Department of
Primary Industries and
Regional Development

GOVERNMENT OF
WESTERN AUSTRALIA

How to perform a pig post-mortem

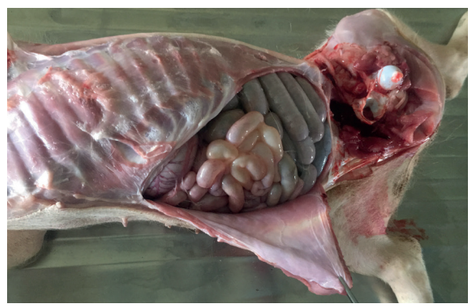
Procedure:

1. Examine the animal for skin lesions, lesions on the eyes or ears, discharges from any orifice, evidence of diarrhoea, swollen joints or traumatic injuries (i.e. tail bite injuries). Sample **skin lesions** by collecting pieces of affected skin into a sterile container and into formalin. Swab discharges or collect a fresh sample of the exudate/fluid. Eyes and ears can be submitted whole in formalin for histopathology if they are abnormal.

2. In cases of lameness or joint swelling, open and sample the affected joints and a selection of major joints (i.e. hip joints, carpal joints, tarsus, stifle, elbow). Incise through the skin with a knife. Incise the joint capsule with a sterile scalpel and collect a sterile swab of **joint fluid** into Amies. Consider submitting the joint whole or a sample of joint capsule in formalin.

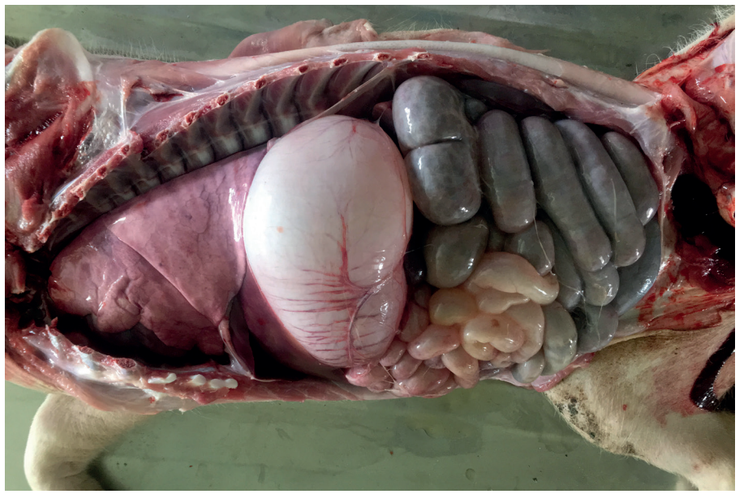
3. Position the pig right side down. Reflect both limbs and skin the flank. Examine the musculature and hip joint. Sample **hind limb skeletal muscle** into formalin. Samples submitted in formalin should be <1cm thick.

4. Open the abdomen and reflect the abdominal wall towards you; take care not to perforate the intestines. **Look for peritoneal exudate**; if present, sample into a sterile sample pot or swab into Amies media.



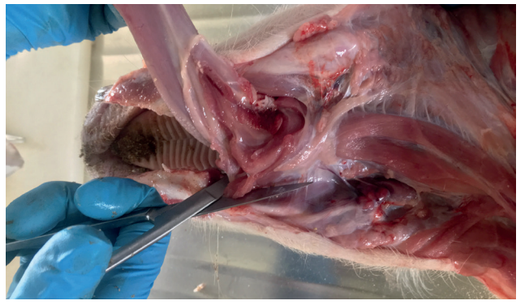
5. Use shears to remove the rib cage by cutting along the bottom and top of the ribs. Trim away the diaphragm and muscle to expose the thoracic cavity.

6. Examine the organs in-situ. Record any abnormalities by writing a description and taking photographs. Collect any **pleural or pericardial exudate** into a sterile container or swab into Amies media.



