



Center for  
Tuberculosis

# PEDIATRIC TUBERCULOSIS: RADIOLOGIC CONSIDERATIONS

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# Role of radiology in pediatric TB

## Impact clinical decision-making:

1. Decision to treat TB disease—abnormal CXR consistent with TB
2. Decision to treat LTBI—normal CXR
3. Alternate diagnosis—abnormal CXR, non-TB findings
4. Monitor treatment

Low frequency of microbiologic confirmation in children increases the importance of radiology in dictating clinical decisions

# Pediatric TB Radiology

The Union

International Union Against  
Tuberculosis and Lung Disease

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## DIAGNOSTIC CXR ATLAS FOR TUBERCULOSIS IN CHILDREN

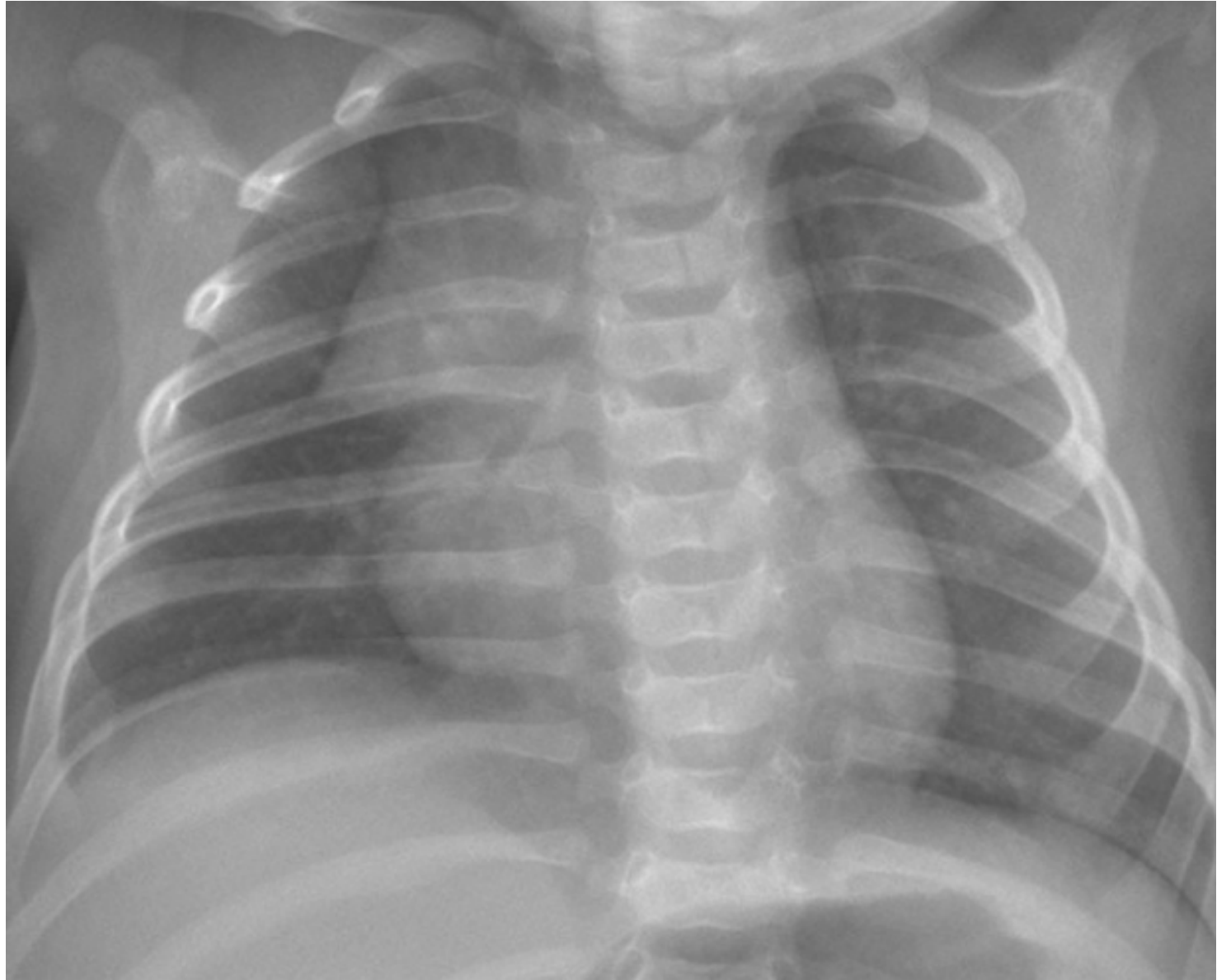
24 March 2022

DOWNLOAD:

[Publication in English \(Pdf\)](#)

<https://theunion.org/technical-publications/diagnostic-cxr-atlas-for-tuberculosis-in-children>

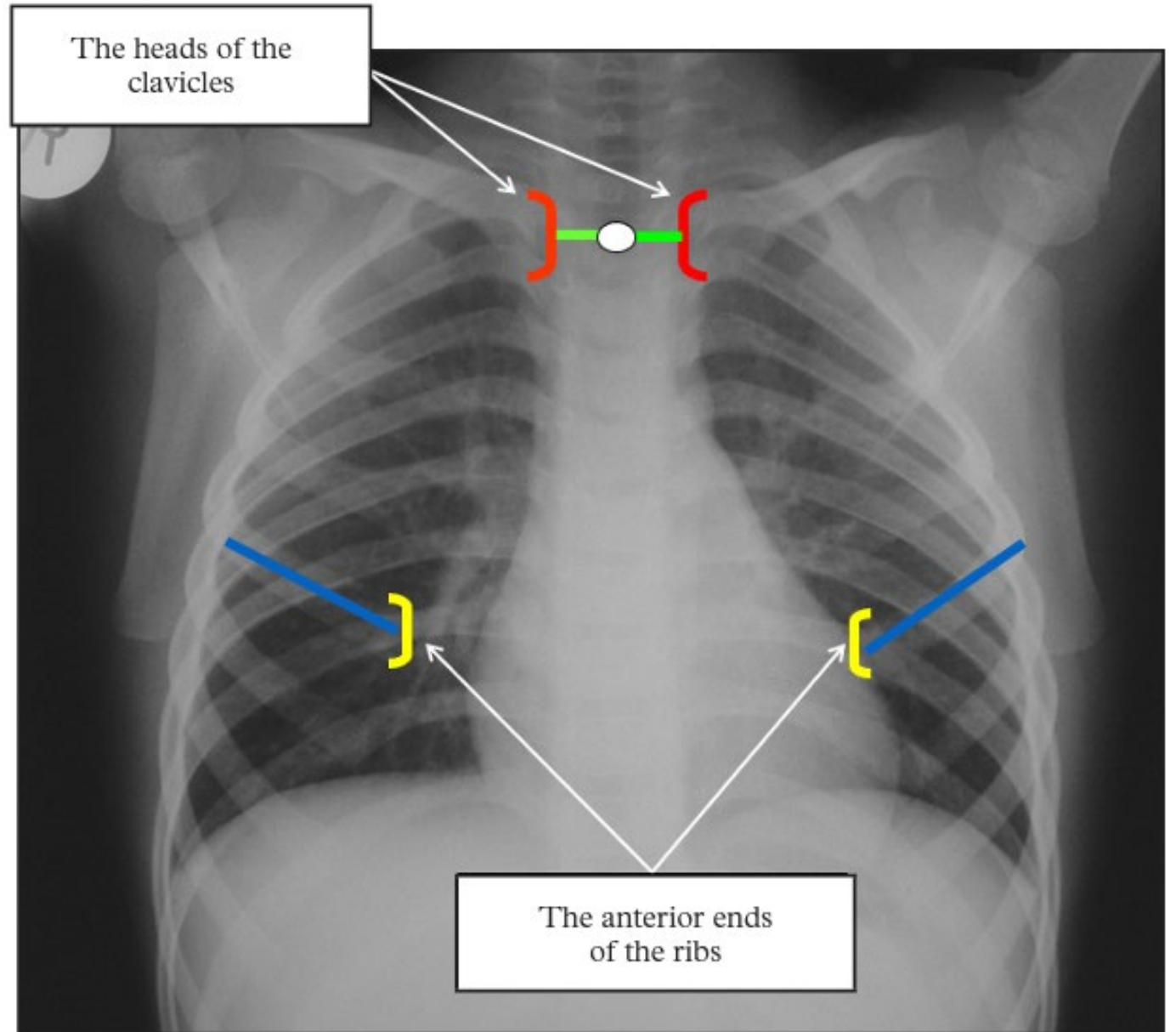
# Radiologic Characteristics of Normal Pediatric X-Ray



