

## TB Publications

### Clinical Publication

Year	Title	Journal / Publication	Key Words	Region	Country	Delft's Solution	Link
2024	The burden of subclinical TB in Nigeria	Public Health Action	Subclinical TB	Africa	Nigeria	CAD4TB Delft Light	<a href="https://pmc.ncbi.nlm.nih.gov/articles/PMC11604149/">https://pmc.ncbi.nlm.nih.gov/articles/PMC11604149/</a>
2024	Adapting a mobile TB screening unit to provide integrated screening services and linkage to primary care	Public Health Action	Integrating screening	America	Peru	CAD4TB (ver. 6)	<a href="https://pmc.ncbi.nlm.nih.gov/articles/PMC11604155/">https://pmc.ncbi.nlm.nih.gov/articles/PMC11604155/</a>
2024	The role of Artificial Intelligence as a community screening tool for Pulmonary Tuberculosis in Tanzania	Research Square	Community-based screening, Performance, Threshold, Cost effectiveness	Africa	Tanzania	CAD4TB (ver. 6)	<a href="https://doi.org/10.21203/rs.3.rs-4990059/v1">https://doi.org/10.21203/rs.3.rs-4990059/v1</a>
2024	Continuous quality improvement in a community-wide TB screening and prevention programme in Papua New Guinea	Public Health Action	Improved Project implementation	Asia	Papua New Guinea	CAD4TB (ver. 6)	<a href="https://doi.org/10.5588/pha.24.0013">https://doi.org/10.5588/pha.24.0013</a>
2024	Prior tuberculosis, radiographic lung abnormalities and prevalent diabetes in rural South Africa	BMC Infectious Diseases	TB/Diabetes	Africa	South Africa	CAD4TB (ver. 5, 6)	<a href="https://doi.org/10.1186/s12879-024-09583-8">https://doi.org/10.1186/s12879-024-09583-8</a>
2024	Diagnostic accuracy of Chest X-Ray Computer Aided Detection software and blood biomarkers for detection of prevalent and incident tuberculosis in household contacts followed up for 5 years	medRxiv	Household TB contacts	Africa	South Africa	CAD4TB (ver. 7)	<a href="https://doi.org/10.1101/2024.06.30.24309731">https://doi.org/10.1101/2024.06.30.24309731</a>
2024	Prevalence of pulmonary tuberculosis among casual labourers working in selected road construction sites in central Uganda	PLOS one	TB Prevalence	Africa	Uganda	CAD4TB (ver. 7)	<a href="https://doi.org/10.1371/journal.pone.0304719">https://doi.org/10.1371/journal.pone.0304719</a>
2024	Enhanced tuberculosis diagnosis with computer-aided chest X-ray and urine LAM in adults with HIV admitted to hospital (CASTLE study): A cluster randomised trial	Clinical Infectious Diseases	TB/HIV	Africa	Malawi	CAD4TB (ver. 6)	<a href="https://doi.org/10.1093/cid/ciae273">https://doi.org/10.1093/cid/ciae273</a>
2024	Integrating molecular and radiological screening tools during community-based active case-finding for tuberculosis and COVID-19 in southern Africa	International Journal of Infectious Diseases	Integrating TB/COVID-19 screening, Community-based active case finding	Africa	South Africa, Zambia, Zimbabwe	Delft Ultra, CAD4TB (ver.7) CAD4COVID	<a href="https://doi.org/10.1016/j.ijid.2024.107081">https://doi.org/10.1016/j.ijid.2024.107081</a>
2024	Evaluation of a population-wide, systematic screening initiative for tuberculosis on Daru island, Western Province, Papua New Guinea	BMC public health	Systematic screening for active TB	Asia	Papua New Guinea	OneStopTB Clinic, CAD4TB	<a href="https://doi.org/10.1186/s12889-024-17918-y">https://doi.org/10.1186/s12889-024-17918-y</a>
2024	Serial Mass Screening for Tuberculosis Among Incarcerated Persons in Brazil	Clinical Infectious Diseases	Prison screening	Latin America	Brazil	CAD4TB (ver.5)	<a href="https://doi.org/10.1093/cid/ciae055">https://doi.org/10.1093/cid/ciae055</a>
2024	Diagnostic Accuracy of Computer-Aided Detection During Active Case Finding for Pulmonary Tuberculosis in Africa: A Systematic Review and Meta-analysis	Open Forum Infectious Diseases	Active case finding, Performance evaluation	Africa	South Africa, Zambia, Kenya	CAD4TB (ver. 5,6,7)	<a href="https://doi.org/10.1093/ofid/ofae020">https://doi.org/10.1093/ofid/ofae020</a>
2024	Iterative evaluation of mobile computer assisted digital chest x-ray screening for TB improves efficiency, yield, and outcomes in Nigeria	PLOS Glob Public Health	Active case finding, Calibration	Africa	Nigeria	OneStopTB Clinic CAD4TB	<a href="https://doi.org/10.1371/journal.pgph.0002018">https://doi.org/10.1371/journal.pgph.0002018</a>
2024	National cross-sectional cluster survey of tuberculosis prevalence in Timor-Leste: a study protocol	BMJ Open	Prevalence survey	Asia	Timor Leste	Delft Light, CAD4TB (ver. 7)	<a href="https://doi.org/10.1136/bmjopen-2023-079794">https://doi.org/10.1136/bmjopen-2023-079794</a>
2023	Computer-aided diagnostic accuracy of pulmonary tuberculosis on chest radiography among lower respiratory tract symptoms patients	Front Public Health	Performance evaluation	Middle East	Palestine	CAD4TB (ver. 6)	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10641698/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10641698/</a>

