| First Author, Year | Country  (TB Burdena) | | %  Male | Mean Age  in Years (SD) | %  HIV | % BCG | Other Study Population Comments | T-SPOT.*TB*  Sensitivity  (95% CI, Interval) (N) | QFT-G  Sensitivity (95% CI, Interval) (N) | QFT-GIT  Sensitivity (95% CI, Interval) (N) | Quality Rating |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Adetifa, 200758 | Gambia (H) | | 63.8 | 31.2  IQR: 23 to 36 | 8.8 | 23.8 | Data extracted for subjects with smear and culture confirmation. No information available on timing of testing with respect to treatment. |  |  | 0.64  (0.53 to 0.74)  (75) | Fair |
| Ak, 200970 | Turkey (I) | | 47.7b | 34.4b (17.9) | 0 | 100.0 | Data extracted for subjects with culture confirmation. Testing completed before treatment started for 90% of participants, and within 7 days of starting treatment for the remainder. |  | 0.78  (0.62 to 0.88)  (36) |  | Good |
| Bocchino, 201074 | Italy (L) | | 60.0 | 39.2 (14.3) | 0 | 43.3 | Data extracted for subjects tested at baseline with culture confirmation or positive AFB smear. Study excluded subjects receiving previous TB treatment. |  |  | 0.88  (0.78 to 0.94)  (60) | Fair |
| Boyd, 201179 | United Kingdom (I) | | 57.0b | NR | 7.0b | NR | Data extracted for subjects with positive AFB sputum, culture, or molecular confirmation. No information available on timing of testing with respect to treatment. | 0.76  (0.59 to 0.87)  (33) |  |  | Good |
| Chee, 200864 | Singapore (I) | | 74.1 | Median: 48.6  Range: 17 to 77 | 0 | NR | Data extracted for HIV-negative subjects with culture confirmation. Study population recruited up to 14 days after starting treatment but 79% tested within 7 days of receiving treatment. | 0.94  (0.90 to 0.96)  (263) |  | 0.79  (0.74 to 0.83)  (283) | Good |
| Cho, 201180 | South Korea (I) | | 41.1b | 48.3b (16.1) | 0 | NR | Data extracted for immunocompetent subjects with culture or PCR confirmation. No information available on timing of testing with respect to treatment. | 0.88  (0.80 to 0.92)  (120) |  |  | Good |
| Dewan, 200759 | United States (L) | | NR | Rangeb: 0 to 76 | 9.0b | NR | Data extracted for group including three HIV-positive subjects. |  | 0.62  (0.46 to 0.76)  (37) |  | Fair |
| Dilektasli, 201075 | Turkey (I) | | 36.7b | 13.4b (NR) | NR | 84.0 | Data extracted for subjects with culture confirmation who had received treatment for less than 4 weeks. | 0.74  (0.57 to 0.86)  (31) |  |  | Fair |
| Erdem, 201499 | Multiple (L and I) | | 52.6 | 39.7 (18.4) | NR | NR | Patient population culture confirmed tuberculous meningitis. Timing of test with respect to treatment not reported. |  |  | 0.90  (0.77 to 0.96)  (41) | Fair |
| Feng, 201391 | Taiwan (I) | | 67.5 | 63.6 (19.7) | 0 | 47.6 | Data extracted for subjects with pathology or culture confirmation. Timing of testing with respect to treatment unclear. |  |  | 0.88  (0.81 to 0.92)  (130) | Fair |
| Goletti, 200656 | Italy(L) | | 65.2 | 33 (SE ± 2) | 0 | 78.3 | Study subjects had positive AFB smear or culture confirmation. Testing completed before treatment initiation. | 0.91  (0.73 to 0.98)  (23) | 0.83  (0.63 to 0.93)  (23) |  | Fair |
| Harada, 200865 | Japan (I) | | 73.0 | 53.3 (NR) | 1.0 | 37.0 | Study subjects had positive culture or positive nucleic acid amplification. All subjects received less than 7 days of treatment prior to testing. |  | 0.79  (0.70 to 0.86)  (100) | 0.87  (0.79 to 0.92)  (100) | Good |
