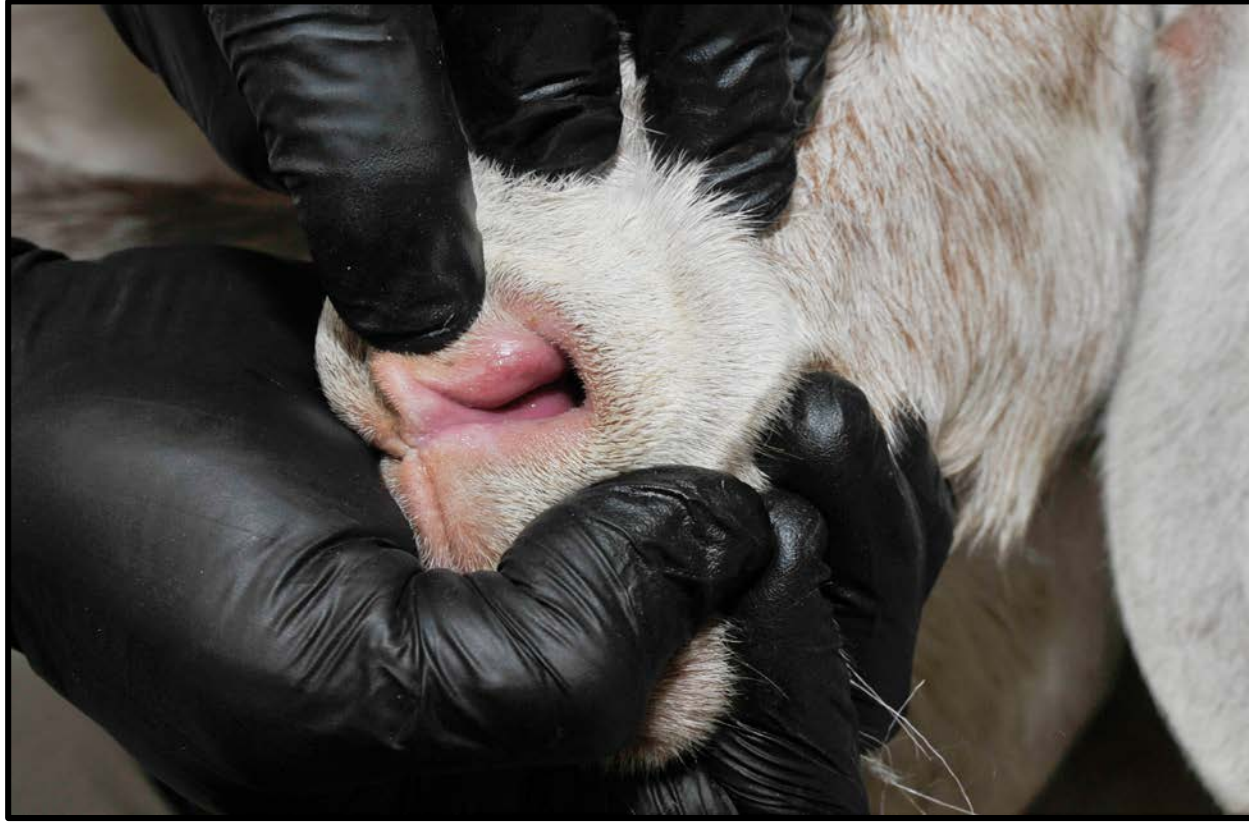


# Peste de Petits Ruminants



Goat, muzzle. Reddening of nasal mucosa



Goat, head. Serous nasal discharge



Goat, muzzle. Mucopurulent nasal discharge with crusting at edges of nares



Goat, head. Purulent ocular discharge.



Goat, mouth. Dental pad with multifocal hyperemia and erosions.



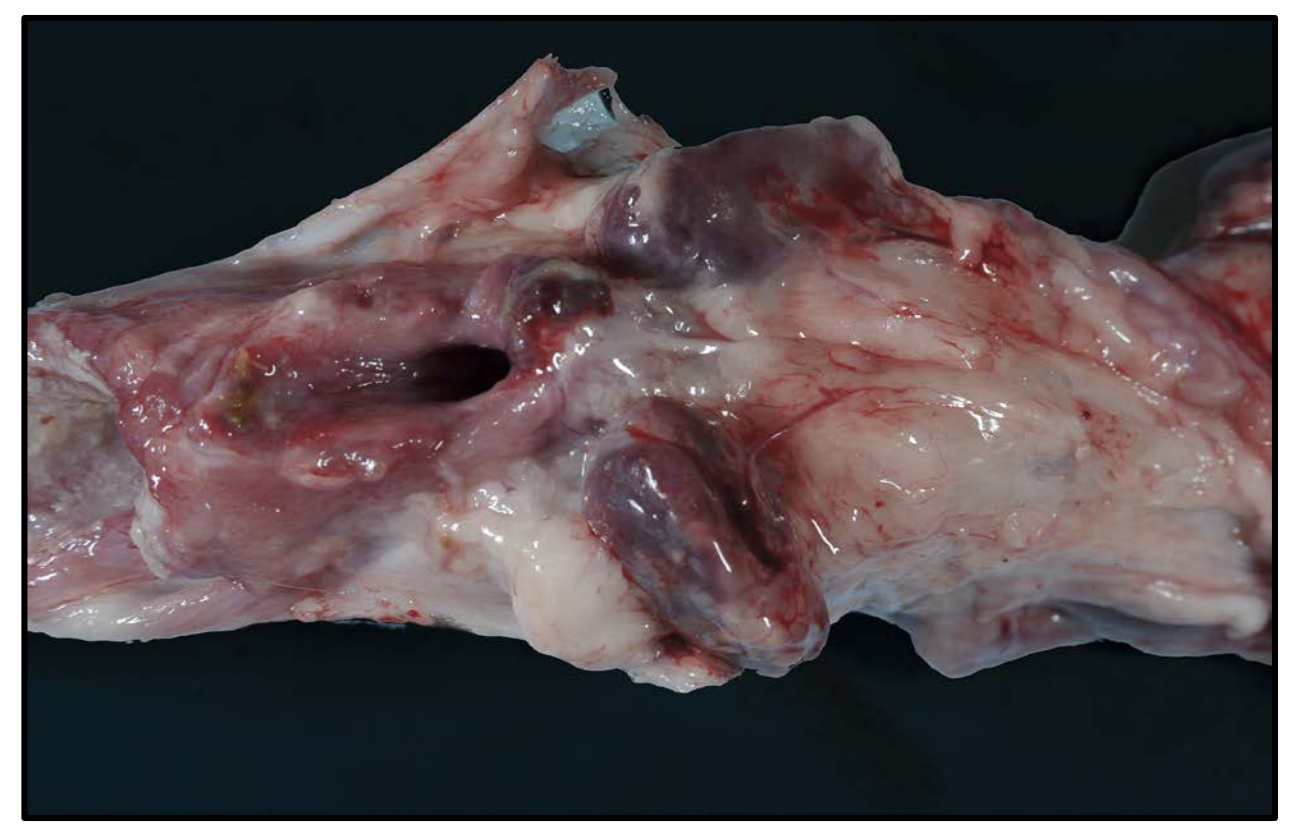
Goat, mouth. Stomatitis with necrosis of buccal papillae and dental pad epithelium.



Goat, tongue. Coalescing areas of white, necrotic epithelium.



Goat, with severe watery diarrhea and staining of perianal area



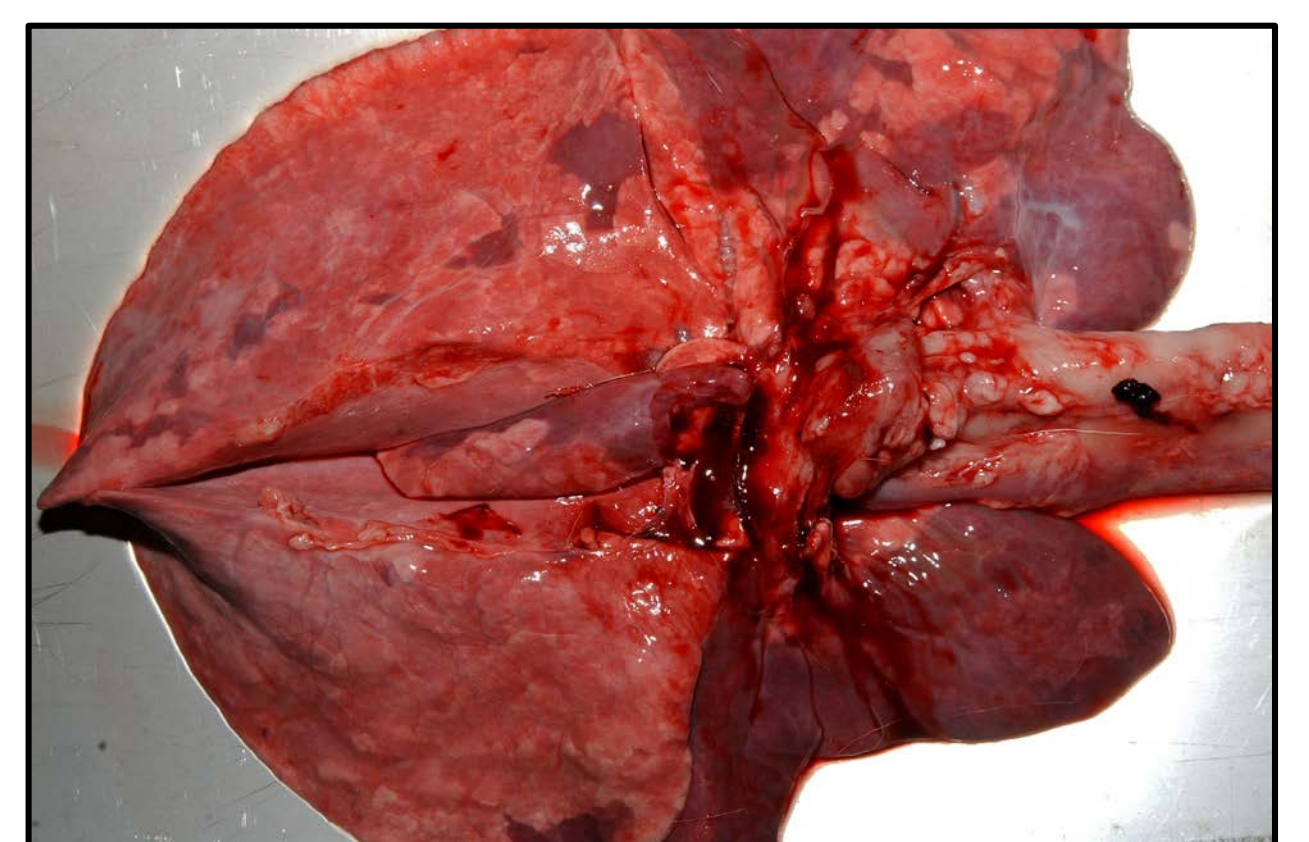
Goat, pharynx. Necrohemorrhagic tracheitis and esophagitis. Severe hemorrhage of the medial retropharyngeal lymph nodes.



Goat, hard palate. Coalescing erosions covered with a fibrinonecrotic pseudomembrane.



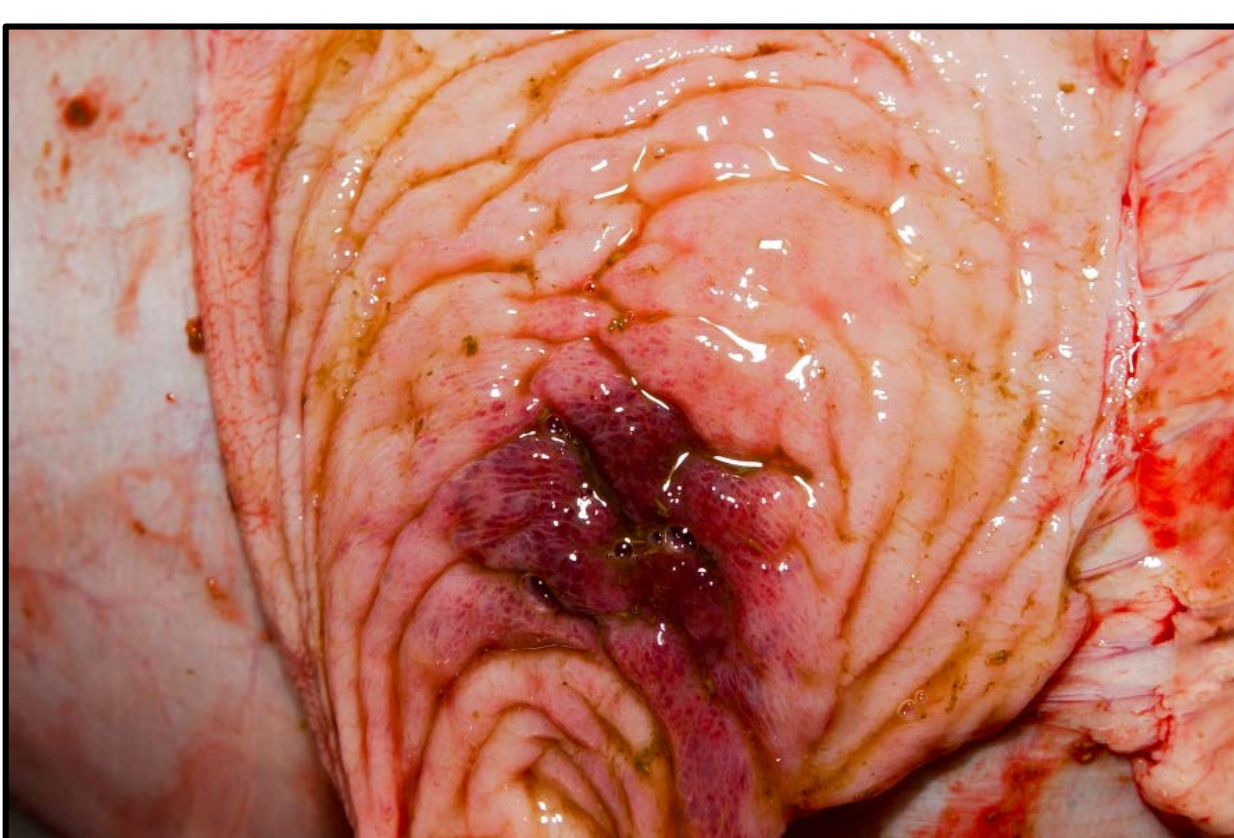
Goat, cross-section of muzzle. Mucopurulent rhinitis and sinusitis.



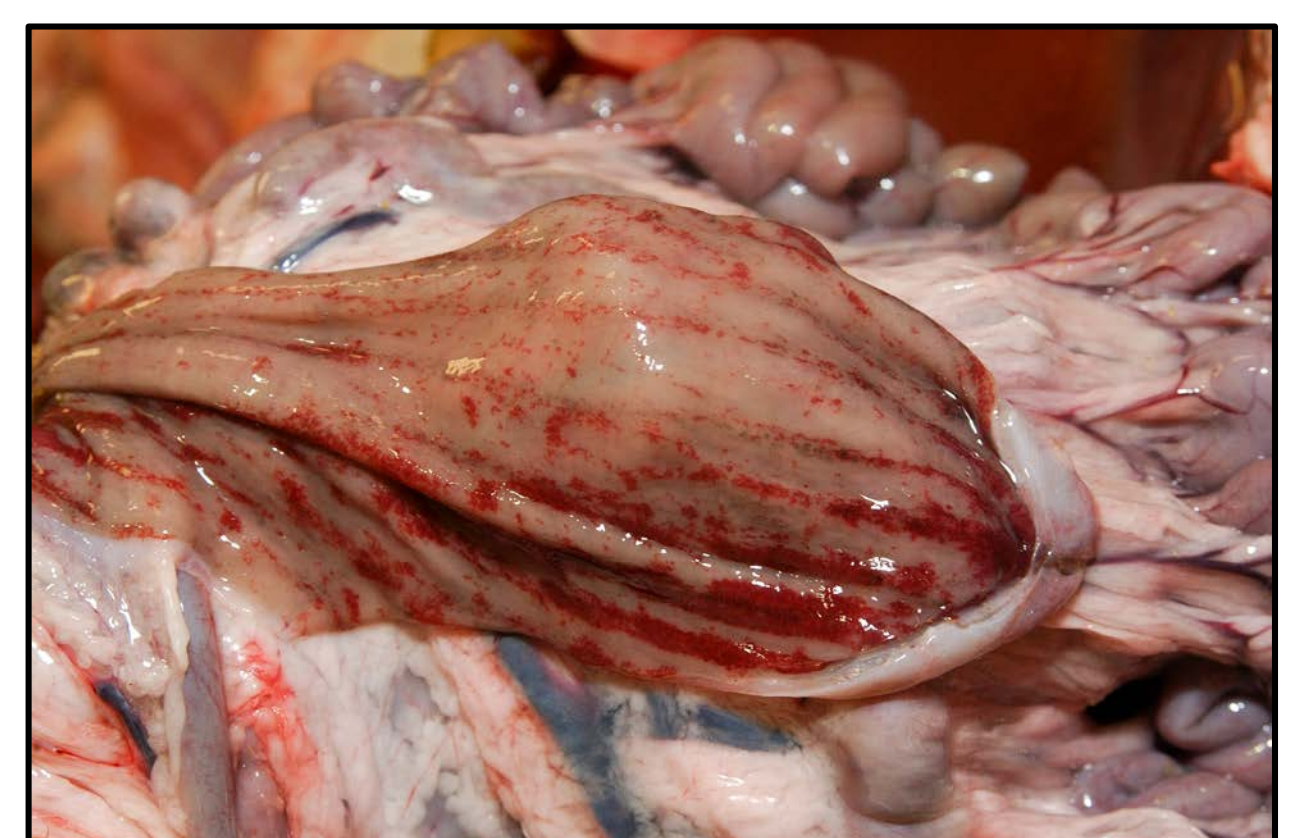
Small ruminant, lungs. Diffuse interstitial pneumonia with cranioventral atelectasis and bronchopneumonia.



Small ruminant, small intestine. Congestion and hemorrhage of gut-associated lymphoid tissue (Peyer's patches).



Small ruminant, abomasum. Hemorrhage and edema.



Small ruminant, colon. Congestion and hemorrhage of colon (colitis) with "zebra stripe" pattern

# African Horse Sickness



Horse, head.  
Marked swelling of supraorbital fossa



Horse, eye.  
Severe edema of conjunctiva



Horse, deceased in prone position, abundant white foamy nasal discharge



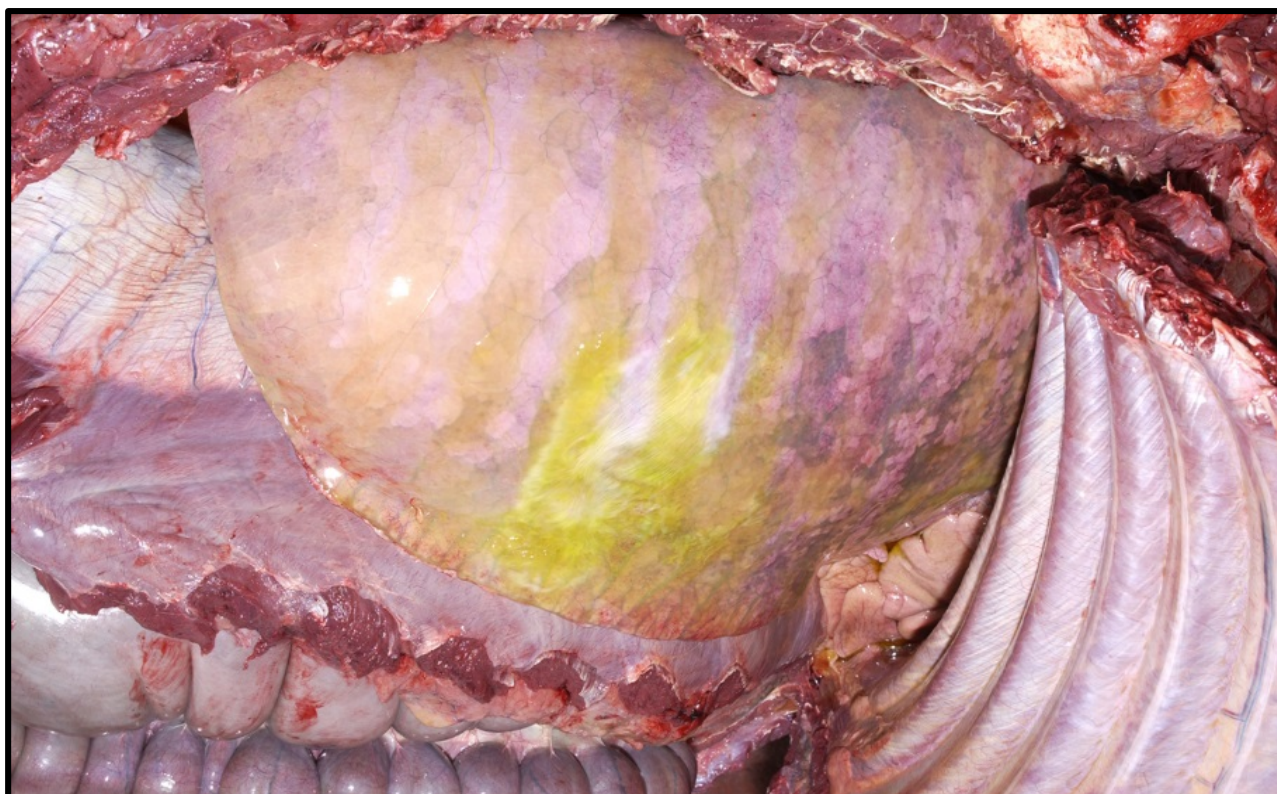
African horse sickness: Horse, Abundant white foamy nasal discharge



Horse, trachea. Abundant white foam in the trachea.



Horse, thorax. Abundant blood-tinged fluid (hydrothorax) in thoracic cavity



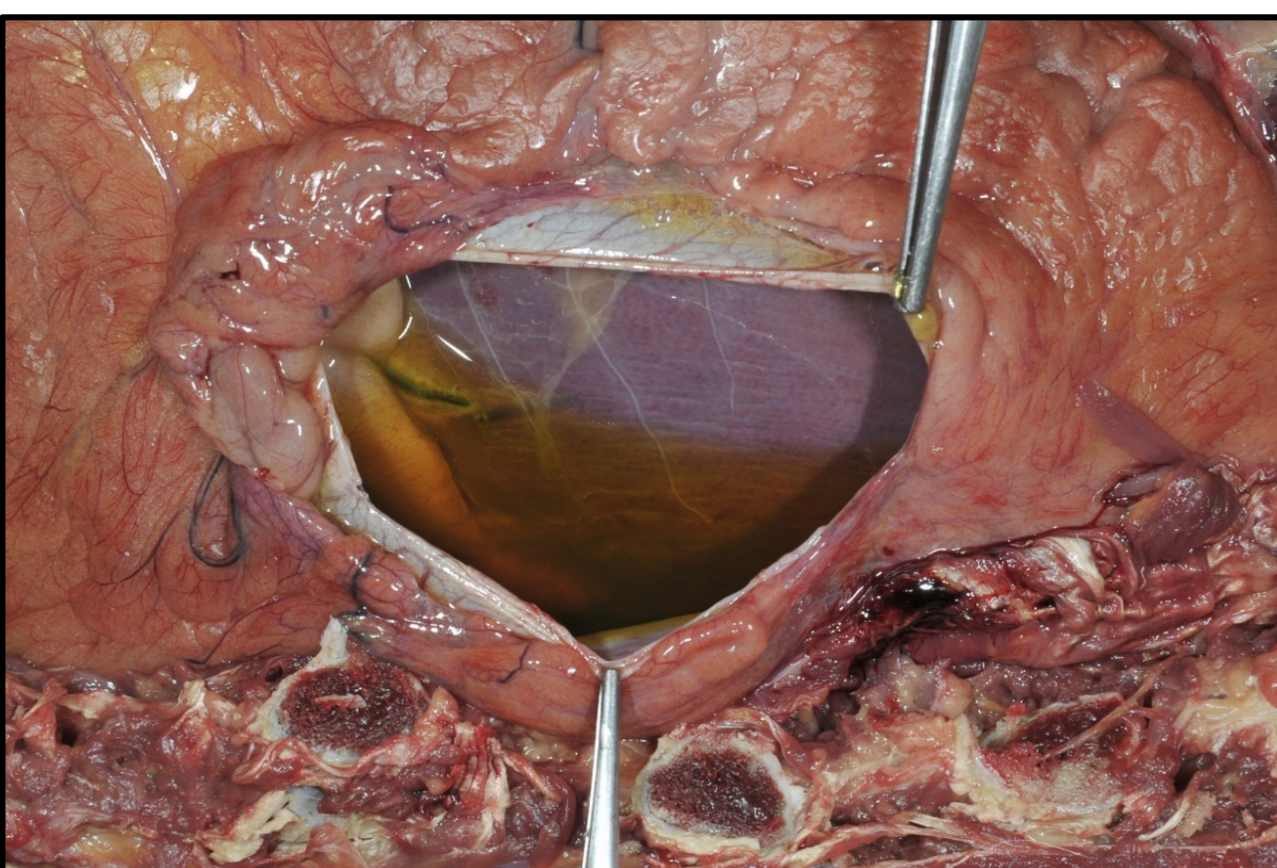
Horse, lung. Severe pulmonary edema; rib impressions and yellow transudate on the pleura



Horse, lung. Severe pulmonary edema; varying degrees of consolidation of lung parenchyma with clear demarcation of interlobular edema



Horse, lung. Pulmonary edema with foamy fluid in bronchioles (left) and marked gelatinous interlobular edema (right)



Horse, heart. Severe blood-tinged hydropericardium



Horse, heart. Severe endocardial hemorrhages



Horse, cervical muscles. Intermuscular edema



Horse, cervical muscles and ligamentum nuchae. Severe intermuscular edema



Horse, stomach. Severe congestion and hemorrhages in glandular stomach; margo plicatus on left.

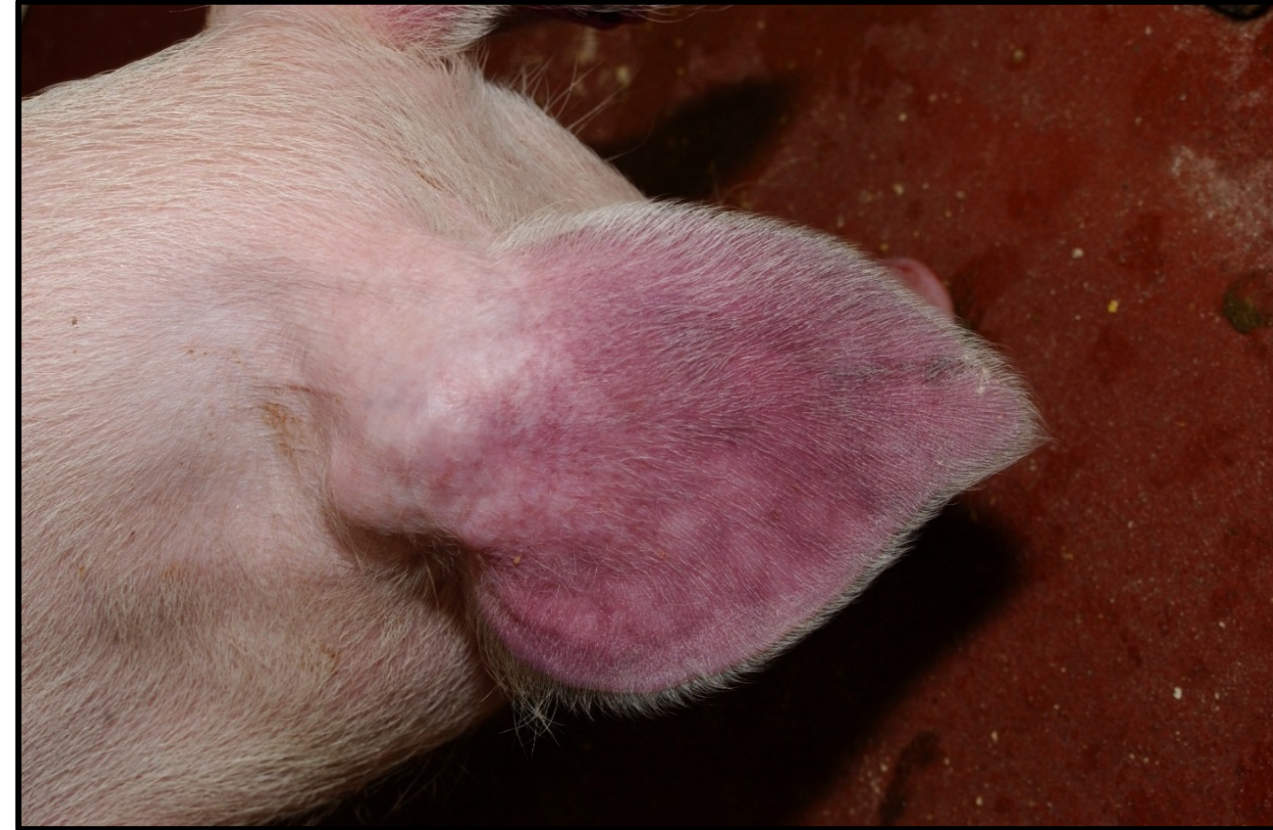


Horse, large colon. Serosal petechiae and congestion.

# African Swine Fever



Swine. Huddling due to fever.



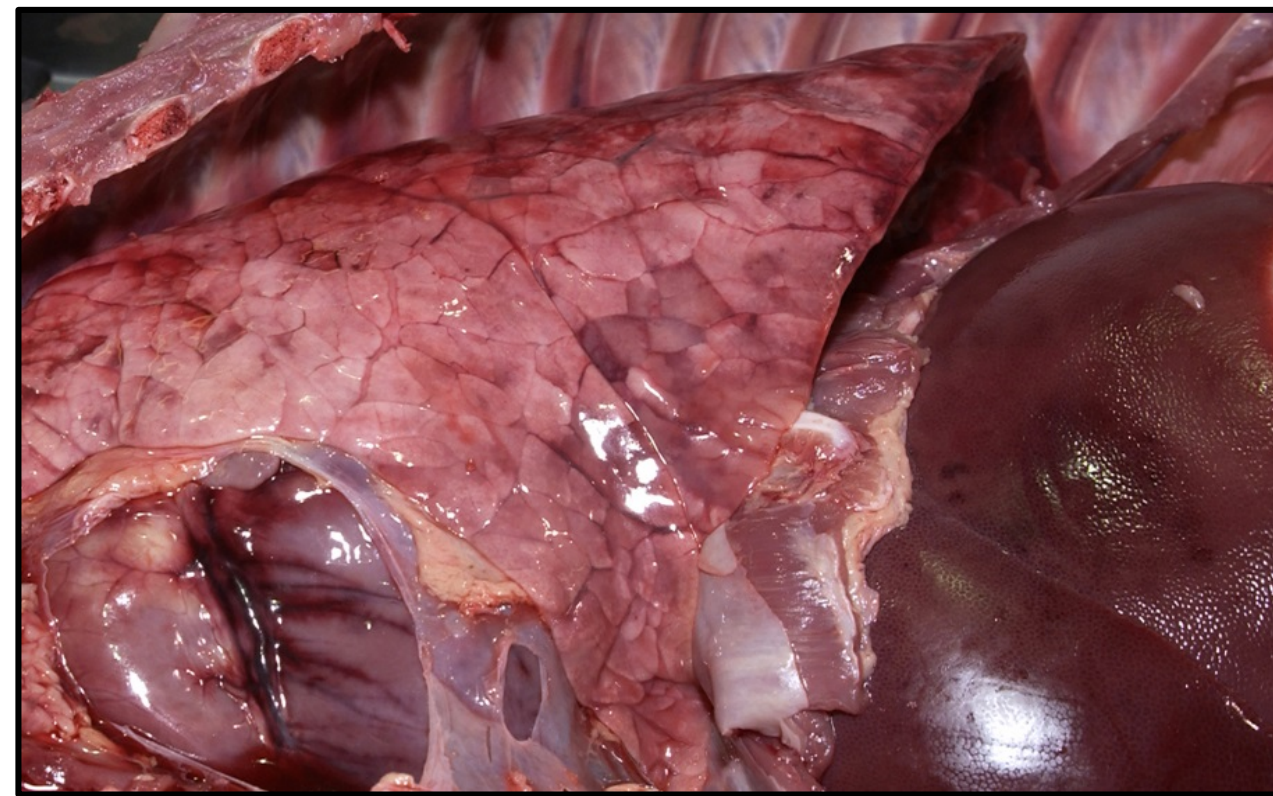
Swine, ear. Petechial hemorrhages, congestion and cyanosis.