2023	Impact of a multi-disease integrated screening and diagnostic model for COVID-19, TB, and HIV in Lesotho	PLOS Global Public Health	Multi-disease (COVID-19, TB, HIV)	Africa	Lesotho	CAD4TB (ver. 6)	<a href="https://doi.org/10.1371/journal.pgph.0001488">https://doi.org/10.1371/journal.pgph.0001488</a>
2023	Improving TB control: efficiencies of case-finding interventions in Nigeria	Public Health Action	Active case finding	Africa	Nigeria	Delft Light CAD4TB	<a href="https://doi.org/10.5588/pha.23.0028">https://doi.org/10.5588/pha.23.0028</a>
2023	Diagnostic accuracy of three computer-aided detection systems for detecting pulmonary tuberculosis on chest radiography when used for screening: Analysis of an international, multicenter migrants screening study	PLOS Global Public Health	Migrants screening	Various	Various	CAD4TB (ver.6)	<a href="https://doi.org/10.1371/journal.pgph.0000402">https://doi.org/10.1371/journal.pgph.0000402</a>
2023	Optimising computer aided detection to identify intra-thoracic tuberculosis on chest x-ray in South African children	PLOS Global Public Health	Paediatric TB	Africa	South Africa	CAD4TB (ver.7)	<a href="https://doi.org/10.1371/journal.pgph.0001799">https://doi.org/10.1371/journal.pgph.0001799</a>
2023	The performance of computer-aided detection digital chest X-ray reading technologies for triage of active Tuberculosis among persons with a history of previous Tuberculosis	Clinical Infectious Diseases	Persons with previously treated TB	Africa	Zambia	CAD4TB (ver.7)	<a href="https://doi.org/10.1093/cid/ciac679">https://doi.org/10.1093/cid/ciac679</a>
2022	Digital Chest X-Ray with Computer-aided Detection for Tuberculosis Screening within Correctional Facilities	ATS Journals	Prison screening	Africa	South Africa	CAD4TB (ver. 6)	<a href="https://doi.org/10.1513/AnnalsATS.202103-380OC">https://doi.org/10.1513/AnnalsATS.202103-380OC</a>
2022	Portable digital X-ray for TB pre-diagnosis screening in rural communities in Nigeria	Public Health Action	Active case finding	Africa	Nigeria	Delft Light CAD4TB (ver.6)	<a href="https://pubmed.ncbi.nlm.nih.gov/35734009/">https://pubmed.ncbi.nlm.nih.gov/35734009/</a>
2022	Population-wide active case finding and prevention for tuberculosis and leprosy elimination in Kiribati: the PEARL study protocol	BMJ Open	Active case finding	Asia	Kiribati	CAD4TB (ver.6)	<a href="https://bmjopen.bmj.com/content/12/4/e055295?rss=1">https://bmjopen.bmj.com/content/12/4/e055295?rss=1</a>
2022	Integrated screening and testing for TB and COVID-19 in Peru	Public Health Action	TB & COVID-19	Latin America	Peru	CAD4TB CAD4COVID	<a href="https://doi.org/10.5588/pha.21.0077">https://doi.org/10.5588/pha.21.0077</a>
2022	Diagnostic accuracy of computer aided reading of chest x-ray in screening for pulmonary tuberculosis in comparison with Gene-Xpert	Pakistan Journal of Medical Sciences	Active case finding, Performance evaluation	Asia	Pakistan	CAD4TB	<a href="https://doi.org/10.12669/pjms.38.1.4531">https://doi.org/10.12669/pjms.38.1.4531</a>
2021	Triage of Persons With Tuberculosis Symptoms Using Artificial Intelligence–Based Chest Radiograph Interpretation: A Cost-Effectiveness Analysis	Open Forum Infectious Diseases	Cost effectiveness	Asia	Pakistan	CAD4TB (ver.6)	<a href="https://doi.org/10.1093/ofid/ofab567">https://doi.org/10.1093/ofid/ofab567</a>
2022	Accuracy of computer-aided chest X-ray in community-based tuberculosis screening: Lessons from the 2016 Kenya National Tuberculosis Prevalence Survey	PLOS Global Public Health	Performance evaluation, community-based screening, prevalence survey	Africa	Kenya	CAD4TB (ver.6)	<a href="https://doi.org/10.1371/journal.pgph.0001272">https://doi.org/10.1371/journal.pgph.0001272</a>
2021	Early TB case detection by community-based mobile X-ray screening and Xpert testing in Balochistan	Public Health Action	Community-based screening	Asia	Pakistan	CAD4TB	<a href="https://doi.org/10.5588/pha.21.0050">https://doi.org/10.5588/pha.21.0050</a>
2021	Computer-aided X-ray screening for tuberculosis and HIV testing among adults with cough in Malawi (the PROSPECT study): A randomised trial and cost-effectiveness analysis	PLOS Medicine	TB/HIV	Africa	Malawi	CAD4TB (ver.5)	<a href="https://doi.org/10.1371/journal.pmed.1003752">https://doi.org/10.1371/journal.pmed.1003752</a>
2021	Use of targeted mobile X-ray screening and computer-aided detection software to identify tuberculosis among high-risk groups in Romania: descriptive results of the E-DETECT TB active case-finding project	BMJ Open	Active case finding	Europe	Romania	CAD4TB (ver.6) CAD4TB (ver.5)	<a href="https://bmjopen.bmj.com/content/11/8/e045289">https://bmjopen.bmj.com/content/11/8/e045289</a>
2021	Computer-aided interpretation of chest radiography reveals the spectrum of tuberculosis in rural South Africa	npj Digital Medicine	Active case finding, TB/HIV	Africa	South Africa	CAD4TB (ver.6) CAD4TB (ver.5)	<a href="https://doi.org/10.1038/s41746-021-00471-y">https://doi.org/10.1038/s41746-021-00471-y</a>
2021	Identifying barriers and facilitators to implementation of community-based tuberculosis active case finding with mobile X-ray units in Lima, Peru: a RE-AIM evaluation	BMJ Open	Active case finding	Latin America	Peru	CAD4TB (ver.6)	<a href="https://doi.org/10.1136/bmjopen-2021-050314">https://doi.org/10.1136/bmjopen-2021-050314</a>

