Update on WHO TB guidelines

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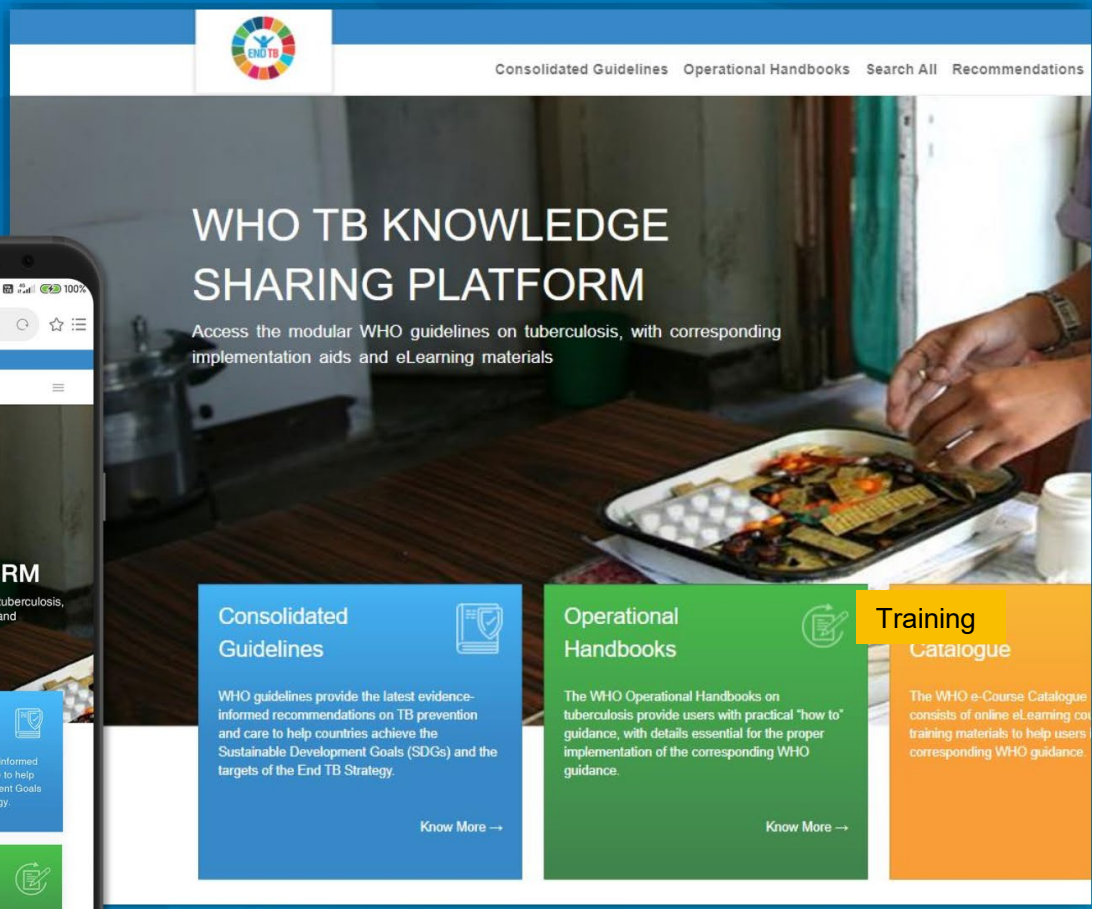
World Health Organization

