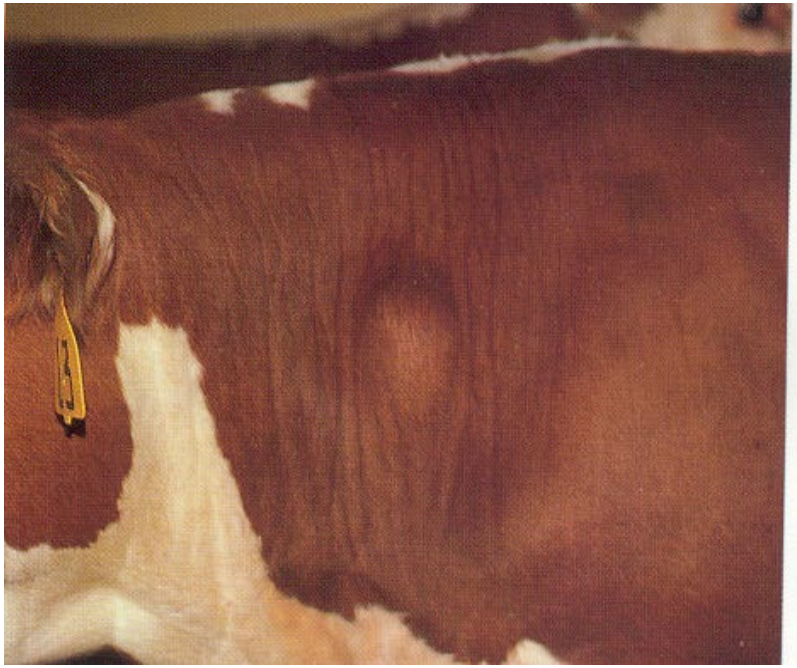
CATTLE PATHOLOGY

Abomasal Ulcers

Abscesses at Antemortem

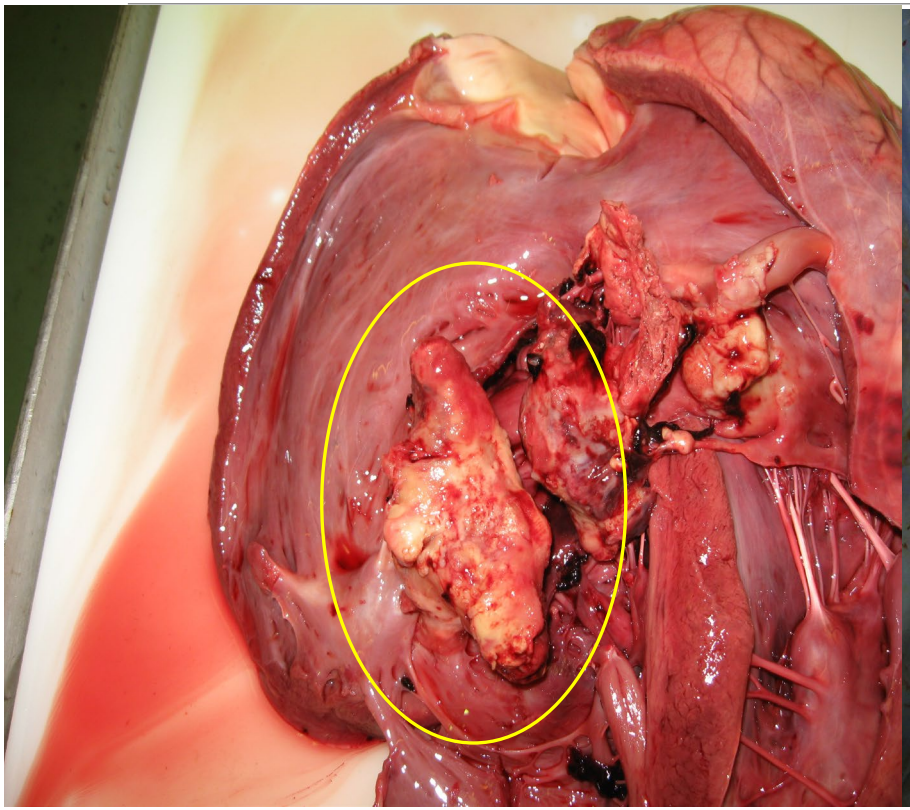


Abcesses at Postmortem

Abscess in the spine.

Abscess in the head.

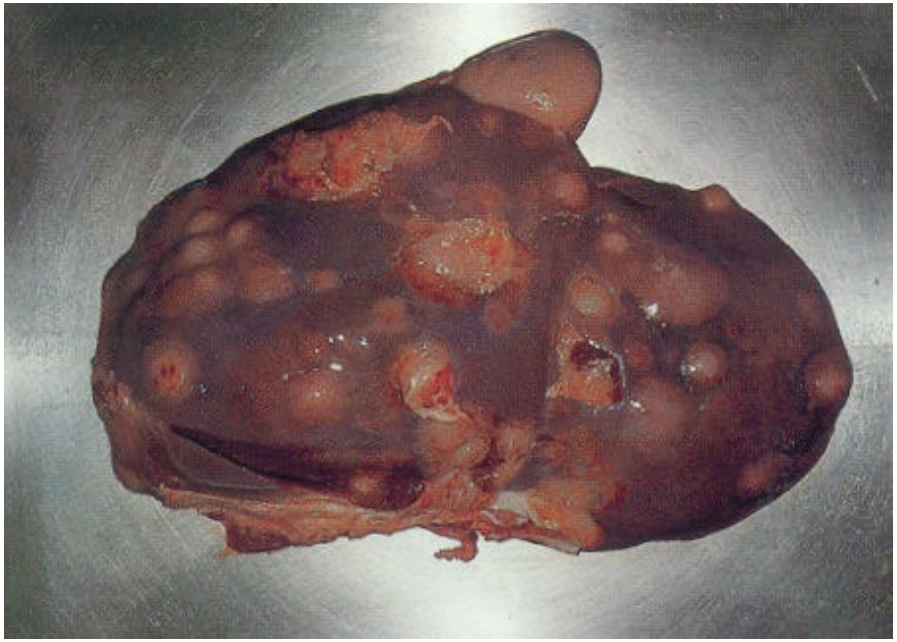
Abscesses in the Heart



Abscess in the heart.

Cross-section of the abscess in the heart as seen in the photo to the left.

