



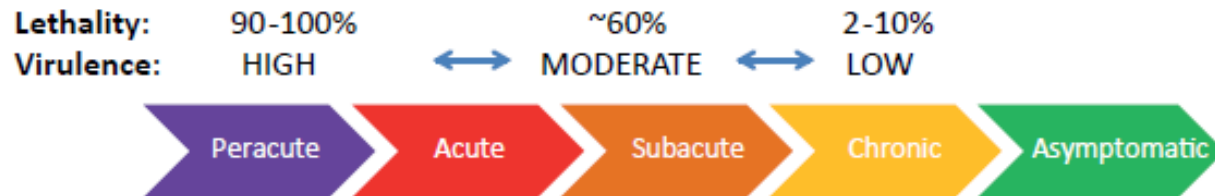
## HOW DOES ASF LOOK LIKE?

The present flyer provides essential information about the clinical presentation of the disease to help to identify the most common clinical signs and lesions induced by ASFV Isolates of different virulence.

### Classification of ASFV isolates according to the virulence versus clinical form of ASF:

- ✓ **High virulence isolates** → peracute and acute forms of disease.
- ✓ **Moderate virulence isolates** → acute, subacute and chronic forms of disease.
- ✓ **Low virulence isolates (attenuated)** → subclinical or chronic form of the disease.

### Clinical forms of African swine fever according to the virulence of the isolate involved



AFRICAN SWINE FEVER (ASF)



ASF CLINICAL FORM	MORTALITY [days post infection]	EXTERNAL CLINICAL SIGNS	LESIONS
<b>Peracute</b>	<b>100%</b> [1-4 days]	Fever (41-42 °C), anorexia, and inactivity hyperpnoea, and cutaneous hyperemia. Animals usually die suddenly without clinical signs.	No lesions are evident in organs.
<b>Acute</b>	<b>90-100%</b> [6-9 days] Highly virulent ASFV [11-15 days] Moderately virulent ASFV	<ul style="list-style-type: none"> <li>• Fever (40-42 °C), anorexia, recumbence, lethargy, weakness and recumbence and show increased respiratory rate;</li> <li>• bluish-purple areas and hemorrhages (spot-like or extended) on the ears, abdomen, and/or hind legs</li> <li>• ocular and nasal discharge;</li> <li>• reddening of the skin of the chest, abdomen, perineum, tail, and legs;</li> <li>• constipation or diarrhea, which may progress from mucoid to bloody (melena);</li> <li>• vomiting;</li> <li>• abortion of pregnant sows at all stages of pregnancy;</li> <li>• bloody froth from the nose/mouth and a discharge from the eyes;</li> <li>• the area around the tail may be soiled with bloody faeces.</li> </ul>	<ul style="list-style-type: none"> <li>• Hemorrhages under the skin;</li> <li>• enlarged, edematous, and completely hemorrhagic lymph nodes similar to blood clots (particularly gastro hepatic, and renal);</li> <li>• enlarged, friable, and dark-red to black spleen with rounded edges;</li> <li>• petechiae (spot-like hemorrhages) on the capsule of the kidneys.</li> <li>• excess of fluids in the heart (hydro pericardium with yellowish fluid) and body cavities (hydrothorax, ascites);</li> <li>• petechiae on the heart's surface (epicardium), urinary bladder, and kidneys (on the cortical and renal pelvis);</li> <li>• the lungs may present congestion and petechiae, with froth in the trachea and bronchus, and severe alveolar and interstitial pulmonary oedema;</li> <li>• petechiae, ecchymosis (larger hemorrhages), and excess clotted blood in the stomach and small and large intestines;</li> <li>• hepatic congestion and hemorrhages in the gall bladder.</li> </ul>
<b>Subacute</b>	<b>30-70%</b> [7-20 days]	<ul style="list-style-type: none"> <li>• Similar (although generally less intense) to those observed in the acute form, except vascular changes that are more intense, mainly hemorrhages and edemas.</li> <li>• Fluctuating fever, accompanied by depression and loss of appetite, are also common.</li> <li>• Painful walking; joints are often swollen with accumulated fluid and fibrin.</li> <li>• Labored respiration and pneumonia.</li> <li>• Abortion</li> </ul>	<ul style="list-style-type: none"> <li>• Ascites and hydro pericardium;</li> <li>• edema of the wall of the gallbladder and bile duct as well as in the surrounding area of kidneys (perirenal edema);</li> <li>• partial hyperemic splenomegaly with focal infarction;</li> <li>• hemorrhagic, edematous and friable lymph nodes, (they often look like dark red hematomas);</li> <li>• Renal hemorrhages are more intense (petechiae and ecchymosis) and more extensive (cortex, medulla and pelvis) than in acute forms</li> </ul>
<b>Chronic</b>	<b>&lt;30%</b> [> 1month]	<ul style="list-style-type: none"> <li>• Slight fever (40-40.5 °C) followed by mild respiratory distress and moderate-to-severe joint swelling.</li> <li>• Reddened areas of skin that become raised and necrotic</li> </ul>	<ul style="list-style-type: none"> <li>• Pneumonia with caseous necrosis (sometimes with focal mineralization) in lungs;</li> <li>• fibrinous pericarditis;</li> <li>• edematous lymph nodes, which can be partially haemorrhagic (mainly mediastinal lymph nodes)</li> </ul>



# ASF External clinical signs acute-subacute ASF

Pigs are visibly weak with fever and huddle to stay warm.