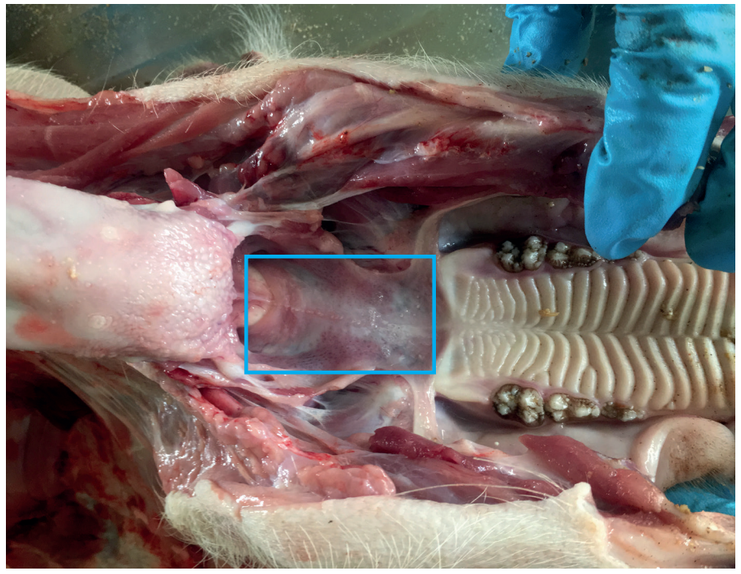
7. Skin underneath the neck and chin. Use shears to cut through the mandibular symphysis and split the lower jaw.

8. Roll the head dorsally, split the lower jaw apart. Grasp and pull the tongue backwards while cutting the soft tissues along both mandibles.

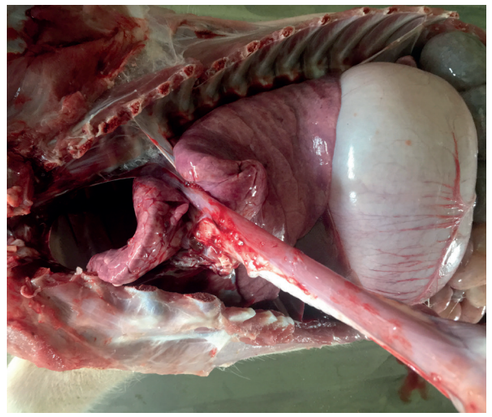


9. Examine the oral cavity. If there are **oral lesions** present (i.e. vesicles, ulcers) collect a sample into formalin, swabs into Amies, and swabs or **epithelial tags** into viral transport media or into a sterile container. **Vesicular fluid** can be aspirated and placed in a plain blood tube.

10. Sample the **tonsils**. The tonsils are the pitted, textured area of the soft palate outlined below. Using scissors, remove the tonsils. Place half into formalin and half into a sterile container.



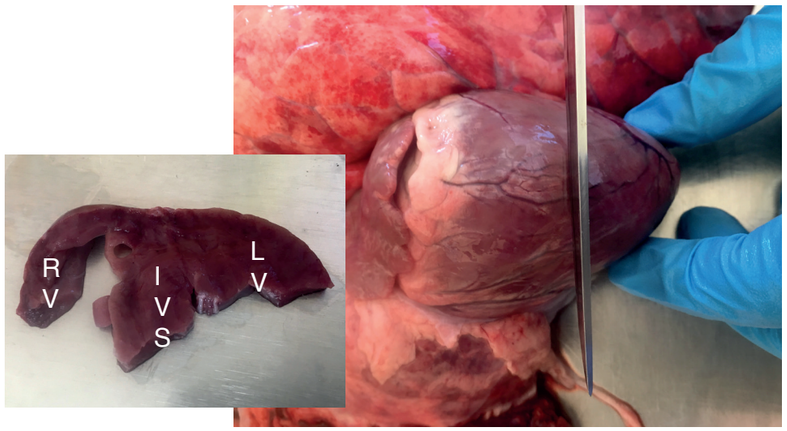
11. Grasp the tongue and pull it caudally. Cut the hyoid bones, dissect along the trachea and oesophagus into the chest and remove the thoracic viscera all together. You will need to cut through the oesophagus, aorta and caudal vena cava where they pass through the diaphragm.



12. Examine the trachea, oesophagus, bronchial lymph nodes, lungs, pericardium and heart. Open the trachea and main stem bronchi. Bread slice the lungs to ensure lesions deep in the lung are not missed.

13. Collect thin sections (no greater than 1cm thick) of **lung, trachea, bronchial lymph node, oesophagus and any lesions** into formalin. Collect a 3cm cube of fresh lung into a sterile container. If bronchial lymph nodes are enlarged or obvious, collect a fresh sample into a sterile container.

14. Examine the pericardium and heart. Cut through the ventricles (see below). Collect a 'T-shaped' section of **heart** which includes **left and right ventricular free wall and interventricular septum** and add this to the formalin pot. The tissue should be <1cm thick.

