



## TB DIAGNOSTICS: NEWER TOOLS AND OUTLOOK

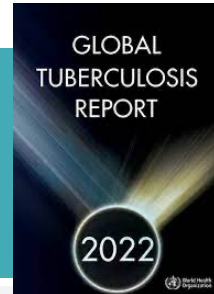
– Bringing diagnostics  
to communities

◆ Adam Penn-Nicholson  
Deputy Director TB programme - FIND

22 March 2023

## TB DIAGNOSTIC GAP

**Covid impacts<sup>2</sup> further emphasize the urgent need for simpler tools to enable PHC and community-based screening and testing**



### Testing remains the weakest link in the cascade of care<sup>1</sup>

- Of annual 10.6M cases, 4.0M remain undiagnosed<sup>1</sup>
- 1 in 3 TB patients are bacterially confirmed
- 1 in 5 TB patients are diagnosed with a WHO recommended mDx
- 1 in 3 with DR-TB are tested and put on relevant treatment



**18% (1.3M!)**

fewer people were notified in 2020 compared to 2019



**The hardest hit countries are among the highest absolute TB incidence<sup>3</sup>**

...India, Indonesia, China, Bangladesh, Nigeria, Pakistan...

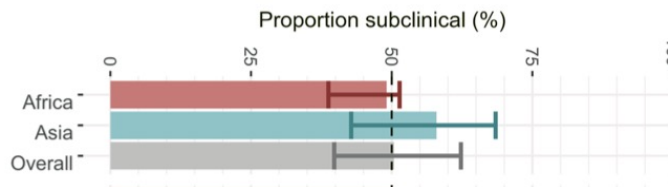
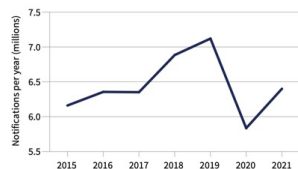
### Diagnostic gaps in TB have many root causes<sup>4</sup>

- ◆ Existing tools are not fit for purpose
- ◆ 70% of patients initiate care at the community and PHC where there is no capacity to diagnose TB
- ◆ **Symptom screen** miss 50% of TB cases in communities<sup>5</sup>
- ◆ **Reliance on sputum** makes diagnosis difficult and selects patients with advanced disease

### The pandemic has opened new opportunities

- ◆ Bringing diagnostics closer to the patients
- ◆ Diverse MDx portfolio, the end of one-size-fits-all
- ◆ Leveraging investments in Dx infrastructure, digital and connectivity
- ◆ New tools for a comprehensive response with TBI test-and-treat strategies, sCTB and personalized medicine in TB

Global notified new TB cases



<sup>1</sup> WHO global TB report 2022

<sup>2</sup> StopTB modelling

<sup>3</sup> WHO global TB report 2021

<sup>4</sup> Pai M et al, Nat.Microb. 2017

<sup>5</sup> Francella et al, CID, 2021 DOI: 10.1093/cid/ciaa1402



## OUR MISSION

FIND seeks to ensure equitable access to reliable diagnosis around the world

- ◆ **We connect countries and communities, funders, decision-makers, healthcare providers and developers** to spur diagnostic innovation and make testing an integral part of sustainable, resilient health systems

### GOAL:

**ACCELERATE GLOBAL EFFORTS TOWARDS UNIVERSAL HEALTH COVERAGE AND HEALTH EMERGENCY RESPONSE**



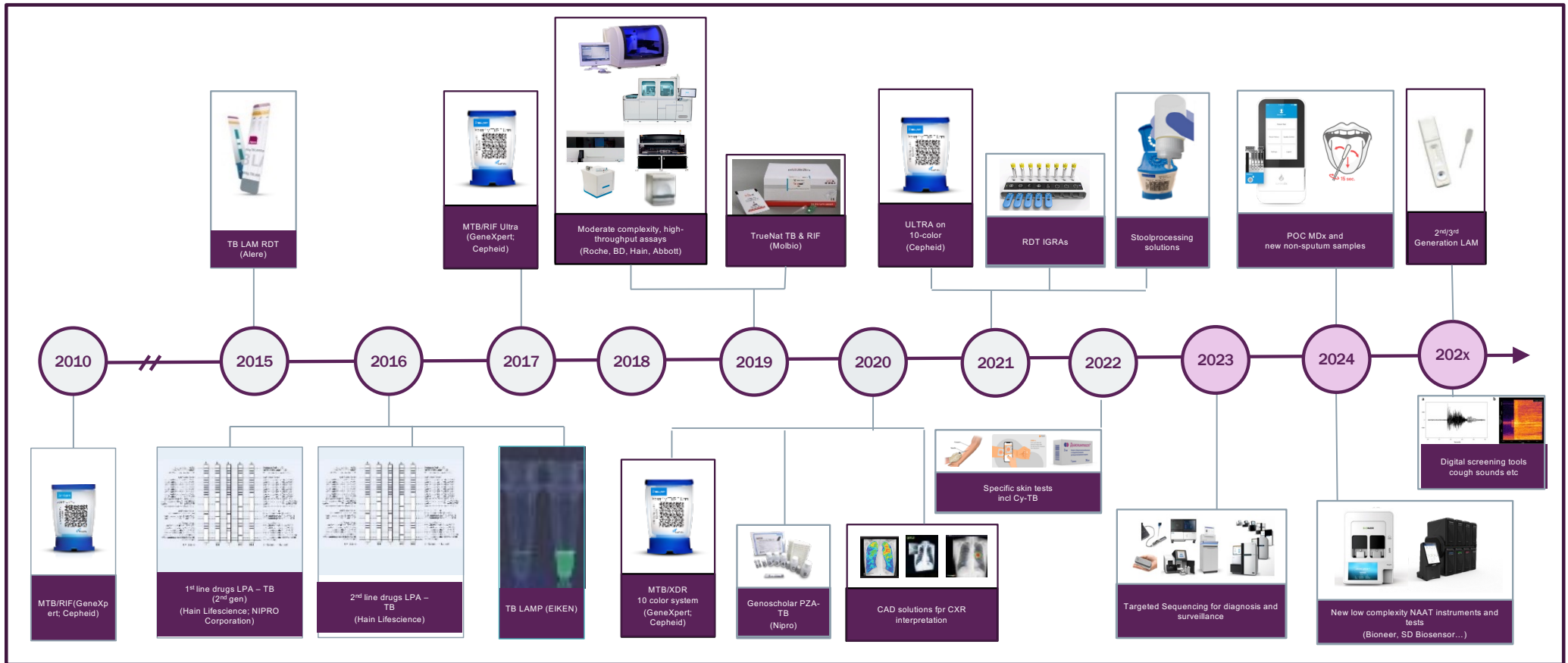
FIND 

TB

HOW WILL WE  
DELIVER ON  
THIS VISION?



FIND HAS GENERATED PIVOTAL EVIDENCE FOR ALL NEW TB DIAGNOSTICS REVIEWED AT WHO SINCE 2010 - 27 TESTS AT 14 GDG/TEGs.  
 19 WERE AT 7 GDG/TEGs SINCE 2019...BUT ALMOST ALL FIND EVIDENCE RELATED TO DX ACCURACY



