UNC SCHOOL OF MEDICINE

UNC Center for Maternal & Infant Health

Tuberculosis Infection in Pregnancy

LATENT TUBERCULOSIS INFECTION (LTBI)

Purpose:

To identify patients with latent tuberculosis infection (LTBI) who should be treated to prevent development of active tuberculosis, in the setting of pregnancy.

Target Population

All pregnant women with the following risk factors should be screened for tuberculosis in early in pregnancy.

- Close contacts (i.e., those sharing the same household or other enclosed environments) of persons known or suspected to have TB;
- persons infected with HIV;
- persons who inject illicit drugs or other locally identified high-risk substance users (e.g., crack cocaine users);
- persons who have medical risk factors known to increase the risk for disease if infection occurs

    A. diabetes mellitus,
    B. conditions requiring prolonged high-dose corticosteroid therapy and other immunosuppressive therapy (including bone marrow and organ transplantation),
    C. chronic renal failure,
    D. some hematologic disorders (e.g., leukemias and lymphomas),
    E. other specific malignancies (e.g., carcinoma of the head or neck),
    F. weight of greater than or equal to 10% below ideal body weight,
    G. silicosis,
    H. gastrectomy,
    I. jejunoileal bypass

- residents and employees of high-risk congregate settings (e.g., correctional institutions, nursing homes, mental institutions, other long-term residential facilities, and shelters for the homeless);
- health-care workers who serve high-risk clients;
- foreign-born persons, including children, recently arrived (within 5 years) from countries that have a high TB incidence or prevalence;
- some medically underserved, low-income populations;
- high-risk racial or ethnic minority populations, as defined locally; and

Method of screening

Tuberculin skin testing (TST) using the single puncture, Mantoux test is the recommended method.

Inject 0.1 ml of 5 tuberculin units (TU) PPD intradermally into the dorsal or volar surface of the forearm.
Tests should be read 48–72 h after test administration
Record the transverse diameter of induration in millimeters
Patient should return in 48-72 hours to have results interpreted

Interpreting the Mantoux Skin Test (TST)

A. The transverse diameter of induration should be record; erythema alone is interpreted as negative.

B. ≥5mm is positive for the following people:

- Persons with recent close contact with persons with active TB
- Persons with known HIV infection or with risk factors for HIV but unknown HIV status
- Persons with fibrotic chest radiographs consistent with healed TB

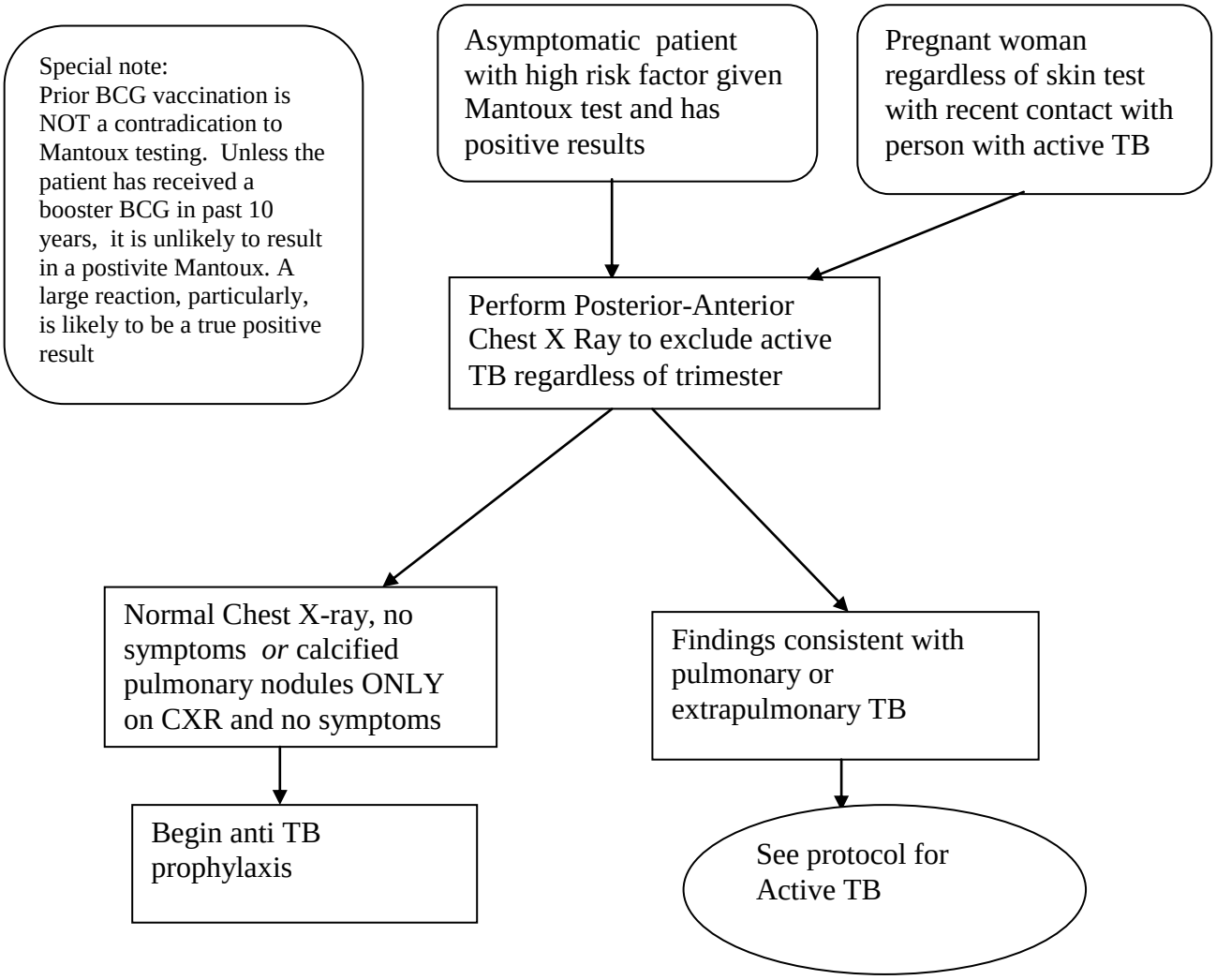
C. ≥10 mm is classified as positive in all others who do meet the above criteria but belon in one of the following groups at high risk for TB:

- Injecting-drug users known to be HIV seronegative;
- Persons who have other medical conditions listed in 4 above.
- Residents and employees of high-risk congregate settings
    - prisons and jails
    - nursing homes and other long-term facilities for the elderly
    - health-care facilities (including some residential mental health facilities)
    - homeless shelters
- Foreign-born persons recently arrived (i.e., within the last 5 years) from countries having a high prevalence or incidence of TB;
- Some medically underserved, low-income populations, including migrant farm workers and homeless persons;
- High-risk racial or ethnic minority populations, as defined locally;
- Children <4 years of age or infants, children, and adolescents exposed to adults in high-risk categories.

D. >=15 mm is classified as positive in any person who does not meet any of the above criteria.

UNC SCHOOL OF MEDICINE

UNC Center for Maternal & Infant Health



INH THERPAY

INH daily 5 mg/kg to a maximum of 300 mg x 9 months + Pyrodoxine (Vit B6) 10-25 mg/day

OR

INH twice weekly using DIRECT OBSERVED THERAPY ONLY 15 mg/kg to a maximum of 900 mg/week x 9 months + Pyrodoxine (Vitamin B6) 10-25 mg/day

Obtain LFTs at Baseline and q month and in post partum period

Special notes:

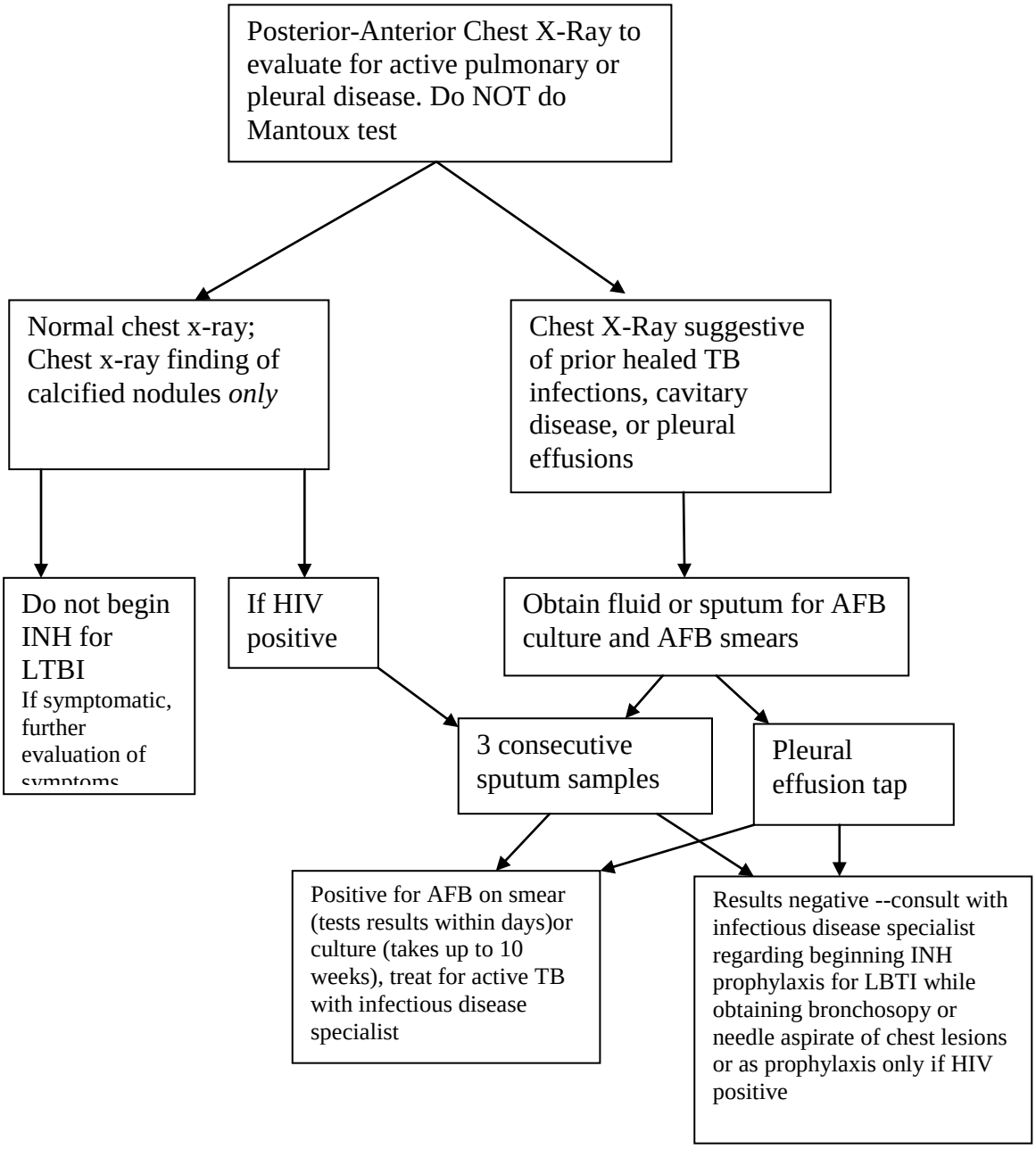
For HIV positive women and recent skin-test converters (within 2 years) who have positive skin testing and negative diagnostic testing, begin INH immediately irrespective of trimester. For others, clinical judgement regarding whether to delay therapy until after pregnancy is possible.

ACTIVE TUBERCULOSIS

Background:

Consider diagnostic instead of screening testing when the risk of active disease is high.

- patient is HIV positive
  Risk of developing active disease in HIV positive patient with latent TB infection is 10% per year and is a major cause of death in HIV positive people
