



### ***How do I diagnose Extralobular Sequestration***

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**Differential diagnoses:** Pulmonary Hypertension, Venous occlusive disease, Congenital malformation

**Side findings:** Tumorlet carcinoid type

#### **Abstract**

Lung sequestration is a radiological/clinical diagnosis displaying with a mass of lung parenchyma that is not connected to the tracheobronchial tree. Intralobular sequestration defines lung parenchyma that is covered by visceral pleura; extralobular sequestration defines lung parenchyma that lies outside the visceral pleura. We report the histological findings of a 71 years old women suffering from chronic cough, recurrent bronchopneumonias, and several radiological densities in the left lower lobe (lingula). A resection of the lingula was performed. The histological findings include focal active fibrosis and marked media hyperplasia and dislocalization of pulmonary arteries as well as a tumorlet of carcinoid type and focal adenomatous hyperplasia (AAH).

**Virtual Slides:** [http://www.diagnosticpathology.eu/vs/2015\\_1\\_55/](http://www.diagnosticpathology.eu/vs/2015_1_55/)

#### **Anamnesis / History**

The patient was a 71 years old woman and a heavy smoker (50 packyears). She suffered from chronic bronchitis, cough, sometimes cyanosis and dyspnea. She was submitted to our hospital with symptoms of severe bronchopneumonia and high fever. Live imaging showed thickened visceral pleura, multiple densities and indication of diminished airflow in the lower left lobe (lingula). Endoscopy, cytology, and bronchial biopsies were consistent with chronic bronchitis.

#### **Gross - microscopic findings**



The partial resection of the lingula measuring 5 x 2 x 1 cm (8,2 gr) displayed with multiple grayish-white lesion of several millimeter in maximum diameter. Several abnormal arteries with thickened vessels and surrounding fibrosis as well as thickened and fibrous pleura were noted.

### **Microscopy**

Microscopy confirmed the thickened vascular walls with irregularly broadened media and insuspicious intima. Marked surrounding fibrotic lung tissue (Figures 1-3). Herein abnormal structures of the lung parenchyma, chronic inflammatory infiltrates with collagen 3 (Sirius stain), and proliferation of bronchiolar epithelia (Figures 4, 7). A small tumorlet of carcinoid type was noted too showing proliferation of neuro-endocrine cells.

### **Expression of markers**

Not applied

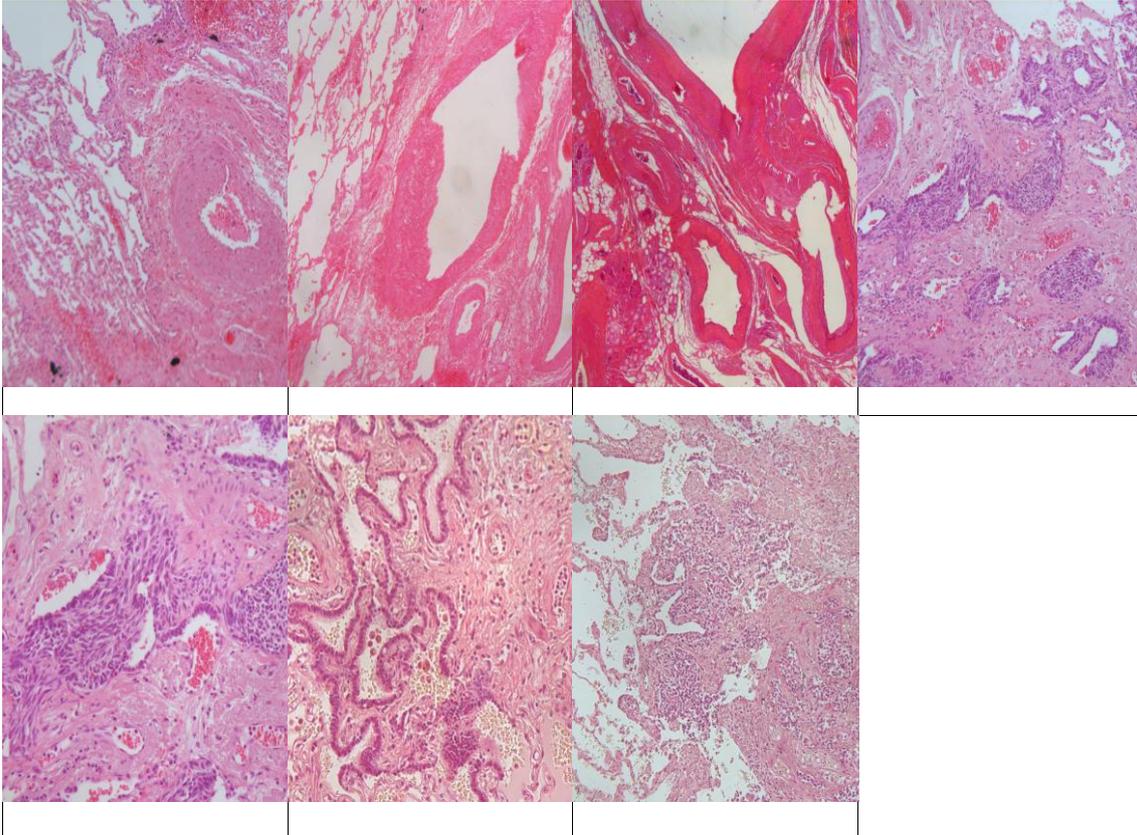
### **Discussion**

All findings indicate that the patient suffered from an extralobular sequestration, which is in agreement with her history, the radiological and microscopic findings. The differential diagnosis includes adenomatoid congenital malformation, an idiopathic pulmonary hypertension, and venous occlusive disease (which could be excluded by clinical and microscopic investigation. Early adenomatoid hyperplasia and two tumorlets of carcinoid type were side findings. They can be associated with chronic infectious inflammation according to the history and peribronchial alterations of the lung parenchyma. Heavy smoking might also participate in the development of these pre-cancerous lesions.

### **Hallmarks of Diagnosis**

Clinical history. Pleura thickening. Severe peribronchial chronic inflammation. Abnormal textures of intra-pulmonary arteries and their media, inflammatory arrosion of bronchi and vascular vessels.

**Images** (for full size images see supplements)



**Keyword - Diagnosis:** [Extralobular Sequestration](#)

**Keyword - differential diagnosis:** [Pulmonary Hypertension](#)

**Keyword - side findings:** [Tumorlet](#)

**Keyword - organ:** [Lingula, Lung](#)

**Keyword - methods:** [Resection](#)

**Keyword - others:** [Atypical Adenomatoid Hyperplasia](#)

#### **Online References (PubMed)**

[1. Extralobular Sequestration](#)

[2. Pulmonary Hypertension](#)

[3. Tumorlet](#)



[4. Adenoid Cystic Malformation](#)

[5. Atypical Adenomatoid Hyperplasia](#)