Reddening of the skin





- ✓ Reddening of the skin - tips of ears and both front and hind legs.
- ✓ Cyanosis





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- ✓ Necrotic areas o the skin surface
- ✓ Subcutaneus haematomas (ears, chest, abdomen and both front and hind legs)



- ✓ Necrotic areas on the skin surface.
- ✓ Subcutaneous haematomas (ears, chest and abdomen)







- ✓ Necrotic areas on the skin surface.
- ✓ Subcutaneous haematomas (abdomen)







- ✓ Melena
- ✓ Epistaxis
- ✓ Foam in mouth/nose



9 dpi  
(wild boar)



# ASF pathological findings acute-subacute ASF



9 dpi  
(wild boar)



10 dpi  
(wild boar)





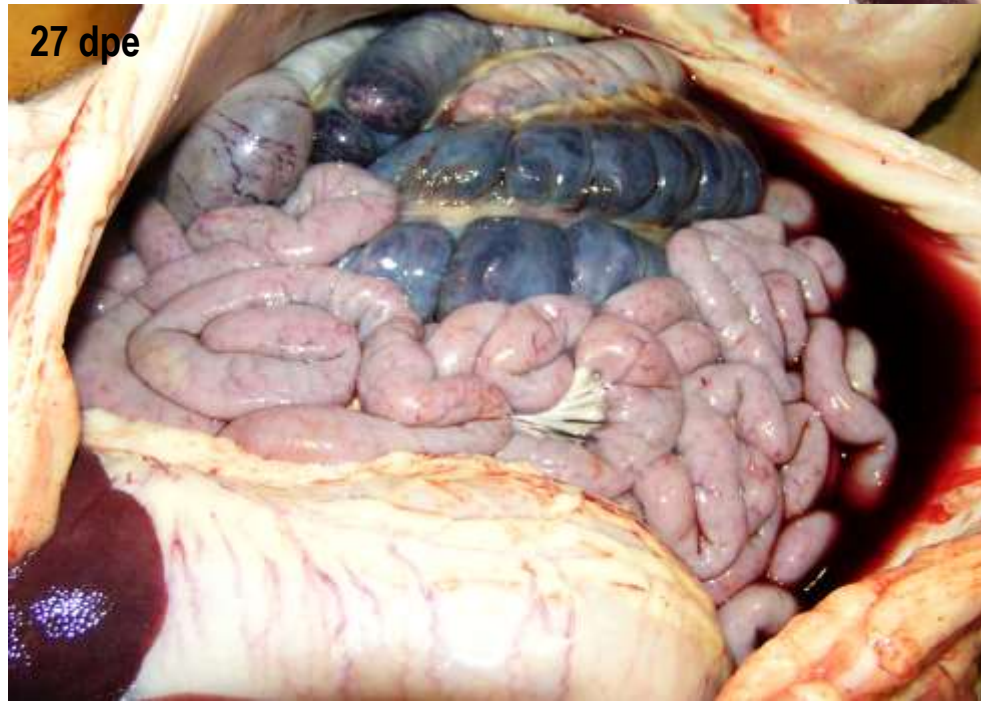
**Abdominal cavity.**

Ascites with redish fluid

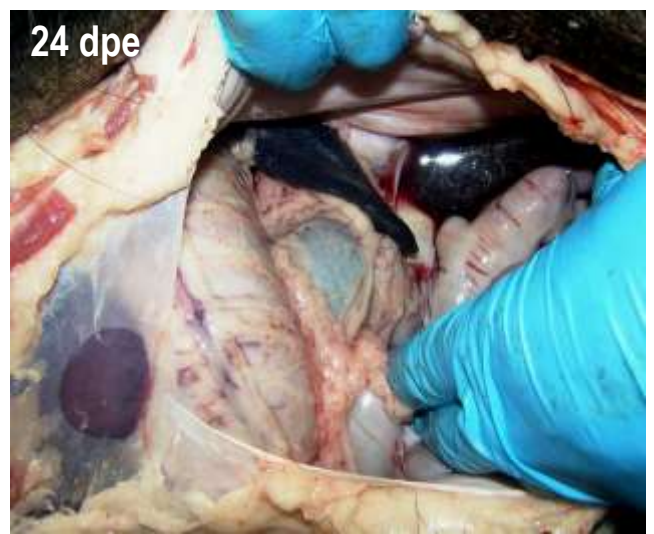
28 dpe



27 dpe



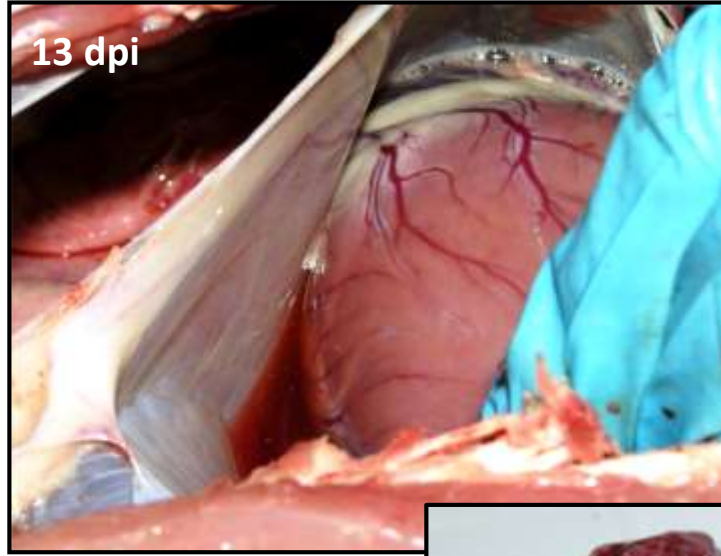
24 dpe



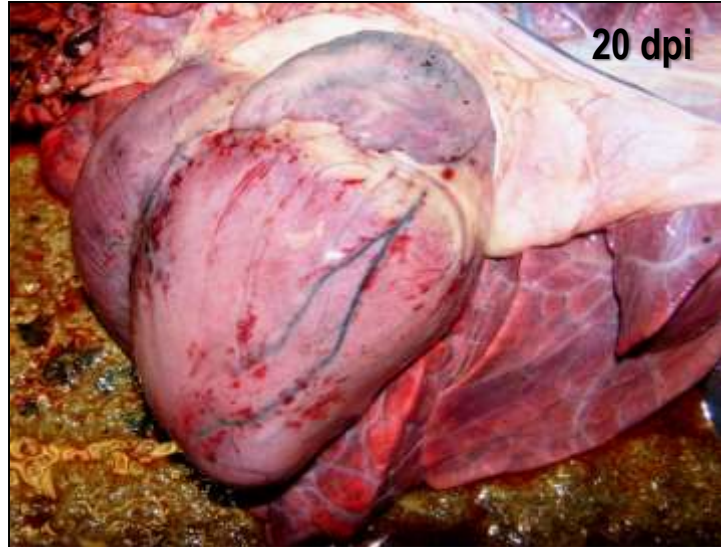


### Heart.

- ✓ Hydropericardium with redish fluid
- ✓ Petechial haemorrhages on epicardium



13 dpi



20 dpi



Wild boar  
9dpi



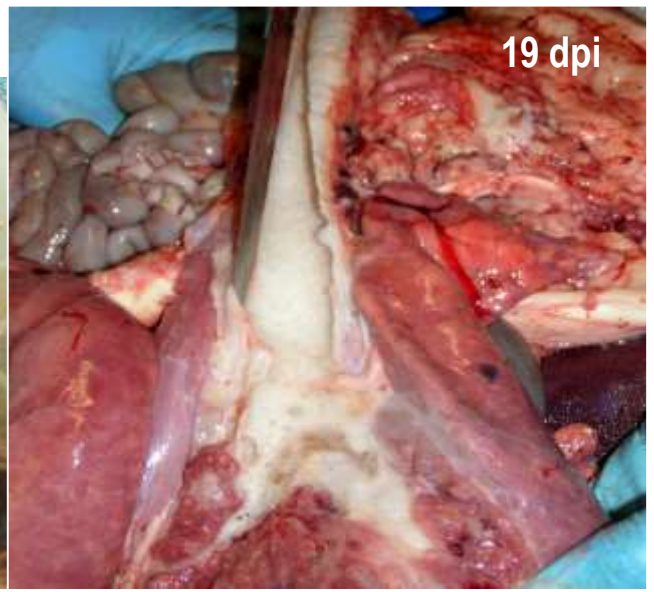
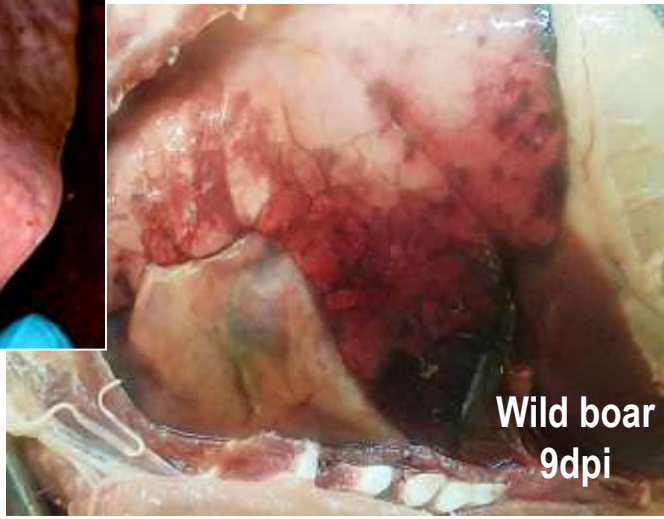
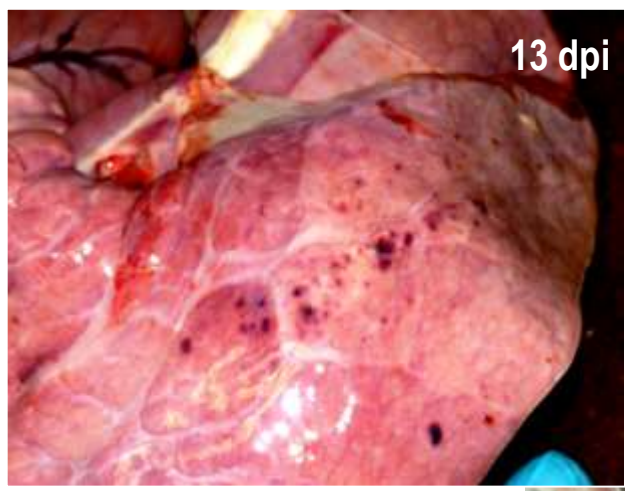
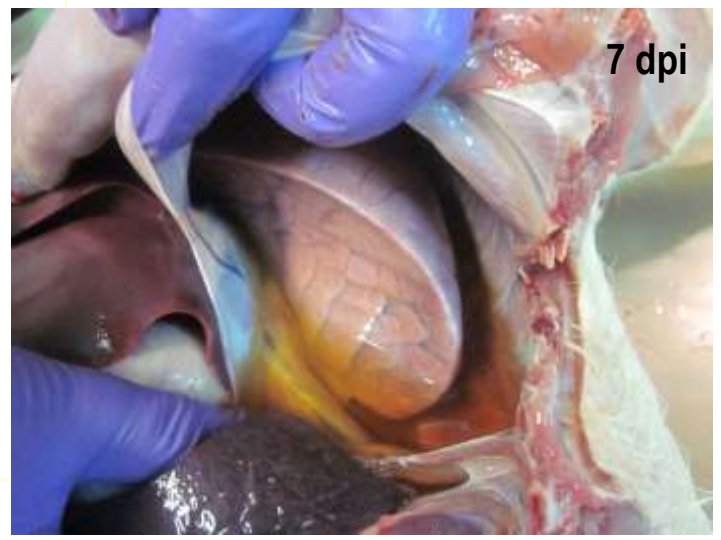