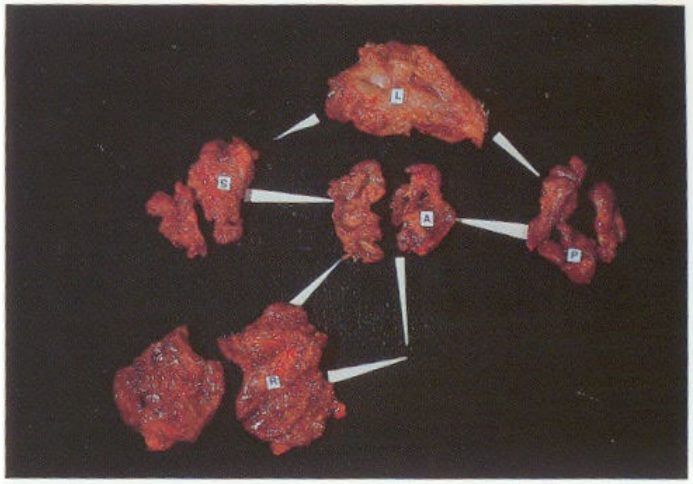
Abscesses in the Liver

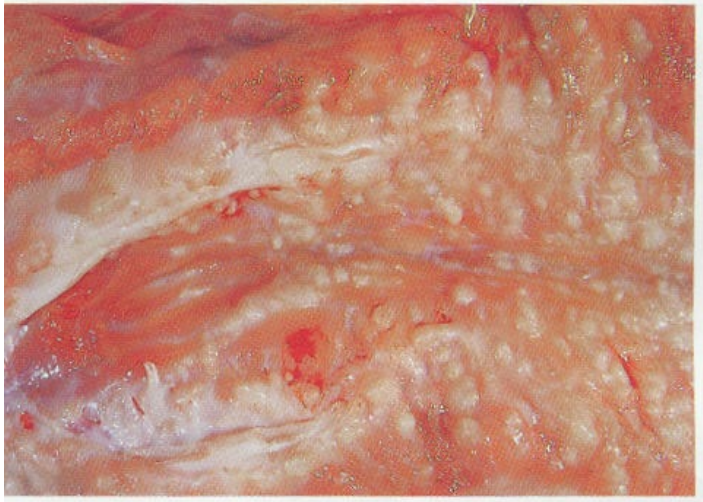


ACTINOBACILLOSIS (Wooden Tongue)

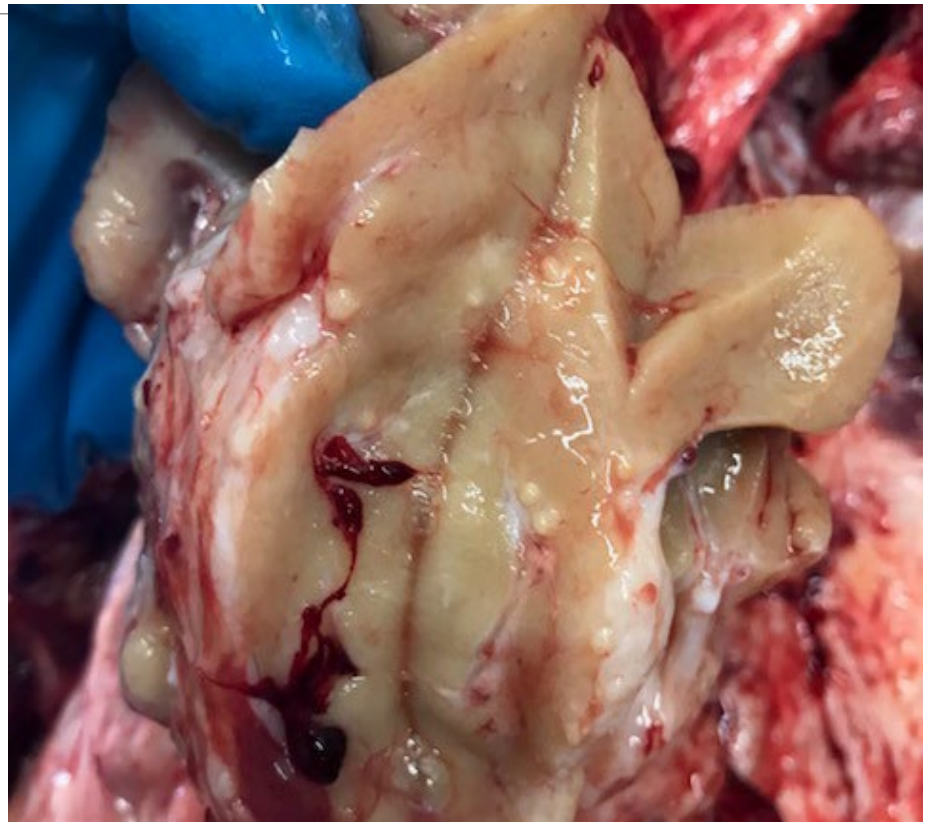
- Generally located in the soft tissue of the head, such as the tongue and/or lymph nodes.
- If localized, part of the head may be salvaged after the removal of affected tissue.
- If this condition is found in the viscera and/or lungs of the animal retain the carcass and parts for veterinary disposition.

Actinobacillosis in Lymph Nodes





Actinobacillosis in Lymph Nodes



LNs very large and some small granulomas can be seen throughout.

Presentation of Wooden Tongue as seen by NCDA MPID personnel!

30+ month Holstein-Angus cow

Antemortem: Large, softball sized swelling in ventral, intermandibular area

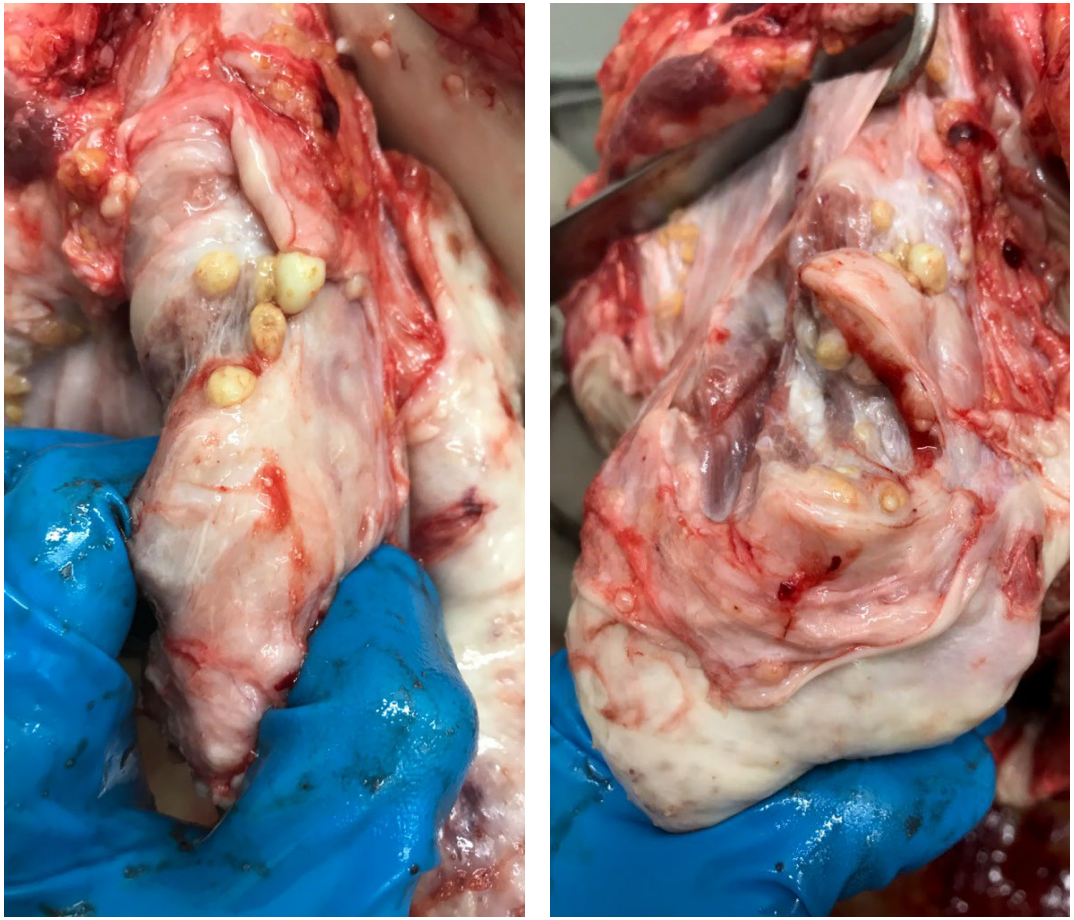
Postmortem: Tongue is stunted, abnormally firm in texture, fibrotic with 2-4 mm pyogranulomatous lesions embedded within tongue, and several small granulomatous nodules in mandibular and medial retropharyngeal LN

