Culture Referred for Identification and Susceptibility for *Mycobacterium* and *Nocardia* Algorithm

TBIDS / Culture Referred for Identification, *Mycobacterium* and *Nocardia* with Antimicrobial Susceptibility Testing

Organism is in pure culture and actively growing on Middlebrook (7H10 or 7H11) or Lowenstein-Jensen medium agar slant

**Acid-fast stain for bacilli**

**POSITIVE**

*Mycobacterium* or *Nocardia* identification by matrix-assisted laser desorption ionization-time of flight (MALDI-TOF) mass spectrometry*

Organism identified?

YES

Organism identification reported

NO

*Mycobacterium* identification by sequencing or *Mycobacterium* Probe Identification (Agar)*

Organism identified?

YES

Organism identification reported

NO

*Mycobacterium or Nocardia* identification by sequencing or MALDI-TOF mass spectrometry

Organism is in pure culture and actively growing in broth (eg, *Mycobacterium* Growth Indicator Tube 7H9 broth)

**Acid-fast stain for bacilli**

**POSITIVE**

*Mycobacterium* Probe Identification, Broth*

Organism identified?

YES

Organism identification reported

NO

*Mycobacterium or Nocardia* identification by sequencing or MALDI-TOF mass spectrometry

For all *Mycobacterium* species (other than *M. gordonae*) and *Nocardia* species, susceptibility testing is performed using the appropriate drug panel.

If *M. gordonae* or an aerobic actinomycete other than *Nocardia* species is identified, susceptibility testing is not automatically performed; call MLIP if testing is desired.

*Nucleic acid probes used for identification, when applicable, include those for *Mycobacterium avium*-intracellulare complex, *Mycobacterium gordonae*, and *Mycobacterium tuberculosis* complex. MALDI-TOF mass spectrometry or 16S rDNA sequencing is used for identification, when applicable, for slowly and rapidly growing *Mycobacterium* species and aerobic actinomycetes (including *Nocardia* species and *Streptomyces* species).