Normal CXR

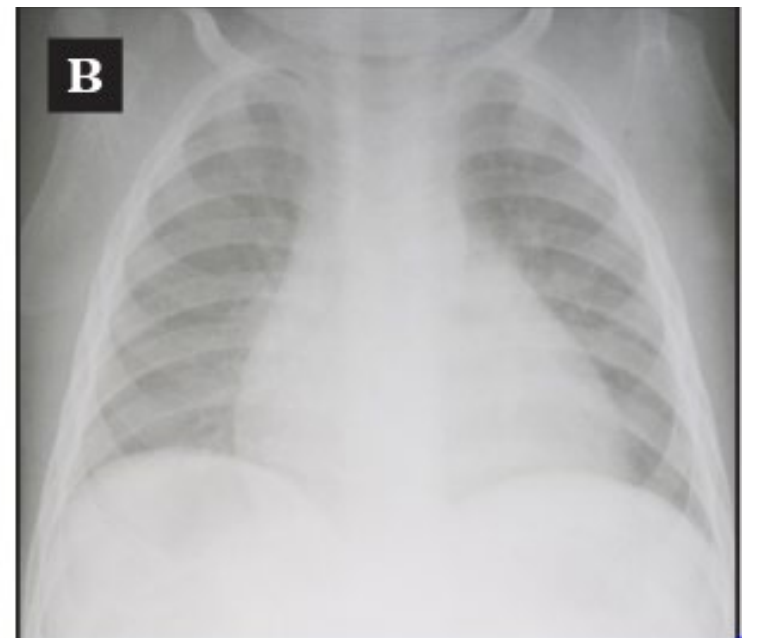
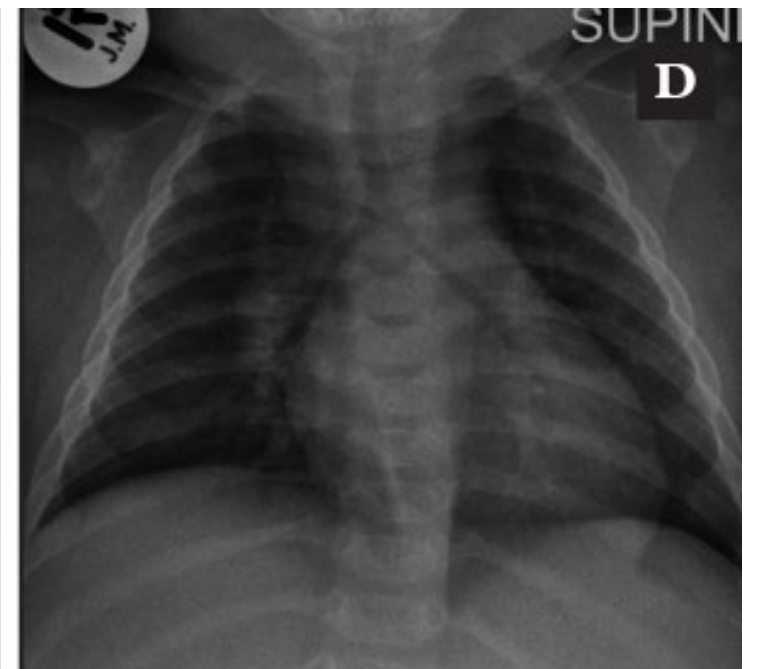
# Assuring the quality of the pediatric CXR

## Rotation



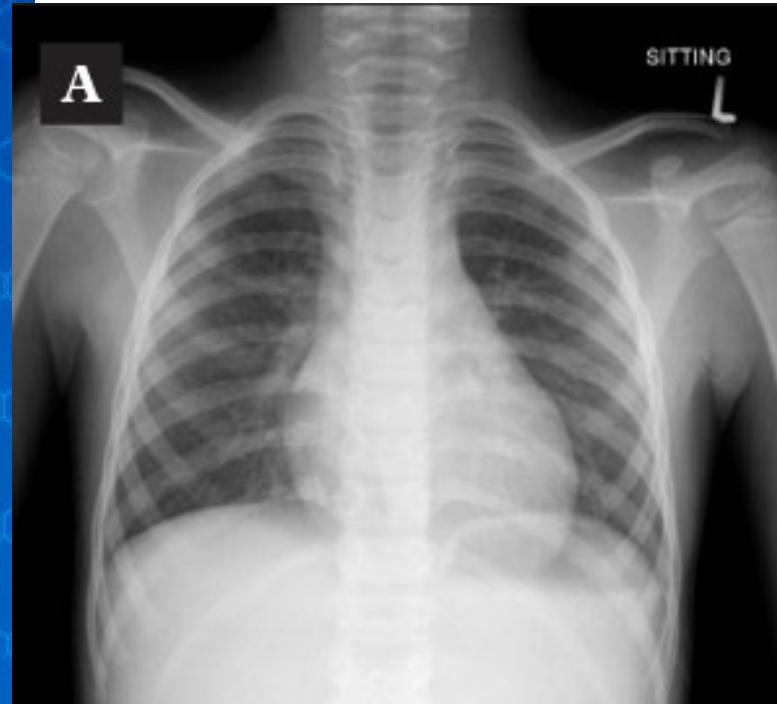
Assuring the quality  
of the pediatric CXR

# Penetration



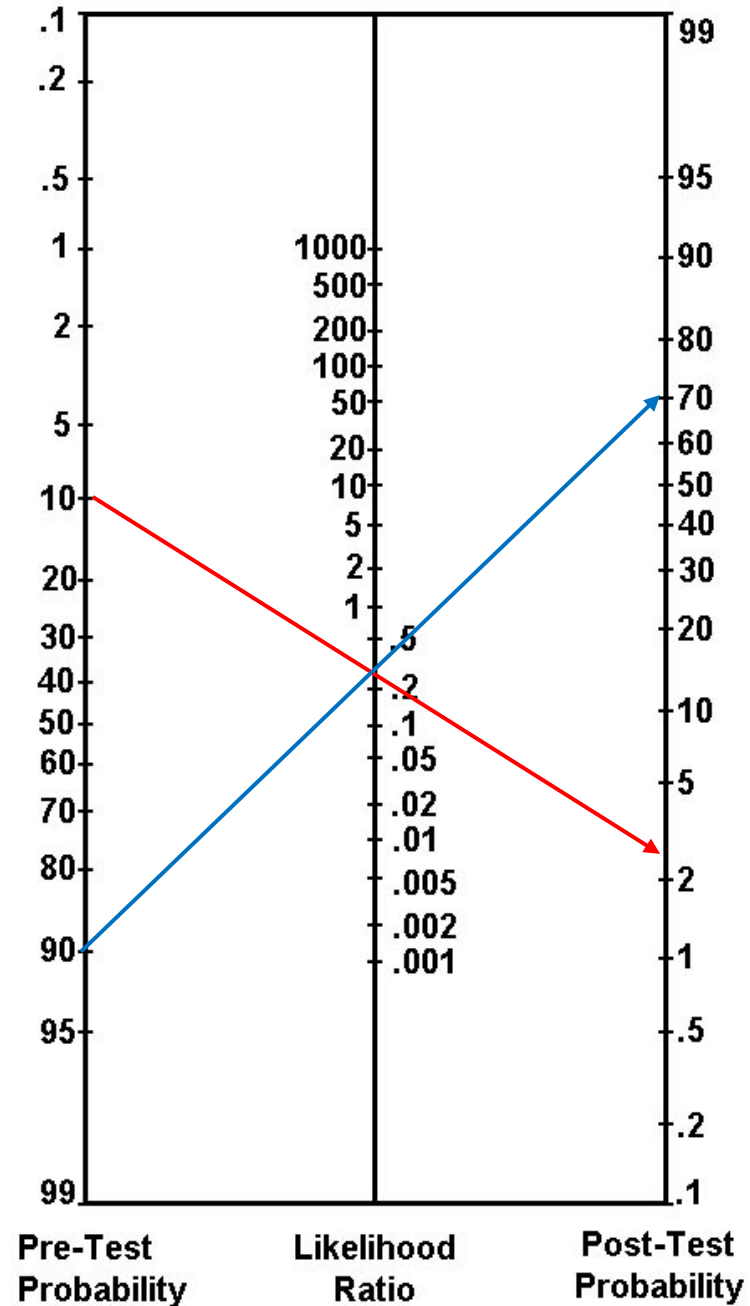
# Assuring the quality of the pediatric CXR

## Inspiration



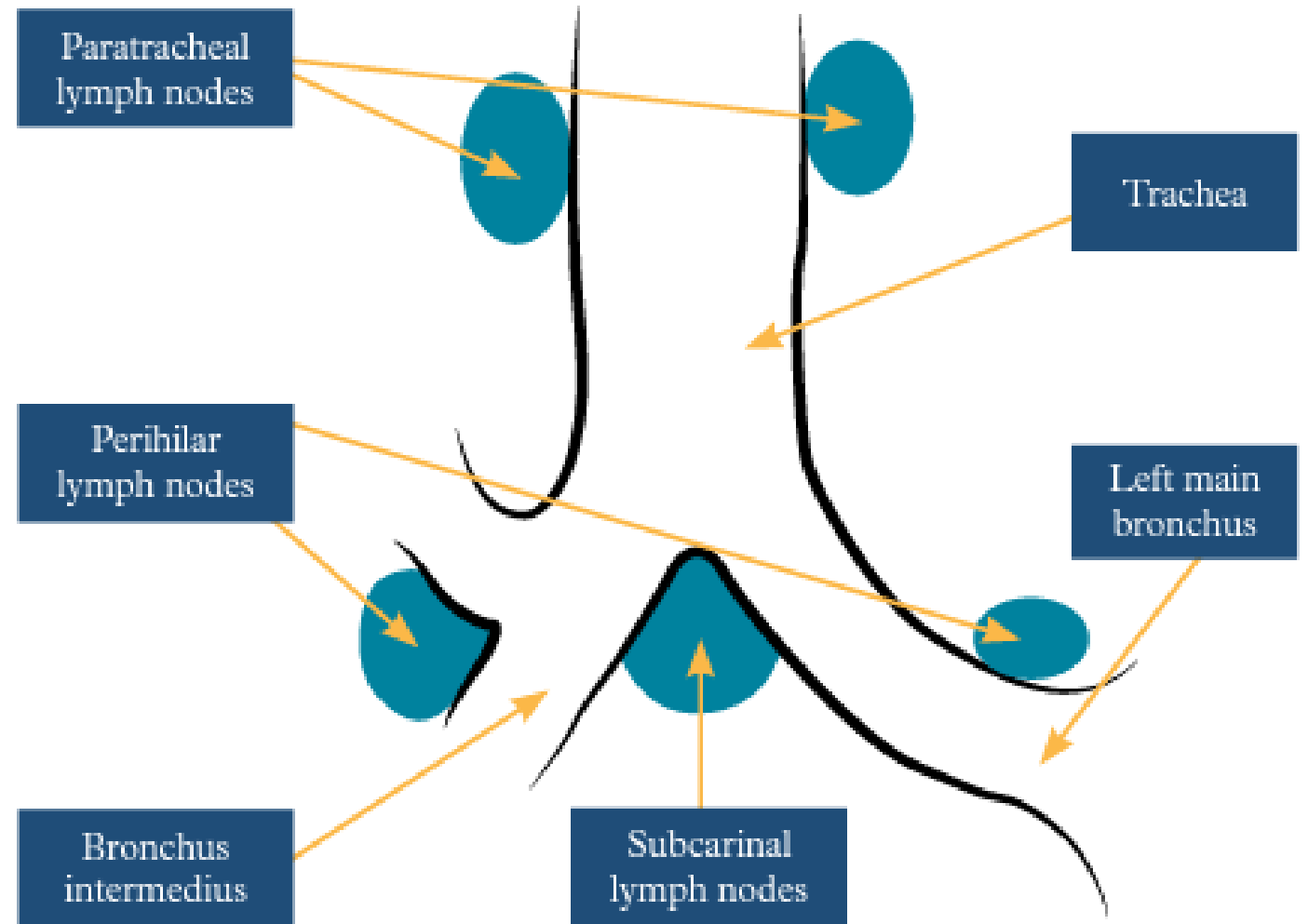
# Pediatric TB interpretation: Impact of pre-test probability

