Full details of the search strategies used in this review

Schwab TC et al. Targeted next-generation sequencing to diagnose drug-resistant tuberculosis: a systematic review and meta-analysis.

Overview databases & results

Date last searched **Oct 14th 2022**

	Before deduplication	After deduplication
Embase.com	1372	
Medline ALL Ovid	883	
Cochrane Reviews	5	
Cochrane Trials	52	
Web of Science Core Collection	1875	
Global Index Medicus	245	
Google Scholar (first 200)	200	
Clinicaltrials.gov	103	
WHO ICTRP	11	
Total	4746	**2866**

1880 duplicate records have been removed with [1]Deduklick
[1]https://doi.org/10.1186/s13643-022-02045-9

Documentation of search strategies

Embase.com (via https://www.embase.com)

('drug resistant tuberculosis'/exp OR 'Mycobacterium tuberculosis'/de OR 'Mycobacterium tuberculosis complex'/de OR 'tuberculosis'/de OR (tubercul* OR TB OR TBC OR DR-TB OR MDR-TB OR MTBC OR RR-TB OR XDR-TB OR XDRTB OR (tubercle NEAR/3 bacill*)):ab,ti,kw) AND ('high throughput sequencing'/exp OR 'targeted sequencing'/de OR 'high throughput sequencer'/de OR 'deep sequencing'/de OR 'massively parallel sequencing'/de OR 'illumina'/de OR 'minion'/de OR (tNGS OR ((target* OR high-through-put OR high-throughput OR nanopore* OR next-generation* OR next-gen OR NGS OR ion-torrent OR ion-proton OR semiconductor OR semi-conductor OR massively-parallel OR mate-pair OR paired-end OR pair-end OR pairwise-end OR long-read OR shotgun OR shot-gun OR single-end OR single-read OR deep OR massively-parallel OR ONT) NEAR/3 (sequenc* OR resequen* OR re-sequenc* OR analys* OR technolog*)) OR (target* NEAR/2 (assay* OR resequenc*)) OR (molecul* NEAR/2 target*) OR "NGS analys*" OR line-probe-assay* OR pyrosequenc* OR pyro-sequenc* OR Deeplex-Myc-TB OR Deeplex-MycTB OR DeepChek OR "MDR-TB assay" OR "Tuberculosis IVD" OR Illumina OR MinION OR MiniSeq):ti,ab,kw) AND (targeted OR point-of-care OR portab* OR amplif* OR multiplex* OR multi-plex* OR specimen* OR sputum OR smear OR isolates OR rapid):ab,ti,kw NOT ([animals]/lim NOT [humans]/lim) NOT ([Conference Abstract]/lim OR [Letter]/lim OR [Note]/lim OR [Editorial]/lim) AND [2005-2022]/py

Medline ALL (via Ovid)

(exp Tuberculosis, Multidrug-Resistant/ OR Mycobacterium tuberculosis/ OR tuberculosis/ OR (tubercul* OR TB OR TBC OR DR-TB OR MDR-TB OR MTBC OR RR-TB OR XDR-TB OR XDRTB OR (tubercle ADJ3 bacill*)).ab,ti,kf.) AND (exp High-Throughput Nucleotide Sequencing/ OR (tNGS OR ((target* OR high-through-put OR high-throughput OR nanopore* OR next-generation* OR next-gen OR NGS OR ion-torrent OR ion-proton OR semiconductor OR semi-conductor OR massively-parallel OR mate-pair OR paired-end OR pair-end OR pairwise-end OR long-read OR shotgun OR shot-gun OR single-end OR single-read OR deep OR massively-parallel OR ONT) ADJ3 (sequenc* OR resequen* OR re-sequenc* OR analys* OR technolog*)) OR (target* ADJ2 (assay* OR resequenc*)) OR (molecul* ADJ2 target*) OR "NGS analys*" OR line-probe-assay* OR pyrosequenc* OR pyro-sequenc* OR Deeplex-Myc-TB OR Deeplex-MycTB OR DeepChek OR "MDR-TB assay" OR "Tuberculosis IVD" OR Illumina OR MinION OR MiniSeq).ab,ti,kf.) AND (targeted OR point-of-care OR portab* OR amplif* OR multiplex* OR multi-plex* OR specimen* OR sputum OR smear OR isolates OR rapid).ab,ti,kf NOT (exp animals/ NOT humans/) NOT (letter OR news OR comment OR editorial OR congress).pt.
limit to yr="2005 -Current"