TB Knowledge Sharing Platform

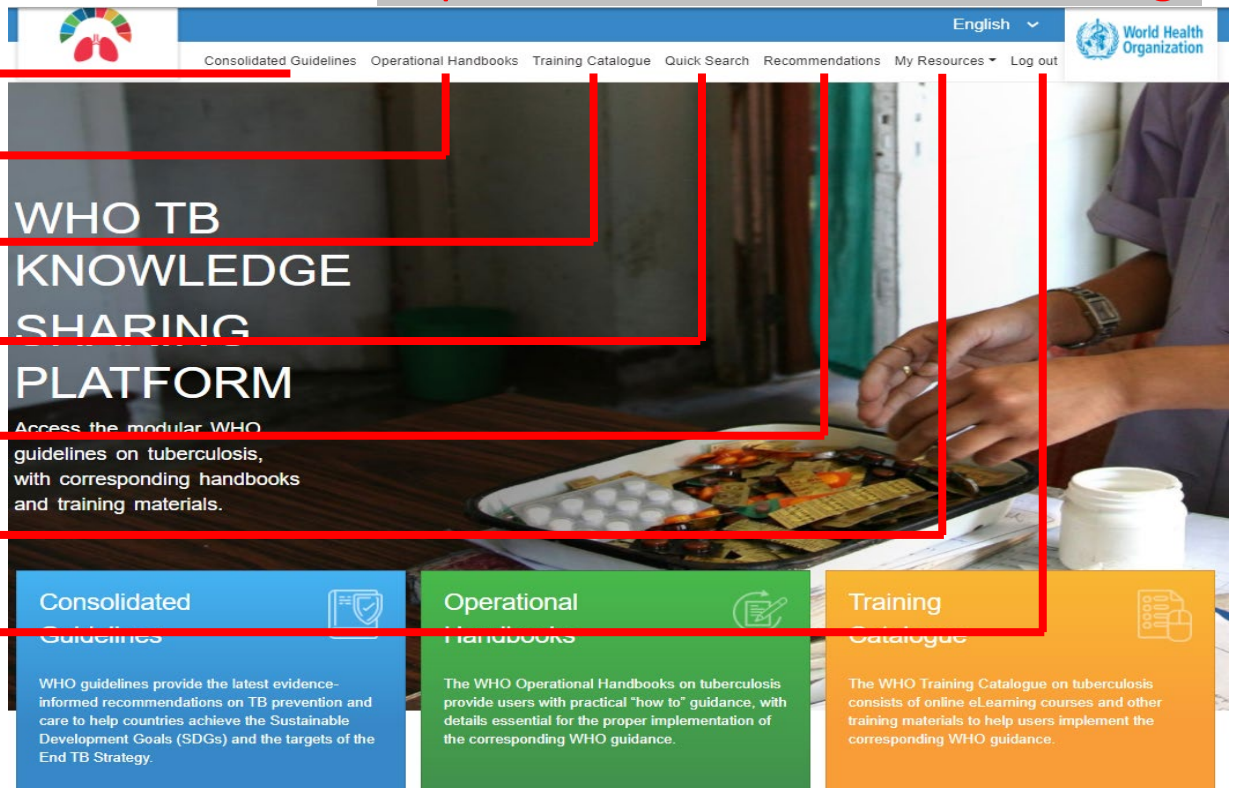
24/7 Accessibility Everywhere



TB Knowledge Sharing Platform

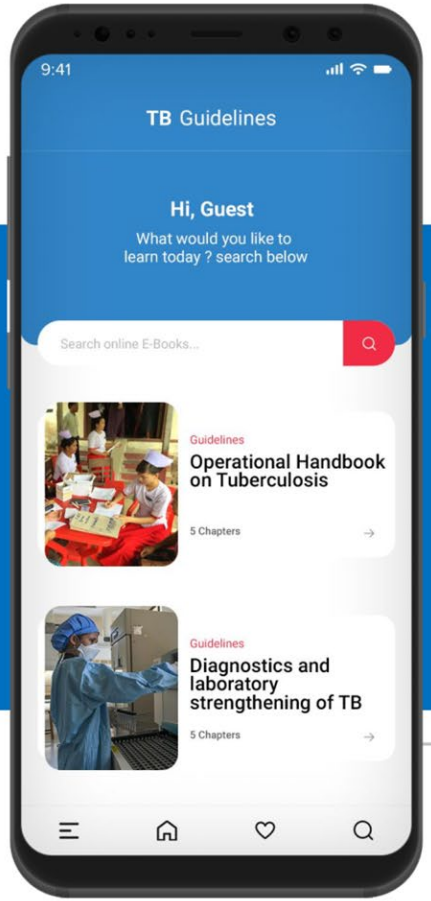
https://extranet.who.int/tbknowledge

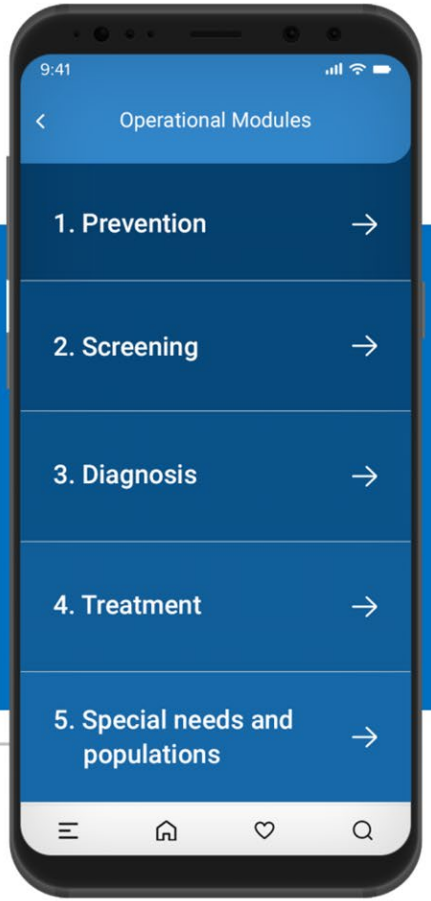
1. Guidelines
2. Handbooks
3. Training
4. Quick search
5. Recommendation map
6. Bookmark & customize
7. Personal space



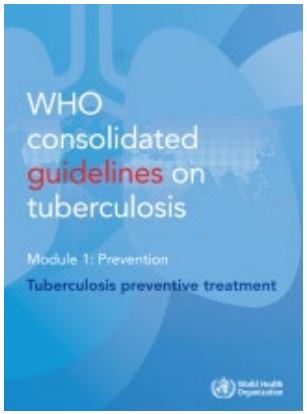
Mobile App