✓ **Hydrotorax**

**Lung.**

- ✓ **Congestion**
- ✓ **Petechial haemorrhages**
- ✓ **Froth in trachea and bronchus**
- ✓ **Severe alveolar and interstitial pulmonary edema.**





- ✓ Ascites with yellowish fluid

## Liver

- ✓ Congestion
- ✓ Hepatomegaly
- ✓ Haemorrhages on the serosa surface of gall bladder

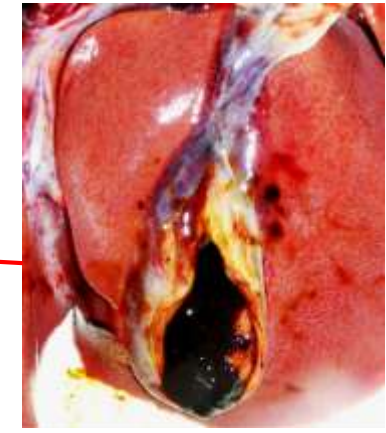
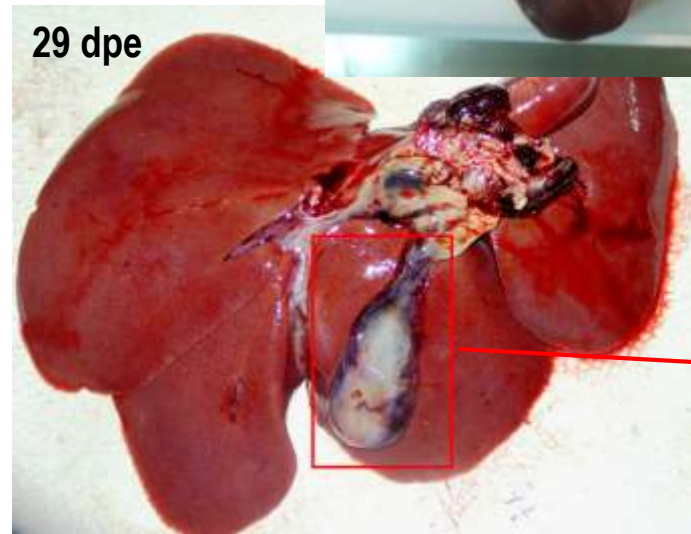
20 dpe