Actinobacillosis
as seen at Antemortem…

IPP suspected this animal.

Tongue is stunted and firm in texture.

Actinobacillosis as seen at Postmortem…



Granulomas in the Mandibular and Medial Retropharyngeal LNs.

Actinobacillosis as seen at Postmortem…

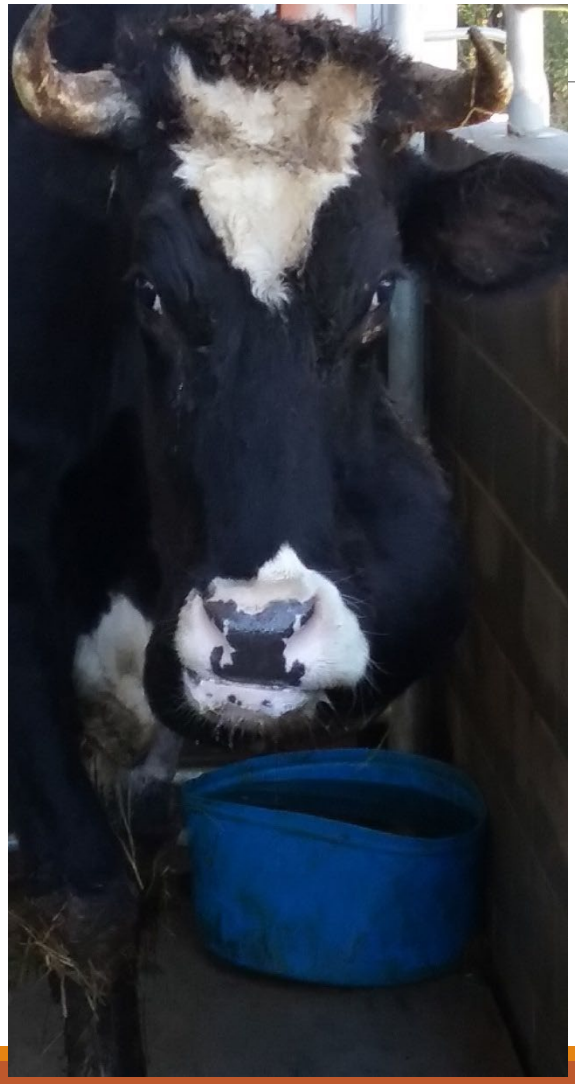
Actinomycosis (Lumpy Jaw) 9 CFR 311.9

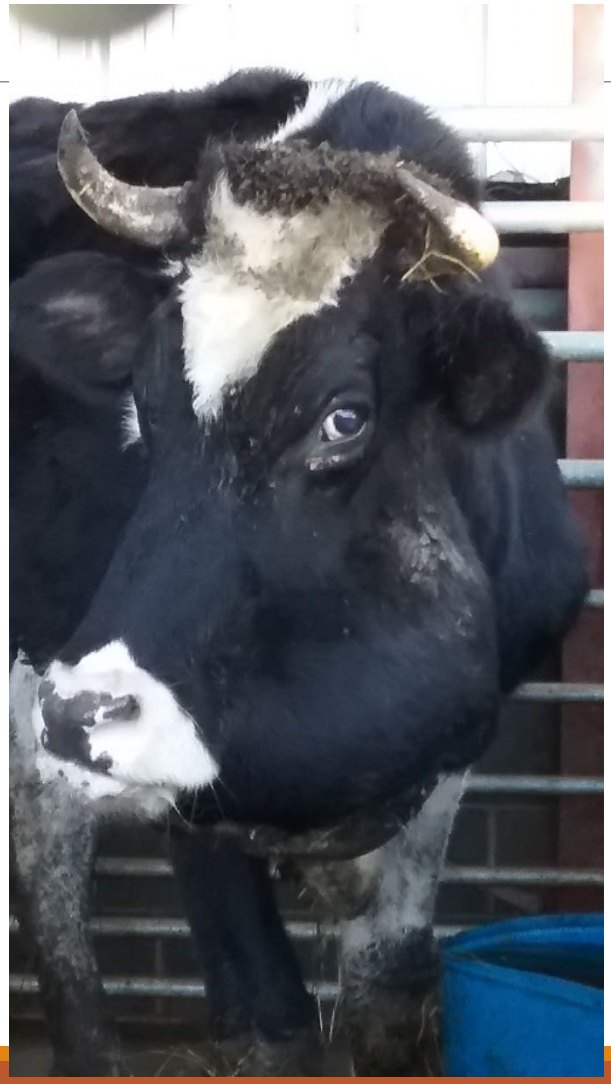
Generally located in the bony structures of the head and jaws.

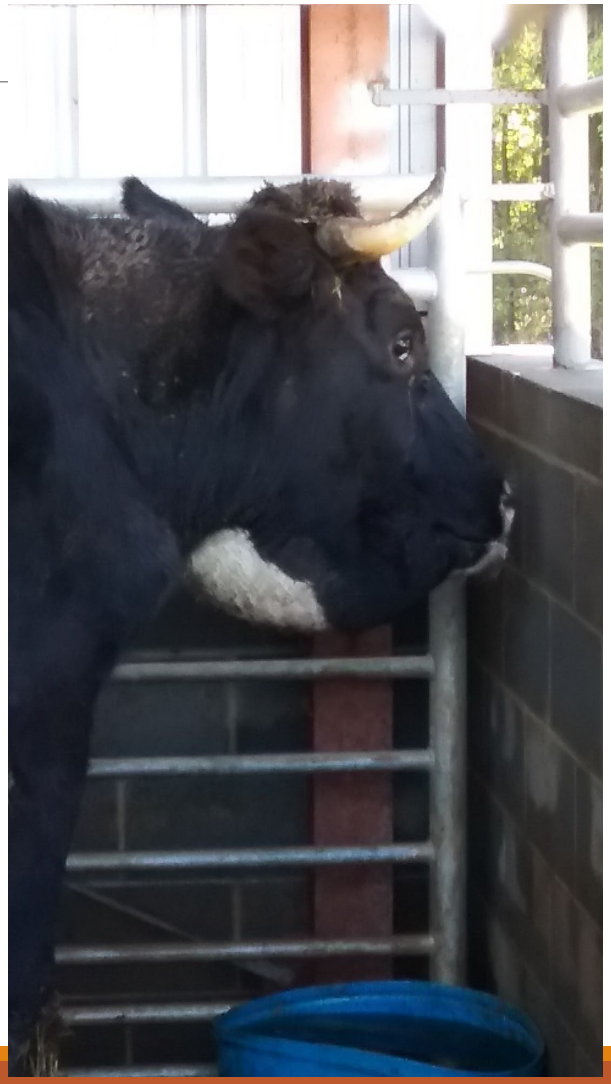
May be abscessed and is usually characterized by swelling.