...and many others

**FIND** 

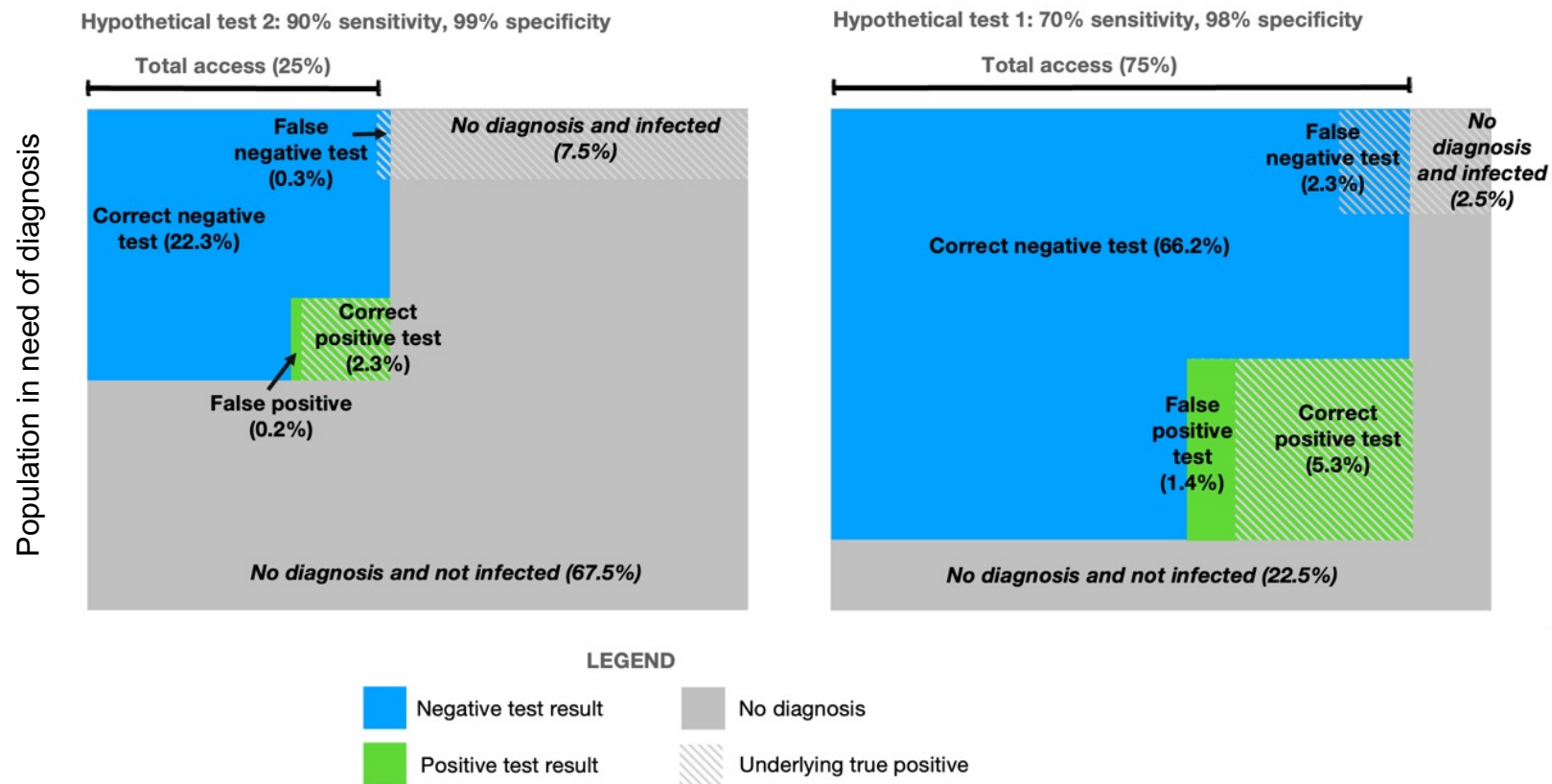
**BRINGING DX CLOSER  
TO THE PATIENTS**



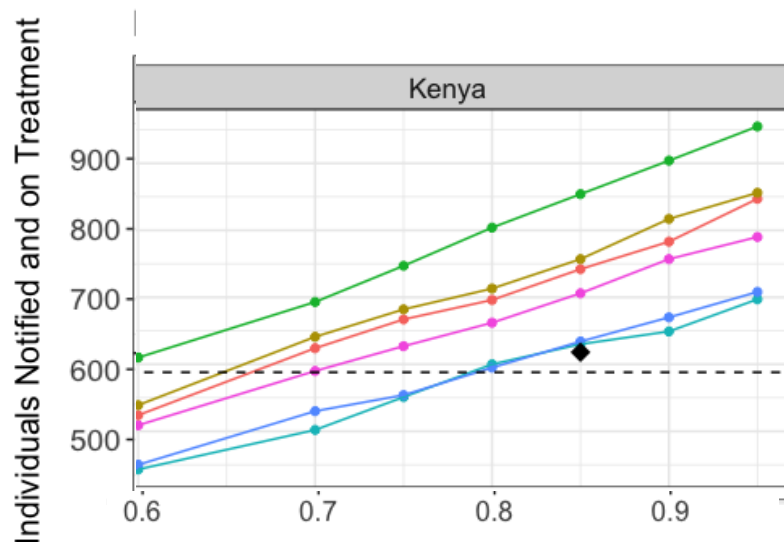
ADDRESSING THE 4.1M DETECTION GAP?

REPLACING NOTHING WITH SOMETHING PROBABLY MAKES 'SO-SO' 'GOOD ENOUGH'

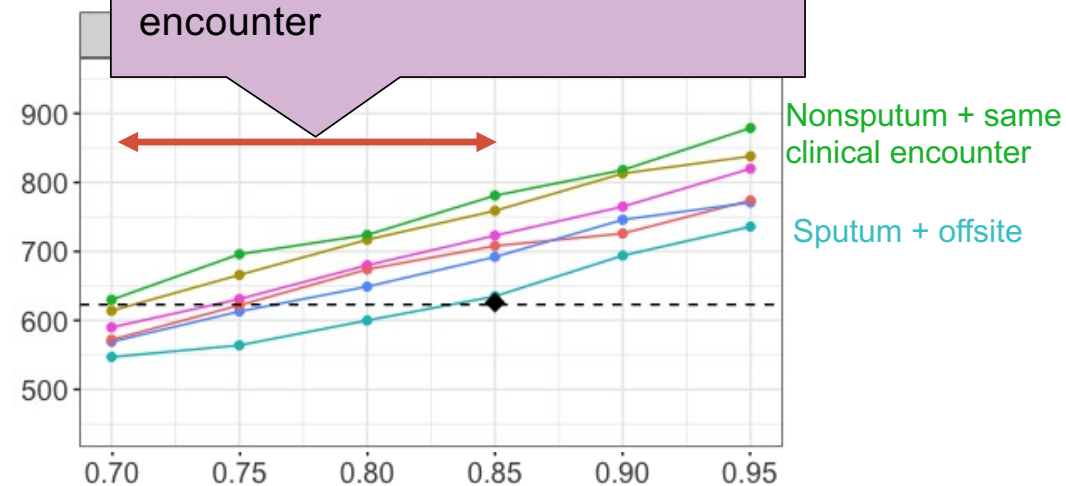
Trade off between test accuracy and test access, assuming an underlying disease prevalence of 10%



## MODELLED IMPACT WITH VARIOUS ACCESS PARAMETERS



Sensitivity reduction of 15% would render similar number of notified cases if test was non-sputum based and result in same clinical encounter



- ◆ NAAT in standard of care
- labs
  - nonSputum+offsite
  - nonSputum+onsite
  - nonSputum+sameClinicalEncounter
  - sputum+offsite
  - Sputum+onsite
  - Sputum+sameClinicalEncounter
- baseline



BRINGING mDX TO THE PEOPLE  
POINT OF CARE MOLECULAR...

Onsite Xpert testing and access to same day treatment initiation leads to 56% increase in treatment start (measured a day 14)  
(Xpel study, Katamba, Cattamanchi et al in press)



Cepheid Omni



Omni

Cepheid Edge



Edge

Molbio

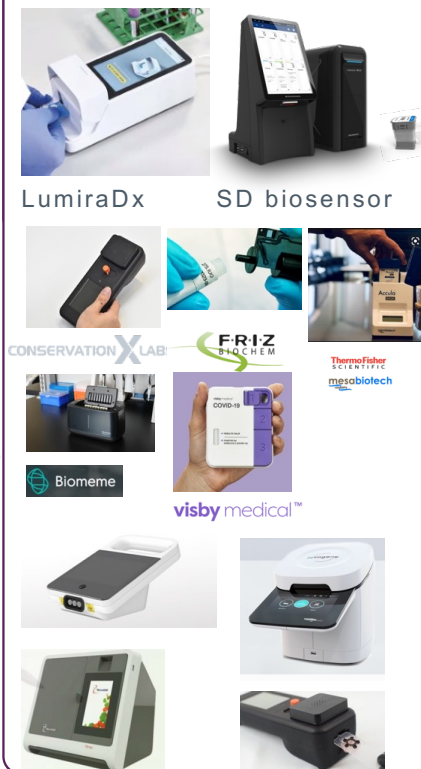


TruePrep + TrueLab



FAST followers

RT-PCR, RCA, LAMP...