19 dpi



29 dpe



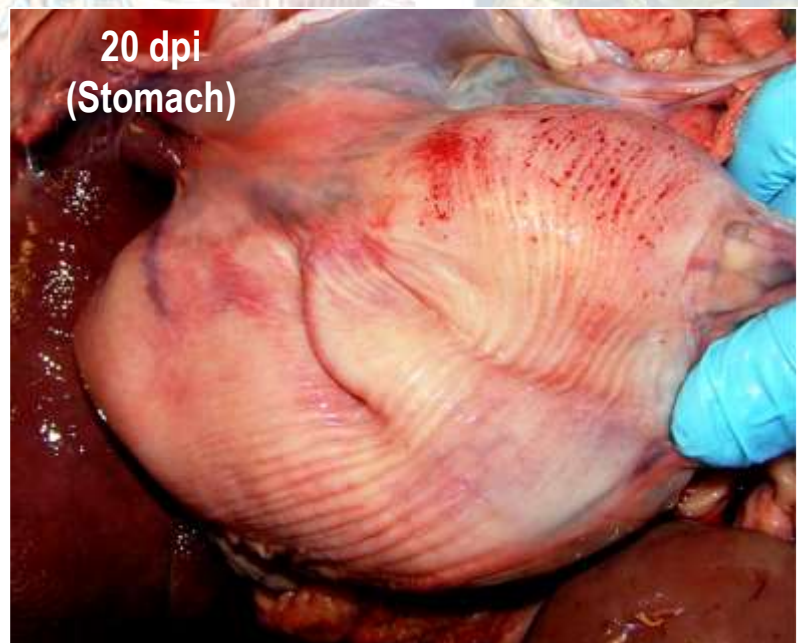


## Stomach

Petechial haemorrhages on serosa and mucosa

## Small and large intestine

Petechial haemorrhages on serosa and mucosa



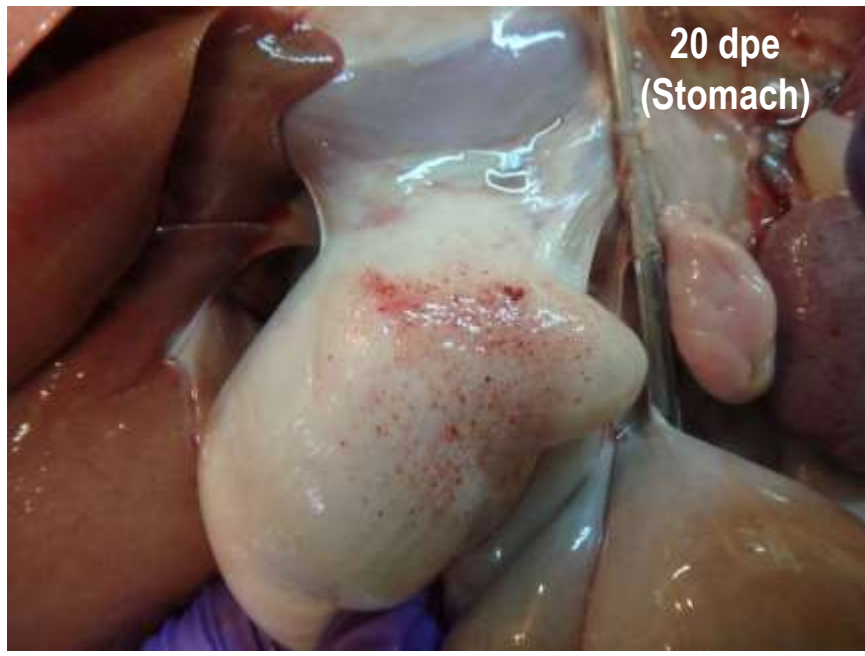


# Stomach

Petechial haemorrhages on serosa and mucosa

# Small and large intestine

Petechial haemorrhages on serosa and mucosa







## Stomach

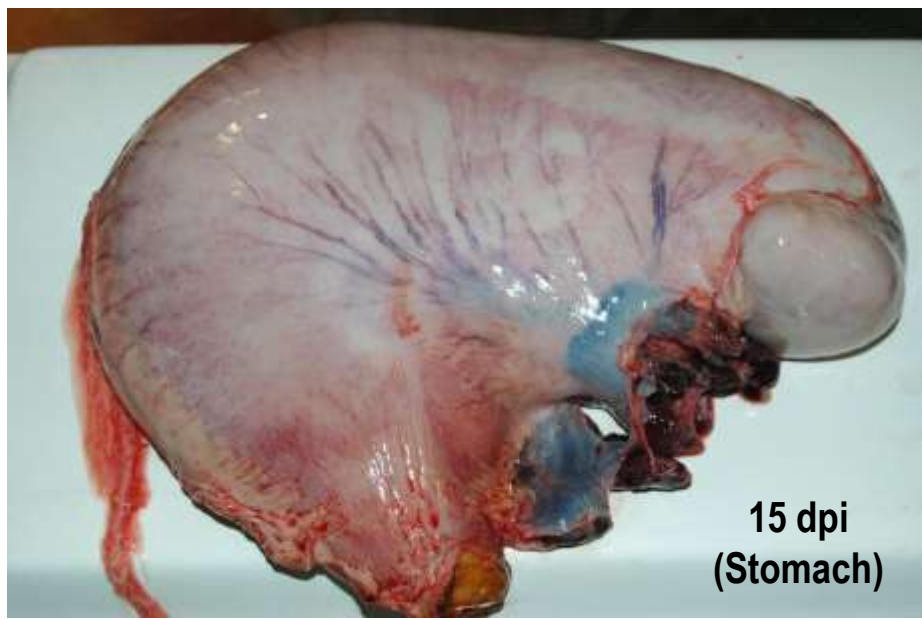
Petechial haemorrhages on serosa and mucosa

## Small and large intestine

Petechial haemorrhages on serosa and mucosa



14 dpi  
(Wild boar)



15 dpi  
(Stomach)

