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# TB Update for Civil Surgeons

April 15, 2010

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# Topics

1. Discuss overseas screening and the importance of civil surgeons in TB elimination
  2. Review the new I-693 Technical Instructions for TB screening
  3. Who, when and how to refer patients to Public Health for TB follow-up
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# Objectives

After this course, you will be able to:

1. Describe the role of the civil surgeon in TB elimination
  2. Complete the I-693 correctly
  3. Explain when and how to refer patients to the Denver Metro TB Clinic
  4. Describe when and how to treat latent TB
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# How often will active TB be detected?

Denver Health screened 7,573 “change of status” immigrants over 20 mo. ‘87-88.

- ❑ 75% less than 35 years of age
- ❑ 42% PPD-positive
- ❑ 10% of PPD+ with any CXR abnormality
- ❑ 1.7% of abnormal CXR were active TB

Blum, Chest 1993;103:1770

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# Treatment of Latent TB and Outcomes: DH Immigrant Screening (1)

- Treatment of LTBI recommended for 1,029
  - Treatment for  $\geq 6$  mo. completed in 716 (70%)
  - No INH hepatitis, 2 stopped due to side effects
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## Treatment of Latent TB and Outcomes: DH Immigrant Screening (2)

- 4 cases of active TB developed over 3 years
    - All had LTBI and normal CXR on screening
    - 3 pulmonary (one fatal), one lymphatic
  
  - Case rate of 2 per 1,000 over 3 years
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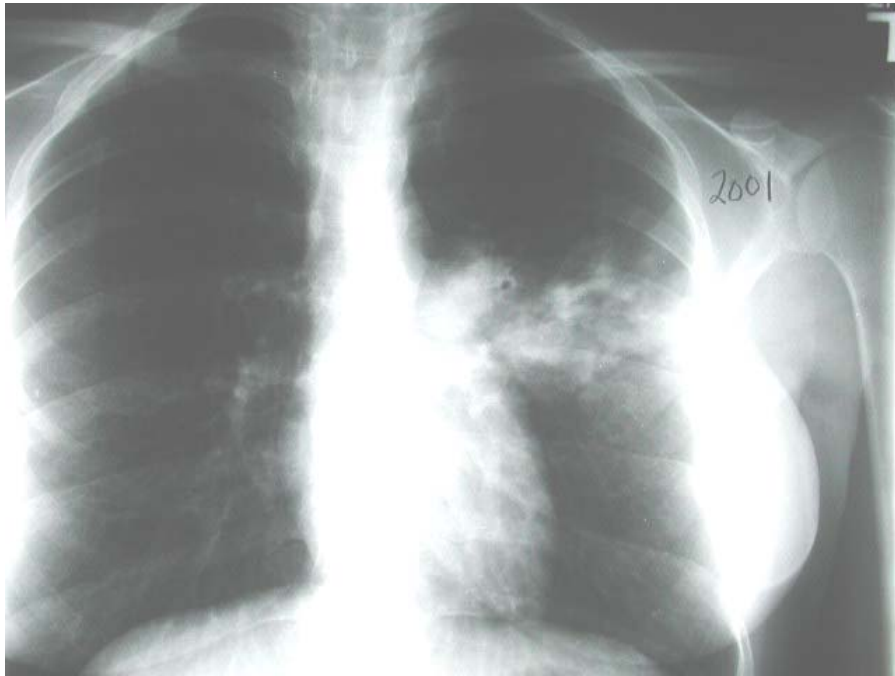
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## 27 y/o female

