Module: Respiratory system.

Morphological characteristics, outcomes and complications of bronchitis.

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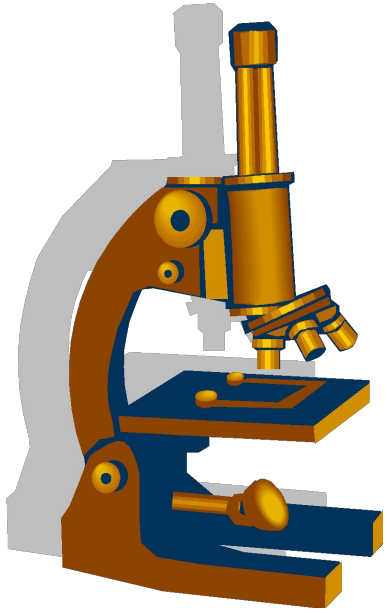


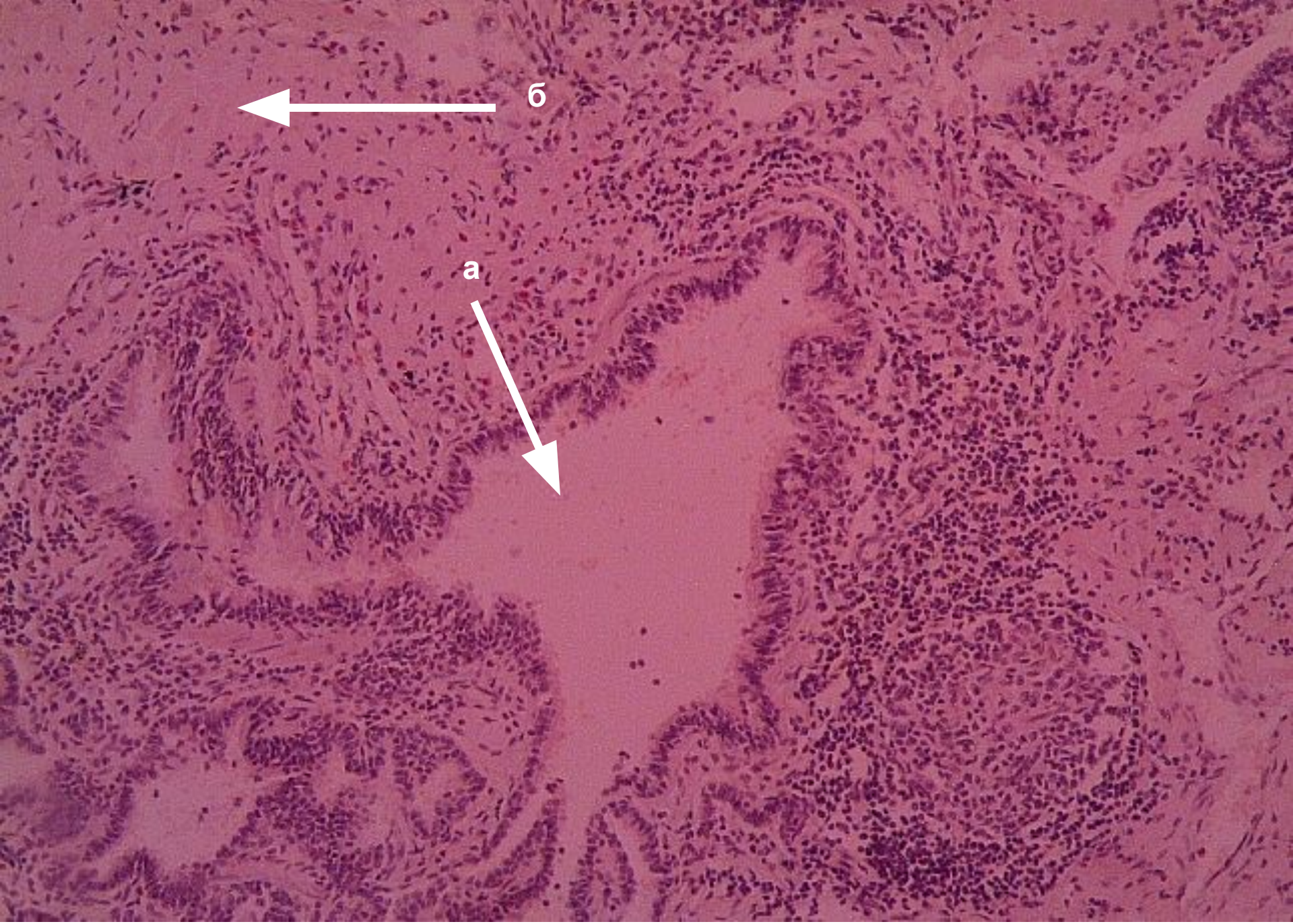
Aim of the lesson :

- To study the etiology; pathogenesis, classification principles of COPD. To study the pathogenesis and morphological characteristics of bronchitis, bronchial asthma, features of a current in children. Correlate morphology with clinical manifestations, complications and causes of death.

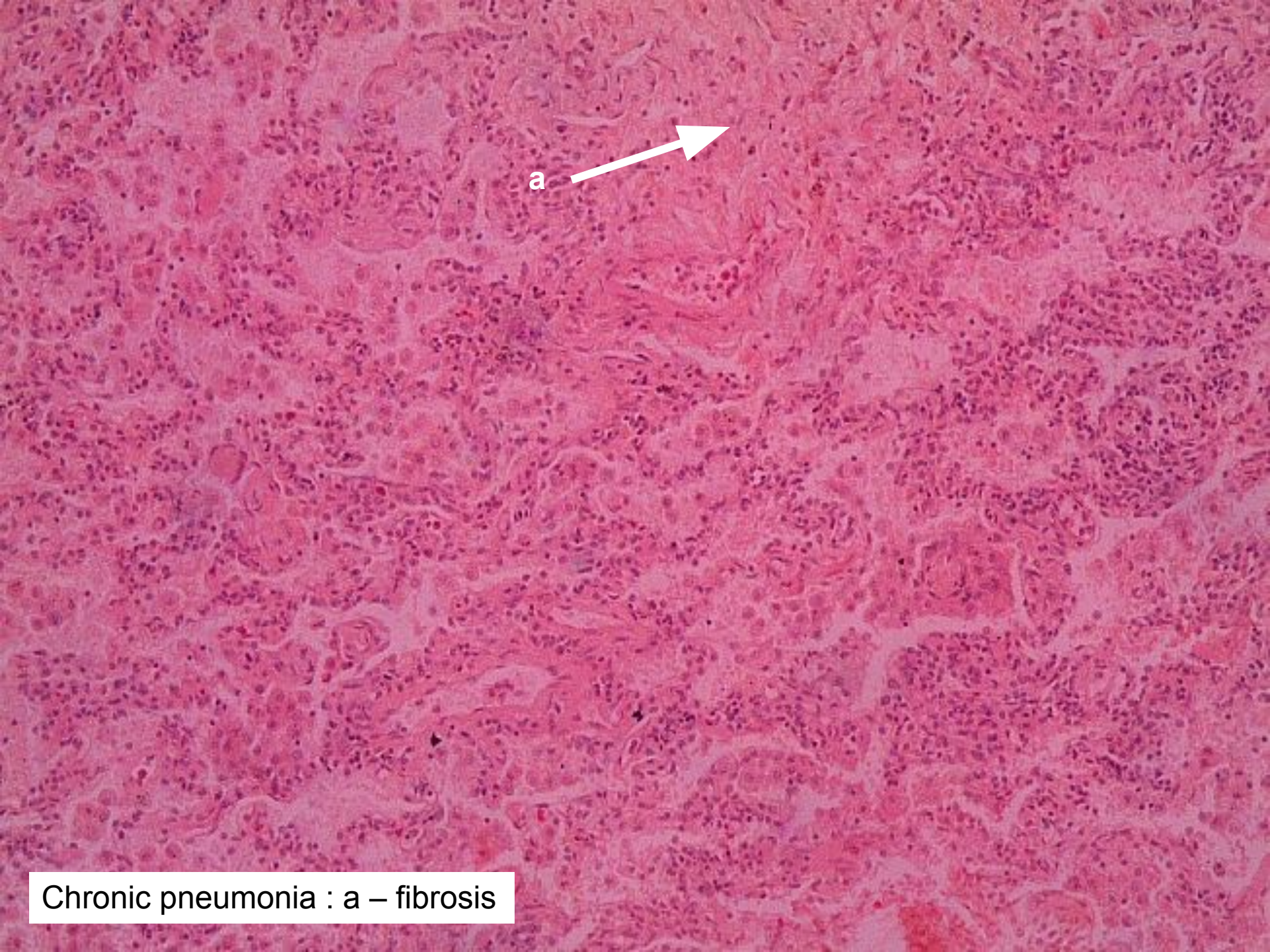
The objectives :

- **Student must know :**
- Morphological characteristics of COPD, pleurisy, chronic abscess;
- Age peculiarities;
- Correlate morphology with clinical manifestations, complications and causes of death.
- **Student must be able :**
- Interpret macro- and microscopic changes in the pathology of respiratory organs.
- Be able to explain the pathogenesis of COPD and to describe morphological characteristics, bronchial asthma, chronic abscess.
- Be able to explain the classification, etiology, pathogenesis, pathological anatomy of interstitial lung diseases.

