TB NURSE NETWORK MEETING

January 20, 2016

10:00-12:00 PM

Conference call in number: 1-888-557-8511

Passcode: 2544873

Agenda

- Announcements (15 min)
- TB Pilot Program with T-SPOT (30 min)
  - Pete Kinney, Danielle Watson; Oxford Immunotec
- Case Presentation (30 min)
  - Dr. Dana Kissner; Wayne State University Physician Group
- Open Forum (30 min)
- Close and Adjourn

Announcements

- Next TBNN meeting
  - Wednesday April 20th, 2016
  - 10-12 PM EST
  - Capitol View Building, 5th floor conference room

Announcements: Upcoming Webinars

- Southeastern National Tuberculosis Center (SNTC)
  - **Jan 27, 2016 1-3 PM EST**
    - Grand Rounds: “Maximizing Rifamycins” Charles Peloquin, Pharm.D.
  - Register for this event here

- TB Education and Training Projects: Updates from the Field
  - **Jan 28, 2016 1-2 PM EST**
    - “A Manual for DOT Aides” Karen Martinek, RN, MPH
    - “TB New Staff Orientation Program” Shelly Robichaux, RN, MPH
    - “Key Messages for TB & Diabetes: Flipchart & Toolkit” Denise Dodge, RN
  - Register for this and other webinars from this program here

- TB Nursing Webinar – NTCA
  - Save the Date: **April 14, 2016**
  - Additional info to follow

Announcements: Upcoming Events

- NTCA 2016 TB Conference
  - February 25-27th
  - Pre-conference meetings 23rd-24th 8-5 PM MT
  - Sheraton Denver Downtown Hotel, Denver, CO
  - Partnering with the UNION-North America Region (International Union Against Tuberculosis and Lung Disease)
  - Registration is open until February 5th

- 2016 World TB Day Conference: Migration & Tuberculosis
  - Friday, April 8th
  - Kellogg Hotel and Conference Center, East Lansing, MI
  - 8:30-4:45 PM
  - Registration is open!

AGENDA

8:00—8:30	Registration, Exhibitors & Posters, Light Continental Breakfast **(non-CME)**		
8:30—8:45	Welcome and Opening Remarks: Migration & Tuberculosis	Jevon McFadden , MD, MPH	Medical Epidemiologist, Michigan Department of Health and Human Services (MDHHS), CDC Career Epidemiology Field Officer
8:45—9:30	Panel: Personal Experience with Tuberculosis	Jinga Rao	TB Patient
		Krutika Jariwala	TB Patient
		Denise Wisner, BSN, MSN	TB Public Health Nurse, Macomb County Health Department
9:30—10:00	Transmission and Pathogenesis of Tuberculosis	Pamela Hackert, MD, JD, MPH	Chief Medical Services, Oakland County Health Department
10:00—10:10	Break **(non-CME)**		
10:10—10:55	Laboratory Testing & Case Study	Angie Schooley, MT, ASCP	Mycobacteriology Supervisor, MDHHS, Bureau of Laboratories
		James Sunstrum, MD	TB Clinical Consultant, Medical Director; MDHHS; Wayne County TB Clinic
10:55—11:40	Radiology	Dana Kissner, MD, MS	Critical Care Pulmonologist, Associate Professor; Wayne State University Physicians Group, Wayne State University School of Medicine
11:40—11:50	Question and Answer: 2 Floor Microphones		
11:50—1:00	Lunch, Exhibitors & Posters **(non-CME)**		
1:00—1:30	Breakout I: Updated TB Testing Requirements for Facilities Licensing	Larry Horvath, BEd	Director, Michigan Department of Licensing and Regulatory Affairs, Bureau of Community and Health Systems
1:00—1:30	Breakout II: TB Clusters in MI & the TB GIMS System	Shona Smith, MPH	TB Epidemiologist, MDHHS
1:30—2:00	Breakout III: New Technologies in Laboratory Testing	Angie Schooley, MT, ASCP	Mycobacteriology Supervisor, MDHHS, Bureau of Laboratories
		Laurel Vibber, MS	Microbiologist, MDHHS, Bureau of Laboratories
1:30—2:00	Breakout IV: 3HP Treatment Regimen for Latent TB Infection	Dana Kissner, MD, MS	Critical Care Pulmonologist, Associate Professor; Wayne State University Physicians Group, Wayne State University School of Medicine
2:00—2:10	Break **(non-CME)**		
2:10—3:10	Connections between Tuberculosis and Diabetes	Richard Brostrom, MD	TB Control Program Manager, Hawaii State Department of Health
3:10—3:40	Epidemiology of Tuberculosis	Shona Smith, MPH	TB Epidemiologist, MDHHS
3:40—4:25	Panel: Cultural Competencies of Tuberculosis	Aimmee Mullendore, RN	CD Nurse and TB Coordinator, Branch-Hillsdale-St. Joseph Community Health Agency
		Ricardo Garay, BBA	Health Network Manager, Migrant Clinicians Networks
4:25—4:35	Question and Answer: 2 Floor Microphones		
4:35—4:45	Concluding Remarks, Evaluation Instructions, Adjournment		

Funding for this conference was made possible (in part) by the Centers for Disease Control and Prevention. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services, nor does the mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government. None of the speakers or planners involved in this activity has any relevant conflict of interest. No commercial support has been received for this program.

TB Pilot Program

- Pete Kinney & Danielle Watson
  - T-SPOT, Oxford Immunotec

Commitment to TB Elimination

Working with Payors May Help Solve Budget Challenges

Oxford Immunotec Global PLC
94C Innovation Drive
Milton Park, Abingdon
Oxfordshire, OX14 4RZ, United Kingdom
Company Number 08654254
www.oxfordimmunotec.com

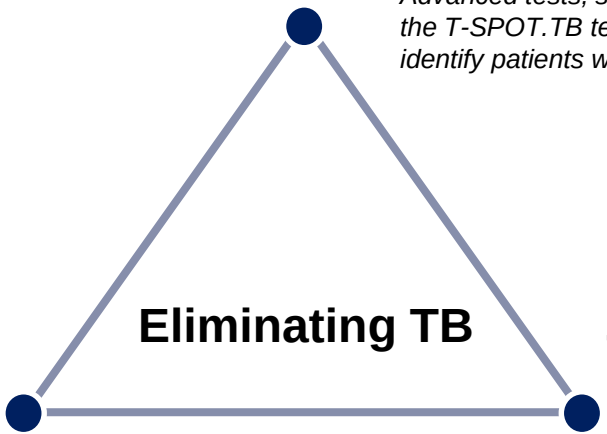
Oxford Immunotec

New WHO Post-2015 Guidelines recommend testing high-risk populations for LTBI and treating to prevent progression to active TB

*"Further progress towards elimination will require better access to high-quality **diagnosis and care** and more effective TB prevention, including addressing the social determinants of TB, with special attention to groups at the highest risk for TB."*

Improved **Diagnosis**

Advanced tests, such as the T-SPOT.TB test, help identify patients with LTBI



Budget Availability

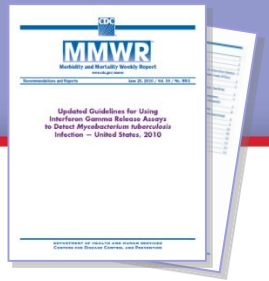
Oxford Immunotec's insurance billing capabilities may help Public Health offer advanced TB tests within existing test budgets

Increased LTBI **Treatment** Completion

New LTBI treatments, such as 3HP short-course therapy, help reduce active TB cases and improve treatment completion rates

Oxford Immunotec

CDC guidelines recognize advances in TB diagnostics and treatment



Targeted Testing Specific Recommendations

- "An IGRA is preferred for testing persons who have received BCG (as a vaccine or for cancer therapy)[1]."
- "An IGRA is preferred for testing persons from groups that historically have low rates of returning to have TSTs read[1]."

