

Разработка инструментов для диагностики ТБ и возможности, которые открывает COVID
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Руководитель программы по борьбе с ТБ

www.finddx.org

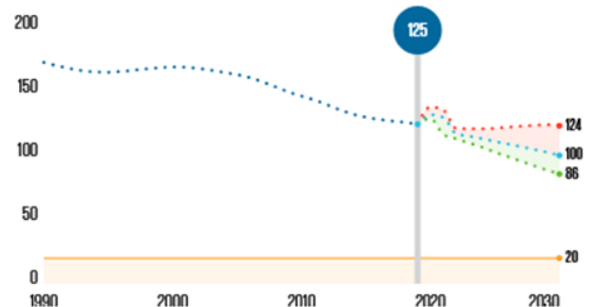
COVID-19 ИЗМЕНИЛ СИТУАЦИЮ...



GLOBAL PROGRESS AND PROJECTIONS FOR TUBERCULOSIS

SDG target: End the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases.

New cases of tuberculosis per 100,000 people

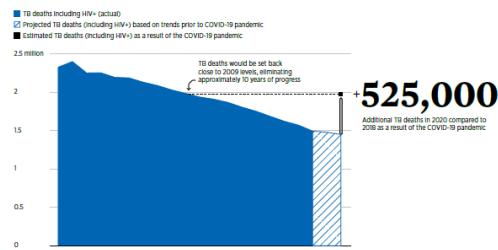


Source: Bill & Melinda Gates Foundation, 2020 Goalkeepers Report. Data from IHME. <http://gates.ly/GK20Tuberculosis>



Tuberculosis deaths: impact of COVID-19

POTENTIAL INCREASE IN TB DEATHS DUE TO TB SERVICE DISRUPTION IN THE CONTEXT OF THE COVID-19 PANDEMIC GLOBALLY



Estimates of TB deaths (including HIV) over 2000–2018 from WHO Global TB Report 2019. Estimation of projected TB deaths over 2018–2030 based on continuation of trends prior to COVID-19. Potential TB deaths (including HIV) globally as a result of the COVID-19 pandemic estimated for the year 2020 from Stop TB Partnership (and partners) modelling study, 2020 which assumed a conservative lockdown period of 2 months and recovery period of 10 months. These additional estimated TB deaths are due to TB service disruptions and exclude TB deaths that may happen in people living with HIV because of disruptions of ARV and other HIV-related services. See <http://www.stop-tb.org/docs/default-source/who-modelling-report-2020/tb-deaths-2020-2030-final.pdf> to learn more.



COVID-19 related disruptions to TB services could lead to

6.3
million
additional people
developing TB

1.4
million
additional
TB deaths

by 2025



IN INDIA

36% OF PEOPLE WITH TB
reported health facilities
they normally visit closed

*GFIC= Global Fund implementing countries

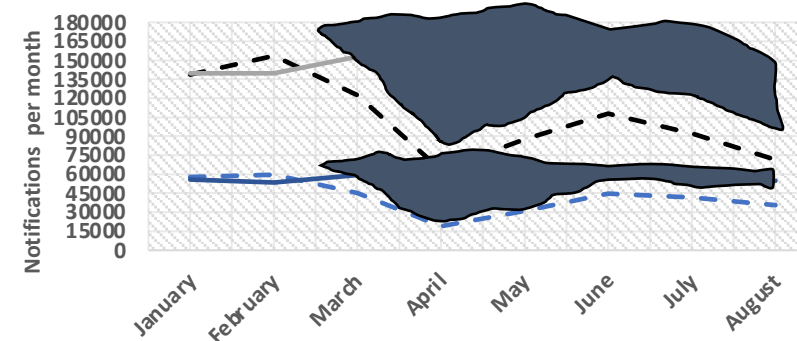
GLOBALLY

70%+ HEALTHCARE WORKERS

reported a decrease in the number of people coming to health facilities for TB testing.

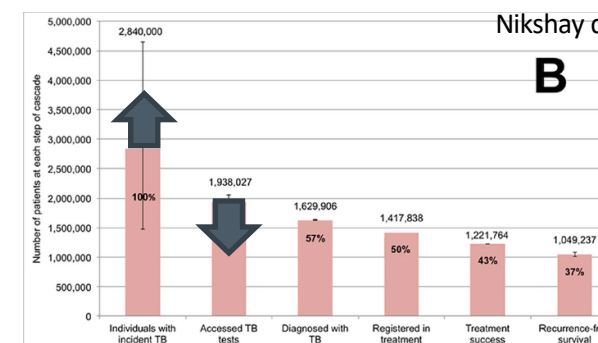


Регистрация случаев в Индии - 2020 и 2019 гг.