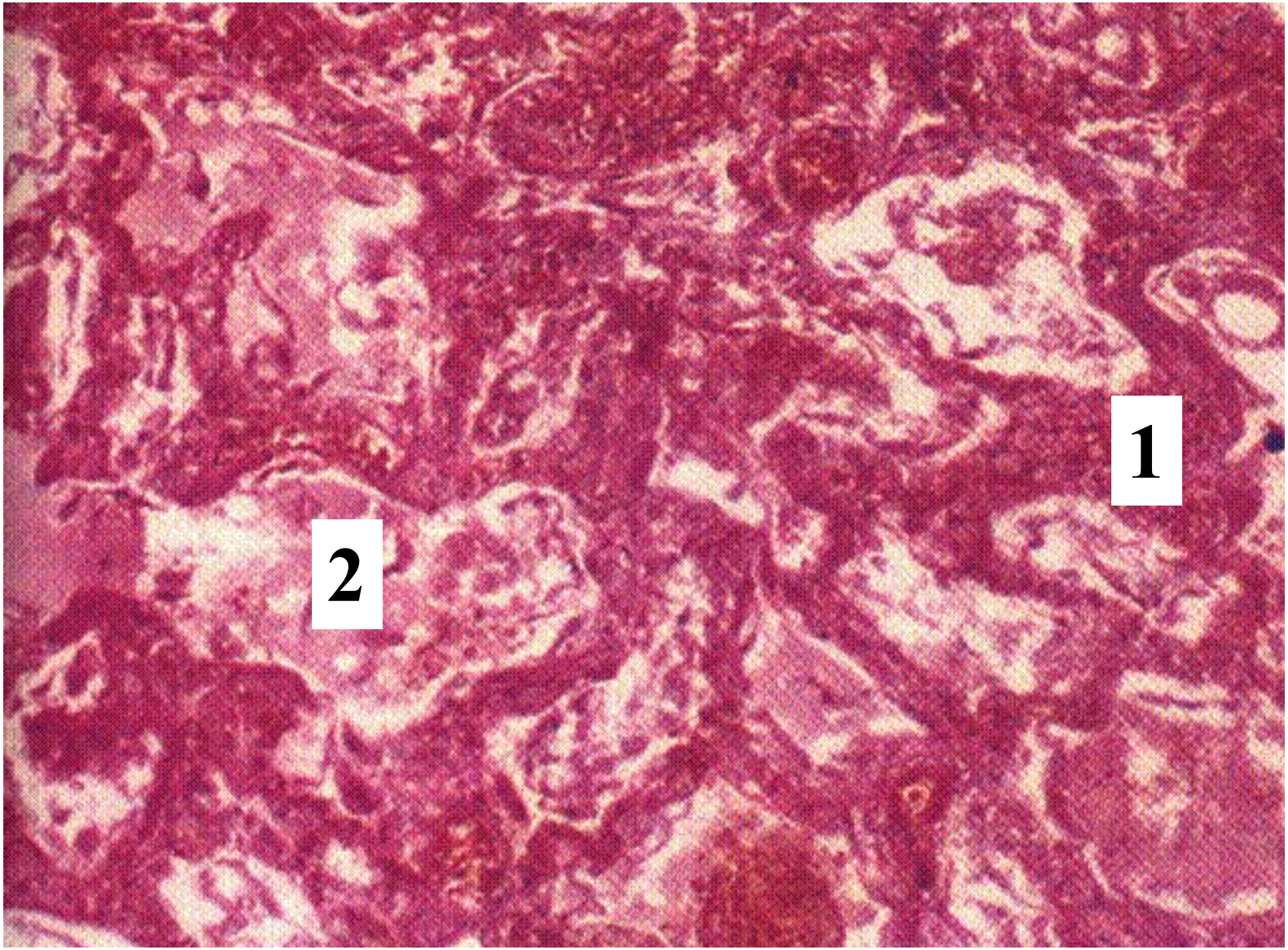
Bronchiectasis



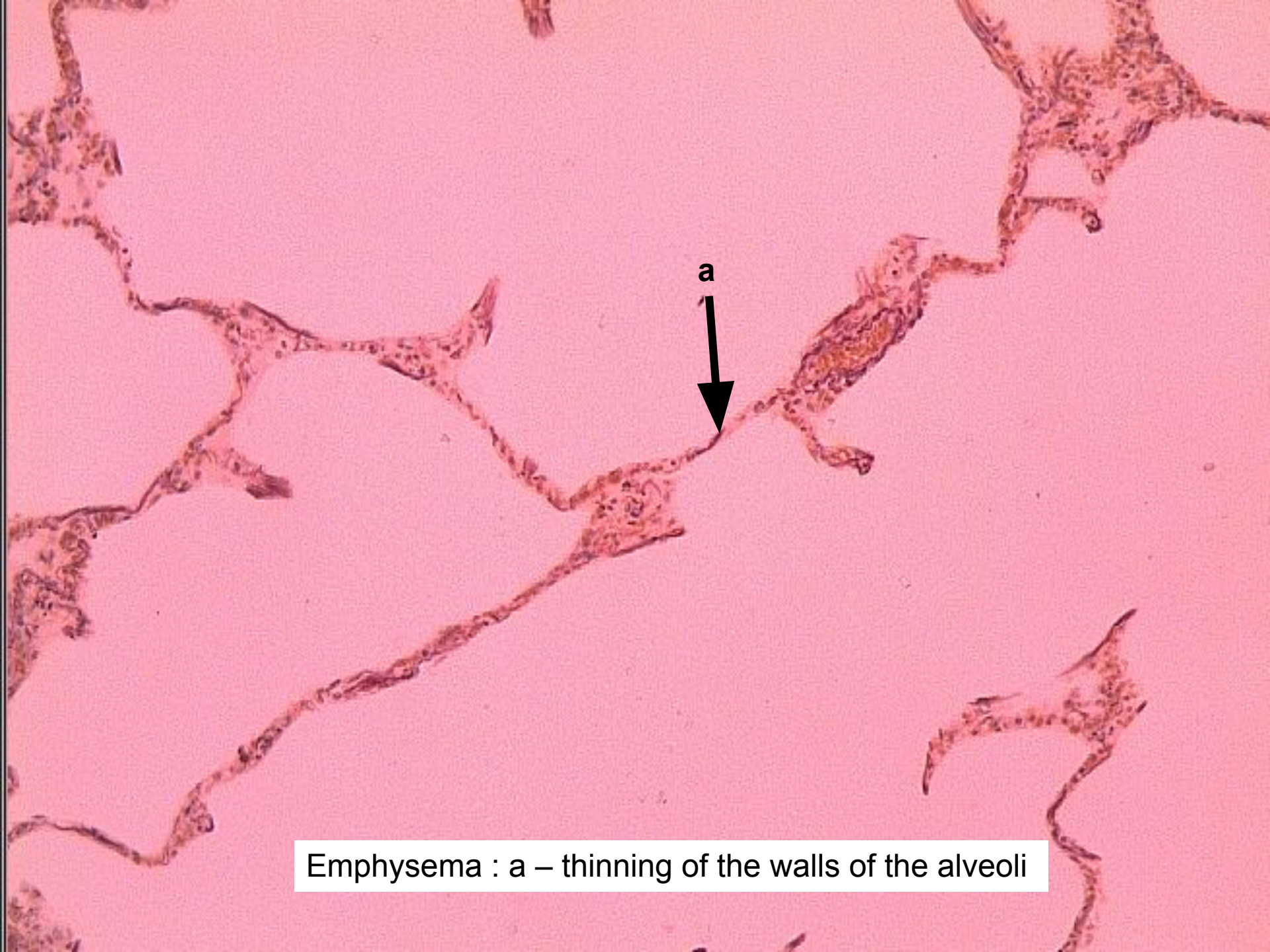
Bronchoectatic disease : а – expanded bronchial lumen, б – fibrosis