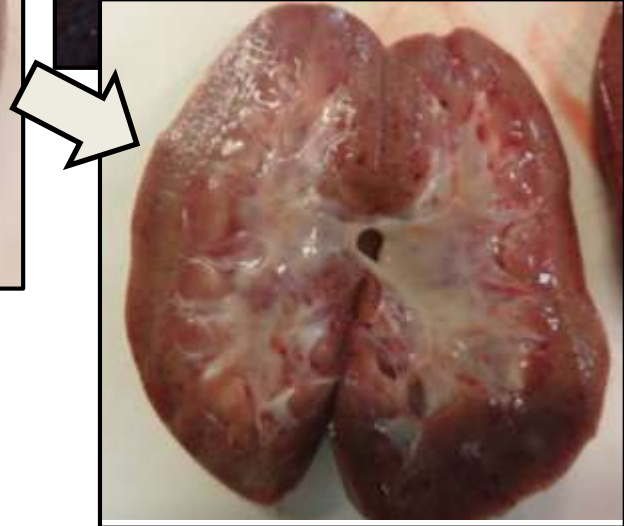
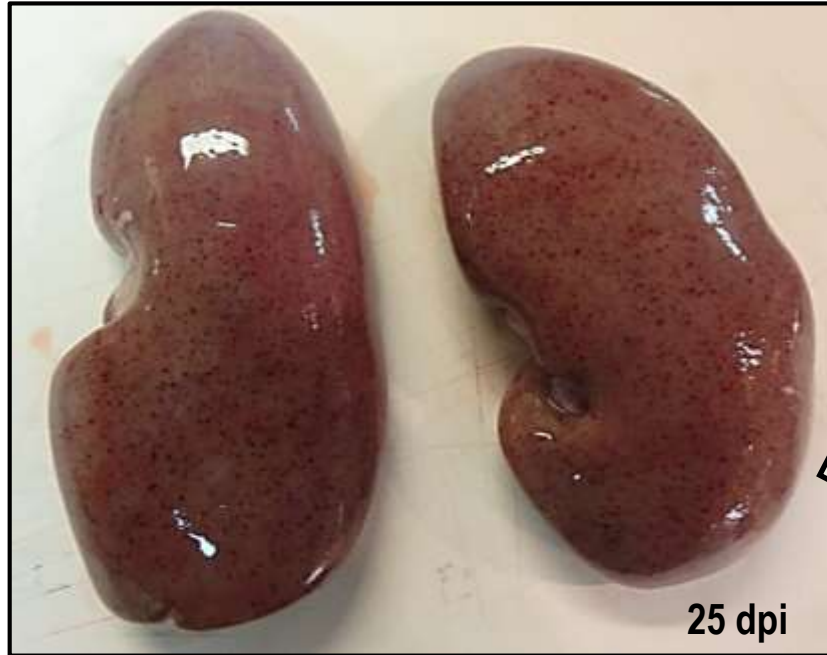


14 dpi  
(Wild boar)



# Kidney

✓ Petechiae in cortex (more numerous and intense in larger courses of disease)

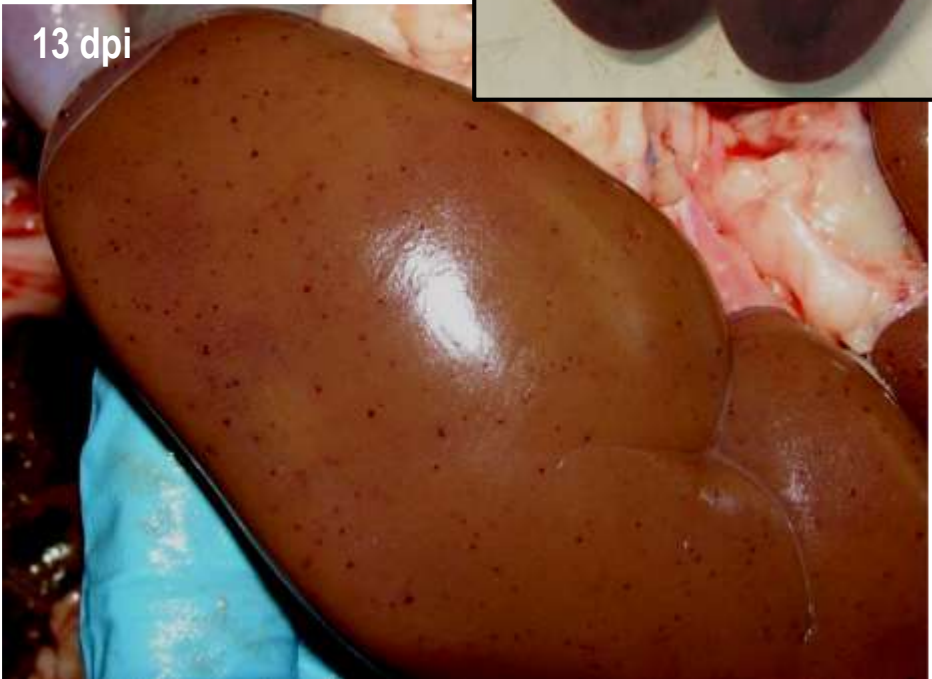
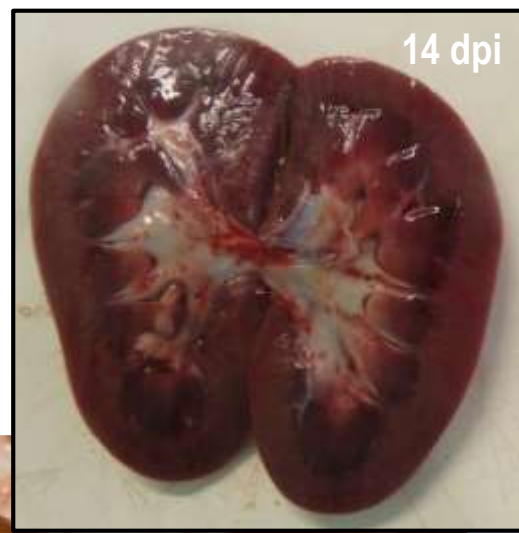






