

Tuberculosis in Pregnancy

1. Screening for Latent Tuberculosis Infection (LTBI)

WHO to screen?

Those at high risk for contracting TB and converting from latent to active TB

- Known HIV infection
- Close contact with individuals known or suspected to have TB
- Medical risk factors known to increase the risk of active disease if they have LTBI
 - Pregestational diabetes
 - Lupus
 - Cancer
 - Alcoholism
 - Drug addiction
 - Conditions requiring prolonged high dose corticosteroid therapy and other immunosuppressants (Such as anti TNF-alpha treatment)
 - Gastrectomy
 - Jeunoileal bypass
- Birth in or emigration from high-prevalent countries
 - Latin America
 - Caribbean
 - Asia
 - Africa
 - Eastern Europe
 - Russia
- Homelessness
- Medically underserved
- Works or lives in high risk settings
 - Correctional institution
 - Nursing home
 - Long-term care facility
- Health care workers working with people at high risk for TB

WHEN to screen: Initiation of Prenatal Care

HOW to Screen

Interferon Gamma Release Assay (IGRA) (Blood testing)

Quanteferon-TB Gold

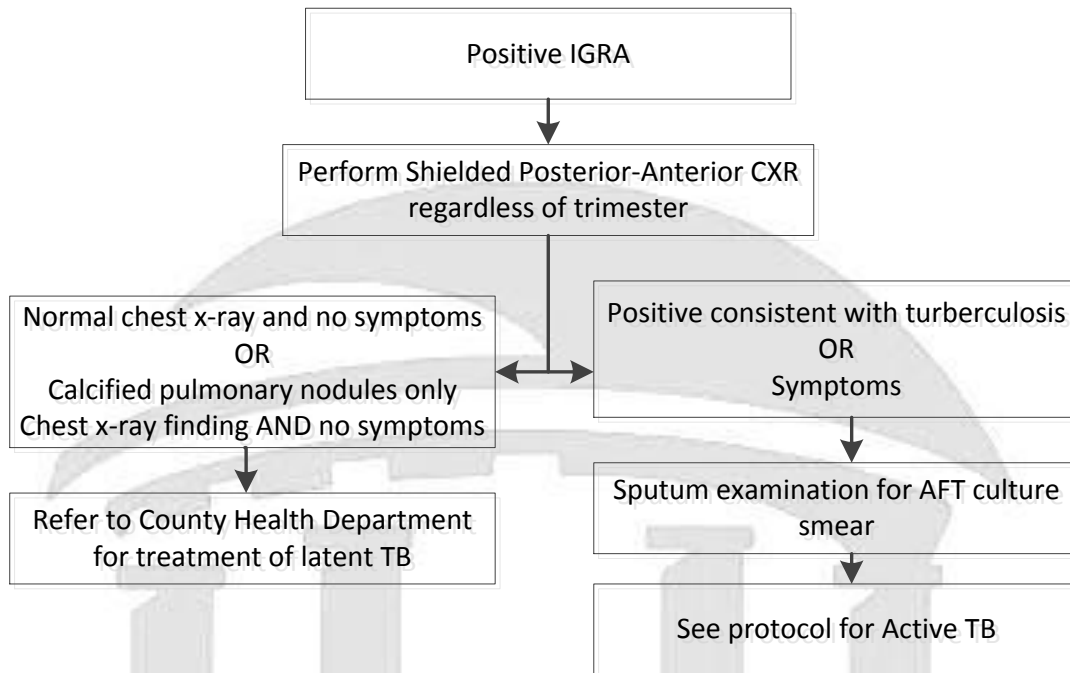
Results: Positive, Negative or Indeterminate

Approximately 5-8% of Quanteferon-TB Gold tests are indeterminate and should be repeated

Cost for Quanteferon-TB Gold

- Charge to patient \$180
- Many of patients who should be screened will be unlikely to pay.
- Up to 8% will require repeat testing for indeterminate result

WHAT TO DO if results are positive



1. Treatment for latent TB is done at the local health departments. It is not anticipated that the OB services here will initiate, maintain or monitor therapy.
2. Treatment for active TB is initiated through referral to infectious disease service

Information about drug therapy options is provided for OB to understand the drugs and be aware of possible complications of the drugs and for documentation purposes.

From CDC.gov Website

INH dosing

Daily dosing: 5 mg/kg to a maximum of 300 mg x 9 months

Twice weekly: Direct Observed Treatment: 15 mg/kg to a maximum of 900 mg/week x 9 months

Pyridoxine (Vitamin B6): 10-25 mg/day throughout the treatment

Drugs	Duration	Interval	Comments
Isoniazid	9 months	Daily	Preferred treatment for: <ul style="list-style-type: none"> • Persons living with HIV • Children aged 2-11 • Pregnant Women (with pyridoxine/vitamin B6 supplements)
		Twice weekly*	Preferred treatment for: <ul style="list-style-type: none"> • Pregnant Women (with pyridoxine/vitamin B6 supplements)
Isoniazid	6 months	Daily	
		Twice weekly*	

The following antituberculosis drugs are contraindicated in pregnant women: Streptomycin, Kanamycin, Amikacin, Capreomycin, Flouroquinolones

Drug-Resistant TB

Pregnant women who are being treated for drug-resistant TB should receive counseling concerning the risk to the fetus because of the known and unknown risks of second-line antituberculosis drugs.