Chronic pneumonia : a – fibrosis



Chronic interstitial pneumonia
1 - interstitial fibrosis 2 - carnification

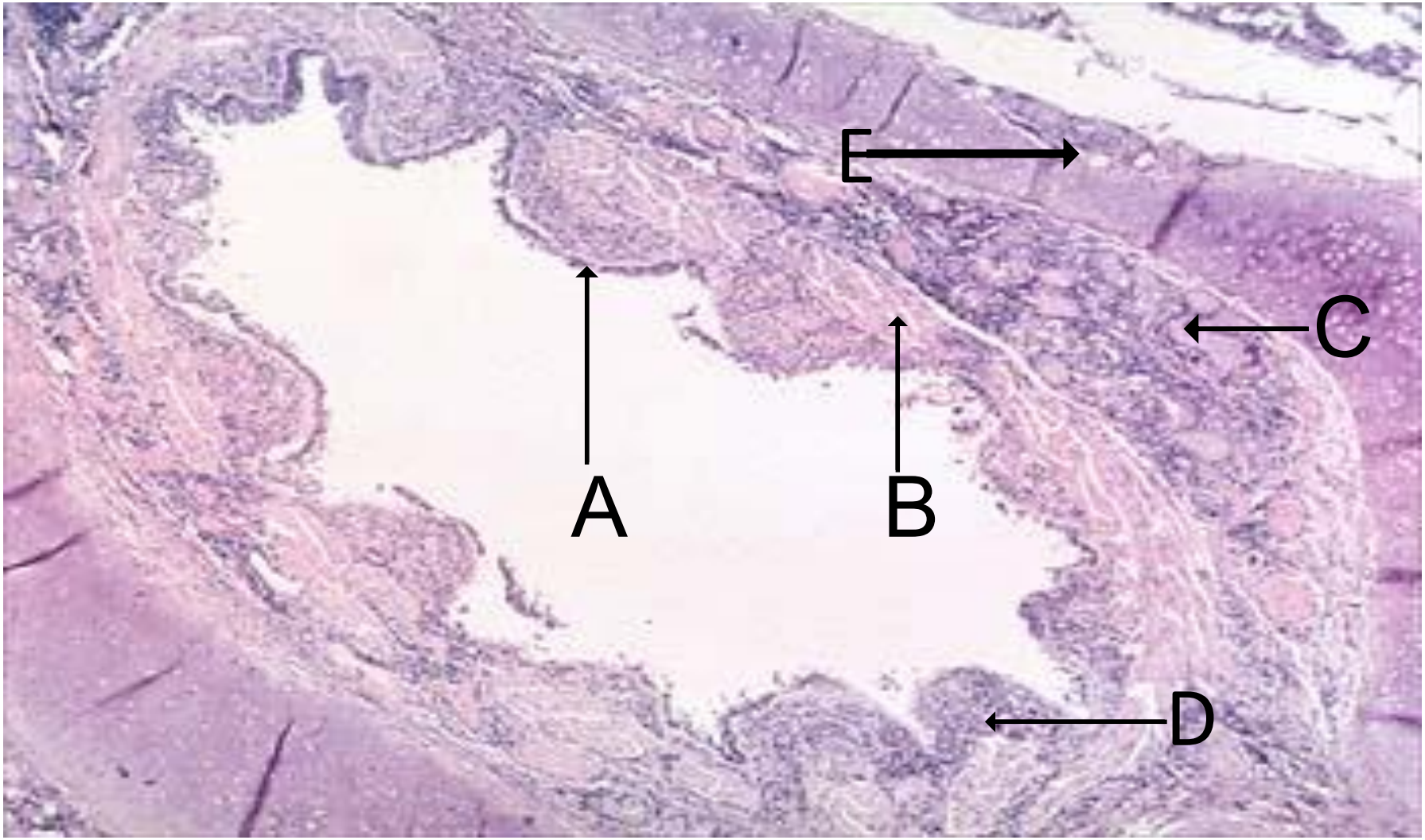


Emphysema : a – thinning of the walls of the alveoli

Lung, bronchial asthma

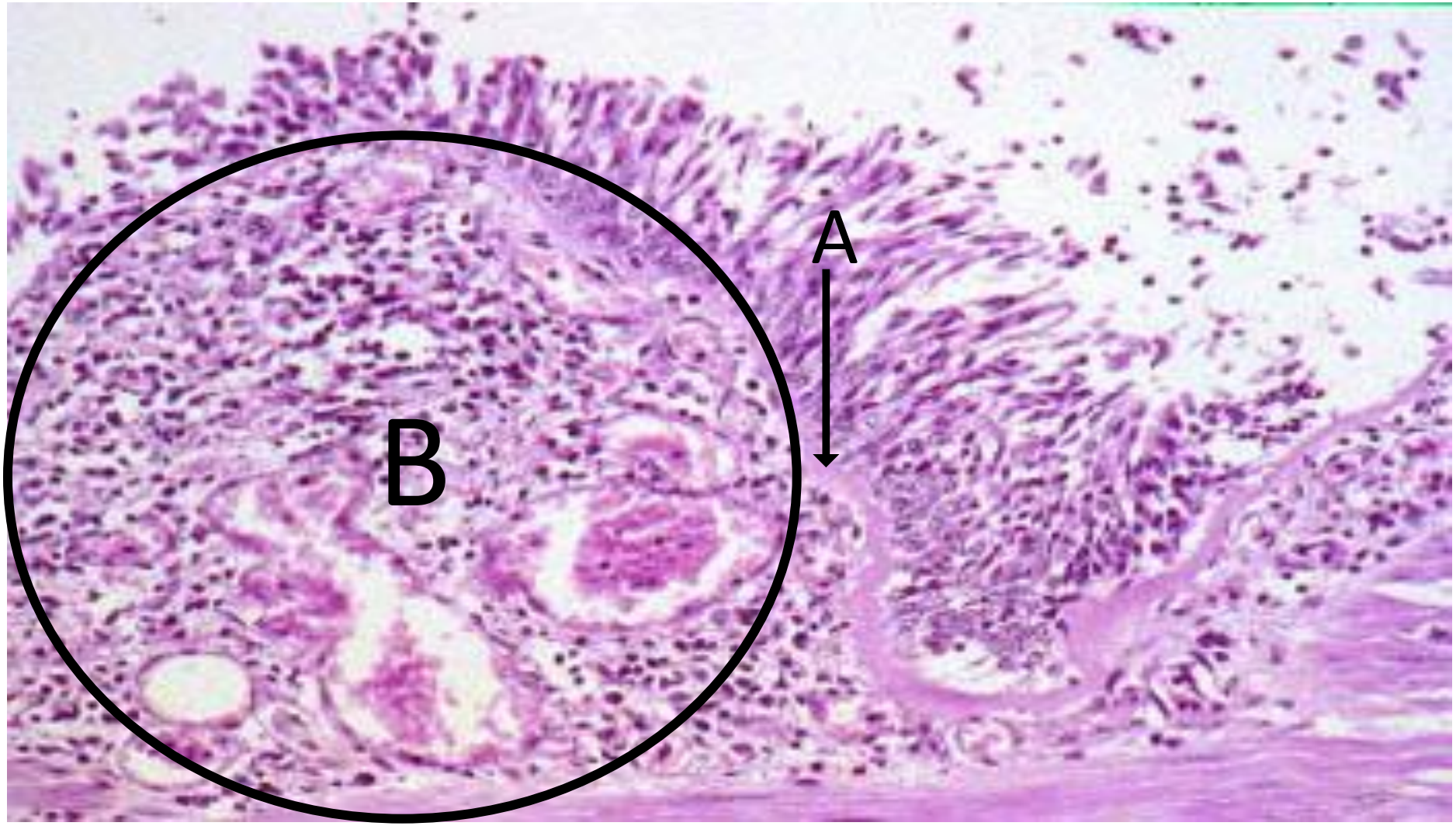
A-mucous cork

Bronchus, bronchial asthma



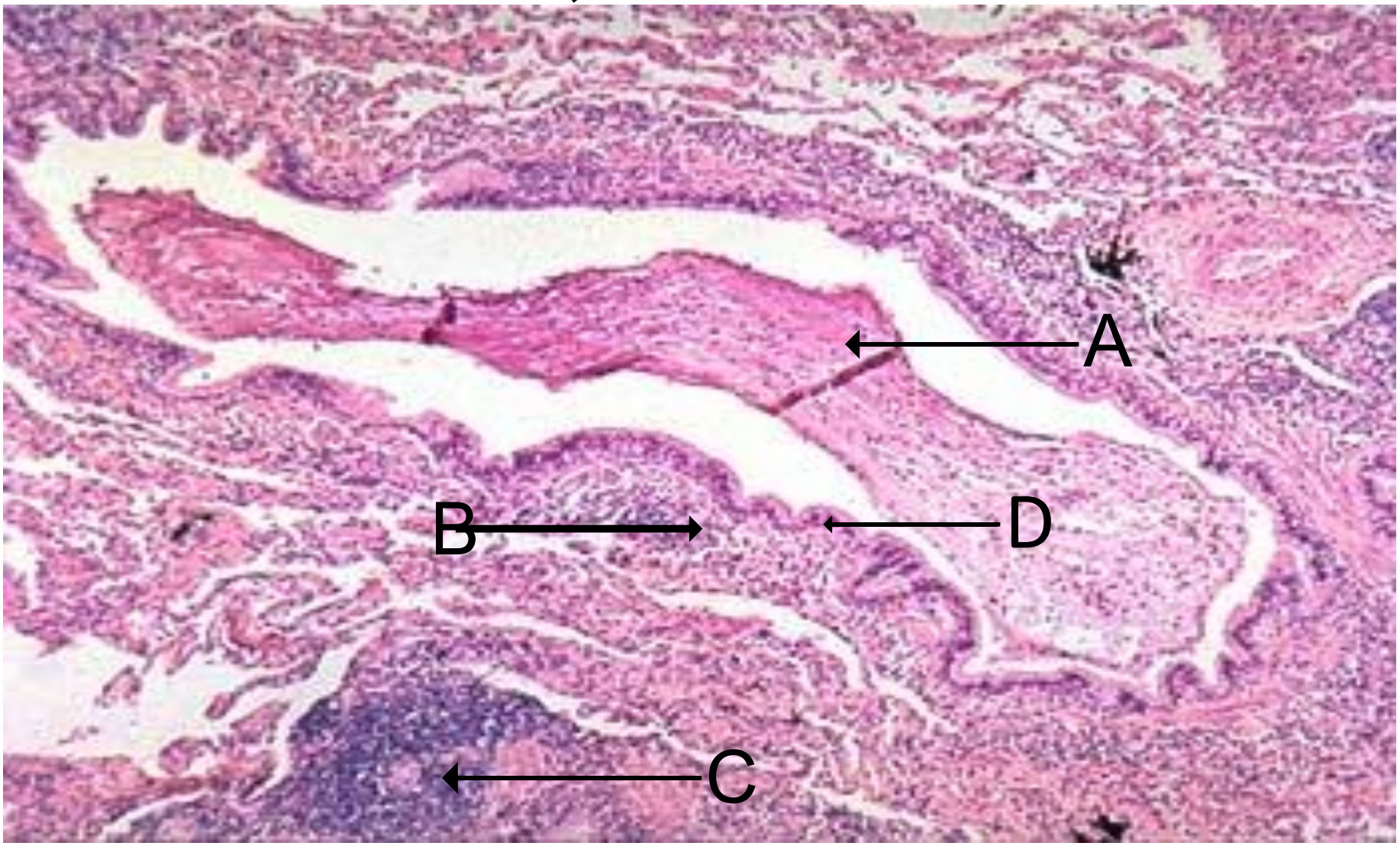
A-epithelial folds, B-muscular layer, C- hyperplasia of glands, D-inflammatory infiltration, E-cartilaginous tissue