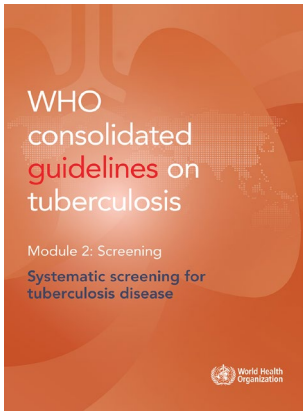
- Home
- Menu

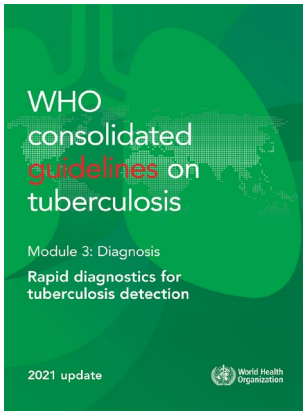


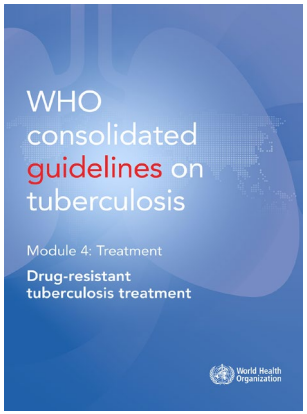


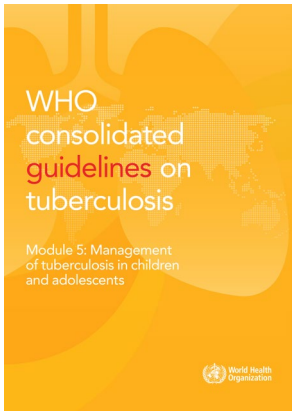
6 Modules

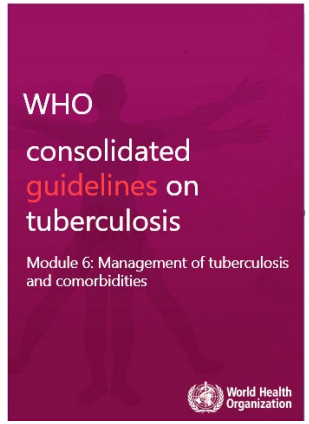

WHO
consolidated
guidelines on
tuberculosis
Module 1: Prevention
Tuberculosis preventive treatment


WHO
consolidated
guidelines on
tuberculosis
Module 2: Screening
Systematic screening for
tuberculosis disease