2020	Automated chest radiography and mass systematic screening for tuberculosis	The International Journal of Tuberculosis and Lung Disease	Systematic screening	Asia	Peru	CAD4TB	<a href="https://doi.org/10.5588/ijtld.19.0501">https://doi.org/10.5588/ijtld.19.0501</a>
2020	Evaluation of computer aided detection of tuberculosis on chest radiography among people with diabetes in Karachi Pakistan	Nature Scientific Reports	TB / Diabetes Mellitus (DM)	Asia	Pakistan	CAD4TB (ver. 3.07)	<a href="https://doi.org/10.1038/s41598-020-63084-7">https://doi.org/10.1038/s41598-020-63084-7</a>
2020	Computer Aided Detection of Tuberculosis on Chest Radiographs: An Evaluation of the CAD4TB v6 system	Nature Scientific Reports	Cost effectiveness, performance evaluation	Asia	Pakistan, Netherlands	CAD4TB (ver.6)	<a href="https://doi.org/10.1038/s41598-020-62148-y">https://doi.org/10.1038/s41598-020-62148-y</a>
2020	Symptom and Digital Chest X-ray TB Screening in South African Prisons: Yield and Cost Effectiveness	The International Journal of Tuberculosis and Lung Disease	Cost effectiveness, performance evaluation	Africa	South Africa	CAD4TB	<a href="https://doi.org/10.5588/ijtld.19.0214">https://doi.org/10.5588/ijtld.19.0214</a>
2020	A Public-Private Model to Scale Up Diabetes Mellitus Screening Among People Accessing Tuberculosis Diagnostics in Dhaka, Bangladesh	The International Journal of Tuberculosis and Lung Disease	TB / Diabetes Mellitus (DM)	Asia	Bangladesh	CAD4TB (ver.3.07) Easy DR X-ray	<a href="https://doi.org/10.1016/j.ijid.2020.01.001">https://doi.org/10.1016/j.ijid.2020.01.001</a>
2020	Yield, Efficiency and Costs of Mass Screening Algorithms for Tuberculosis in Brazilian Prisons	Clinical infectious diseases	Cost effectiveness, active case finding, prevalence survey, prison screening	Latin America	Brazil	CAD4TB	<a href="https://doi.org/10.1093/cid/ciaa135">https://doi.org/10.1093/cid/ciaa135</a>
2020	Deep learning, Computer-Aided Radiography Reading for Tuberculosis: a Diagnostic Accuracy Study from a Tertiary Hospital in India	Nature Scientific Reports	Performance evaluation	Asia	India	CAD4TB (ver.6) as reference	<a href="https://doi.org/10.1038/s41598-019-56589-3">https://doi.org/10.1038/s41598-019-56589-3</a>
2019	Prevalence of Tuberculosis, HIV/AIDS, and Hepatitis; in a Prison of Balochistan: a Cross-Sectional Survey	BMC public health	TB/HIV, active case finding, prevalence survey, prison screening	Asia	Pakistan	CAD4TB	<a href="https://doi.org/10.1186/s12889-019-8011-7">https://doi.org/10.1186/s12889-019-8011-7</a>
2019	Automated Chest X-ray Reading for Tuberculosis in the Philippines to Improve Case Detection: a Cohort Study	The International Journal of Tuberculosis and Lung Disease	Performance evaluation	Asia	Philippines	CAD4TB (ver.5)	<a href="https://doi.org/10.5588/ijtld.18.0004">https://doi.org/10.5588/ijtld.18.0004</a>
2018	Computer-Assisted Chest Radiography Reading for Tuberculosis Screening in People Living with Diabetes Mellitus	The International Journal of Tuberculosis and Lung Disease	TB / Diabetes Mellitus (DM)	Asia	Indonesia	CAD4TB (ver.5)	<a href="https://doi.org/10.5588/ijtld.17.0827">https://doi.org/10.5588/ijtld.17.0827</a>
2018	Evaluation of the Diagnostic Accuracy of Computer-Aided Detection of Tuberculosis on Chest Radiography Among Private Sector Patients in Pakistan	Nature Scientific Reports	Cost effectiveness	Asia	Pakistan	CAD4TB (ver. 3.07)	<a href="https://doi.org/10.1038/s41598-018-30810-1">https://doi.org/10.1038/s41598-018-30810-1</a>
2018	Accuracy of an Automated System for Tuberculosis Detection on Chest Radiographs in High-risk Screening	The International Journal of Tuberculosis and Lung Disease	Cost effectiveness, active case finding	Europe	UK	CAD4TB (ver.5)	<a href="https://pubmed.ncbi.nlm.nih.gov/29663963/">https://pubmed.ncbi.nlm.nih.gov/29663963/</a>
2017	Computer-Aided Reading of Tuberculosis Chest Radiography: Moving the Research Agenda Forward to Inform Policy	European Respiratory Journal	Research agenda	-	-	CAD4TB	<a href="https://erj.ersjournals.com/content/50/1/1700953">https://erj.ersjournals.com/content/50/1/1700953</a>
2017	Automatic Versus Human Reading of Chest X-rays in the Zambia National Tuberculosis Prevalence Survey	The International Journal of Tuberculosis and Lung Disease	Performance evaluation, prevalence survey	Africa	Zambia	CAD4TB (ver.5)	<a href="https://www.diagnijmegen.nl/publications/mele17/">https://www.diagnijmegen.nl/publications/mele17/</a>
2017	Digital CXR with Computer-Aided Diagnosis Versus Symptom Screen to Define Presumptive Tuberculosis Among Households Contacts and Impact on Tuberculosis Diagnosis	BMC Infectious Diseases	Household contact	Africa	Zambia	CAD4TB (ver.1.08)	<a href="https://doi.org/10.1186/s12879-017-2388-7">https://doi.org/10.1186/s12879-017-2388-7</a>
2017	An Evaluation of Automated Chest Radiography Reading Software for Tuberculosis Screening Among Public- and Private-sector Patients	European Respiratory Journal	Cost effectiveness	Asia	Bangladesh	CAD4TB (ver. 3.07) EZ DR X-ray	<a href="https://erj.ersjournals.com/content/49/5/1602159">https://erj.ersjournals.com/content/49/5/1602159</a>
2016	An Automated Tuberculosis Screening Strategy Combining X-ray Based Computer-Aided Detection and Clinical Information	Nature Scientific Reports	Performance evaluation	Africa	South Africa	CAD4TB (ver. 3.07) Odelca DR	<a href="https://doi.org/10.1038/srep25265">https://doi.org/10.1038/srep25265</a>
2015	Screening for Pulmonary Tuberculosis in a Tanzanian Prison and Computer-Aided Interpretation of Chest X-rays	Public Health Action	Active case finding, prison screening, performance evaluation	Africa	Tanzania	CAD4TB (ver. 3.07) Odelca DR	<a href="https://doi.org/10.5588/pha.15.0037">https://doi.org/10.5588/pha.15.0037</a>