If this is seen, Suspect the animal at antemortem. Retain at postmortem if this was not seen at antemortem.

Case of Lumpy Jaw seen by NCDA MPID Personnel!

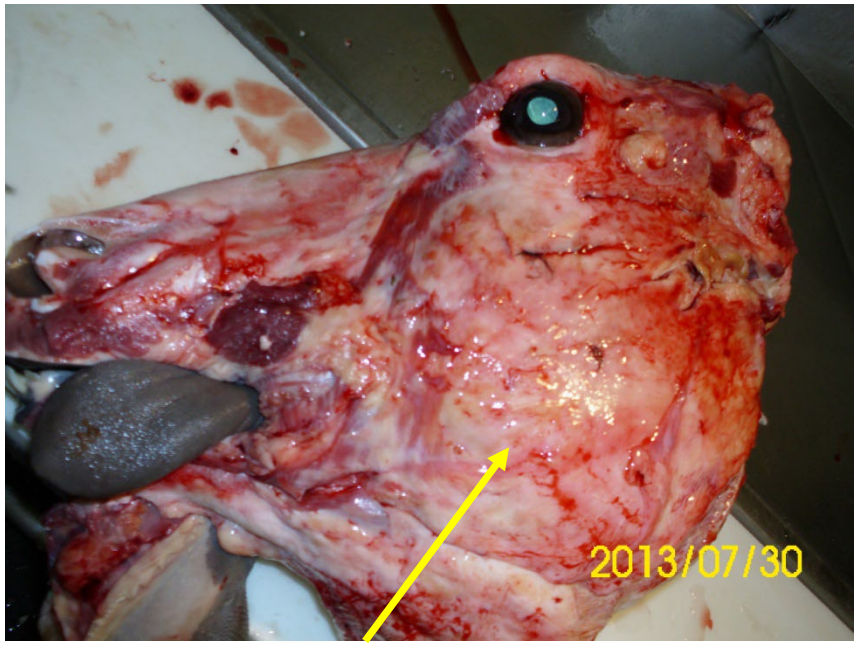






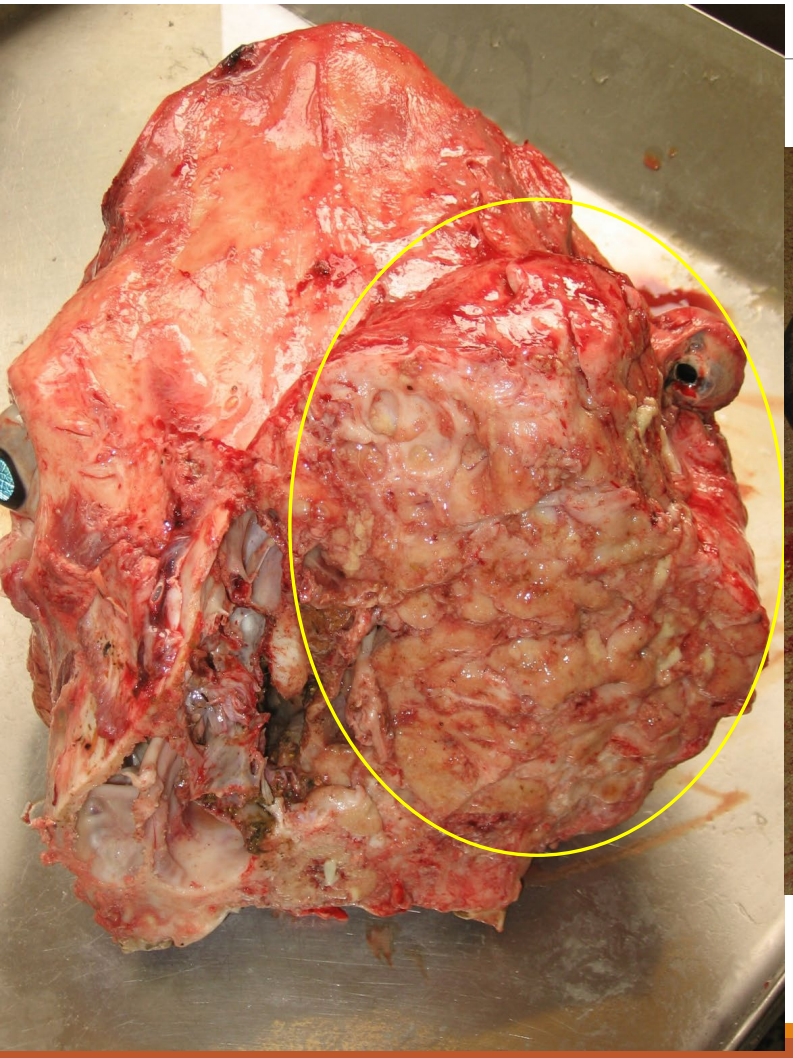
Actinomycosis (Lumpy Jaw)

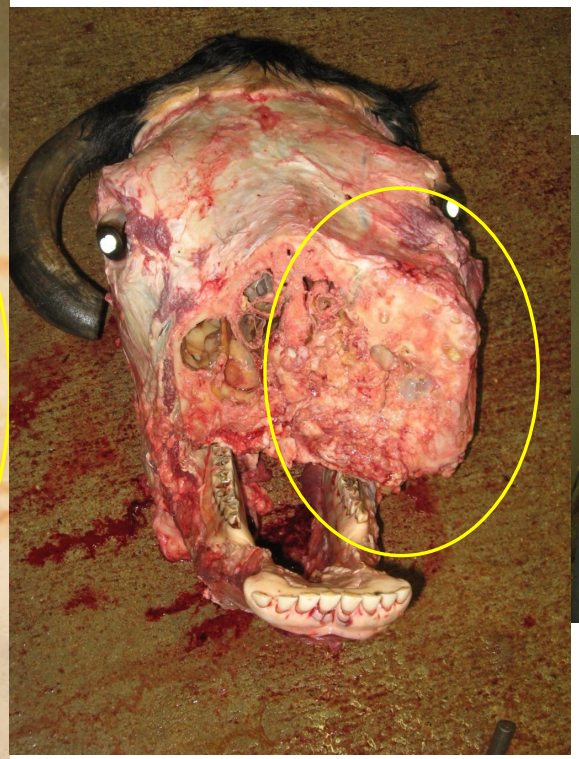
Normal – no swelling seen.

