

# TB Labs: What are they and what do they mean?

## IGRA (Interferon-Gamma Release Assay)

### What are they?

- Screening test that measures immune response to TB-specific antigens in the blood.
  - QuantiFERON®-TB Gold Plus (QFT-Plus)
  - T-SPOT®.TB test (T-Spot)

#### Test

M. tuberculosis tuberculin stimulated  
gamma interferon: ACnc: Pt: Bld: Ord:  
Micro

### What do they mean?

- A positive result means you have been exposed to TB Disease.
- It does not determine whether you have TB Disease or TB Infection; other tests are required for that.
- Cases created based on a positive IGRA will create a Suspect TB Infection event in MAVEN.
- Next steps may include chest x-ray, symptoms review, and/or sputum test.

## TB Smear/Stain

### What are they?

- A test that detects the presence of mycobacteria.

#### Test

Microscopy: Prld: Pt: xxx: Nom:  
Acid fast stain

### What do they mean?

- A positive result (or a result of “Acid-fast bacillus (organism)”) means there is mycobacteria present. A positive result on a sputum smear could indicate infectiousness.

- There are several types of mycobacteria, and this test cannot distinguish between them. Additional tests are required to establish whether it is *mycobacterium tuberculosis*.
- Next steps may include a culture or NAAT.

## NAAT (Nucleic Acid Amplification Test)

### What are they?

- Molecular test that detects the presence of genetic material related to TB.
- Can distinguish TB from other mycobacteria.
- Results available in hours (unlike culture methods, which take weeks).

Test	↕
MTB: PrId: Pt: xxx: Ord: Nucleic Acid Amplification	

### What do they mean?

- If the result is “Positive” or “Acid-fast bacillus (organism)” then it means genetic material related to *mycobacterium tuberculosis* or *mycobacterium tuberculosis complex* is present.
- It cannot detect TB Disease, since the presence of genetic material is not the same as the presence of live bacteria.
- A positive result will create a Suspect TB Infection case in MAVEN.

## TB Culture

### What are they?

- A test where you attempt to grow TB bacteria from the sample.
- It can also be used for DST (see DST entry below).
- Mycobacterium tuberculosis grows very slowly, so cultures can take up to 8 weeks or longer to produce a result.

Test	↕
Microorganism: PrId: Pt: xxx: Nom: Culture	

### What do they mean?

- If the culture returns a result of “M. tuberculosis” or “M. tuberculosis complex” it means that there is active TB present (i.e.: TB Disease).
- Cases created from a positive culture will create a Suspect TB Disease event in MAVEN. This event will populate your **TB suspect/case notification not acknowledged** workflow, and you will receive an immediate disease notification e-mail.

## DST (Drug Susceptibility Test)

### What are they?

- These tests determine whether the bacteria is resistant or susceptible to certain antibiotics used to treat TB.

### What do they mean?

- If a patient is resistant to an antibiotic, then treatment course may need to be altered.