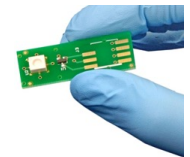


## EDCTP FUNDED TB-CAPT CONSORTIUM



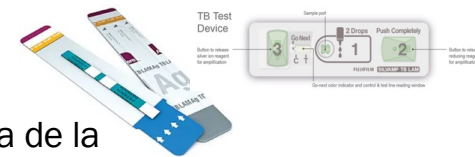
**CORE TRIAL:** *Molbio Truenat™ TB platform combined with the Truenat TB assays for detection of tuberculosis and rifampicin resistance in adults with presumptive pulmonary tuberculosis at primary-level diagnostic centres in Tanzania and Mozambique: a pragmatic, cluster-randomized controlled trial*

Katharina Kranzer, Adam Penn-Nicholson, Morten Ruhwald, Elisa Tagliani and many others



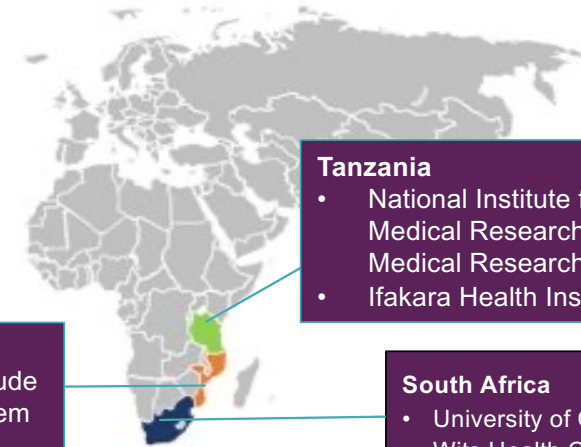
**EXULTANT TRIAL:** *Expanding Xpert Ultra for TB: diagnosis among HIV-positive patients admitted to hospitals in Tanzania and Mozambique*

Alberto García-Basteiro, Adam Penn-Nicholson, Laura de la Torre, Morten Ruhwald, Elisa Tagliani, and many others



**Xpert MTB/XDR study:** *Two-site laboratory-based diagnostic accuracy and feasibility study of the Xpert MTB/XDR assay for detection of isoniazid, fluoroquinolone, ethionamide and second-line injectable anti-tuberculosis drug*

Helen Cox, Leslie Scott, Chad Cetner, Adam Penn-Nicholson, Morten Ruhwald, Elisa Tagliani, and many others



- Tanzania**
- National Institute for Medical Research – Mbeya Medical Research
  - Ifakara Health Institute Trust

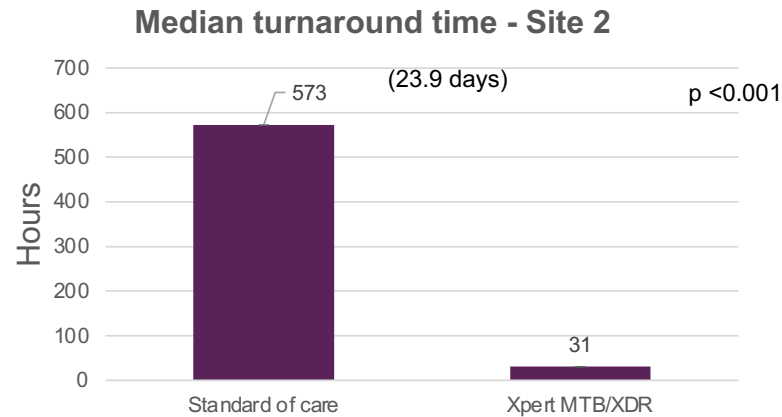
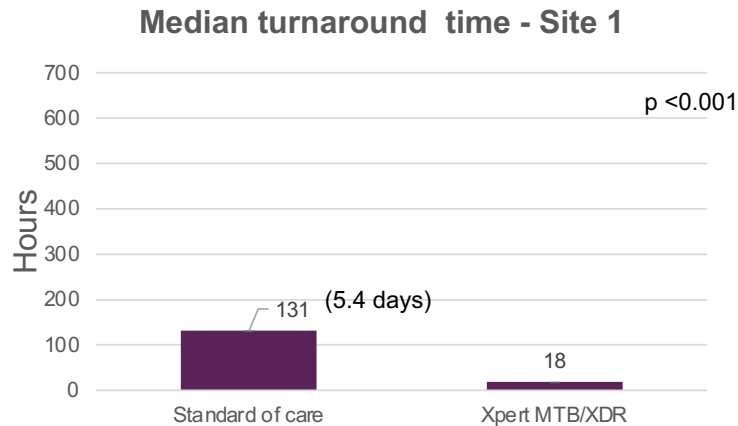
- Mozambique**
- Instituto Nacional de Saude
  - Centro de Investigação em Saúde de Manhiça

- South Africa**
- University of Cape Town Wits Health Consortium

XPERT XDR

Diagnostic Accuracy and Feasibility study of Xpert MTB/XDR

- Two high throughput labs in South Africa (Cape Town and Gqeberha)
- Sputum from n=763 participants processed by Xpert Ultra and reflexed to Xpert XDR, vs pDST + WGS, compared to LPA
  - **86% of specimens were processed on Xpert XDR >4hrs of addition of SR buffer, with no significant impact on test validity rates for any drug target.**
  - **Median turn-around-time for resistance result was dramatically reduced by Xpert XDR vs SOC**



Diagnostic accuracy was aligned to previously reported results

Next step: TRiAD study → To evaluate the effectiveness, operational feasibility, acceptability, and cost-effectiveness of implementing the Xpert MTB/XDR assay for rapid triage and selection of all-oral regimens for DR-TB



GROWING LANDSCAPE AND PIPELINE OF 'LOW COMPLEXITY AUTOMATED NAATS'  
**STATUS ON mDx assays**

**CEPHEID**



**Ultra**  
TB/RIF

**Xpert MTB/XDR + 10 color**  
INH/FQ/SLIDs

**MOLBIO**



THIS SIMPLE CHIP  
Can Test 30+ Diseases  
#Truenat

**Trueprep + Truelab**  
MTB + RIF

GROWING LANDSCAPE AND PIPELINE OF 'LOW COMPLEXITY AUTOMATED NAATS'  
**NEAR POC MDX**

**SD BIOSENSOR, STANDARD M10**



**STANDARD M10**

- MTB assay
  - TB, RIF, INH
  - Result in 60 mins

**BIONEER, IRON-qPCR**



- MTB assay
  - TB, RIF, INH, FQ, SLID
  - Result in 30 mins

**MOLBIO, TRUENAT**



- New Ultima, INH and FQ chips
- Combined TB and Covid-19 assay
- Clinical trials started in 2022

mWRDs, moderate complexity NAATs

READY TO LEVERAGE COVID-19 INVESTMENTS, MULTI-PATHOGENIZE MDX SERVICES

▪ **Enable**

- Sputum based
- high-throughput testing
- upfront INH testing
- multi-disease testing