Bronchus during bronchial asthma



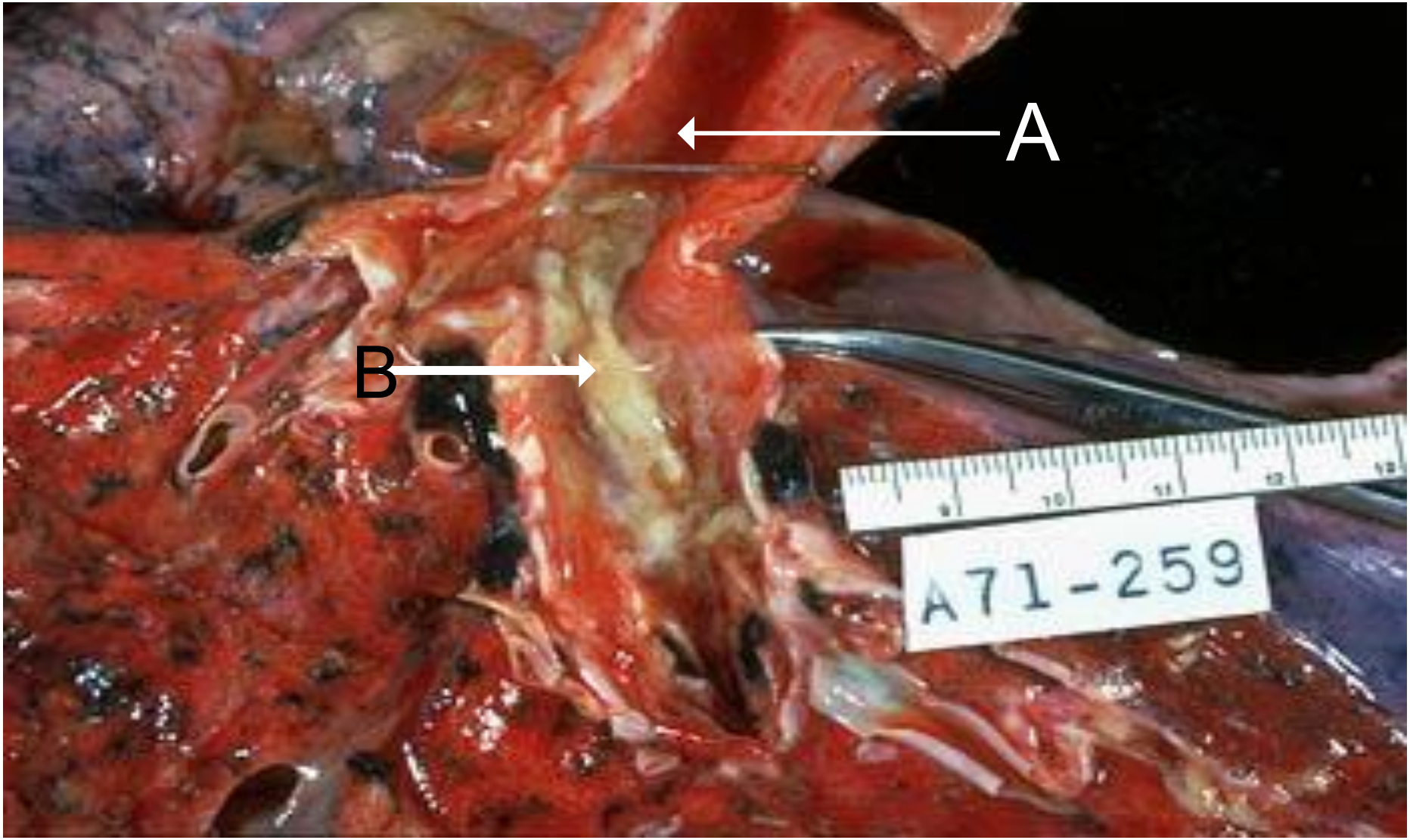
A- basement membrane, B- inflammatory infiltration, containing eosinophils

Bronchiole, bronchial asthma



A-mucous cork B-acute inflammation, C-chronic inflammation, D-epithelium of the bronchioles