Make sure to use it—  
and communicate to the  
radiologist!



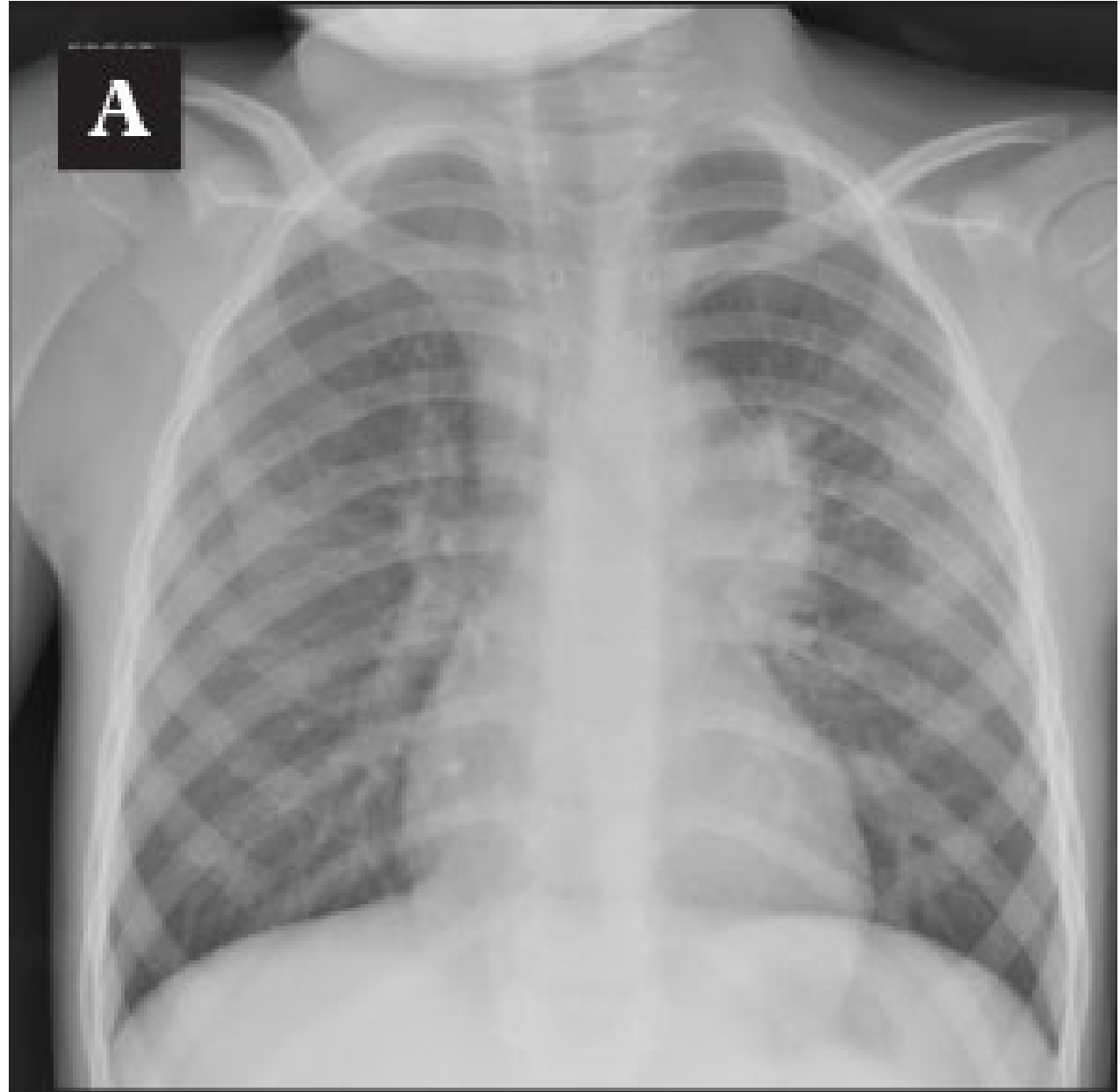
# Radiographic TB disease patterns in children

## Intrathoracic adenopathy



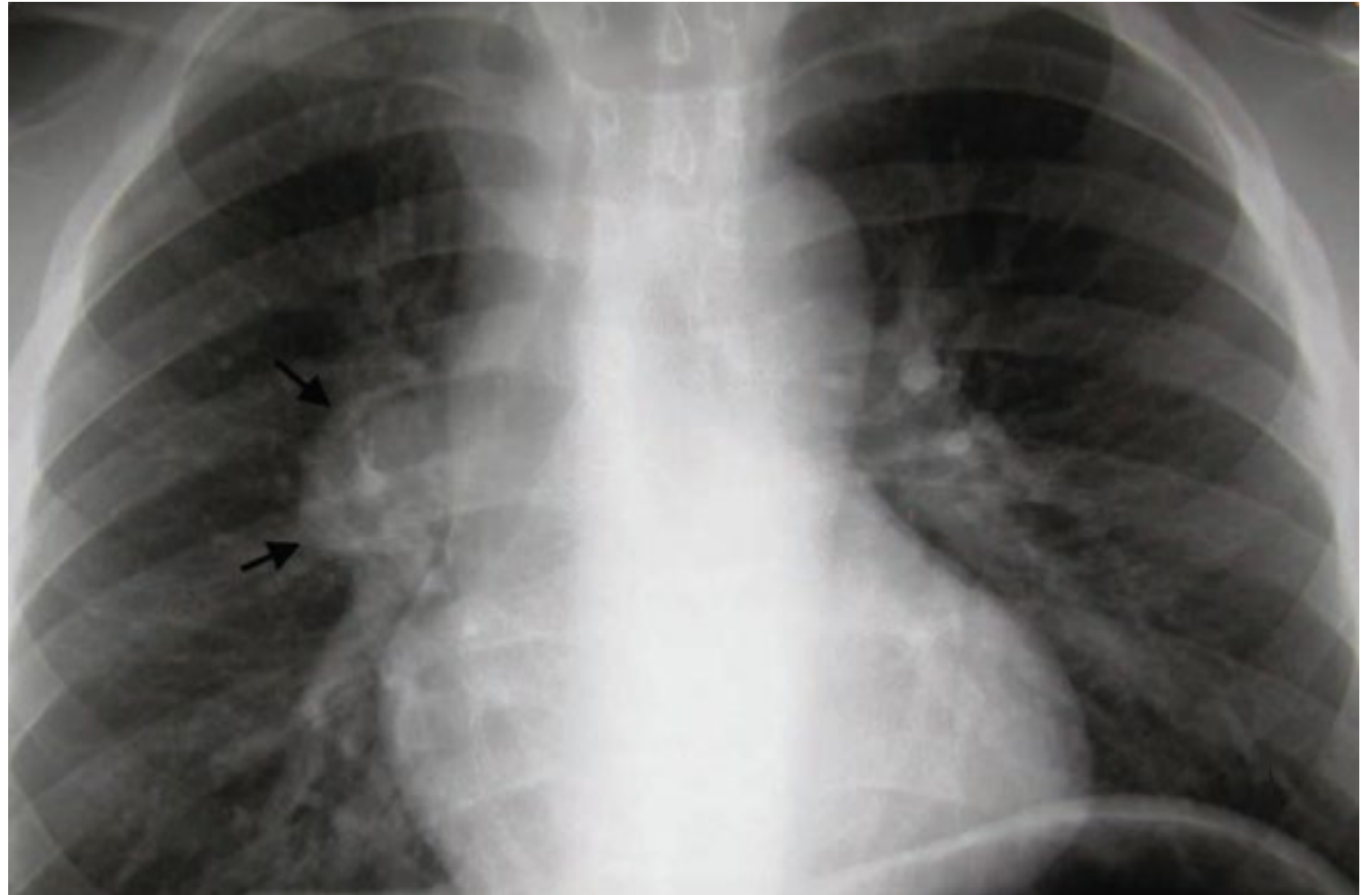
# Radiographic TB disease patterns in children

