provide a validated ratio (or index) of antibody levels in the serum and CSF. If CNS infection is suspected, providers should order the new test code **Lyme CSF WITH ANTIBODY INDEX TO SERUM**.

This test requires the parallel collection of CSF and serum from the patient. The blood sample must be collected within 24 hours of the CSF collection for antibody index calculations (i.e., the ratio of antibodies produced in the CSF to the serum to evaluate intrathecal antibody synthesis). The serum will be tested first for the presence of Lyme antibodies at HUP using the Lyme antibody screen with reflex to confirmatory. If the serum test at HUP is negative, indeterminate or serum has not been received, the LYME CSF AI test will be cancelled, but CSF will be banked for 1 month in case further testing is requested. If the test is positive, then an aliquot of the same serum sample along with the CSF will be sent to Quest Laboratories for parallel evaluation of blood and CSF Lyme antibodies to compute an antibody index (test code 34194).

Interpretive information for the assay index values (IV) will be as follows:

≤1.0 IV	Negative- no enrichment of antibodies in the CSF
1.1-1.2 IV	Equivocal
≥1.3 IV	Positive- enrichment of antibodies in the CSF

The order codes for the serum screening assay and tube type will not change. Positive results will automatically reflex the confirmatory tests. The CSF tube type will also not change.

For clinical questions related to this change, please contact the Immunology Resident at 215-980-9871. For operational questions related to this change, please contact Joyce Gonzalez at Joyce.Gonzalez@pennmedicine.upenn.edu or 215-662-6023.