Bronchitis

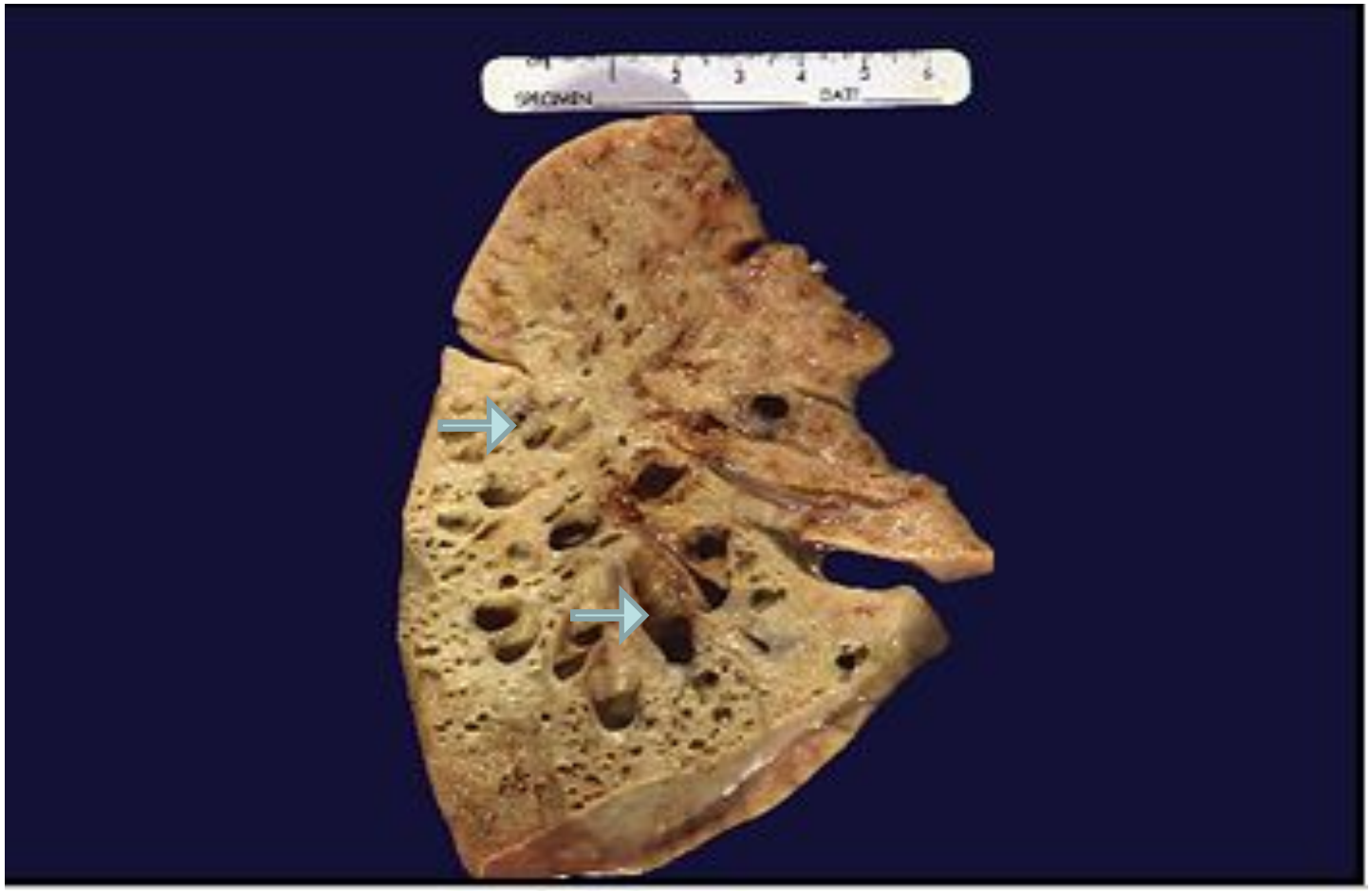


A-trachea and main bronchi, B- muco-purulent exudate

Bronchiectasis

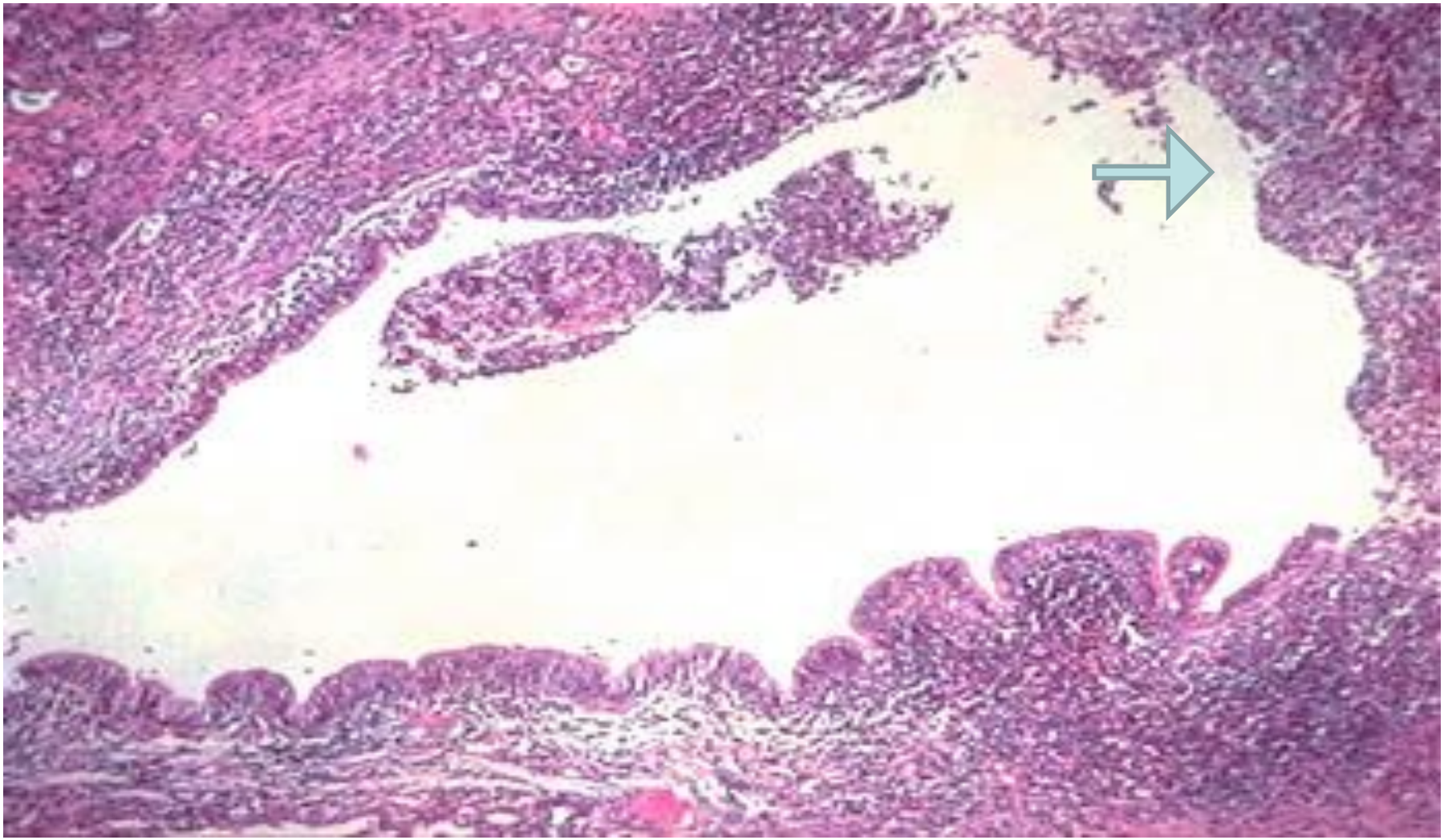
- Extended bronchi

Bronchiectasis



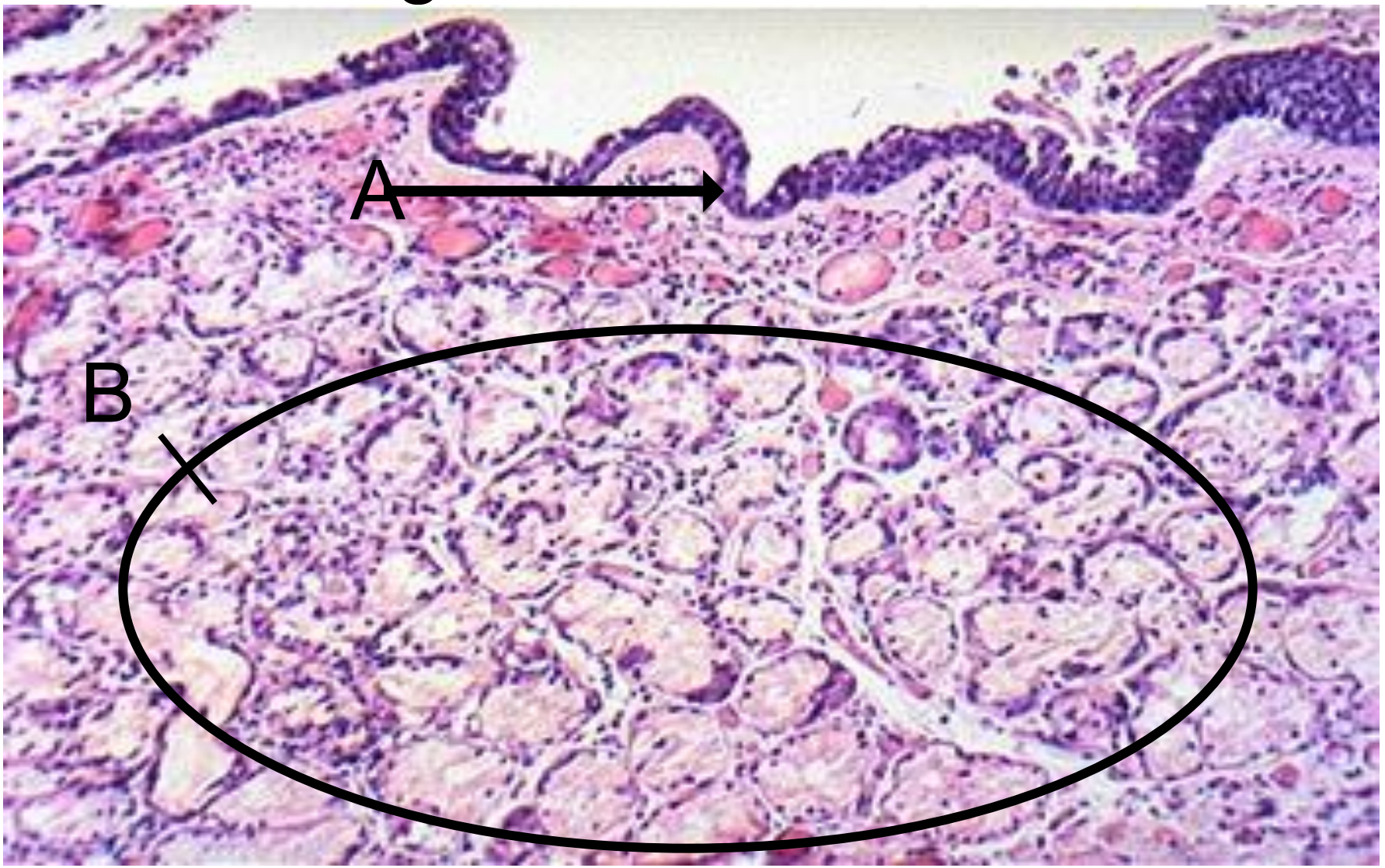
- Expansion of the large and small bronchi