Не выявлено
497713 случаев
Март-август

- - • Total Public Notified-2020 - - • Total Private Notified-2020
 — Total Public Notified-2019 — Total Private Notified-2019



Nikshay data, Sanjay Sarin FIND India

E

Glaziou P. <https://www.medrxiv.org/content/10.1101/2020.04.28.20079582v1>

<https://www.finddx.org/covid-19/pipeline>



COVID-19 ИЗМЕНИЛ СИТУАЦИЮ...

Because diagnosis matters

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SARS-COV-2 DIAGNOSTIC PIPELINE

GLOB
TUBE

SDG targ

New cas



200

150

100

50

0

10%

Source

/GK2

Glazi

Home > Diagnostics & testing > SARS-CoV-2 diagnostic pipeline

FIND is collating an overview of SARS-CoV-2 tests that are commercially available or in development for the diagnosis of COVID-19. We do not guarantee that this is a comprehensive list, since the information below has been submitted voluntarily by test suppliers and is not independently verified. If you have any queries or wish for us to make updates in the pipeline, please [contact us](#).

If you would like your test to be included in the pipeline, please click on this button to download the form. [SUBMISSION FORM](#)

To know more about the ongoing test evaluations, please click on these buttons. [MOLECULAR ASSAY EVALUATIONS](#) [IMMUNOASSAY EVALUATIONS](#)

EUA: Emergency Use Authorization — **HSA:** Health & Safety/Sciences Authority — **MFDS:** Ministry of Food & Drug Safety — **MoH:** Ministry of Health — **MHRA:** Medicines & Health Care Products Regulatory Agency — **NRA:** National Regulatory Authority — **RUO:** Research Use Only — **TGA:** Therapeutic Goods Administration — **WHO EUL:** World Health Organization Emergency Use Listing

SHOW ALL	IMMUNOASSAYS	MOLECULAR ASSAYS	SAMPLE COLLECTION / INACTIVATION	DIGITAL SOLUTIONS	OTHER DIAGNOSTICS
Status	Test format	Test target	Regulatory	FILTER	EXPORT TO XLS

799 RESULT(S)

- [1drop Inc.](#) 1copy™ COVID-19 qPCR Multi Kit (Korea MFDS EUA - US FDA EUA - Health Canada - Saudi FDA - Sri Lanka NMRA - CE-IVD) [Contact](#)
- [3B BlackBio Biotech India Ltd](#) TRUPCR® SARS-CoV-2 RT qPCR Kit (India CDSCO - US FDA EUA) [Contact](#)
- [3D Medicines](#) ANDiS® SARS-CoV-2 RT-qPCR Detection Kit (US FDA EUA - CE-IVD) [Contact](#)
- [3D Medicines](#) 3DMed 2019-nCoV RT-qPCR Detection Kit (CE-IVD) [Contact](#)
- [A*ccelerate Technology](#) A*STAR Fortitude Kit 2.0 (Singapore HSA) [Contact](#)
- [AAZ-LMB](#) COVID-PRESTO® (CE-IVD) [Contact](#)



