CAD4TB

Computer-Aided Detection for Tuberculosis

CAD4TB is a CE-certified AI software to support fast, easy, highly accurate automated TB detection with cost-efficiency. CAD4TB is available for online and offline use to analyse images 4 years old and above, enabling data-driven TB screening in resource-constrained settings.

Features of CAD4TB

- CAD4TB outputs:
  – An abnormality score (between 0 and 100)
  – A heat map indicating possible areas of abnormalities associated with TB
- Results are ready within 2 seconds
- Images of adults and children from age 4+ can be processed
- Available for online (CAD4TBcloud) and offline (CAD4TBbox)
- Integrated & data-driven TB screening by CAD4TB platform
- The latest version includes cardiomegaly analysis

Artificial Intelligence for TB detection

9.6 million+ people Screened by CAD4TB

40+ Countries Utilize CAD4TB

60+ Scientific publications Featuring CAD4TB

Age 4+ Children's CXR to process by CAD4TB
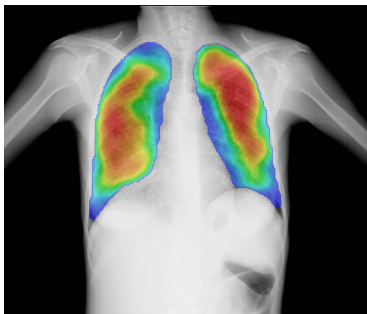
Hybrid Offline and/or Online use for CAD4TB

Data Platform For integrated TB screening

CAD4TB is a Class IIb medical software which quickly analyses a digital chest X-ray image and gives an indication if the subject on the image has abnormalities that may be related to pulmonary TB. The software has been trained in the detection of TB-related abnormalities by applying deep learning. CAD4TB has also received expert feedback from lung specialists, making it extremely accurate and reliable.

CAD4TB Platform

Q DEMO OUR CAD4TB PLATFORM

Login: user@cad4tb.care
Password: Showing2Customers!

Data agility with CAD4TB Platform

Evolving from paper-based to digitalised data management using one platform is key to further making the TB screening process efficient. Therefore, we introduce the CAD4TB Platform with SAM (Screening-Analytics-Management) functionalities as an add-on to the CAD4TB AI software.

Features of CAD4TB Platform

The CAD4TB platform provides modules for patient registration, symptoms registration, and reporting including individual report and dashboards. It digitizes the TB screening process and provides valuable and targeted insights, including gender, age demographics and CAD4TB scores.

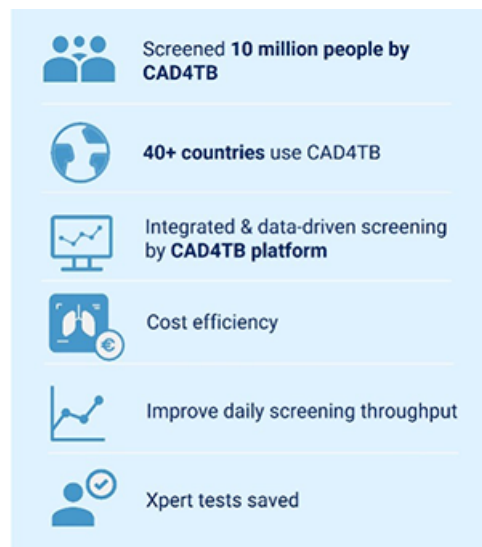## Data governance for successful adoption of digital TB screening

The CAD4TB platform enables TB programs to rapidly screen risk groups and support prevalence surveys while simultaneously collecting digitized data and information into one platform. Thus, it facilitates and simplifies data governance and optimizes the successful adoption of digital TB screening systems. The SAM functionalities contribute to data quality and integrity while avoiding data fragmentation. It also enables data access from multiple locations: by providing connectivity with other data systems at the national level, SAM can serve as the first data entry point for health workers at the community level, thereby ensuring that National TB Programs can access aggregated data and dashboards.