Contact Tracing

- "An IGRA or a TST may be used without preference to test recent contacts of persons known or suspected to have active tuberculosis with special considerations for follow-up testing[1]."

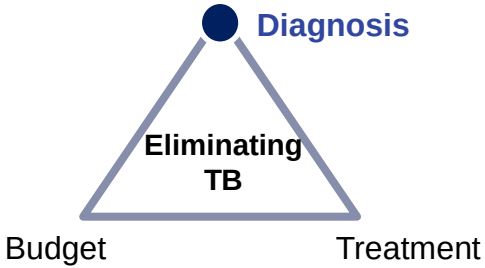
Treatment

- "The new regimen is recommended as an equal alternative to the 9-month INH regimen for otherwise healthy patients aged ≥12 years who have LTBI and factors that are predictive of TB developing[1]."

1.MMWR 2010;59(No. RR-5):1-25.

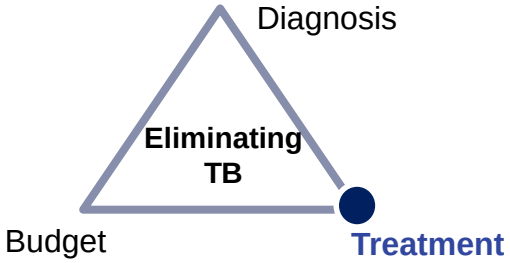
Oxford Immunotec

Diagnosis – You need a TB test that improves your LTBI diagnosis



TB Diagnostic Challenge	T-SPOT®.*TB*
Accurately diagnosing immunosuppressed patients, such as individuals with HIV	The T-SPOT.*TB* test has been tested in immunosuppressed patients.
BCG vaccinated individuals may not believe a positive TST results	BCG does not cross-react with the T-SPOT.*TB* test.
High risk populations, such as homeless persons or drug users, may not return for TST reading	The T-SPOT.*TB* test can be completed in one visit

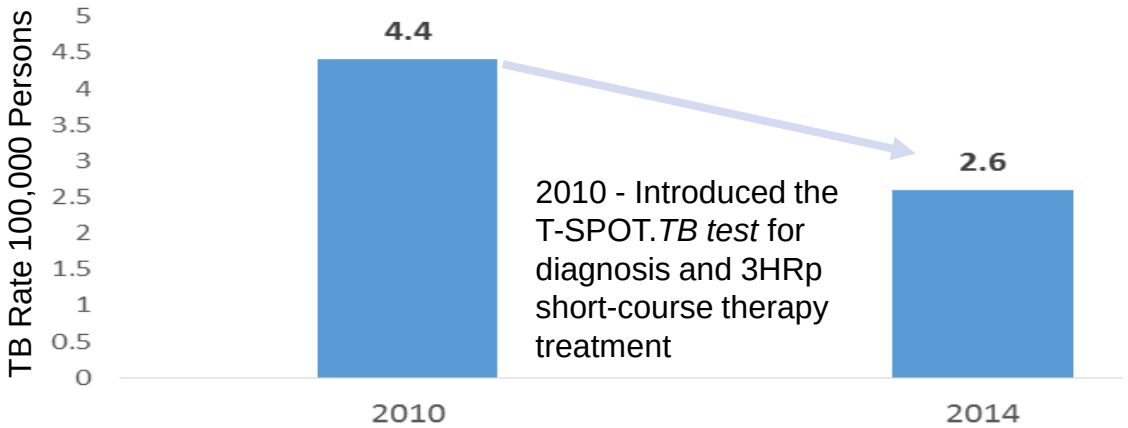
Treatment – New, short-course therapy can improve LTBI treatment completion rates



CDC Recommends Short-Course Therapy as Equal Alternative to INH

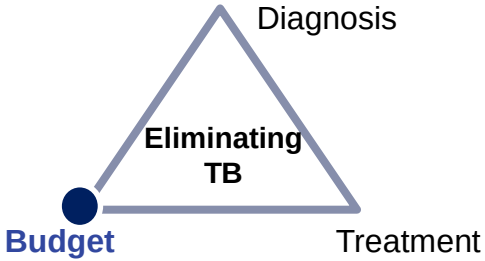
"The new regimen is recommended as an equal alternative to the 9-month INH regimen for otherwise healthy patients aged ≥12 years who have LTBI and factors that are predictive of TB developing (e.g., recent exposure to contagious TB). The new regimen also can be considered for other categories of patients when it offers practical advantages[2]."

Louisiana TB Control Program Reduced TB Rates 59% by Improving Diagnosis and Treatment[1]



1. http://dhh.louisiana.gov/index.cfm/newsroom/detail/3332
2. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6048a3.htm?s_cid=mm6048a3_w

TB Elimination Program



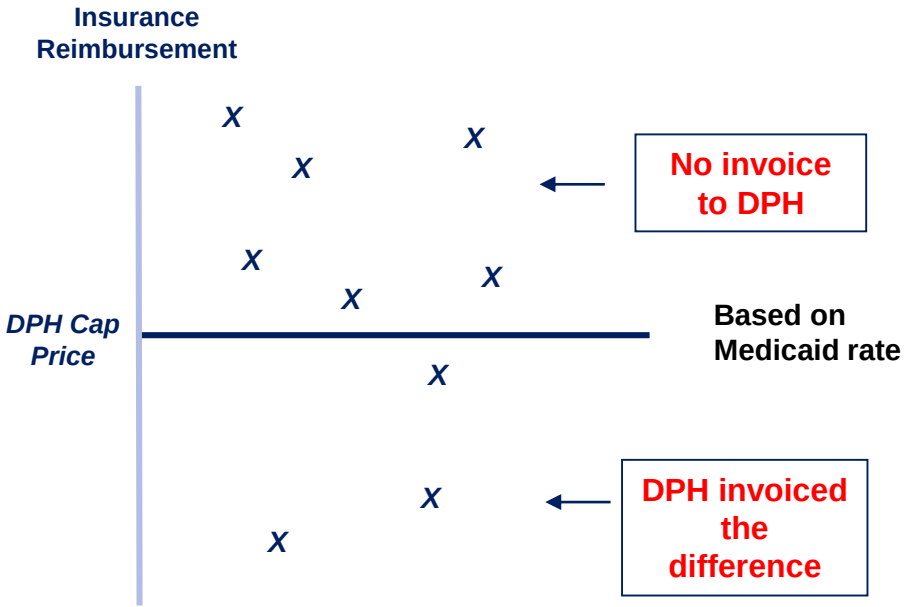
DPH Capped price (based on state Medicaid rate)

- Maximum the DPH can be invoiced
- Introductory 12 month DPH Cap

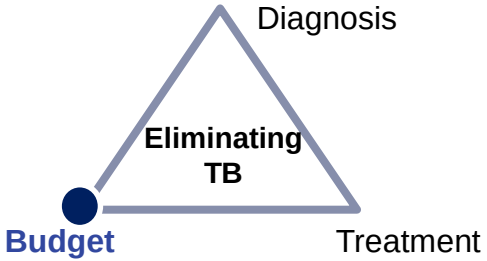
ODL submits insurance claim:

- Tests reimbursed ≥ DPH cap:
- Tests reimbursed < DPH cap:
- No insurance provided:
  - DPH invoiced at DPH cap

