



# Internal Medicine: Respiratory System

GENERAL EXAMINATION OF A PATIENT

# Aims of the meeting

- ▣ TO WIDEN YOUR MEDICAL VOCABULARY ABOUT RESPIRATORY SYSTEM
- ▣ TO FORM A PRESENTATION OF PHYSICAL EXAMINATION
- ▣ TO SOLVE A LITTLE PROBLEM

# Structure of Respiratory tract

## Upper respiratory tract

Nasal cavity

Pharynx

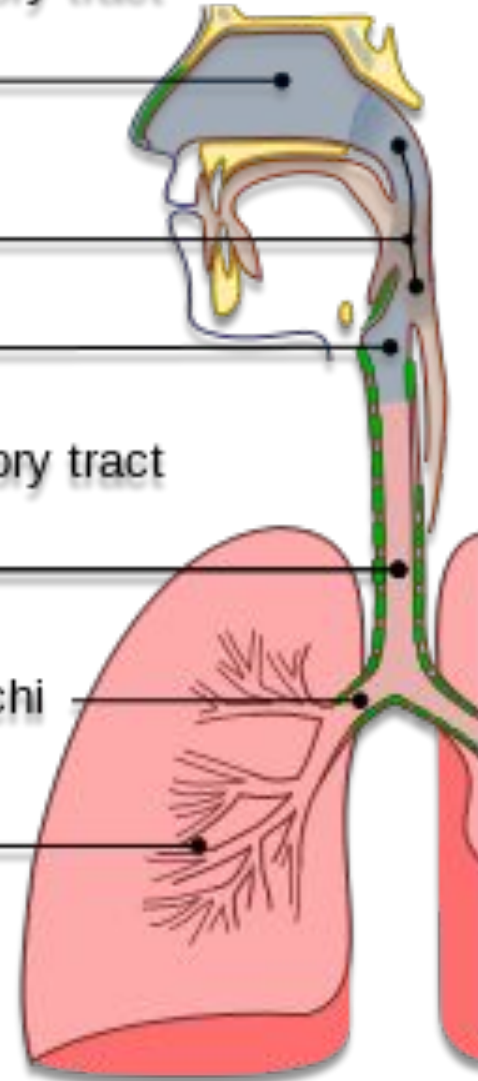
Larynx

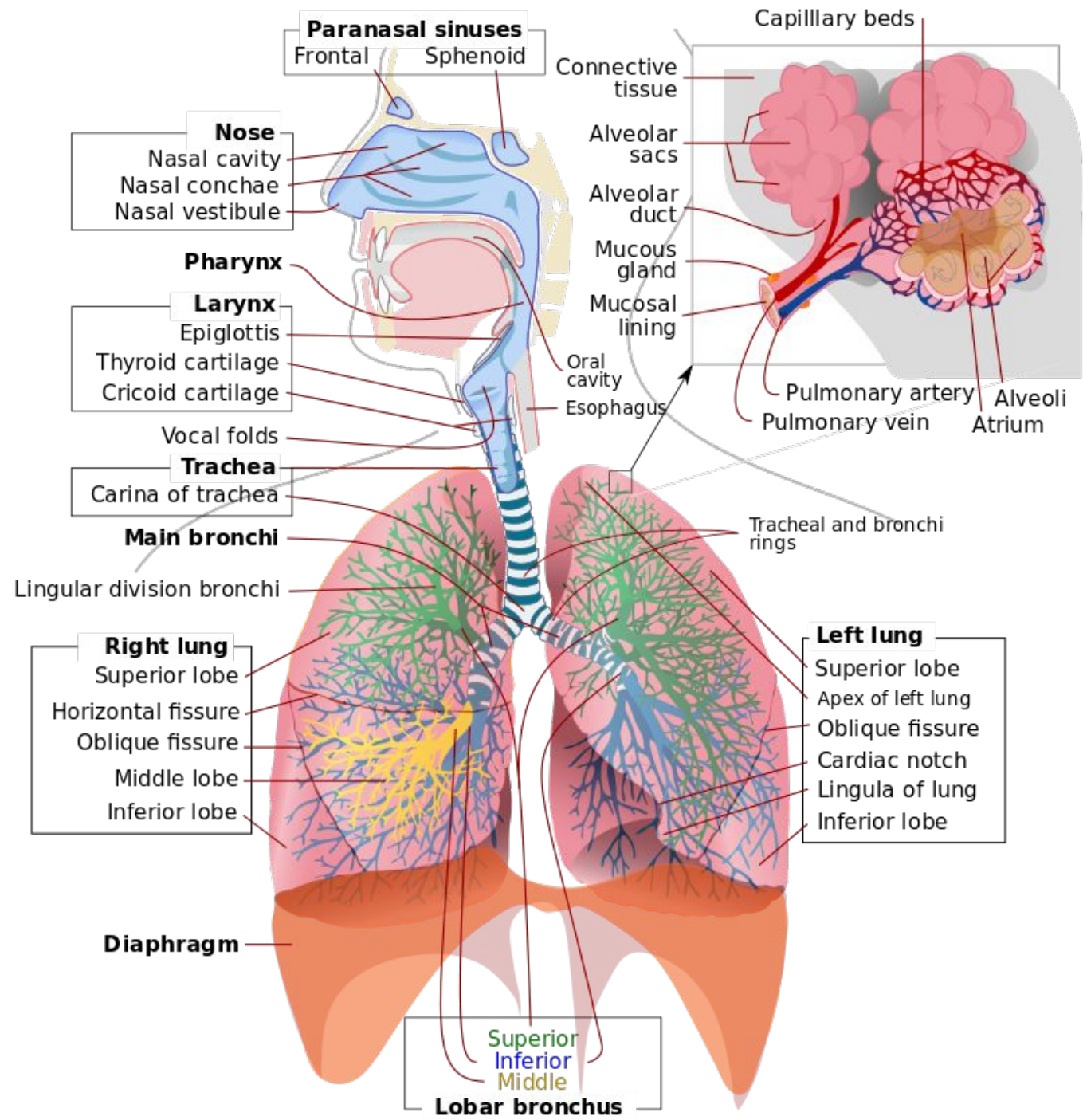
## Lower respiratory tract

Trachea

Primary bronchi

Lungs







# Approach to the patient with Disease of the Respiratory System

# Clinical presentation

## **History taking** (risk factors):

- ▶ Smoking history (the number of years of smoking, the number of packs per day; if the patient no longer smokes – the interval; since smoking cessation)
- ▶ Inhaled dust (pneumoconiosis, such as asbestosis, silicosis, etc.)
- ▶ Inhaled organic antigen (especially from molds and animals)
- ▶ Contacts with individuals with known respiratory infections (especially tuberculosis)
- ▶ Residence in an area with endemic pathogens (histoplasmosis, blastomycosis)



# Clinical presentation

- ▶ **Dyspnea**

- acute (laryngeal edema, acute asthma)
- subacute (asthma, chronic bronchitis)
- chronic ( chronic obstructive lung disease, chronic cardiac disease)

- ▶ **Hemoptysis**

- inflammatory
- neoplastic

- ▶ **Chest pain** (in case of the parietal pleura involvement)

- ▶ **Cough** (as normal physiological reflex or due to underlying cause)