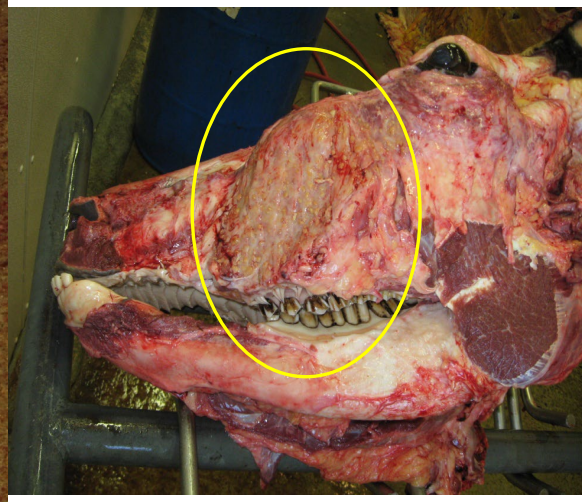


Affected side. Notice the swelling seen here that is not present on the head on the left. Both photos are of the same head, thus why it is important for us to inspect bovines at antemortem on both sides.

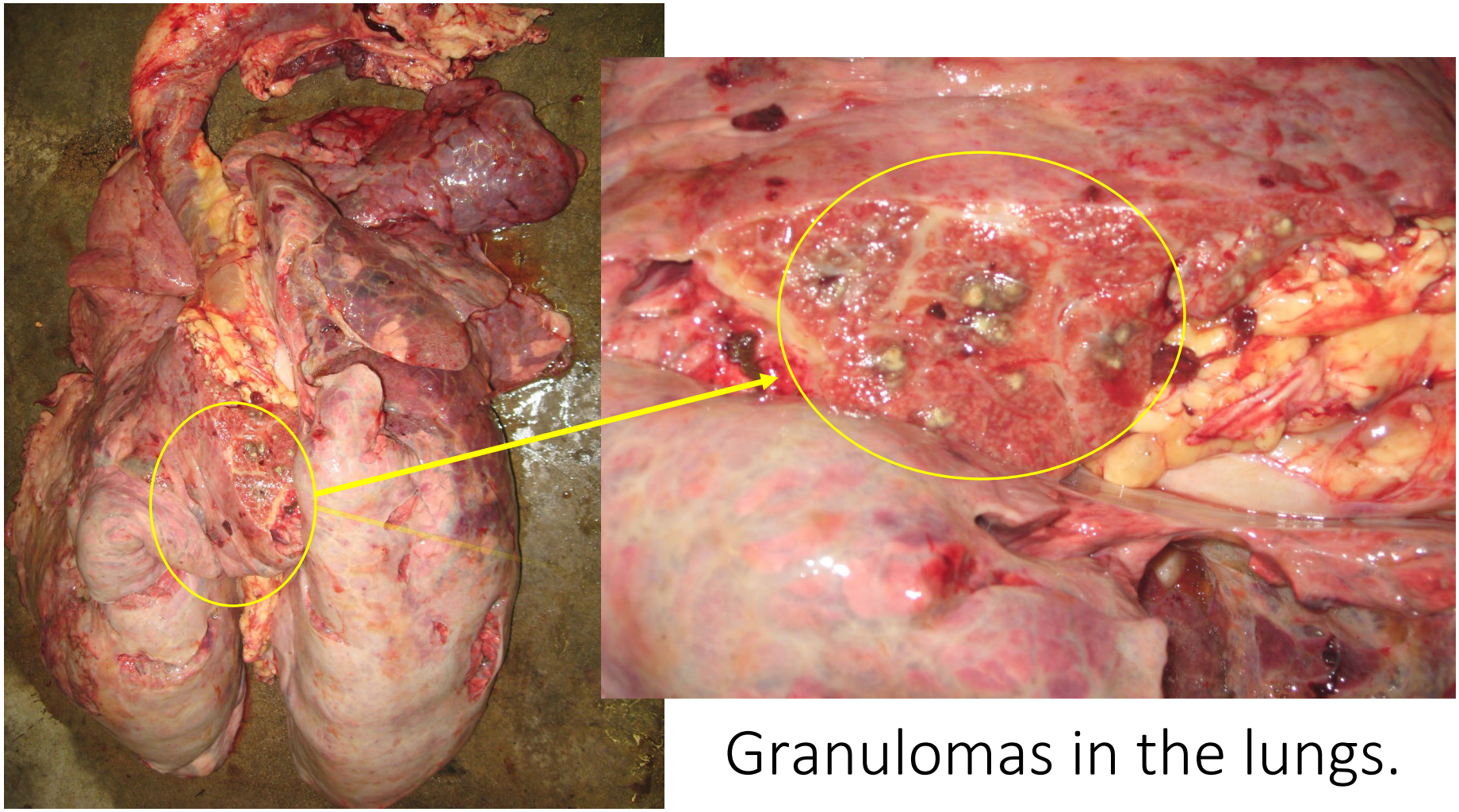
Actinomycosis in the Head



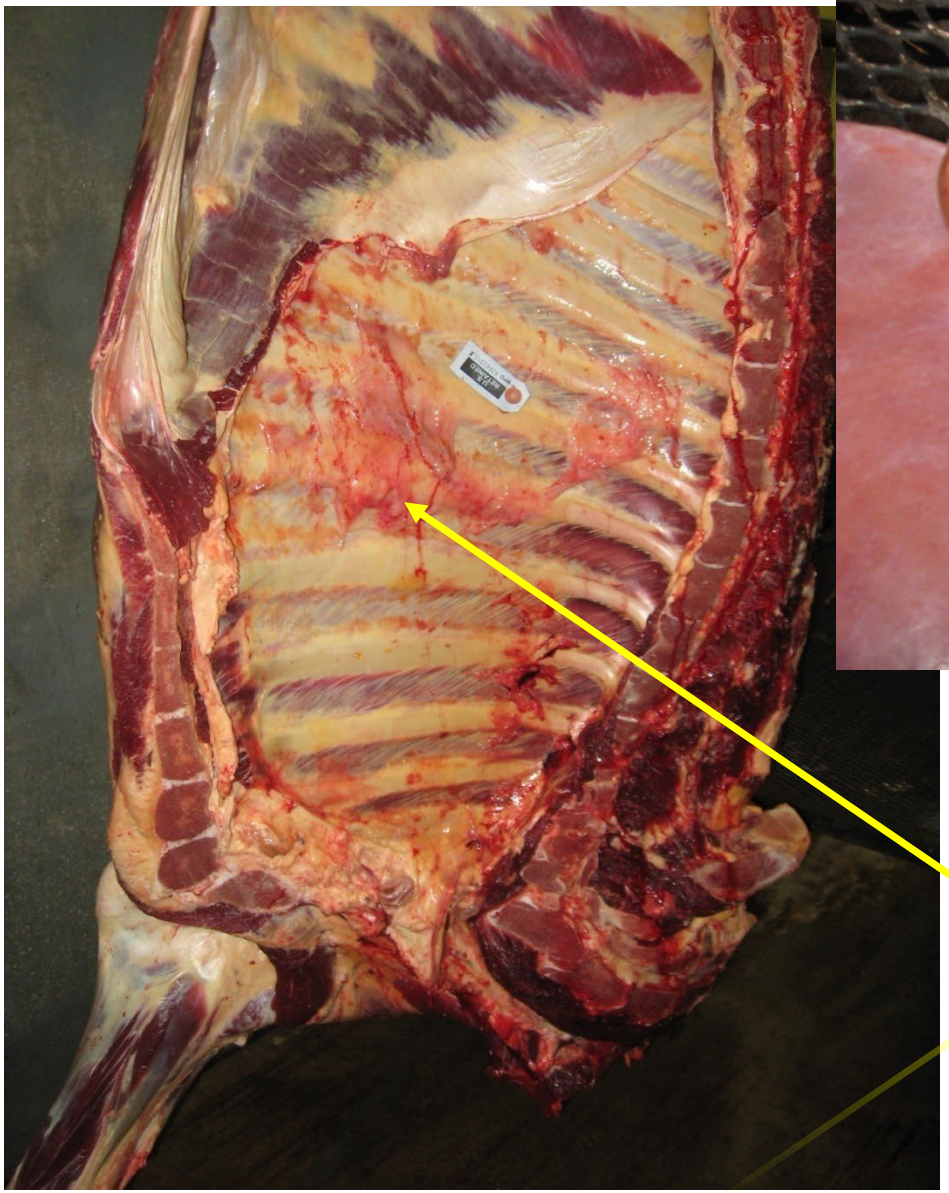


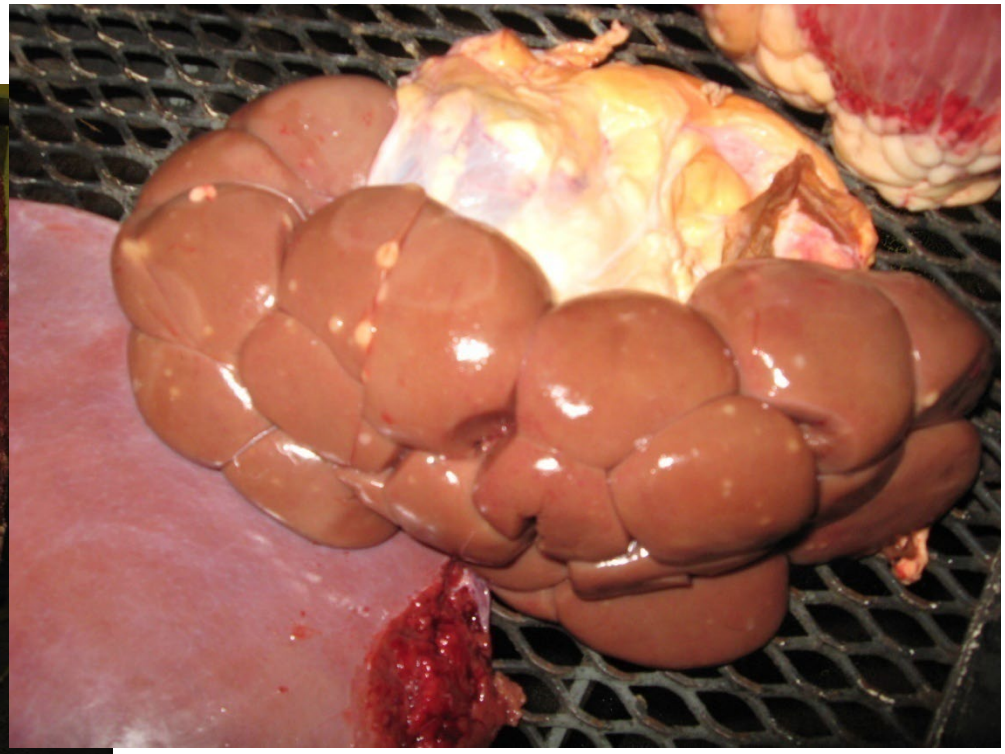


Presentation of Actinomycosis in the Viscera…



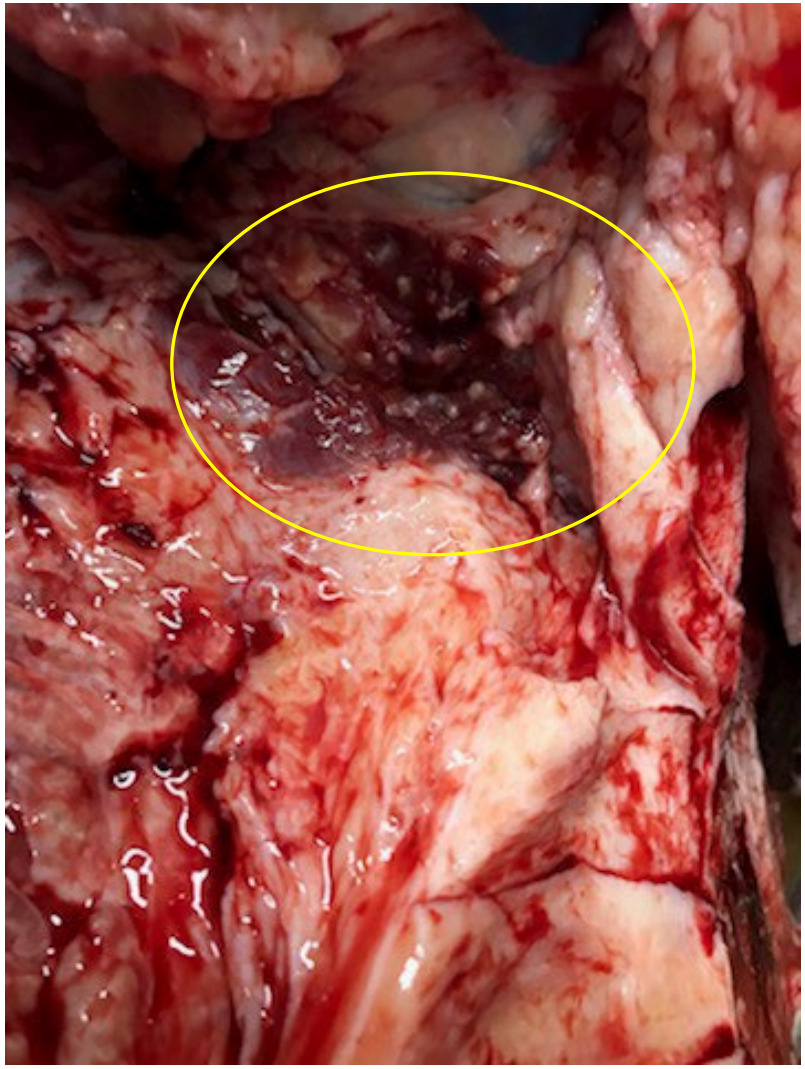
Granulomas in the lungs.