**Individual will never receive an invoice, bill, co-pay



Oxford Immunotec will bill insurance when available, allowing you to use the T-SPOT.*TB* test within your existing TB test budget



State Public Health Implementation

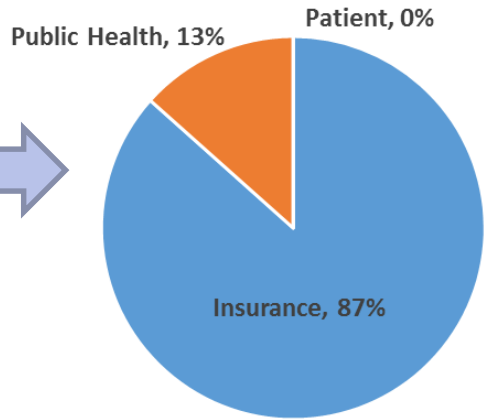
Data collected July – December, 2014

575 Patients tested with T-SPOT.*TB*
- Contact investigations managed through Oxford Immunotec's SPOTLIGHT service

Oxford Immunotec invoiced patients' insurance
- Uninsured patients covered by Public Health

Budget Results

Average Public Health cost/test = $8.88

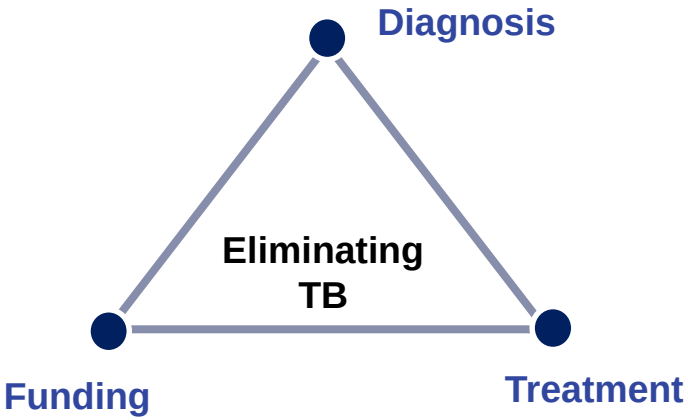


TB Test Budget Examples

Example:	Patient #1	Patient #2	Patient #3	Patient #4
Insurance Plan	A	B	C	D
Public Health Capped Price	$74.00	$74.00	$74.00	$74.00
Insurance Reimbursement	$102.00	$50.00	$90.00[1]	$0[2]
Public Health Responsibility for Specific Patient	$0	$24.00	$0	$74.00
Patient Responsibility for Test	$0	$0	$0	$0

1. $10 co-pay indicated
2. $100 payment authorized, applied to patient's deductible

Public Health organizations benefit from Oxford Immunotec's cost-effective approach to TB Screening



- Your organization can start immediately
- Oxford handles all insurance billing
- Customer agreement:
  - No test volume commitment
  - No long-term contract

Questions

Oxford Immunotec

Case Presentation

- Dr. Dana Kissner
  - Wayne State University Physician Group – TB Elimination and Control Program

14 month old from Yemen: To Detroit via Djibouti

TB Nurse Network Webinar 1/20/2016

Dana Kissner, MD
Medical Director Detroit TB
Associate Professor Wayne State University

Journey

- Born end of October 2014 in Yemen
  - 11/11/14 given BCG vaccination
- Age 10 months traveled to Djibouti with 29 year old mom and 9 year old brother
  - Lived in large house, very hot outside, many women and children
  - Owner's wife played with children every day, constantly coughing
- September arrived in Chicago=>Detroit


SPAIN
Lisbon
Sardinia
Algiers
Tunis
Oran
Constantine
Sicily
Valletta
MALTA
GREECE
Athens
İzmir
TURKEY
Adana
Tabriz
Tehran
Mashhad
MADEIRA ISLANDS (PORTUGAL)
Funchal
Rabat
Casablanca
Fes
MOROCCO
Marrakech
TUNISIA
Mediterranean Sea
Nicosia
CYPRUS
Aleppo
SYRIA
Damascus
LEB.
Beirut
IRAQ
Baghdad
Eşfahān
IRAN
Shiraz
CANARY ISLANDS (SPAIN)
Las Palmas
Laayoune (El Aaiún)
Western Sahara
ALGERIA
Tripoli
Banghāzi
LIBYA
Alexandria
Jerusalem
ISRAEL
Amman
JORDAN
Cairo
Al Jīzah
EGYPT
KUWAIT
Kuwait
Manama
BAHR.
Doha
QATAR
Abu Dhab
Riyadh
SAUDI ARABIA
Medina
Tropic of Cancer
Al Jawf
Aswān
Jiddah
Mecca
Port Sudan
Red Sea
MAURITANIA
Nouakchott
Tombouctou
NIGER
Agadez
MALI
CHAD
Omdurman
Khartoum
SUDAN
ERITREA
Asmara
YEMEN
Sanaa
SENEGAL
Bamako
BURKINA FASO
Niamey
Zinder
N'Djamena
Gulf of Aden
Djibouti
DJIBOUTI
Hargeysa
BISSAU
GUINEA
Ouagadougou
Kano
BENIN
NIGERIA
Abuja
Addis Ababa
Conakry
Freetown
SIERRA LEONE
CÔTE D'IVOIRE
GHANA
TOGO
Lomé
Ogbomoso
Ibadan
Lagos
Meoundou
ETHIOPIA
Prov. Admin. Line
SOMAL
Monrovia
LIBERIA
Yamoussoukro
Accra
Porto-Novo
Abidjan
CAMEROON
Douala
Yaoundé
CENTRAL AFRICAN REPUBLIC
Bangui
Juba
Malabo
EQUATORIAL GUINEA
Gulf of Guinea
SAO TOME AND PRINCIPE
São Tomé
Annobón (EQUA. GUI.)
Equator
Libreville
GABON
REP. OF THE CONGO
Brazzaville
Pointe-Noire
ANGOLA (Cabinda)
Kinshasa
DEM. REP. OF THE CONGO
Kisangani
UGANDA
Kampala
KENYA
Nairobi
Mogadishu
RWANDA
Kigali
Sukavu
Bujumbura
BURUNDI
Lake Victoria
Lake Tanganyika
Mombasa
Dodoma
Zanzibar
TANZANIA
Dar es Salaam
Indian Ocean
Ascension (St. Helena)
South Atlantic Ocean
St. Helena (St. Helena)
Luanda
Mbuji-Mayi
Lubumbashi
MALAWI
Lilongwe
Kitwe
ZAMBIA
Lusaka
Lubango
Namibe
ANGOLA
Cidade de Nacala
Blantyre
Lake Nyasa
COMOROS
Moroni
Mayotte (admin. by France, claimed by Comoros)
Juan de Nova Island (FRANCE)
Mahajanga
Toamasina
Antananarivo
MOZAMBIQUE
Harare
ZIMBABWE
Beira
Mozambique Channel
Bassas da India (FRANCE)
Europa Island (FRANCE)
MADAGASCAR
Windhoek
Walvis Bay
BOTSWANA
Tropic of Capricorn
NAMIBIA
Gaborone
Pretoria
Johannesburg
Mbabane
SWAZILAND
Maputo
SOUTH AFRICA
Maseru
LESOTHO
Durban
Cape Town
Port Elizabeth

UNHCR
The UN Refugee Agency

UNHCR FACTSHEET

DJIBOUTI

FACTSHEET

September 2015

HIGHLIGHTS

25,219	4,318	140
Arrivals from Yemen to Djibouti since 26 March	Households provided with cash grants in Ali Sabieh	Children from Yemen benefitted from catch up classes