▪ **Performance**

- Sensitivity similar to Xpert
- Resistance detection similar to LPA

**Abbott**



Abbott m2000sp



Abbott m2000rt



**Hain**



GenoXtract®96



FluoroCycler® 96

Fluorotype XDR - in trial



**BD**



BD MAX™



**Roche**



Roche: cobas® 8800/6800 System

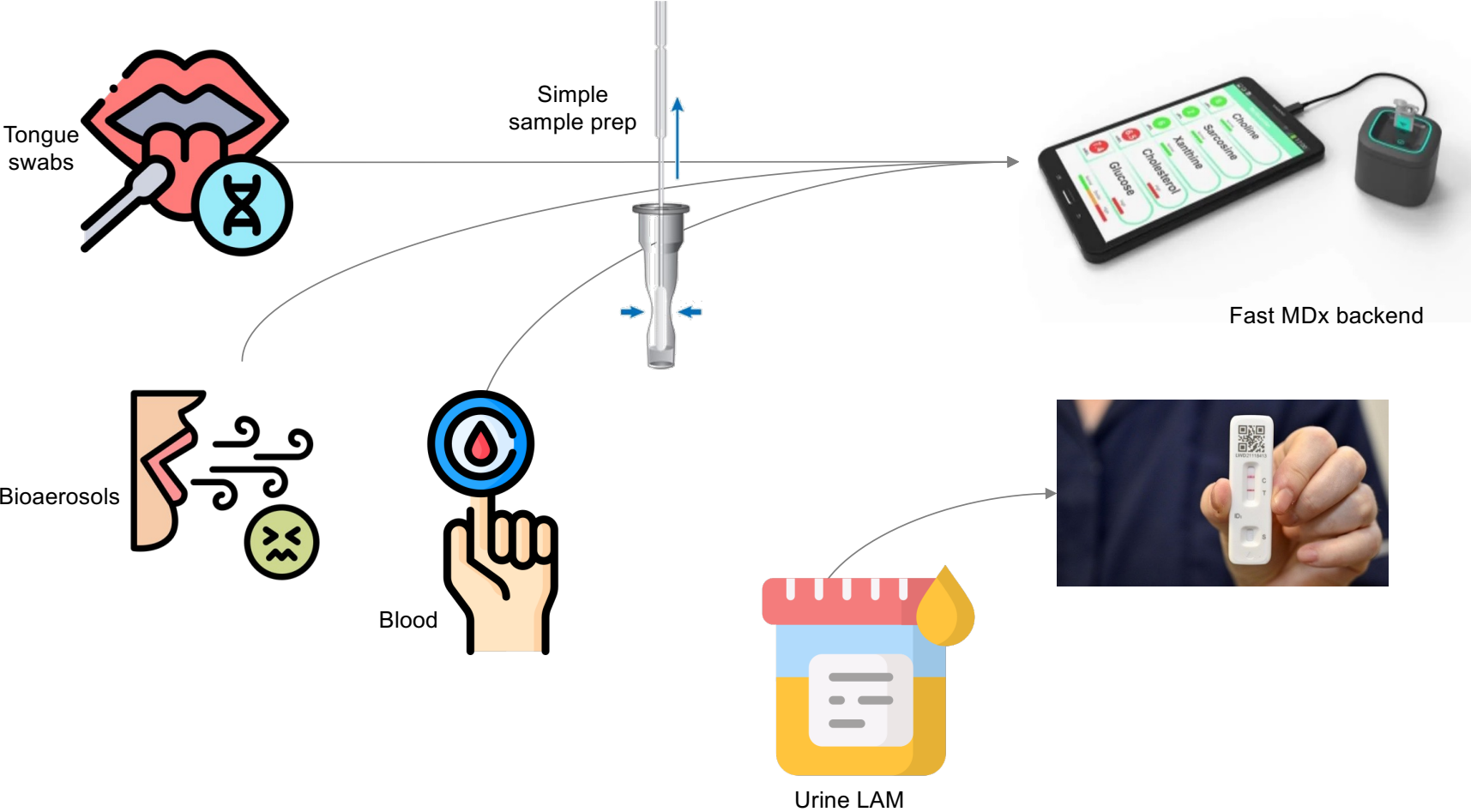


**Bioneer**



Bioneer: ExiStation™ Universal MDx System

# AN ALTERNATIVE TO SPUTUM - ADDRESS MAJOR ACCESS BARRIERS LEAD STRATEGIES PURSUED



NON-SPUTUM BASED SAMPLING WITH SWABS

TONGUE SWABS IS A POTENTIALLY DISRUPTIVE STRATEGY TO REPLACE SPUTUM



- Swab frozen in 1.2ml PBS
- Thawed, and 2.4ml SR buffer added
- 2ml loaded to Xpert Ultra



<b>Tongue</b>
<b>Cheek and gums</b>
<b>Nostrils</b>
<b>Tongue, cheek and gum</b>

FEND-TB consortium, in preparation  
\* = n=30 for nostril swabs

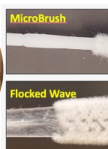


Tongue swab Ultra, Method 2 (N=183) trace+ for all		
	Sputum Xpert	Microbiologic reference standard*
<b>Sensitivity</b>	77.8 (64.4-88.0)	73.4 (59.1-83.3)
<b>Specificity</b>	100 (97.2-100)	100 (96.9-100)



Some refinements underway

- The optimal swab?
- Sample prep?
- The optimal backend?
- Stability and optimal transport media...or dry?
- Simultaneous SARS-CoV2 testing?



**"I got tested at home, the help came to me": acceptability and feasibility of home-based TB testing of household contacts using portable molecular diagnostics in South Africa**

Andrew Medina-Marino<sup>1,2,3</sup>, Lindsey de Vos<sup>1</sup>, Dana Bezuidenhout<sup>1</sup>, Claudia M. Denkinger<sup>4,5</sup>, Samuel G. Schumacher<sup>4</sup>, Sanghyuk S. Shin<sup>6</sup>, Wendy Stevens<sup>7</sup>, Grant Theron<sup>8</sup>, Martie van der Walt<sup>9</sup> and Joseph Daniels<sup>10</sup>

SWABS IN ACTIVE CASE FINDING PILOT

ANALYZING SWABS IN REAL TIME IN THE COMMUNITY, POOLING SWABS FROM HOUSEHOLD

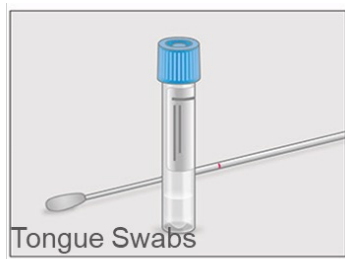
Andrew Medina-Marino and Bernard Fourie, in preparation



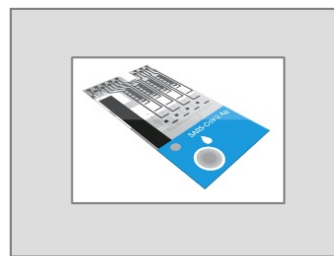


## LumiraDx TB MOLECULAR

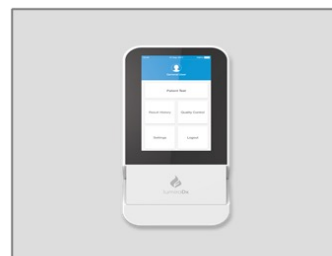
### FIRST IN CLASS - SWAB BASED TB DETECTION ON MULTI-PATHOGEN PLATFORM AT POC



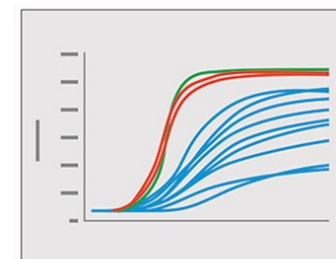
Sample Collection  
& Lysis



Insert Strip &  
Add Sample



Amplification  
15 minutes



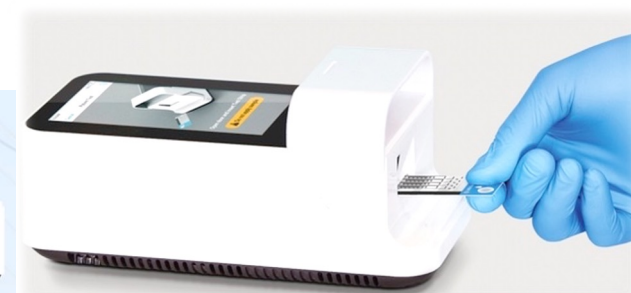
Analysis and  
Report



**Total Test Time: ~20 Minutes**

#### LumiraDx Smart Connectivity

- Step-by-step test instructions on screen
- Digital display of results and reporting
- Data analytics and decision support
- Seamless, secure connectivity to the cloud and health IT systems
- Platform launch 2018, in 2021 5k instruments installed in Africa, 20k globally
- TB assay enter policy trial 2023



Proprietary process subject to LumiraDx IP protection. Project subject to further development and regulatory approval. 18

FIND 

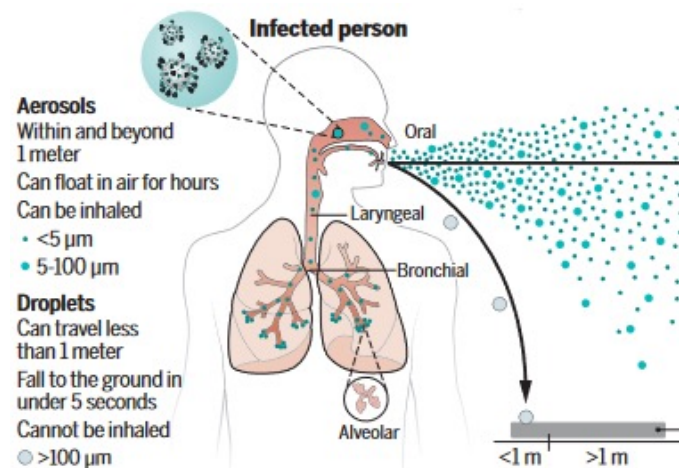
IS THIS PRACTICAL?