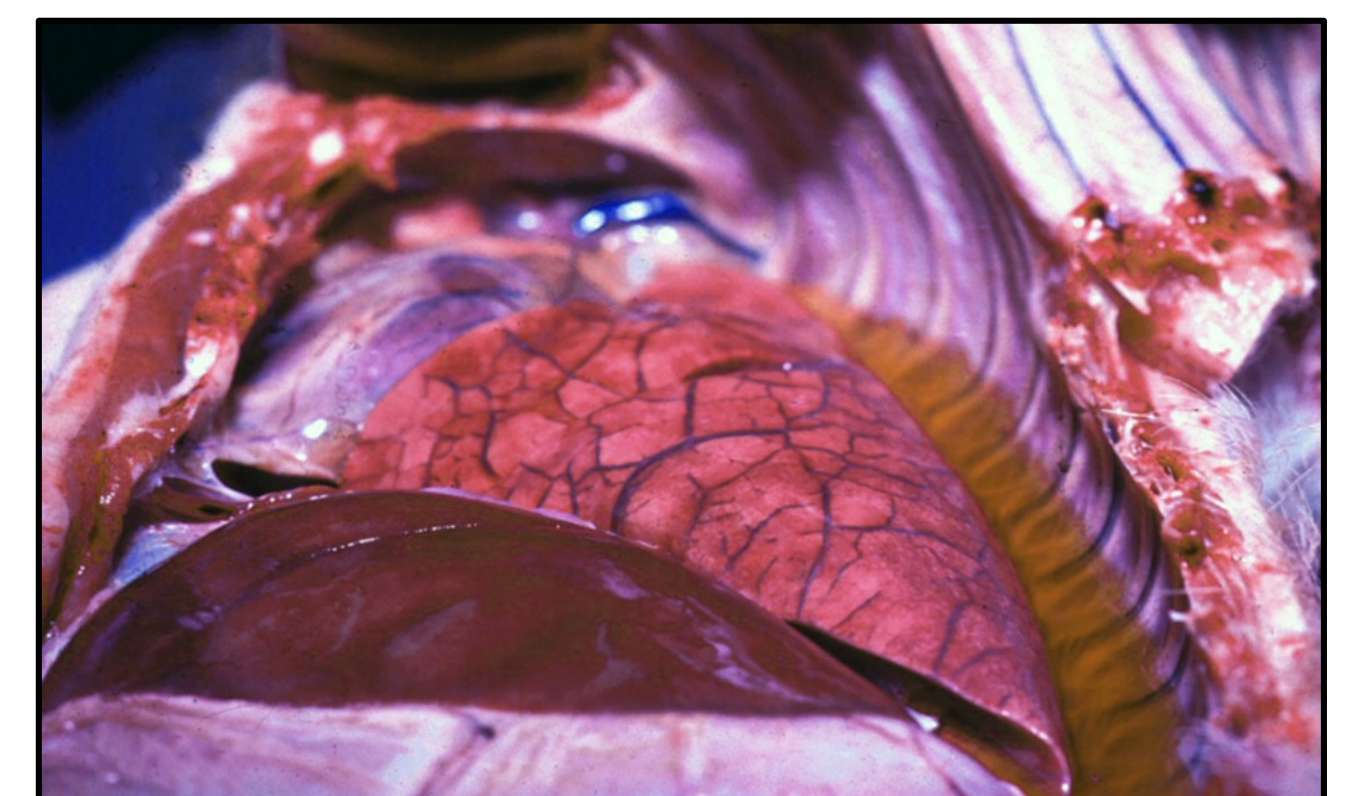
Swine, legs. Multiple areas of necrosis, hemorrhage and ulceration in the skin; these lesions commonly occur over pressure points like the joints in chronic forms of ASF, not commonly seen



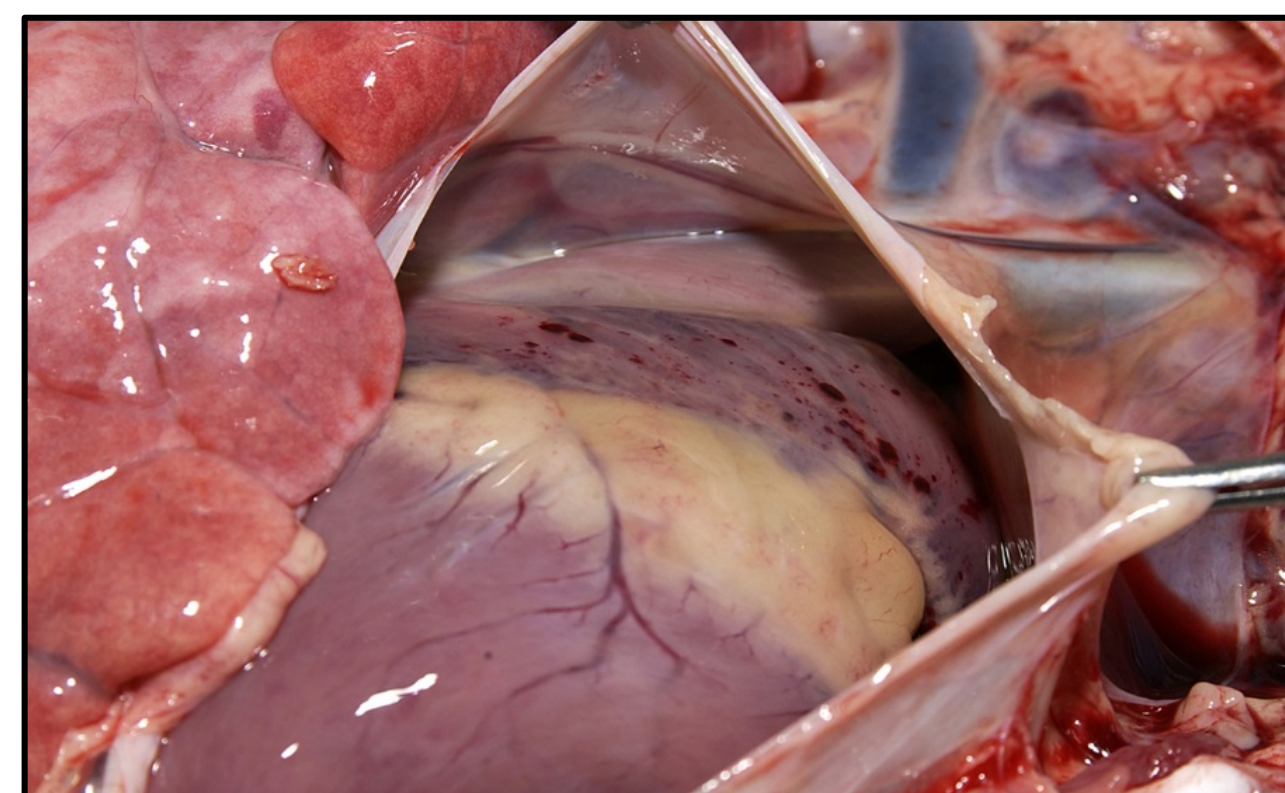
Swine, feces. Soft stool with frank blood



Swine, lung. Severe diffuse interstitial pneumonia and interlobular edema



Swine, lung. Marked interlobular edema and hydrothorax.



Swine, heart. Moderate multifocal epicardial hemorrhages on atrium



Swine, gall bladder. Gall bladder wall is thickened and edematous



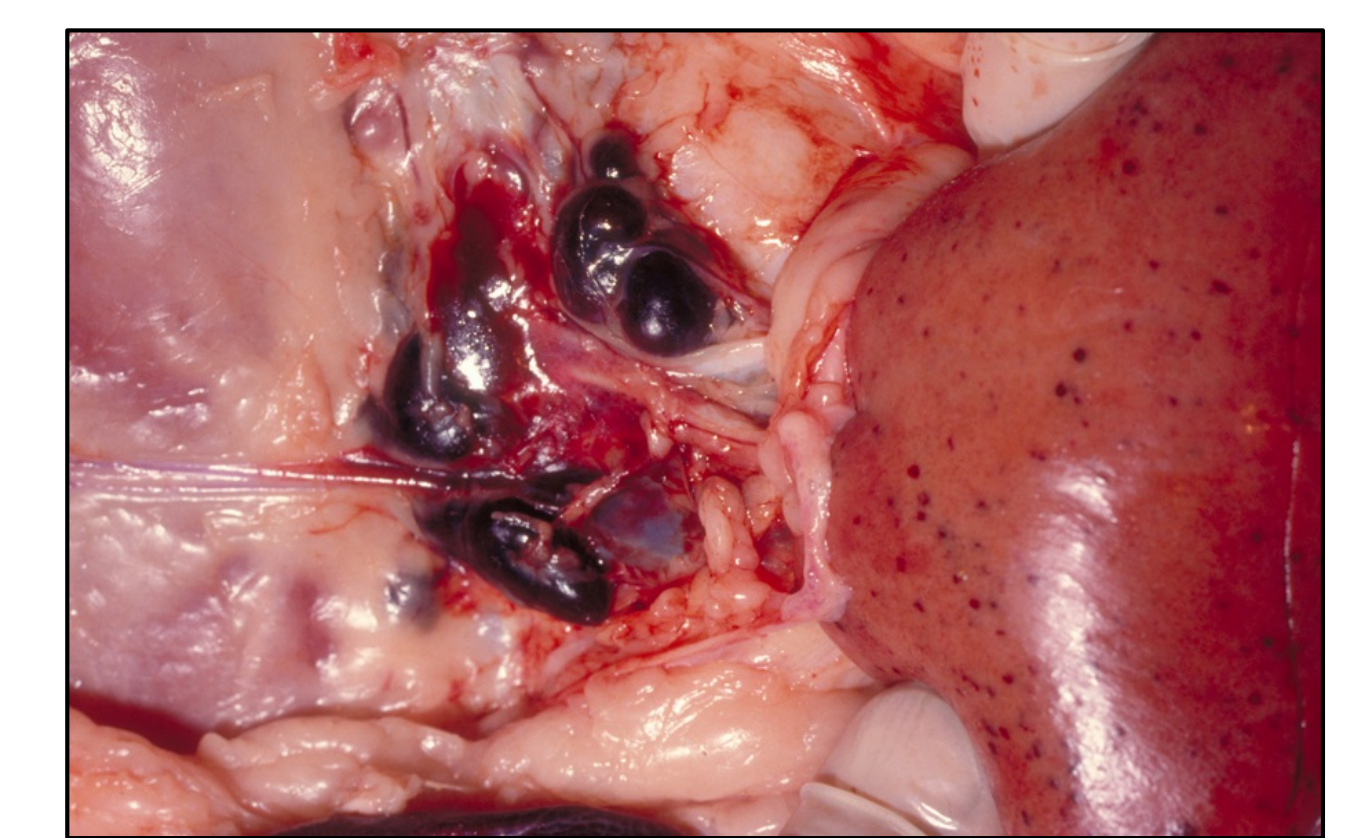
Swine, spleen. Spleen is more than twice normal size and is dark black red



Swine, spleen. Markedly thickened



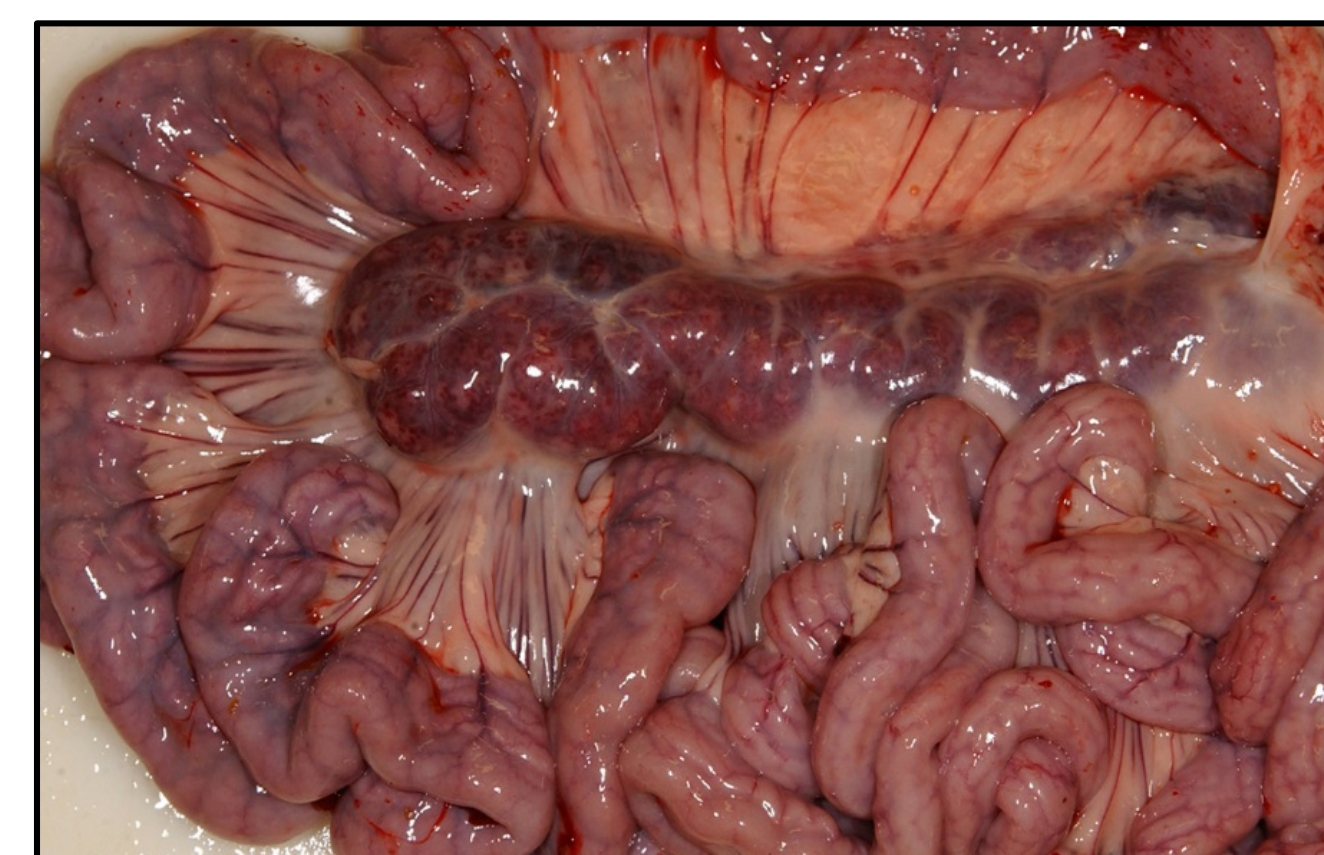
Swine, spleen. Friable, capsule breaking easily when folded



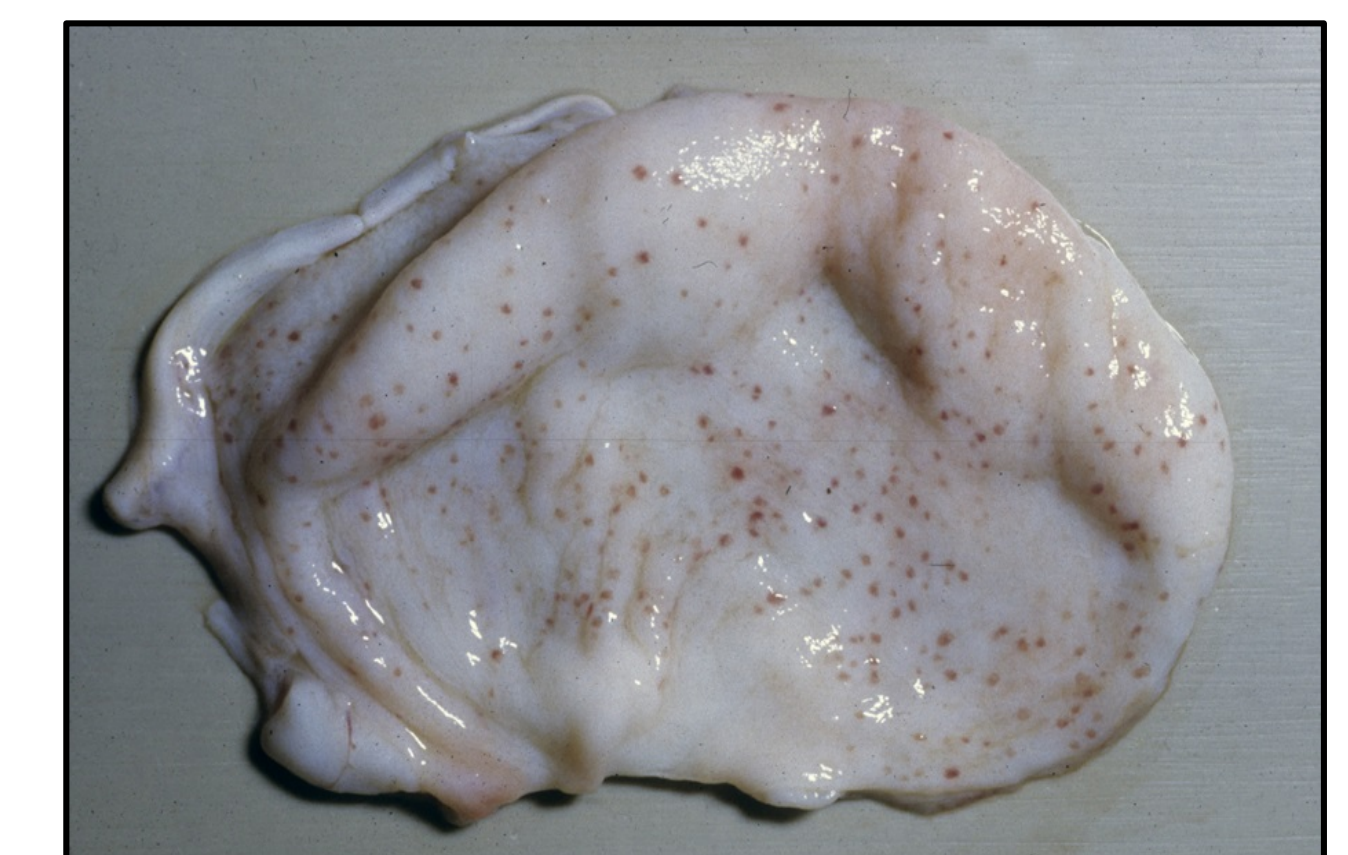
Swine, gastrohepatic lymph node. Marked enlargement and diffuse hemorrhage



Swine, kidney. Perirenal edema and hemorrhage of perirenal lymph nodes

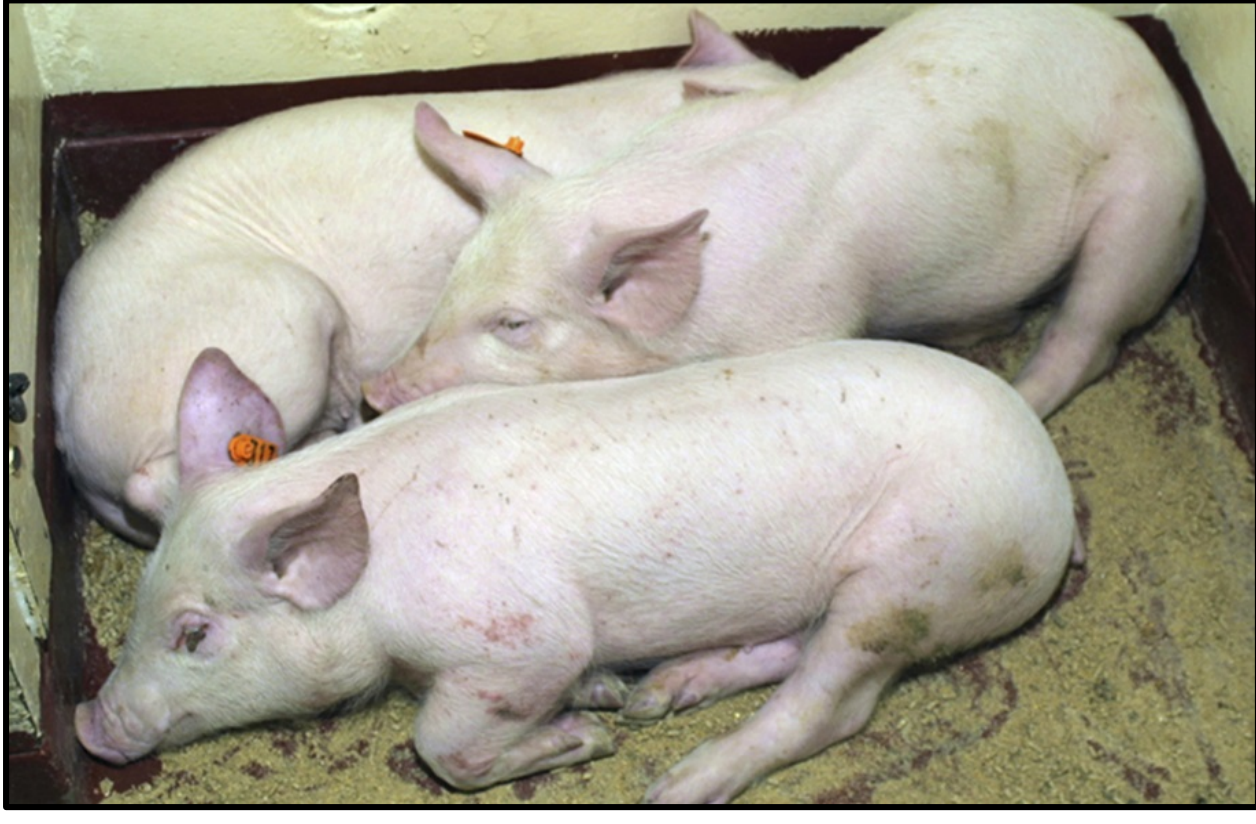


Swine. Mesenteric lymph nodes are enlarged and hemorrhagic



Swine, urinary bladder. Multiple petechial hemorrhages on bladder mucosa.

# Classical Swine Fever



Swine. Pigs with high fever huddled together; pig in foreground has cyanotic ears and conjunctivitis.



Swine. Ataxia resulting in stumbling and difficulty in standing.



Swine. Numerous petechial hemorrhages along the caudal and lateral sides of the leg.



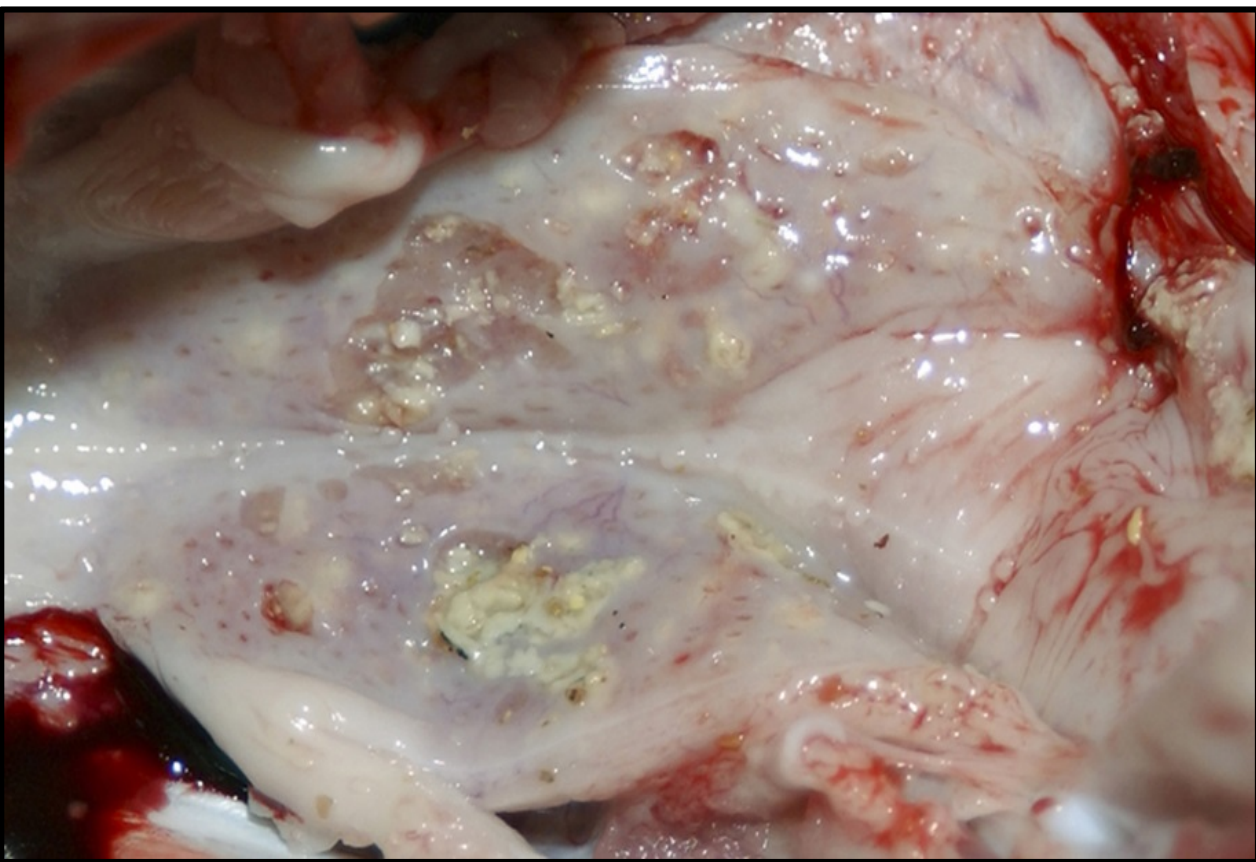
Swine. Watery feces on the pen floor.



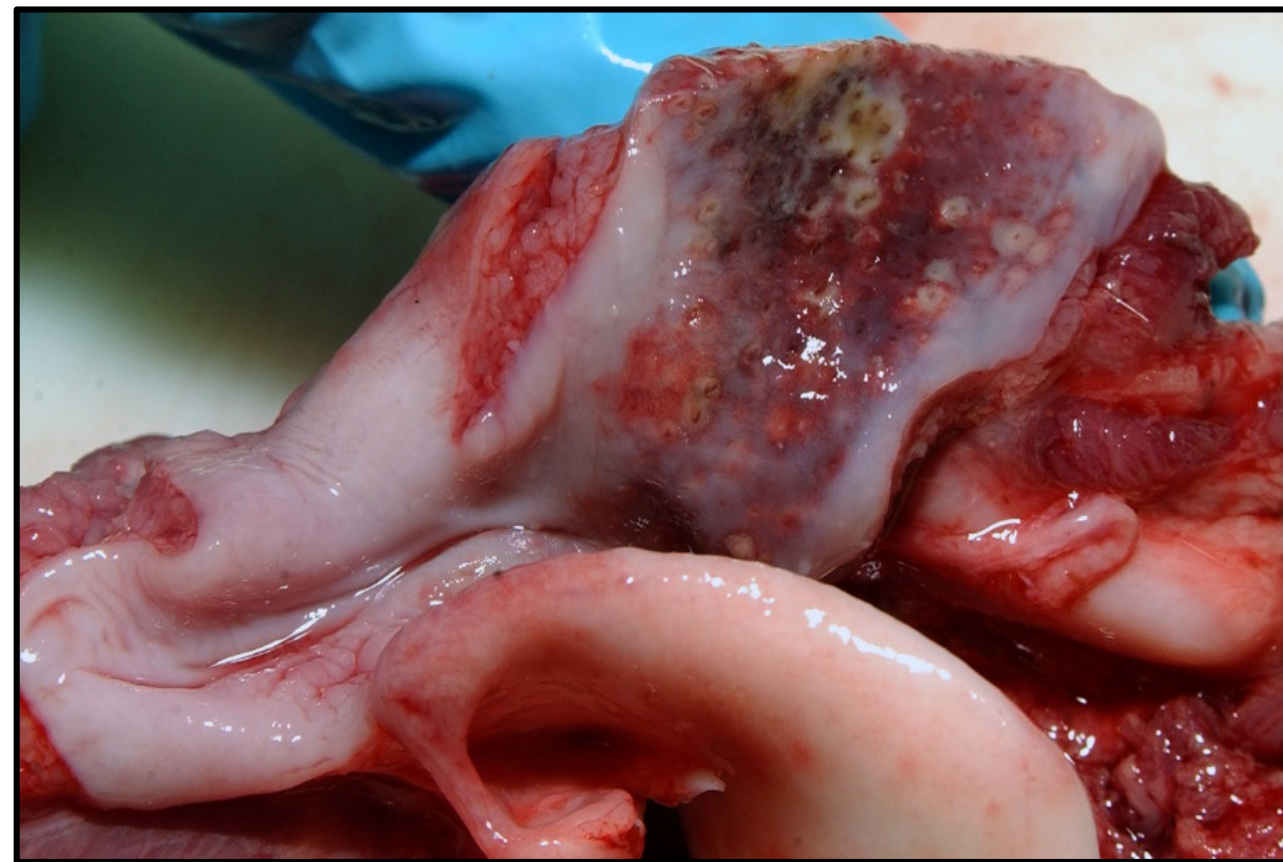
Swine, eye. Crusting of ocular discharge



Swine, spleen. Severe multifocal splenic infarcts from a highly virulent strain of CSF.