2015	Automated Chest-radiography as a Triage for Xpert Testing in Resource-Constrained Settings: a Prospective Study of Diagnostic Accuracy and Costs.	Nature Scientific Reports	Cost effectiveness	Africa	South Africa	CAD4TB (ver. 3.07) Odelca DR	<a href="https://doi.org/10.1038/srep12215">https://doi.org/10.1038/srep12215</a>
2015	Computerized Reading of Chest Radiographs in The Gambia National Tuberculosis Prevalence Survey: Retrospective Comparison with Human Experts	Proceeding from Union World Conference on Lung Health	Performance evaluation	Africa	Gambia	CAD4TB	<a href="https://www.diagnijmegen.nl/publications/madu15/">https://www.diagnijmegen.nl/publications/madu15/</a>
2015	Objective Computerized Chest Radiography Screening to Detect Tuberculosis in the Philippines	Proceeding from Union World Conference on Lung Health	Performance evaluation, prison screening	Asia	Philippines	CAD4TB (ver. 4.10)	<a href="https://www.diagnijmegen.nl/publications/phil15a/">https://www.diagnijmegen.nl/publications/phil15a/</a>
2014	Diagnostic Accuracy of Computer-Aided Detection of Pulmonary Tuberculosis in Chest Radiographs: A Validation Study from Sub-Saharan Africa	PLOS one	Performance evaluation	Africa	Tanzania	CAD4TB (ver. 3.07)	<a href="https://doi.org/10.1371/journal.pone.0106381">https://doi.org/10.1371/journal.pone.0106381</a>
2014	The Sensitivity and Specificity of Using a Computer Aided Diagnosis Program for Automatically Scoring Chest X-Rays of Presumptive TB Patients Compared with Xpert MTB/RIF in Lusaka Zambia	PLOS one	Performance evaluation, TB/HIV	Africa	Zambia	CAD4TB (ver.1.08)	<a href="https://doi.org/10.1371/journal.pone.0093757">https://doi.org/10.1371/journal.pone.0093757</a>
2014	Detection of Chest X-ray abnormalities and tuberculosis using computer-aided detection vs interpretation by radiologists and a clinical officer	Proceeding from Union World Conference on Lung Health	Performance evaluation	Asia	Pakistan	CAD4TB (ver. 3.07)	<a href="https://www.diagnijmegen.nl/publications/khan14/">https://www.diagnijmegen.nl/publications/khan14/</a>
2013	Detection of Tuberculosis Using Digital Chest Radiography: Automated Reading vs. Interpretation by Clinical Officers	The International Journal of Tuberculosis and Lung Disease, European respiratory Journal	Performance evaluation	Africa	Zambia	CAD4TB (ver.1.08) Odelca DR	<a href="https://doi.org/10.5588/ijtld.13.0325">https://doi.org/10.5588/ijtld.13.0325</a>

## Technical Publication

2024	Accuracy of CAD4TB (Computer-Aided Detection for Tuberculosis) on paediatric chest radiographs	European Respiratory Journal	Paediatric TB	Africa	Gambia	CAD4TB (ver. 7)	<a href="https://pmc.ncbi.nlm.nih.gov/articles/PMC11540982/pdf/ERJ-00811-2024.pdf">https://pmc.ncbi.nlm.nih.gov/articles/PMC11540982/pdf/ERJ-00811-2024.pdf</a>
2024	Diagnostic accuracy of TB screening tests in a prospective multinational cohort: Chest-X-ray with computer-aided detection, Xpert TB host response, and C-reactive protein	Clinical Infectious Diseases	Performance comparison of CAD, CRP, and Xpert HR	Various	Philippines, Vietnam, South Africa, Uganda, and India	CAD4TB (ver. 7)	<a href="https://doi.org/10.1093/cid/ciae549">https://doi.org/10.1093/cid/ciae549</a>
2024	Breaking the threshold: Developing multivariable models using computer-aided chest X-ray analysis for tuberculosis triage	International Journal of Infectious Diseases	Threshold selection	Multi-country	Pakistan, Tanzania, Zambia	CAD4TB (ver. 7)	<a href="https://doi.org/10.1016/j.ijid.2024.107221">https://doi.org/10.1016/j.ijid.2024.107221</a>
2024	Computer-aided detection of tuberculosis from chest radiographs in a tuberculosis prevalence survey in South Africa: external validation and modelled impacts of commercially available artificial intelligence software	The Lancet Digital Health	Performance comparison of CAD software	Africa	South Africa	CAD4TB (ver. 7)	<a href="https://doi.org/10.1016/S2589-7500(24)00118-3">https://doi.org/10.1016/S2589-7500(24)00118-3</a>
2024	An independent, multi-country head-to-head accuracy comparison of automated chest x-ray algorithms for the triage of pulmonary tuberculosis	medRxiv	Performance comparison of CAD software	Multi-country	India, Madagascar, Philippines, South Africa, Tanzania, Uganda, Vietnam	CAD4TB (ver. 7)	<a href="https://doi.org/10.1101/2024.06.19.24309061">https://doi.org/10.1101/2024.06.19.24309061</a>
2024	Computer-aided detection thresholds for digital chest x-ray interpretation in tuberculosis diagnostic algorithms	ERJ Open Research	Threshold selection	Africa	Lesotho	CAD4TB (ver. 7)	<a href="https://doi.org/10.1183/23120541.00508-2023">https://doi.org/10.1183/23120541.00508-2023</a>
2023	Early user perspectives on using computer-aided detection software for interpreting chest X-ray images to enhance access and quality of care for persons with tuberculosis	BMC Global Public Health	User experience of X-ray with CAD	Multi-country	Various	CAD4TB	<a href="https://doi.org/10.1186/s44263-023-00033-2">https://doi.org/10.1186/s44263-023-00033-2</a>
2023	Evaluation of tuberculosis diagnostic test accuracy using Bayesian latent class analysis in the presence of conditional dependence between the diagnostic tests used in a community-based tuberculosis screening study	PLOS one		Africa	South Africa	CAD4TB (ver.5 & 6)	<a href="https://doi.org/10.1371/journal.pone.0282417">https://doi.org/10.1371/journal.pone.0282417</a>
2023	CAD4TB software updates: different triaging thresholds require caution by users and regulation by authorities	The International Journal of Tuberculosis and Lung Disease	Performance comparison of CAD software	Africa	South Africa	CAD4TB	<a href="https://doi.org/10.5588/ijtld.22.0437">https://doi.org/10.5588/ijtld.22.0437</a>
2023	Evaluation of chest X-ray with automated interpretation algorithms for mass tuberculosis screening in prisons: A cross-sectional study	The Lancet Regional Health Americas	Performance comparison of CAD software, Prison screening	Latin America	Brazil	CAD4TB (ver.6)	<a href="https://doi.org/10.1016/j.lana.2022.100388">https://doi.org/10.1016/j.lana.2022.100388</a>
2023	Early user experience and lessons learned using ultra-portable digital X-ray with computer-aided detection (DXR-CAD) products: A qualitative study from the perspective of healthcare providers	PLOS one	User experience of ultra-portable X-ray with CAD	Multi-country	Various	CAD4TB Delft Light Delft Ultra	<a href="https://doi.org/10.1371/journal.pone.0277843">https://doi.org/10.1371/journal.pone.0277843</a>
2022	Economic analysis of different throughput scenarios and implementation strategies of computer-aided detection software as a screening and triage test for pulmonary TB	PLOS one	Economic analysis of CAD software	Asia	Pakistan	CAD4TB (ver.7)	<a href="https://doi.org/10.1371/journal.pone.0277393">https://doi.org/10.1371/journal.pone.0277393</a>
2022	Advances in Deep Learning for Tuberculosis Screening using Chest X-rays: The Last 5 Years Review	Journal of Medical Systems	Performance comparison of CAD software	-	-	CAD4TB	<a href="https://doi.org/10.1007/s10916-022-01870-8">https://doi.org/10.1007/s10916-022-01870-8</a>
2022	Computer-Aided Detection of Tuberculosis from Chest Radiographs in TB Prevalence Survey: External Validation and Modelled Impacts of Commercially Available Artificial Intelligence Software	SSRN	Performance comparison of CAD software	Africa	South Africa	CAD4TB (ver.7)	<a href="http://dx.doi.org/10.2139/ssrn.4258953">http://dx.doi.org/10.2139/ssrn.4258953</a>

