

6. Interpretation of NAAT results

Interpretation of NAAT results should integrate clinical and radiologic data as well as AFB smear and culture results before making decisions on TB diagnosis, treatment, and isolation (see **Table 1** and **Table 2** for specific guidance).

NAATs have a reported specificity of 98–99%; therefore, patients with at least one positive NAAT should be considered to have a presumptive diagnosis of TB disease. Clinical judgment should be used with patients who have a prior history of active TB because false-positive results have been reported, even when anti-TB treatment was completed years earlier.

For AFB smear-positive, culture-positive respiratory specimens, TB NAATs have a reported sensitivity of 97–99%. However, preliminary review of data from LAC indicates the sensitivity of NAATs for AFB smear-positive, culture-positive respiratory specimens may be as low as 72% (range from 72-96%). NAAT performance characteristics may vary among laboratory-developed tests, when there is a prolonged delay between specimen collection and specimen testing (e.g., “add-on” tests), or in the setting of anti-TB treatment. Therefore, although a negative NAAT on an AFB smear-positive specimen makes TB less likely, a second NAAT on another AFB smear-positive specimen should be performed. At this time, decisions regarding isolation and disposition should be made in consultation with the LAC TB Control Program, taking into account all clinical, radiologic, and laboratory data, **and not on NAAT results alone**. We will continue to monitor NAAT performance in LA County and will update guidelines when data consistently indicate improved test sensitivity.

For AFB smear-negative, culture-positive respiratory specimens, NAATs have a reported sensitivity of 60–74% [12]. While this represents a marked improvement in diagnostic yield when compared to AFB smear microscopy, a substantial number of patients with smear-negative, culture-positive TB will also have negative NAATs. Therefore, it is essential for providers to retain a clinical suspicion for TB and to consider empiric anti-TB treatment even if the NAAT results are negative based on clinical, radiologic, and laboratory data, and in consultation with the LAC TB Control Program.