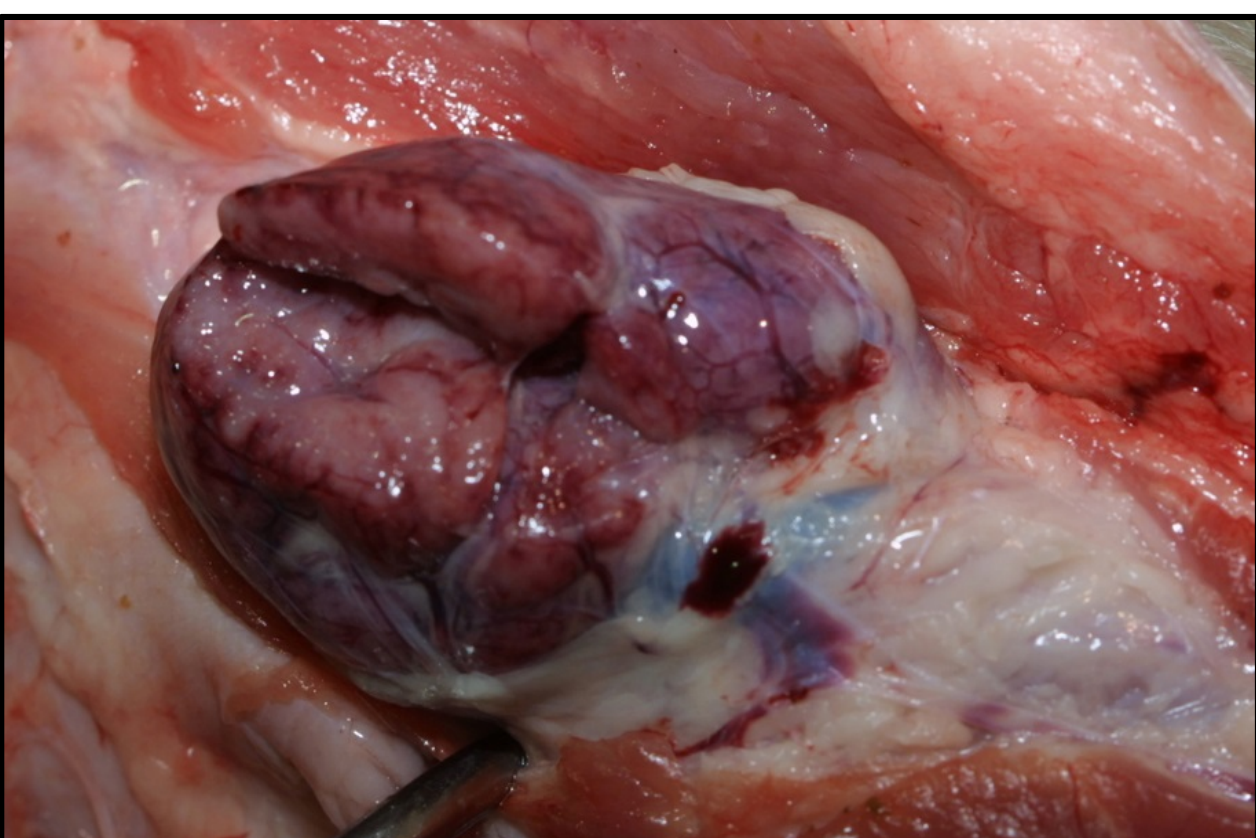
Swine, tonsil. Severe multifocal crypt necrosis



Swine, tonsil. Multifocal crypt necrosis and diffuse congestion



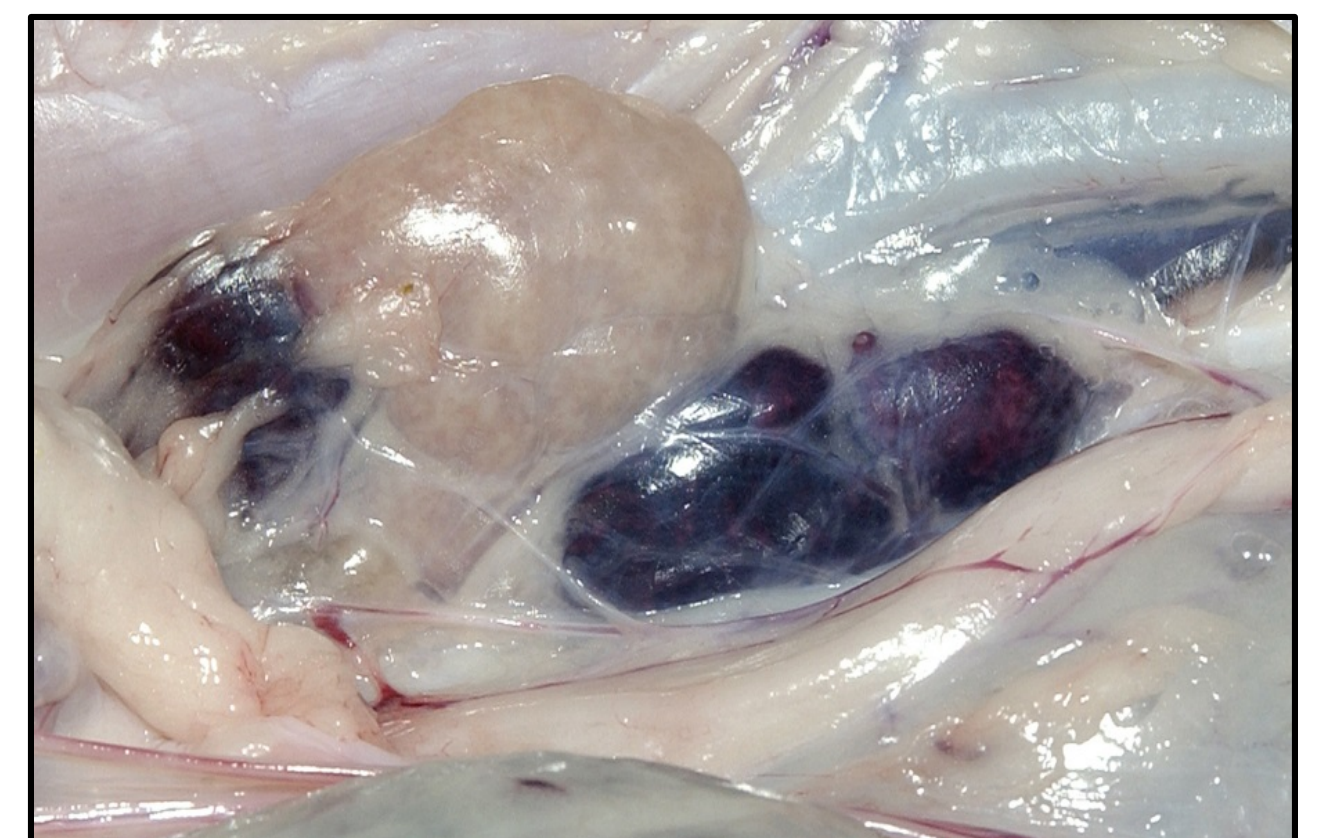
Swine, duodenum. Slight hemorrhage with fibrinous necrotic inflammation of mucosa



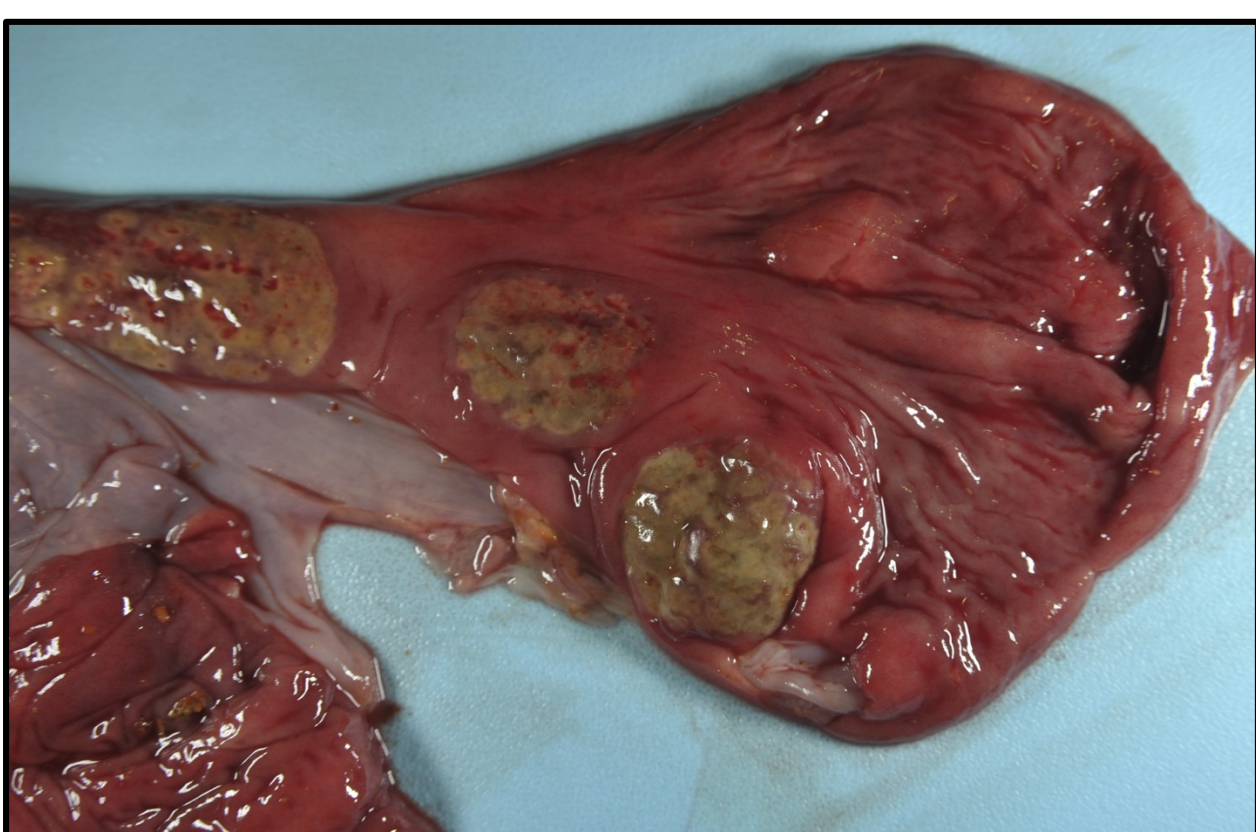
Swine, mandibular lymph node. Slightly enlarged, congested and edematous



Swine, abdominal lymph node. Enlarged and hemorrhagic



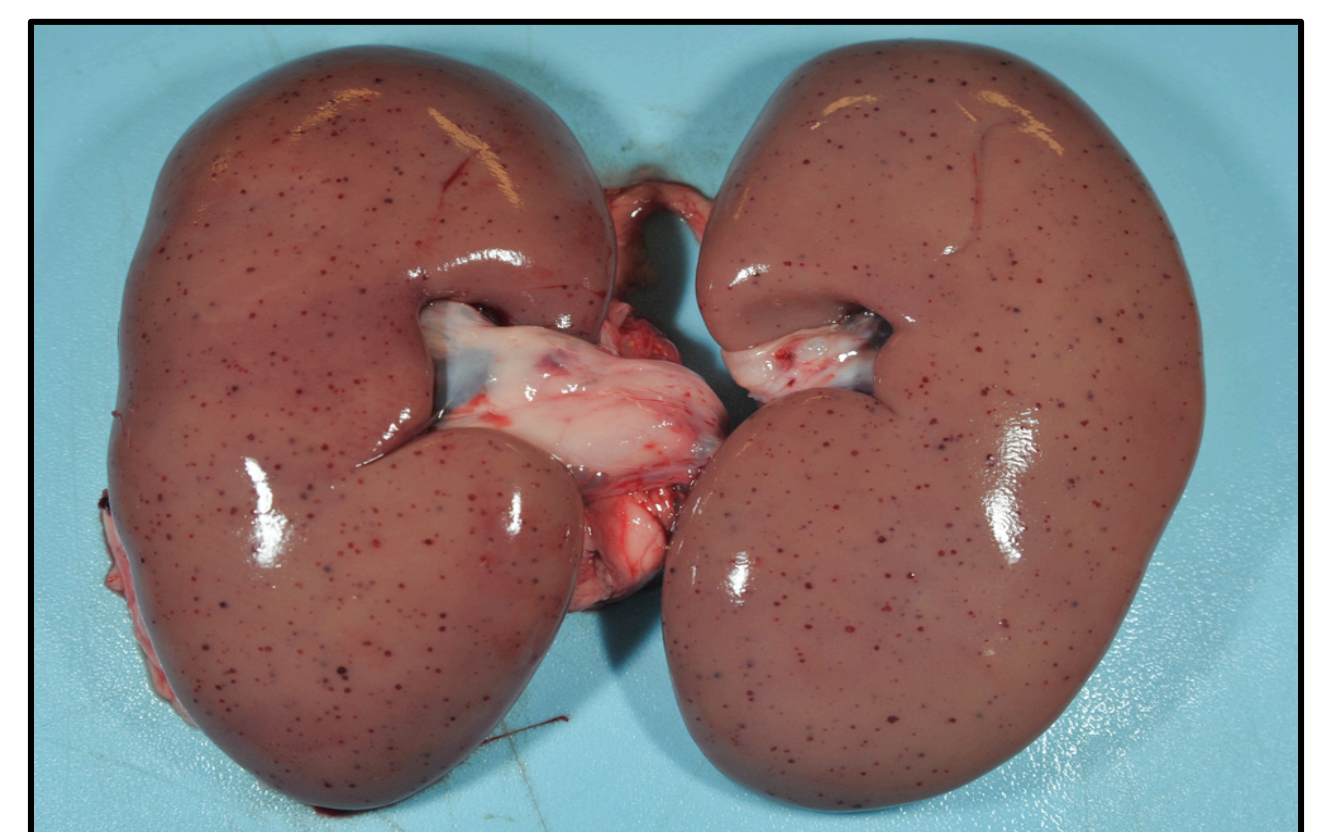
Swine, abdominal lymph node. Enlarged and hemorrhagic



Swine, fibrinous button ulcers of gastrointestinal tract



Swine, petechial hemorrhages of serosal surface of gastrointestinal tract



Swine, kidneys. Multifocal cortical petechial hemorrhages sometimes referred to as a "turkey egg kidney"

# Contagious Bovine Pleuropneumonia



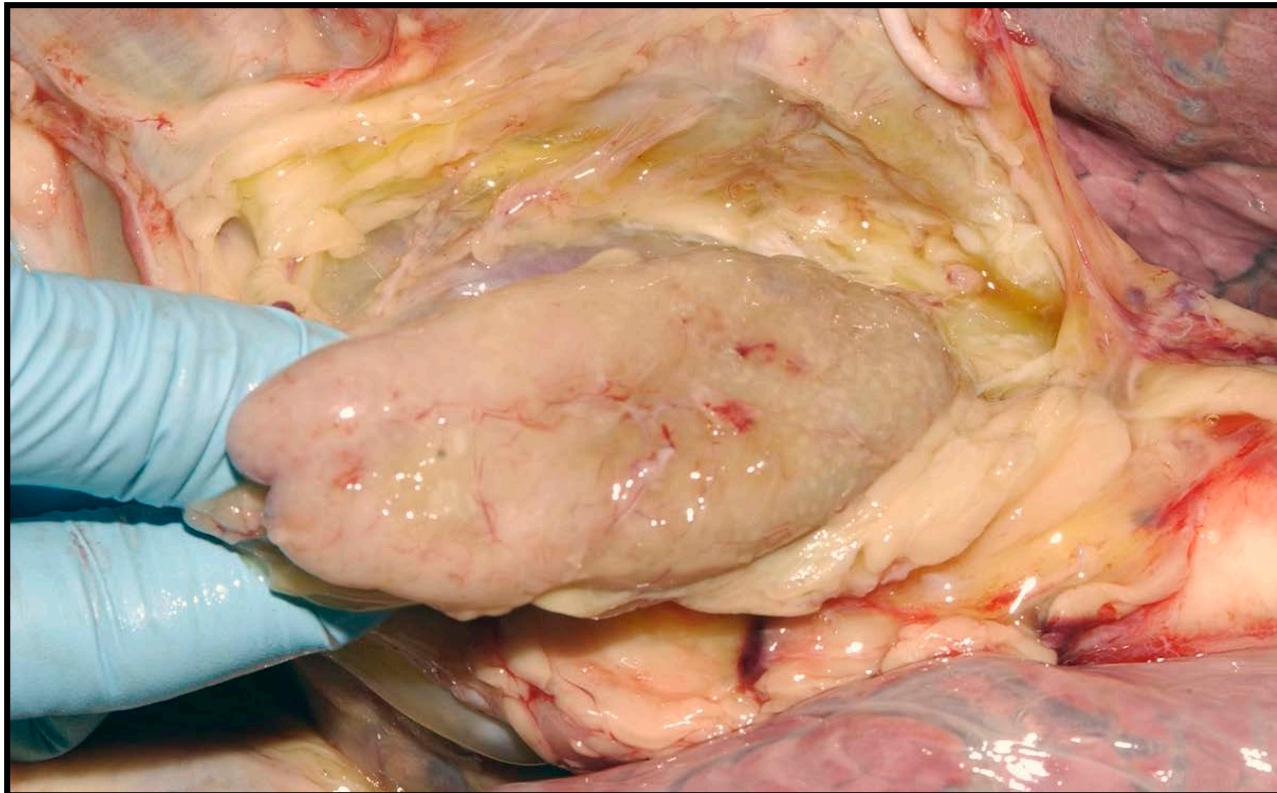
Cow. Dyspnea as demonstrated by open mouth breathing and extension of head and neck



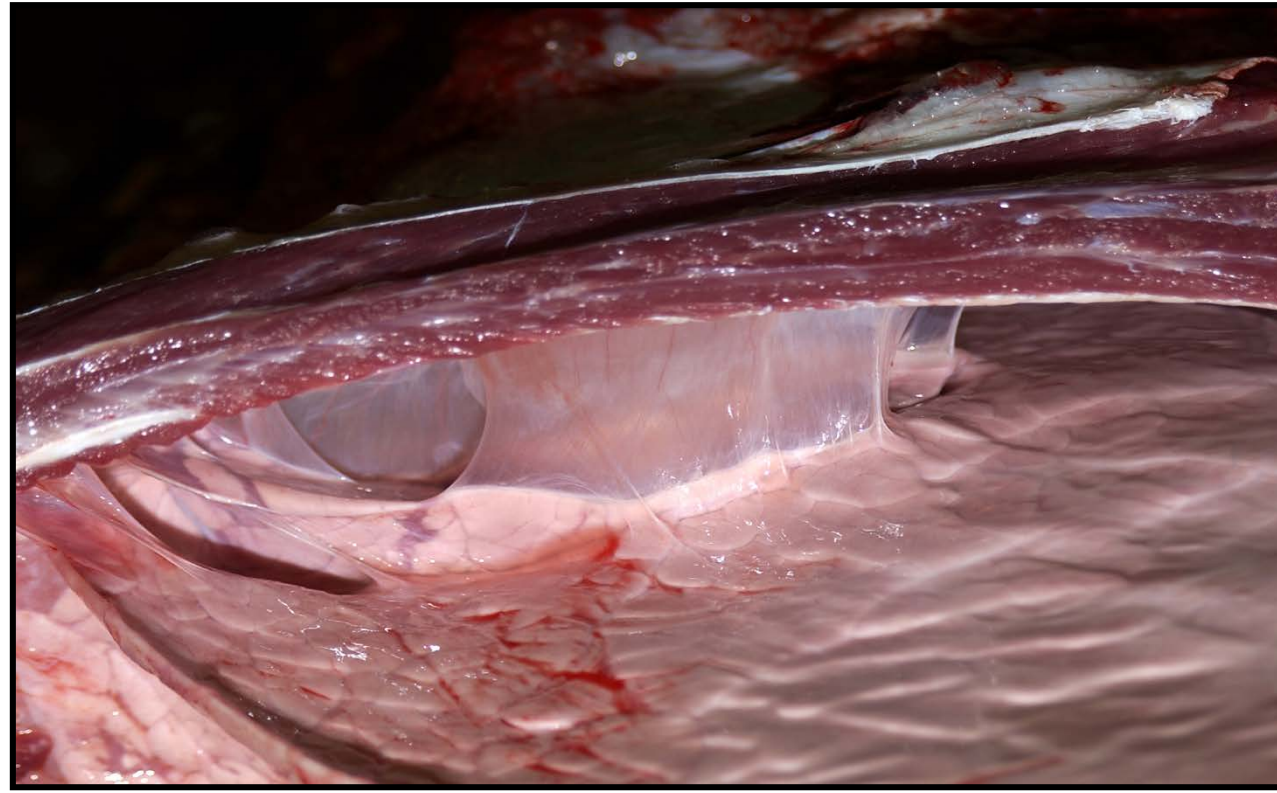
Cow. Swollen carpal and hock joints



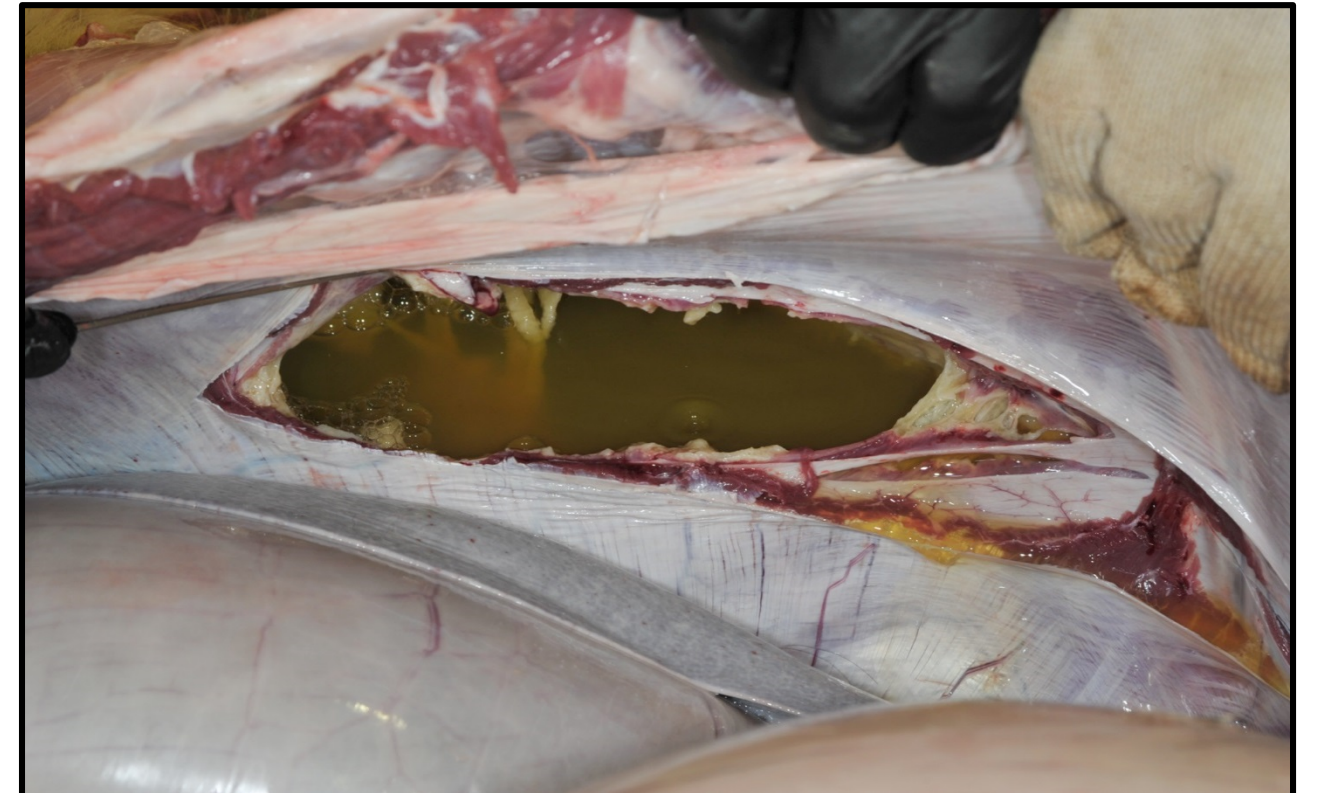
Cow. Swollen carpal and hock joints



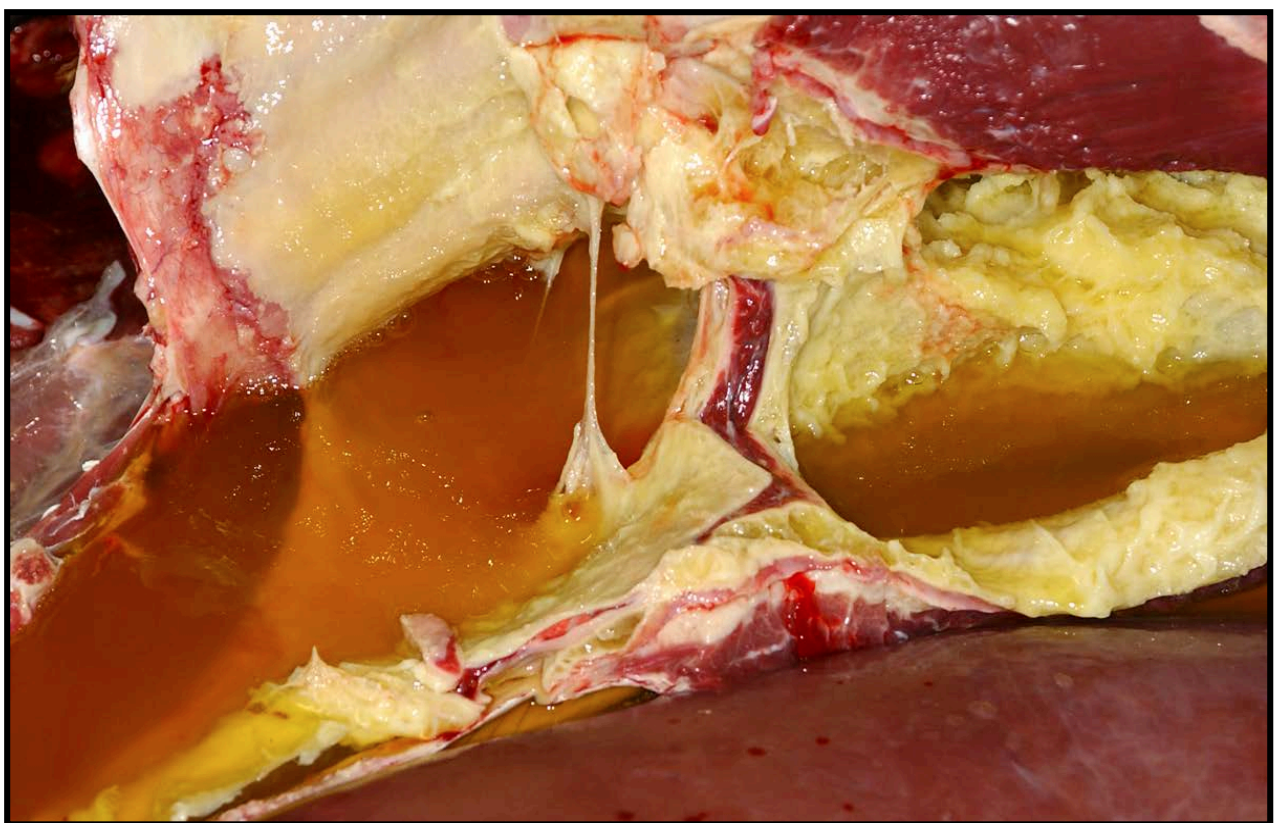
Cow, cut section, mediastinal lymph node. Markedly enlarged mediastinal lymph node and bulging outward on cut section; edema in the lymph node and adjacent connective tissues.



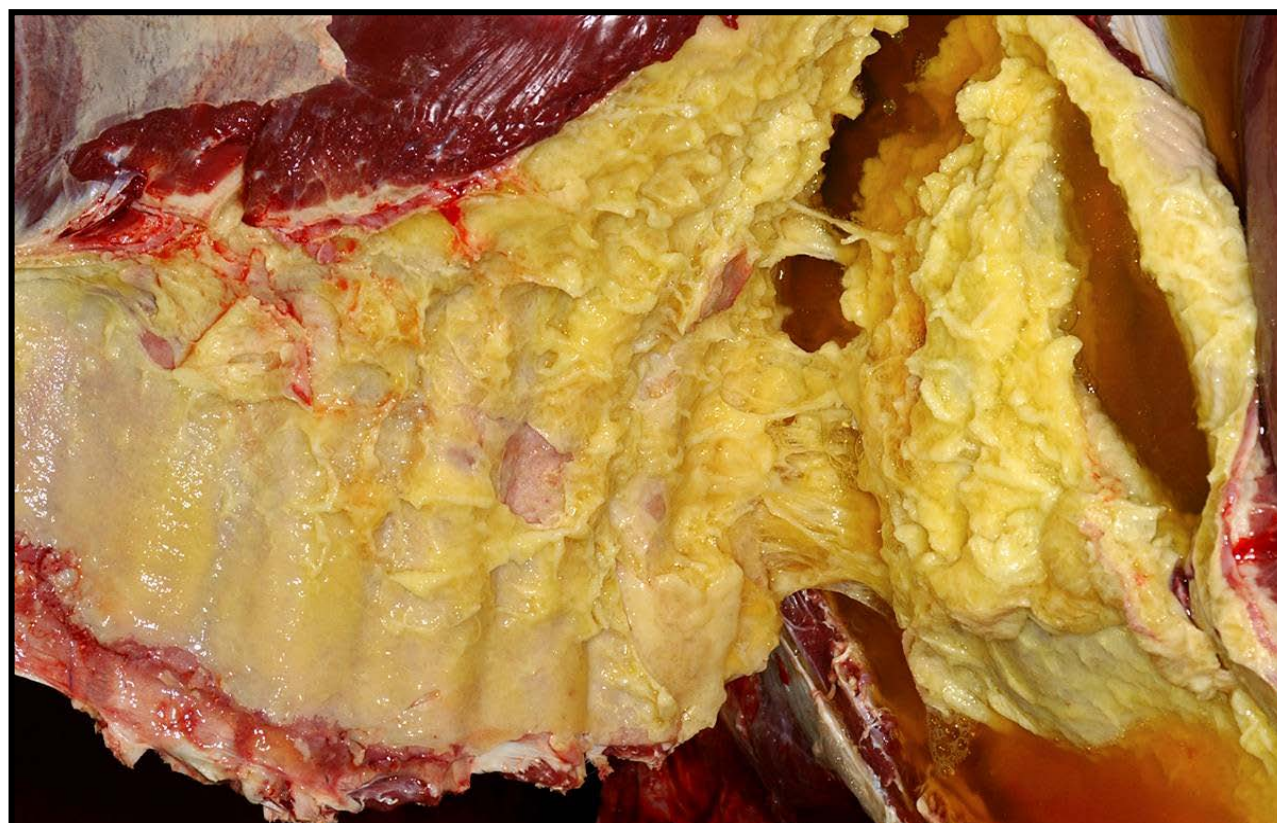
Cow, thoracic cavity. Pleural adhesions between pleura of thoracic wall and lung (adhesions between parietal and visceral pleura)



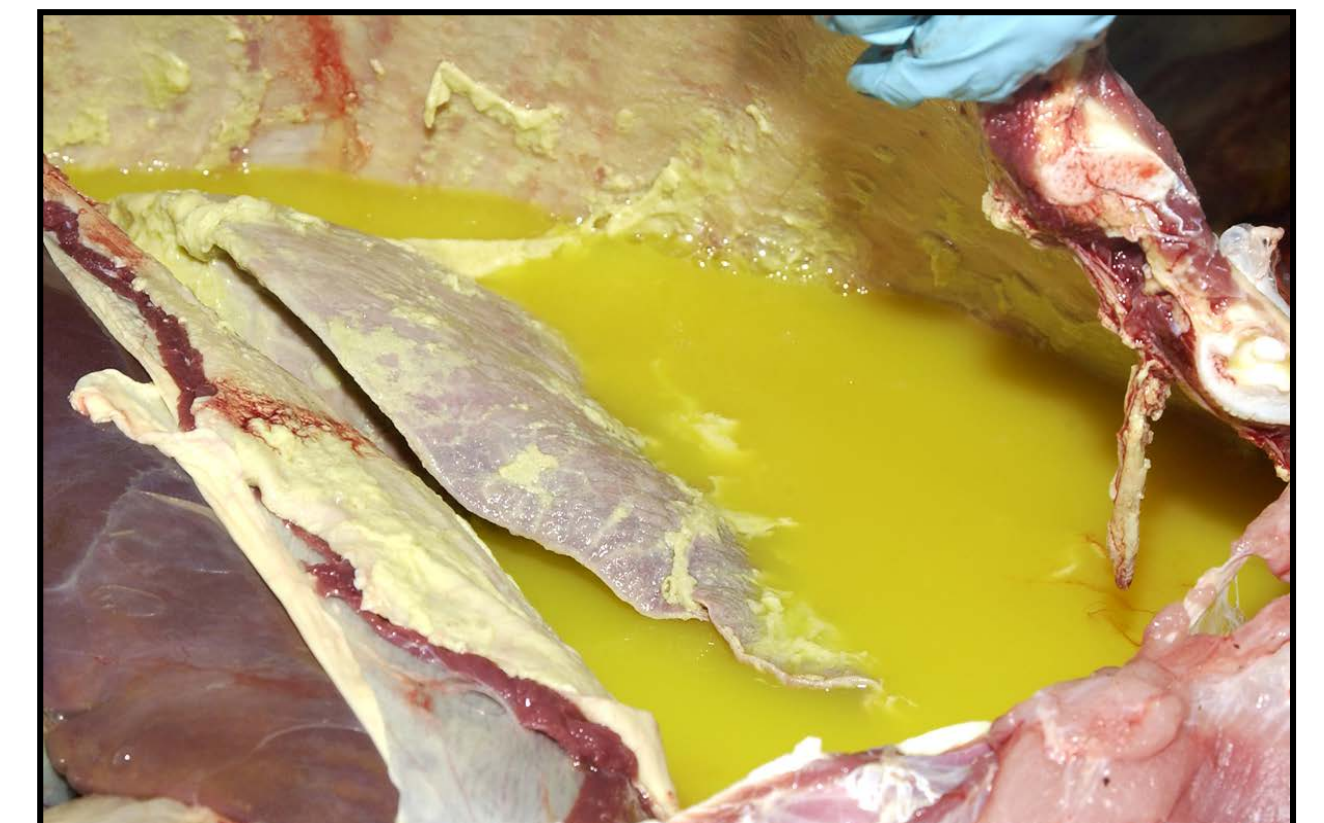
Cow, view from abdominal cavity into thoracic cavity. Incision of diaphragm revealing abundant fluid in thoracic cavity (hydrothorax)



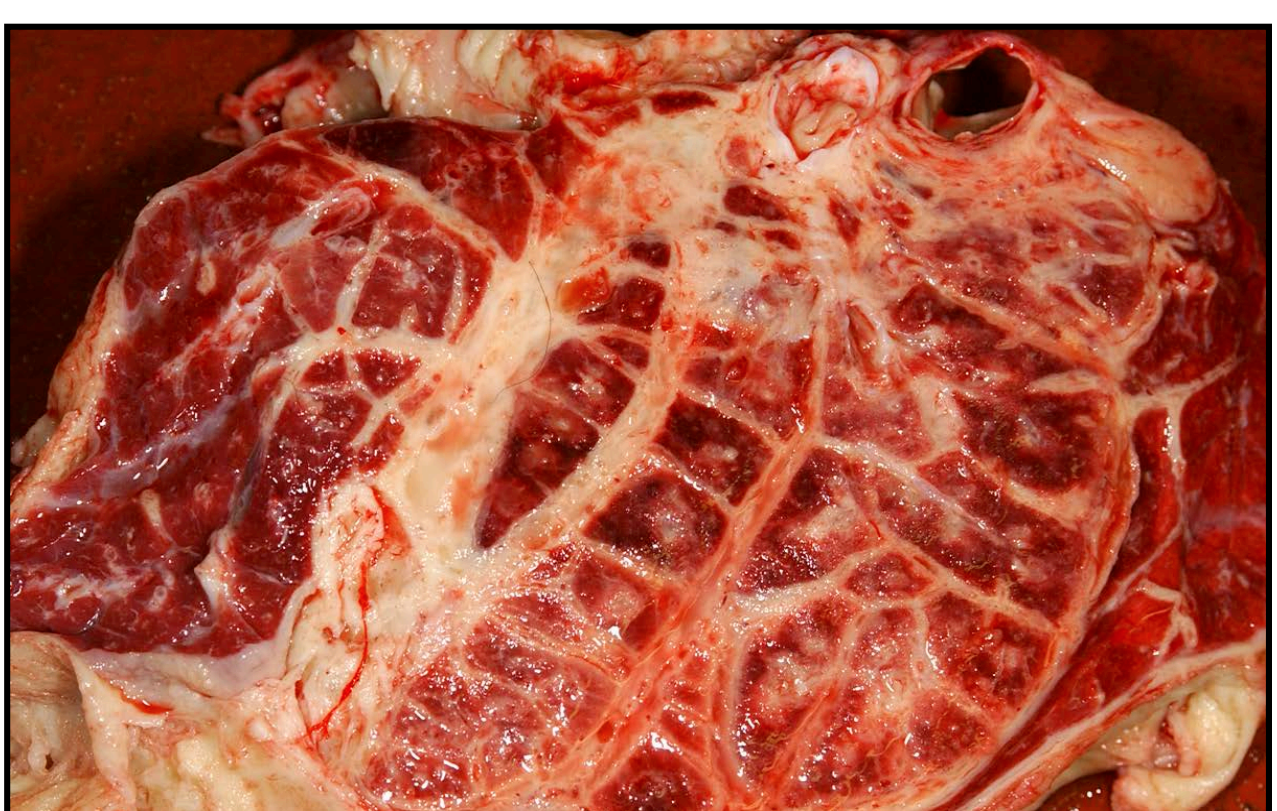
Cow, thoracic cavity. Severe fibrinous and fibrous pleuritis with abundant serous pleural exudate.