# Kidney

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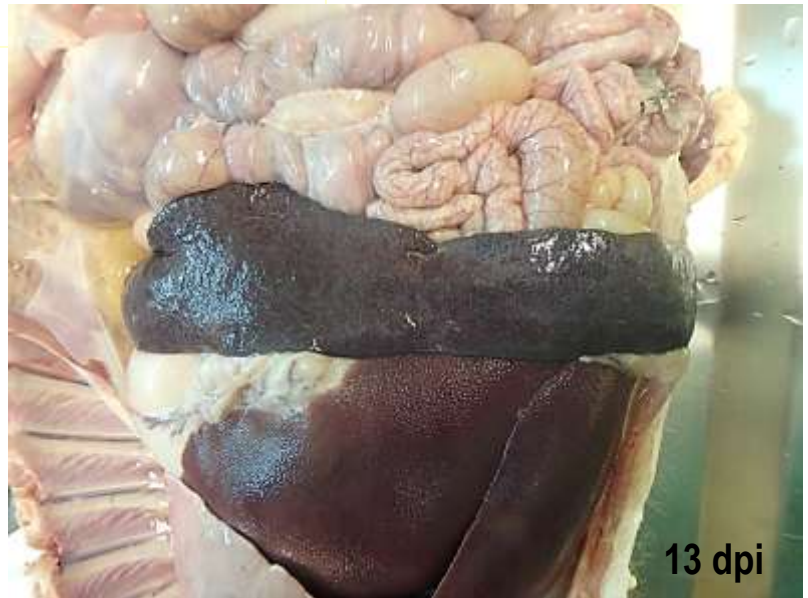


# Spleen

- ✓ **Hyperemic splenomegaly** (enlarged with rounded edges, friable and dark red to black)



10 dpi  
(Wild boar)



13 dpi

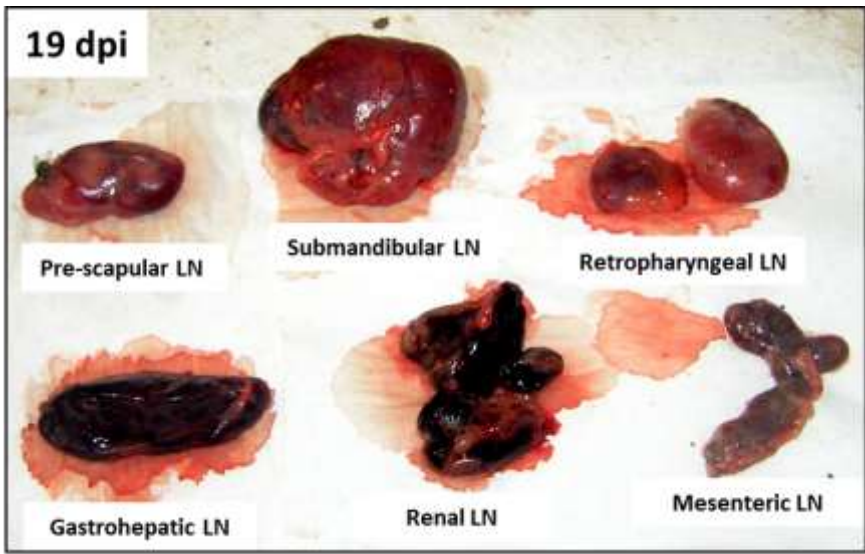
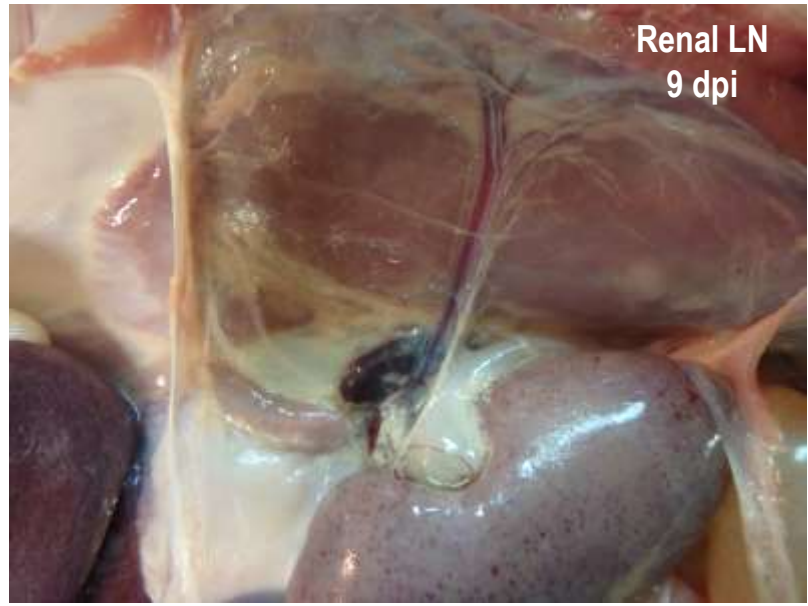


