Because of the need to reduce labor costs, many laboratories are replacing the traditional syphilis testing algorithm—screening with a manual nontreponemal test, followed by an anti-
Treponema pallidum antibody test—with a “reverse” algorithm that uses an automated immunosassay to screen for anti-T. pallidum IgG antibodies. A rapid plasma reagin (RPR) titer determination is then performed on IgG-reactive specimens to (i) verify syphilis by an alternative method and (ii) obtain a titer for patient management. In addition, some laboratories also perform a traditional treponemal assay (fluorescent trepo-

definite value in low-prevalence populations (2). Yen-Lieber-
man et al. recently reported that the strength of signal (anti-
body index [AI]) of the Bioplex 2200 syphilis IgG multiplex flow immunosassay (Bio-Rad Laboratories, Hercules, CA) could be used to identify likely false-positive results and thereby reduce the need for confirmatory testing (5). They demonstrated that specimens with Bioplex AIs of $\geq 6.0$ were always positive when tested with a supplemental enzyme immu-

In conclusion, we demonstrate for the first time the utility of the Bioplex 2200 syphilis IgG assay in different patient populations and the usefulness of a cutoff value to identify specimens that may not require an additional treponemal assay for confirmation. An AI cutoff of 8 was necessary to achieve maximum specificity in our incarcerated and OB/Gyn cohorts. RPR titers of $\geq 2$ are sufficient to suggest that a reactive Bio-
plex IgG result in both low- and high-risk cohorts represents an accurate determination of exposure to *T. pallidum*. Finally, laboratories that choose to use the AI value as part of their syphilis IgG test must independently verify the performance characteristics of this modification to the manufacturer’s recommended procedure. This is also important because, as we have shown, the optimal AI cutoff may vary depending on the patient population.

(Tabular data here)

**REFERENCES**


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