IN INDIA
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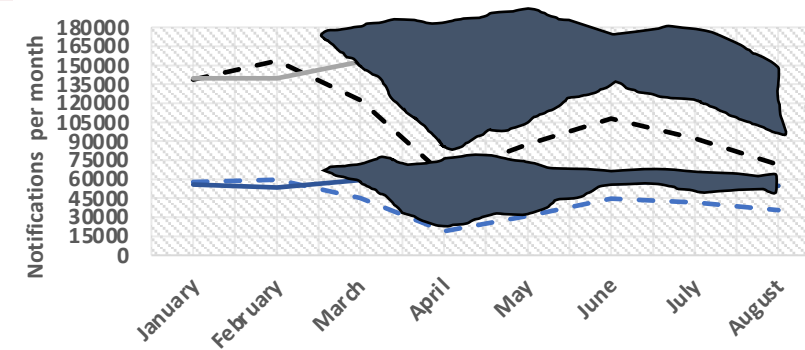
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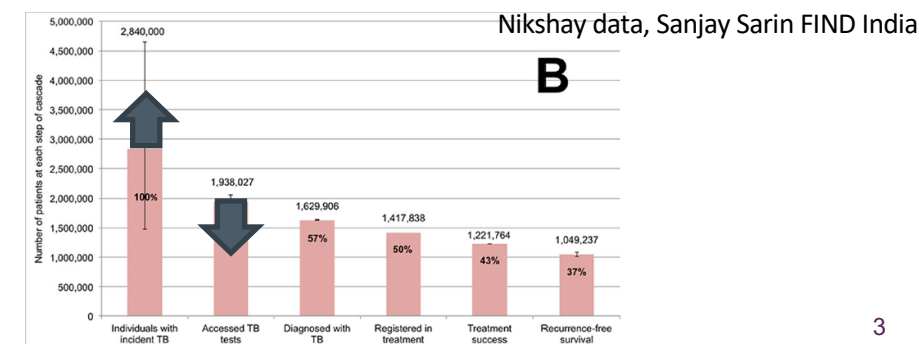


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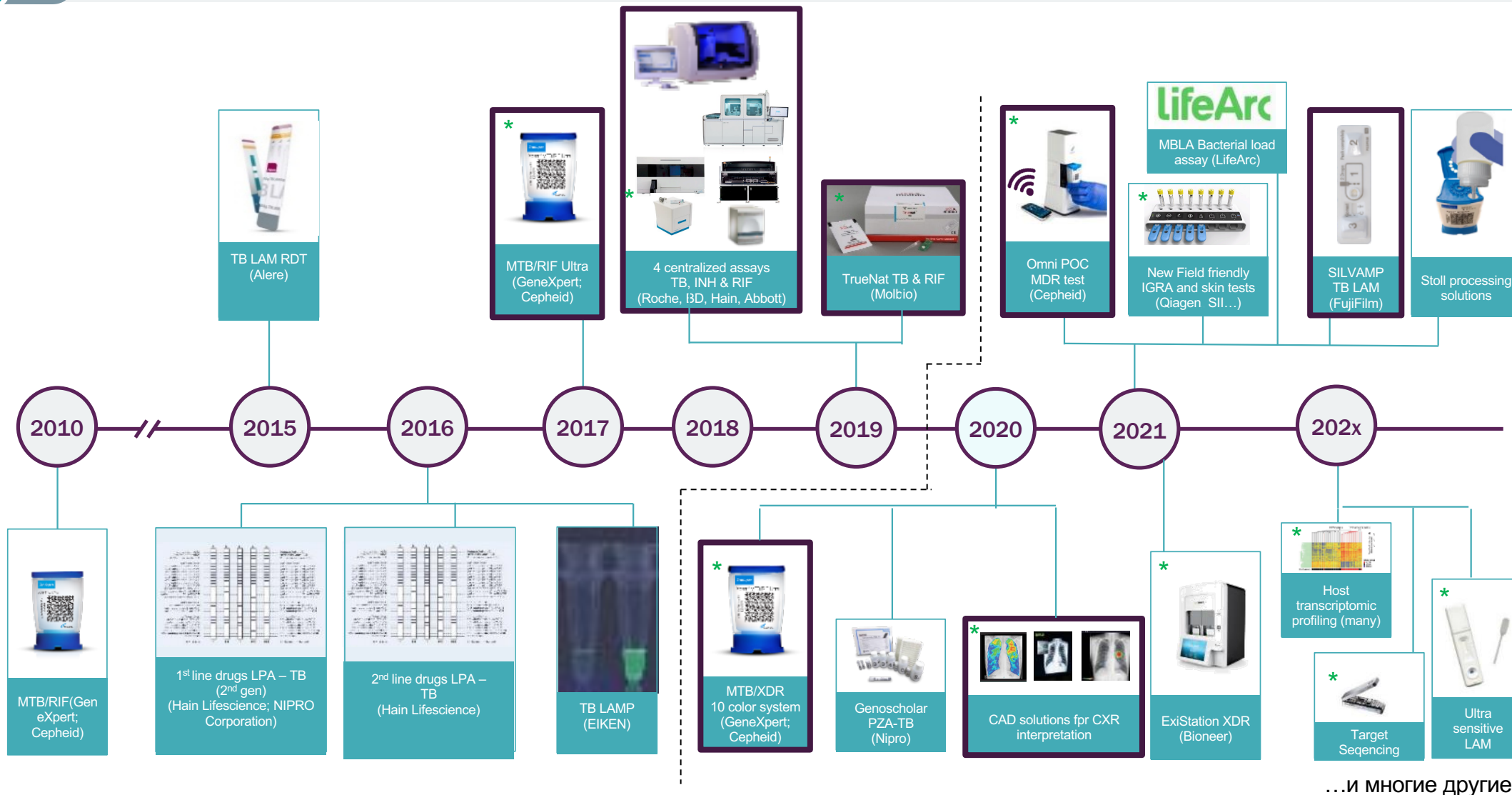
— • Total Public Notified-2020 — • Total Private Notified-2020
— Total Public Notified-2019 — Total Private Notified-2019