7 dpi





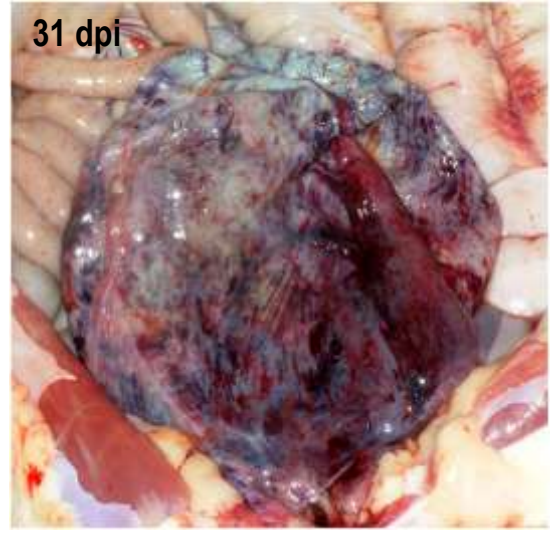
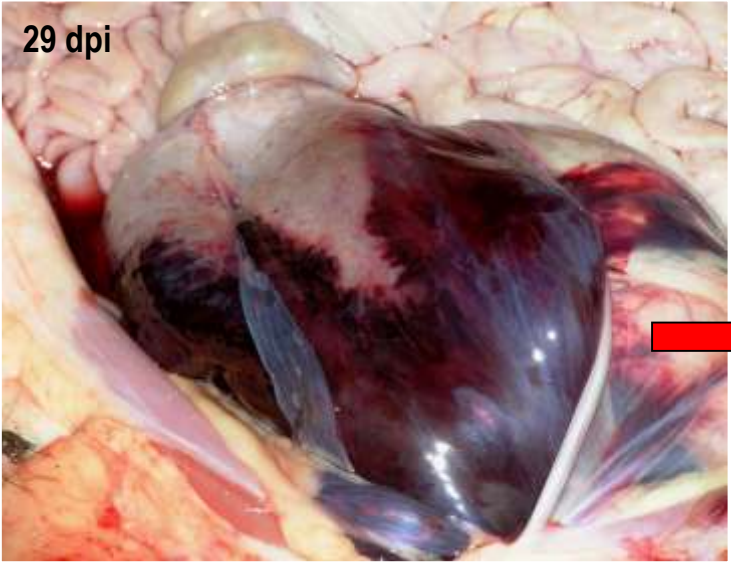
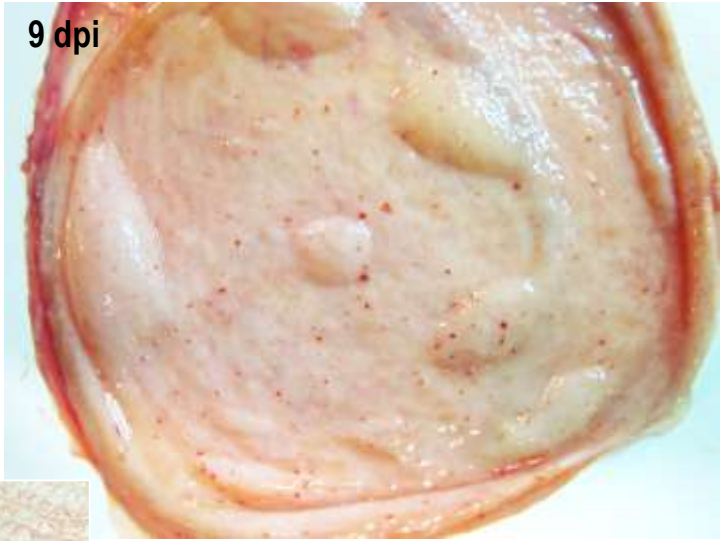
**Lymph nodes enlarged edematous and completely hemorrhagic similar to a blood clot, mainly gastro hepatic and renal LNs.**





## Urinary Bladder

- ✓ Edema in urinary bladder wall
- ✓ Haemorrhages (petechiae, ecchymoses and suffusions) in submucosa and serosa
- ✓ Occasional clot blood on mucosa surface





## ASF External clinical signs chronic ASF



Moderate to severe joint swelling, often combined with reddened areas of skin that become raised and necrotic.



- ✓ Moderate to severe joint swelling, often combined with reddened areas of skin that become raised and necrotic.
- ✓ Cyanosis







**JOINT SWELLING, NECROTIC FOCI**



# ASF pathological findings **chronic ASF**

**Severe respiratory disorders**

**Caseous necrosis and mineralization of the lungs**