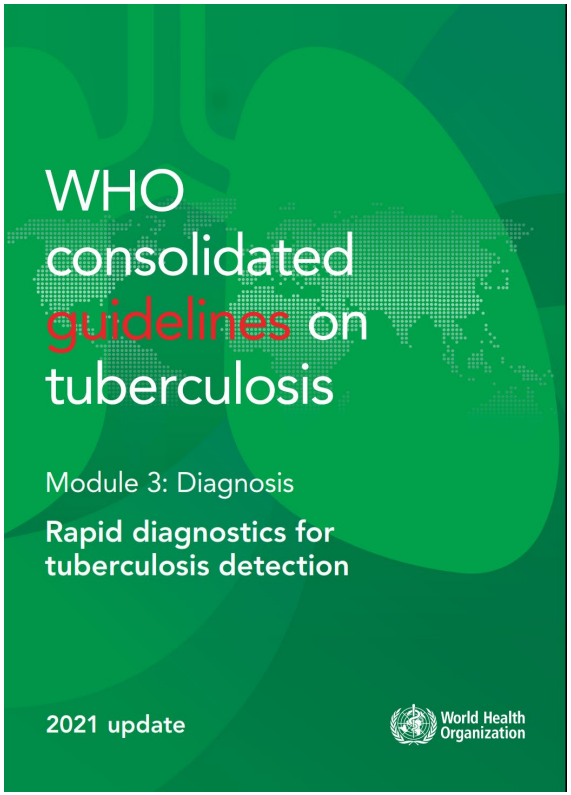

WHO
consolidated
guidelines on
tuberculosis
Module 3: Diagnosis
Rapid diagnostics for
tuberculosis detection
2021 update

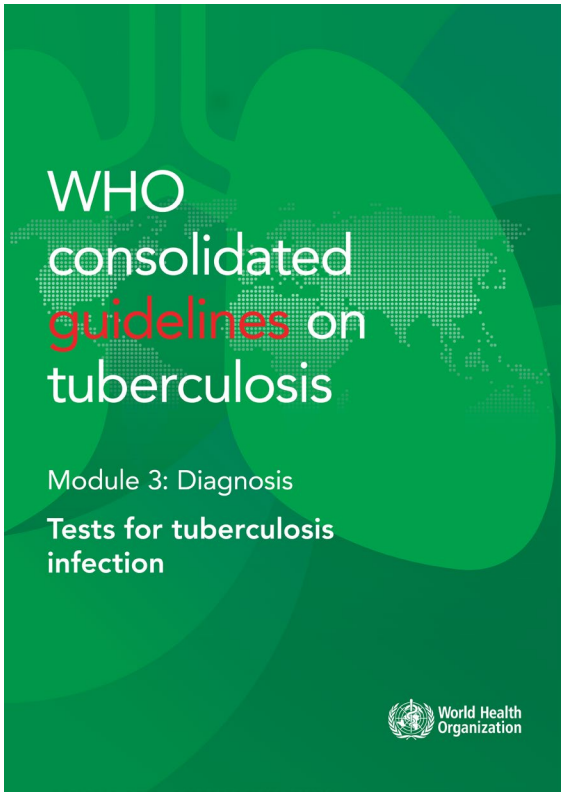

WHO
consolidated
guidelines on
tuberculosis
Module 4: Treatment
Drug-resistant
tuberculosis treatment


WHO
consolidated
guidelines on
tuberculosis
Module 5: Management
of tuberculosis in children
and adolescents


WHO
consolidated
guidelines on
tuberculosis
Module 6: Management of tuberculosis
and comorbidities
World Health
Organization

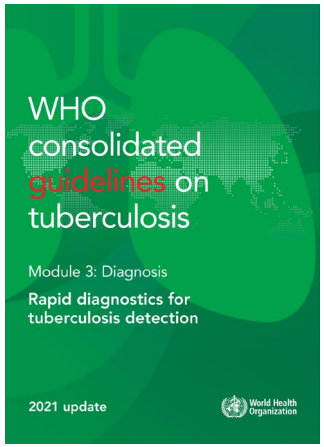
TB diagnosis: disease and infection





new update to be available in Q1 2024

TB diagnosis: disease



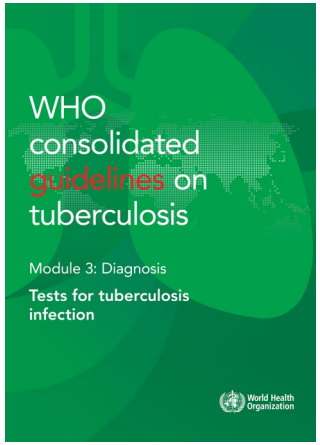
new update to be available in Q1 2024

In 2023 WHO has a Rapid Communication on the use of targeted next-generation sequencing (NGS) to detect drug-resistant tuberculosis.