Cow, thoracic cavity. Severe diffuse fibrinous pleuritis of the visceral and parietal pleura with abundant exudate.



Cow, thoracic cavity. Severe fibrinous pleuropneumonia with pyothorax (suggestive of bacterial secondary infection); thick fibrin on parietal and visceral pleura in a pool of turbid yellow exudate



Cow, cut section of lung. Severe chronic necrotizing interstitial pneumonia; tissue shows the classic "marbling" appearance with edema and fibrosis of the interlobular septa.



Cow, lung. Sequestrum composed of pale pink necrotic lung tissue surrounded by a capsule in the center of the cross section.



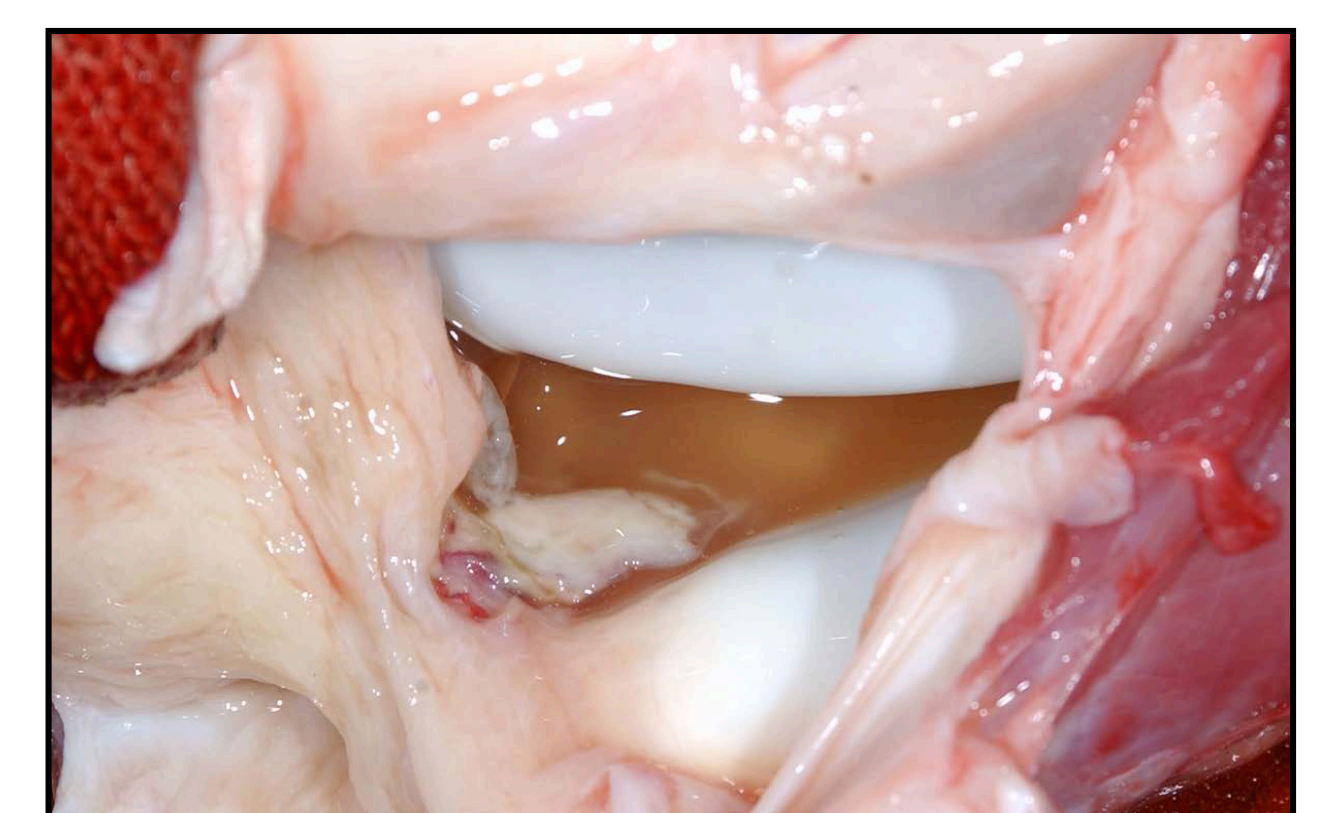
Cow, kidney. Renal infarcts characterized by multifocal to coalescing light areas with moderate fibrosis



Cow, cut section of kidney. Note the pale, triangular, renal cortical infarct.

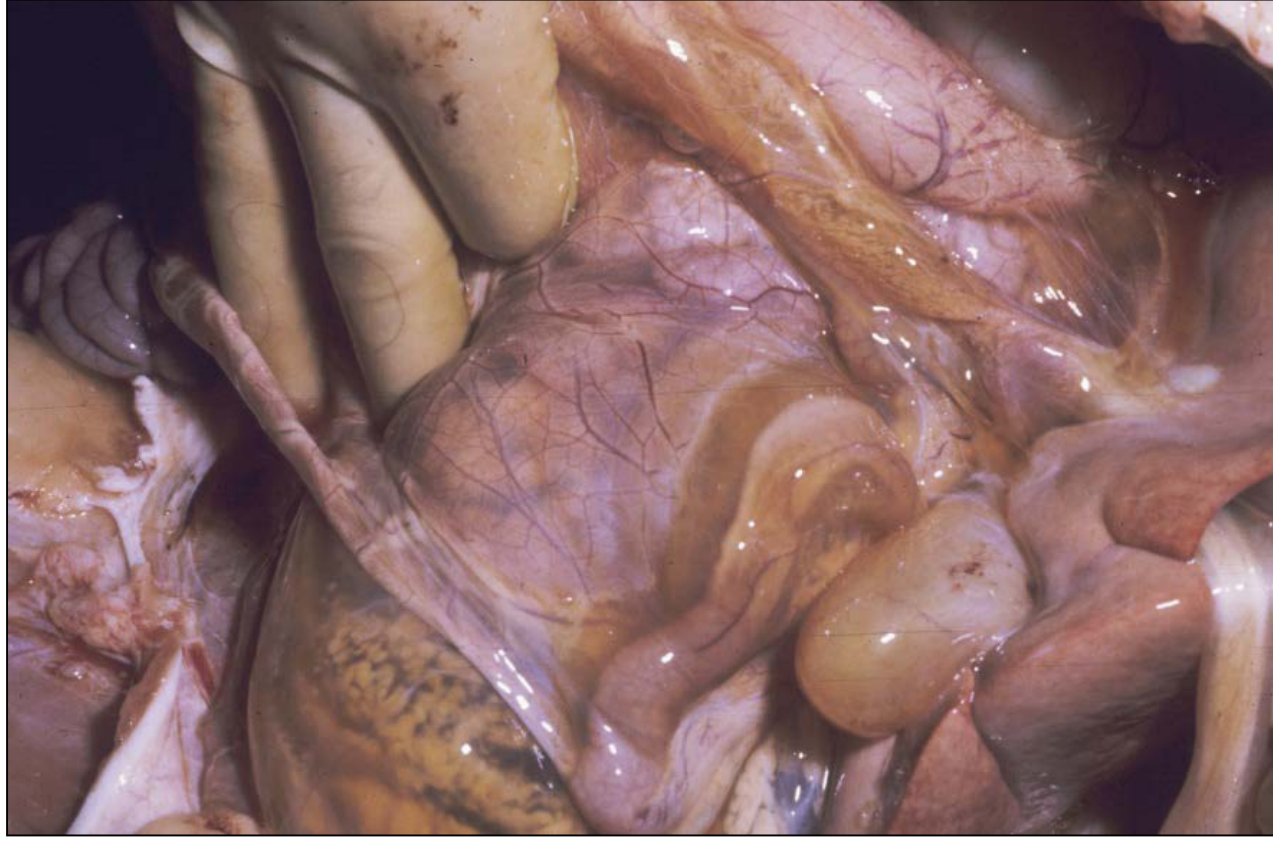


Cow, tibiotarsal joint. Thickened joint capsule, periarticular edema and increased synovial fluid

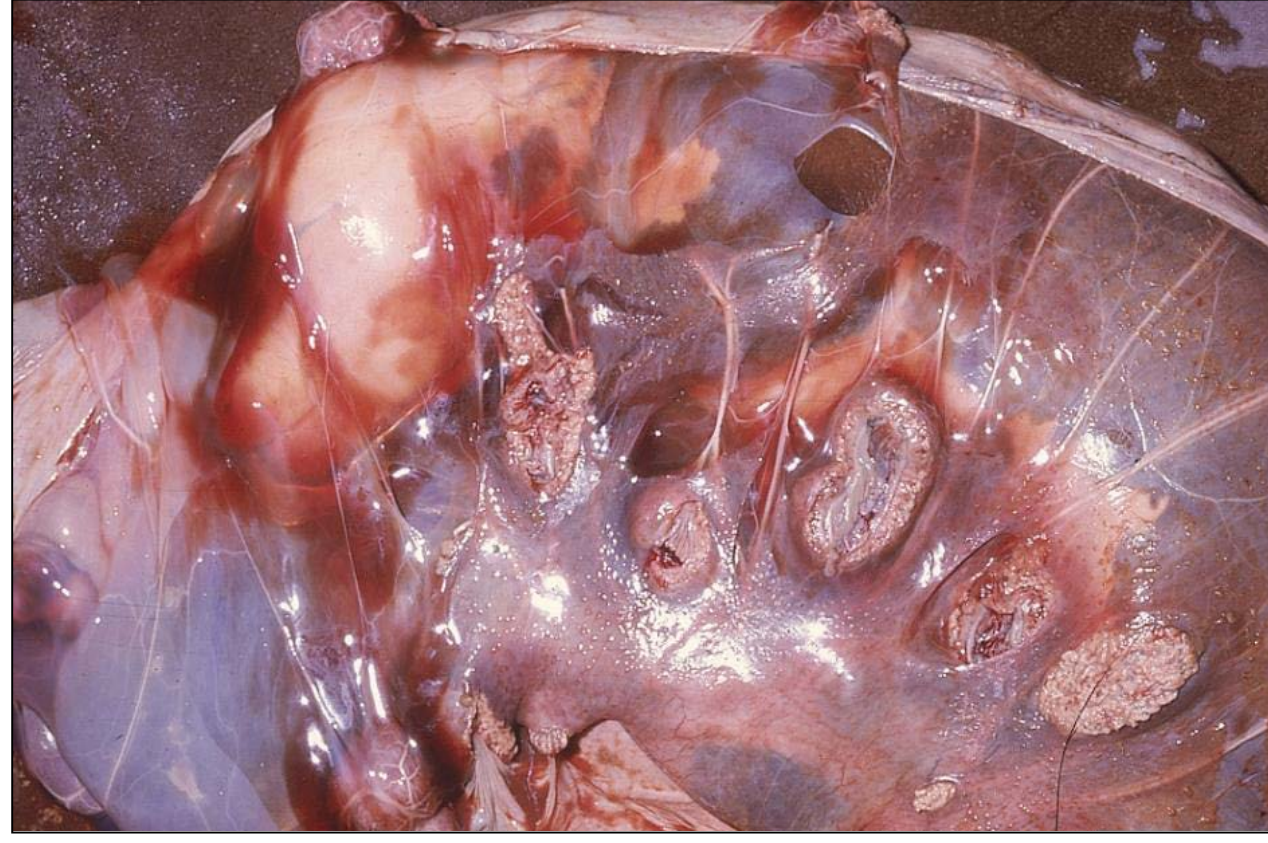


Cow, joint. Marked fibrinous synovitis; excessive joint fluid and white strands of fibrin are floating within the joint fluid.

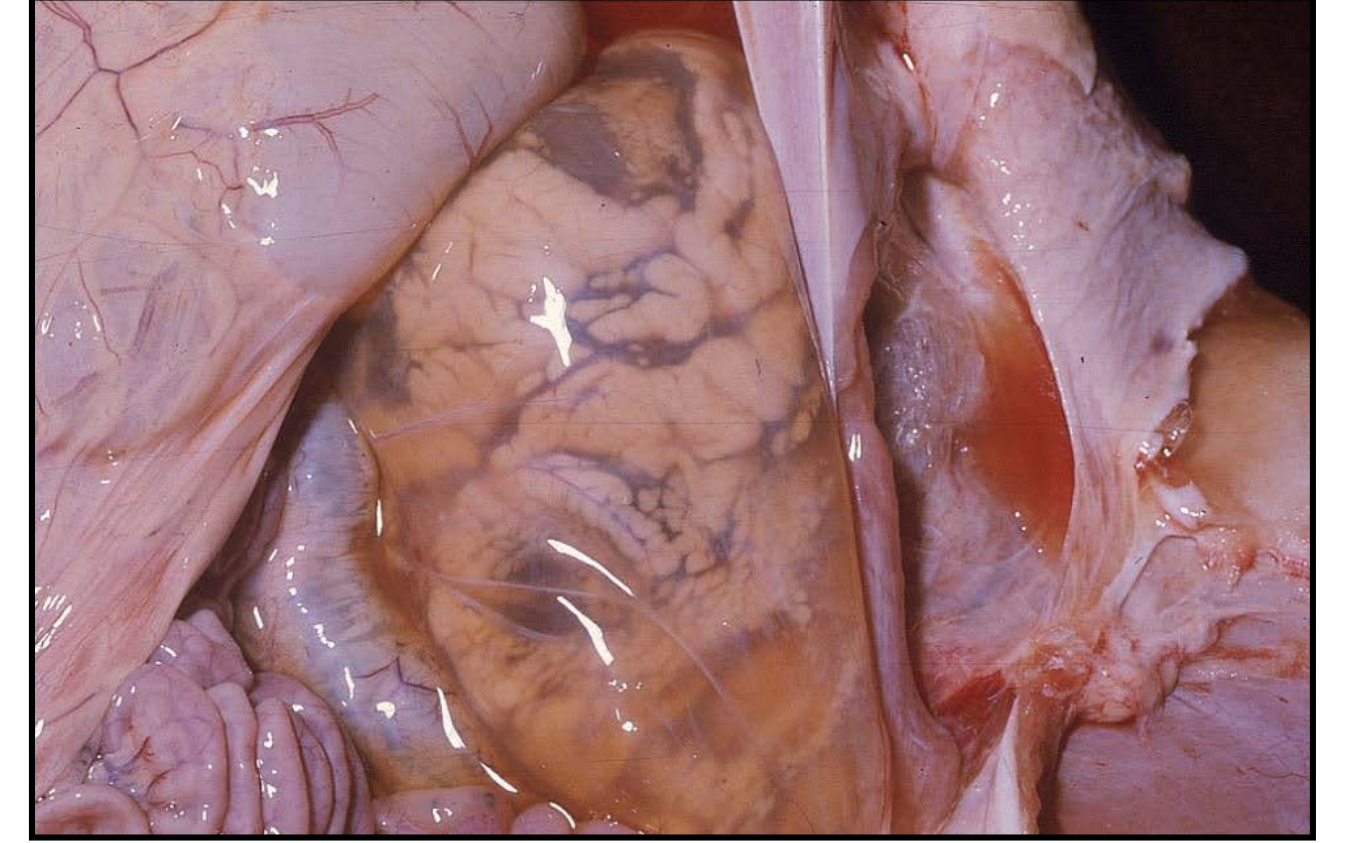
# Rift Valley Fever



Bovine, fetus, intestine. Marked mesenteric and serosal edema



Bovine, aborted fetus and placenta. Edema, excessive amniotic fluid (hydramnion) and hemorrhage; thickened and edematous cotyledons and inter-cotyledon area



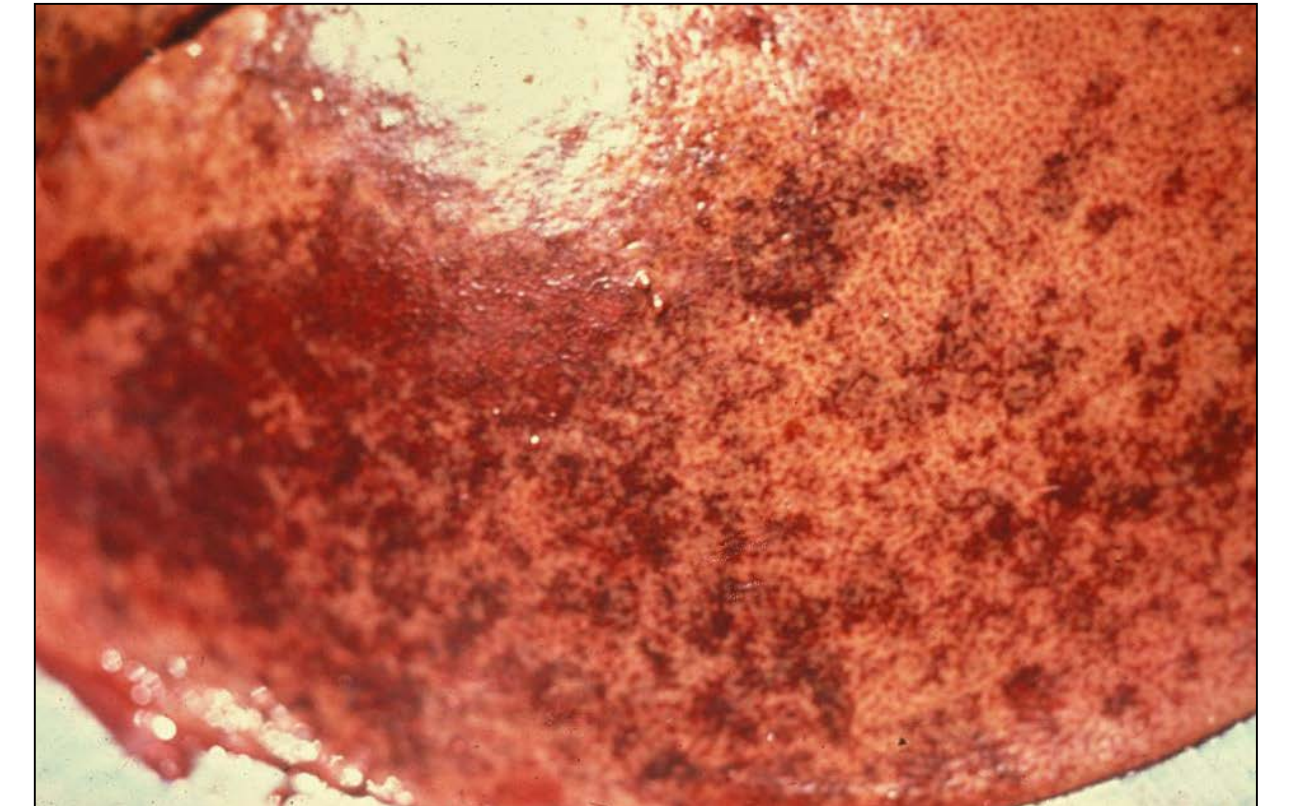
Sheep, fetus, kidney. Marked perirenal edema.



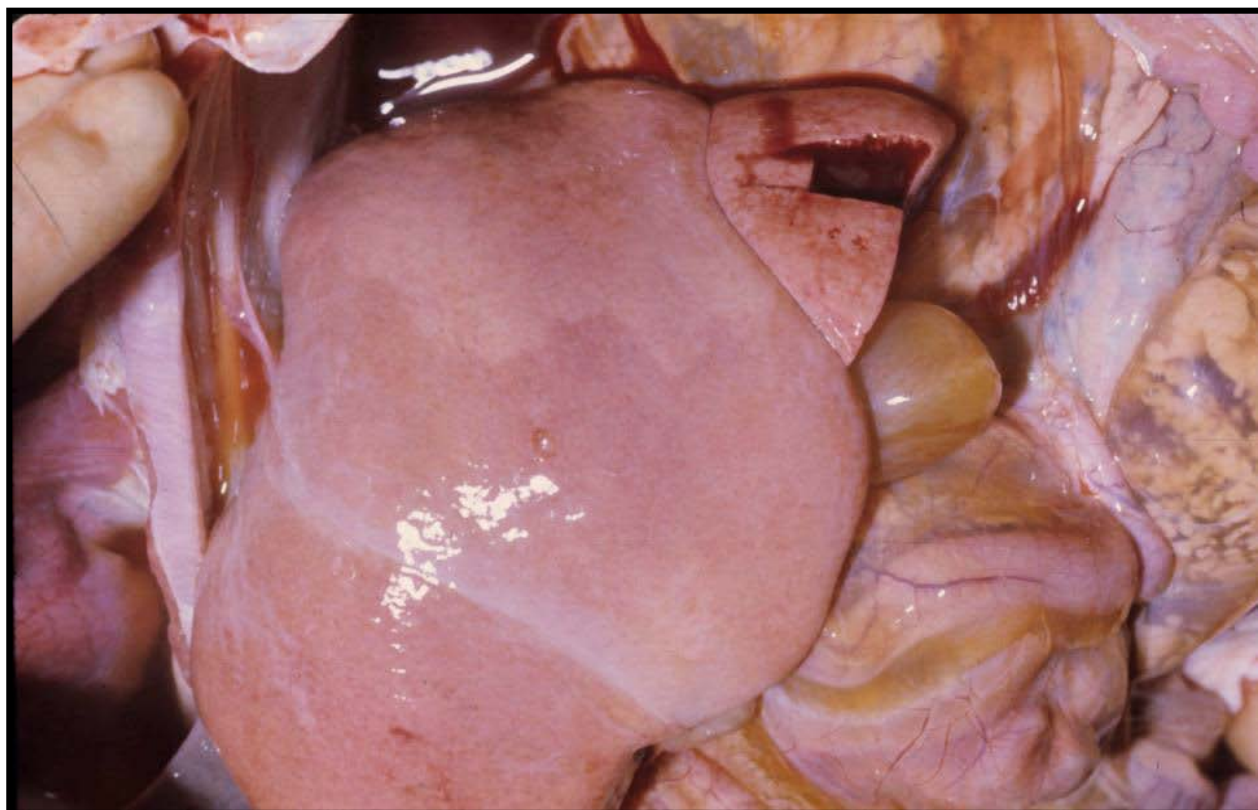
Bovine fetus. Skin of this emphysematous fetus is stained with meconium.



Newborn lamb, liver. Diffuse pale necrosis with locally extensive hemorrhage



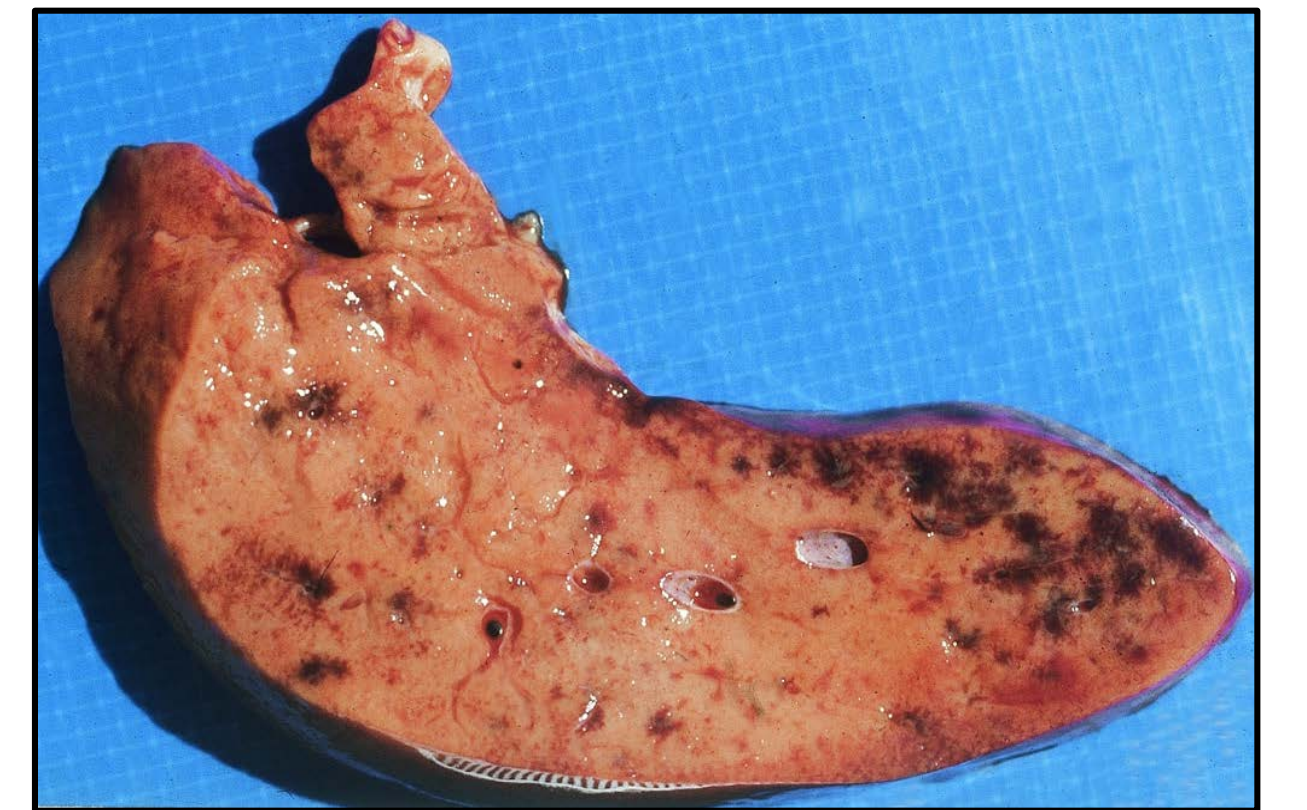
Newborn lamb, liver. Multifocal to submassive hepatic necrosis with multifocal hemorrhages.