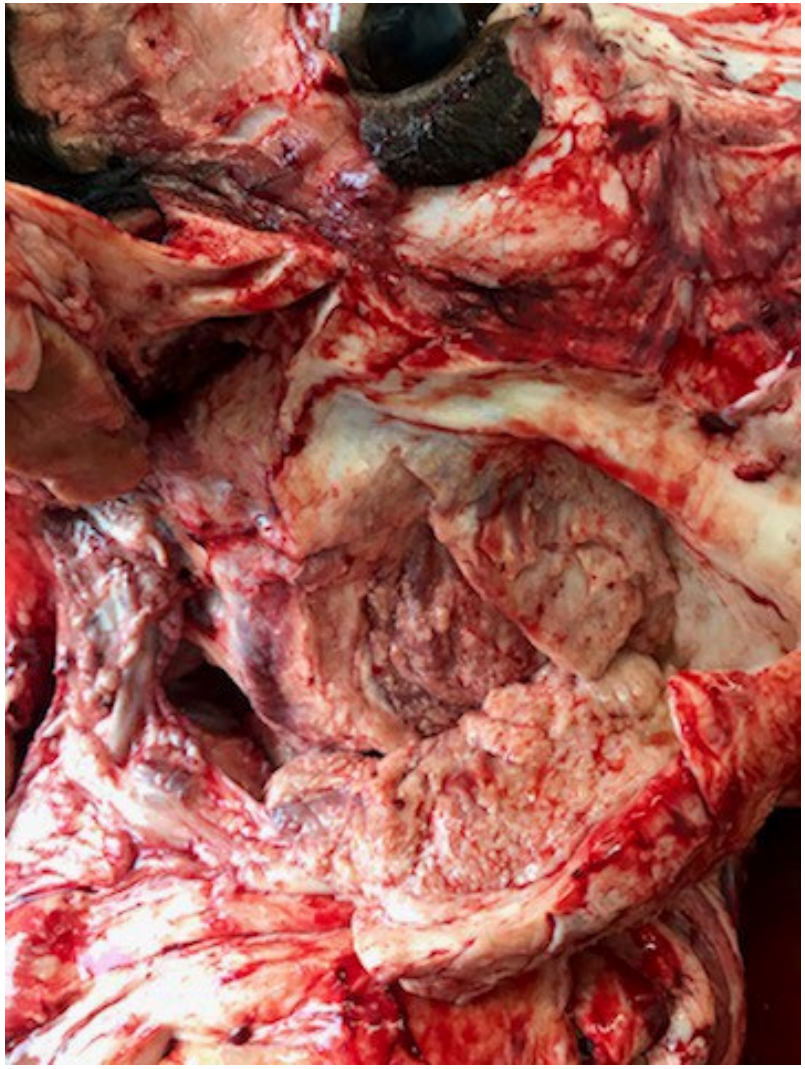
Actinomycosis presenting as Pleuritis in chest cavity and white spots on kidney.

2nd Case of Lumpy Jaw as seen by NCDA MPID Personnel!



Actinobacillosis in Muscle

CROSS-SECTION OF PYOGRANULOMATOUS LESIONS IN THE MUSCLE.



Actinobacillosis in the Head

CROSS-SECTION OF THE INFECTED MASS UNDERNEATH THE RIGHT EYE.

Actinobacillosis in Parotid Lymph Nodes…

Enlarged and granulomatous.

Arthritis
9 CFR 311.7

An inflammatory condition of the joint.

Most arthritis is the result of an injury and only requires that the affected joint and corresponding lymph nodes be removed and condemned.

If during the removal of affected joint(s) the synovial fluid within the joint is released, all tissue in contact with the fluid must also be trimmed away and condemned.

When more than one joint is involved with arthritis (Polyarthritis), you should retain the carcass and parts for veterinary disposition.

Arthritis

Arthritis

The yellow fluid seen on the exterior of the carcass above is synovial fluid from inside an arthritic joint. Normal synovial fluid is clear.

Bruised Tissue
9 CFR 311.14

Bruised tissue should be trimmed and condemned.

If evidence of infection exists, retain the carcass and parts for veterinary disposition.

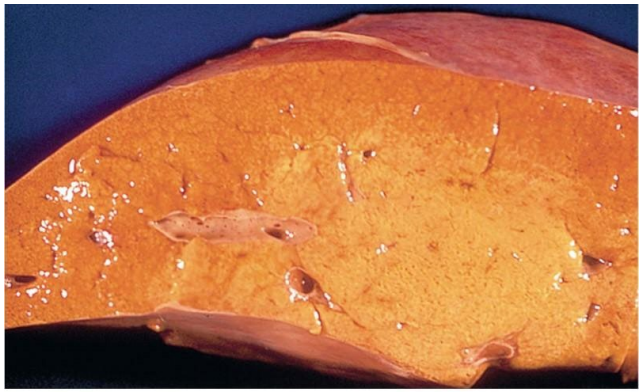
Bruised Tissue

Cadiomegaly

Enlarged heart

Could be the result of short-term stress, such as a pregnancy or medical condition, such as the weakening of the heart muscle, artery disease, heart valve problems, or abnormal heart rhythms.

Carotenosis of the Liver
9 CFR 311.13



Liver is characterized by a highly colored yellow-orange color or pigmentation. This condition may cause the liver to become enlarged, soft, and friable (easily crumbled).

A practical test to assure the correct recognition of carotenosis is made by placing a white paper towel or napkin on the cut surface of a liver suspected of being affected with carotene discoloration. An orange-bronze stain would be indicative of carotenosis.

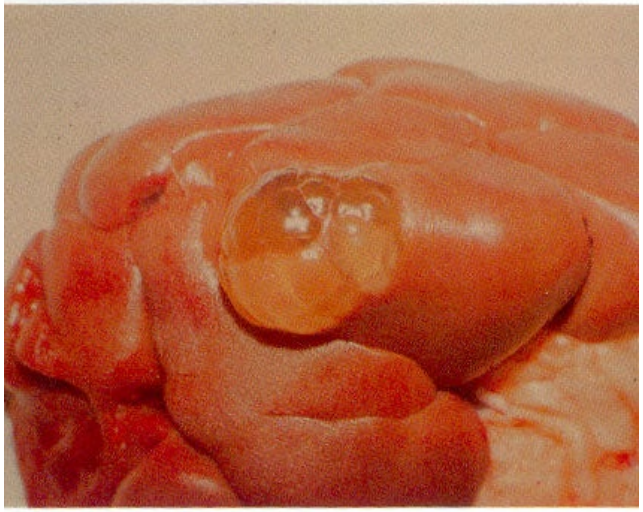
A liver affected with carotenosis is to be condemned and not eligible for use a human food but *may* be salvaged for animal food uses.

The pale-colored liver (Hepatic Lipidosis) found in near-term cows may resemble carotenosis. For this reason, you must be sure of your diagnosis. The pale liver may vary from tan to yellow to gray in color and may be enlarged. Usually, the cut surface feels greasy. The cause of this pale liver is thought to be the result of a change in fat metabolism of the near-term cow. Livers from cattle that are normal except for the pale color are passed without restriction.