## Hilar adenopathy



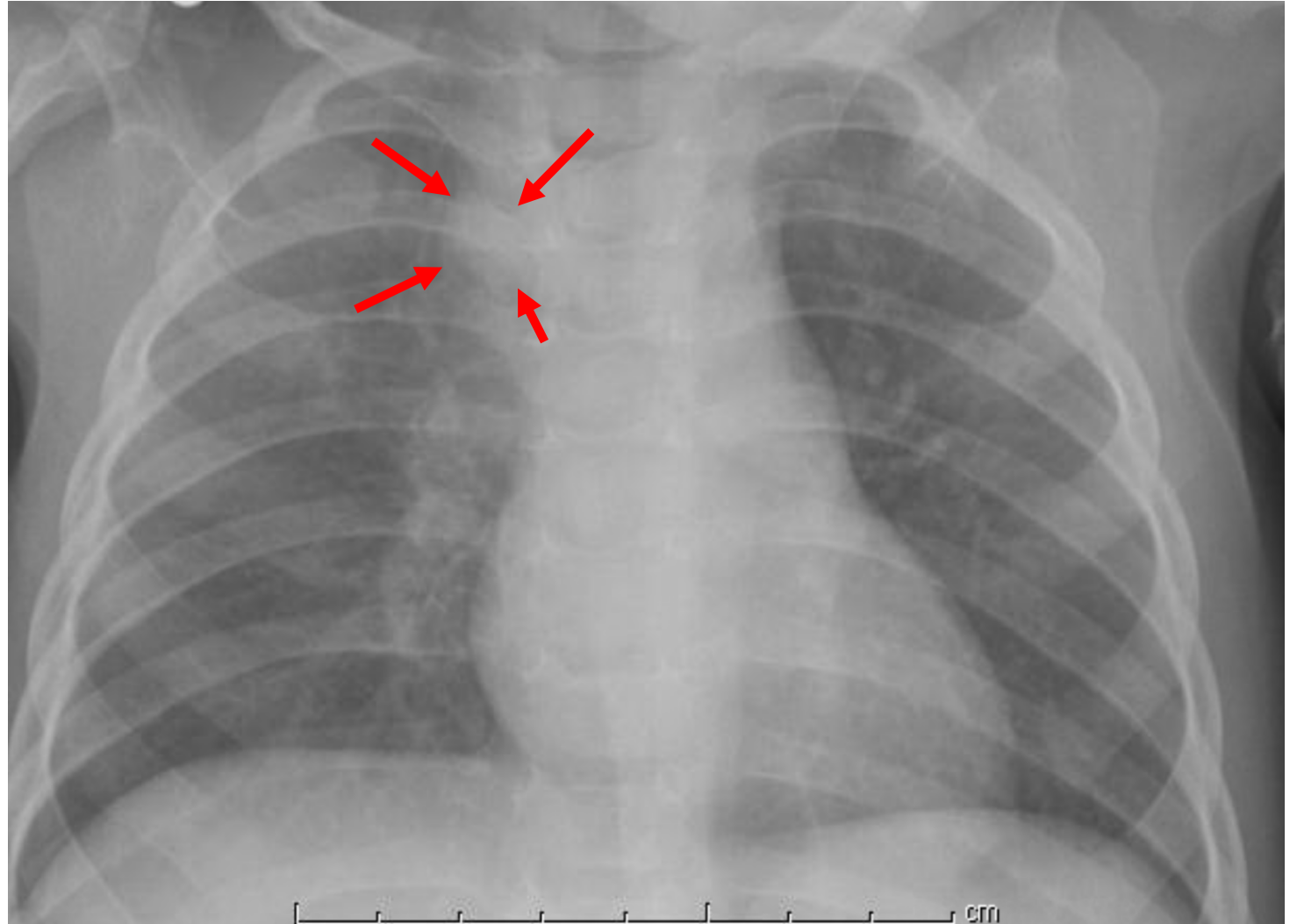
# Radiographic TB disease patterns in children

## Hilar adenopathy



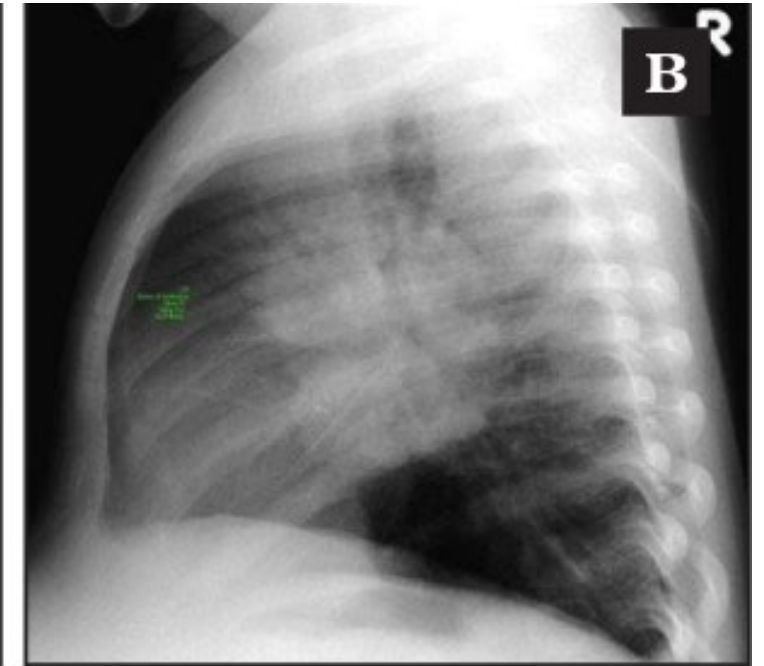
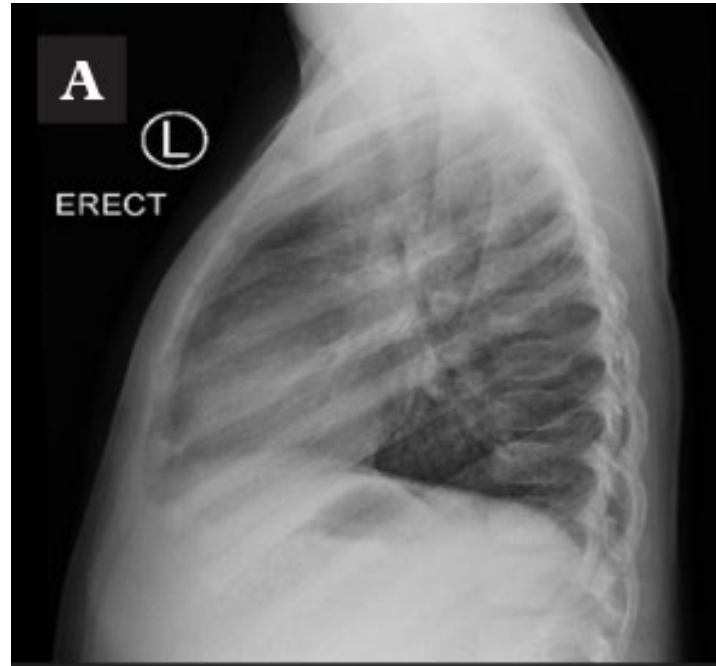
# Radiographic TB disease patterns in children

## Paratracheal Adenopathy



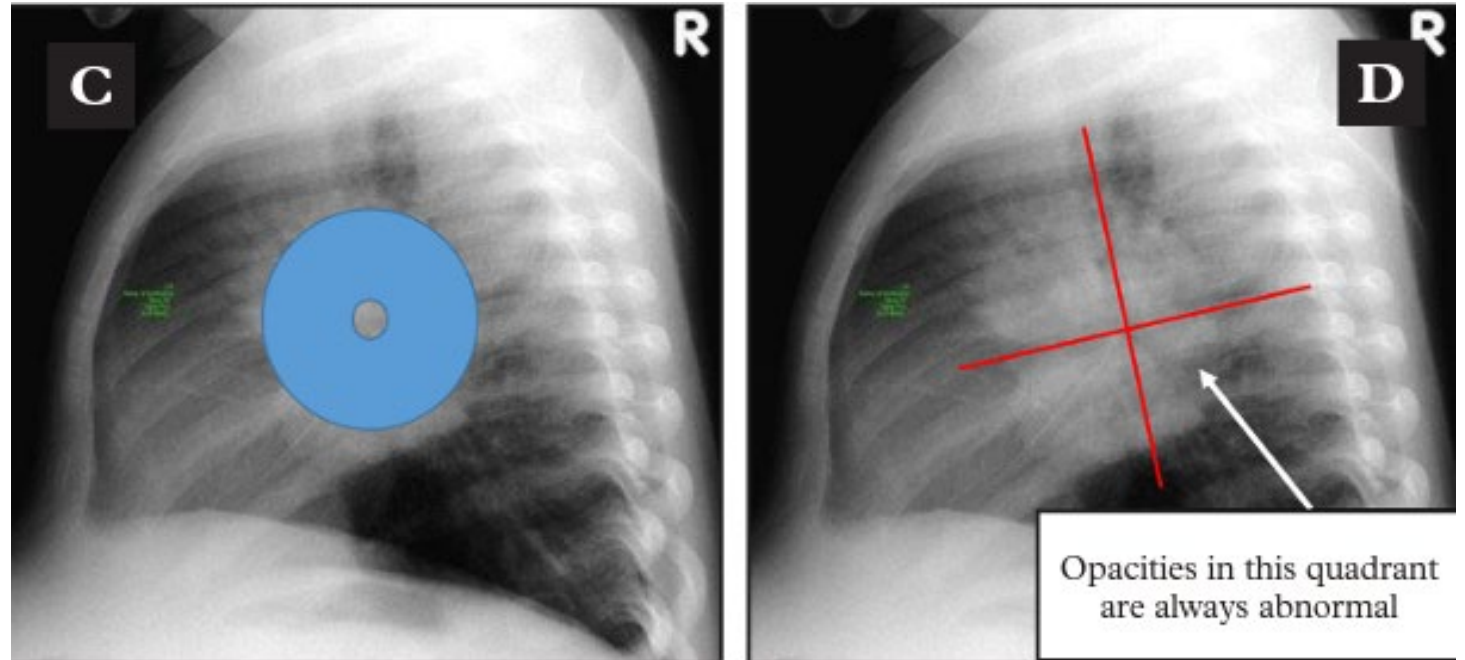
# Radiographic TB disease patterns in children