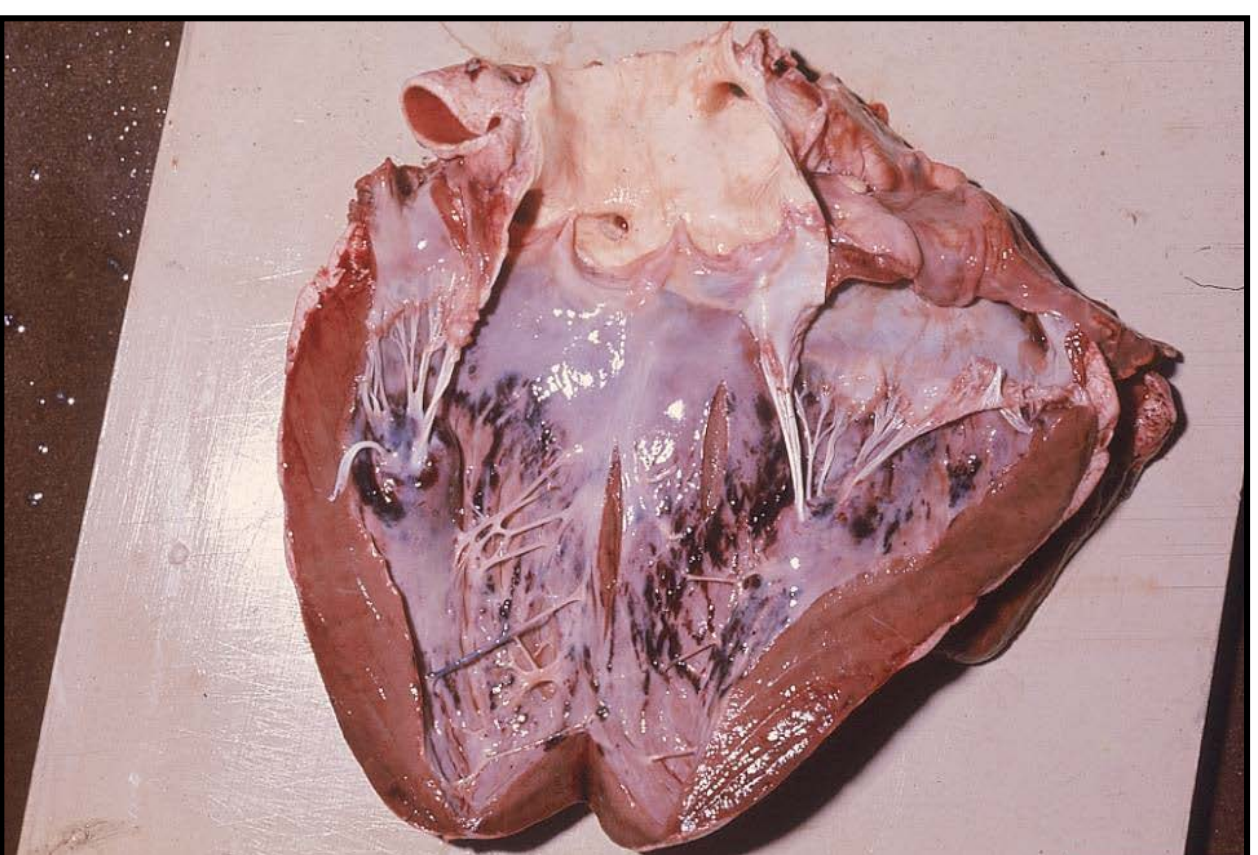
Cow, liver. Parenchyma is diffusely pale due to massive necrosis; note the severe edema in the adjacent mesentery



Cow, liver. Cut surface of swollen liver, pale with petechial hemorrhages in parenchyma



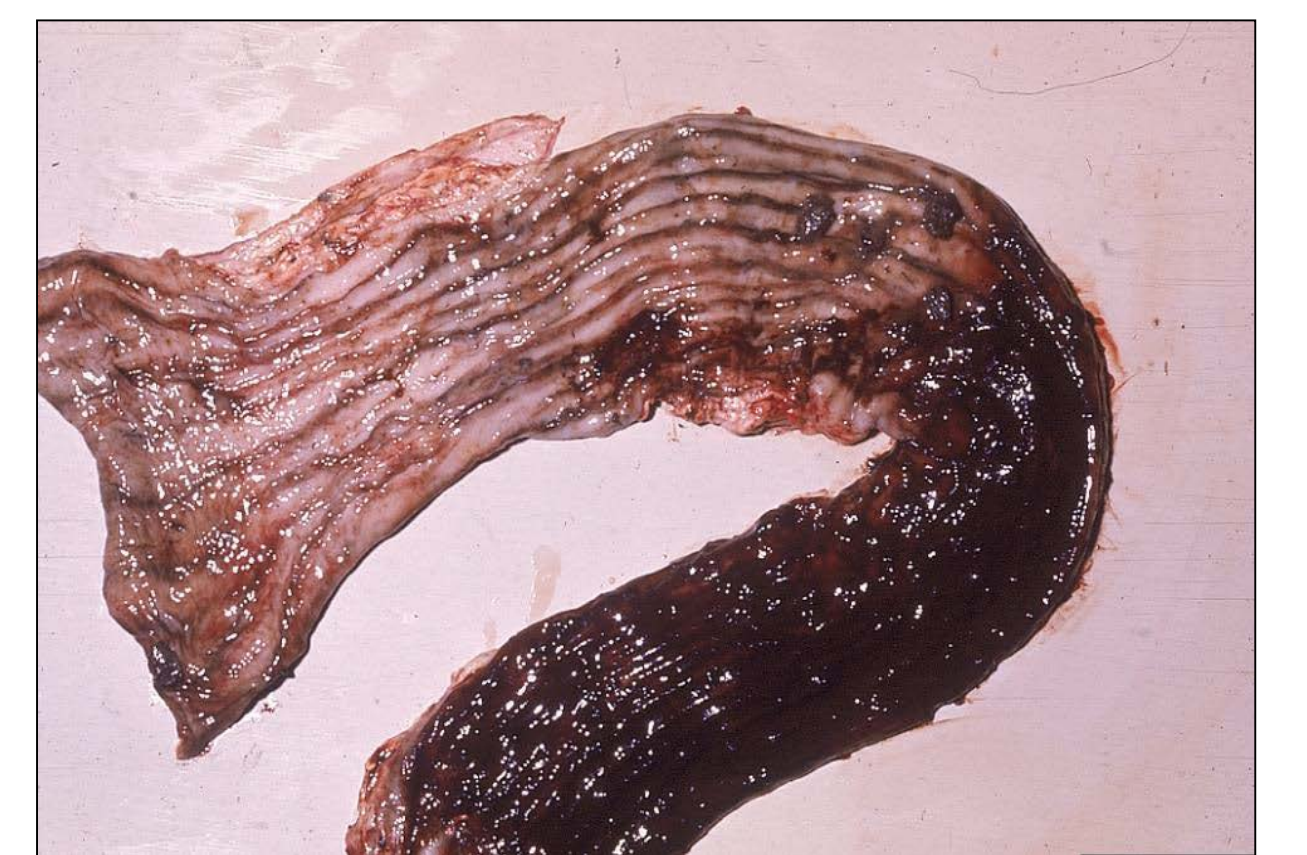
Sheep, liver. Cut surface of liver is pale, swollen and contains multiple foci of hemorrhage



Sheep, heart. The ventricular endocardium contains many hemorrhages



Sheep, colon. Severe hemorrhagic colitis



Sheep, colon. Severe, locally extensive mucosal hemorrhage



Sheep, abomasum. Multifocal hemorrhage and diffuse mucosal edema.



Sheep, abomasum. Locally extensive petechial hemorrhages and diffuse edema with multifocal pale necrotic foci in the mucosa



Sheep, fetus, kidney. There is severe perirenal edema

# Avian Influenza



Chicken. Severe depression with congestion of the wattles and combs



Chicken. Cyanotic comb and wattles



Chicken. Open mouth breathing with moderate edema of the comb and wattles



Chicken. Comparison of severe edema in the wattle and comb in bird on right versus normal comb and wattle in the bird on the left



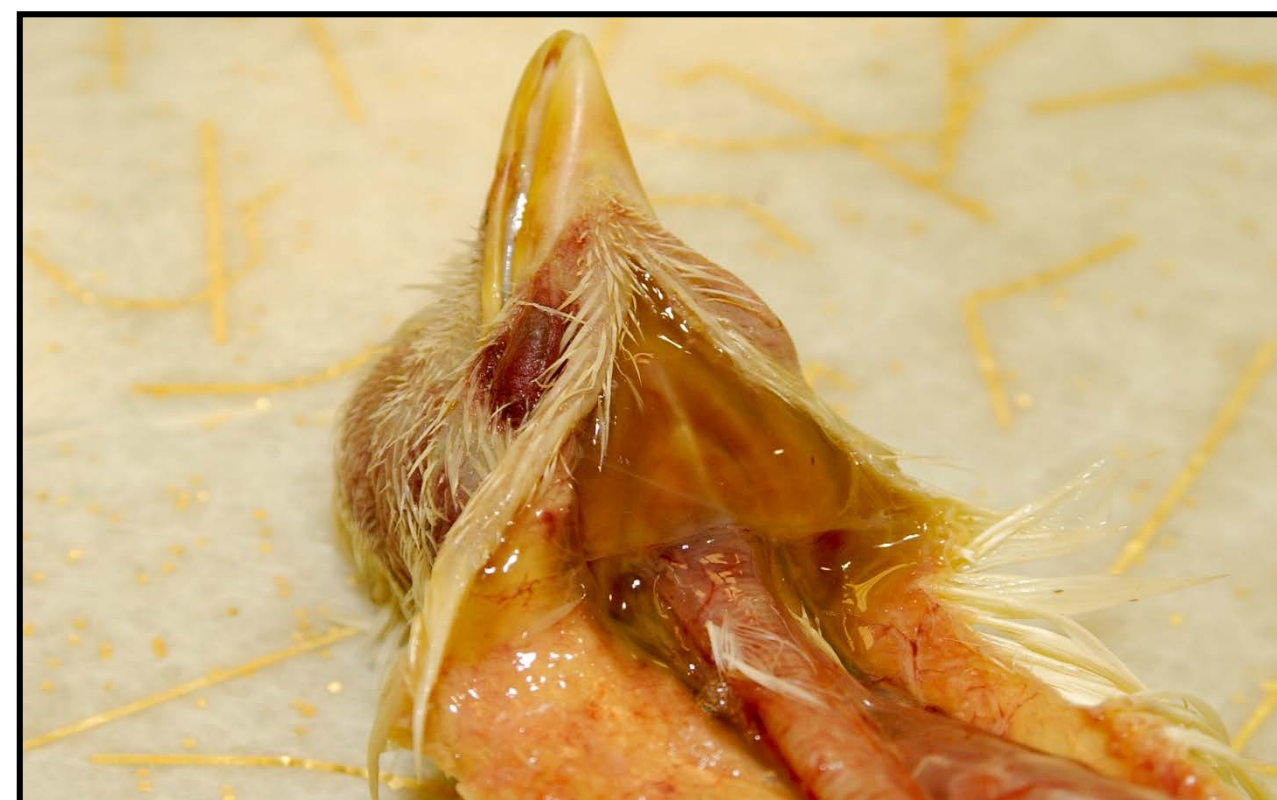
Chicken, Tarsal joints and shanks. Marked ecchymotic hemorrhages and edema



Chicken, head. Mild periorbital and facial edema



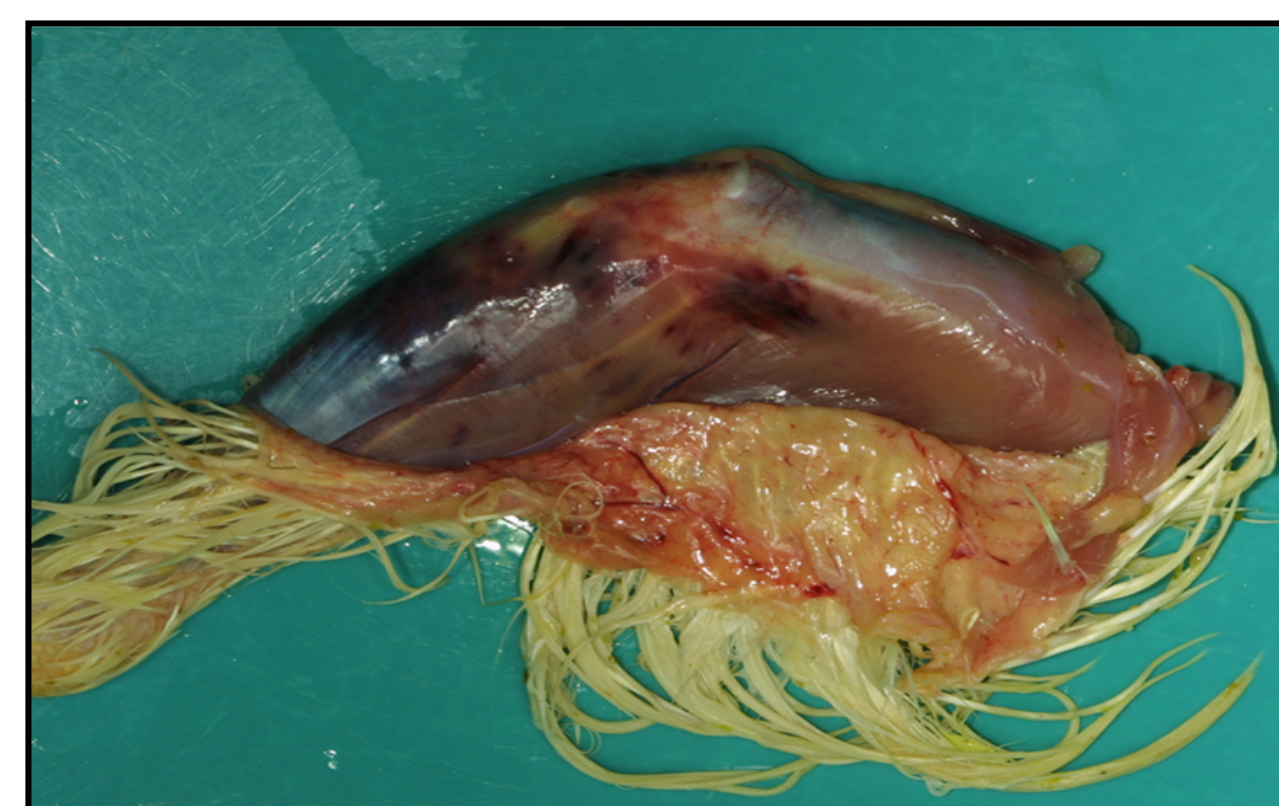
Chicken, cross section of sinuses. Inflammation and hemorrhaging of sinuses



Chicken, head. Submandibular edema



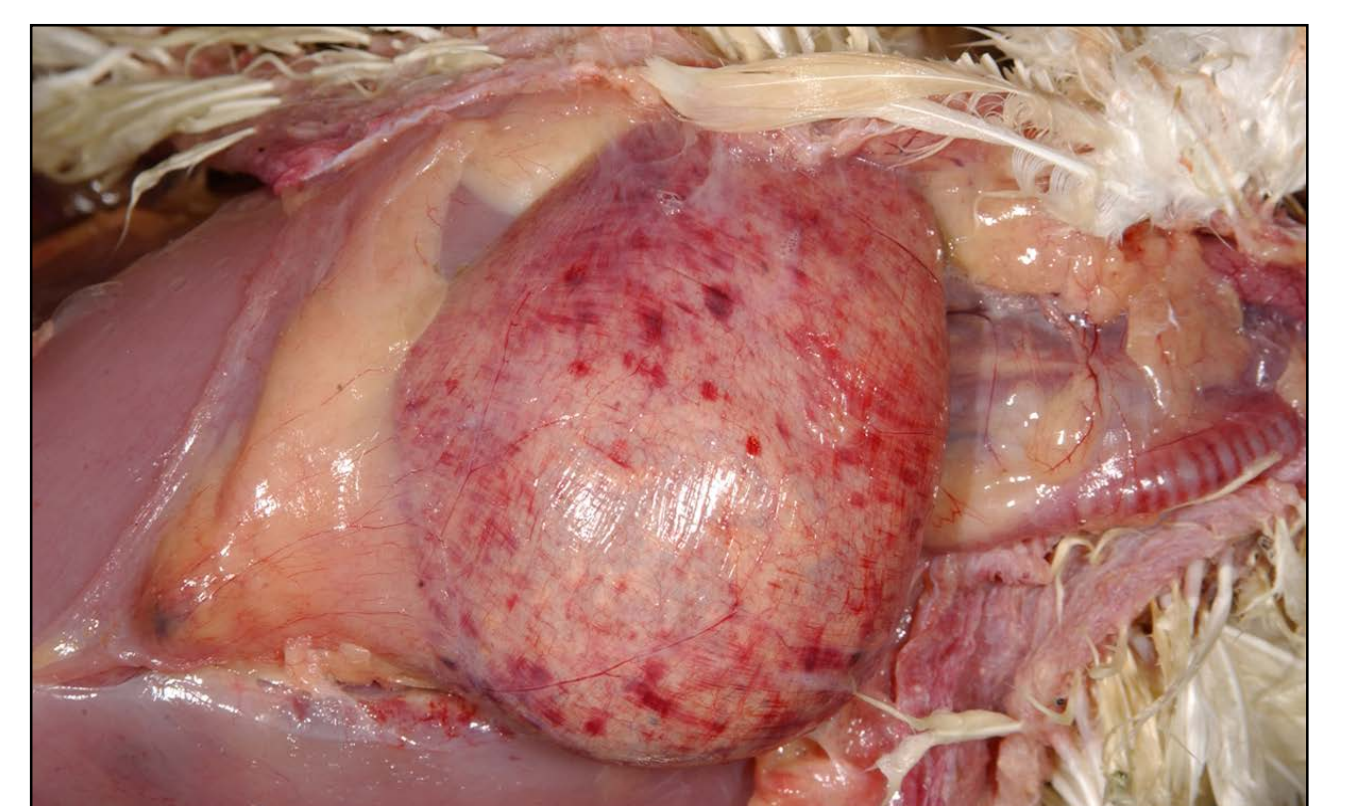
Chicken. Leg edema



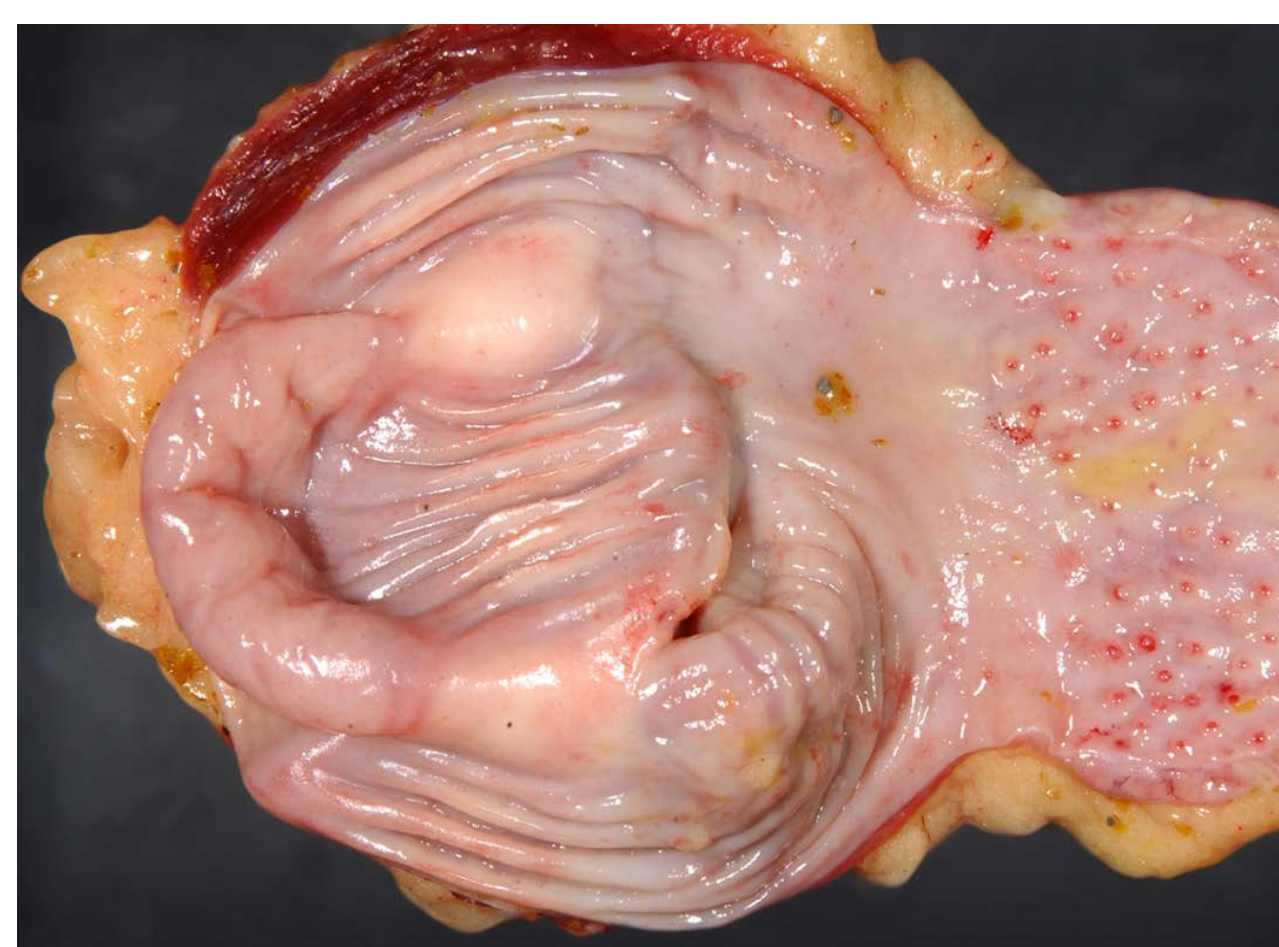
Chicken. Multifocal intramuscular hemorrhages of leg



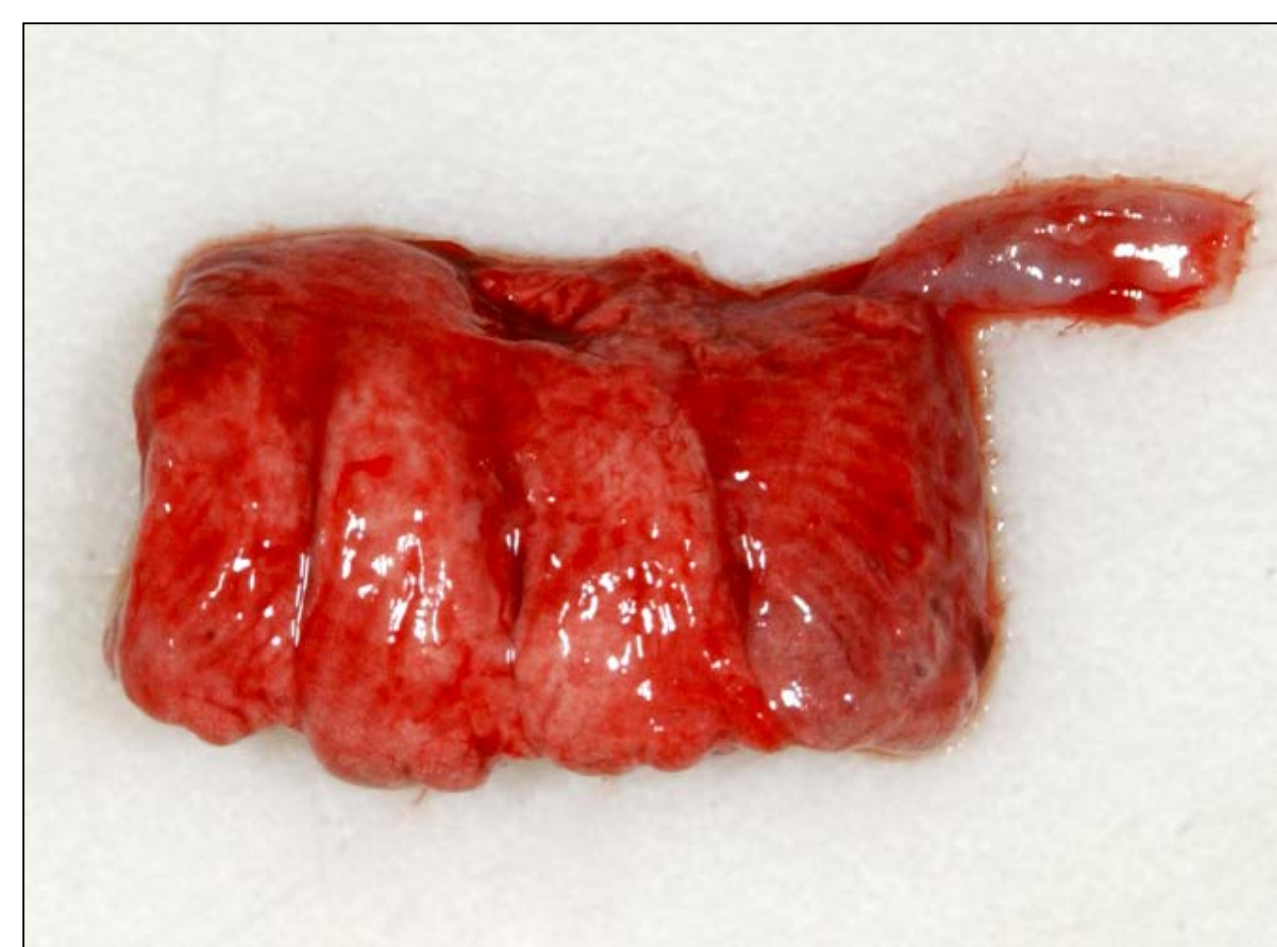
Chicken, trachea. Multifocal petechial hemorrhages



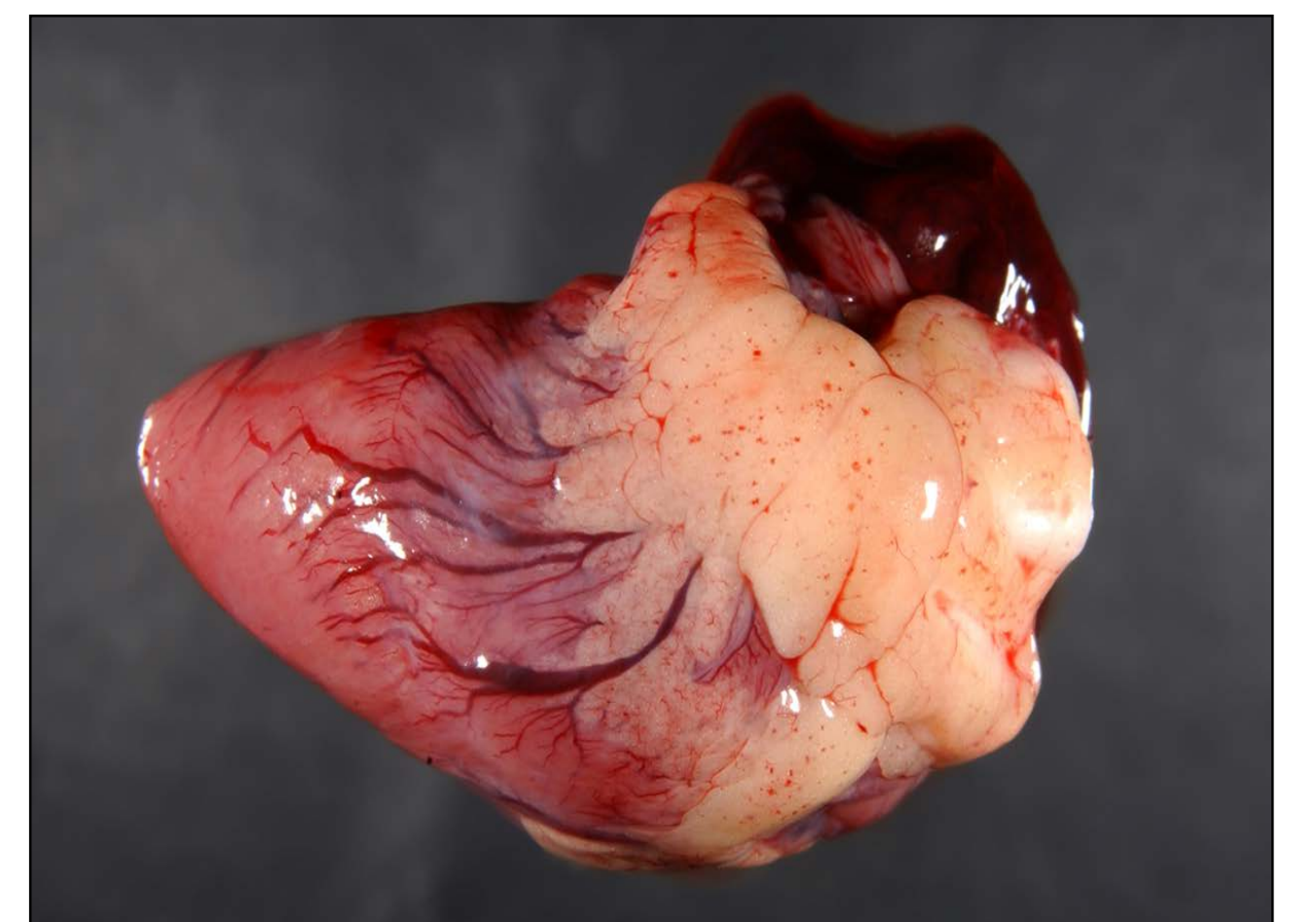
Chicken, crop. Multifocal petechial hemorrhages on serosa.



Chicken, proventriculus. Hemorrhage of glandular crypts; ventriculus; rare mucosal petechial hemorrhages.