Population of concern

A total of 18,234 people of concern

By country of origin

Country	Total PoC
Somalia	12,044
Yemen	2,818
Ethiopia	2,424
Eritrea	896
Other	52
Total	**18,234**

Funding

USD 37,477,643 million requested

UNHCR Presence

Staff:

29 national staff
12 international staff
7 united nations volunteers
2 consultants/contractors

Offices:

1 office in Djibouti
1 field office in Ali Sabieh
1 field unit in Obock

In Hamtramck

- Sickly on arrival
  - Grandfather noted swelling in left neck
- Pediatrician noted enlarged submandibular lymph node
  - Pediatrician treats with Augmentin
  - Another enlarged lymph node appears in pre-auricular area

At CHM

- Brought to CHM on 12/17/15
  - Healthy appearing, afebrile
  - Chest x-ray is normal
  - 2 enlarged lymph nodes, firm, tender in left neck / face, no skin lesions
  - Coughing in ER – TB is considered
  - **What testing should be done?**
    - **PPD or IGRA (QuantiFERON Gold TB, T-Spot) or none?**
    - **Does the BCG vaccination matter?**

BCG: Live Attenuated form of M bovis

- Shares antigens with PPD, but not those in IGRAs.
- Can give a false + PPD skin test.
- Cannot give a false + QFT or T-Spot.
- Can cause infections in immune deficient people and in babies
  - Can cause lymphadenitis

Situations in Which IGRA Preferred

- IGRA preferred in
  - Persons with low rates of return for TST reading (homeless, drug users)
  - BCG-vaccinated or treated (for cancer) individuals
- TST preferred in children < 5 years old, but IGRA acceptable

- Administer the vaccine in the deltoid region (Figure 1). Position the arm to maintain a horizontal surface where the vaccine is to be placed.

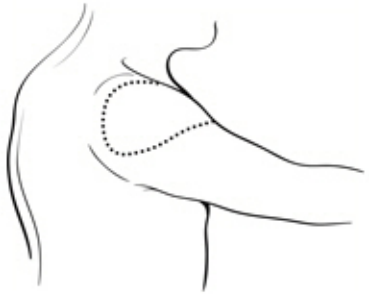


Figure 1

- Drop the immunizing dose of 0.2–0.3 mL of BCG VACCINE from the syringe and needle onto the cleansed surface of the skin (Figure 2) and spread over a 1" by 2" area using the edge of the multiple puncture device (Figure 3).

Figure 2

Figure 3

- Grasp the arm firmly from underneath, tensing the skin. Center the multiple puncture device over the vaccine and apply firm downward pressure such that the device points are well buried in the skin (Figure 4).

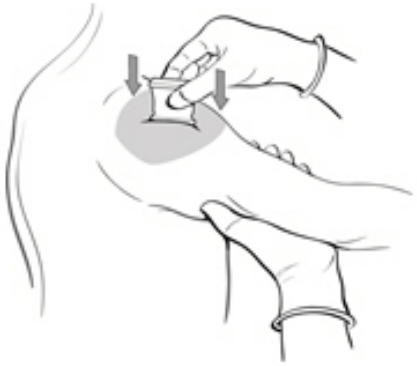
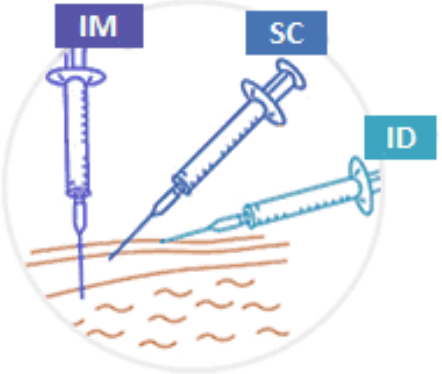


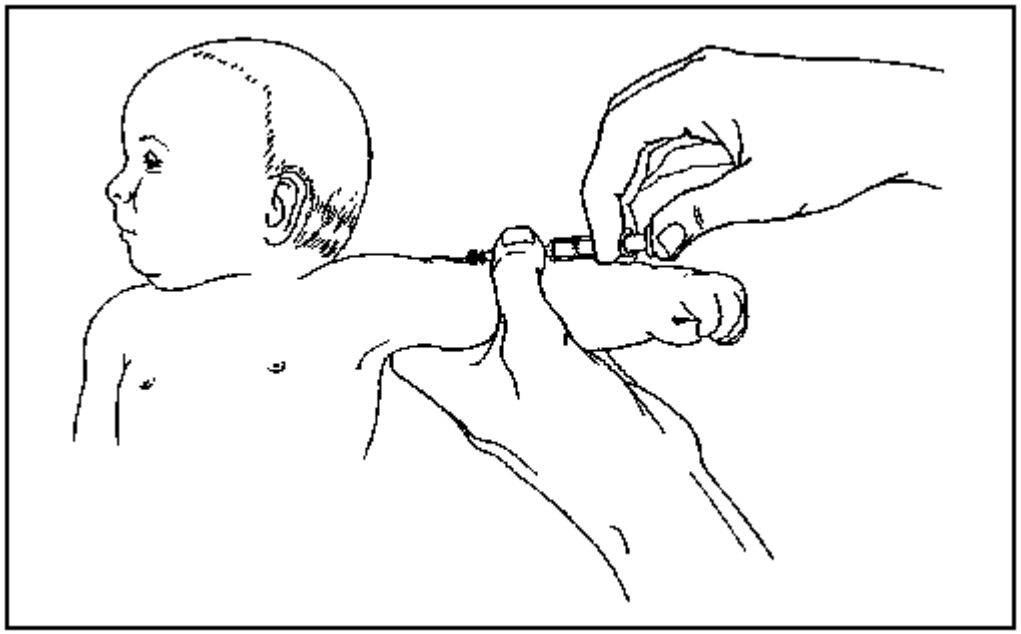
Figure 4

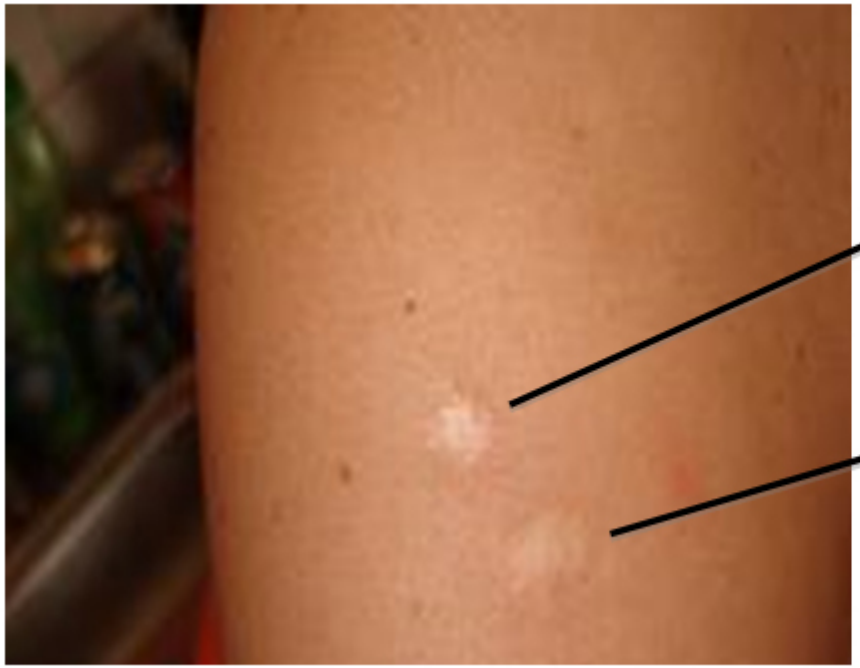
- Maintain pressure for 5 seconds. Do not "rock" the device. Release the pressure underneath the arm and remove the device. In a successful procedure the points puncture the skin. If the points do not puncture the skin, the procedure must be repeated.
- After successful puncture, spread vaccine as evenly as possible over the puncture area with the edge of the device. An additional 1–2 drops of BCG VACCINE may be added to ensure a very wet vaccination site.
- Use the multiple puncture device once and discard in a standard biohazardous sharps container.
- Loosely cover the site and keep dry for 24 hours.
- Advise the patient that the vaccine contains live organisms. Although the vaccine will not survive in a dry state for long, infection of others is possible.