| Higuchi, 200971 | Japan (I) | | 78.7 | 52.7  Range: 17 to 91 | NR | 100.0 | Study subjects had culture, PCR, or positive smear confirmation before treatment or within 1 week after the start of treatment. | 0.96  (0.86 to 0.99)  (49) | 0.87  (0.75 to 0.94)  (47) |  | Fair |
| Janssens, 200760 | Switzerland (L) | | 51.7 | 37 (17) | 0 | NR | Study subjects had smear or culture confirmation. Foreign-born represented 86% of the study group. Testing completed within 2 weeks of initiating treatment. | 0.98  (0.91 to 1.00)  (58) |  |  | Fair |
| Jeon, 201392 | South Korea (I) | | 60.7 | 54.8 (20.1) | 0 | NR | Data extracted for subjects with PCR or culture confirmation. In this group, 13.7% were non-HIV immunosuppressed due to medications or advanced cancer. Subjects taking TB medication prior to exam were excluded. |  |  | 0.65  (0.57 to 0.72)  (168) | Fair |
| Kang, 200555 | South Korea (I) | | 59.0 | Median: 43  Range: 17 to 84 | 0 | 56.0 | Study subjects had pathologic or culture confirmation. Demographic data excludes indeterminates. No information available on timing of testing with respect to treatment. |  | 0.76  (0.63 to 0.85)  (58) |  | Fair |
| Kim, 201181 | South Korea (I) | | 54.4 | Median: 49  Range: 16 to 94 | 0 | NR | Data extracted for subjects with culture confirmation. QFT testing completed before treatment initiation. |  |  | 0.86  (0.82 to 0.89)  (362) | Good (QFT-G)  Poor (TST) |
| Kim, 201393 | South Korea (I) | | 56.5 | Median: 48  Range: 28 to 86 | NR | 67.4 | Data extracted for subjects with positive sputum culture or molecular confirmation, though 2 subjects had clinical confirmation. No information available on the timing of testing with respect to treatment. |  |  | 0.89  (0.77 to 0.95)  (46) | Fair |
| Kim, 2014100 | South Korea (I) | | 39.0 | 64.0 (19) | 5.0 | NR | Study population limited to those with military TB. Timing of testing with respect to treatment not specifically reported, but testing was done within 5 days of hospital presentation, so likely no treatment for longer than 7 days prior to testing. |  |  | 0.68  (0.53 to 0.80)  (44) | Good |
| Kobashi, 200866 | Japan (I) | | 64.3 | 62.8 (10.8) | 0 | NR | Study subjects had microbiologic confirmation. No information on timing of testing with respect to treatment available, although study excluded 10 patients due to previous TB treatment. |  | 0.81  (0.68 to 0.90)  (48) |  | Fair |
| Kobashi, 200868 | Japan (I) | | 77.0 | NR | 0 | 60.8 | Study subjects had culture-confirmed pulmonary or extrapulmonary TB. No information available on the timing of testing with respect to treatment. |  | 0.81  (0.68 to 0.90)  (48) |  | Fair |
| Kobashi, 200867 | Japan (I) | | 75.0 | 59.6 (10.6) | 0 | 58.0 | Data extracted for subjects with culture confirmation. Testing completed prior to treatment initiation. | 0.88  (0.75 to 0.94)  (48) | 0.85  (0.77 to 0.90)  (130) |  | Good |
| Kobashi, 200972 | Japan (I) | | 60.0 | 57.7 (10.2) | 1.0 | 60.1 | Data extracted for subjects with culture confirmation. No information available on the timing of testing with respect to treatment. |  | 0.81  (0.68 to 0.90)  (48) |  | Fair |