Chicken, lung. Pulmonary hemorrhage and edema



Chicken, heart. Multifocal petechial hemorrhages in the epicardium and epicardial adipose

# Newcastle Disease



Chicken. Unilateral wing paralysis and leg paresis; ataxia



Chicken. Down bird that is unable to stand



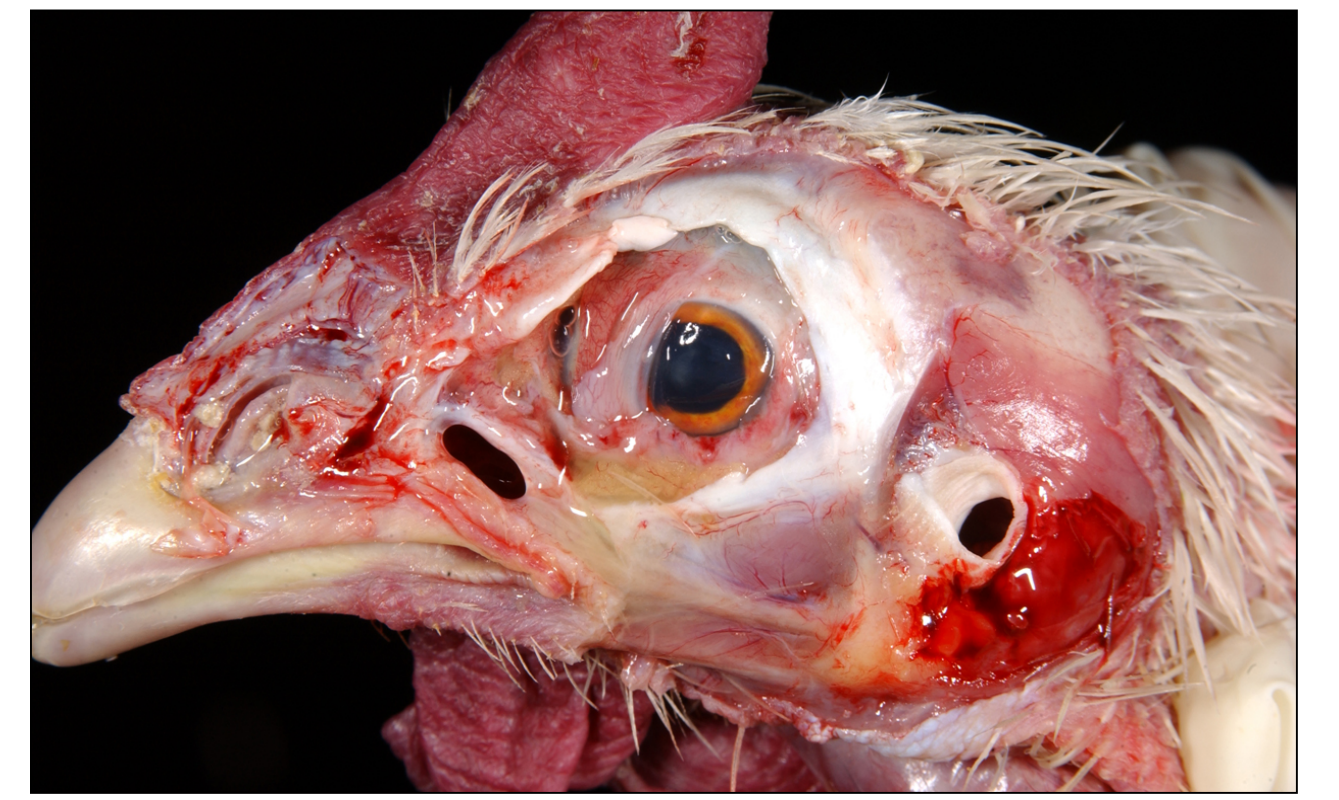
Chicken. Torticollis



Chicken. Peri-orbital edema and ruffled feathers



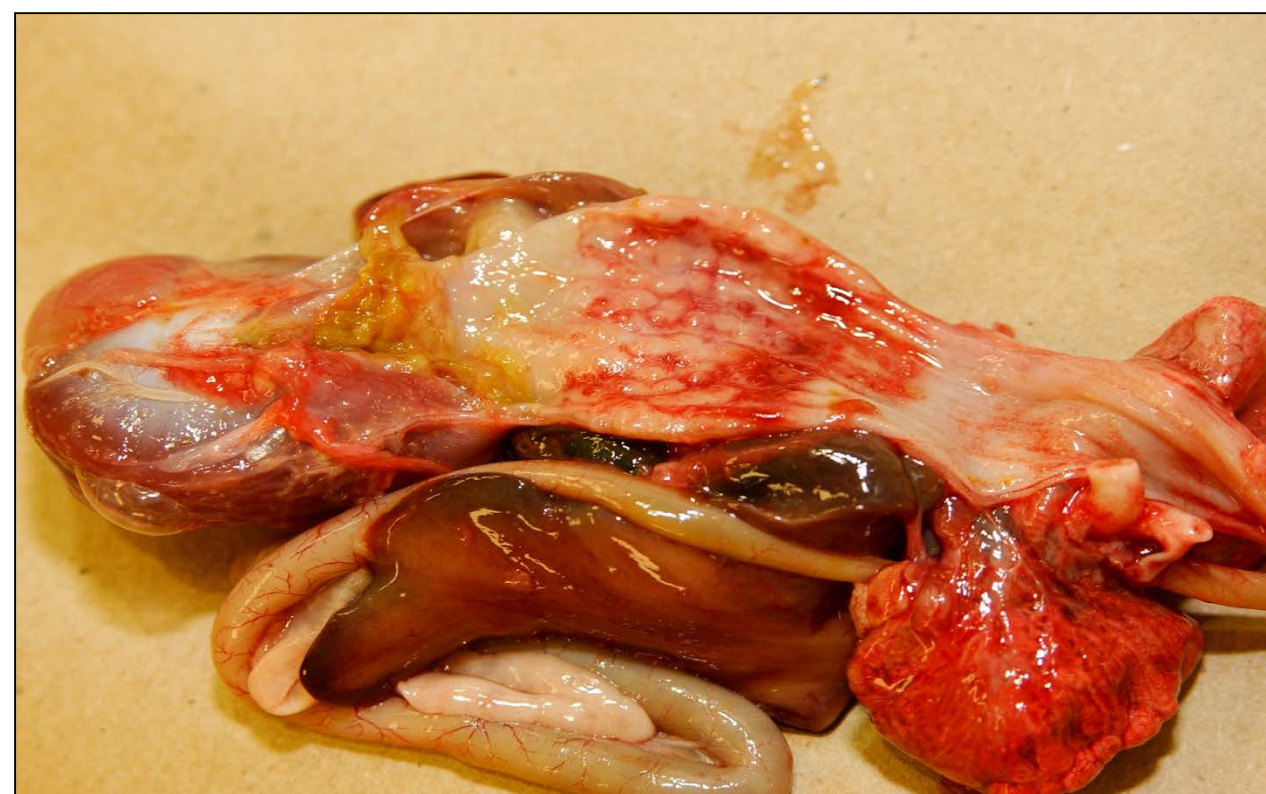
Chicken. Lower eyelid with hemorrhage and edema



Chicken. Facial and peri-orbital edema



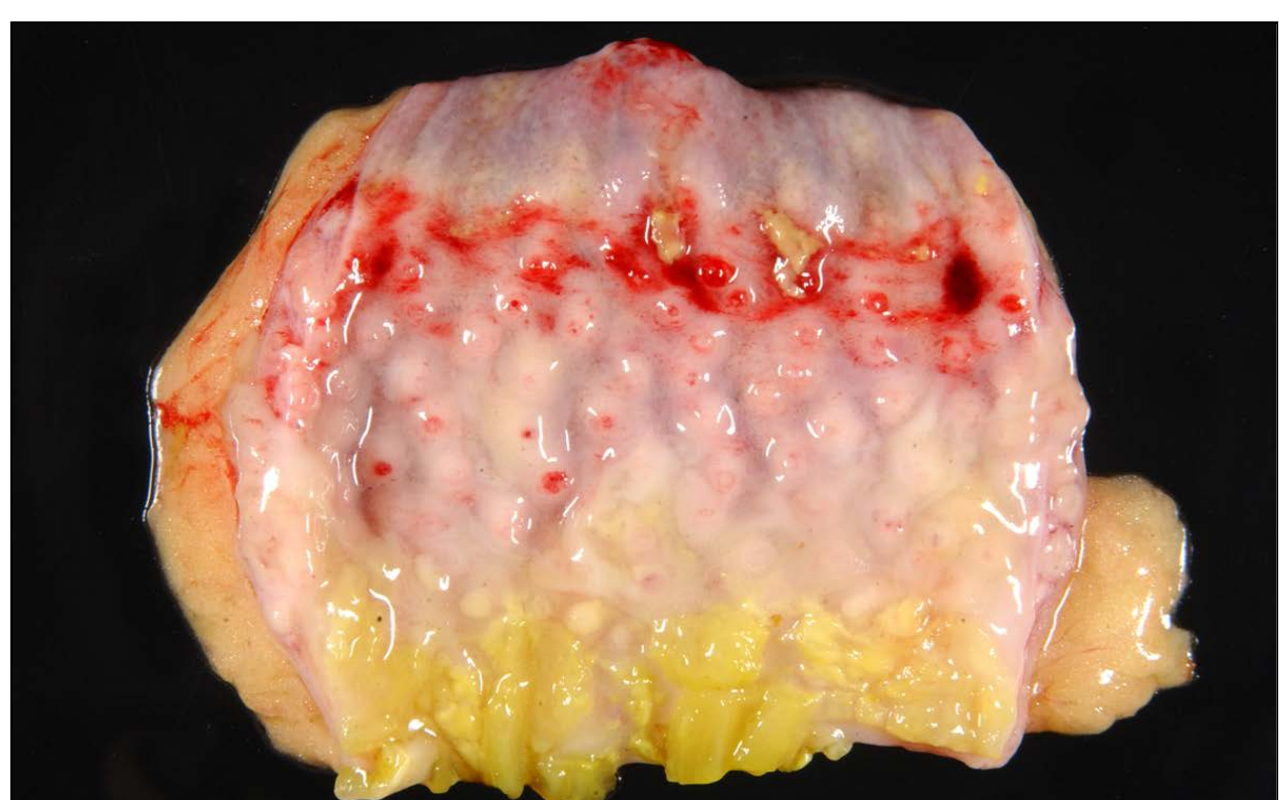
Chicken, trachea. Subcutaneous cervical edema



Chicken, intestine. Proventricular hemorrhages



Chicken, trachea. Marked subcutaneous and thymic hemorrhages



Chicken. Proventriculus. Linear hemorrhage and necrosis at the junction of the proventriculus and esophagus. Multifocal hemorrhages on the proventricular papillae



Chicken, intestine. Focal intestinal hemorrhage GALT



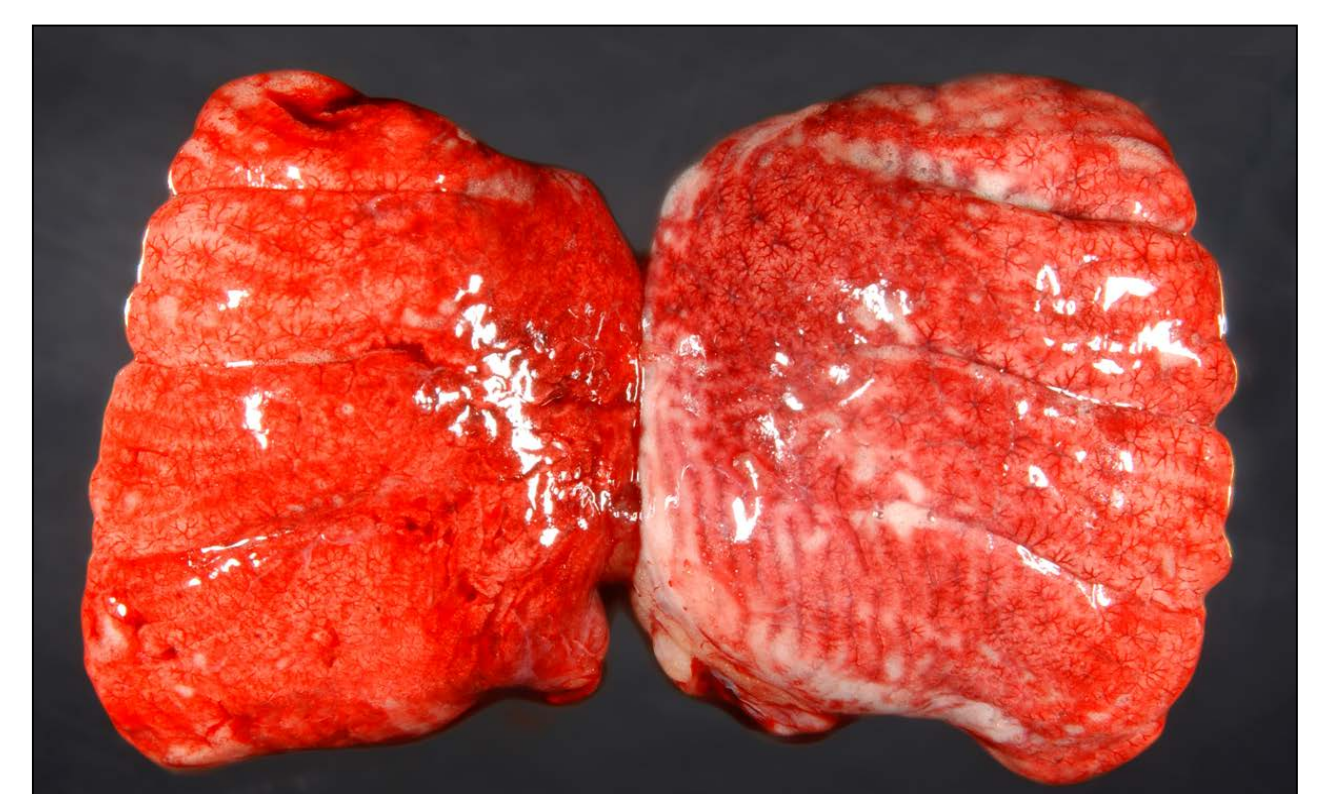
Chicken, intestine. Focal hemorrhage in the intestine.



Chicken. Hemorrhage of the cecal tonsils visible through the serosa



Chicken, cecum. Cecal tonsil hemorrhages



Chicken, lungs. Marked pulmonary congestion and edema.



# Sheep pox



Sheep, muzzle. Generalized hyperemia of the nares and lips with multiple small macules



Sheep, periorbital region. Macules, papules and pustules



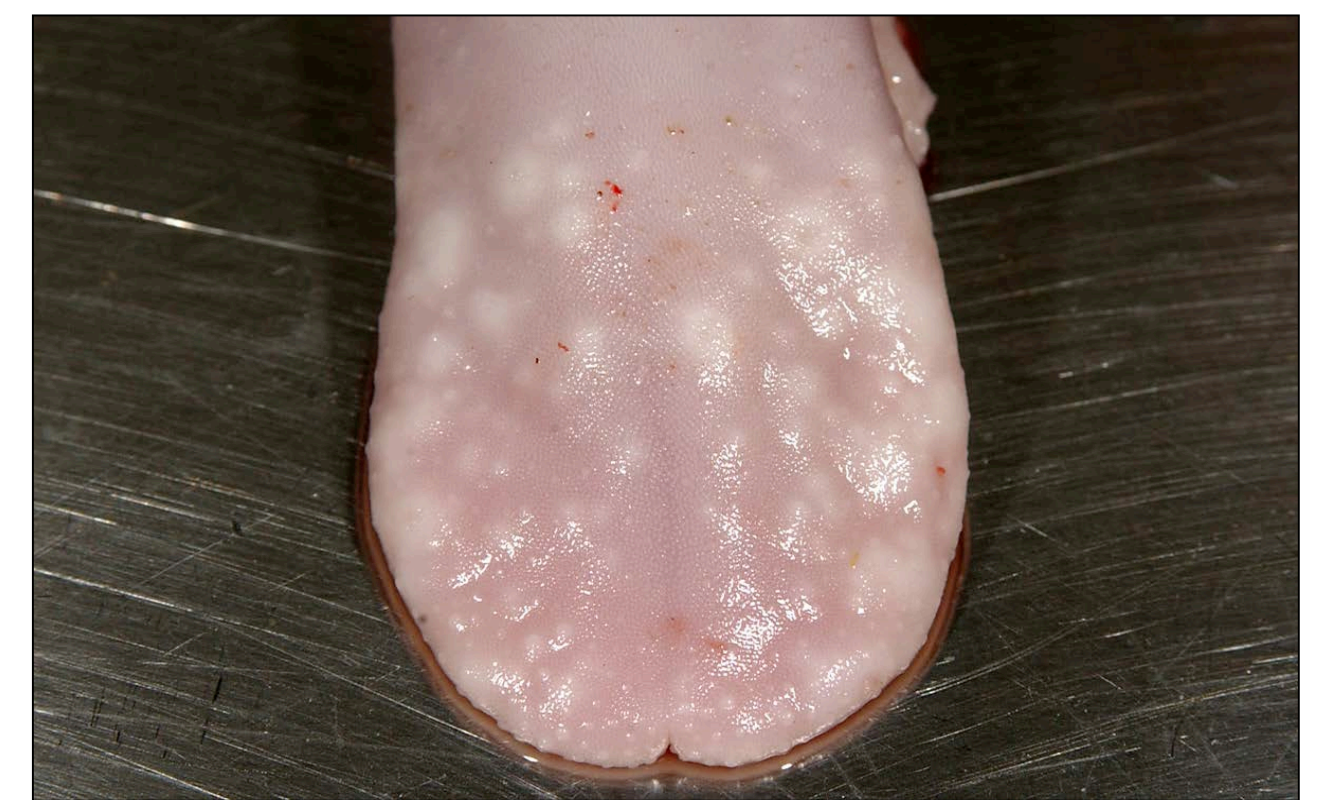
Sheep. Small hemorrhagic, pox lesions on conjunctiva and nictitating membrane



Sheep, ear. Macules and papules



Sheep, upper lip. Multiple coalescing, pale pox lesions in the upper lip



Sheep, dorsal tongue. Multifocal papular glossitis



Sheep, axilla. Multiple discrete papules



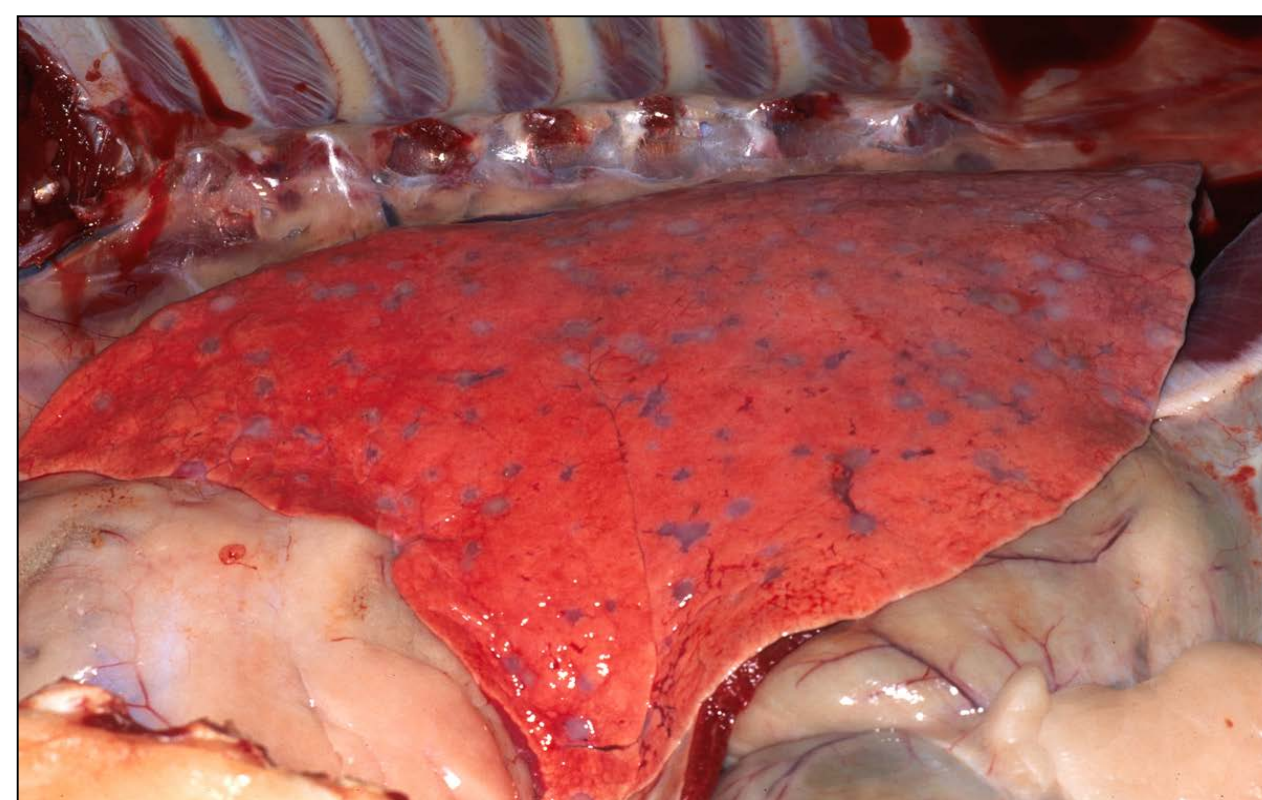
Sheep, axillary skin. Early skin lesion composed of multiple small red foci



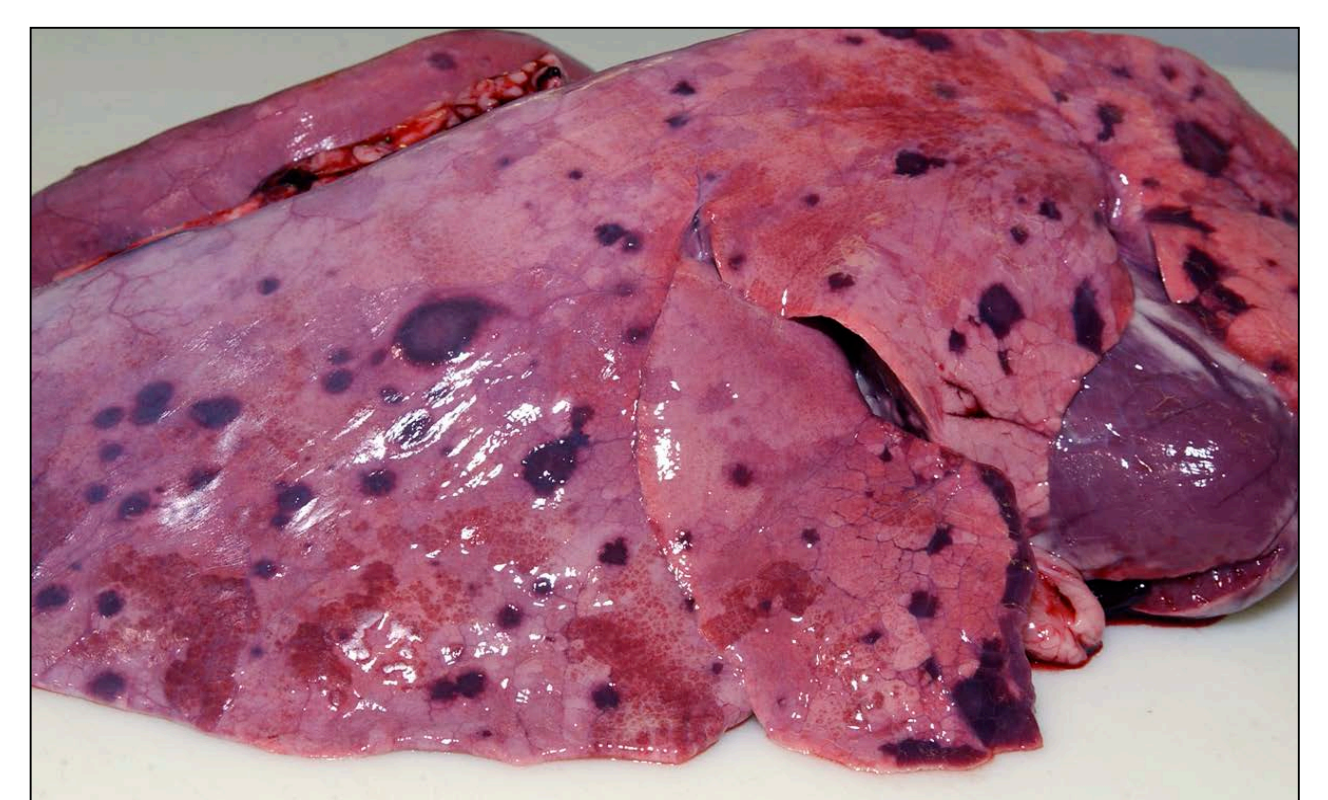
Sheep, inguinal skin. Multifocal discrete pox papules with central areas of necrosis



Sheep, esophagus. Small circumscribed raised white pox nodules in the mucosal lining of the esophagus



Sheep, lung. Multifocal, mottled purple-white pox lesions distributed throughout parenchyma of the lung



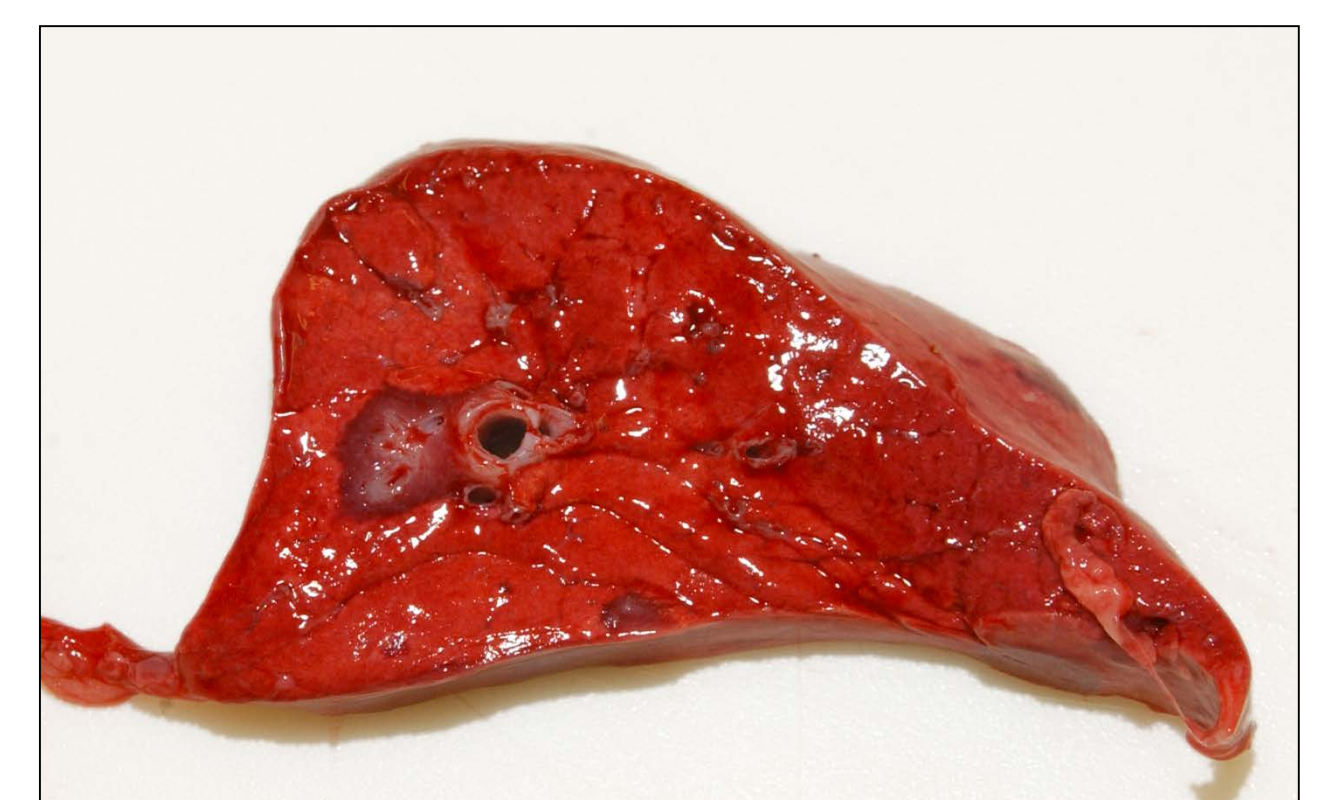
Sheep, lung. Numerous firm, dark red pox nodules distributed throughout all the lung lobes



Sheep, rumen. Multifocal papular rumenitis



Sheep, rumen. Diffuse blanched areas seen through rumen wall

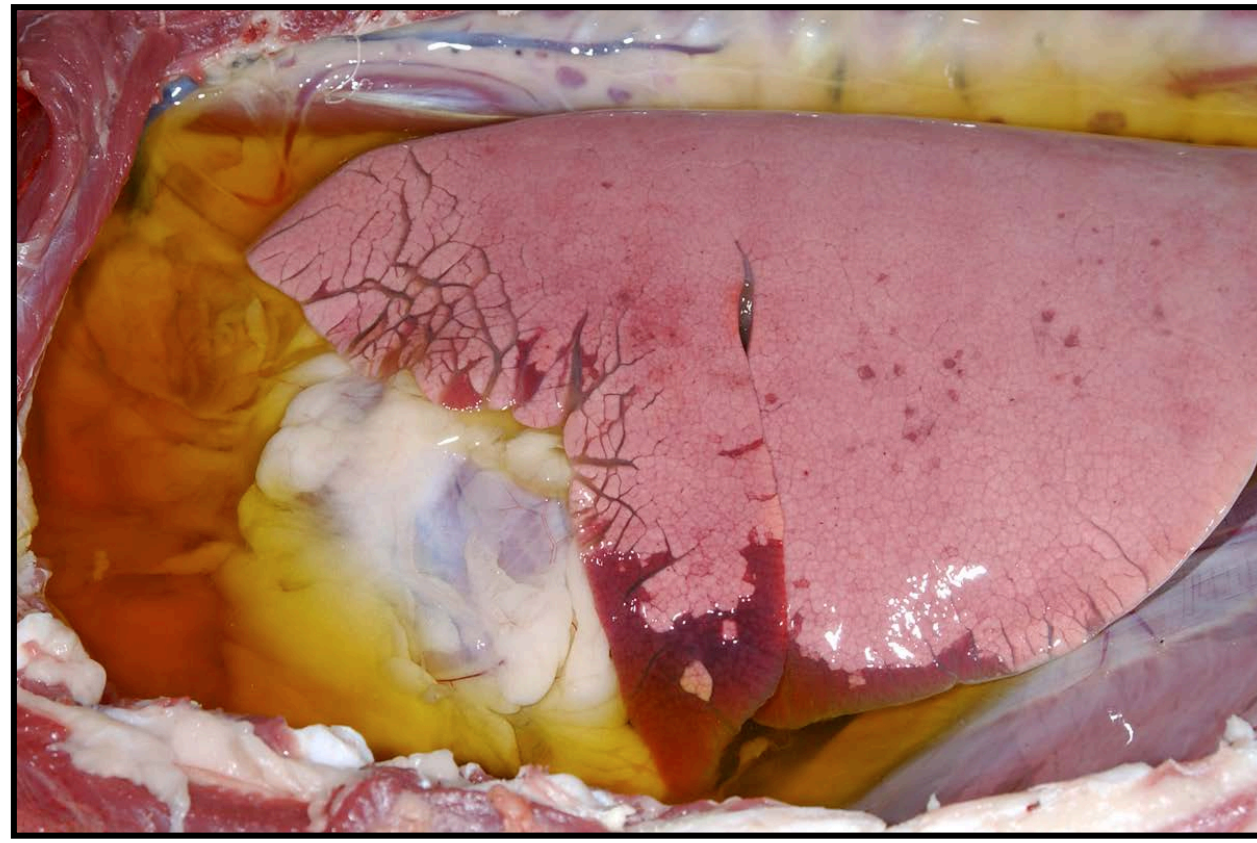


Sheep, lung. Cross-section of lung with internal pox nodule peripheral to bronchiole