BIOAEROSOLS POTENTIALLY DETECT SUBCLINICAL/MINIMAL DISEASE BETTER THAN SPUTUM-BASED METHODS



TB AEROSOLS & CAPTURE TECHNOLOGIES



Mtb  
 0.2–0.5  $\mu\text{m}$  x 2–4  $\mu\text{m}$



Face mask-type technologies



Blow tube-type technologies



- Higher in patients with pulmonary TB, declines with Rx
- Infectiousness is highly variable
- Aerosol output is better predictor of Mtb in households compared to smear positivity

## ADDITIONAL USE CASES SUBCLINICAL TB DETECTION

### FMS performance for sub-clinical TB

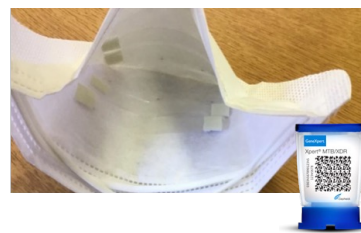
Exhaled *Mycobacterium tuberculosis* output and detection of subclinical disease by face-mask sampling: prospective observational studies



Caroline M Williams, Mahamad Abdulwhhab, Surinder S Birring, Elsabe De Kock, Natalie J Garton, Eleanor Townsend, Manish Pareek, Alaa Al-Taie, Jingzhe Pan, Rakesh Ganatra, Anton C Stoltz, Pranabashis Halder, Michael R Barer



Pretoria ACF Study, n=20 WHO symptom score TB-positive



Xpert - /Mask -, n=12 → 10mo FU, No TB  
 Xpert + /Mask -, n=1 }  
 Xpert + /Mask +, n=1 } Started Rx  
 Xpert - /Mask +, n=6

**Positivity rate:** 7/8 for masks and 2/8 for sputum Xpert

**6 weeks FU (n=5)**  
 n=4 Xpert+ve/Mask+ve  
 • all CXR-ve but PET-CT+ve  
 n=1 Xpert-ve/Mask+ve  
 • CXR-ve, PET-CT+ve  
 • Alternative Dx made at 20 week FU

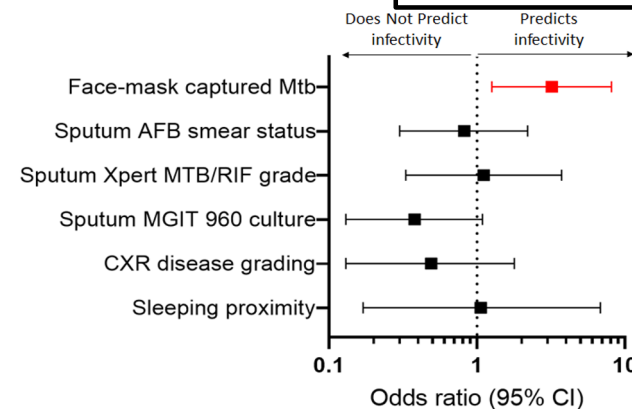
## TRANSMISSION

### FMS performance for household contacts (transmission)

The Gambia, n=46 microbiologically confirmed TB patients each with at least 3 household contacts (n=181 household contacts)

**Index Cases**  
 1hr FMS at enrolment  
 Sputum sample at enrolment

**Household Contacts**  
 QFT at enrolment  
 Assessment for active TB at enrolment  
 QFT at 6 months  
 Assessment for active TB at 6 months

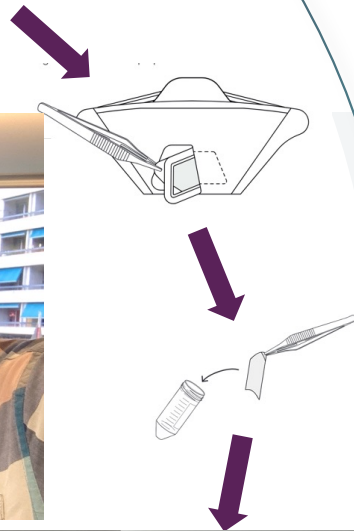
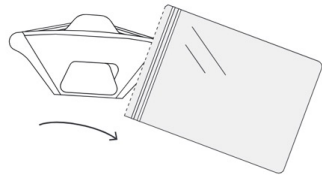


Williams CM et al.  
<https://www.medrxiv.org/content/10.1101/2021.11.06.21266008v1>

- A high mask Mtb level ( $\geq 20,000$  IS6110 copies) observed in 45% of cases and associated with increased likelihood of incident Mtb infection in contacts
- Mask Mtb level was a better predictor of incident Mtb infection than sputum bacillary load, chest radiographic characteristics or sleeping proximity
- Follow-up studies in Pretoria, screening 321pts to date, found >25% positivity with FMS+Ultra

## FACE MASKS AND BREATH CAPTURE

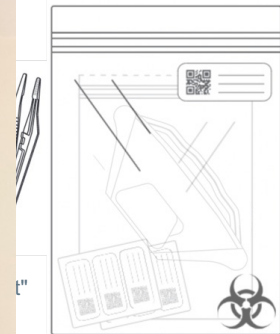
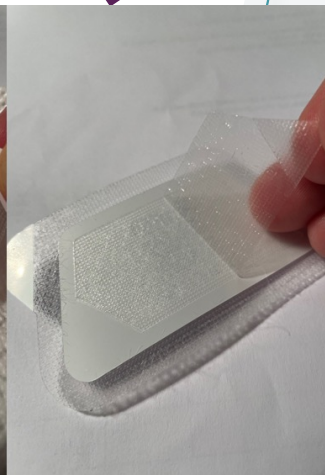
30 MIN



FIND and the University of Leicester have developed the concept into a scalable product for tidal breath sampling (30min) and TB detection

Clinical performance for TB detection is currently being evaluated in FEND-TB

Once clinical evidence is available, production will be scaled up and face masks will be made available for clinical use via an RFP process



Wear 30mins

Remove PVA strip and backing from mask

Remove PVA strip from backing

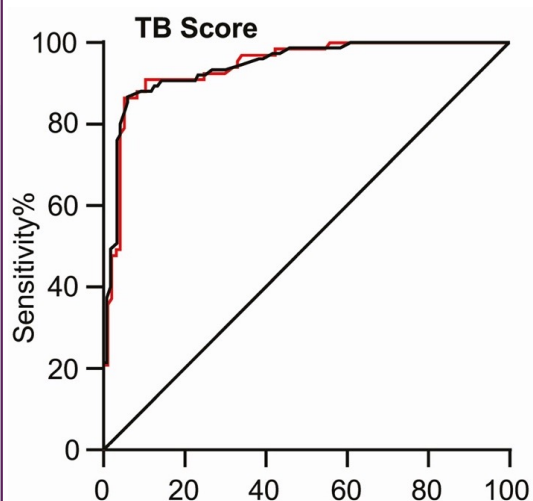
Dissolve PVA strip in 4ml H2O (tap)

Run 5 drops of dissolved PVA on RDT (neat)

<https://www.fend-tb.org/>

# NON-SPUTUM-BASED TESTING USING BLOOD? BLOOD-BASED DX

## mRNA TRANSCRIPTOMICS



### Study Overview

- Gambia, Vietnam, Uganda and South Africa
- 75 Xpert positive, 120 negative
- 200ul fingerstick blood

### Findings

- AUC 0.94
- Sensitivity 87%
- Specificity 94%

— All AUC 0.94 95% CI, .91–.97  
— HIV- AUC 0.94 95% CI, .91–.98

Source: Sutherland et al CID 2022



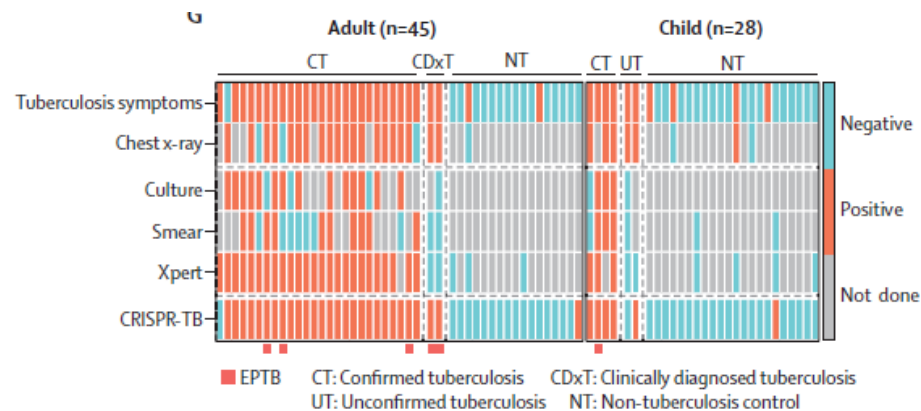
## cfDNA AND CRISPR

### CRISPR detection of circulating cell-free *Mycobacterium tuberculosis* DNA in adults and children, including children with HIV: a molecular diagnostics study