Hilar  
adenopathy:  
importance of  
lateral film



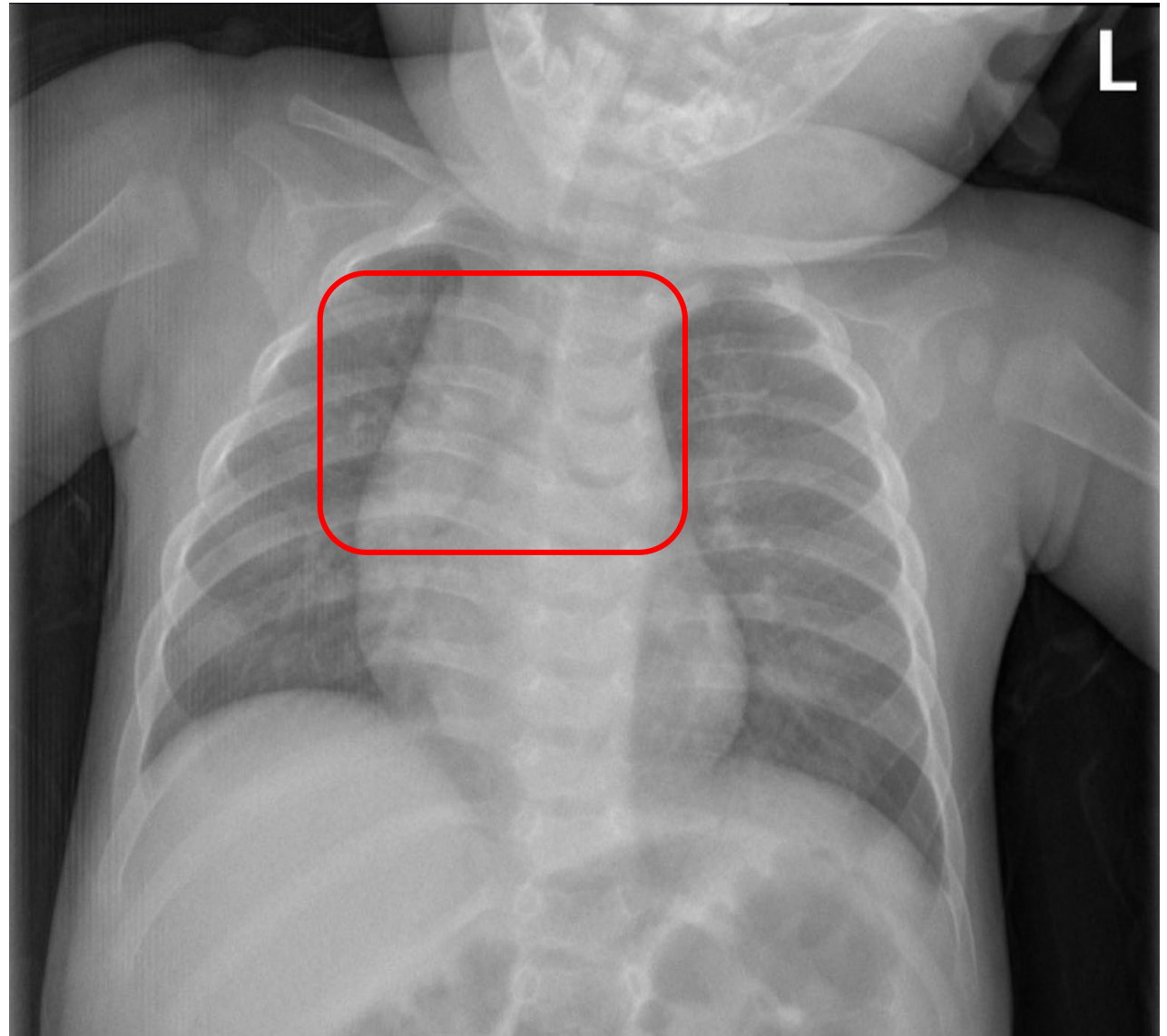
# Radiographic TB disease patterns in children

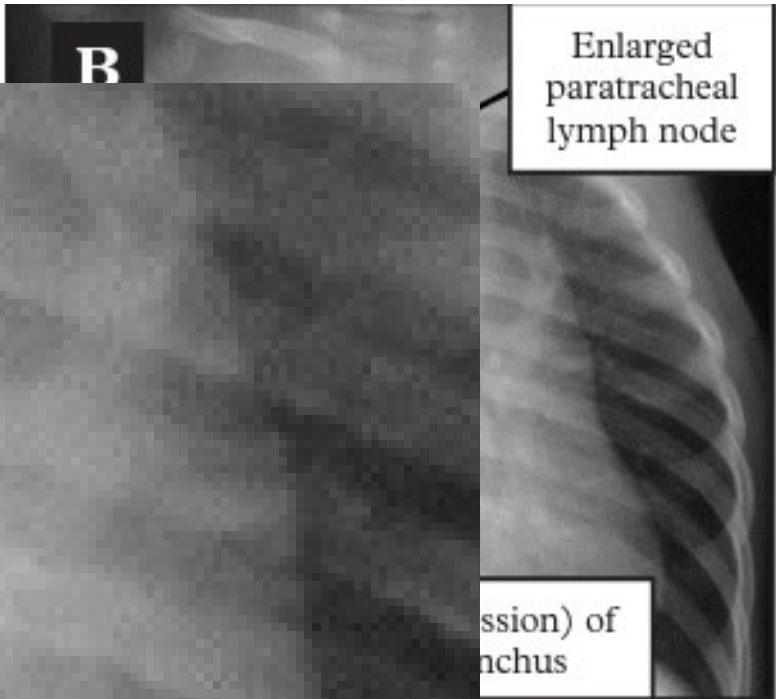
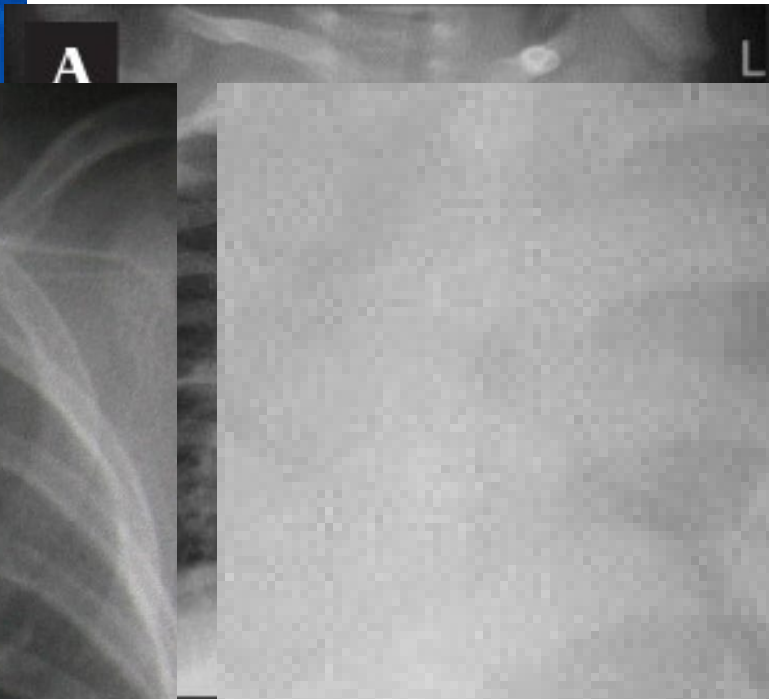
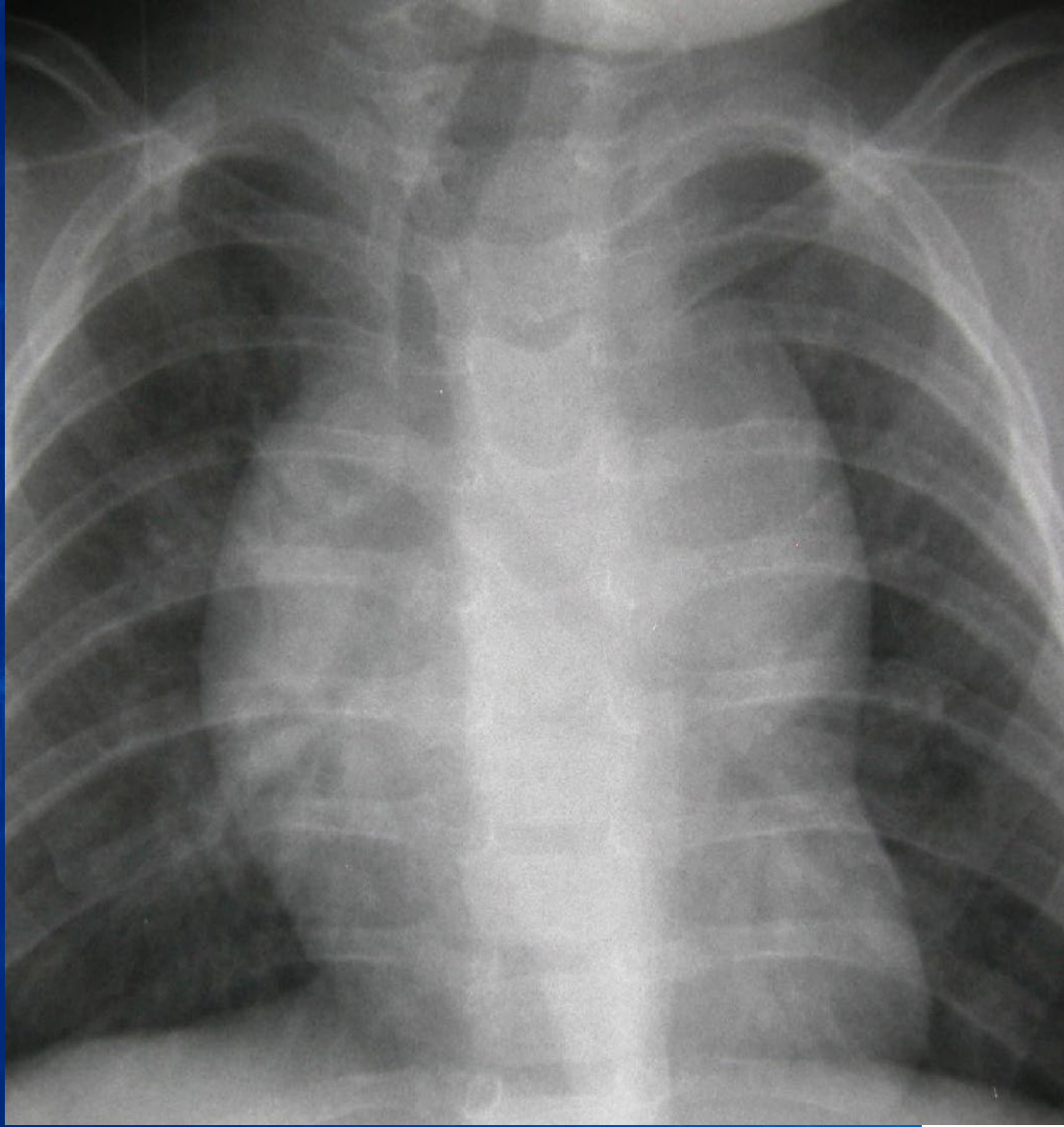
Hilar adenopathy: importance of lateral film