The 2024 update of the guidelines will include new recommendations to guide clinical decision-making for drug-resistant TB treatment. The products and drugs for which eligible data met the class-based performance criteria are:

- Deeplex® Myc-TB (GenoScreen): for rifampicin, isoniazid, pyrazinamide, ethambutol, fluoroquinolones, bedaquiline, linezolid, clofazimine, amikacin and streptomycin.
- NanoTB® (Oxford Nanopore Technologies): for rifampicin, isoniazid, fluoroquinolones, linezolid, amikacin and streptomycin.
- TBseq® (ShengTing Biotech): for ethambutol

TB diagnosis: TB infection



In 2011 WHO has issued recommendations on the use of IGRAs for the diagnosis of TB infection, including the following technologies :

- **TST**;
- QIAGEN QuantiFERON-Gold (**QFT-G**);
- QIAGEN QuantiFERON-TB Gold In-Tube (**QFT-GIT**); and
- Oxford Immunotec T-SPOT.*TB* (**T-Spot**) assays.

In 2018, WHO has updated the recommendations stipulating that both TST and/or IGRA can be used for TB infection.[1]

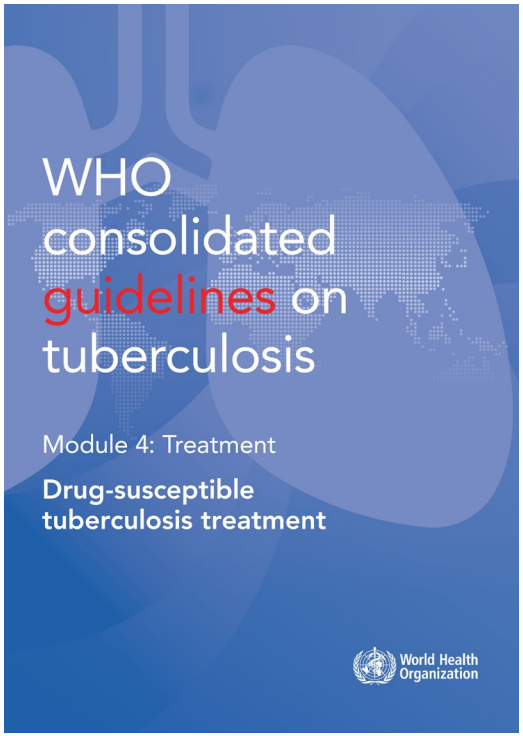
In 2021 the WHO recommendations were extended for the below technologies:

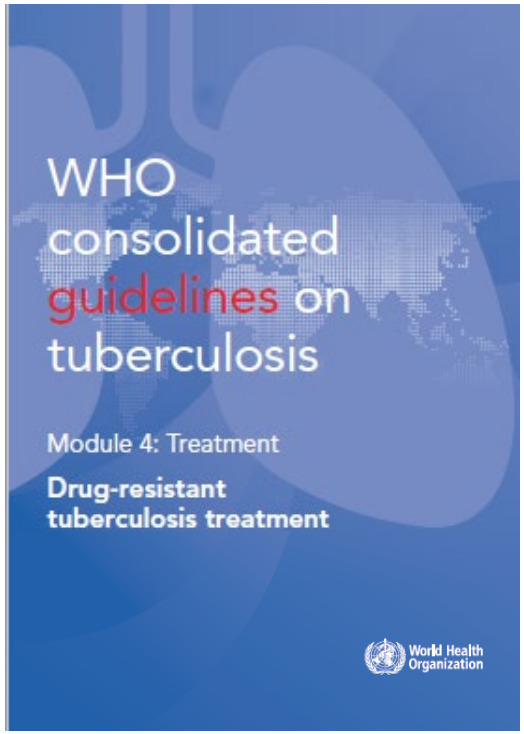
- Beijing **Wantai's TB-IGRA**;
- QIAGEN QuantiFERON-TB Gold Plus (**QFT-Plus**).