Cochrane Database of Systematic Reviews (via Wiley)
Issue 10 of 12, October 2022
Cochrane Central Register of Controlled Trials (via Wiley)
Issue 10 of 12, October 2022

((tubercul* OR TB OR TBC OR DR-TB OR MDR-TB OR MTBC OR RR-TB OR XDR-TB OR XDRTB OR (tubercle NEAR/3 bacill*)):ab,ti,kw) AND ((tNGS OR ((target* OR "high through put" OR high-throughput OR nanopore* OR "next-generation" OR "next-gen" OR NGS OR ion-torrent OR ion-proton OR semiconductor OR semi-conductor OR massively-parallel OR mate-pair OR paired-end OR pair-end OR pairwise-end OR long-read OR shotgun OR shot-gun OR single-end OR single-read OR deep OR massively-parallel OR ONT) NEAR/3 (sequenc* OR resequen* OR re-sequenc* OR analys* OR technolog*)) OR (target* NEAR/2 (assay* OR resequenc*)) OR (molecul* NEAR/2 target*) OR NGS-analys* OR line-probe-assay* OR pyrosequenc* OR pyro-sequenc* OR Deeplex-Myc-TB OR Deeplex-MycTB OR DeepChek OR "MDR-TB assay" OR "Tuberculosis IVD" OR Illumina OR MinION OR MiniSeq):ti,ab,kw)

Note: date limit/customization of year ranges in Cochrane not necessary, doesn't change amount of results

*Web of Science Core Collection (via Clarivate)

TS=(((tubercul* OR TB OR TBC OR DR-TB OR MDR-TB OR MTBC OR RR-TB OR XDR-TB OR XDRTB OR (tubercle NEAR/2 bacill*))) AND ((tNGS OR ((target* OR "high through put" OR high-throughput OR nanopore* OR "next generation" OR "next-gen" OR NGS OR ion-torrent OR ion-proton OR semiconductor OR semi-conductor OR massively-parallel OR mate-pair OR paired-end OR pair-end OR pairwise-end OR long-read OR shotgun OR shot-gun OR single-end OR single-read OR deep OR massively-parallel OR ONT) NEAR/2 (sequenc* OR resequen* OR analys* OR technolog*)) OR (target* NEAR/1 (assay* OR resequenc*)) OR (molecul* NEAR/1 target*) OR NGS-analys* OR line-probe-assay* OR pyrosequenc* OR pyro-sequenc* OR Deeplex-Myc-TB OR Deeplex-MycTB OR DeepChek OR "MDR-TB assay" OR "Tuberculosis IVD" OR Illumina OR MinION OR MiniSeq))) AND TS=(targeted OR point-of-care OR portab* OR amplif* OR multiplex* OR multi-plex* OR specimen* OR sputum OR smear OR isolates OR rapid) NOT TS=((animal* OR plant* OR rat OR rats OR murine OR mouse OR mice OR pigs) NOT (human* OR patient*)) AND PY=(2005-2023)

Exclude: Document types: (editorial material OR book chapters OR letter OR meeting abstract OR proceeding paper)

Global Index Medicus (via https://www.globalindexmedicus.net/en Advanced search)

tw:((tw:(tubercul* OR tubercle OR tb OR tbc OR dr-tb OR mdr-tb OR mtbc OR rr-tb OR xdr-tb OR xdrtb)) AND (tw:(tngs OR target* OR "high through put" OR high-throughput OR nanopore* OR next-generation* OR next-gen OR ngs OR deep OR ont)) AND (tw:(sequenc* OR resequen* OR technolog*)))
OR
tw:((tw:(tubercul* OR tubercle OR tb OR tbc OR dr-tb OR mdr-tb OR mtbc OR rr-tb OR xdr-tb OR xdrtb)) AND (tw:(NGS-analys* OR line-probe-assay* OR pyrosequenc* OR pyro-sequenc* OR deeplex-myc-tb OR deeplex-myctb OR deepchek OR "MDR-TB assay" OR "Tuberculosis IVD" OR illumina OR minion OR miniseq)))

Google Scholar (first 200 out of 21'300 hits, 2005-2022, sorted by relevance ranking)

tuberculosis|tuberculous|tubercle tNGS|"next generation"|"next-gen"|NGS|nanopore|"Deeplex Myc-TB"|"Deeplex-MycTB"|DeepChek|"MDR-TB"|"Tuberculosis IVD"|Illumina|MinION|MiniSeq|"high through put"|"high-throughput"|deep assay|assays|sequencing|sequencer