| Kobashi, 201288 | Japan (I) | | 77.2 | 65.2 (10) | 0 | NR | Study subjects had culture-confirmed pulmonary or extrapulmonary TB. 9% of subjects received previous anti-TB treatment and 14% of subjects received immunosuppressive treatment. No information available on the timing of testing with respect to treatment. | 0.95  (0.78 to 0.99)  (22) | 0.82  (0.61 to 0.93)  (22) | 0.86  (0.67 to 0.95)  (22) | Fair |
| Lai, 201183 | Taiwan (I) | | 71.0b | 57.5b (18.5) | 8.0b | NR | Data extracted for subjects with culture confirmation. No information available on timing of testing with respect to treatment. | 0.90  (0.60 to 0.98)  (10) |  | 0.65  (0.55 to 0.74)  (98) | Fair |
| Lai, 201182 | | Taiwan (I) | 51.1b | 55.2b (16.4) | 6.7b | NR | Data extracted for subjects with M.Tb culture confirmation. No information available on timing of testing with respect to treatment. | 0.88  (0.80 to 0.93)  (98) |  |  | Fair |
| Lee, 201289 | | South Korea (I) | 62.0 | 61 (19.4) | 0 | NR | Study subjects had positive nucleic acid amplification PCR or culture confirmation from sputum or pleural fluid. No information available on timing of testing with respect to treatment. |  |  | 0.78  (0.67 to 0.87)  (65) | Good |
| Legesse, 201076 | | Ethiopia (H) | 54.3b | 34.2b (NR) | 0 | 20.0b | Data extracted for subjects with culture confirmation or positive AFB smear. Study excluded patients on TB treatment. |  |  | 0.65  (0.47 to 0.79)  (31) | Fair |
| Losi, 200761 | | Netherlands, Germany, and Italy (L) | 40.0 | 42.3 (17.4) | NR | NR | Data extracted for subjects with microbiological or PCR confirmation. No information available on timing of test with respect to treatment. | 1.00  (0.72 to 1.00)  (10) |  |  | Fair |
| Lui, 201184 | Hong Kong (I) | | 74.6 | Median: 47 | 1.6 | 83.0 | Data extracted for subjects with culture or histologic confirmation, with 3 patients confirmed by clinic-radiologic characteristics and response to therapy. Testing performed prior to initiation of treatment. |  | 0.60  (0.47 to 0.72)  (55) |  | Fair |
| Metcalfe, 201077 | United States (L) | | 69.0 | Median: 50  IQR: 36 to 62 | 0 | 18.0 | Study subjects had culture confirmed pulmonary or extrapulmonary TB but were AFB smear-negative. Study excluded patients who had received TB treatment for 7 days or longer. |  | 0.72  (0.60 to 0.82)  (65) |  | Fair |
| Min, 201394 | South Korea (I) | | 56.8b | Medianb: 66  Range: 27 to 90 | NR | 32.4b | Data extracted for subjects with culture confirmation. 7 subjects had history of treatment although no information available on the timing of treatment with respect to testing. |  |  | 0.85  (0.68 to 0.94)  (27) | Fair (Sn)  Poor (Sp) |
| Pai, 200763 | India (H) | | 75.0b | 36.4b  Range: 18 to 76 | 0 | 41.0b | Data extracted for HIV-negative subjects with culture or smear confirmation. Data extracted only from testing before treatment. |  |  | 0.76  (0.60 to 0.87)  (37) | Good |
| Painter, 201351 | Vietnam (H) | | 68.9b | 37.3b  Range: 15 to 65 and older | 0.1b | 100.0 | Data extracted for subjects with culture confirmation. No information available on timing of testing with respect to treatment. |  |  | 0.86  (0.79 to 0.91)  (132) | Fair |
| Park, 200973 | South Korea (I) | | 54.0 | 52.2 (16.5) | 0 | NR | Data extracted for subjects with culture confirmation. No information available on timing of testing with respect to treatment. |  |  | 0.88  (0.82 to 0.92)  (153) | Fair |
| Qian, 201395 | China (H) | | 66.2b | 45.8 (17.3)b | 0 | 84.7b | Data extracted for subjects with positive AFB smear. No subjects were receiving treatment. |  |  | 0.82  (0.75 to 0.87)  (157) | Fair |