In 2022 WHO has issued recommendations on the use of TB antigen-based skin tests (TBSTs) for the diagnosis of TB infection including the following technologies (as part of consolidated guidelines):

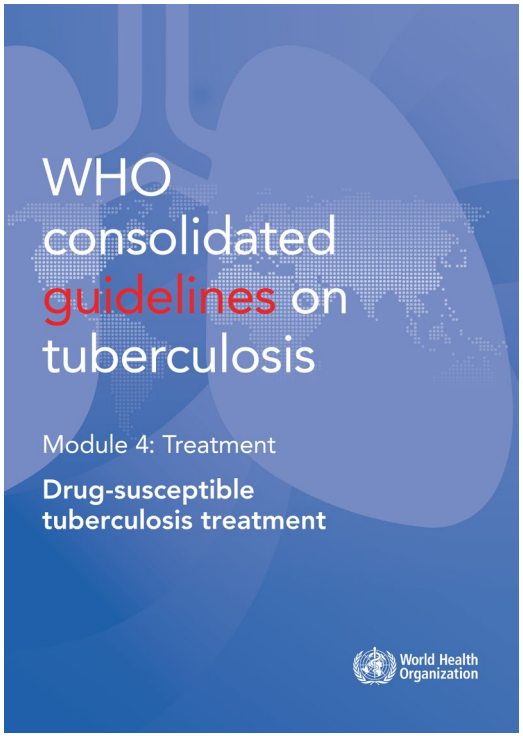
- **Cy-Tb** (Serum Institute of India, India);
- **Diaskintest** (Generium, Russia);
- **C-TST** (formerly known as ESAT6-CFP10 test, Anhui Zhifei Longcom, China).

TB treatment: drug-susceptible, drug-resistance





TB treatment: drug-susceptible



New patients with pulmonary TB should receive a regimen containing 6 months of rifampicin: 2HRZE/4HR

Wherever feasible, the optimal dosing frequency for new patients with pulmonary TB is daily throughout the course of therapy

In new PTB patients treated with the regimen containing rifampicin throughout treatment, if a positive sputum smear is found at completion of the intensive phase, the extension of the intensive phase is not recommended

The use of fix-dose combination (FDC) is recommended over separate drug formulations in treatment of patients with DS-TB

In all patients with DS PTB, the use of 3x dosing is not recommended in both the intensive and continuation phases of therapy, and daily dosing remains the recommended dosing frequency

NEW

People aged 12 years or older with drug-susceptible pulmonary TB, may receive a 4-month regimen 2HPMZ/2HPM

NEW

In children and adolescents, 3month-16years, with non-severe TB, a 4- month treatment regimen 2HRZ(E)/2HR should be used

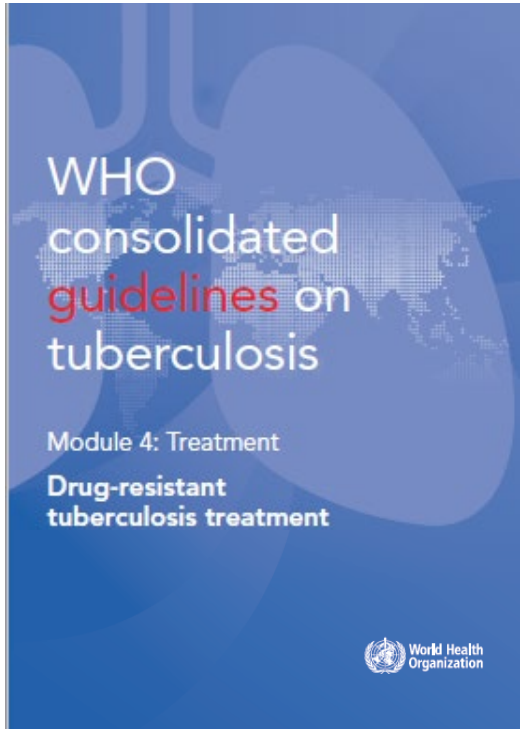
It is recommended that TB patients who are living with HIV should receive at least the same duration of daily TB treatment as HIV-negative TB patients.