<https://www.finddx.org/covid-19/pipeline>



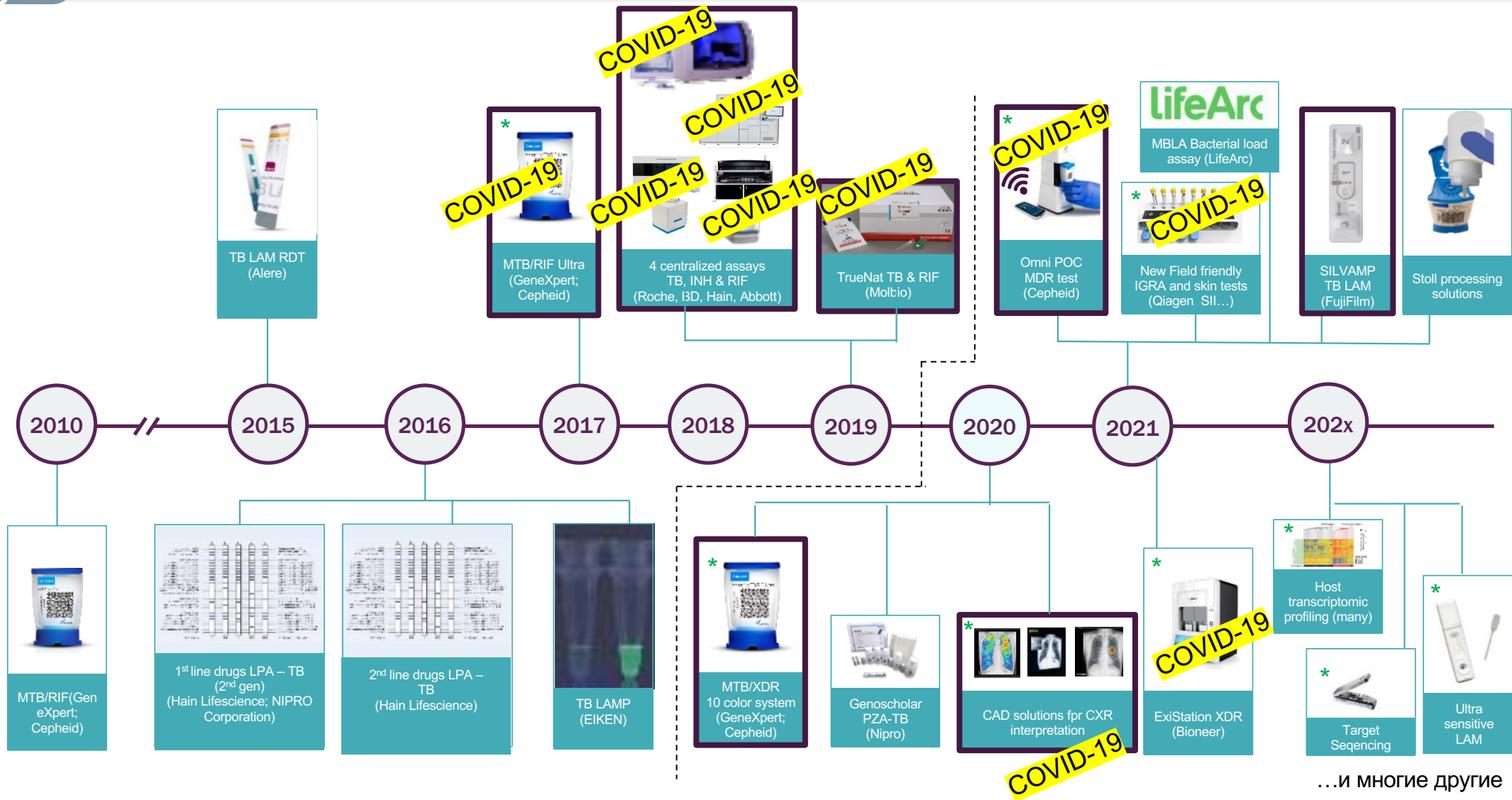
Много разработок, связанных с диагностикой ТБ



