

# ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2016 – Mock Exam

## 2. Tissue from a Boar

The **lung** shows a **multifocal to coalescing** lesion, randomly scattered in the pulmonary parenchyma. One- to 10-mm well-demarcated foci are characterized by

- central replacement of lung parenchyma by acidophilic cytoplasmic debris and karyorrhectic nuclei with preservation of tissue architecture (**coagulative necrosis**),
- extravasated erythrocytes (**hemorrhages**),
- acidophilic extracellular fibrillar material (**fibrin**),
- and myriads of basophilic, anucleate organisms, 1 µm in length (**bacterial colonies of coccobacilli**).

Surrounding the necrotic areas, there are very abundant **pyknotic** and **karyorrhectic neutrophils (suppuration)** and **monocytes/macrophages**, whose nuclei occasionally show a condensed round shape and hyperbasophilia (**round cells**) or chromatin streaming (**oat cells**). **Alveoli, bronchioles and bronchi** are filled with fibrillary acidophilic material (**fibrin**), extravasated red blood cells (**hemorrhages**), abundant viable and degenerate **neutrophils**, abundant spumous macrophages (alveolar **histiocytosis**). Interlobular septa, **alveolar septa**, and bronchiolar walls, are multifocally thickened by collagen and hyperplastic fibroblasts (**fibroplasia / fibrosis**), with moderate amounts of lymphocytes and plasma cells. The **bronchiolar epithelium** is multifocally **necrotic** or absent. Small- and medium-sized arteries and veins in necrotic areas show a dilated lumen filled with fibrin (**fibrinous thrombi**), a hyperacidophilic media with loss of cell details (fibrinoid necrosis), and infiltration by pyknotic and karyorrhectic neutrophils (**suppurative / leukocytoclastic vasculitis**). Focal alveolar atelectasis and marked **alveolar emphysema** are also present. The pleura is diffusely thickened by collagen (**fibrosis**) with fibroblastic hyperplasia.

### Morphologic diagnosis / diagnoses

Multifocal severe necrotic and **Fibrinosuppurative (1) (broncho)pneumonia (0.5)** with intralesional **bacterial colonies (1)**, thrombosis and leukocytoclastic **vasculitis (0.5)**.

**Etiology / Etiologies: *Actinobacillus pleuropneumoniae***

### Marks

Lung .....	1
Necrosis and description .....	2
Hemorrhages with description .....	1
Fibrin in alveoli .....	1
Bacterial colonies .....	1
Oat cells and description .....	2
Bronchial / bronchiolar epithelium necrosis .....	1
Alveolar emphysema .....	1
Alveolar histiocytosis .....	1
Interstitial fibrosis .....	1
Leukocytoclastic vasculitis .....	1
Fibrinous thrombi .....	1
Morphologic diagnosis .....	3
Etiology .....	1
Design .....	2