

To: Penn Medicine Physicians and Staff
Date: March 22, 2021

From: Malek Kamoun, MD, PhD, Director, Clinical Immunology Laboratory
Joyce Gonzalez BS, M(ASCP)

Re: New Lyme TOTAL PLUS IgG/IgM antibody assay

Beginning on March 24, 2021, Penn Medicine Pathology and Laboratory Medicine will change the *Borrelia burgdorferi* (Lyme) IgG/IgM antibody assay to the Lyme Total Antibody Plus IgG/IgM assay. The assay will continue to be performed on the DiaSorin Liaison XL Chemiluminescent analyzer. Validation studies showed excellent correlation between the two assays.

In addition to using *Borrelia* VlsE, variable major protein-like sequence antigens (*B. burgdorferi* and *B. garinii*) the new assay also contains *Borrelia* OspC, the outer surface protein (*B. afzelii*). These outer surface proteins are thought to play major roles in the immune response with OspC serving as the immunodominant antigen of the IgM response during early stage infection and VlsE producing strong antibody response at all stages of disease, including the early stage.

The reference range is negative and interpretive information will remain the same.

All indeterminate and positive samples will still be sent out to a reference laboratory for confirmatory Enzyme immunoassay (IgG/IgM) and IgG Western Blot.

The order codes and tube type (SST) will 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.