2022	Comparing different versions of computer-aided detection products when reading chest X-rays for tuberculosis	PLOS Digital Health	Performance comparison of CAD software	Asia	Bangladesh	CAD4TB (ver.6 & 7)	<a href="https://doi.org/10.1371/journal.pdig.0000067">https://doi.org/10.1371/journal.pdig.0000067</a>
2022	"Similar performances but markedly different triaging thresholds in three CAD4TB versions risk systematic errors in TB screening programs"	MedRxiv	Performance comparison of CAD software	Africa	South Africa	CAD4TB (ver.5, 6, 7)	<a href="https://doi.org/10.1101/2022.04.29.22274472">https://doi.org/10.1101/2022.04.29.22274472</a>
2022	Diagnostic accuracy of chest X-ray interpretation for tuberculosis by three artificial intelligence-based software in a screening use-case: an individual patient meta-analysis of global data	MedRxiv	Performance comparison of CAD software	Multi-country	Various	CAD4TB (ver.6)	<a href="https://doi.org/10.1101/2022.01.24.22269730">https://doi.org/10.1101/2022.01.24.22269730</a>
2021	Independent evaluation of 12 artificial intelligence solutions for the detection of tuberculosis	Nature Scientific Reports	Performance comparison of CAD software	Asia	Vietnam	CAD4TB (ver.7)	<a href="https://doi.org/10.1038/s41598-021-03265-0">https://doi.org/10.1038/s41598-021-03265-0</a>
2021	Costs and cost-effectiveness of a comprehensive tuberculosis case finding strategy in Zambia	PLOS one	Cost effectiveness	Africa	Zambia	CAD4TB (ver. 1.5)	<a href="https://doi.org/10.1371/journal.pone.0256531">https://doi.org/10.1371/journal.pone.0256531</a>
2021	Tuberculosis detection from chest x-rays for triaging in a high tuberculosis-burden setting: an evaluation of five artificial intelligence algorithms	The Lancet Digital Health	Performance comparison of CAD software	Asia	Bangladesh	CAD4TB (ver.7) Easy DR	<a href="https://doi.org/10.1016/S2589-7500(21)00116-3">https://doi.org/10.1016/S2589-7500(21)00116-3</a>
2021	Chest X-ray analysis with deep learning-based software as a triage test for pulmonary tuberculosis: an individual patient data meta-analysis of diagnostic accuracy	Clinical Infectious Diseases	Performance comparison of CAD software	Multi-country	Pakistan, South Africa, Tanzania, Zambia	CAD4TB (ver.6)	<a href="https://doi.org/10.1093/cid/ciab639">https://doi.org/10.1093/cid/ciab639</a>
2021	Can artificial intelligence (AI) be used to accurately detect tuberculosis (TB) from chest X-rays? An evaluation of five AI products for TB screening and triaging in a high TB burden setting	ArXiv	Performance comparison of CAD software	Asia	Bangladesh	CAD4TB (ver.7)	<a href="https://doi.org/10.48550/arXiv.2006.05509">https://doi.org/10.48550/arXiv.2006.05509</a>
2021	Application of artificial intelligence in digital chest radiography reading for pulmonary tuberculosis screening	Chronic Diseases and Translational Medicine	Review of CAD related articles	All	All	CAD4TB (ver.6)	<a href="https://doi.org/10.1016/j.cdtm.2021.02.001">https://doi.org/10.1016/j.cdtm.2021.02.001</a>
2021	A new resource on artificial intelligence powered computer automated detection software products for tuberculosis programmes and implementers	Tuberculosis	Performance comparison of CAD software	All	All	CAD4TB (ver.6)	<a href="https://doi.org/10.1016/j.tube.2020.102049">https://doi.org/10.1016/j.tube.2020.102049</a>
2020	Chest X-ray Analysis with Deep Learning-Based Software as a Triage Test for Pulmonary Tuberculosis: a Prospective Study of Diagnostic Accuracy for Culture-Confirmed Disease	The Lancet Digital Health	WHO criteria, performance comparison of CAD software	Asia	Pakistan	CAD4TB (ver.6)	<a href="https://doi.org/10.1016/S2589-7500(20)30221-1">https://doi.org/10.1016/S2589-7500(20)30221-1</a>
2020	Can Artificial Intelligence Be Used to Accurately Detect Tuberculosis (TB) from Chest X-ray? A Multi-Platform Evaluation of Five AI Products Used for TB Screening in a High-Burden setting	ArXiv	Performance comparison of CAD software	Asia	Bangladesh	CAD4TB (ver.6)	<a href="https://doi.org/10.48550/arXiv.2006.05509">https://doi.org/10.48550/arXiv.2006.05509</a>
2019	Using Artificial Intelligence to Read Chest Radiographs for Tuberculosis Detection: A Multi-Site Evaluation of the Diagnostic Accuracy of Three Deep Learning Systems	Nature Scientific Reports	Performance comparison of CAD software	Asia, Africa	Nepal, Cameroon	CAD4TB	<a href="https://doi.org/10.1038/s41598-019-51503-3">https://doi.org/10.1038/s41598-019-51503-3</a>
2019	A systematic review of the diagnostic accuracy of artificial intelligence-based computer programs to analyze chest X-rays for pulmonary tuberculosis	PLOS one	Review of CAD related articles			CAD4TB	<a href="https://doi.org/10.1371/journal.pone.0221339">https://doi.org/10.1371/journal.pone.0221339</a>
2017	Fast and Effective Quantification of Symmetry in Medical Images for Pathology Detection: Application to Chest Radiography	Medical Physics	Symmetry computation				<a href="https://doi.org/10.1002/mp.12127">https://doi.org/10.1002/mp.12127</a>
2016	Automatic Detection of Pleural Effusion in Chest Radiographs	Medical Image Analysis	Detect pleural effusion				<a href="https://doi.org/10.1016/j.media.2015.09.004">https://doi.org/10.1016/j.media.2015.09.004</a>
2016	Computer-Aided Detection of Pulmonary Tuberculosis on Digital Chest Radiographs: a Systematic Review	The International Journal of Tuberculosis and Lung Disease	Systematic review			CAD4TB	<a href="https://doi.org/10.5588/ijtld.15.0926">https://doi.org/10.5588/ijtld.15.0926</a>
2015	On Combining Multiple-Instance Learning and Active Learning for Computer-Aided Detection of Tuberculosis	IEEE Transactions on Medical Imaging					<a href="https://ieeexplore.ieee.org/document/7347438/">https://ieeexplore.ieee.org/document/7347438/</a>