- born in India, immigrated 1 year ago
  - 16 weeks pregnant
  - Asymptomatic
  - Has a history of BCG as a child and no other PMHx
  - No PPD is done
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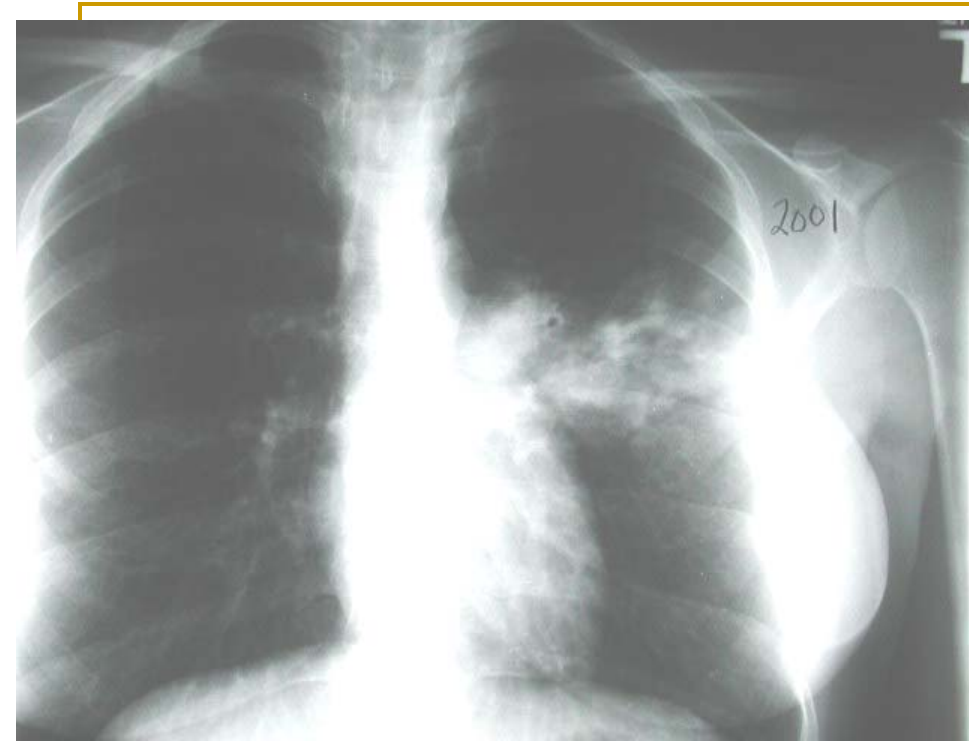
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3 yrs later ... 30 y/o female