# Clinical presentation

## Cough

**Respiratory tract infection** (common cold, acute bronchitis, pneumonia, pertussis, tuberculosis)

**Reactive airway disease** (asthma, chronic bronchitis, smoker's cough)

**Gastroesophageal reflex** (cause of GERD)

**Air pollution** (tobacco smoke, irritant gases, dampness in a home)

**Foreign body** (including swallowing difficulties)

**Psychogenic cough** (as habit or 'tic-cough')



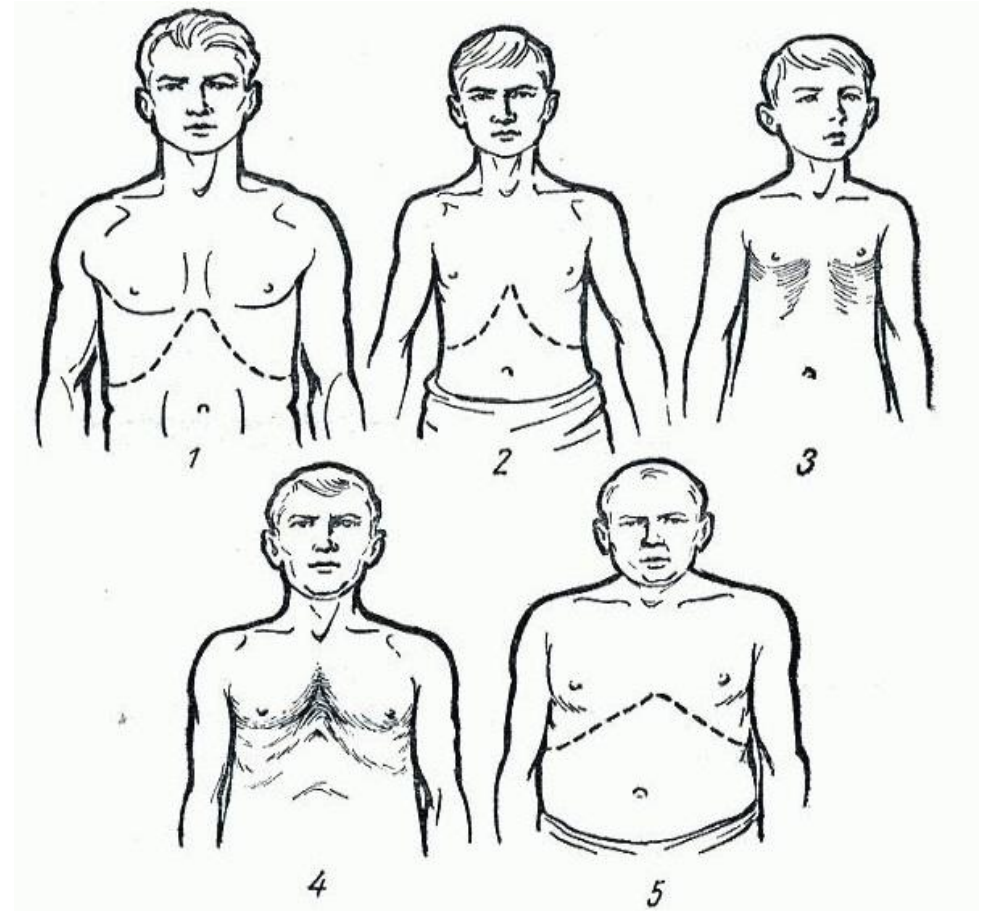
# Physical Examination

## *Inspection*

- ▶ Rate and pattern of breathing
- ▶ Depth and symmetry of lung expansion

What can you detect?

- ▶ Rapid breathing
- ▶ Labored breathing
- ▶ Associated with the use of accessory muscles
- ▶ Asymmetric expansion
- ▶ Visible abnormalities of the thoracic cage



# Physical Examination

## ***Palpation***

- ▶ Symmetry of lung expansion
- ▶ Vibration: - decrease/absent (liquid, endobronchial obstruction)  
- increase (pulmonary consolidation)
- ▶ Tenderness (costochondritis, rib fracture)

## ***Percussion***

- ▶ Resonant (normal sound of air contain structures as lung)
- ▶ Dull (sound of consolidated lung)
- ▶ Hyperresonant (emphysema or air in the pleural space)

