Reply to Binnicker et al.

To the Editor—We thank Binnicker et al for their comments regarding our article [1] and questioning the terminology used to refer to nontreponemal testing conducted after a reactive anti-treponemal antibody screening assay for *Treponema pallidum* infection. Although the term “confirmatory” can apply to any test that establishes the accuracy or correctness of another method, conventional wisdom would dictate that a confirmatory assay have a higher specificity than the screening method. The strategy of clinical diagnostic algorithms is to conduct a highly sensitive screening test that can detect all true-positives and only a few false-positives, followed by a more specific confirmatory test that identifies all true-negatives and resolves false-positive results.

Although we used the word “confirmation” to refer to nontreponemal tests in the new testing algorithms, similar to recognized experts in the field [2], we agree with Binnicker et al that this term is inconsistent with what we know about the basis of these assays and could further contribute to misunderstanding in clinical practice. For this purpose, we carefully described the foundation of the traditional serologic tests by which we diagnose syphilis in our article [1] to educate clinicians regarding their limitations and test performance relative to the newer diagnostic methods. Nontreponemal tests, including the rapid plasma reagin, the Venereal Disease Research Laboratory, and the toluene red unheated serum tests clearly lack specificity for *T. pallidum* infection and are likely to be associated with more false-positives than the newer treponemal screening assays. Therefore, in principle, nontreponemal tests should not be considered as confirmatory tests in the diagnosis of syphilis.

However, clinicians should not underestimate the value of the qualitative nontreponemal test in the decision tree for determining the management of a positive treponemal screening result. Although not confirmatory, a rapid plasma reagin, Venereal Disease Research Laboratory, or toluene red unheated serum titer can significantly contribute to the analytical process by which a clinician must weigh the patient history along with serological test results in estimating the stage of syphilis infection. Despite slight variation among quantitative rapid plasma reagin titers between laboratories [3], these titers are known to correlate well overall with disease activity [4]. Different therapeutic regimens and management considerations depend on the stage of syphilis; thus, nontreponemal tests are crucial to estimating the stage of infection along with the clinical history and the physical examination.

Binnicker et al suggested that the term “supplementary” be applied to nontreponemal testing in the new syphilis testing algorithms; however, these serologies can also be considered as part of a reflex testing approach, whereby laboratories conducting treponemal screening tests automatically perform qualitative nontreponemal test titers following a positive result. Therefore, although the debate may continue regarding how to refer to nontreponemal tests in the new algorithms, the clinician should remember that a 2-step testing process is generally recommended for diagnosis of *T. pallidum* infections, regardless of which type of test is used for screening.

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References

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