# Radiographic TB disease patterns in children

## Subtle signs of airway compression





Enlarged paratracheal lymph node

(compression) of  
trachea

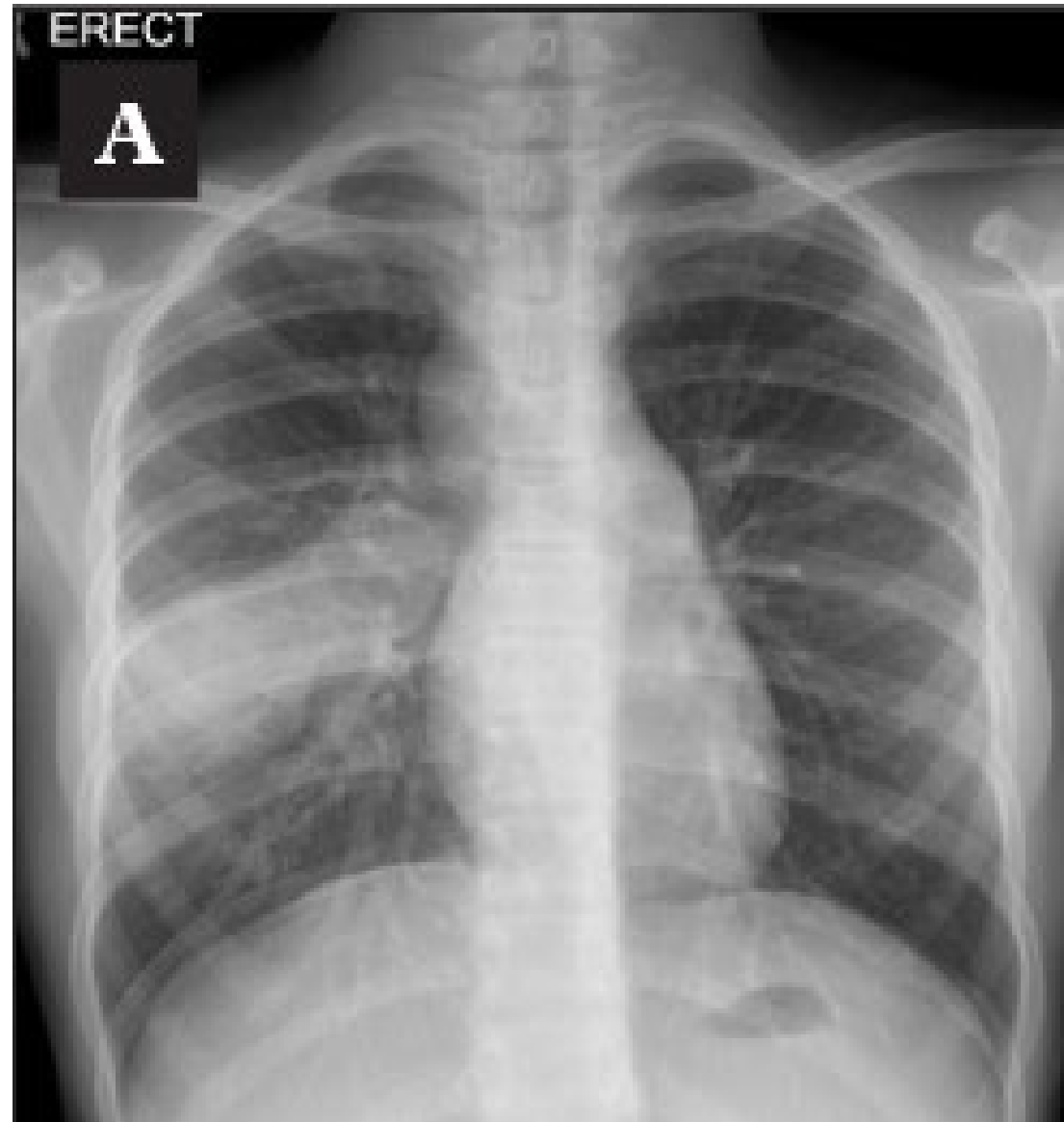
## Radiographic TB disease patterns in children



Subtle radiographic concerns, imperfect film, high stakes:  
Potential role for CT scan

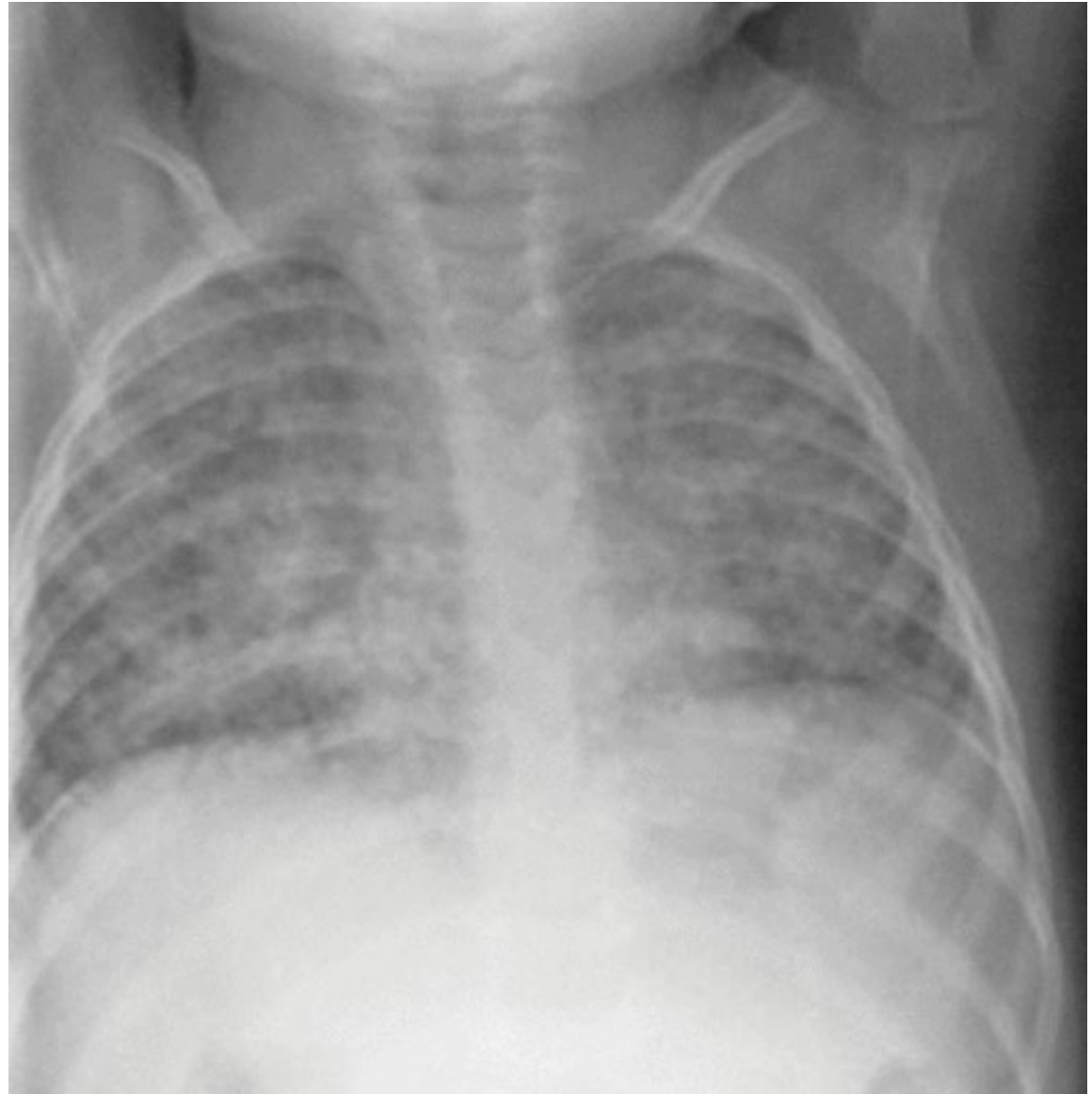
## Radiographic TB disease patterns in children

