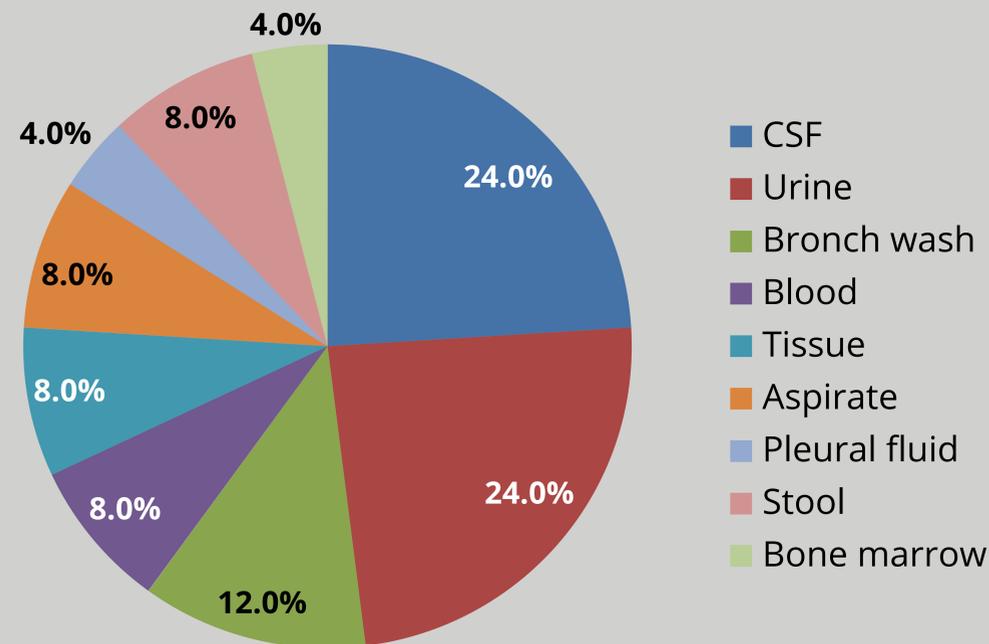


Introduction

Mycobacterium tuberculosis can disseminate throughout the body and into various body fluids. It may present at detectable levels, within these various fluids, prior to the development of respiratory symptoms.

Frequently, a non-sputum source may be the only specimen available for testing and therefore may be the only chance for laboratory confirmation of infection.

Figure 1



Planning & Implementation

All non-sputum specimens received between July 2014-September 2015 were tested on GeneXpert. Sources varied from: bronchial washings, lymph nodes, urine, stool, blood, CSF, bone marrow and endotracheal aspirate. Specimens tested included both positive and negative specimens by fluorochrome smear. GeneXpert results were compared to reported culture results.

Results

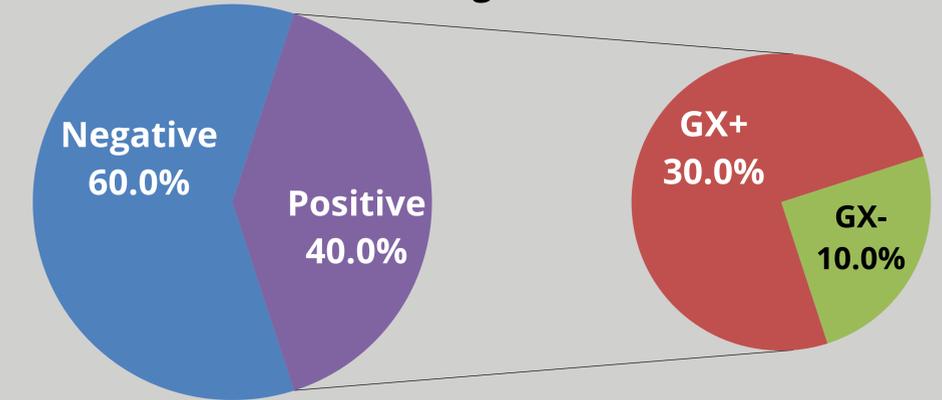
A total of 25 non-sputum specimens were received from hospital and local public health departments. **Figure 1** shows the distribution of non-sputum specimens received. Smear results were reported as negative, <1, 1-10 or 10+. A total of 17 specimens were smear-negative and 8 were smear-positive (5 were <1; 2 were 1-10 and 1 was 10+). Of the smear-positive samples, 6 were positive on GeneXpert and 2 were negative. All smear-negative samples had negative cultures for *M. tuberculosis*. All of the samples that were smear-positive/GeneXpert-positive had cultures that were positive for *M. tuberculosis*. Two samples that were smear-positive/GeneXpert-negative had cultures positive for *M. intracellulare* and one sample that was smear-positive/GeneXpert-negative was contaminated and further identification was not possible. **Figure 2** shows the relation between AFB smear positive samples and GeneXpert result.

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Figure 2



Conclusions and Limitations

Conclusion:

100% correlation between the Positive GeneXpert and culture results. Reliable results can be obtained from non-sputum sources utilizing GeneXpert MTB/RIF. Therefore, GeneXpert testing will be routinely performed on acceptable respiratory and non-respiratory specimens received for Mycobacteriology Smear and Culture testing. Non-sputum sources will also have the following disclaimer added:

This test has been approved by U.S. Food and Drug Administration for analysis of sputum specimens. Performance characteristics from specimen types other than sputum have been determined by TDH Laboratories Services.

Limitations: Testing on specimens that appear to contain particulate matter or may be too viscous will be at the discretion of the laboratorian.