# Physical Examination

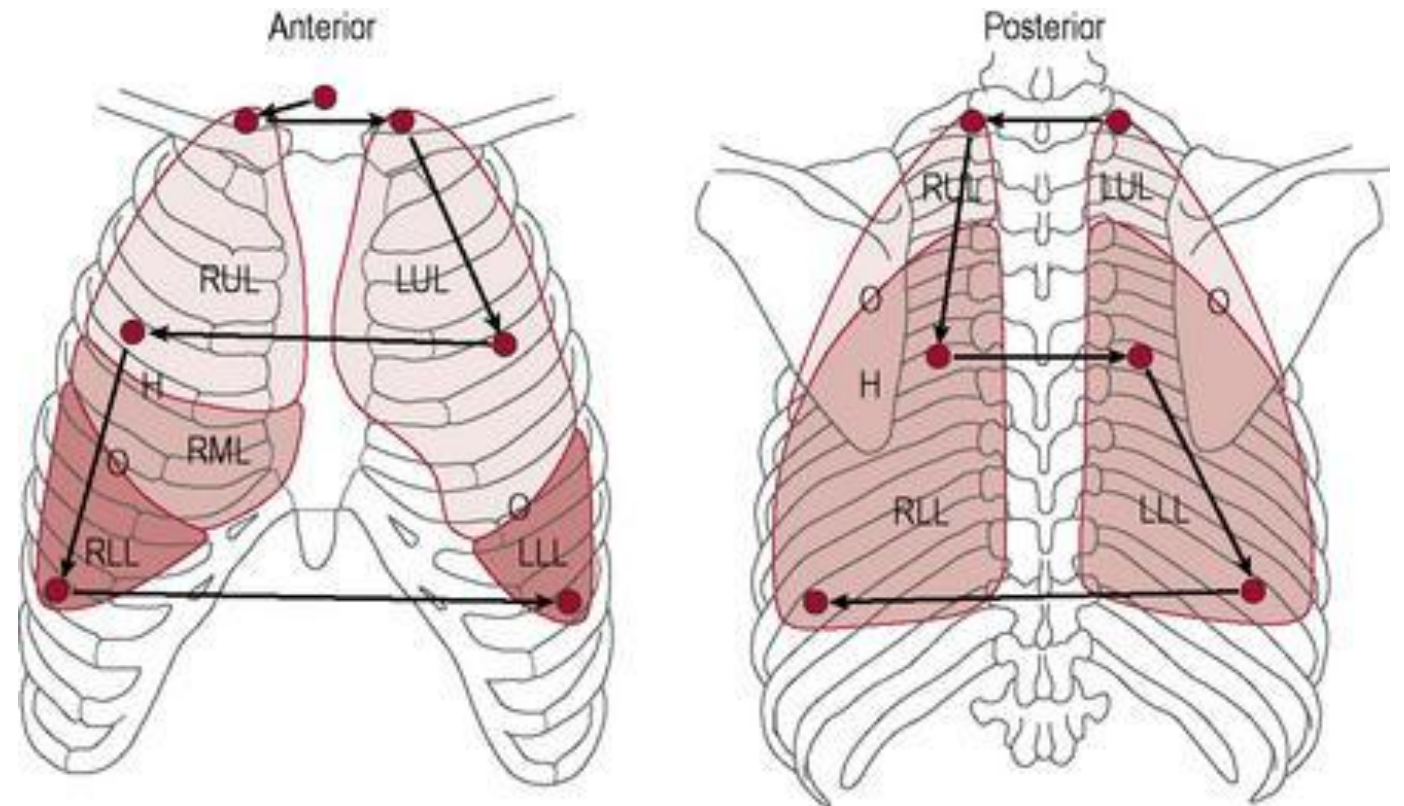
## **Auscultation**

Normal breath sound

- ▶ Vesicular breath sound

Extra sound (abnormal)

- ▶ Bronchial breath sound
- ▶ Crackles (≈crepitation)
- ▶ Wheezes (the same as sibilant rhonchi)
- ▶ Pleural friction rub



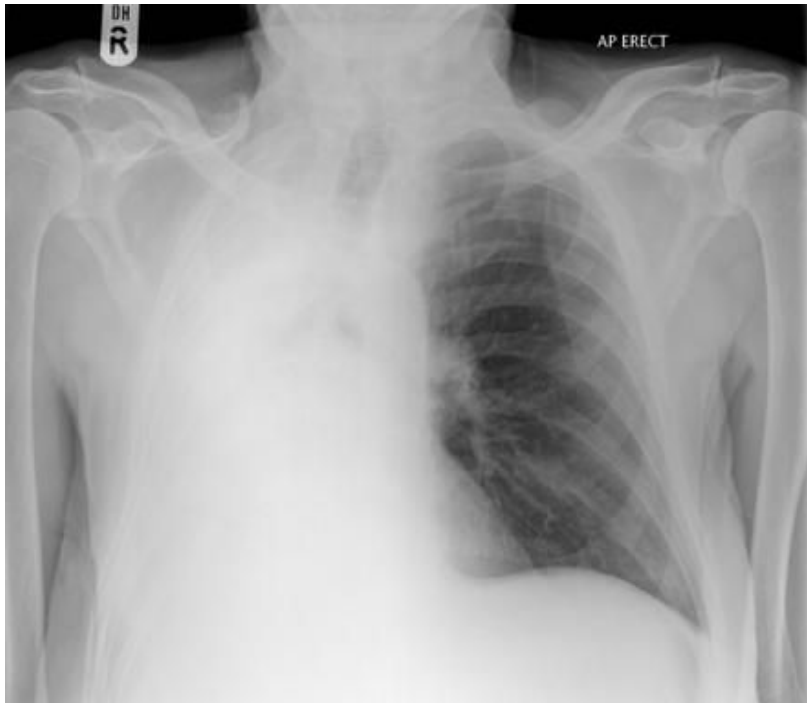
# Physical Examination

Name	Continuous/discontinuous	inspiratory/expiratory	Associated conditions
Wheeze or rhonchi	continuous	expiratory or inspiratory	asthma, chronic obstructive pulmonary disease, foreign body
Stridor	continuous	mostly inspiratory	epiglottitis, foreign body, laryngeal oedema
Pleural friction rub	discontinuous	expiratory and inspiratory	inflammation of pleura, lung tumors
Crackles (crepitations)	discontinuous	inspiratory	pneumonia, pulmonary edema, tuberculosis, bronchitis

# Imaging studies

**Routine radiography** (posteroanterior and lateral views)

- ▶ A localized region of opacification involving the pulmonary parenchyma
- ▶ Radiolucency (with a cyst/bulla, or emphysema)



# Imaging studies

## Other methods

- ▶ CT
- ▶ MRI
- ▶ PET
- ▶ Scintigraphy imaging
- ▶ Pulmonary angiography
- ▶ Ultrasound