Adenopathy with  
consolidation



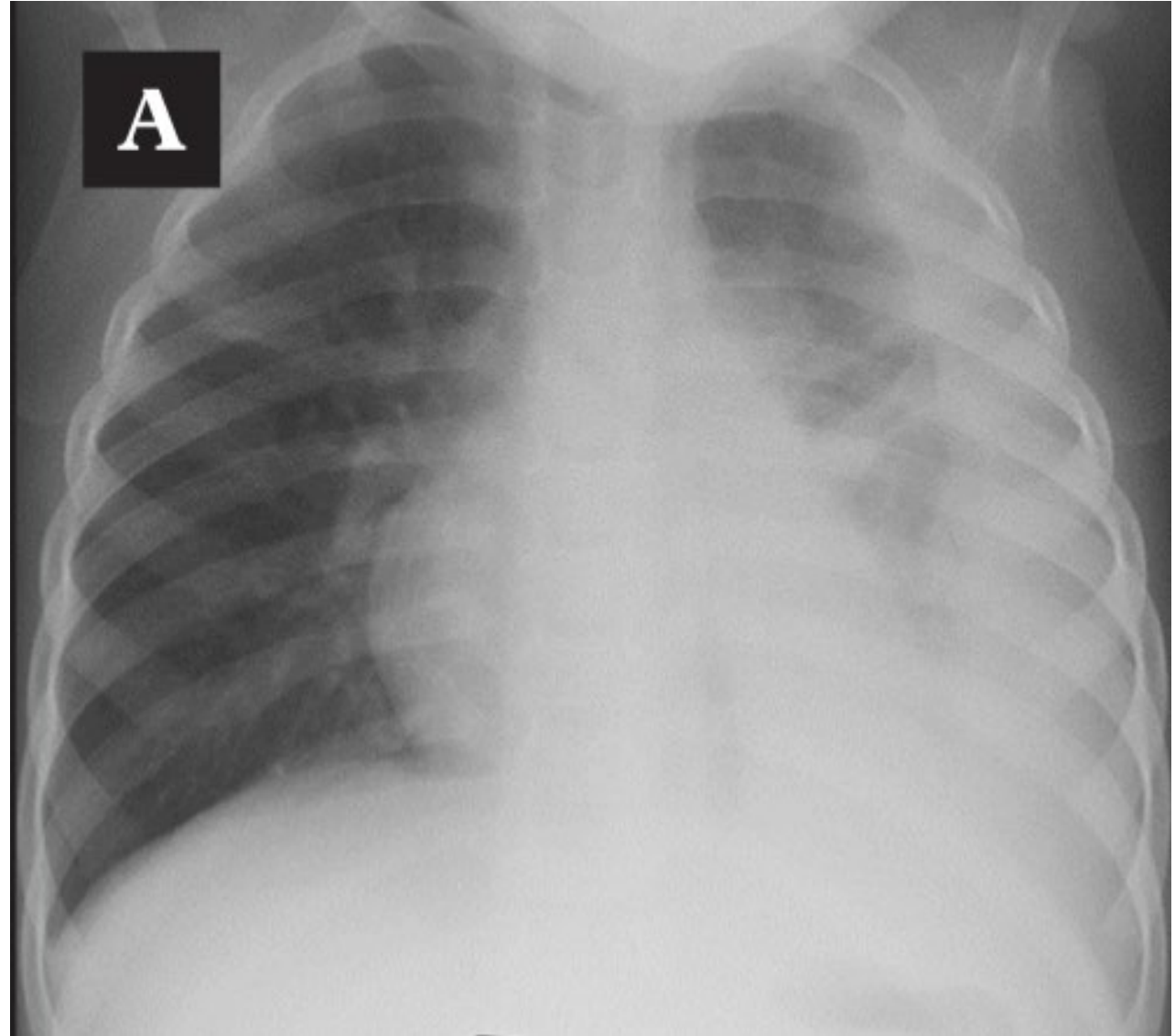
# Radiologic characteristics of pediatric TB

## Miliary pattern



Radiologic  
characteristics of  
pediatric TB

Pleural Effusion



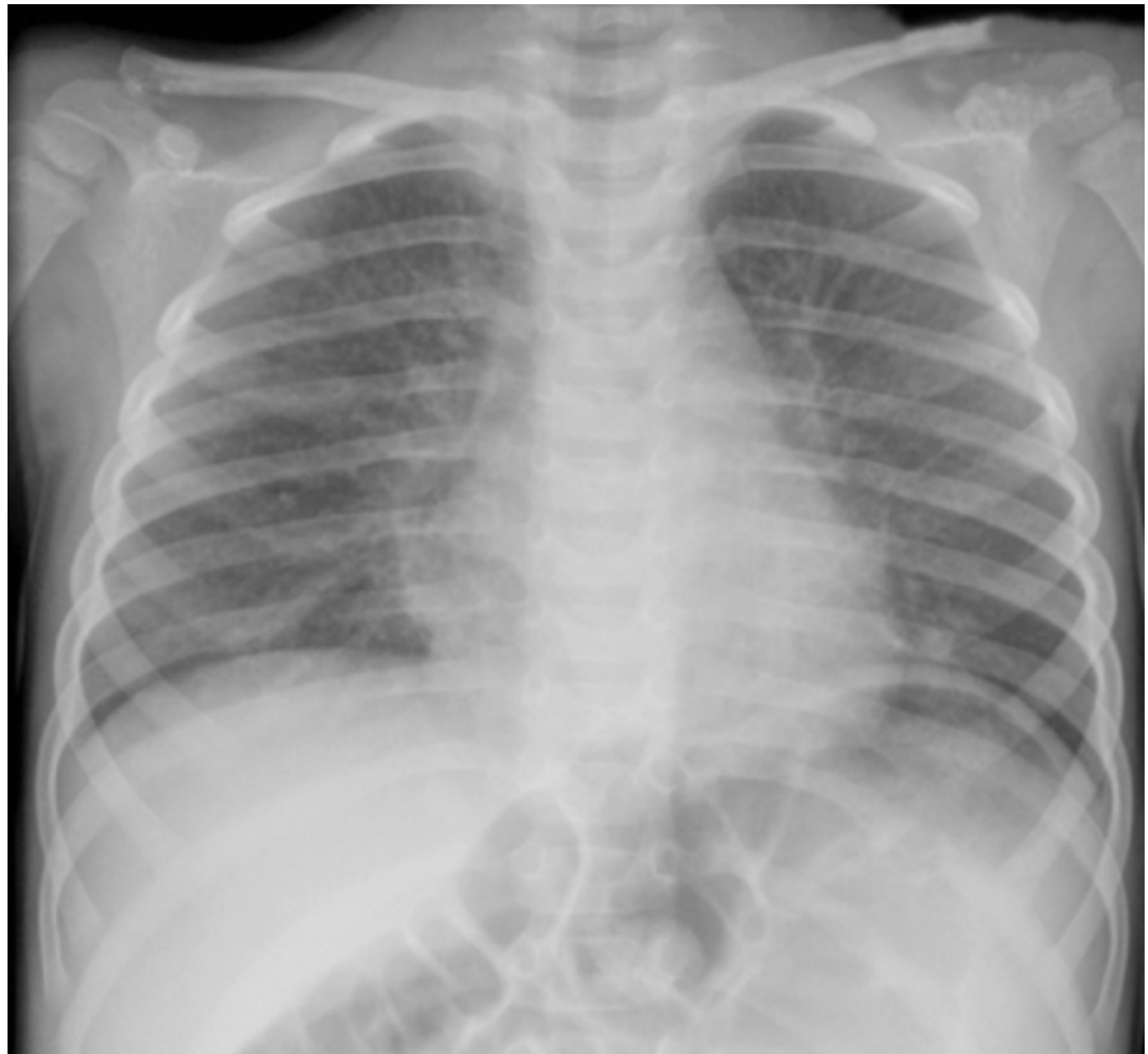
# Radiologic characteristics of pediatric TB