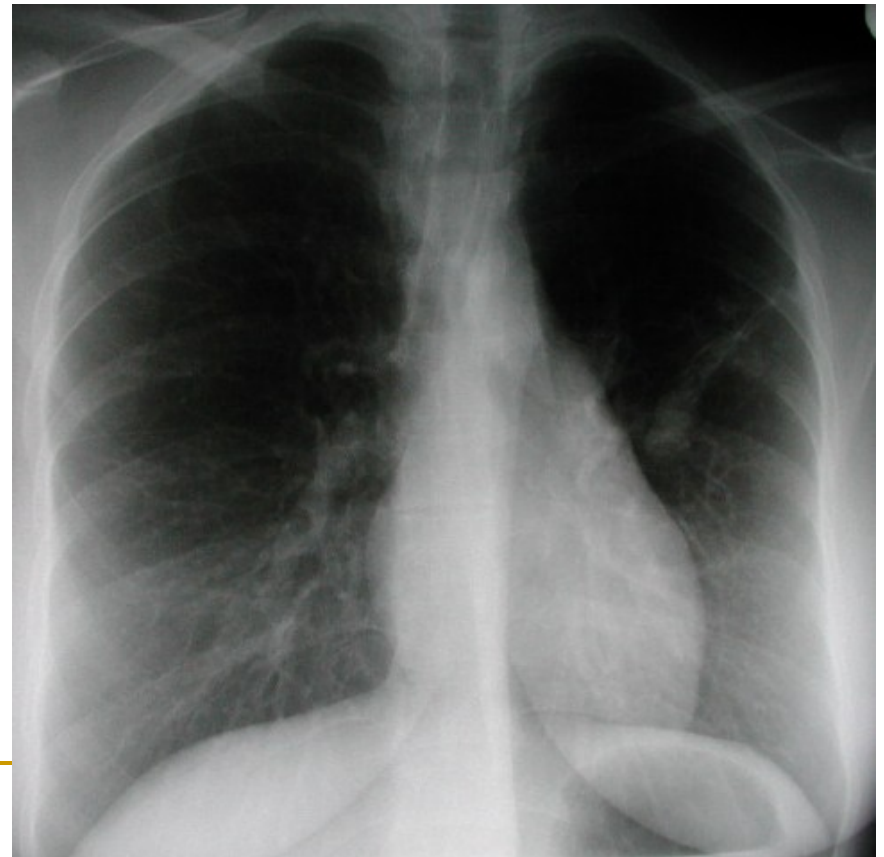


- Pneumonia - improved on levofloxacin
- No AFBs
- No PPD





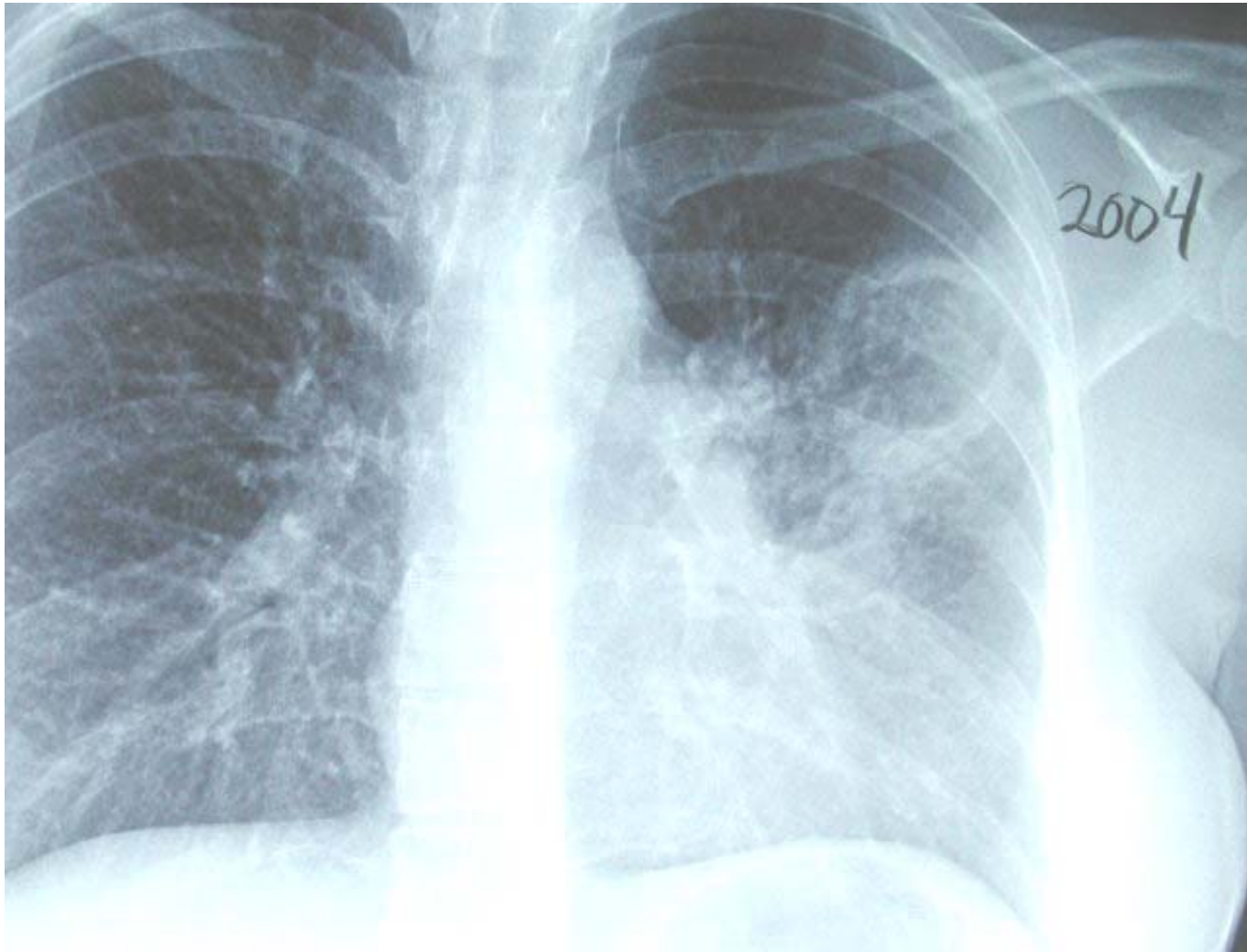
After treatment  
with levofloxacin →



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## 2 years later ...32 y/o female from India

- Immigrated to the U.S. 6 years ago
  - She is 12 weeks pregnant and presents with a 2 week history of a productive cough, fever and chills
  - After failing to respond to azithromycin (Z-pac) twice and 1 month of symptoms she gets a CXR
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AFB smear (+)

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# Diagnosing TB in Primary Care Clinics (1)

## Risk Factors for Infection:

1. Persons born/resided where TB is common (includes travel > 3 months to an endemic area)

Central and South America, Africa, Eastern Europe, Asia and the Pacific Islands

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# Diagnosing TB in Primary Care Clinics (2)

## Others at Risk for Infection:

- Elderly U.S. born (>70)
- Health Care Workers
- Persons who live/work in high-risk congregate settings (jail, nursing home, homeless shelters)
- Substance abusers (IV drugs or alcohol)
- Children exposed to high-risk adults  
(US born children of foreign-born parents)

# Diagnosing TB in Primary Care Clinics (3)

## Risk Factors for Progression:

- **HIV**
- Immunosuppression (transplants, TNF-alpha inhibitors)
- Recent close contact to active TB
- Fibrotic CXR changes consistent w/ prior TB
- **Diabetes**
- **Chronic renal failure**
- Silicosis
- Leukemia / lymphoma
- Head/neck cancer
- Wt loss > 10%, gastric bypass surgery

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# Diagnosing TB in Primary Care Clinics (4)

- Test people with risk for infection, risk for progression, and especially those with both