Click here to learn about Data-driven TB control with CAD4TB platform

Within 2 seconds, the CAD4TB software analyses a chest X-ray, detects abnormalities and indicates the likelihood that active TB is present. This allows costly TB tests to be used only in suspected cases.

Advantages of CAD4TB

CAD4TB can facilitate fast, easy, highly accurate automated TB detection with cost efficiency: it does not require skilled human readers to determine if the subject is a presumptive TB case; and only if the output score is higher than a certain threshold, patient will need confirmatory testing to finalize the diagnosis. Various scientific publications suggest that CAD4TB can perform on par or significantly better than human expert readers and meets the WHO's Target Product Profile. 'Studies also highlight that CAD4TB can increase daily screening throughput by 2.5 times, reduce the cost per screen by 50%, and save Xpert test usage with up to 75%cand save Xpert test usage with up to 75%. The offline CAD4TB solution is relevant for the use in resource-constrained settings with high daily throughput.

Screened **10 million people** by **CAD4TB**

40+ countries use CAD4TB

Integrated & data-driven screening by **CAD4TB platform**

Cost efficiency

Improve daily screening throughput

Xpert tests saved

Bi-directional Tuberculosis/COVID-19 Screening

The COVID-19 pandemic is threatening the global goals to fight to end TB by 2030. Thereupon, the importance to implement prioritized mitigation measures and innovations for TB programs have been indicated from across the globe. This includes prioritizing bi-directional screening/testing for TB and COVID-19, using X-ray with CAD (computer-aided detection).

At the start of the pandemic, we developed CAD4COVID which uses the same technical core and quality standard as our proven CAD4TB software. With years of digital X-ray and CAD field implementation expertise, our response to the bi-directional screening equation pertaining to TB and COVID-19 is apparent.

Procuring CAD4TB via GDF Diagnostics Catalogue

The Stop TB Partnership's Global Drug Facility (GDF) announced the inclusion of ultra-portable digital X-ray systems and software packages for the computer-aided detection (CAD) of tuberculosis (TB) based on AI. These TB

combat tools will be made available at a reduced cost to all TB programs around the globe. We are proud to announce that CAD4TB can now be easily procured through the Diagnostics Catalogue of GDF at a pre-negotiated price. Learn more here.

Timeline Delft Imaging & CAD4TB

Delft Projects Using CAD4TB

Cameroon

An estimated 46,000 people in Cameroon had TB in 2020. But roughly half were not diagnosed and notified as only 18% of health facilities offer TB services through unreliable tests for diagnosis. To reduce [...]

Uganda – Rural

In Uganda, an estimated 90,000 people fell sick with TB in 2020. Globally, Uganda is one of the countries that have a high burden of TB. To accelerate case detection and further save the [...]

Bangladesh – High-population

With support from the Stop TB Partnership's TB REACH initiative, icddr,b screened 655,751 people using digital X-ray and CAD4TB in the 4th most populous city

Nigeria – Prison

To tackle an outbreak of TB in Kano Central Correctional Center, KNVC Nigeria deployed OneStop TB Mobile Clinic (WoW: Wellness on

Zambia

PATH intensified its TB case finding mission by using Delft's OneStop Mobile Clinic in the highest TB burden province of Zambia: Copperbelt. The OneStop Mobile

Uganda

As a quarter of TB cases are estimated to be missed in 2020, the National Tuberculosis and Leprosy Program of Uganda, used Delft Light with CAD4TB for a TB case finding

Nigeria

In February 2021, we successfully completed the last phase of the Lagos State Ministry of Health project which began in December 2020. Altogether 21 digital x-ray installations, including 3 mobile screening vans, 8 semi-mobile

Thailand

Delft Imaging installed 5 Delft Lights with CAD4TB and CAD4COVID which they use for screening migrants at the border and prisons. With the financial support of the Global Fund, SMRU is managing a tuberculosis screening program in the migrant

Want to learn more about CAD4TB?

💬 CONTACT US!

Delft Imaging

ISO certified

Stay in Touch

Delft Newsletter

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