Cavitary, upper lobe disease



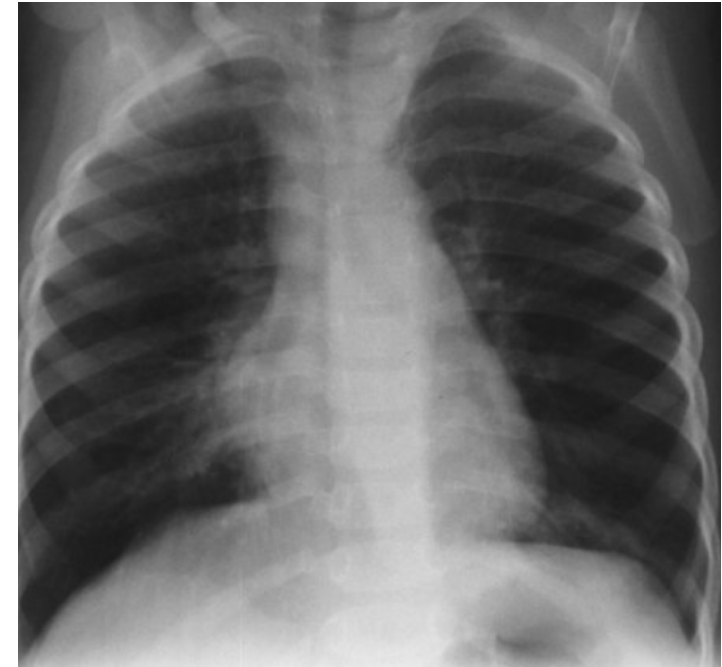
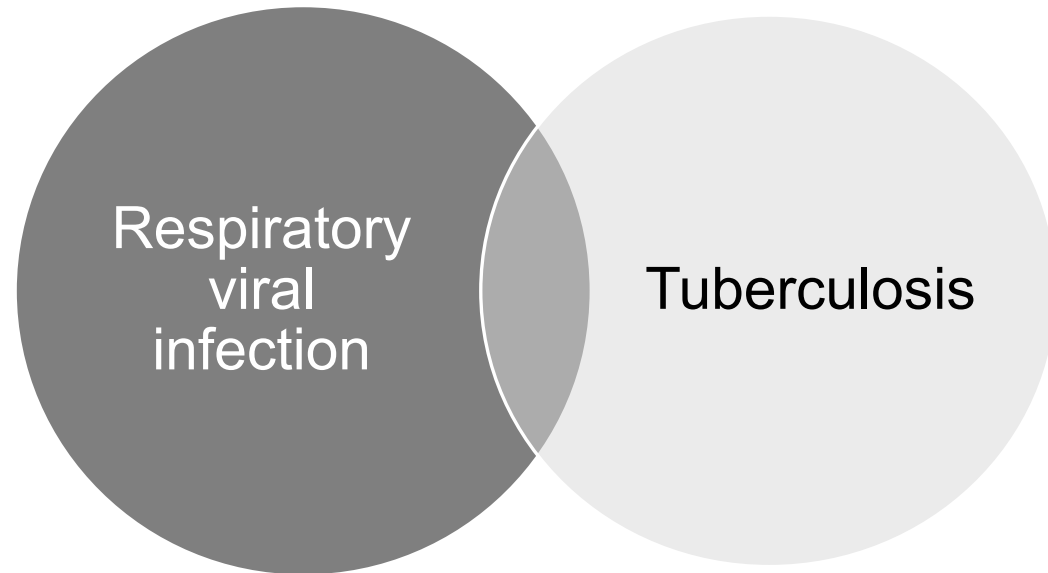
## Key non-TB Disease patterns

Viral pneumonitis,  
bronchiolitis, reactive  
airways disease



# Navigating radiologic uncertainty

School age child with household exposure, positive IGRA, cough



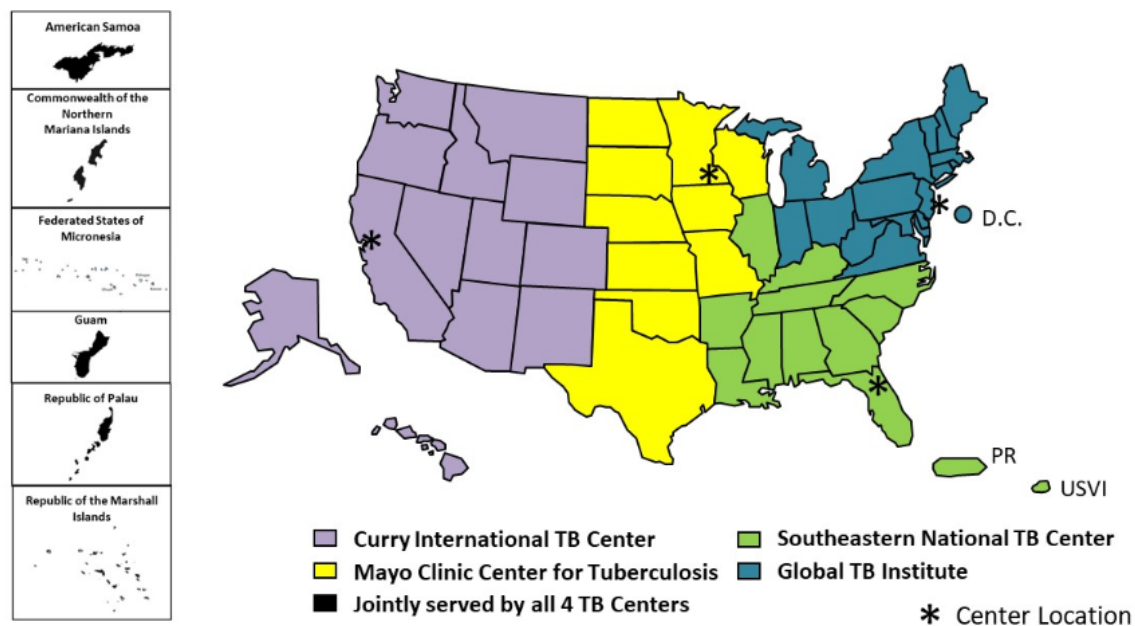
“Streaky RML density, potentially not inconsistent with an infectious etiology, which may not be exclusory of tuberculosis in the right clinical circumstances”

# Navigating Uncertainty

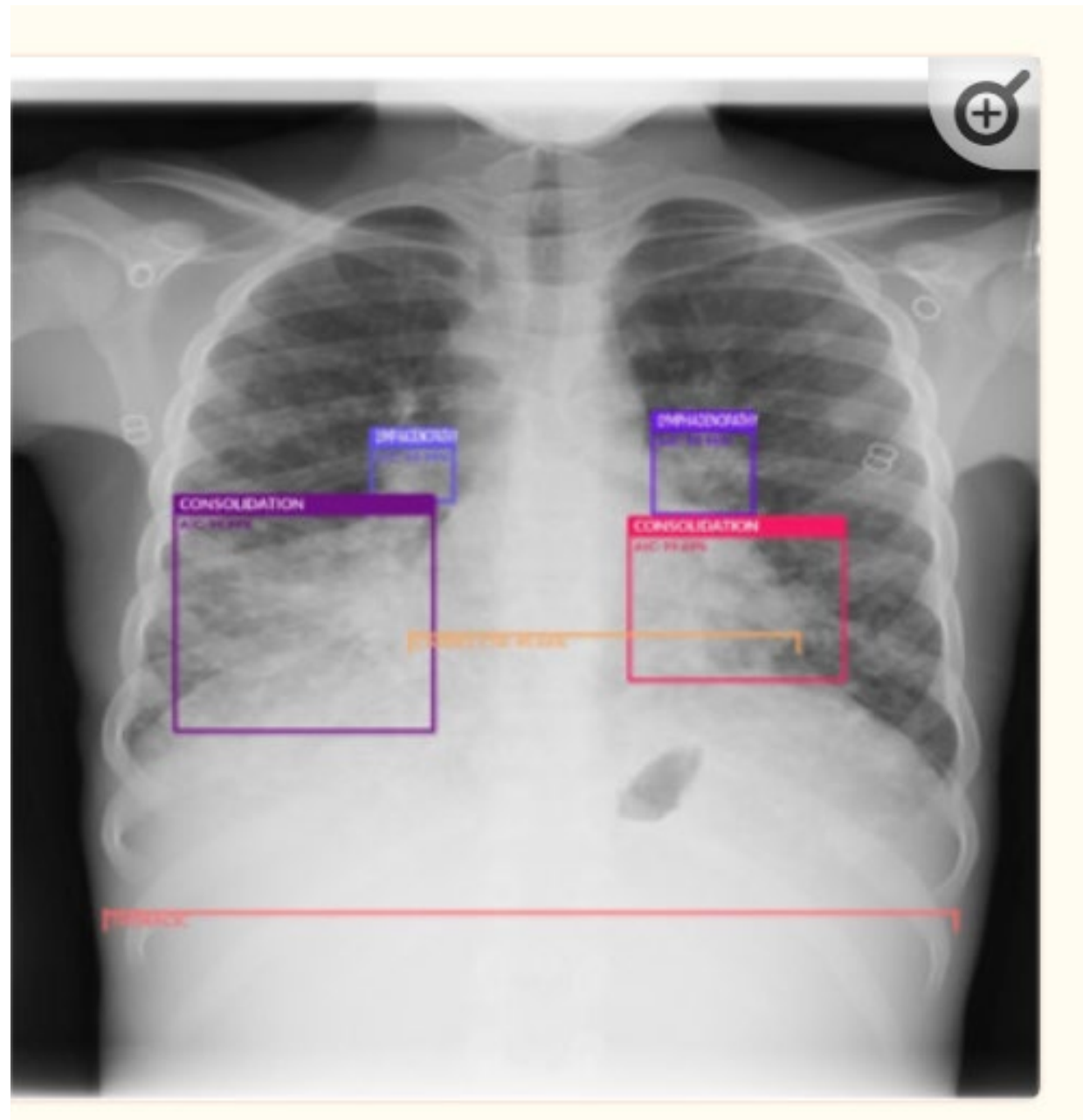


# Navigating Uncertainty: Available resources

## TB Centers of Excellence for Training, Education, and Medical Consultation



# Pediatric TB Radiology: Future Directions and Innovations





Thank you