  - TST is most widely available
  - QuantiFERON and T-SPOT.TB are newer blood tests for diagnosing LTBI
  - A positive on any should prompt a CXR and careful symptom review to exclude active disease
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# Recommended Treatment for Latent TB Infection

- INH daily for 9 months

preferred for both HIV (-) and HIV (+)

- adults 5 mg / kg, max 300 mg

- children 10-20 mg / kg, max 300 mg

- Vit B6 25mg daily
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# Lab Work

- Not routinely indicated
  - Baseline hepatic test & after one month if:
    - Initial work-up suggests possible liver disorder
    - Pregnant or immediate post-partum
    - HIV positive
    - Taking other meds with potential for liver toxicity
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# Monthly Monitoring

1. Signs/Symptoms of Active TB
  2. Possible Side Effects of INH
    - toxicity/hepatitis
    - lab work as needed
  3. Establish rapport with patient and emphasize:
    - benefits of meds
    - importance of adherence
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# Summary

- Use a risk assessment and CXR to decide when to collect sputum
  - Sputum smears and TST alone do not rule out active TB
  - Avoid using fluoroquinolones
  - Call the TB clinic (or local health dept) early and often with suspect cases
  - Prevent TB by evaluating and treating at risk patients with latent TB infection
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# Contact Information

- Denver Metro TB Clinic (303) 602-7240
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  - Carolyn Bargman R.N. (Boulder) (303) 413-7516
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  - Bob Belknap M.D. (303) 602-7244
  - After hours –
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