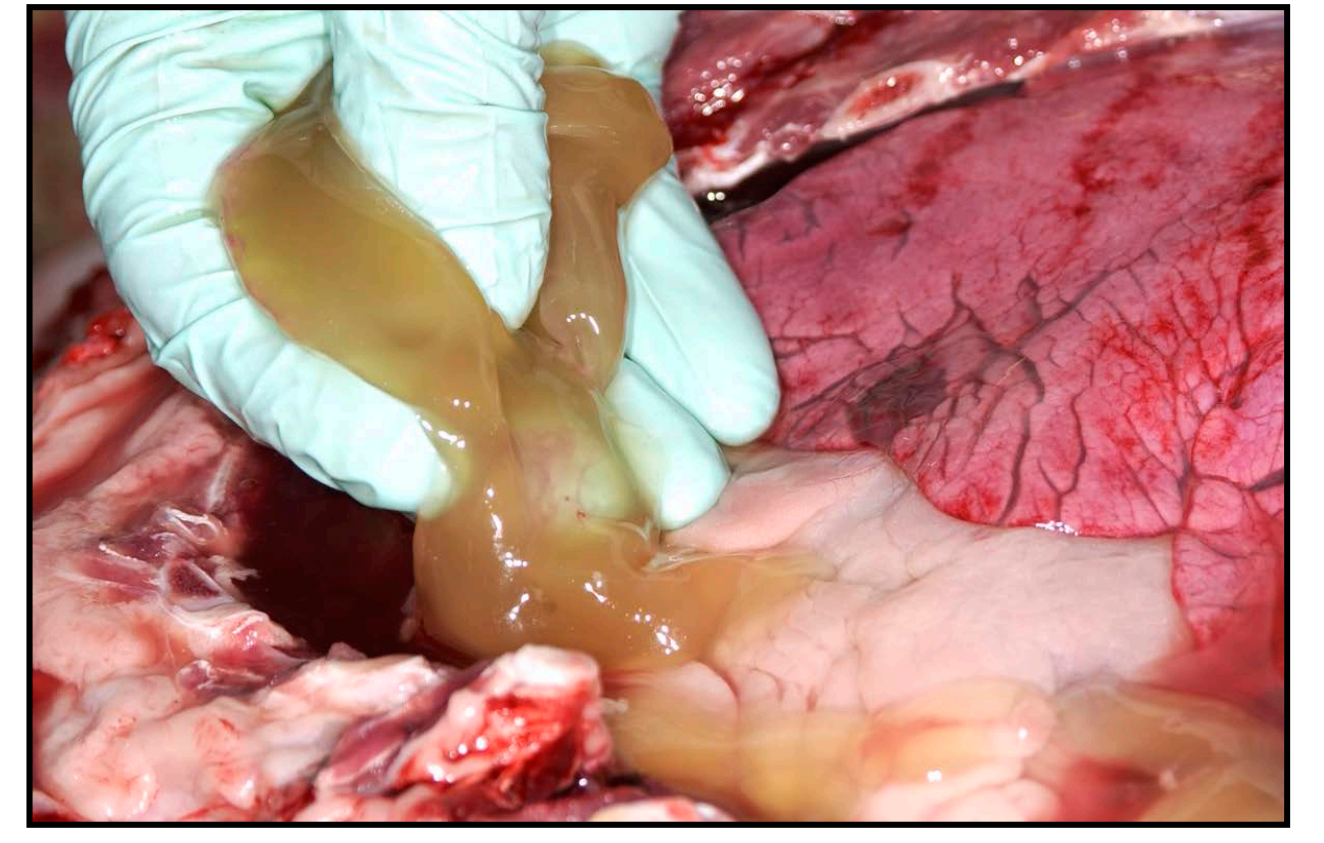
# Heartwater



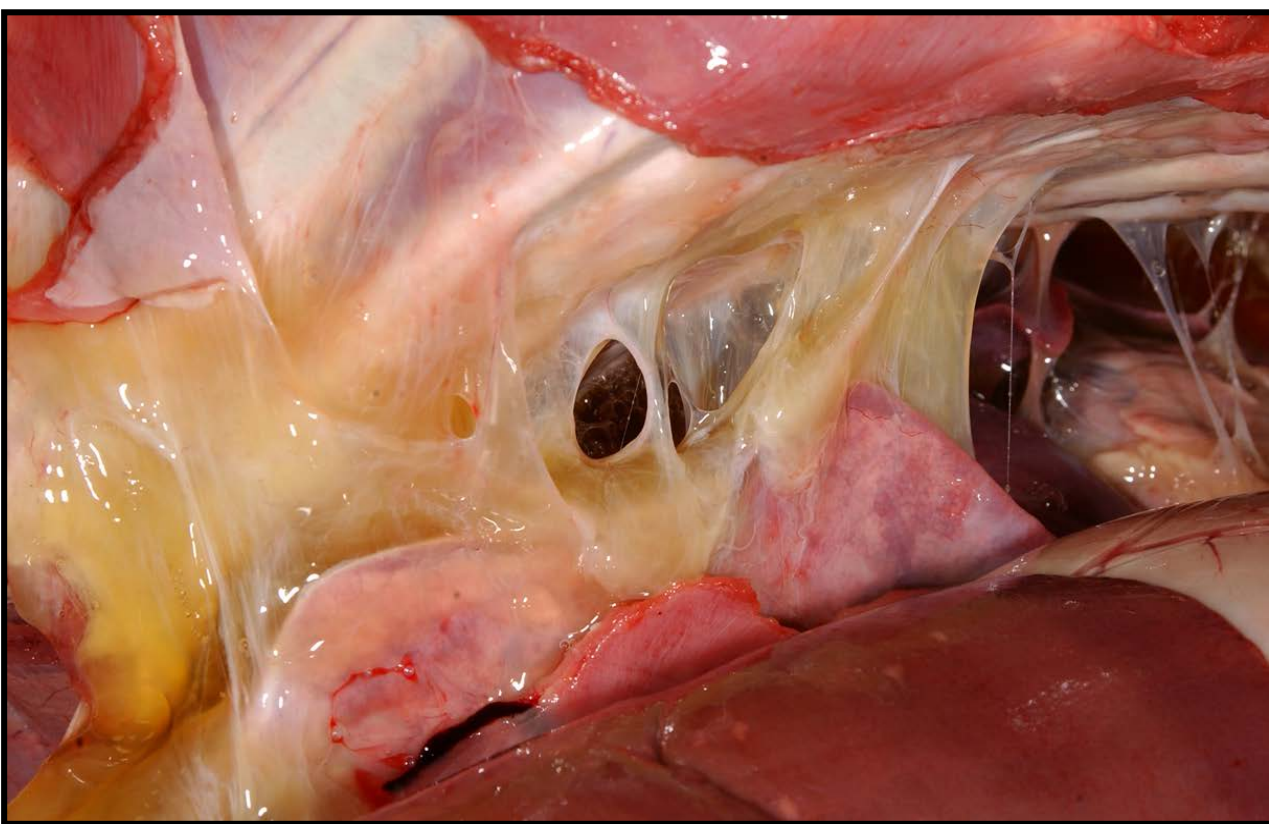
Sheep, head. Foam extruding from nares of sheep



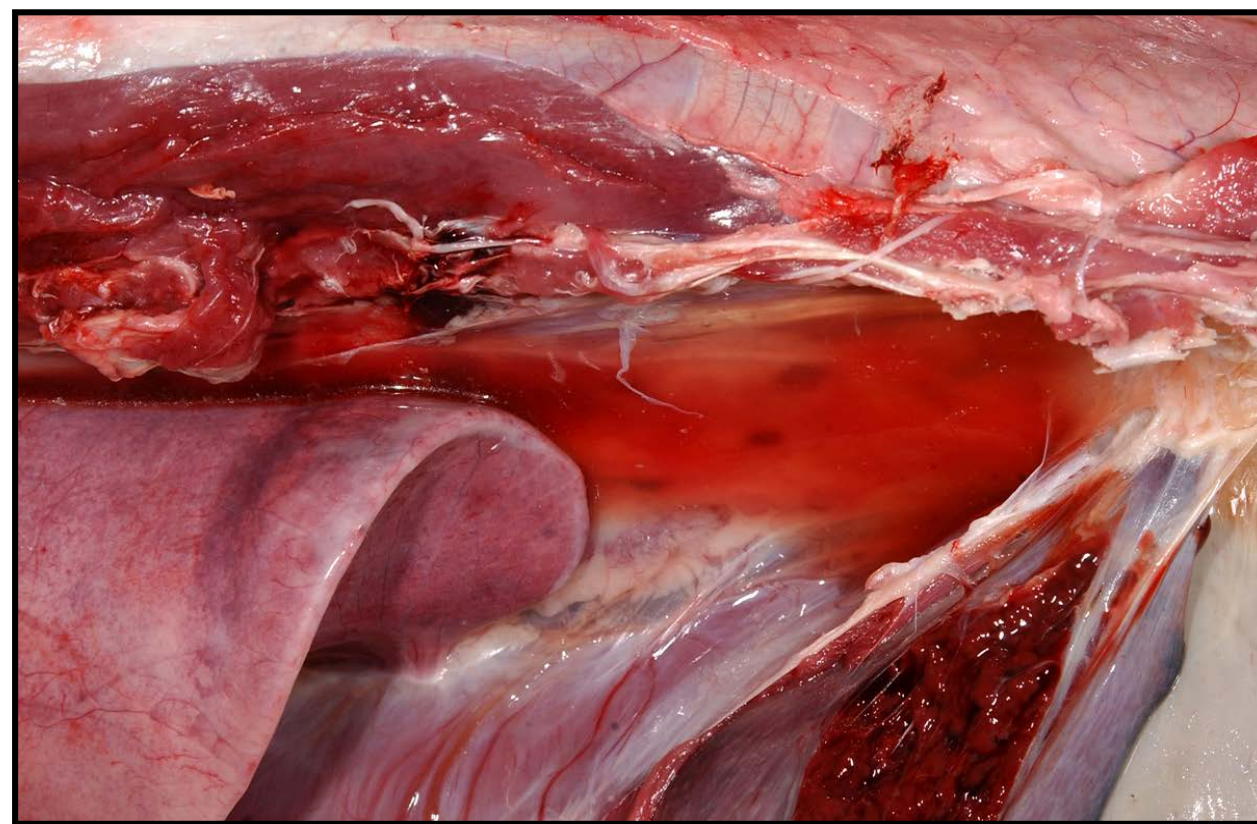
Sheep, lung. Severe hydrothorax, pulmonary edema as shown by the widened interlobular septa and failure of the lung to collapse; atelectasis in dark purple ventral portion of the lung



Sheep, thoracic cavity. Fibrin clots in the thoracic fluid demonstrate the protein-rich nature of the effusion; marked interlobular edema in the lung



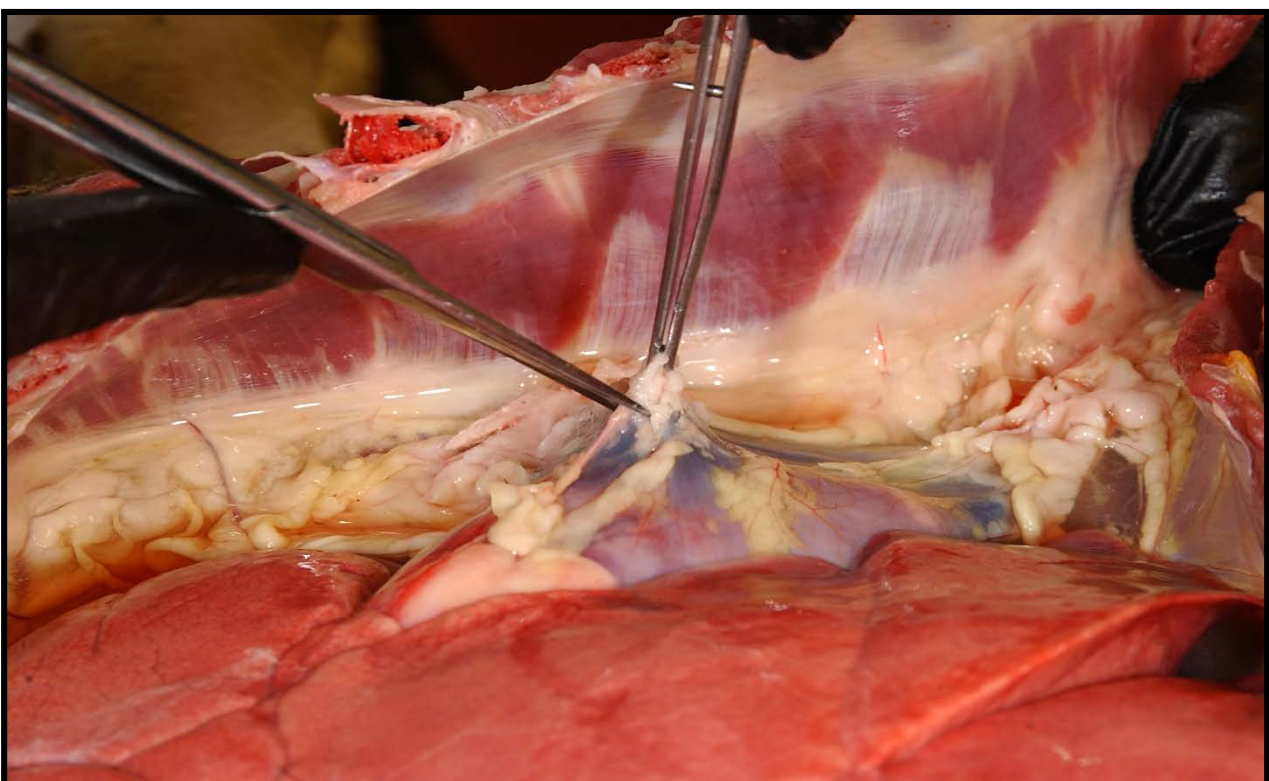
Sheep, thoracic cavity. Fibrinous hydrothorax with fibrin adhering the lung to the thoracic wall (adhesions between parietal and visceral pleurae)



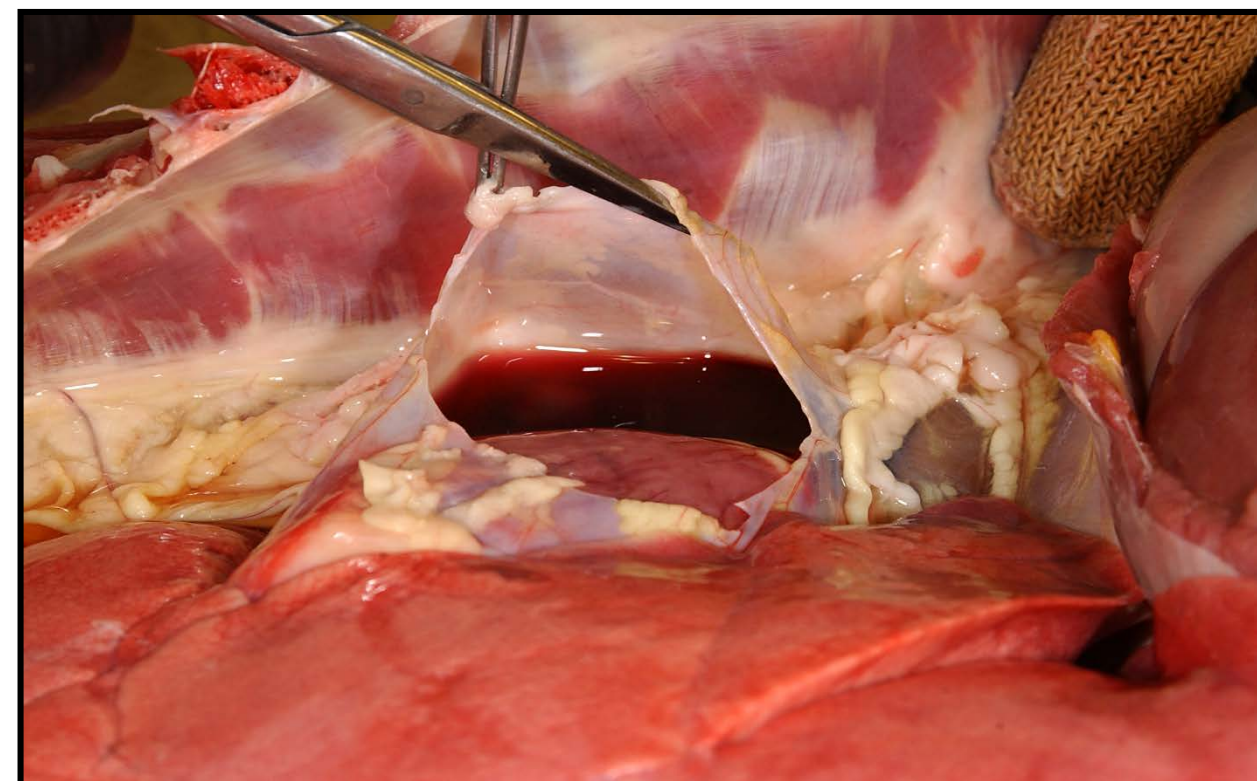
Sheep, thoracic cavity. Serosanguineous thoracic fluid and severe pulmonary edema



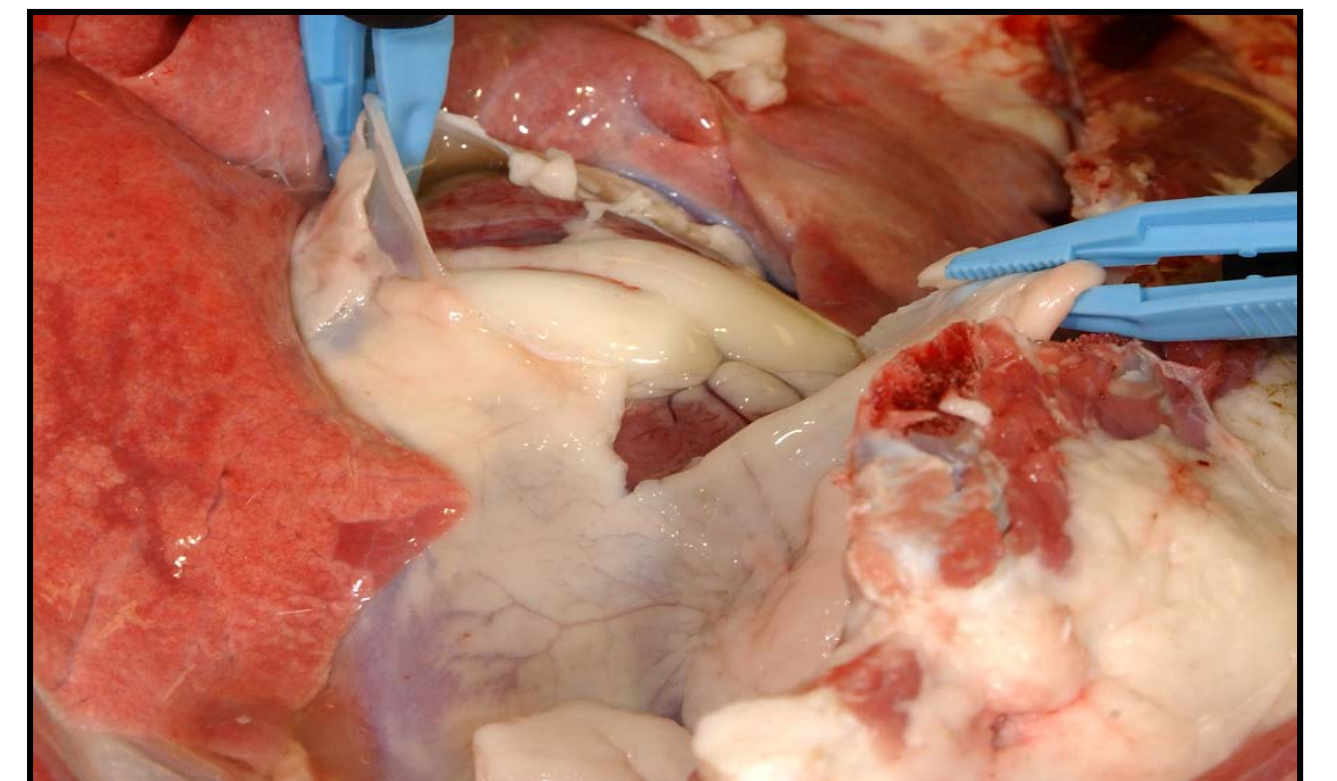
Sheep. Step by step extraction of pericardial fluid: open thoracic cavity to expose cardiac area



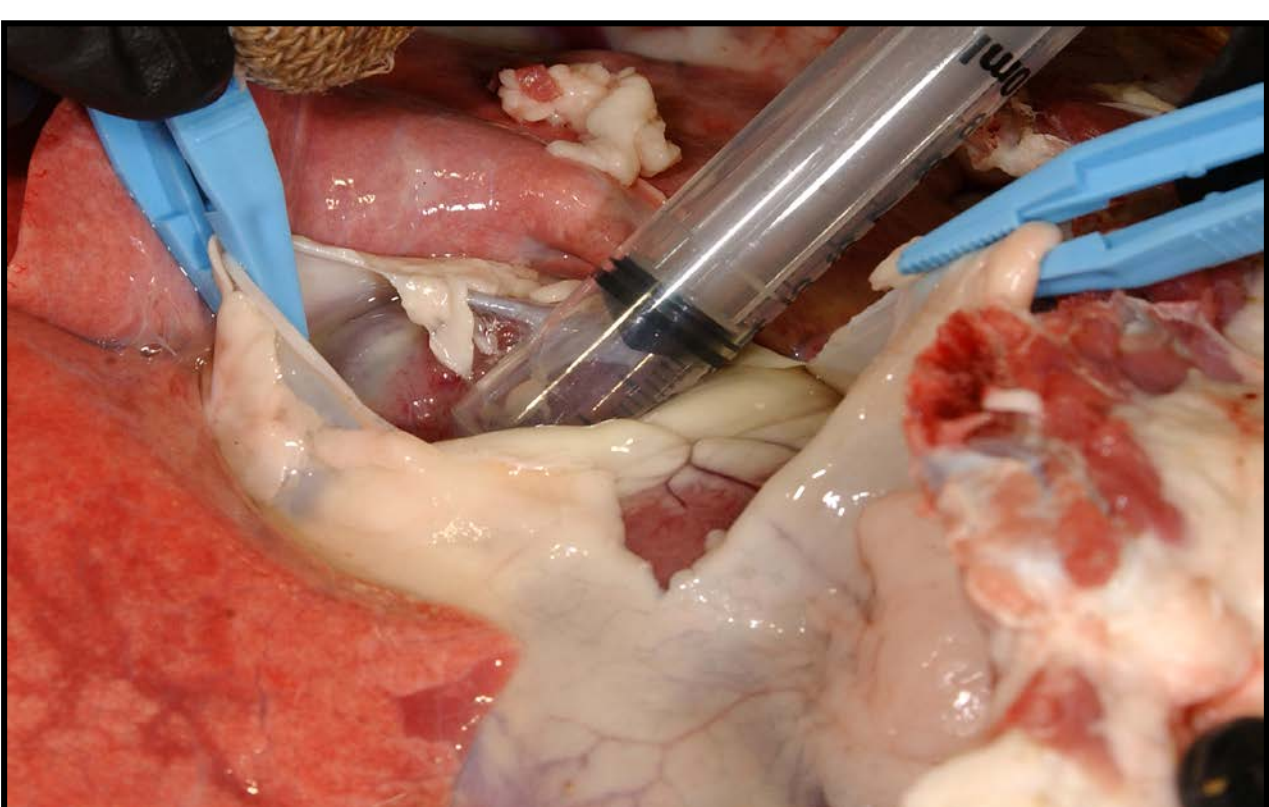
Sheep. Step by step extraction of pericardial fluid: with forceps, grasp and tent pericardium



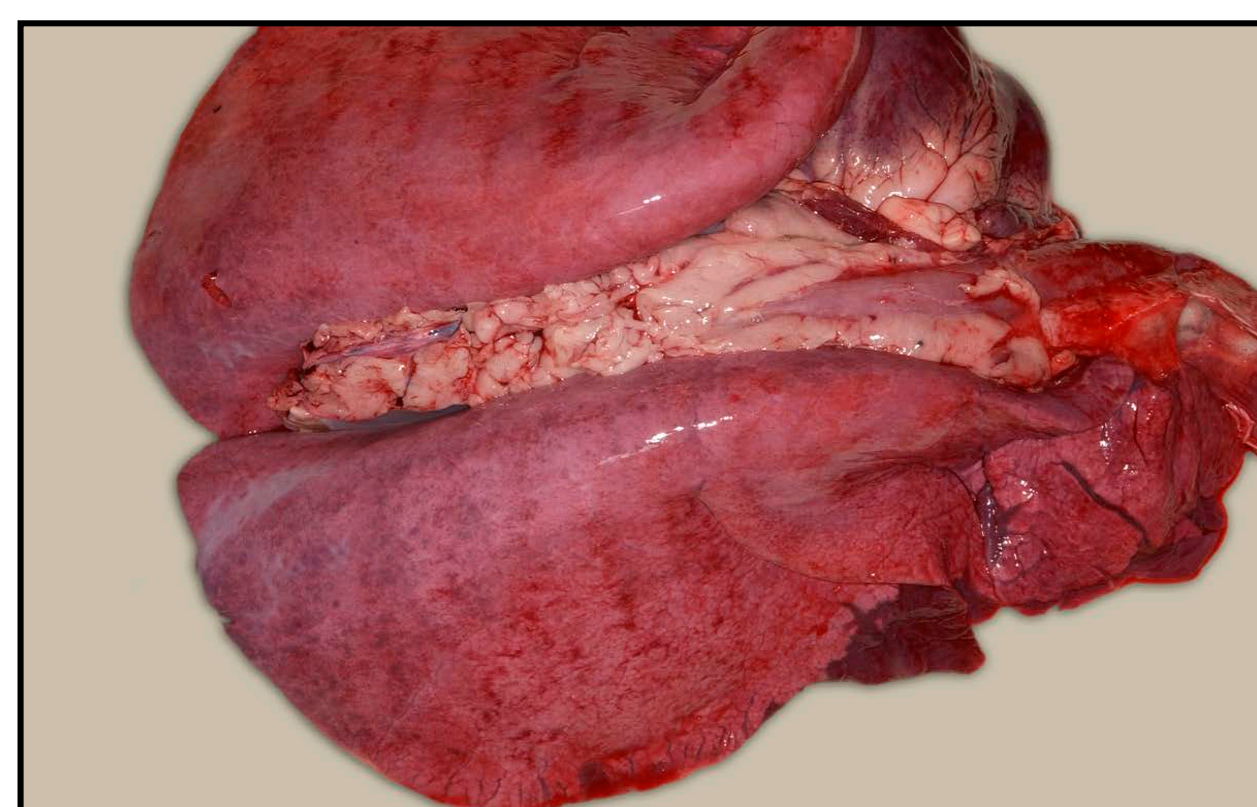
Sheep. Step by step extraction of pericardial fluid: with straight, blunt scissors, make small incision of tented pericardium



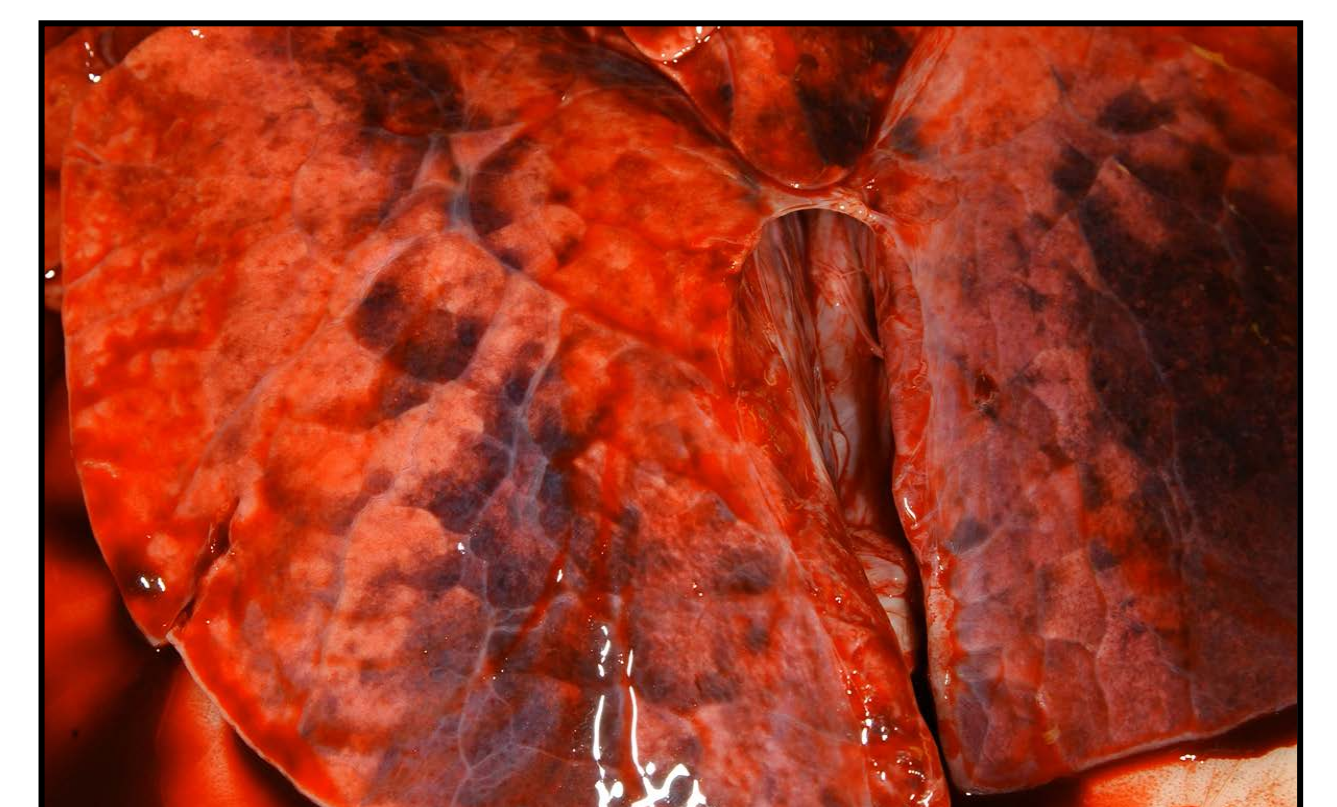
Sheep. Step by step extraction of pericardial fluid: observe fluid, color, quantity, opacity



Step by step extraction of pericardial fluid: collect fluid with syringe (no needle)



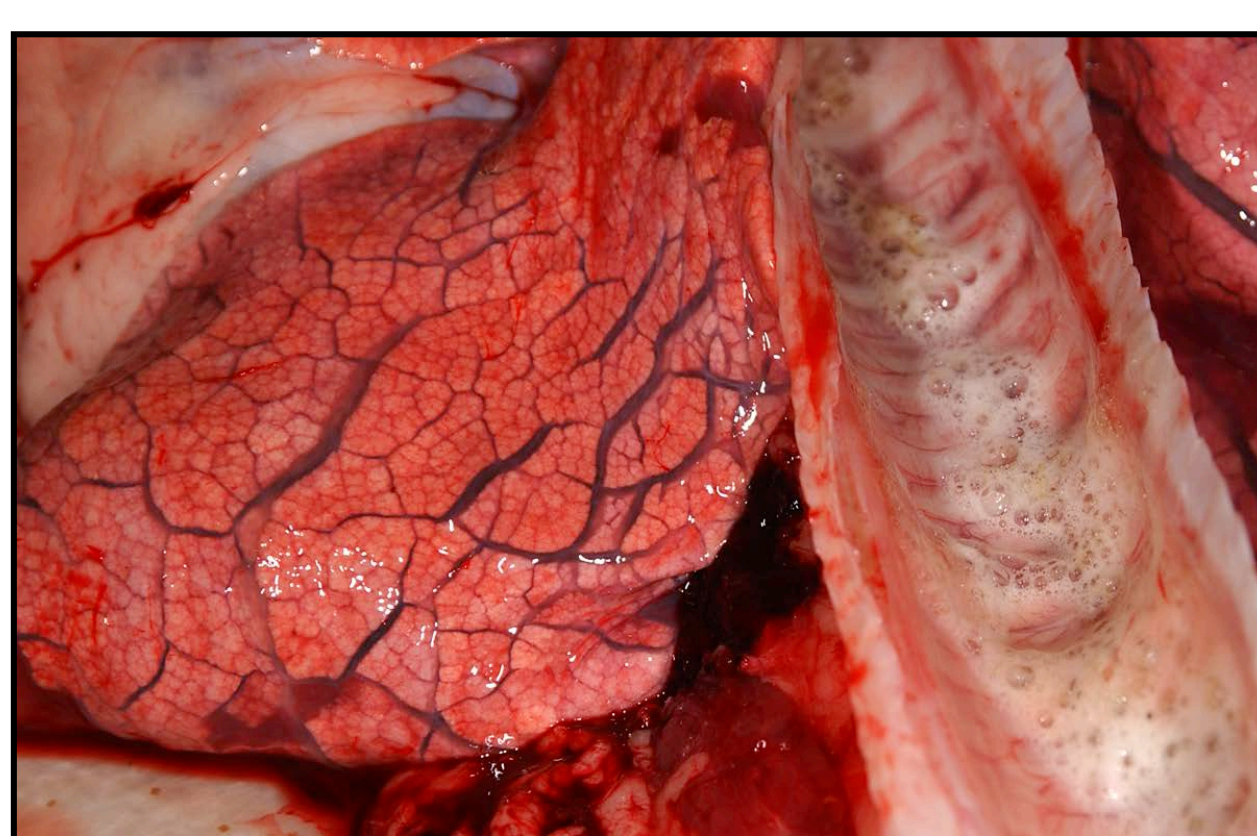
Sheep, lungs. Severe pulmonary edema. Lungs fail to collapse, are reddened, and have multiple rib impressions