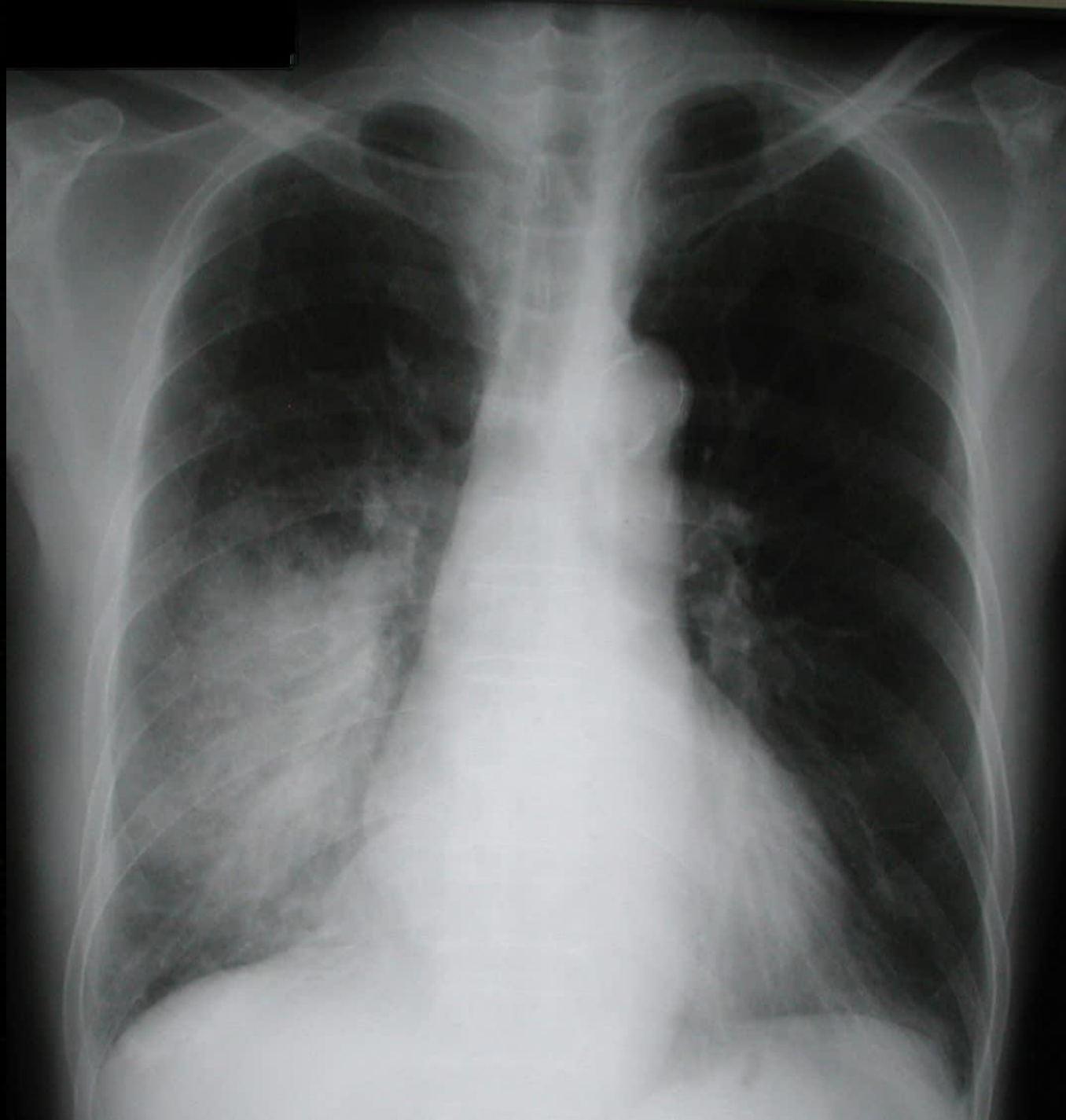
Any questions? Suggestions?

Thank you for your attention!

“It seems to me I  
have some  
problems... again”

© Clara

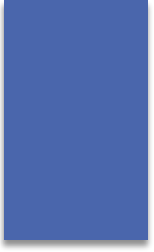




# We Were Born to Fly

Hello again  
You've been alone awhile  
And I can use a friend  
Your shades are down  
And I've been waiting here for you to come around  
And it's not about forgiveness  
Cause it's all about the love anyhow

We were born to fly  
To reach beyond the sky  
To carry on forever after  
You and I  
You keep my faith alive  
With you I'm not afraid  
To rise and fall and face disaster  
You and I



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