ClinicalTrials.gov (via Expert Search)
https://www.clinicaltrials.gov/

((tuberculosis OR tuberculous OR tubercle OR TB OR TBC OR DR-TB OR MDR-TB OR MTBC OR RR-TB OR XDR-TB OR XDRTB) AND (tNGS OR "high through put" OR high-throughput OR nanopore OR "next generation" OR "next-gen" OR NGS OR ion-torrent OR ion-proton OR semiconductor OR semi-conductor OR massively-parallel OR mate-pair OR paired-end OR pair-end OR pairwise-end OR long-read OR shotgun OR shot-gun OR single-end OR single-read OR deep OR massively-parallel OR ONT OR Deeplex OR DeepChek OR "MDR-TB assay" OR "Tuberculosis IVD" OR Illumina OR MinION OR MiniSeq))

WHO International Clinical Trials Registriy Platform (Search Portal)
https://trialsearch.who.int

(tuberculosis AND tNGS) OR (tuberculosis AND high through put) OR (tuberculosis AND high-throughput) OR (tuberculosis AND nanopore) OR (tuberculosis AND next-generation) OR (tuberculosis AND next-gen) OR (tuberculosis AND Deeplex) OR (tuberculosis AND DeepChek) OR (tuberculosis AND MDR-TB assay) OR (tuberculosis AND Tuberculosis IVD) OR (tuberculosis AND Illumina) OR (tuberculosis AND MinION) OR (tuberculosis AND MiniSeq) OR (tb AND tNGS) OR (tb AND high through put) OR (tb AND high-throughput) OR (tb AND nanopore) OR (tb AND next-generation) OR (tb AND next-gen) OR (tb AND Deeplex) OR (tb AND DeepChek) OR (tb AND MDR-TB assay) OR (tb AND Tb IVD) OR (tb AND Illumina) OR (tb AND MinION) OR (tb AND MiniSeq)

Identification of studies via alert services:

Search alerts will be set up in Google Scholar and Embase.com to monitor newly published studies. A separate search strategy will be used for PubMed alerts. The need of the PubMed alert will be evaluated, considering that Embase.com already includes Medline records. If PubMed alerts do not identify additional studies beyond those found in Embase.com and Google Scholar, they will be discontinued.

PubMed Alert

(Tuberculosis, Multidrug-Resistant[mh] OR Mycobacterium tuberculosis[mh] OR tuberculosis[mh] OR (tubercul*[tiab] OR TB[tiab] OR TBC[tiab] OR DR-TB[tiab] OR MDR-TB[tiab] OR MTBC[tiab] OR RR-TB[tiab] OR XDR-TB[tiab] OR XDRTB[tiab] OR (tubercle[tiab] AND bacill*[tiab]))) AND (High-Throughput Nucleotide Sequencing[mh] OR (tNGS[tiab] OR ((target*[tiab] OR high-through-put[tiab] OR high-throughput[tiab] OR nanopore*[tiab] OR next-generation*[tiab] OR next-gen[tiab] OR NGS[tiab] OR ion-torrent[tiab] OR ion-proton[tiab] OR semiconductor[tiab] OR semi-conductor[tiab] OR massively-parallel[tiab] OR mate-pair[tiab] OR paired-end[tiab] OR pair-end[tiab] OR pairwise-end[tiab] OR long-read[tiab] OR shotgun[tiab] OR shot-gun[tiab] OR single-end[tiab] OR single-read[tiab] OR deep[tiab] OR massively-parallel[tiab] OR ONT[tiab]) AND (sequenc*[tiab] OR resequen*[tiab] OR re-sequenc*[tiab] OR analys*[tiab] OR technolog*[tiab])) OR (target*[tiab] AND (assay*[tiab] OR resequenc*[tiab])) OR (molecul*[tiab] AND target*[tiab]) OR NGS-analys*[tiab] OR line-probe-assay*[tiab] OR pyrosequenc*[tiab] OR pyro-sequenc*[tiab] OR Deeplex-Myc-TB[tiab] OR Deeplex-MycTB[tiab] OR DeepChek[tiab] OR MDR-TB-assay[tiab] OR Tuberculosis-IVD[tiab] OR Illumina[tiab] OR MinION[tiab] OR MiniSeq[tiab])) AND (targeted[tiab] OR point-of-care[tiab] OR portab*[tiab] OR amplif*[tiab] OR multiplex*[tiab] OR multi-plex*[tiab] OR specimen*[tiab] OR sputum[tiab] OR smear[tiab] OR isolates[tiab] OR rapid[tiab]) NOT (animals[mh] NOT humans[mh])