Breastfeeding

Breastfeeding should not be discouraged for women being treated with the first-line antituberculosis drugs because the concentrations of these drugs in breast milk are too small to produce toxicity in the nursing newborn. For the same reason, drugs in breast milk are not an effective treatment for TB disease or latent TB infection in a nursing infant. Breastfeeding women taking INH should also take pyridoxine (vitamin B6) supplementation.

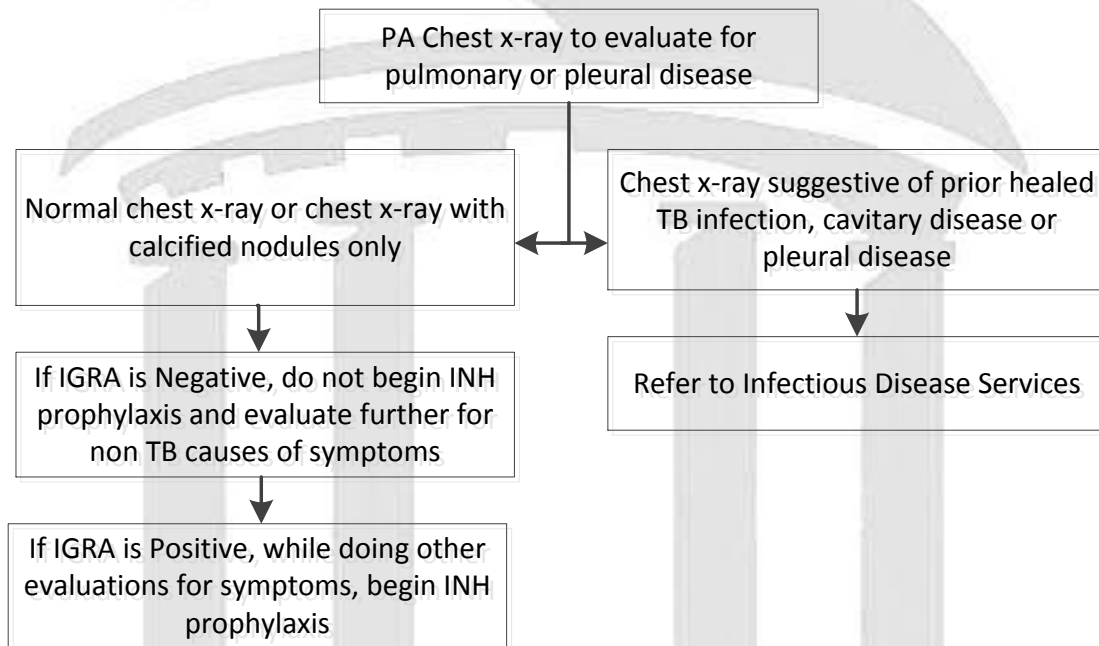
II. Active Disease

IF Symptoms of Pulmonary TB

Cough of >2 weeks duration, unexplained weight loss of more than 10% of body weight, night sweats

PLUS High risk factors (See above)

1. Order IGRA (Quantiferon-X TB)



References

1. Guidelines for Perinatal Care. 7th Edition. American College of Obstetricians and Gynecologists, American Academy of Pediatrics 2013
2. Centers for Disease Control and Prevention CDC.gov website pages related to tuberculosis diagnosis and treatment
3. Mazurek GH, Jereb J, Vernon A, LoBue P, Goldberg S, Castro K. Updated Guidelines for Using Interferon Gamma Release Assays to Detect *Mycobacterium tuberculosis* Infection --- United States, 2010 *Recommendations and Reports* June 25, 2010 / 59(RR05);1-25.
4. Kahwate LC, Feltner C, Halpern M, Woodell CL, Boland W, Amick HR, Weber RP, Jonas DE.
5. Primary Care Screening and Treatment for Latent Tuberculosis Infection in Adults: Evidence Report and Systematic Review for the US Preventive Services Task Force. *JAMA*. 2016;316(9):970-983.

Background Reading on TB in Pregnancy

1. Malhamé I, Cormier M, Sugarman J, Schwartzman K. Latent Tuberculosis in Pregnancy: A systematic review. *PLOS one* May 5, 2016. DOI: 10.1371/journal.pone.0154825
2. Nguyen HT, Pandolfini C, Chiodini P, Bonati M. Tuberculosis care for pregnant women: A systematic review. *BMC Infectious Diseases* 2014, 14:617.
3. Sobhy S, Babiker Z, Zamora J, Khan KS, Kunst H. Maternal and perinatal mortality and morbidity associated with tuberculosis during pregnancy and the postpartum period: A systematic review and meta-analysis. *BJOG* 2017;124:727-733.

These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities.

The algorithms remain the intellectual property of the University of North Carolina at Chapel Hill School of Medicine. They cannot be reproduced in whole or in part without the expressed written permission of the school.

www.mombaby.org

Revised 12/14/17 NCC