Zhen Huang, Sylvia M LaCourse, Alexander W Kay, Joshua Stern, Jaclyn N Escudero, Brady M Youngquist, Wenshu Zheng, Deborah Yombe, Muyalo Dlamini, Godwin Mbatwa, Lisa M Cranmer, Irene Njuguna, Dalton C Wamukwa, Elizabeth Malche-Olimko, Donald G Catanzaro, Christopher J Lyon, Grace John-Stewart, Andrew DiNardo, Anna M Mandalakas, Bo Ning, Tony Y Hu



[https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247\(22\)00087-8/fulltext](https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247(22)00087-8/fulltext)

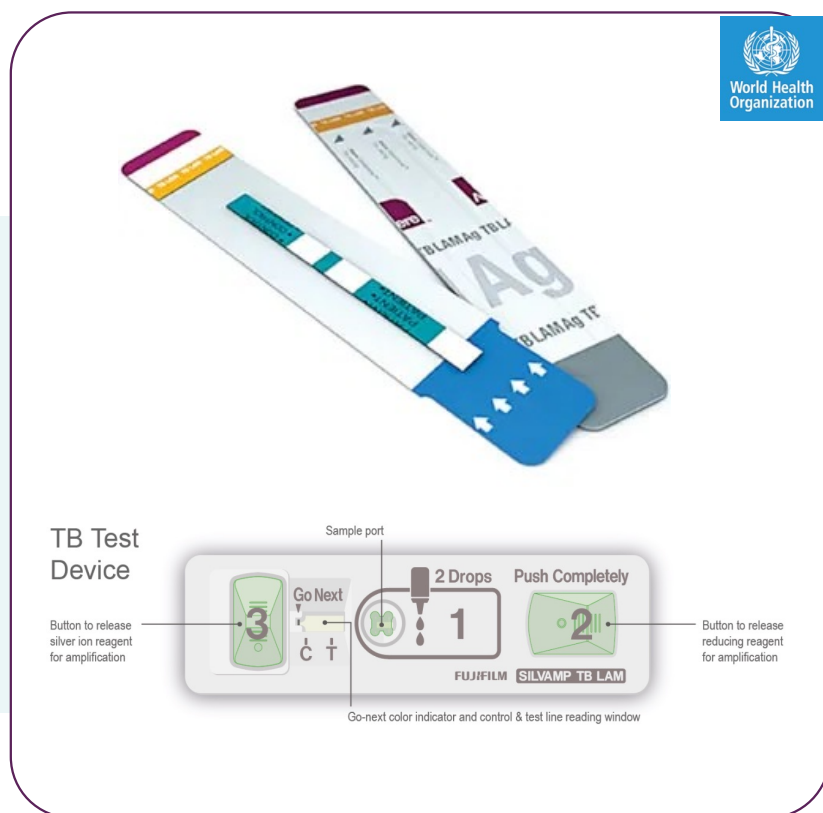


Serum based cfDNA with CRISPR:

100% sensitivity for detection of confirmed TB and 85% for unconfirmed TB in paediatric HIV+ cohort

# ANTIGEN DETECTION TESTS

## DETERMINE TB LAM Ag and Fujifilm SILVAMP TB LAM



### PLHIV (5 cohorts, n=1595)

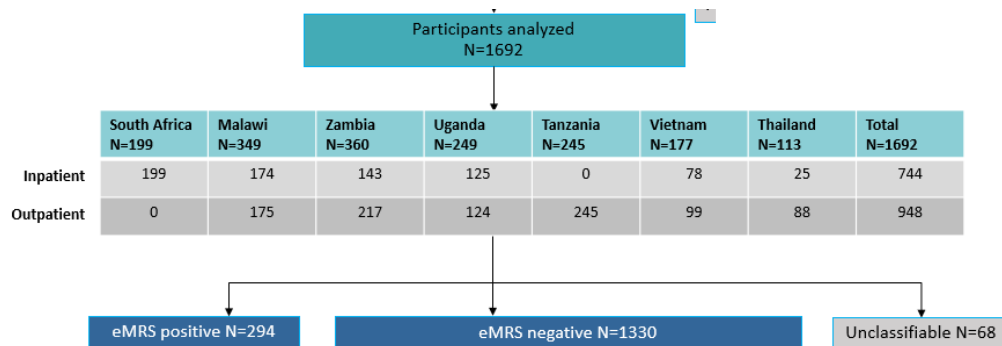
	Sn [95% CI]	Sp [95% CI]
<b>FujiLam</b>	70.7 [59.0 – 80.8]	90.9 [87.2 – 93.7]
<b>AlereLAM</b>	34.9 [19.5 – 50.9]	95.3 [92.2 – 97.7]

### HIV uninfected patients (n=372)

	Sensitivity (95% CI)	Specificity (95% CI)
<b>FujiLAM</b>	53.2% (43.9 to 62.2)	98.9% (96.7 to 99.6)
<b>AlereLAM</b>	10.8% (6.3 to 18.0)	92.3% (88.5 to 95.0)

Source: Broger et al. J Clin Invest 2020; Broger et al, PLOS Med 2020

# FIRST LARGE PROSPECTIVE ACCURACY EVALUATION OF FUJILAM RENDERS UNEXPECTED LOW SPECIFICITY AND VARIABILITY



	Sensitivity [95%CI]	Specificity[95%CI]
FujiLAM	54.8 [49.1-60.4]	85.1 [83.1-85.9]
Determine TB LAM Ag	30.5 [25.5-36.0]	90.7 [89.0-92.2]

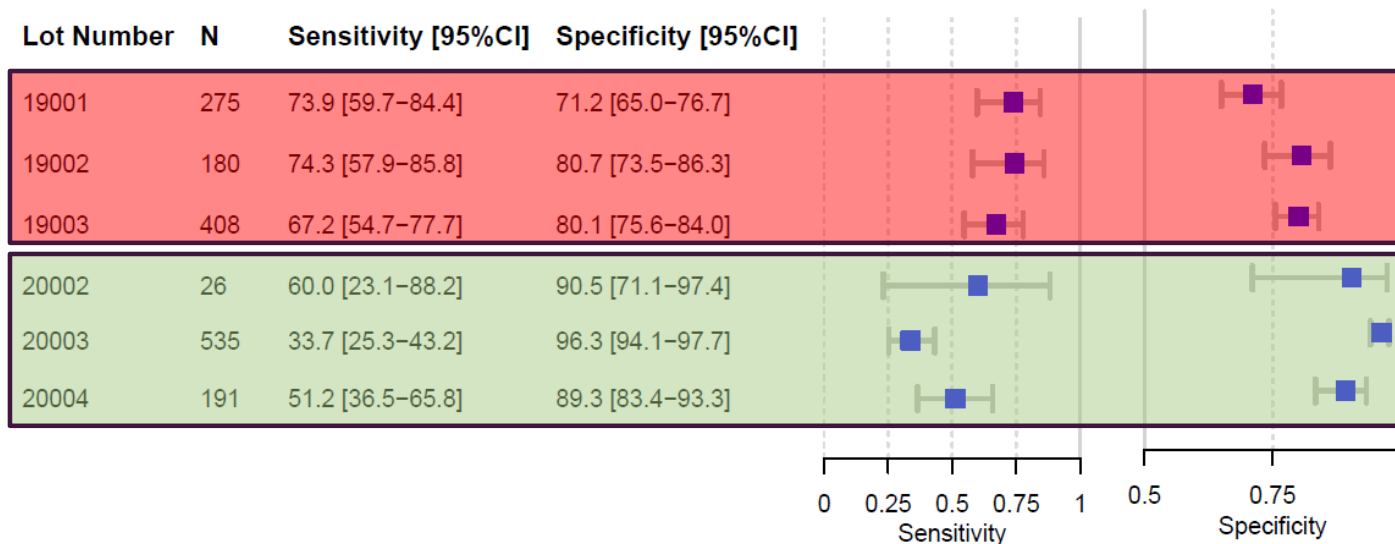
	N	Sensitivity [95%CI]	Specificity [95%CI]
All	1615	54.8 [49.1-60.4]	85.1 [83.1-86.9]
<b>CD4</b>			
≤100	326	82.2 [73.6-88.4]	80.4 [74.8-85.1]
101 to ≤200	183	62.5 [47.0-75.8]	87.4 [81.0-91.9]
201 to ≤500	502	44.9 [34.3-55.9]	83.5 [79.7-86.7]
>500	588	22.1 [13.9-33.3]	87.7 [84.6-90.2]
<b>Countries</b>			
South Africa	144	73.2 [60.4-83.0]	75.0 [65.0-82.9]
Malawi	334	62.5 [45.2-77.1]	88.1 [83.9-91.3]
Zambia	358	62.3 [48.8-74.1]	81.6 [76.9-85.6]
Uganda	248	72.7 [58.1-83.7]	82.4 [76.5-87.0]
Tanzania	245	26.5 [17.4-38.0]	87.0 [81.3-91.2]
Viet Nam	176	33.3 [19.8-50.4]	96.5 [92.1-98.5]
Thailand	110	83.3 [43.6-97.0]	81.7 [73.2-88.0]

Expected Spec > 97%

?