2015	Localized energy-based normalization of medical images: application to chest radiography	IEEE Transactions on Medical Imaging					<a href="https://ieeexplore.ieee.org/document/7073580">https://ieeexplore.ieee.org/document/7073580</a>
2015	Automatic Detection of Tuberculosis in Chest Radiographs Using a Combination of Textural, Focal, and Shape Abnormality Analysis	IEEE Transactions on Medical Imaging					<a href="https://ieeexplore.ieee.org/document/7045613">https://ieeexplore.ieee.org/document/7045613</a>
2014	A Novel Multiple-Instance Learning-Based Approach to Computer-Aided Detection of Tuberculosis on Chest X-Rays	IEEE Transactions on Medical Imaging					<a href="https://ieeexplore.ieee.org/document/6882215">https://ieeexplore.ieee.org/document/6882215</a>
2014	Cavity Contour Segmentation in Chest Radiographs Using Supervised Learning and Dynamic Programming	Medical Physics					<a href="https://doi.org/10.1118/1.4881096">https://doi.org/10.1118/1.4881096</a>
2014	Multiple-instance learning for computer-aided detection of tuberculosis	Medical Imaging					<a href="https://doi.org/10.1117/12.2043018">https://doi.org/10.1117/12.2043018</a>
2013	Suppression of Translucent Elongated Structures: Applications in Chest Radiography	IEEE Transactions on Medical Imaging					<a href="https://ieeexplore.ieee.org/document/6564454">https://ieeexplore.ieee.org/document/6564454</a>
2013	Foreign Object Detection and Removal to Improve Automated Analysis of Chest Radiographs	Medical Physics					<a href="https://doi.org/10.1118/1.4805104">https://doi.org/10.1118/1.4805104</a>
2013	Automated Localization of Costophrenic Recesses and Costophrenic Angle Measurement on Frontal Chest Radiographs	Proceeding from SPIE Medical Imaging 2013					<a href="https://doi.org/10.1117/12.2008239">https://doi.org/10.1117/12.2008239</a>
2013	Improved Texture Analysis for Automatic Detection of Tuberculosis (TB) on Chest Radiographs with Bone Suppression Images	Proceeding from SPIE Medical Imaging 2013					<a href="https://doi.org/10.1117/12.2008083">https://doi.org/10.1117/12.2008083</a>
2012	Clavicle segmentation in chest radiographs	Medical Image Analysis					<a href="http://dx.doi.org/10.1016/j.media.2012.06.009">http://dx.doi.org/10.1016/j.media.2012.06.009</a>
2010	Fusion of local and global detection systems to detect tuberculosis in chest radiographs	Medical Image Computing and Computer-Assisted Intervention					<a href="https://link.springer.com/chapter/10.1007%2F978-3-642-15711-0_81">https://link.springer.com/chapter/10.1007%2F978-3-642-15711-0_81</a>
2010	Rib Suppression in Chest Radiographs to Improve Classification of Textural Abnormalities	Proceeding from SPIE Medical Imaging 2010					<a href="https://doi.org/10.1117/12.844409">https://doi.org/10.1117/12.844409</a>
2009	Dissimilarity-based Classification in the Absence of Local Ground Truth: Application to the Diagnostic Interpretation of Chest Radiographs	Pattern Recognition					<a href="https://doi.org/10.1016/j.patcog.2009.01.016">https://doi.org/10.1016/j.patcog.2009.01.016</a>
2007	Computer-aided detection of interstitial abnormalities in chest radiographs using a reference standard based on computed tomography	Medical Physics					<a href="https://doi.org/10.1118/1.2795672">https://doi.org/10.1118/1.2795672</a>
2006	Segmentation of Anatomical Structures in Chest Radiographs Using Supervised Methods: a Comparative Study on a Public Database	Medical Image Analysis	Lung segmentation	-	-	-	<a href="https://doi.org/10.1016/j.media.2005.02.002">https://doi.org/10.1016/j.media.2005.02.002</a>
2002	Automatic Detection of Abnormalities in Chest Radiographs Using Local Texture Analysis	IEEE Transactions on Medical Imaging					<a href="https://ieeexplore.ieee.org/document/993132">https://ieeexplore.ieee.org/document/993132</a>