Tuberculin reactivity resulting from BCG vaccination should be documented. A vaccinated person should be tuberculin skin tested 2–3 months after BCG administration, and the test results, in millimeters of induration, should be recorded in the person's medical record.{9} Vaccination should be repeated for those who remain tuberculin negative to 5 TU of tuberculin after 2–3 months.

- **Oral**
  - OPV
  - Rotavirus
- **Intramuscular (IM)**
  - DTwP, DTaP, DT, Td, TT
  - Hepatitis B
  - IPV
  - Hib
  - PCV-7
- **Subcutaneous (SC)**
  - Measles
  - Yellow fever
- **Intradermal (ID)**
  - BCG

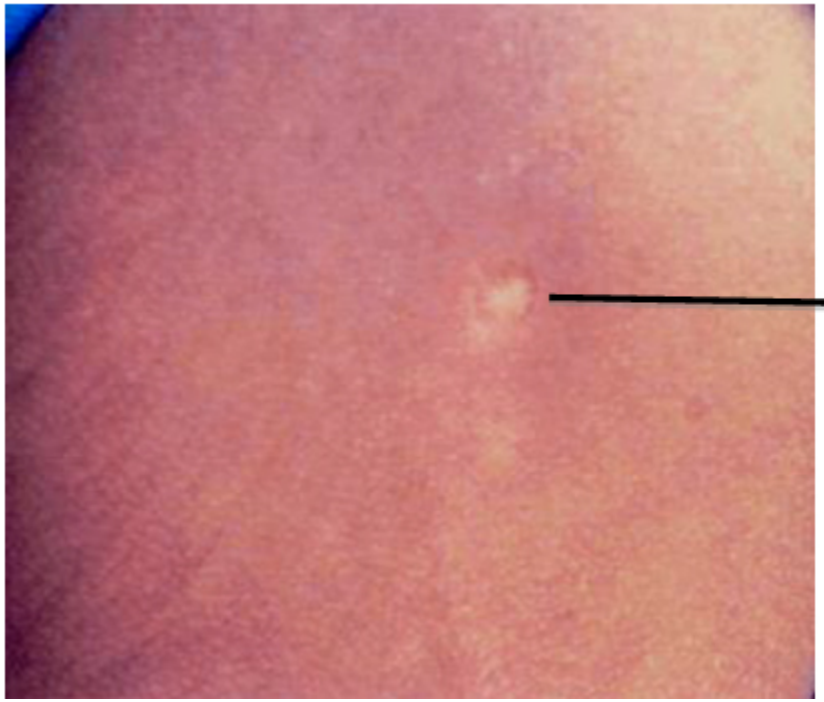






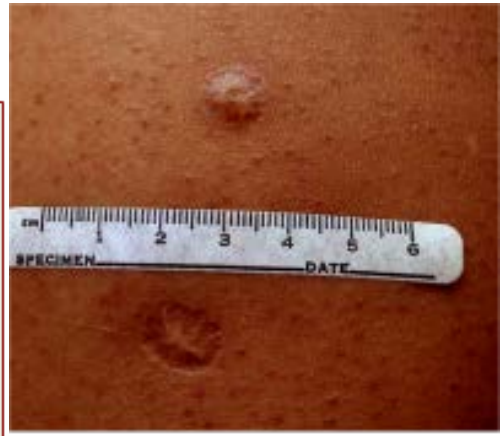
BCG SCAR
The centre of the scar is raised. It is smaller in size than the smallpox vaccine scar

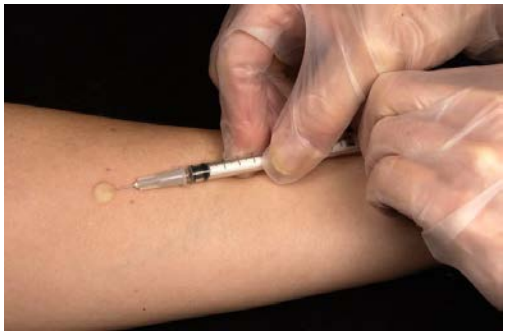
SMALLPOX SCAR
The scar is flat, larger in diameter and without a raised centre.

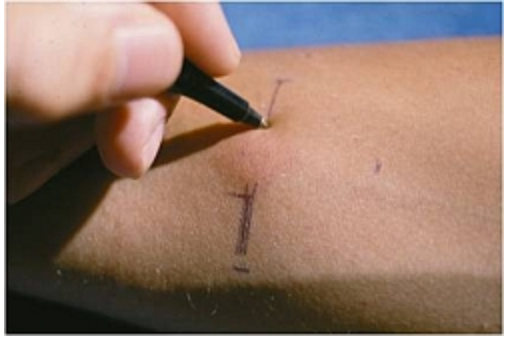


- Small scar typically left upper arm in deltoid region.

- This scar has a central raised area, which is often best felt rather than seen.







Diagnosing TB Infection

QuantiFERON®-TB Gold In-Tube test (QFT-GIT)

FDA Approved 10/07

T-SPOT®. *TB* test (T-Spot)

FDA Approved 7/08

QFT Gold In-Tube TB

- Patient's immune cells are mixed with a cocktail of synthetic peptides that represent 3 antigens unique to MTB* (& M kansasii, M szulgai, M marinum)
- If the cells have been exposed to TB and sensitized they produce excess Interferon Gamma
- Negative (nil) and Positive Controls (mitogen)

* ESAT-6 & CFP-10 + parts of TB7.7 (RD4)

Interpretation (FDA): QFT-GIT

Interpretation	NIL	TB Response	Mitogen Response
Positive	≤8	≥.35 IU/ml & ≥25% of Nil	Any
Negative	≤8	<.35 IU/ml or <25% of Nil	≥0.5
Indeterminate	≤8	<.35 or <25% of Nil	<0.5
Indeterminate	>8	Any	Any

NIL = plasma IFN-gamma concentration
TB Response = plasma IFN-gamma concentration ***minus*** Nil
Mitogen Response = plasma IFN-gamma concentration ***minus*** Nil

Interpretation (FDA): QFT-GIT*

Interpretation	NIL	TB Response	Mitogen Response
Positive	≤8	≥.35 IU/ml & ≥25% of Nil	Any
Negative	≤8	<.35 IU/ml or <25% of Nil	≥0.5
Indeterminate	≤8	<.35 or <25% of Nil	<0.5
Indeterminate	>8	Any	Any

NIL = plasma IFN-gamma concentration
TB Response = plasma IFN-gamma concentration ***minus*** Nil
Mitogen Response = plasma IFN-gamma concentration ***minus*** Nil