# LOT-TO-LOT VARIABILITY



n =1575 all PLHIV, 4 countries, outpatient sympt, asymptomatic with advanced HIV

	Sensitivity % (95% CI)	Specificity % (95% CI)
Lot 19003	76 (57-89)	77 (72-81)
Lot 20002	75 (41-93)	91 (81-96)
Lot 20003	59 (36-79)	98 (93-99)
Lot 20004	48 (34-62)	97 (94-99)

Huerga et al preprint, <http://dx.doi.org/10.2139/ssrn.41752>



ASTIIE study, n =600 all PLHIV, 2 countries.

	Sensitivity	Specificity
Lot 19002/3	56.3% (29.9 - 80.2)	86.4% (80.3 - 91.2)
Lot 20003	35.0% (15.4 - 59.2)	97.4% (95.3 - 98.8)

Tiemersma E et al in preparation

# PATHWAYS TO 3<sup>RD</sup> GENERATION LAM TESTS

3<sup>rd</sup> Generation LAM assay  
Ultra sensitive (<10 pg/mL) to detect LAM in all TB patients

## Pre-analytical Improved reagents

RUTGERS  
 MOLOGIC  
 PATH  
 FIND  
 Diagnosis for all

## Pre-analytical Sample Preparation

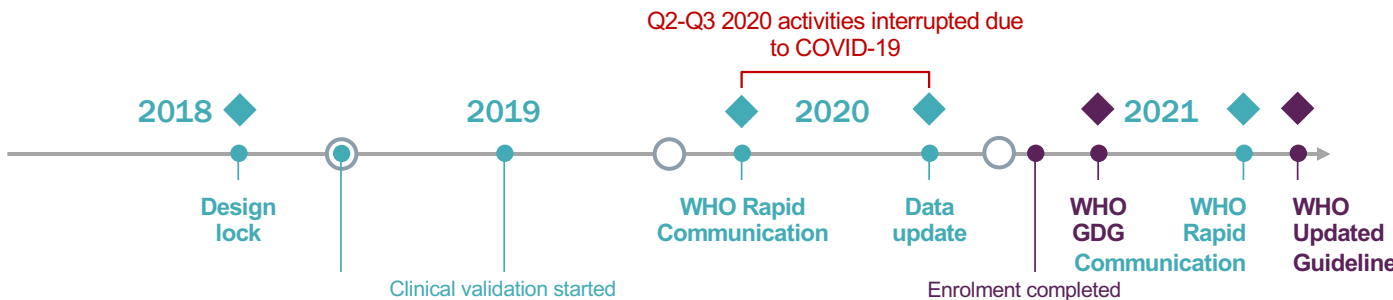
SALUS  
 ZS

## Innovative Assay Design

SD BIOSENSOR  
 MOLOGIC  
 DCN<sup>DX</sup>  
 lumiraDx<sup>®</sup>  
 GH+ Labs  
 LUMOS DIAGNOSTICS

# DIAGNOSING TB IN CHILDREN

## UPDATED POLICY RECOMMENDATION FOR STOOL



### UPTAKE OF STOOL TESTING

#### Routine (policies adapted for stool testing):

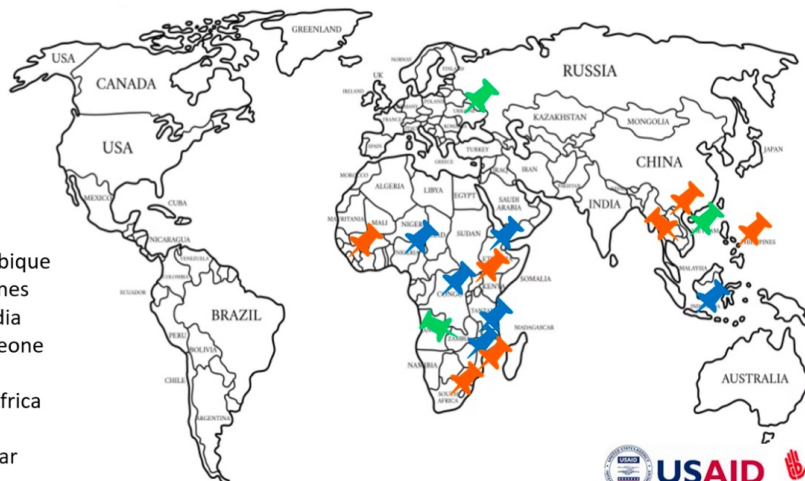
- Vietnam
- Zambia
- Ukraine

#### Pilot or scale up:

- Ethiopia
- DR Congo
- Malawi
- Zimbabwe
- Indonesia
- Nigeria

#### Planned:

- Mozambique
- Philippines
- Cambodia
- Sierra Leone
- Uganda
- South Africa
- Liberia
- Myanmar



DOWNLOAD THE SOS STOOLBOX

STOOLBOX SOP - PDF | STOOLBOX VARIABLES - PDF | SOS STOOL TRAINING FLYER - PDF

STOOLBOX METHOD - PDF | STOOLBOX METHOD - PDF

LABORATORY PROCEDURE SIMPLIFIED ONE STEP (SOS) STOOL METHOD

Developed by de Haas et al., J. Clin. Microbiol, 2021

For liquid stool samples you should use a transfer pipette

Source: <https://www.kncvtbc.org/en/sos-stoolbox/>

# CAD/CXR – AUTOMATED CHEST X-RAY INTERPRETATION WITH AI SOFTWARE AND PORTABLE AND SAFER INSTRUMENTS

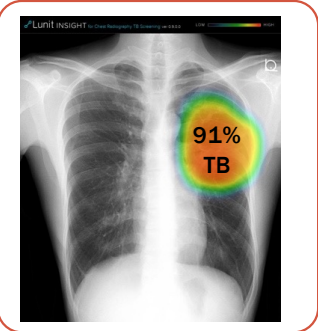
## Input:

Digital AP CXR



## Output:

Abnormality score



### A fast-moving field

- CXR remains the most sensitive screening and triage tool for TB
- CXR is underutilized due to global shortage of radiologists, infrastructure and logistical restraints
- Portable x-ray instruments are now on the market and WHO endorsed
- 8 CE marked CAD products in 2022 (only 3 in 2019) [www.ai4hith.org](http://www.ai4hith.org)

### AI enabled solutions

POCUS

dStethoscopes

Cough apps



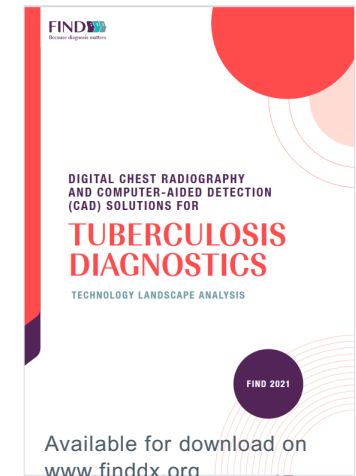
### Portable x-ray instruments takes CXR to where no x-ray has gone before!