Bronchiole during bronchiectasis



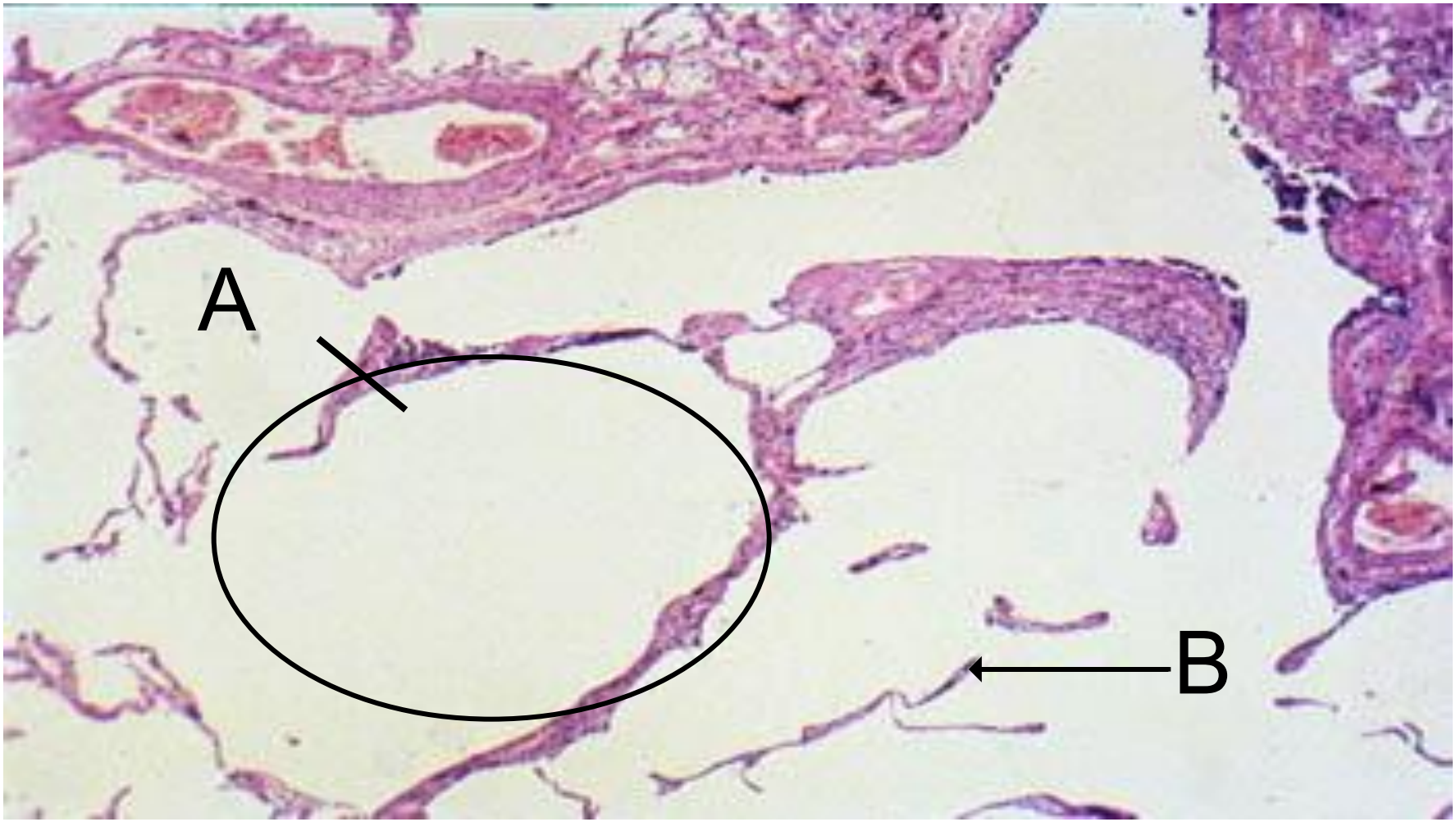
- damage of mucous membrane

Lung, chronic bronchitis



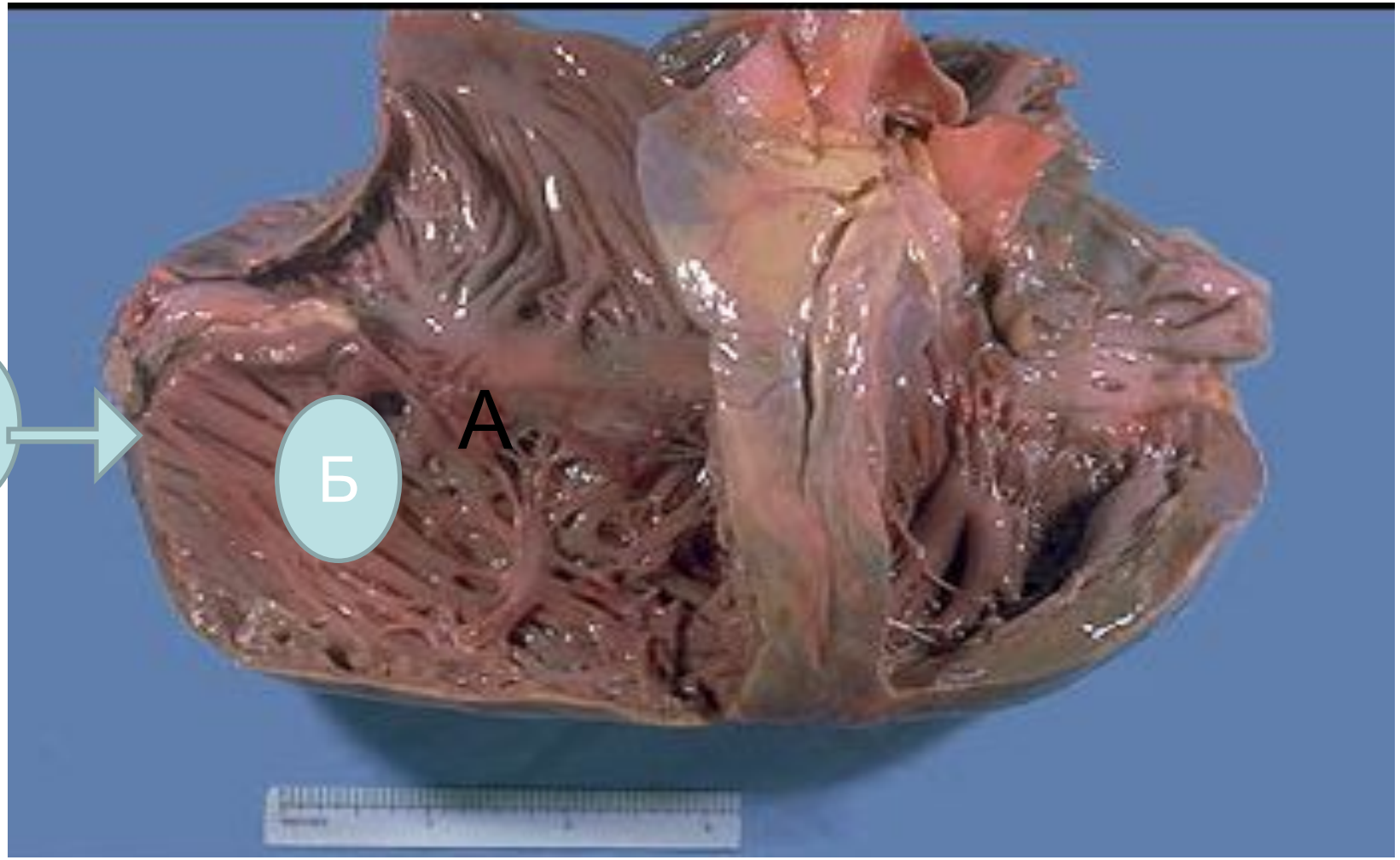
A-bronchial epithelium, B- hyperplasia of the mucous glands