| Ra, 201185 | South Korea (I) | | 42.1 | Median: 49  Range: 22 to 83 | 0 | 84.6 | Data extracted for subjects with positive AFB smear and culture confirmation. Information not available on timing of testing with respect to treatment. Subjects included 9 patients with prior history of TB and 13 immunosuppressed patients. |  | 0.89  (0.76 to 0.96)  (38) |  | Fair (QFT-G)  Poor (TST) |
| Ruhwald, 201186 | Italy (L), Denmark (L), Sweden (L), Spain (I), Greece (L), Finland (L) | | 57.0 | Median: 37  Range: 18 to 90 | 7.0 | NR | Study subjects had positive culture, PCR, or microscopy or histology with a response to treatment. Testing completed within the first 2 weeks of treatment. | 0.90  (0.78 to 0.95)  (48) |  | 0.79  (0.72 to 0.85)  (168) | Good |
| Soysal, 200869 | Turkey (I) | | 56.0 | 35 (16) | 0 | 78.0 | Data extracted for subjects with culture confirmation. All subjects had been untreated or treated for less than 7 days at the time of testing. | 0.83  (0.75 to 0.89)  (96) | 0.78  (0.69 to 0.85)  (100) |  | Fair |
| Taki-Eddin, 201290 | Syria (I) | | NR | NR | NR | NR | Data extracted for subjects with culture confirmation. No information available on timing of testing with respect to treatment. |  |  | 0.87  (0.73 to 0.94)  (38) | Fair |
| Tan, 201078 | Taiwan (I) | | 75.0b | 67b (12.9) | 1.2b | NR | Data extracted for subjects with culture confirmation. All subjects had diabetes. 5 subjects were reported to have received anti-TB treatment prior to testing, but timing of treatment is not described. | 0.86  (0.72 to 0.93)  (42) |  |  | Fair |
| Tsiouris, 200657 | South Africa (H) | | 62.3b | Male:b 38  Female: 36.5  (NR) | 0 | 65.7b | Study subjects had culture confirmation. Data extracted for HIV-negative subjects. |  |  | 0.73  (0.48 to 0.89)  (15) | Good |
| Walsh, 201187 | United States (L), Mexico (I) | | 65.1  67.5 | Range: 20 to 60 and older  Range: 20 to 60 and older | 7.0  3.0 | 87.5  74.5 | Study excluded patients receiving treatment more than 7 days with culture confirmation or AFB smear positive. | 0.93  (0.81 to 0.98)  (43) | 0.70  (0.63 to 0.77)  (169) |  | Fair |
| Wang, 201396 | China (H) | | 65.4 | 46  Range: 20 to 75 | 0 | 80.1 | Data extracted for subjects with positive AFB smear or sputum culture confirmation. Subjects received testing prior to or within 7 days of beginning treatment. |  |  | 0.85  (0.66 to 0.94)  (26) | Fair |
| Wlodarczyk, 201498 | Poland (I) | | 51.2 | 48.6 (18.2) | 0 | 100 | Data extracted for subjects with culture confirmation. Timing of treatment in relation to testing unstated. |  |  | 0.65  (0.50 to 0.78)  (43) | Good |

a TB burden according to World Health Organization classification. (L) Low <10 cases/100,000; (I) Intermediate 10–99 cases/100,000; (H) High >100 cases/100,000.

b Represents demographics of the overall study population; demographics for subjects eligible for inclusion in analysis were not reported.

**Abbreviations:** AFB=acid fast bacilli; BCG=bacille Calmette-Guérin; CI=confidence interval; HIV=human immunodeficiency virus; IGRA=interferon-gamma release assay; IQR=interquartile range; M.Tb=*Mycobacterium tuberculosis*; N=number analyzed; NR=not reported; QFT-G=QuantiFERON-TB Gold (2nd generation test); QFT-GIT=QuantiFERON-TB Gold In-Tube (3rd generation test); SD=standard deviation; TB=tuberculosis; TST=tuberculin skin test.