Delft Ultra; Delft NL



Xair, FUJIFILM, JP



Available for download on [www.finddx.org](http://www.finddx.org)

AN EXPLOSION IN NEW DX FOR TBI  
**>15 NEW PRODUCTS ENTERING THE MARKET**

**AUTOMATED/HIGH THROUGHPUT**

Qiagen-Diasorin



Qiagen, QIAreach

BioMérieux, Vidas TB-IGRA



SD Biosensor, Standard F TB-Feron

**RDT BASED IGRA**



Boditech, iCHROMA IGRA-TB



R-Biopharm, IP-10 release assay



Lionex LIOFeron®TB-LTBI



LGchem Avansure TB



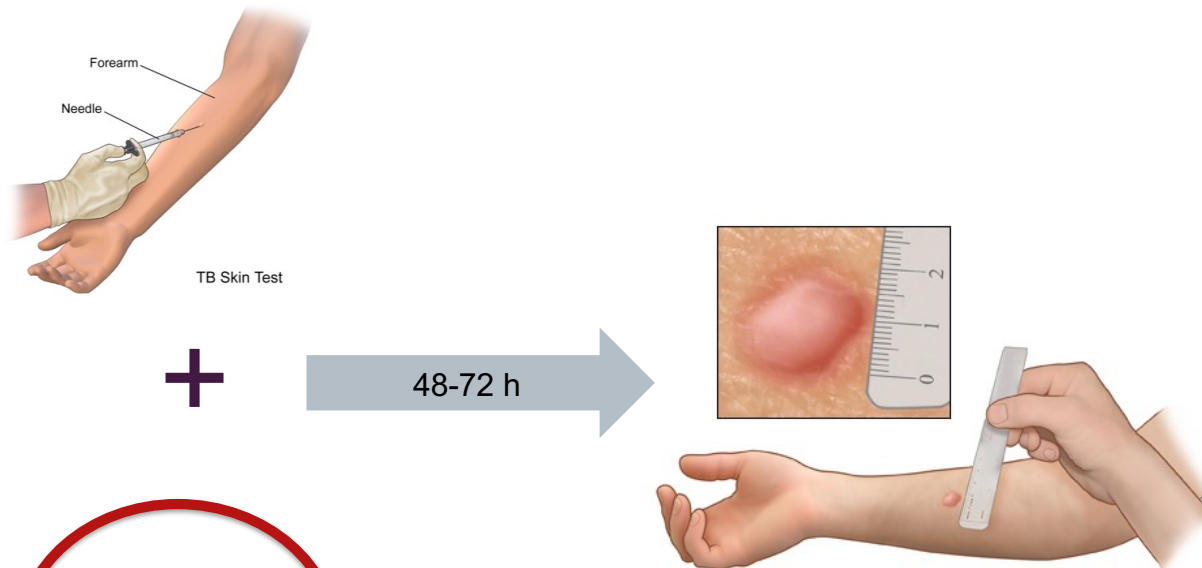
SD Biosensor Standard E TB Feron

**ELISA BASED IGRA**

Source: Landscape paper, Hamada Y et al ERJ 2021

# TESTS FOR TB INFECTION

## SPECIFIC SKIN TESTS: THE 'IGRA IN THE SKIN'



**ESAT-6**

**CFP-10**

- Safety profile on par with PPD
- IGRA like specificity in BCG vaccinated
- High agreement with IGRA and correlation with exposure in contacts



**Diaskintest**



**Cy-Tb**

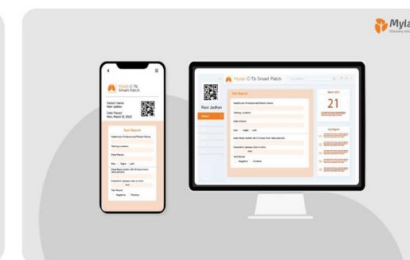
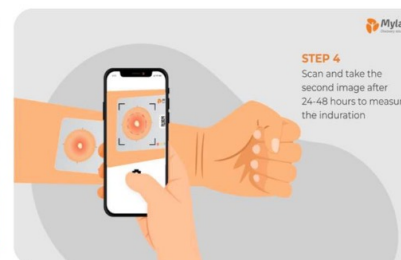
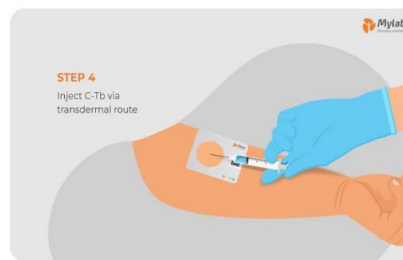
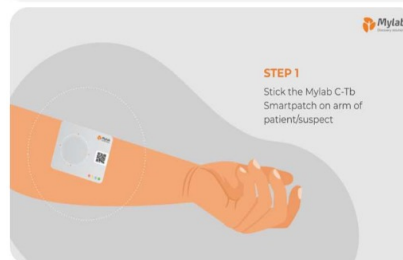
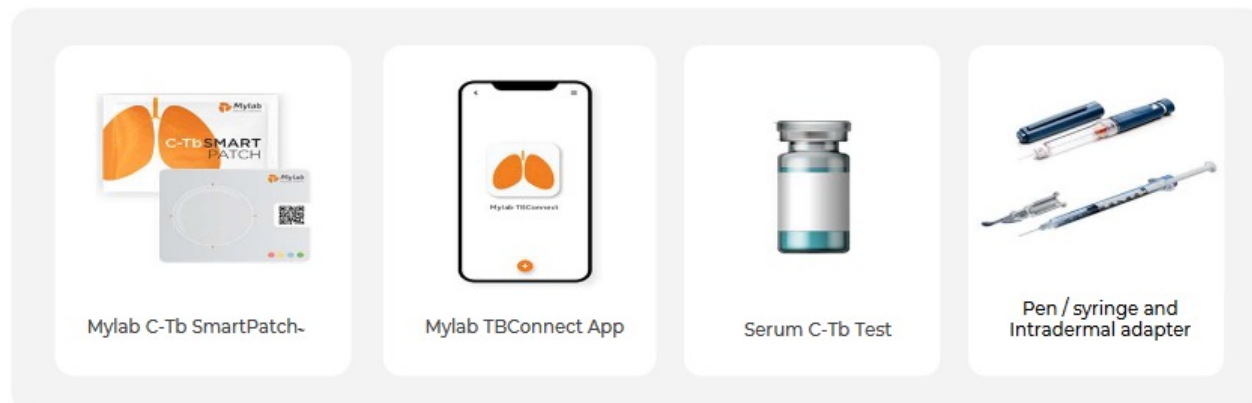
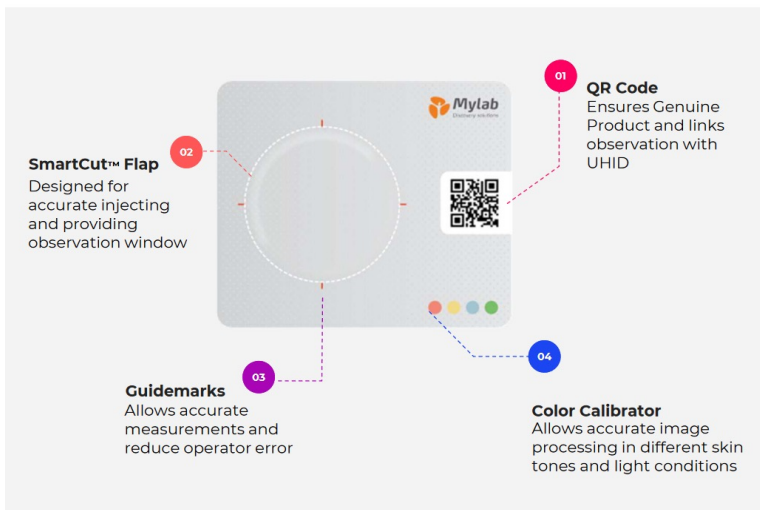


**C-TST**



# CONNECTING THE CENTURY OLD SKIN TEST

## SMART PATCH AND COMPANION APP FOR CY-TB



## TAKE HOME MESSAGES



- TB remains the top infectious disease killer; C-19 impacts will take decades to recover from
- Diagnostic gap in TB is a disaster...but
- ...unprecedented opportunities coming through COVID-19 and we need to build on the momentum
- New instruments and alternative sampling strategies are showing promise to bring the diagnostics close to the patients
  - trade off in accuracy for yield is expected and impact is unknown
- Plenty of new diagnostics that can be partnered with communities and treatment regimens and digital solution for a comprehensive package to support patients



# ACKNOWLEDGEMENTS – FIND’S TEAM

Thank you to the participants and their families

Thank you to the FIND TB team!



- |                     |                        |                        |
|---------------------|------------------------|------------------------|
| Sergio Carmona      | Alex Ogwal             | Pamela Nabeta          |
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| Adam Penn-Nicholson | Sandra Kik             | Luz Villa              |
| Kavi Velen          | Victor Anyebe          | Sunita Singh           |
| Margaretha De Vos   | Harisha Ramachandraiah | Kavi Ramjeet           |
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| Mikashmi Kohli      | Swapna Uplekar         | Marta Fernandez Suarez |
| Rita Szekely        | Andres de la Rossa     | Aurelien Mace          |
| Andrea Cavellini    | Lauri Koivula          | Berra Erkosar          |
| Laure Martine       | Tim Rodwell            | Frida Wambui           |
| Mary Gaichiri       | Rebecca Colman         | Karishma Saran         |
| Dennis Walusimbi    | Sacha Laurent          | Sarah-Jane Loveday     |

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Contact: [adam.penn-nicholson@finddx.org](mailto:adam.penn-nicholson@finddx.org)