Lungs, emphysema



A-expanded alveolar space, B-destruction of alveolar walls

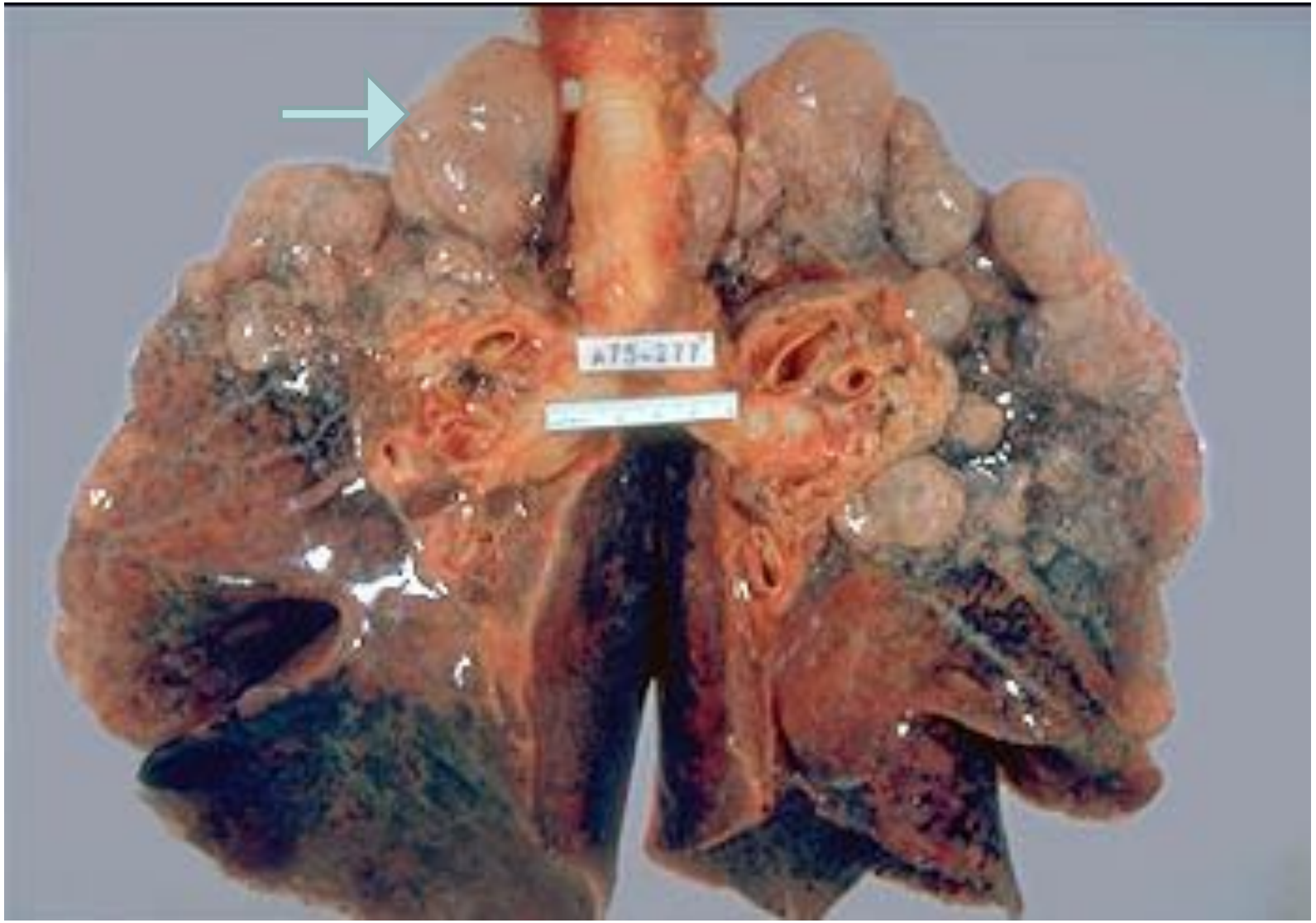
Cor pulmonale



А. Right ventricular hypertrophy

Б. Dilatation of the right ventricle

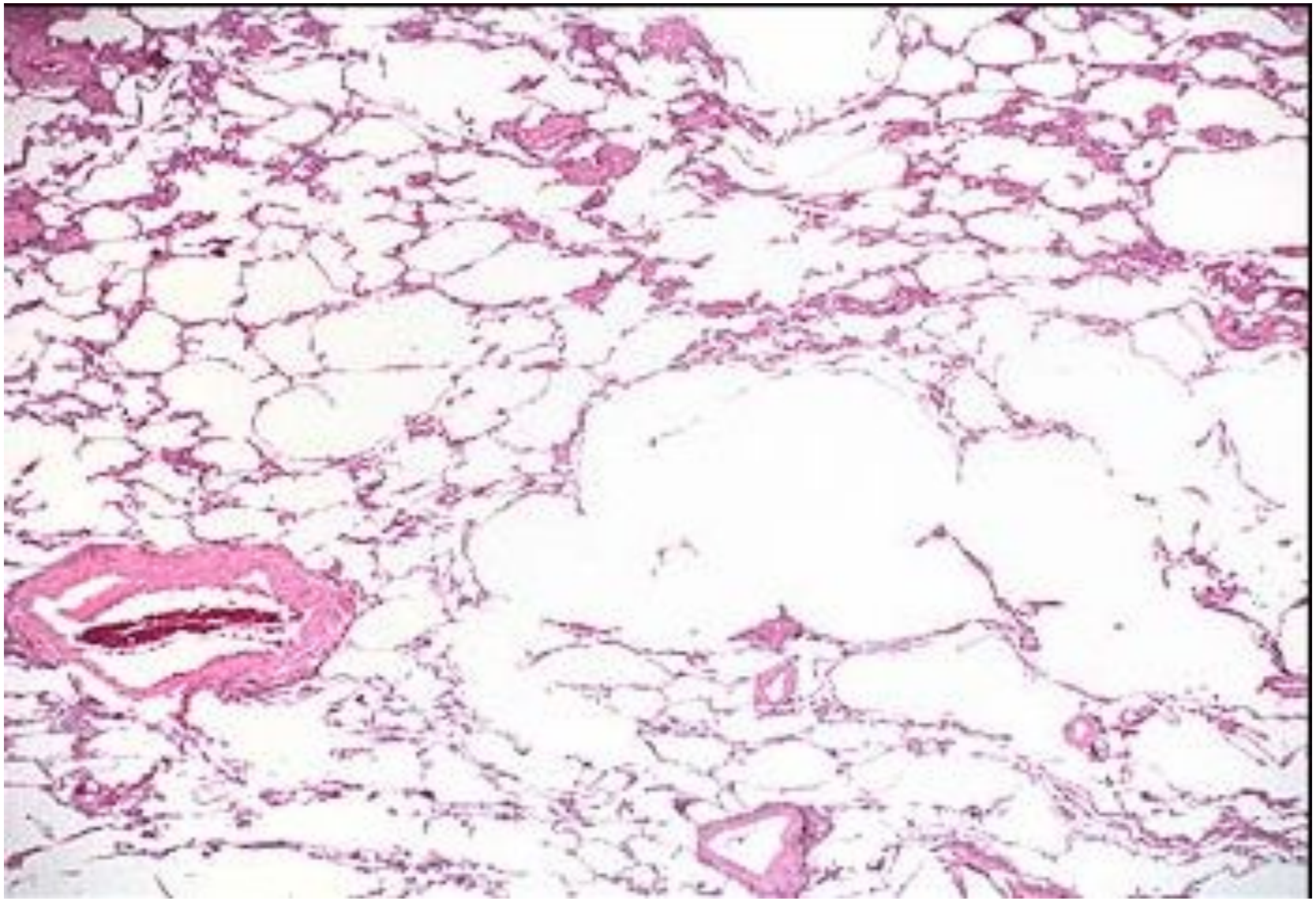
Emphysema



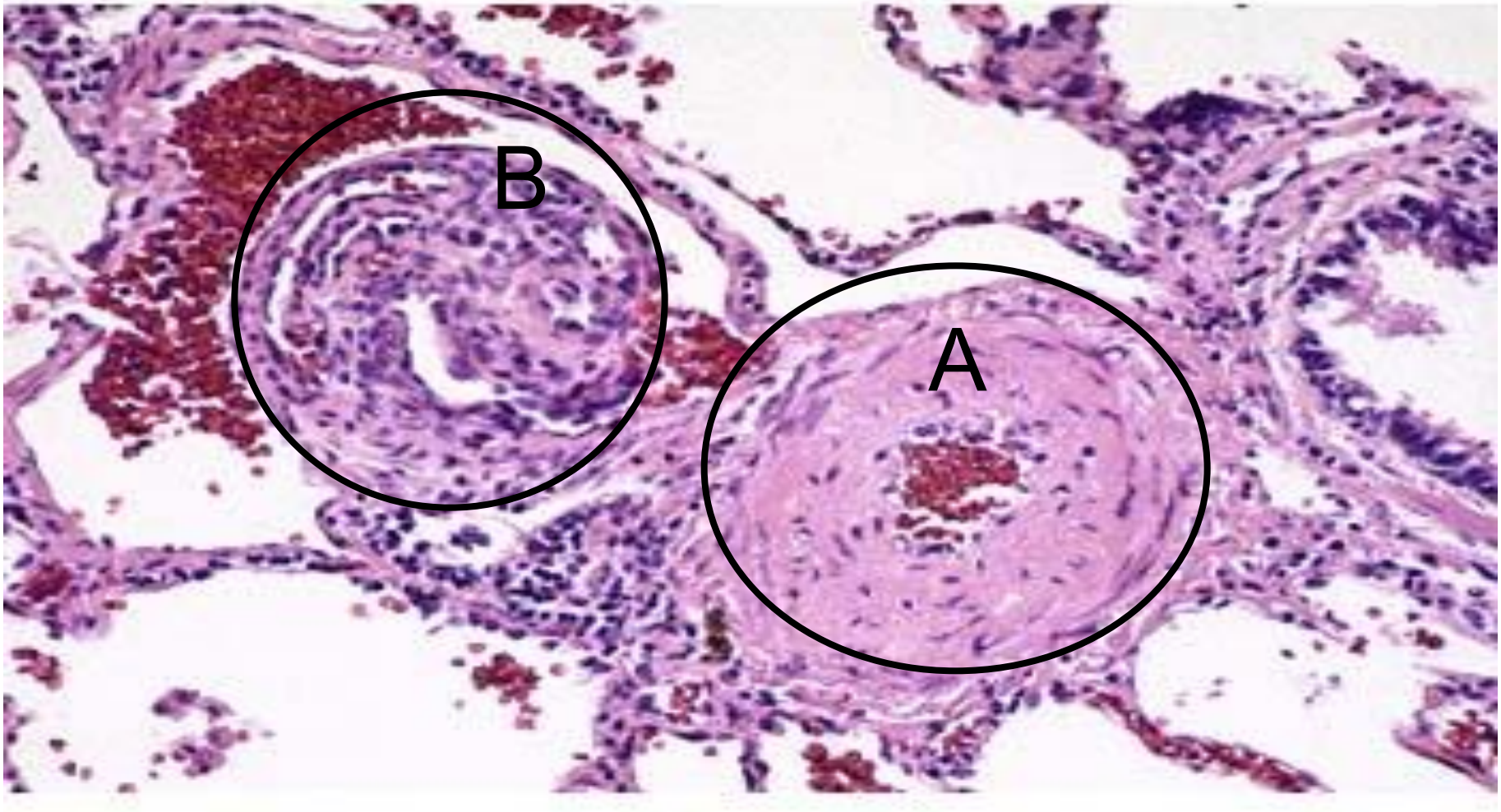
- Large bullae

Centrilobular emphysema

Pulmonary emphysema

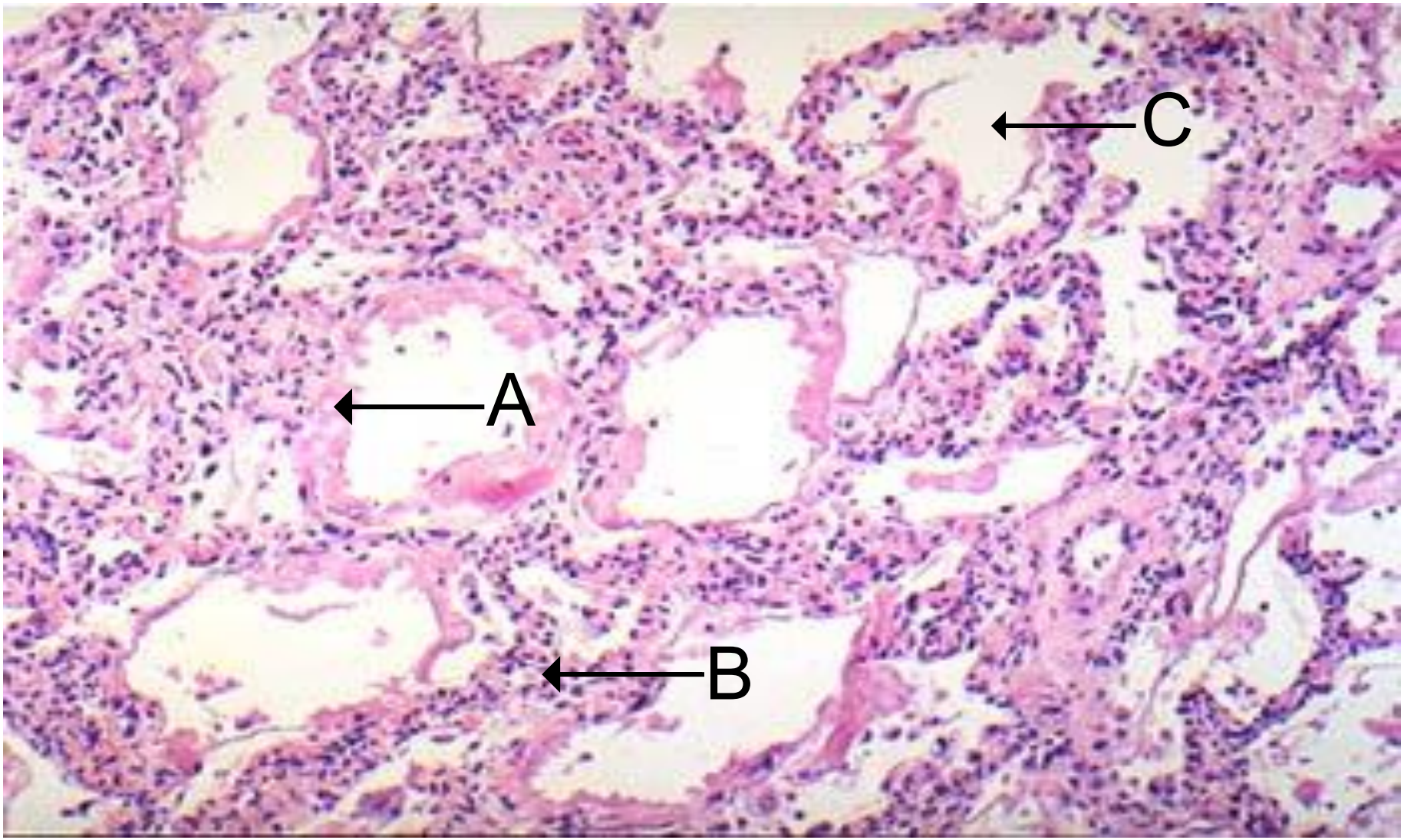


Moderate hypertrophy of the arteries and arterioles during pulmonary hypertension