*QFT-G is different

Interpretation (FDA): QFT-GIT*

Interpretation	NIL	TB Response	Mitogen Response
Positive	≤8	≥.35 IU/ml & ≥25% of Nil	Any
Negative	≤8	<.35 IU/ml or <25% of Nil	≥0.5
Indeterminate	≤8	<.35 or <25% of Nil	<0.5
Indeterminate	>8	Any	Any

NIL = plasma IFN-gamma concentration
TB Response = plasma IFN-gamma concentration ***minus*** Nil
Mitogen Response = plasma IFN-gamma concentration ***minus*** Nil

*QFT-G is different

Tests Ordered : TB QUANTIFERON GOLD (326751)

TB QUANTIFERON GOLD (Collection Date: Mon Dec 28 13:58:00 GMT-05:00 2015, Status: Final)
Specimen Collection Date/Time - Start: Mon Dec 28 21:41:00 GMT-05:00 2015

Component	Result	Units	Flag	Range	Comment
TB QUANT GOLD	Positive				Result Status: Final Observed On: Mon Jan 04 07:41:00 GMT-05:00 2016 0.34 IU/mL or less: M. tuberculosis infection unlikely, but cannot be completely excluded. 0.35 IU/mL or greater: M. tuberculosis infection (latent) or disease (active) likely. Reference range: Negative Unit: not reported
QUANTIFERON TB MINUS NIL	4.93	IU/mL	H	<0.35	Result Status: Final Observed On: Mon Jan 04 07:41:00 GMT-05:00 2016 Reference range: 0.00 to 0.34
QUANTIFERON MITOGEN MINUS NIL	>10.00	IU/mL			Result Status: Final Observed On: Mon Jan 04 07:41:00 GMT-05:00 2016
QUANTIFERON NIL	0.06	IU/mL			Result Status: Final Observed On: Mon Jan 04 07:41:00 GMT-05:00 2016 Performed at ARUP Labs, 500 Chipeta Way, Salt Lake City, Utah 84108

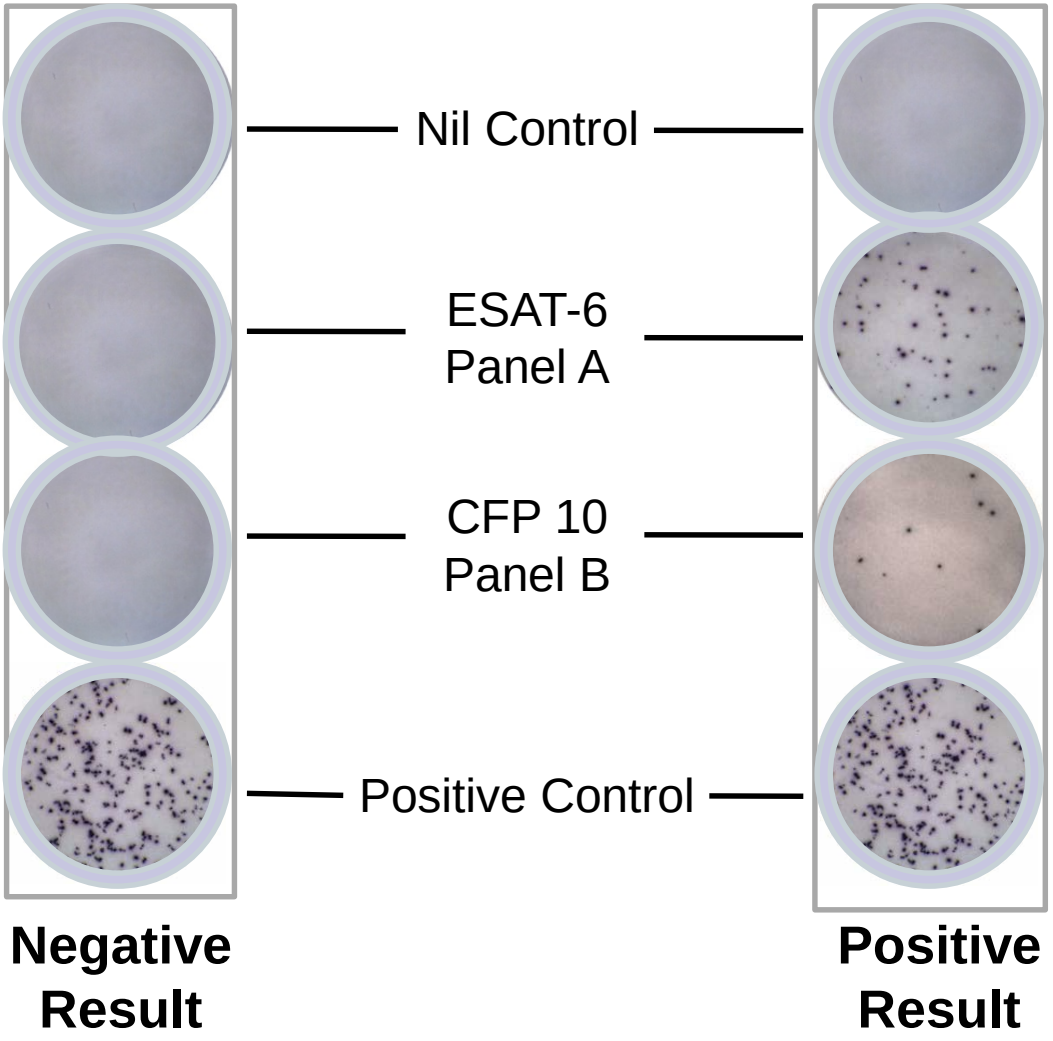
TB-nil 4.93

Tests	Results Flag	Reference Range	Units
Quantiferon	Detected	(Not Detected)	
Nil	0.07		IU/mL
Mitogen-Nil	>10.00		IU/mL
TB Ag-Nil	>10.00		IU/mL

T-Spot

- Uses single tube of blood
- Mixes patient's blood immune cells separately with ESAT-6 & CFP-10
- Spots are counted.
  - Made up of the immune cell secreting Interferon gamma

Interpretation of T-Spot Results



Interpretation (FDA)
T-Spot

- m

Interpretation	Nil	TB Response	Mitogen Response
Positive	≤10 spots	≥8 spots	Any result
Borderline – repeat test	≤10 spots	5, 6, or 7 spots	Any result
Negative	≤10 spots	≤4 spots	≥20 spots
Invalid – repeat test	>10 spots	Any result	Any result
Invalid – repeat test	≤10 spots	<5 spots	<20 spots

Nil = # spots
TB Response = the greatest # spots (ESAT-6 or CFP-10) ***minus*** Nil spots
Mitogen Response = # spots ***minus*** Nil spots

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1-877-596-2522

CLIA ID# 44D2035207
Charles Handorf, MD PhD, Medical Director

Patient Name:	[redacted]	Provider:	Robinson, Celeste
Patient ID:	08/16/1982	Location:	Campus Health Center in Detroit
Sex:	F	Customer Number:	CHC01
DOB:	8/16/1982	Sample ID:	154653527
Collection Date/Time:	1/8/2016 10:16	Received Date/Time:	1/9/2016 04:00
		Approval	1/10/2016 16:24

T-SPOT®.*TB* Test Results

[A]