ART should be started as soon as possible within two weeks of initiating TB treatment, regardless of CD4 cell count, among people living with HIV.

In patients with TB meningitis, an initial adjuvant corticosteroids with dexamethasone or prednisolone tapered over 6-8 wk should be used

In patients with TB pericarditis, an initial adjuvant corticosteroids may be used

TB treatment: drug-resistant



Section 1. The 6-month bedaquiline, pretomanid, linezolid, and moxifloxacin (BPaLM) regimen for MDR/RR-TB (new)

Section 2. The 9-month, all-oral, regimen for MDR/RR-TB (new)

Section 3: Longer regimens for MDR/RR-TB

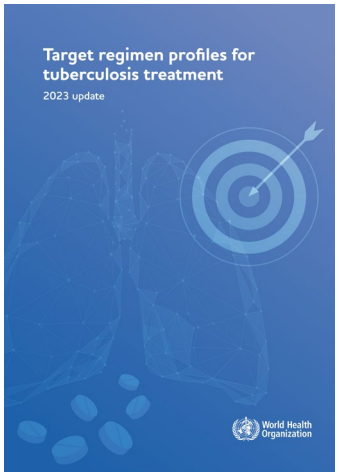
Section 4: Regimen for rifampicin-susceptible and isoniazid-resistant TB

Section 5. Monitoring patient response to MDR/RR-TB treatment using culture

Section 6. Start of antiretroviral therapy in patients on MDR/RR-TB regimens

Section 7. Surgery for patients on MDR/RR-TB treatment

Target Regimens Profiles TB treatment



1 Common characteristics
(minimal and optimal requirements are identical between the three TRPs)

1. Target population
2. Special populations
3. Drug-drug interaction (DDI) and metabolism
4. Forgiveness of the regimen
5. Number of component drugs
6. Formulation/dosage form, dosing freq. & route of admin.
7. Stability / Shelf Life

RS- / RR- / Pan-TB
...
...
...
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2 TRP-specific characteristics
(minimal and optimal requirements vary between the three TRPs)

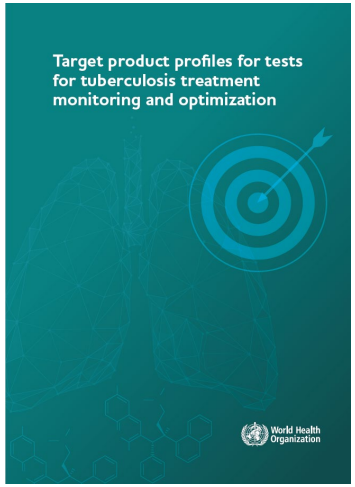
1. Indication & need for DST
2. Efficacy
3. Duration
4. Safety, monitoring & tolerability
5. Pill Burden
6. Propensity to develop resistance

RS-TB	RR-TB	Pan-TB
...	...	...
...	...	...
...	...	...
...	...	...
...	...	...
...	...	...

3 Cross-cutting aspects
(discussion of aspects beyond direct requirements, applying to all three TRPs)

1. Trade-offs
2. DST
3. Treatment duration
4. Adherence & forgiveness
5. Treatment strategies (dose adjustment, stratified medicine, treat-follow-re-treat)
6. Post-TB lung disease
7. Equitable access and transparent pricing
8. Cost considerations

Target Product Profiles TB biomarkers



Use case	Timing	Explanation / consequences
Identify people who require a more intensive TB treatment regimen	Treatment initiation	A more intensive TB regimen may be longer, contain more medicines, or the patient may need additional interventions
Identify people at risk of a poor treatment outcome with current TB treatment	During treatment	A person with poor response to treatment might need a different TB treatment regimen, adjunctive therapies, adherence support interventions, or further testing (e.g. for drug resistance);
Identify people with a poor treatment outcome at the end of TB treatment	Presumed end of treatment	A person with poor treatment outcome or at high risk of relapse may require further investigations, or continuing or optimizing of the treatment regimen

Acknowledgments

Dr Dennis Falzon

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Dr Fuad Mirzayev