Others						
Year	Title	Journal / Publication	Key Words	Link		
2024	Policies, practices, opportunities, and challenges for TB screening – A survey of sixty National TB Programmes	medRxiv	Survey of NTP concerning TB screening	<a href="https://doi.org/10.1101/2024.07.03.24309601">https://doi.org/10.1101/2024.07.03.24309601</a>		
2024	Assessment of scattered and leakage radiation from ultra-portable digital chest X-ray systems: An independent study	arXiv	Radiation safety of ultra-portable digital X-ray	<a href="https://doi.org/10.48550/arXiv.2406.10044">https://doi.org/10.48550/arXiv.2406.10044</a>		
2024	Finding the missed millions: innovations to bring tuberculosis diagnosis closer to key populations	BMC Global and Public Health	Ultra-portable digital X-ray and CAD	<a href="https://doi.org/10.1186/s44263-024-00063-4">https://doi.org/10.1186/s44263-024-00063-4</a>		
2024	Tweaking algorithms. Technopolitical issues associated with artificial intelligence based tuberculosis detection in global health	Sage Journals	CAD Calibration	<a href="https://doi.org/10.1177/20552076241239778">https://doi.org/10.1177/20552076241239778</a>		
2023	Enhancing the reliability and accuracy of AI-enabled diagnosis via complementarity-driven deferral to clinicians	Nature Medicine	Complementarity-Driven Deferral to Clinical Workflow for AI	<a href="https://doi.org/10.1038/s41591-023-02437-x">https://doi.org/10.1038/s41591-023-02437-x</a>		
2023	Artificial intelligence-based computer aided detection (AI-CAD) in the fight against tuberculosis: Effects of moving health technologies in global health	Social Science & Medicine	Social-political and health aspects	<a href="https://doi.org/10.1016/j.socscimed.2023.115949">https://doi.org/10.1016/j.socscimed.2023.115949</a>		
2023	Artificial Intelligence-Based Software with CE Mark for Chest X-ray Interpretation: Opportunities and Challenges	Diagnostics	Overview of studies on CAD for Chest X-ray	<a href="https://doi.org/10.3390/diagnostics13122020">https://doi.org/10.3390/diagnostics13122020</a>		
2023	The rise of artificial intelligence reading of chest X-rays for enhanced TB diagnosis and elimination	The International Journal of Tuberculosis and Lung Disease	Overview of evidence on CAD	<a href="https://doi.org/10.5588/ijtld.22.0687">https://doi.org/10.5588/ijtld.22.0687</a>		
2022	Conditions required for the artificial-intelligence-based computer-aided detection of tuberculosis to attain its global health potential	The Lancet Digital Health		<a href="https://doi.org/10.1016/S2589-7500(22)00172-8">https://doi.org/10.1016/S2589-7500(22)00172-8</a>		
2022	User perspectives on the use of X-rays and computer-aided detection for TB	The International Journal of Tuberculosis and Lung Disease	User perspective	<a href="https://doi.org/10.5588/ijtld.22.0232">https://doi.org/10.5588/ijtld.22.0232</a>		

## Non-TB Abnormalities

Year	Title	Journal / Publication	Key Words	Region	Country	Delft Solutions	Link
2023	COVID-19 screening in low resource settings using artificial intelligence for chest radiographs and point-of-care blood tests	Nature Scientific Reports	COVID-19	Africa	South Africa, Lesotho	CAD4COVID X-ray	<a href="https://doi.org/10.1038/s41598-023-46461-w">https://doi.org/10.1038/s41598-023-46461-w</a>
2023	Incidental radiological findings during clinical tuberculosis screening in Lesotho and South Africa: a case series	Journal of Medical Case Reports	Identify non-TB abnormalities on CXR	Africa	Lesotho, South Africa	CAD4TB (ver.7)	<a href="https://doi.org/10.1186/s13256-023-04097-4">https://doi.org/10.1186/s13256-023-04097-4</a>
2023	Assessment of non-tuberculosis abnormalities on digital chest x-rays with high CAD4TB scores from a tuberculosis prevalence survey in Zambia and South Africa	BMC Infectious Diseases	Identify non-TB abnormalities on CXR	Africa	Zambia, South Africa	CAD4TB (ver.5)	<a href="https://doi.org/10.1186/s12879-023-08460-0">https://doi.org/10.1186/s12879-023-08460-0</a>

## Silicosis

Year	Title	Journal / Publication	Key Words	Region	Country	Delft Solutions	Link
2022	Accuracy of Computer-Aided Detection of Occupational Lung Disease: Silicosis and Pulmonary Tuberculosis in Ex-Miners from the South African Gold Mines	Int. J. Environ. Res. Public Health	Silicosis	Africa	South Africa	CAD4TB, CAD4Silicosis	<a href="https://doi.org/10.3390/ijerph191912402">https://doi.org/10.3390/ijerph191912402</a>
2020	Computer-Aided Detection for Tuberculosis and Silicosis in Chest Radiographs of Gold Miners of South Africa	International Journal of TB and Lung Disease	Silicosis	Africa	South Africa	CAD4TB	<a href="https://doi.org/10.5588/ijtld.19.0624">https://doi.org/10.5588/ijtld.19.0624</a>