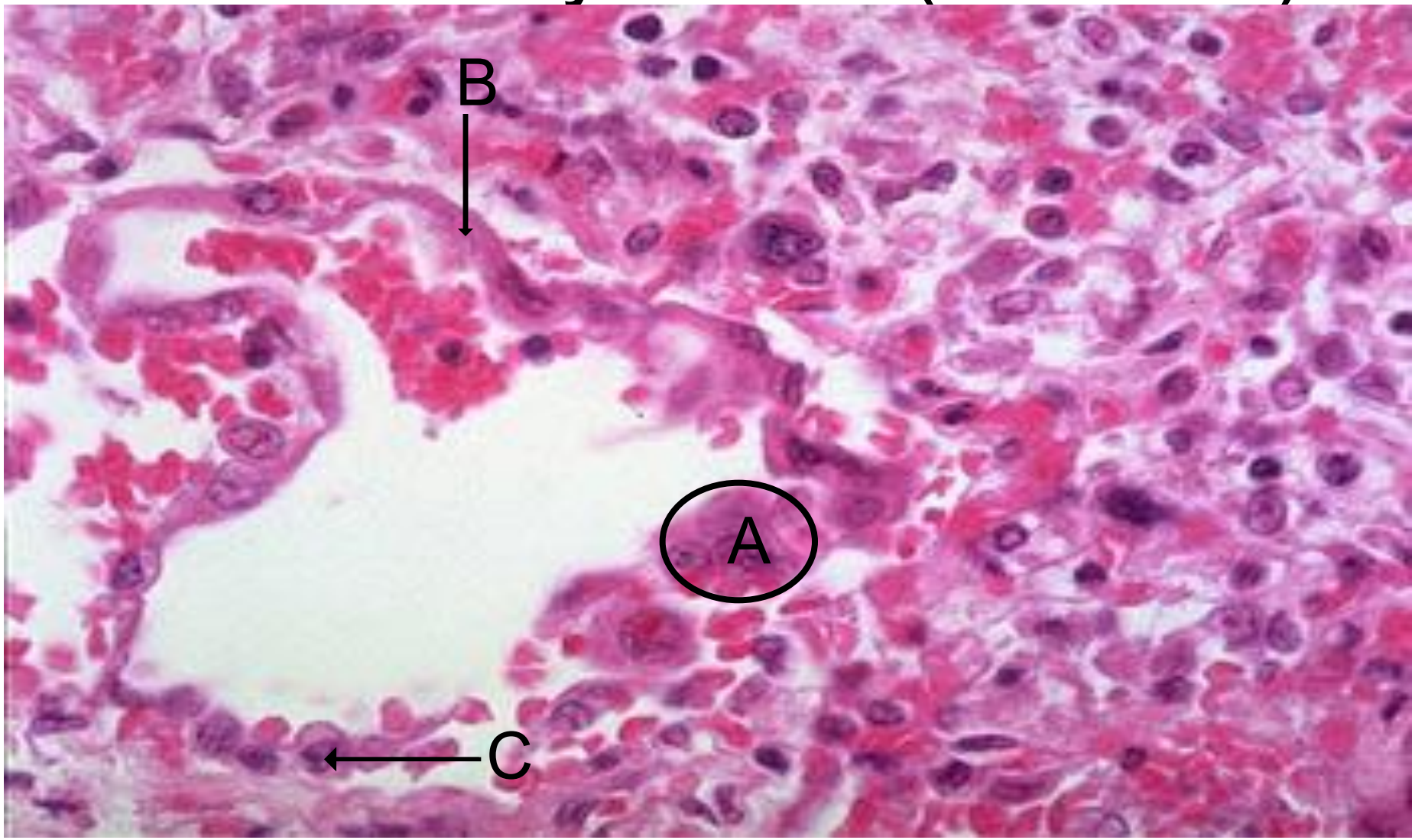
A-thickened vessel wall, B-reticular damage

Lung during distress - syndrome



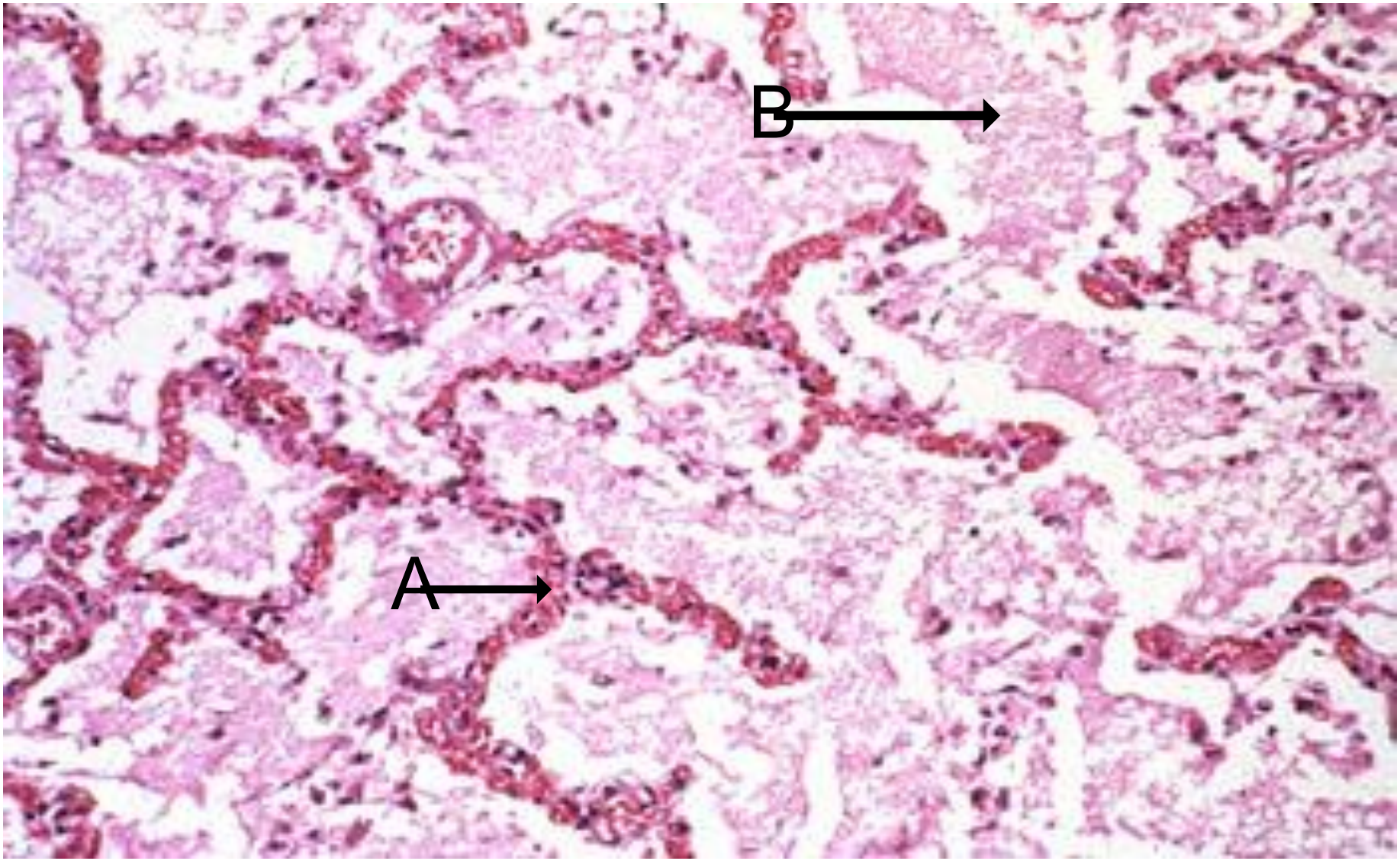
A-hyaline membranes, B-interstitial inflammation

Distress - Syndrome(measles)



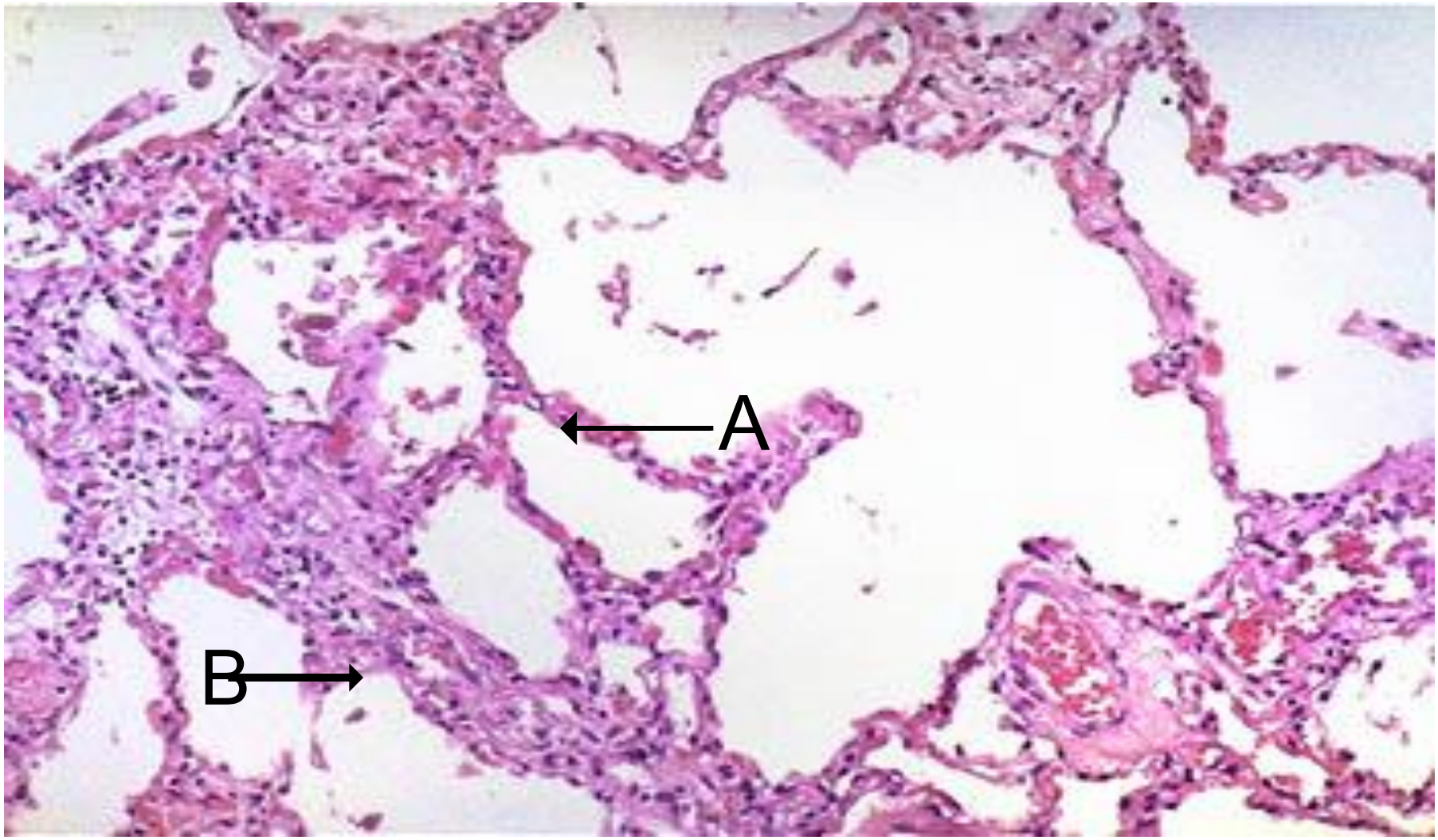
A-polynuclear giant cells, B- hyaline membrane, C-2 types of cells

Pulmonary edema



A- blood congestion, B- transudate in the alveoli

Идиопатический фиброз легкого



А-неизмененная межальвеолярная перегородка, В-утолщенная межальвеолярная перегородка