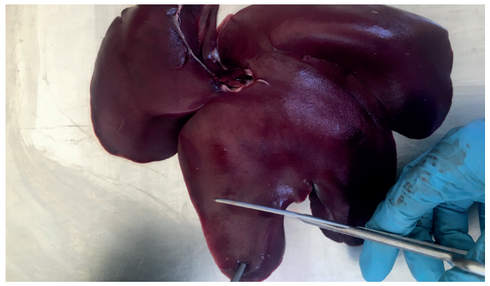


Open the left and right ventricles and incise up into the atria and great vessels. Examine the heart valves. Sample any lesions into a sterile jar and into formalin and swab any exudates into Amies.

15. In the abdomen, examine the **spleen**. Collect a 3cm cube of **spleen** into a sterile container and a thin section (<1cm) into formalin.

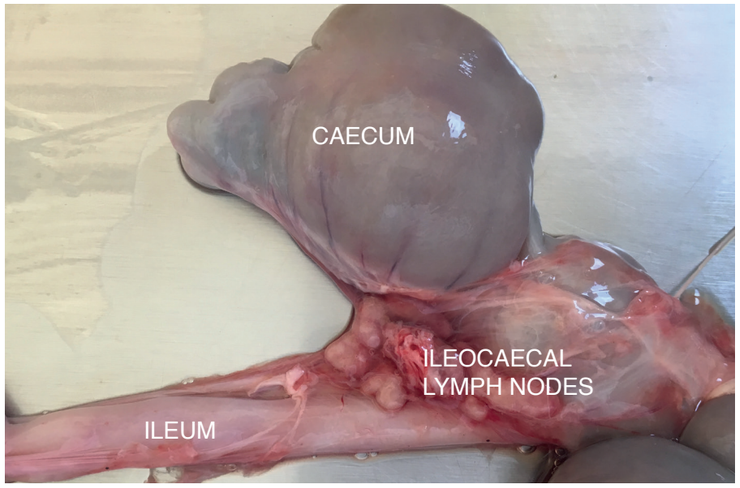
16. Cut the diaphragm away from the body wall. Grasp the mesenteric root and pull the viscera caudally, lifting the intestines and liver out of the abdomen and cutting the mesentery. The kidneys and urogenital tract should remain in the abdomen. Leaving the colon as the last point of attachment, incise the colon as far caudally as possible and collect a **faecal** sample.

17. Dissect the liver from the intestines. Examine and bread slice the organ. Collect a 3x3cm fresh sample of **liver** into a sterile container and a <1cm thick section into formalin.



18. Spread out the intestine by cutting through the mesenteric root. Identify the ileum, caecum and ileocaecal junction (below).

19. Collect a 5cm long section of **ileum** and place half into formalin and half into a sterile container. Collect an **ileocaecal lymph node** (see below) into both formalin and a sterile container.



20. Examine the remaining sections of the intestinal tract. Open the stomach and examine the mucosa. Collect a sample of **stomach contents** into a sterile container and a **piece of stomach** into formalin.

21. Examine the **small and large intestine**. Open sections of all areas of the intestinal tract and examine the mucosa, especially in cases of diarrhoea. If there are abnormal contents or areas of mucosa target these areas; collect fresh **intestinal contents** or swabs in Amies. Collect short segments of **duodenum, jejunum, caecum and colon**. Take care not to scrape the mucosal surface of pieces of tissue placed into formalin.

22. Remove both kidneys, cut in half length ways and examine the cortex, medulla and pelvis. Collect a 3x3cm piece of **kidney** into a sterile container. Collect a thin piece of kidney which includes **cortex, medulla and pelvis** into formalin.

23. Examine the bladder. If there is evidence of urogenital disease, collect a sample of bladder into formalin and a urine sample into a sterile container.

24. Examine the urogenital tract (ovaries and uterus or testes). Bread slice these tissues. Collect fresh and fixed samples if required.

25. Remove the **brain**. Saw or split the head sagittally in a large pig or remove the calavarium with shears in a small pig. Brain removal guides are available on the DPIRD website (agric.wa.gov.au). Collect a sample of fresh brain into a sterile container. A small piece of cortex (olfactory lobe or occipital cortex) is sufficient. Alternatively, collect a meningeal swab. The rest of the brain should be submitted whole in formalin.

26. If there is a history of neurological signs, consider collecting additional samples such as spinal cord and peripheral nerve.

27. **All samples should be labelled clearly.** Samples should be submitted as described in the sampling guidelines with a completed submission form.

Refrigerate

Formalin at room temp

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