## CAD for TB Screening: Policies and Guidelines

Year	Title	Organisation	Key Words	Link
2024	AI-assisted diagnostics for TB, COVID-19, and other respiratory diseases in low- and middle-income countries	FIND	AI tools for respiratory diseases	<a href="https://www.finddx.org/wp-content/uploads/2024/05/20240530_rep_ai_assisted_dx_FV_EN.pdf">https://www.finddx.org/wp-content/uploads/2024/05/20240530_rep_ai_assisted_dx_FV_EN.pdf</a>
2024	WHO Operational handbook on tuberculosis Module 6: Tuberculosis and comorbidities	World Health Organization	Chest X-ray and CAD for TB screening among people living with HIV	<a href="https://www.who.int/publications/i/item/9789240091290">https://www.who.int/publications/i/item/9789240091290</a>
2024	WHO Consolidated guidelines on tuberculosis Module 6: Tuberculosis and comorbidities	World Health Organization	Chest X-ray and CAD for TB screening among people living with HIV	<a href="https://www.who.int/publications/i/item/9789240087002">https://www.who.int/publications/i/item/9789240087002</a>
2022	Good Practices and Promising Interventions, Technical Series No. 8: A Cost Effectiveness Analysis of Mainstreaming Chest X-Ray Screening with Artificial Intelligence-Powered Computer-Aided Detection or Human Readers in Public Facilities	USAID, CLAIHealth	Digital X-ray and CAD cost effectiveness	<a href="https://pdf.usaid.gov/pdf_docs/PA00Z93H.pdf">https://pdf.usaid.gov/pdf_docs/PA00Z93H.pdf</a>
2022	Tuberculosis Prevention and Care Among Refugees and Other Populations in Humanitarian Settings: an interagency field guide	CDC, UNHCR, World Health Organization	Digital X-ray and CAD	<a href="https://www.who.int/publications/i/item/9789240042087">https://www.who.int/publications/i/item/9789240042087</a>
2021	Screening and Triage for TB using Computer-Aided Detection (CAD) Technology and Ultra-portable X-Ray Systems: A Practical Guide	Stop TB Partnership	CAD for TB screening and triage Ultra-portable X-ray	<a href="https://www.stoptb.org/resources-implementing-cad-and-xray/cad-and-x-ray-practical-implementation-guide">https://www.stoptb.org/resources-implementing-cad-and-xray/cad-and-x-ray-practical-implementation-guide</a>
2021	Programmatic innovations to address challenges in tuberculosis prevention and care during the COVID-19 pandemic	World Health Organization	TB and COVID-19	<a href="https://www.who.int/publications/i/item/programmatic-innovations-to-address-challenges-in-tuberculosis-prevention-and-care-during-the-covid-19-pandemic">https://www.who.int/publications/i/item/programmatic-innovations-to-address-challenges-in-tuberculosis-prevention-and-care-during-the-covid-19-pandemic</a>
2021	Determining the local calibration of computer-assisted detection (CAD) thresholds and other parameters: a toolkit to support the effective use of CAD for TB screening	World Health Organization	CAD Calibration	<a href="https://tdr.who.int/docs/librariesprovider10/cad/toolkit-to-support-the-effective-use-of-cad-for-tb-screening.pdf?sfvrsn=86f4bad0_14">https://tdr.who.int/docs/librariesprovider10/cad/toolkit-to-support-the-effective-use-of-cad-for-tb-screening.pdf?sfvrsn=86f4bad0_14</a>
2021	Digital Chest Radiography and Computer-Aided Detection (CAD) Solutions for Tuberculosis Diagnostics - Technology Landscape Analysis	FIND	Digital X-ray and CAD	<a href="https://www.finddx.org/wp-content/uploads/2021/04/FIND-CXR-CAD-solutions-for-TB-diagnosis-7Apr2021-2pg-spread.pdf">https://www.finddx.org/wp-content/uploads/2021/04/FIND-CXR-CAD-solutions-for-TB-diagnosis-7Apr2021-2pg-spread.pdf</a>
2021	WHO Operational handbook on tuberculosis Module 2: Screening Systematic screening for tuberculosis disease	World Health Organization	CAD Recommendation	<a href="https://apps.who.int/iris/bitstream/handle/10665/340256/9789240022614-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/340256/9789240022614-eng.pdf</a>
2021	WHO Consolidated guidelines on tuberculosis Module 2: Screening Systematic screening for tuberculosis disease	World Health Organization	CAD Recommendation	<a href="https://apps.who.int/iris/bitstream/handle/10665/340255/9789240022676-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/340255/9789240022676-eng.pdf</a>
2019	StopTB Partnership Field Guide on Chest X-ray Screening	StopTB Partnership	CXR Field Guide	<a href="https://stoptb-strategicinitiative.org/index.php/2019/04/17/stoptb-field-guide-8-chest-x-ray-screening/">https://stoptb-strategicinitiative.org/index.php/2019/04/17/stoptb-field-guide-8-chest-x-ray-screening/</a>
2018	Mobile Care for TB Screening and Diagnosis - a How-To Guide	USAID/ChallengeTB	Mobile screening	<a href="https://www.challengetb.org/publications/Challenge_TB_Mobile_Care_How_To.pdf">https://www.challengetb.org/publications/Challenge_TB_Mobile_Care_How_To.pdf</a>
2017	Global investments in Tuberculosis research and development: past, present and future	World Health Organization	Automated imaging detection	<a href="https://apps.who.int/iris/bitstream/handle/10665/259412/9789241513326-eng.pdf;jsessionid=7E0F217142B74E2DDE438FE6FB9AD925?sequence=1">https://apps.who.int/iris/bitstream/handle/10665/259412/9789241513326-eng.pdf;jsessionid=7E0F217142B74E2DDE438FE6FB9AD925?sequence=1</a>
2015	Chest Radiography in Tuberculosis Detection - Summary of Current WHO Recommendations and Guidance on Programmatic Approaches	World Health Organization	TB diagnostics pipeline	<a href="https://apps.who.int/iris/bitstream/handle/10665/252424/9789241511506-eng.pdf?sequence=1">https://apps.who.int/iris/bitstream/handle/10665/252424/9789241511506-eng.pdf?sequence=1</a>
2015	WHO Compendium of Innovative Health Technologies for Low-Resource Settings	World Health Organization	New innovation	<a href="https://www.who.int/publications/i/item/9789241509992">https://www.who.int/publications/i/item/9789241509992</a>
2014	Tuberculosis - Diagnostics Technology and Market Landscape	UNITAID, World Health Organization	TB diagnostics technology landscape	<a href="https://unitaid.org/assets/Tuberculosis_diagnostics_technology_and_market_landscape_4th_edition_Oct_2015.pdf">https://unitaid.org/assets/Tuberculosis_diagnostics_technology_and_market_landscape_4th_edition_Oct_2015.pdf</a>
2012	Digital Imaging Innovations for Early TB Case Detection	StopTB Partnership / CheckTB	Active case finding	<a href="https://stoptb.org/wg/new_diagnostics/assets/documents/F.vanDoren_CAD%20Digital%20X-ray.pdf">https://stoptb.org/wg/new_diagnostics/assets/documents/F.vanDoren_CAD%20Digital%20X-ray.pdf</a>