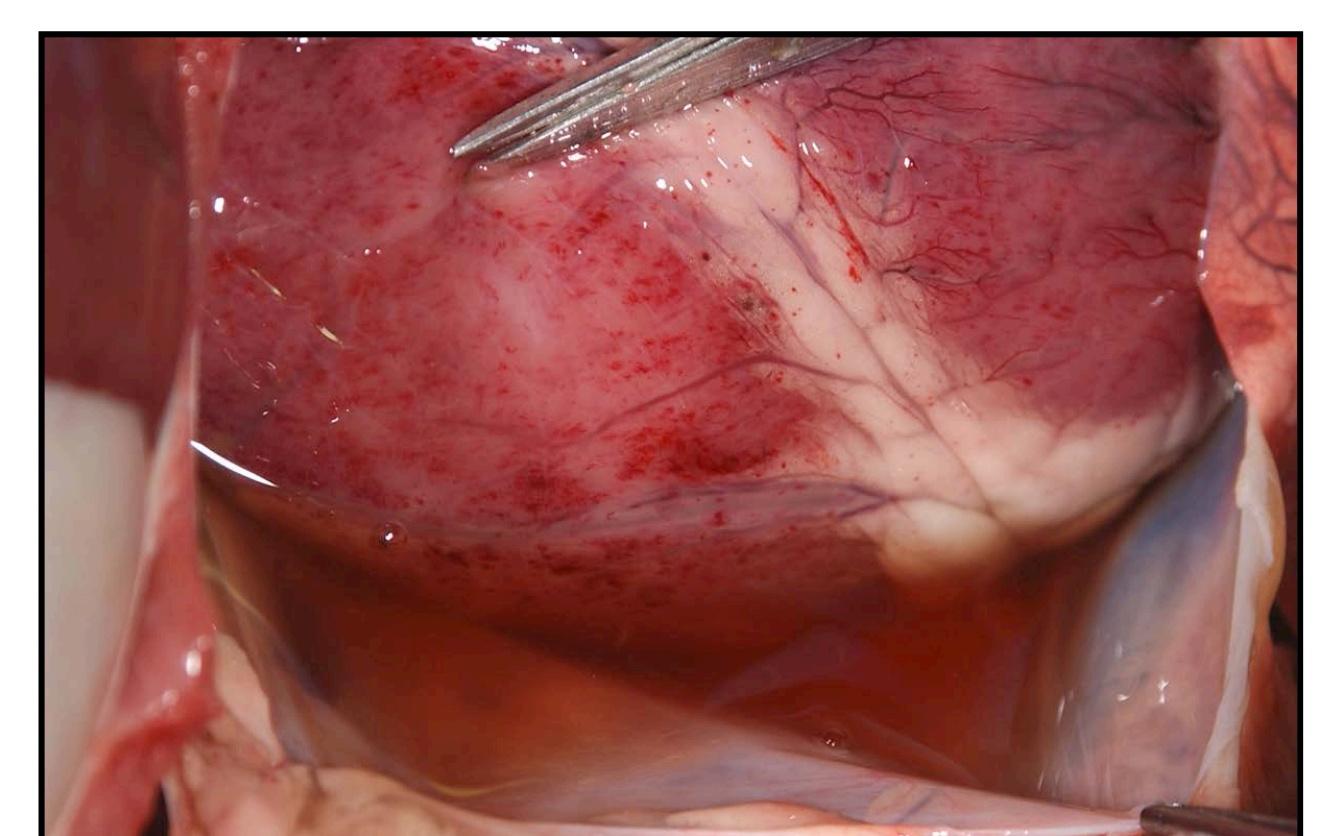
Sheep, lungs. Multifocal congestion and edema



Sheep, cut section of lung. White foam fills the bronchi and other airways indicating pulmonary edema



Sheep, lung and trachea. Severe interlobular pulmonary edema and froth in trachea



Sheep, heart. Marked hydropericardium ("heartwater") and numerous epicardial petechial hemorrhages

# Foot and Mouth Disease



Cow. Ptyalism and nasal discharge



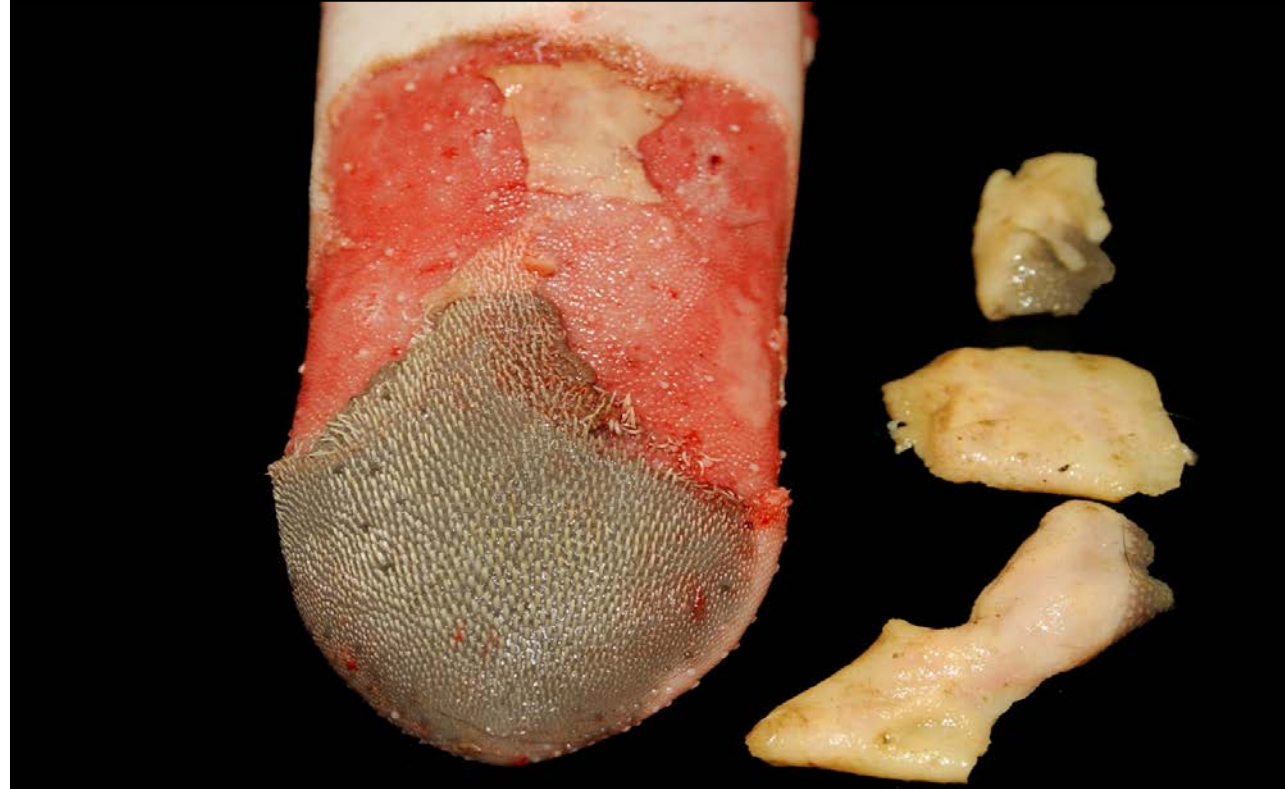
Cow, alar fold. Erosion and exudate



Cow, lower labial vestibule: multiple coalescing erosions; Dental pad: more advanced erosions with sloughing of mucosal tissue



Cow, tongue. blanching area of border of tongue with early vesicle formation



Cow, tongue. Glossitis associated with recently detached portions of lingual epithelium



Cow, tongue. Area of detached epithelium probably resulting from coalescence of several smaller vesicular lesions; early re-epithelialization (healing)



Cow, dorsal aspect of interdigital space. Blanching epithelium of interdigital space and coronary band. Very early infection.



Cow, plantar coronary bands of hoof and dewclaws. Skin adjacent to the coronary bands of hoof and dew claws is hyperemic; epithelium of coronary bands and interdigital is blanching



Cow, plantar aspect of foot. Hyperemia of coronary bands with initiation of large vesicle or bullae on bulbs of feet and interdigital space



Cow, dorsal coronary band. Recently ruptured vesicles along the coronary band epithelium



Cow, interdigital space. Ruptured vesicle in the interdigital space



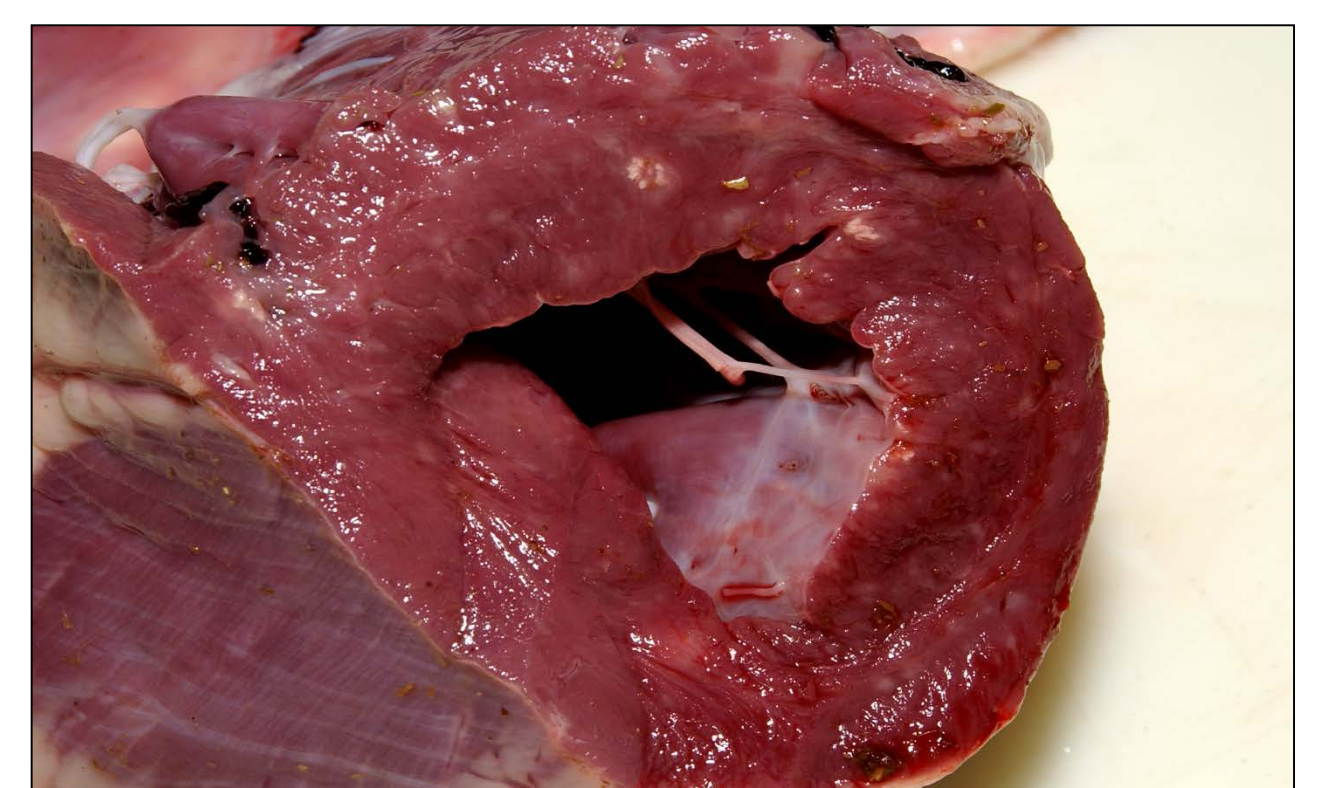
Cow, interdigital space. Large ruptured bulla in the interdigital space



Cow, rumen. Erosions on the rumen pillars



Cow, heart. White striations of epicardial surface



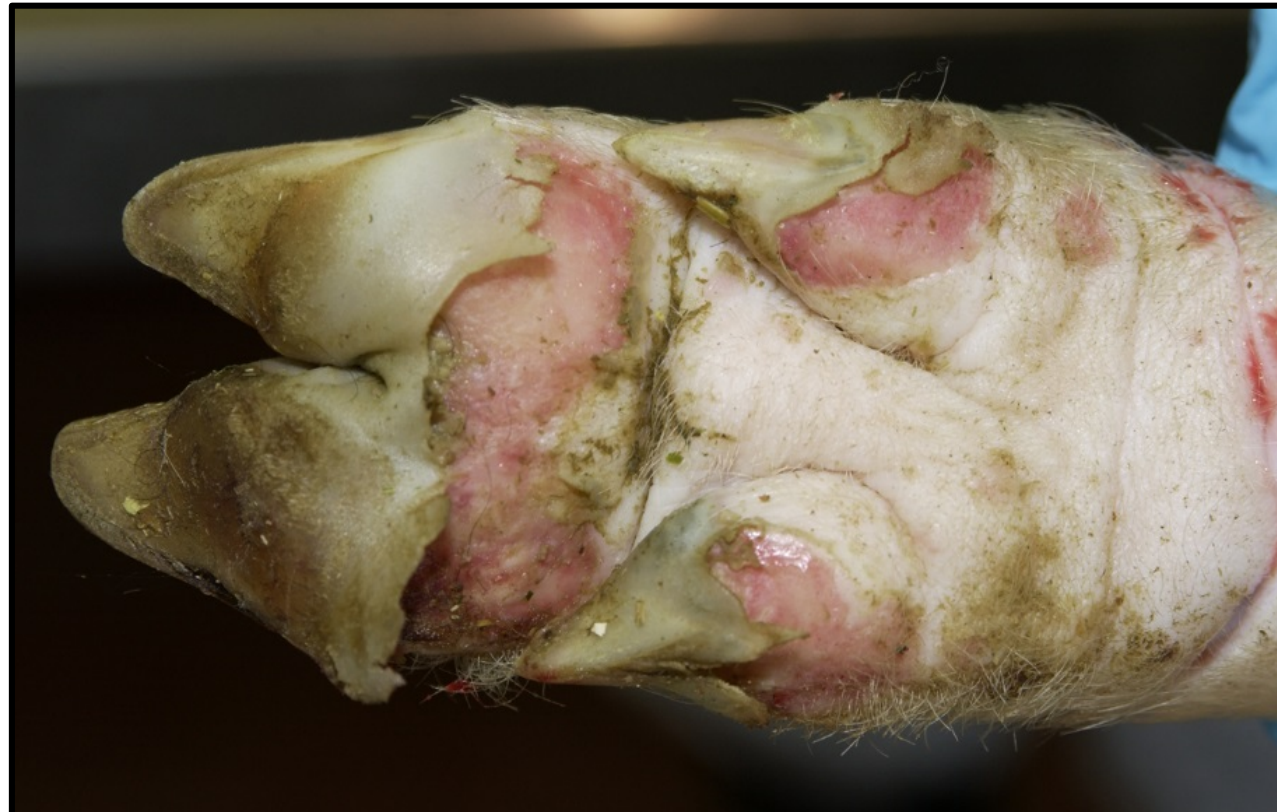
Cow, heart. ventricular wall. Multifocal myocardial degeneration and necrosis

# Foot and Mouth Disease Swine / Sheep

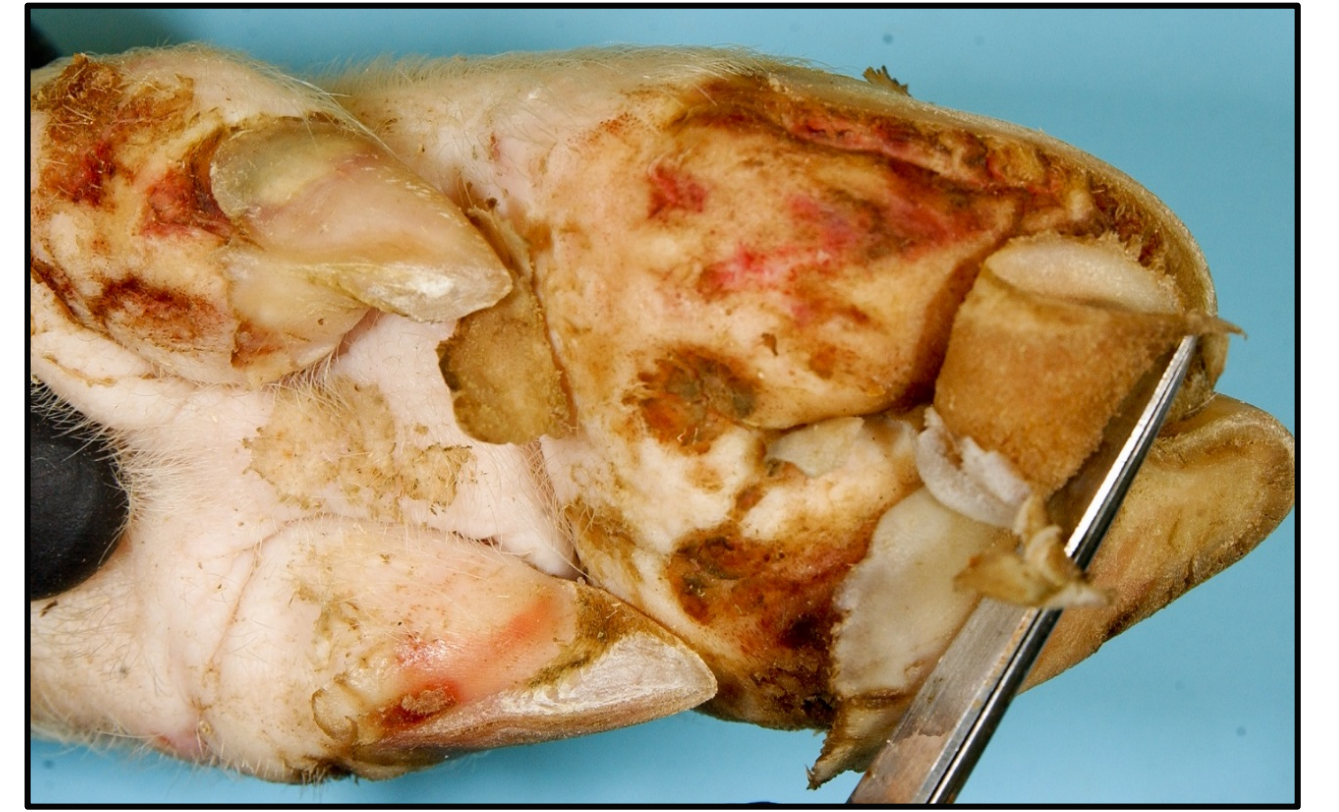
## Swine



Swine, foot. Inflammation of coronary band, some re-epithelialization of ruptured vesicles with initial separation of claw



Swine, foot. Hooves at the sole of both claws have separated from underlying epithelium



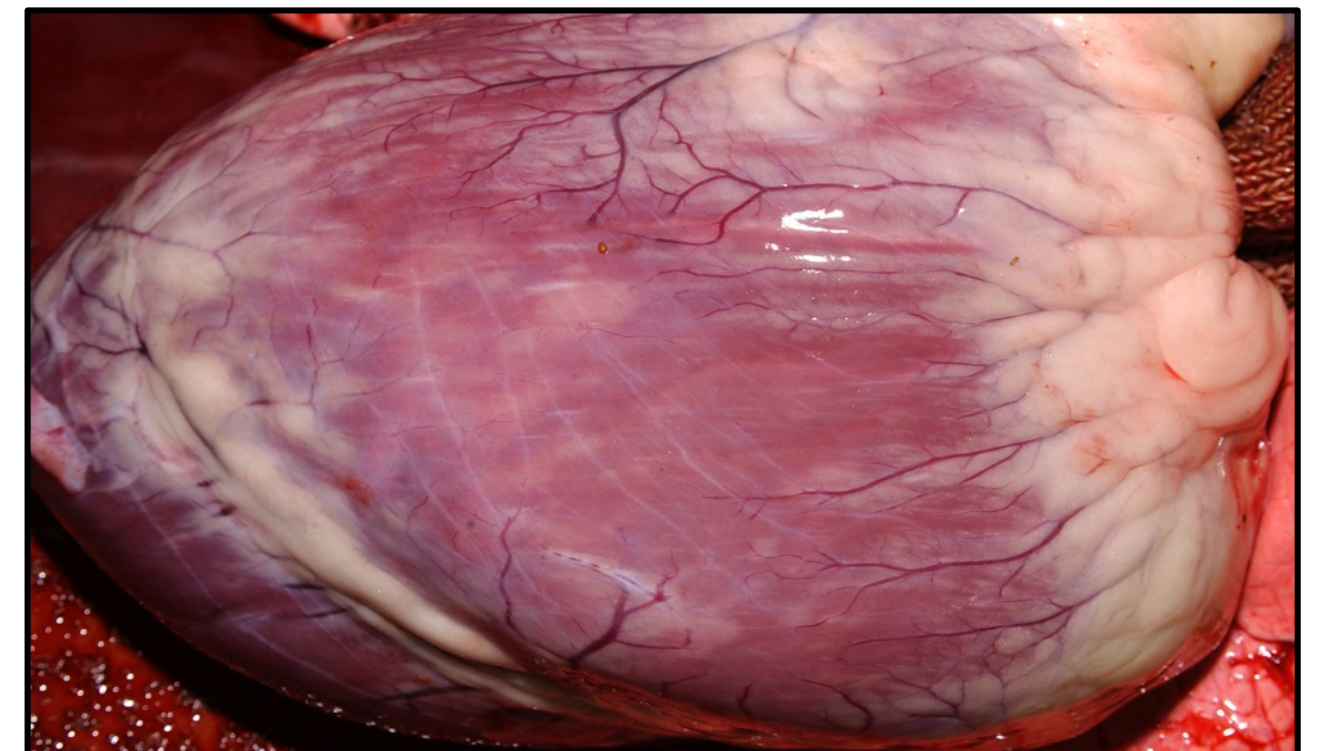
Swine, foot. Hooves at the sole of both claws can easily be separated from underlying epithelium



Swine, snout. Single intact vesicle on the dorsal snout

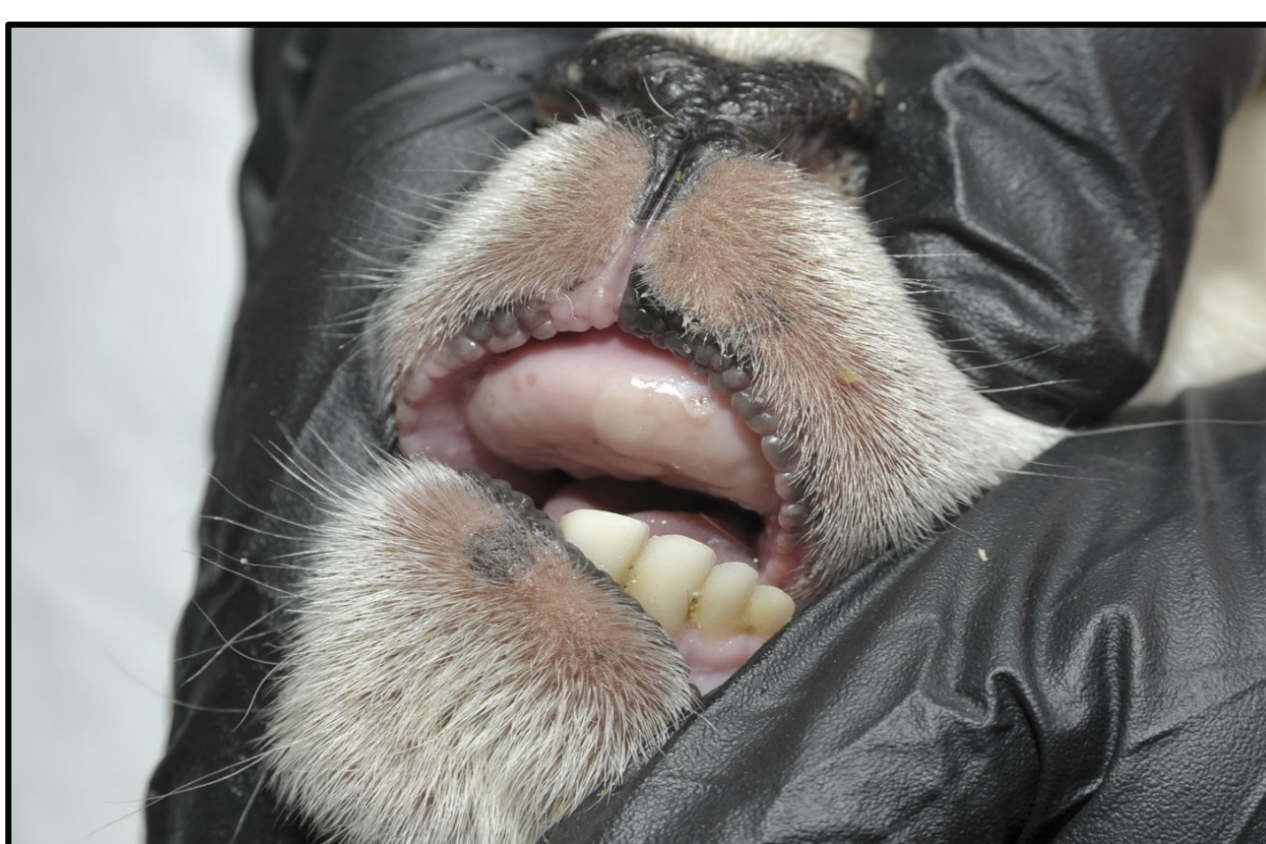


Swine, snout. Ruptured bulla revealing the underlying eroded epithelium.

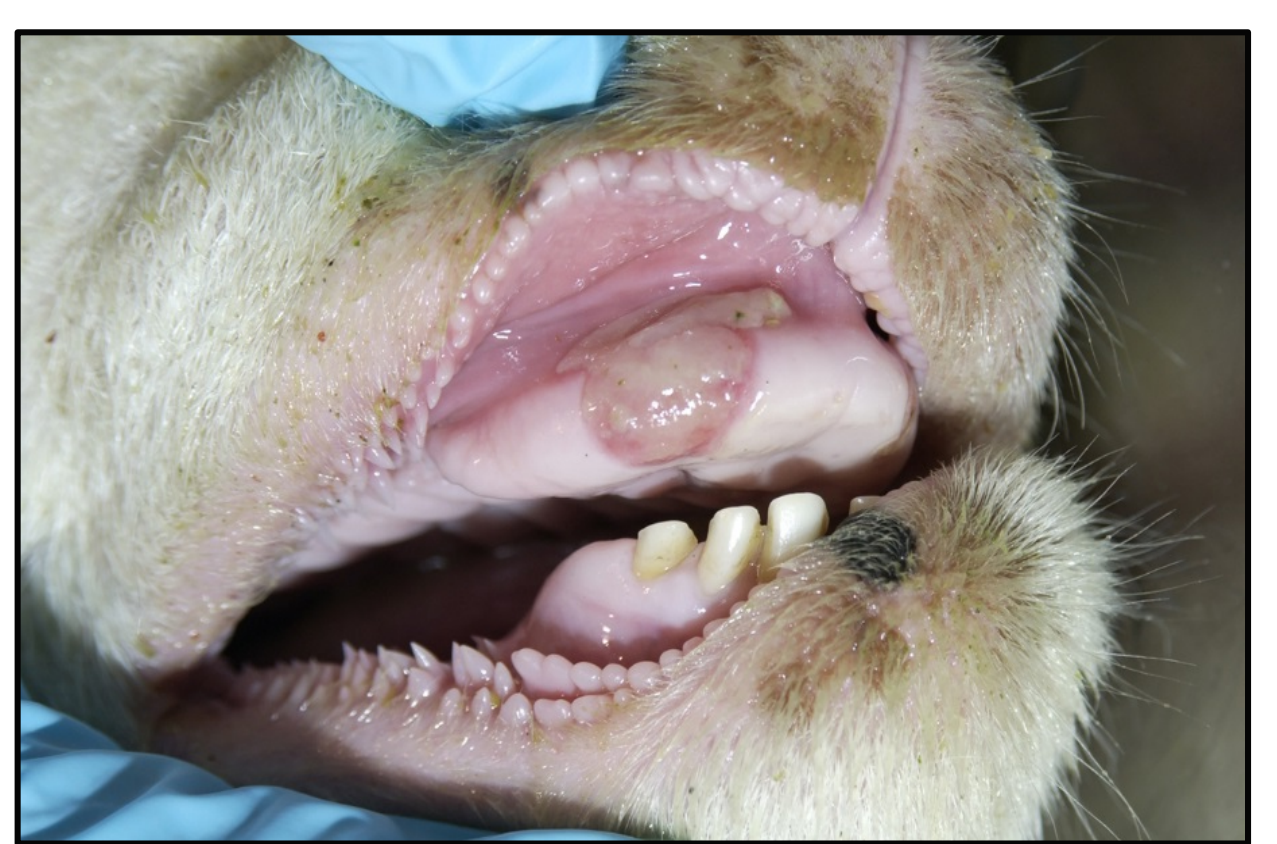


Swine, heart. . Right-side severe multifocal myocardial necrosis; gray mottled streaks deep in the myocardium, not to be confused with fat or lymphatics that are fine lines across the muscle fibers.

## Sheep



Sheep, dental pad. Small blanched area which often evolve into vesicle



Sheep, dental pad. Erosion with a flap of necrotic epithelium



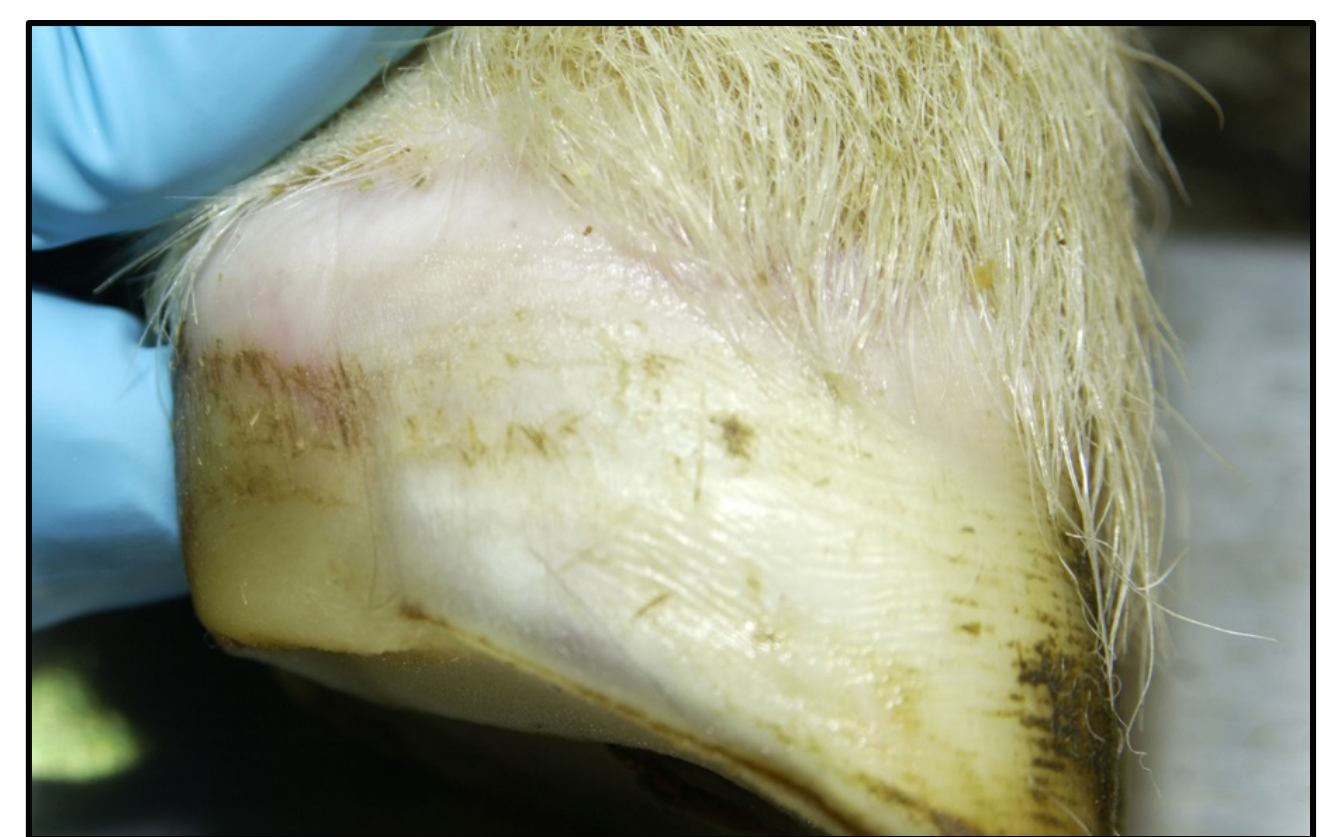
Sheep, dental pad. Advanced re-epithelialization of ruptured vesicle on dental pad



Sheep; vulva. Multiple erosions at the mucocutaneous junction of the vulva



Sheep; vulva. Piece of straw is pointing to a single vesicle at the mucocutaneous junction of the vulva



Sheep, coronary band. Blanching along the coronary band with vesicular fluid present