

## Cutting-Edge TB Diagnostic Test Now Available at Reduced Price

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Now more tuberculosis (TB) patients can avail the benefits of one of the world's most accurate and reliable TB tests approved by WHO as private labs in the country have introduced them at a uniform reduced price.

The gold standard for TB detection - the MGIT Liquid Culture will be available at a subsidized ceiling price of Rs 900 (the maximum price laboratories can charge patients) at select labs registered with Initiative for Promoting Affordable, Quality TB Tests (IPAQT), a coalition of over 60 private labs in India making WHO approved tests available at affordable prices to patients in the private sector. The cost varies between Rs 1100 - Rs 2000 in other private labs. Currently, WHO-endorsed tests are available at specially negotiated low prices only to the public sector.

Liquid culture is faster, more accurate and more comprehensive than conventional solid media or sputa smear approaches. It is particularly valuable in its ability not only to detect drug resistant TB (MDR/XDR-TB) but also in determining which drugs can be used to treat patients. It is also more effective than conventional approaches in diagnosing TB in patients co-infected with TB and HIV.

In India, 73 private labs (including 15 IPAQT labs) and 50 government set ups are offering the liquid culture test. Labs in IPAQT, which operates on a high-volume, low-margin model have access to lower, negotiated prices for the quality tests in exchange of their commitment to pass on the benefits to patients.

"Government has taken several initiatives for controlling TB, but now the private laboratories are also coming forward and playing a critical role in TB management. The availability of low cost TB liquid culture will help improve the standard of care of TB diagnosis in low-income settings," said Prof. Rohini Kelkar, hod, Microbiology, Tata Memorial Centre, Mumbai.

There are 4 tests approved by WHO: LED Microscope, Liquid Culture and two molecular tests viz. Gene Xpert and Line Probe Assay. Molecular-based tests provide rapid and accurate results and are preferred choice. However, molecular-based tests are expensive and costs around Rs. 3,500 per person. As per a report published in PLOS Medicine journal, the recently introduced Xpert MTB/RIF has limitations including limited shelf-life of the diagnostic cartridges, operating temperature and humidity restrictions, requirement for electricity supply, the need for annual servicing and calibration of each machine.

The IPAQT initiative was started in March 2013 with the backing of 14 labs/hospitals and now has reached 61 labs (with over 3,000 collection centers) in Feb 2014. The members of IPAQT have tested 45000 TB suspects through one or more of the WHO approved TB tests as of March 2014. TB cases diagnosed are notified to the Revised National TB Control Programme (RNTCP) for linkages to free TB drugs, where necessary.

"Use of TB liquid culture systems is the standard of care for TB diagnosis in developed countries and will revolutionize the scenario in India once adopted widely. Any private lab approved by the National Accreditation Board for Laboratories or College of American Pathologists Revised National TB Control Programme can become a member and offer the service to the public," commented Dr Shaheen Shaikh, consultant clinical microbiologist at Suburban Diagnostics, Mumbai.

To promote understanding of this technology in India, private manufacturer Becton Dickinson (BD) is working with both Revised National TB Control Program and FIND (Foundation of Innovative New Diagnostics) to develop capacity for TB culture and drug susceptibility testing in 33 laboratories across India. Under the initiative, best practices are being taught using BD BACTEC MGIT liquid culture systems, quality control and quality assurance of laboratory practices.

As per Dr Ranjan K Nanda, scientist, International Centre for Genetic Engineering and Biotechnology, "The culture based test will remain as a gold standard and capacity building for such tests should be given high priority in every state of our country. TB and/or HIV incidence rates could be used as an important indicator for identifying locations to facilitate culture test."