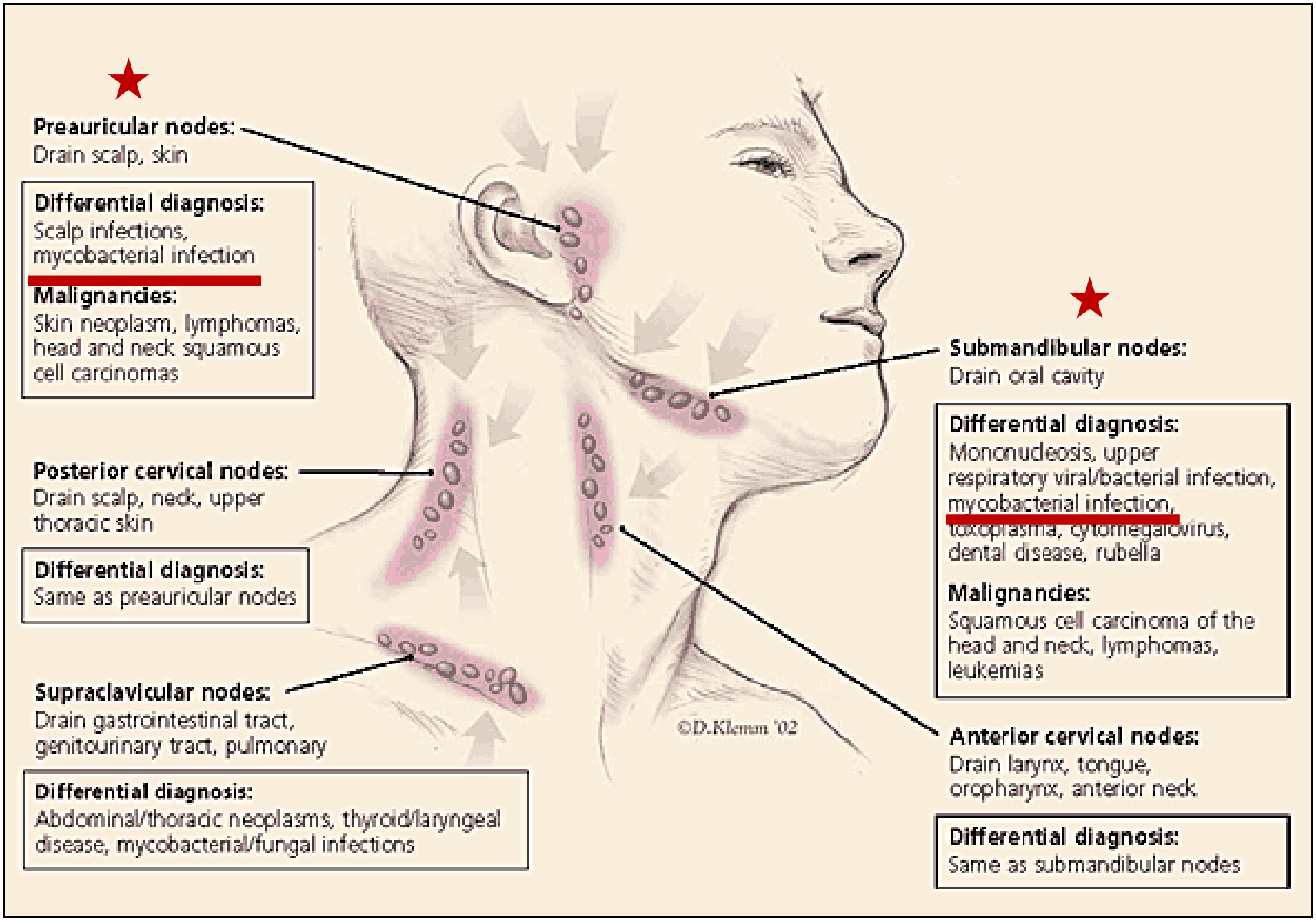
The test result is Positive because the spot count in (Panel A minus Nil Control) and/or (Panel B minus Nil Control) is greater than or equal to 8.

Note: Diagnosing or excluding tuberculosis (TB) disease, and assessing the probability of latent TB infection (LTBI), requires a combination of epidemiological, historical, medical and diagnostic findings that should be taken into account when interpreting T-SPOT.TB test results. Refer to the most recent CDC guidance (http://www.cdc.gov/tb/publications/guidelines/default.htm) for detailed recommendations on diagnosing TB infection (including disease) and selecting persons for testing.

T-SPOT.TB	Positive
Nil (Neg) Control Spot Count	2
Panel A Spot Count	>50
Panel B Spot Count	>50
Positive Control Spot Count	>20

At CHM

- Brought to CHM on 12/17/15
  - Healthy appearing, afebrile
  - Enlarged lymph nodes, firm, tender, no skin lesions
  - Coughing in ER – TB is considered
    - PPD 25 mm.
    - Nasal swab rhinovirus
  - Admitted, treated with IV Clindamycin
  - QFT done on discharge day
    - Positive, >10
    - Referred to health department
  - Now what?



Mycobacterial diversity causing multi- and extensively drug-resistant tuberculosis in Djibouti, Horn of Africa

Authors: Millán-Lou, M. I.[1]; Ollé-Goig, J. E.[2]; Tortola, M. T.[3]; Martin, C.[4]; Samper, S.[4]

Source: The International Journal of Tuberculosis and Lung Disease, Volume 20, Number 2, 1 February 2016, pp. 150-153(4)

Publisher: International Union Against Tuberculosis and Lung Disease

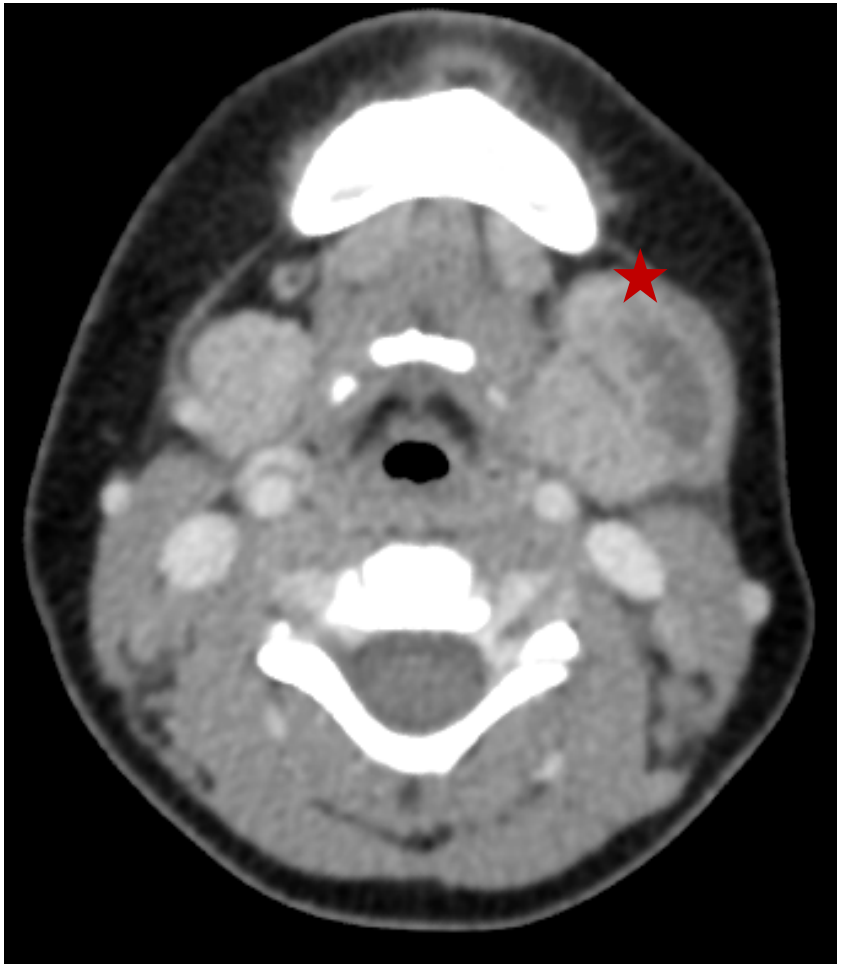
Abstract:

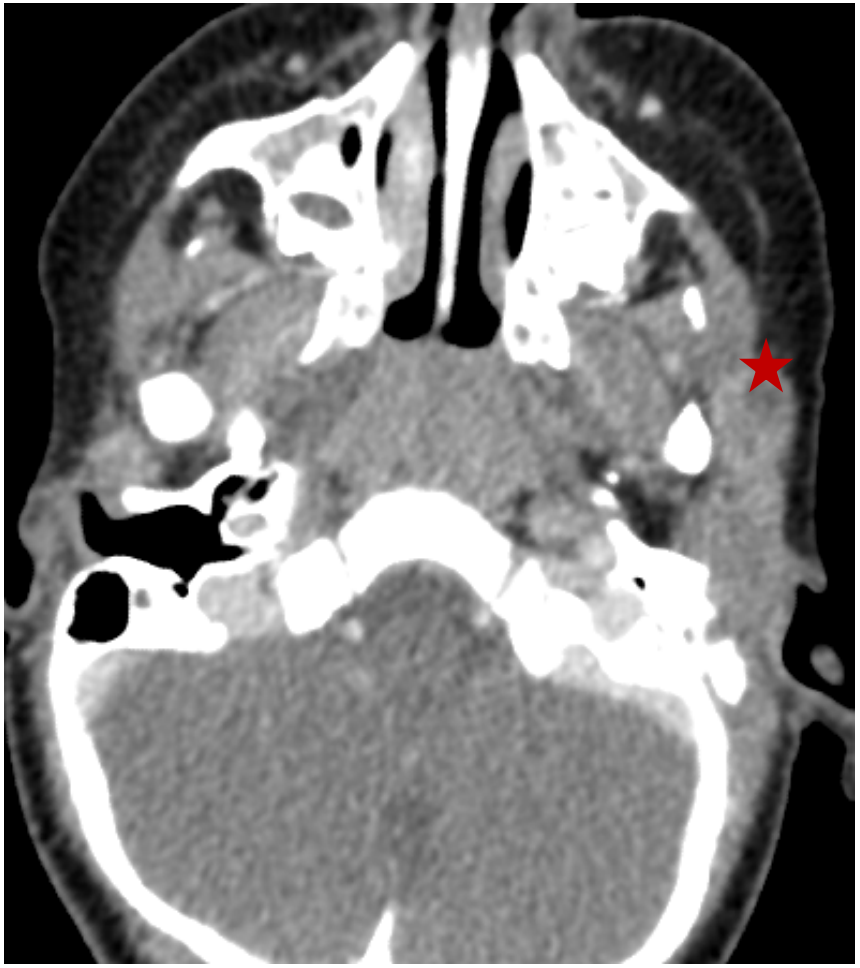
On detecting a high prevalence of multidrug-resistant tuberculosis (TB) in Djibouti, 32 *Mycobacterium tuberculosis* isolates of patients hospitalised in the TB referral centre of the capital were genotyped. A high variety of *M. tuberculosis* lineages, including lineage 1, Indo-Oceanic, lineage 2, East-Asian, lineage 3, East-African Indian and lineage 4, Euro-American, were detected.

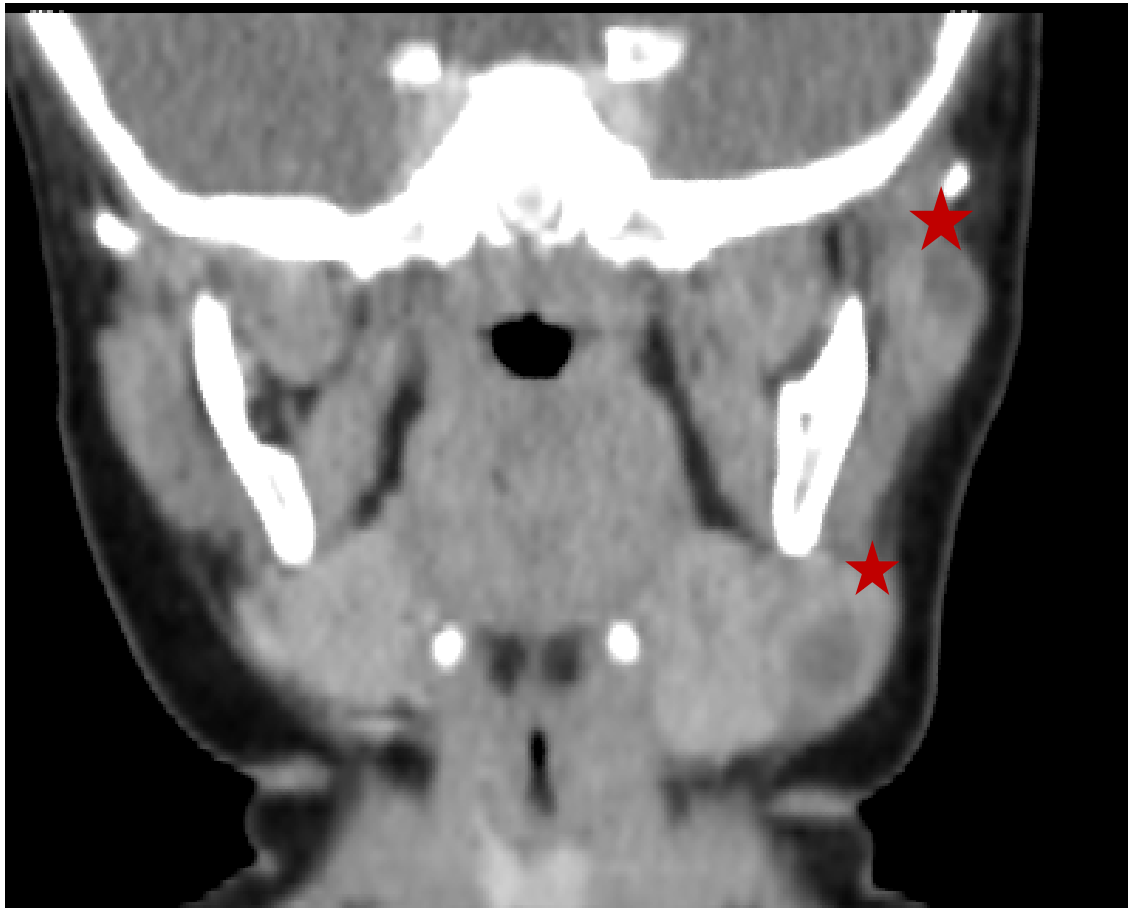
Health Department Perspective

- This cannot be latent TB infection
  - Defined as absence of TB symptoms / signs
    - Unless TB is excluded and an alternative cause is found
  - This kind of lymphadenopathy is classic for TB
- If resistance is not an issue a clinical diagnosis of TB can be considered and standard treatment begun
  - Biopsy in order to test for drug susceptibility
- Only mother, pregnant, has + QFT, CXR normal

Hospital Admission







Tissue and Fluid

- AFB smear +
- Sent to state lab
  - A PCR they are validating was +
  - Awaiting cultures

Teaching Points

- The decision to treat for TB is very frequently a clinical one
  - This is TB and needs to be treated as TB
  - But, this child was infected in a country where drug resistance is possible
  - Mom is pregnant and has a + QFT and effective treatment is important
- Drug susceptibility is the most important test needed here

Thank you!

- Meeting notes will be sent to everyone on the TB Nurse Network list

- If you have questions/comments regarding TBNN, please contact:

Helen McGuirk
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517-335-8050