* Обеспечена совместимость



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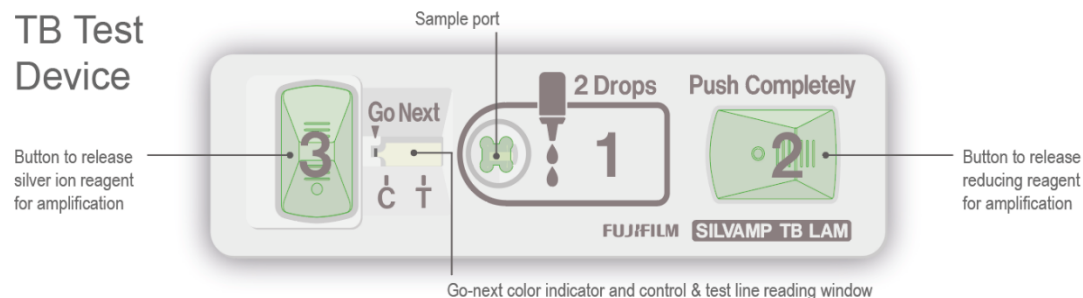


* Обеспечена совместимость



Fujifilm SILVAMP TB LAM

Первый высокочувствительный LAM-тест нового поколения



Новые доп. данные

- Дети
- Внелегочный ТБ
- ВИЧ- ТБ
- Смертность



Для тестирования в месте оказания услуг в СНСД

По моче, быстрый тест, без инструментов, безопасный



Повышенная чувствительность для диагностики ТБ у ЛЖВ

Чувствительность приблизительно в 2 раза выше, чем в LAM-тестах, используемых в месте оказания услуг



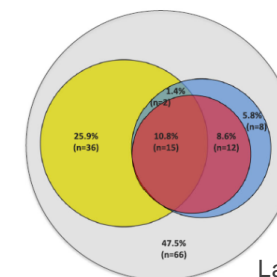
Высокая специфичность для скорейшего начала лечения



Высокая диагностическая мощность

LAM-тесты позволяют быстро выявлять пациентов и используются в дополнение к анализам на основе мокроты

Планируется поддержка
обзора ВОЗ в 2021 г.



Lawn et al. 2017



Чувствительность FujiLAM в 2 раза выше, чем AlereLAM среди ЛЖВ, первые данные по ВИЧ-отрицательным пациентам

ЛЖВ (5 когорт, n=1595)

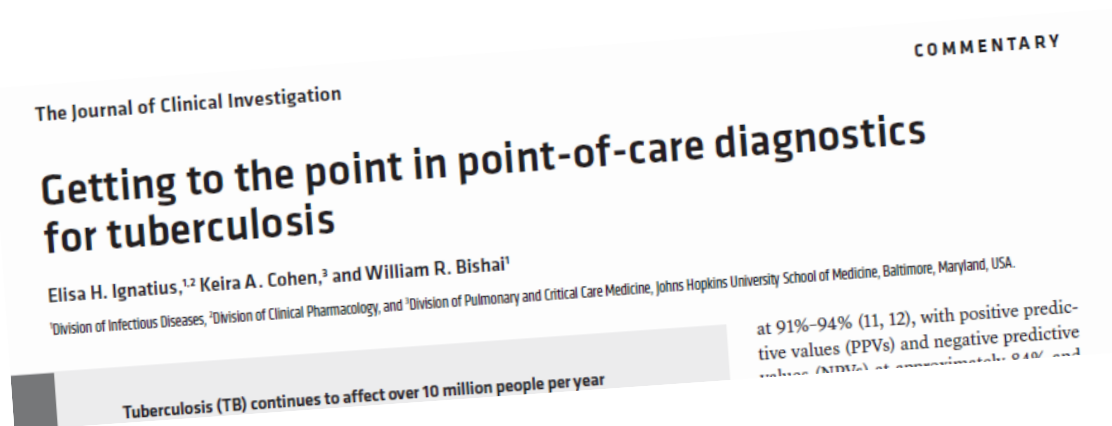
	N	Sn	[95% CI]	Sp	[95% CI]
FujiLAM	1595	70.7	[59.0 – 80.8]	90.9	[87.2 – 93.7]
AlereLAM	1595	34.9	[19.5 – 50.9]	95.3	[92.2 – 97.7]
Diff Sn and Diff Sp		35.8		-4.4	