- recent contact with active TB case
- recent skin test conversion (within 2 years of last test);
- when administration and follow up of Mantoux testing is unreliable;
- when consequences of undiagnosed disease may be severe
- patient with symptoms of pulmonary TB (cough > 2 weeks duration, unexplained weight loss of more than 10% of body weight
- Approximately half the cases of TB in pregnancy are extrapulmonary.


Posterior-Anterior Chest X-Ray to evaluate for active pulmonary or pleural disease. Do NOT do Mantoux test
Normal chest x-ray; Chest x-ray finding of calcified nodules *only*
Chest X-Ray suggestive of prior healed TB infections, cavitary disease, or pleural effusions
Do not begin INH for LTBI
If symptomatic, further evaluation of symptoms
If HIV positive
Obtain fluid or sputum for AFB culture and AFB smears
3 consecutive sputum samples
Pleural effusion tap
Positive for AFB on smear (tests results within days)or culture (takes up to 10 weeks), treat for active TB with infectious disease specialist
Results negative --consult with infectious disease specialist regarding beginning INH prophylaxis for LBTI while obtaining bronchosopy or needle aspirate of chest lesions or as prophylaxis only if HIV positive

UNC SCHOOL OF MEDICINE

UNC Center for Maternal & Infant Health

Resources

Guidelines for Perinatal Care, 6th Edition. American College of Obstetricians and Gynecologists; American Academy of Pediatrics, October 2007

CDC. CDC Fact Sheet TB Elimination. Tuberculosis in Pregnancy, October 2008

CDC. Treatment of tuberculosis. *MMWR* 2003; 52 (No. RR-11) www.cdc.gov/mmwr/PDF/rr/rr5211.pdf

Targeted tuberculin testing and treatment of latent tuberculosis infection. June 9 2009 www.cdc.gov/MMWR/PDF/rr/rr4906.pdf

Revised June 8, 2012.

Notification to Users

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.