Broger *et al*, PLOS Med 2020

ВИЧ-отрицательные пациенты

Группа насел.	Site	Sensitivity % (95% C.I.)	Specificity % (95% C.I.)
Взрослые (n=187)	ЮАР	25.0 (13.3 – 42.1)	98.1 (94.5 – 99.3)
Взрослые (n=185)	Перу	64.6 (53.6 – 74.2)	100.0 (96.5 – 100.0)

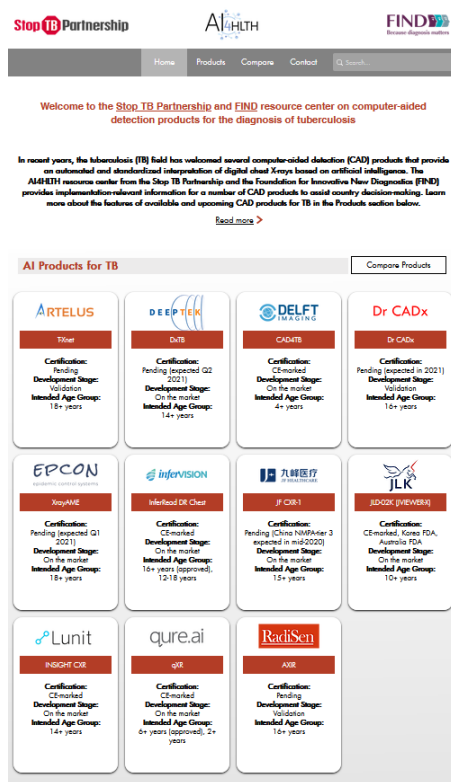
Broger *et al*. J Clin Invest 2020. (in press)



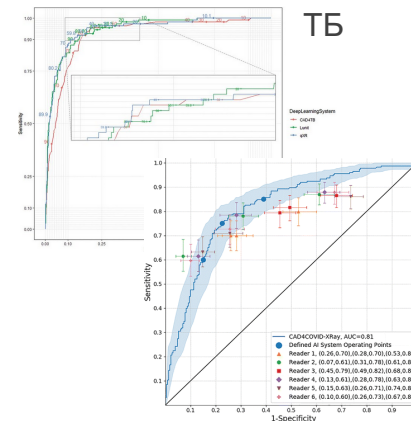
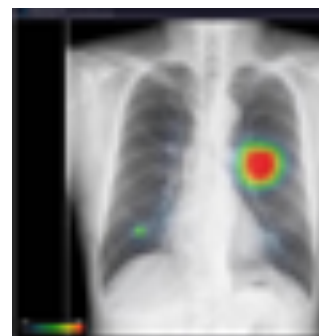


Цифровой рентген с технологией CAD

- НОВЫЕ ВОЗМОЖНОСТИ СКРИНИНГА НА ТБ И COVID-19



www.ai4hlth.org



COVID



Delft Light



FujiFilm CalneoXair



JLK inspection

Источник: <https://www.delft.care/x-ray-systems/>; <http://jilkgroup.com/>;
<http://design.fujifilm.com/en/business/calneo-xair/>
 Murphy K, Radiology 2020; Qin et al Sci.rep. 2019; Yoo SH et al Frontiers 2020



Выражение признательности

Спасибо многочисленным партнерам
и донорам, которые делают
возможной работу FIND!



Спасибо команде!



Samuel Schumacher
Adam Penn-Nicholson
Margaretha De Vos
Alex Bouhabli
Emmanuel Moreau
Rita Szekely
Eva Junyent
Sandra Kik

Anita Suresh
Swapna Uplekar
Andres de la Rossa
Lauri Koivula
Tim Rodwell
Rebecca Colman
Sacha Laurent
Sophia Georghiou

Pamela Nabeta
Audrey Albertini
Anna Mantsoki
Christine Hoogland
Aurelien Mace
Tatiana Letsko
Karishma Saran
Sarah-Jane Loveday