Cirrhosis of the Liver

Degeneration of liver tissue with a replacement by hard, tough, fibrous connective tissue.

Condemn these livers, but the establishment may save them for animal food.



Cystic Kidney

Fluid-filled cysts visible on the surface of the kidney or occasionally embedded inside.

Slight cystic conditions may be trimmed and passed.

When the cystic condition is more than slight, the affected kidney(s) are condemned.

Cysticercosis (Beef Measles) 9 CFR 311.23

Infective form of the human tapeworm.

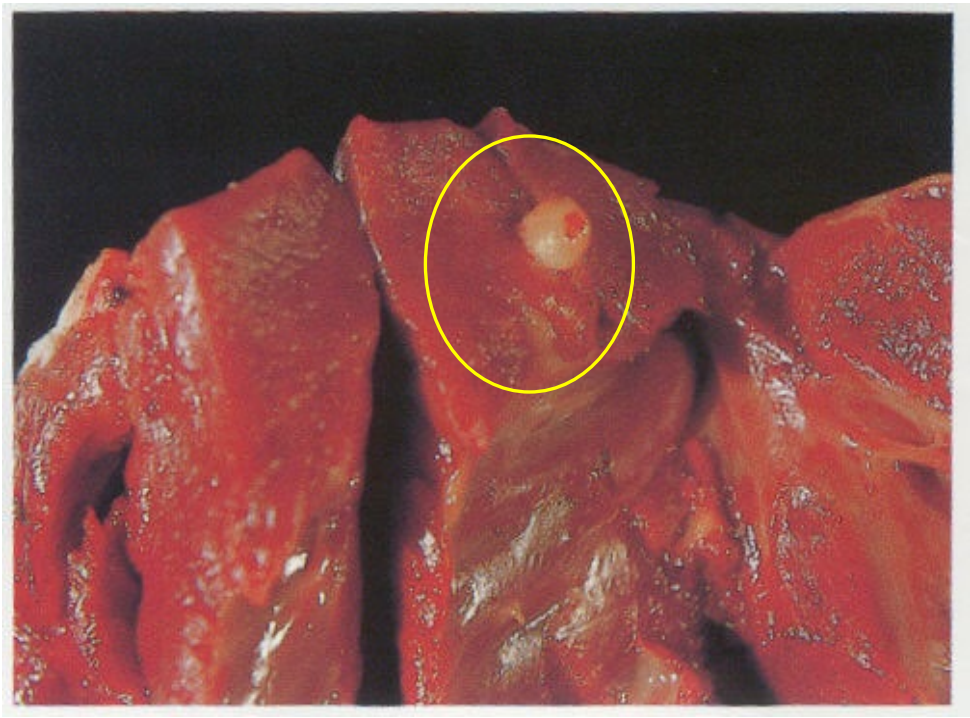
Cysts appear as ¼ to ½ inch sized “blisters” in the meat.

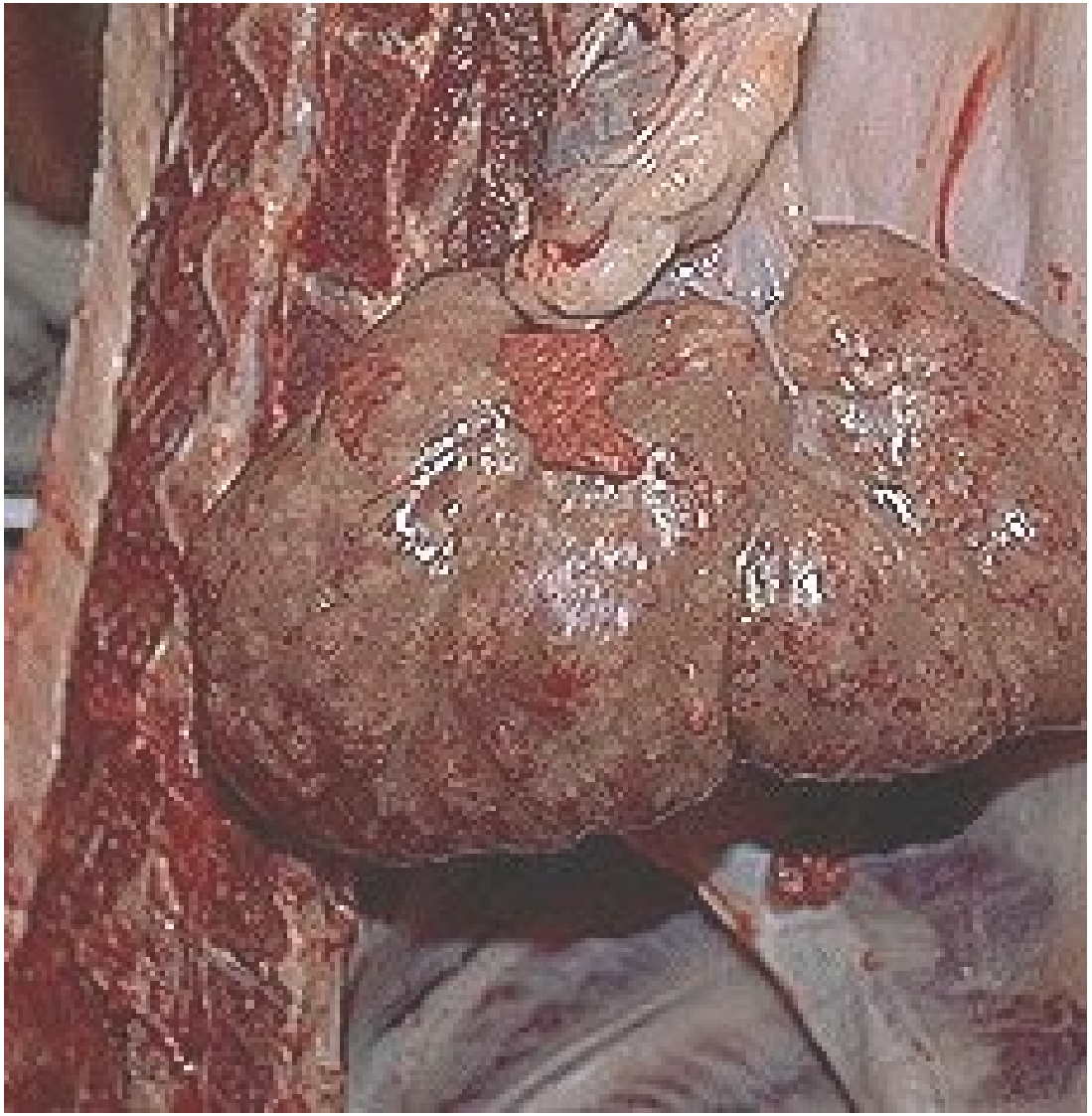
Larvae are inside the cysts.

Usually located in the muscles with best circulation (cheeks, skirt, round, heart, etc.).

Retain carcass and parts for veterinary disposition.

Cysticercosis (Beef Measles)





Degenerative Kidney

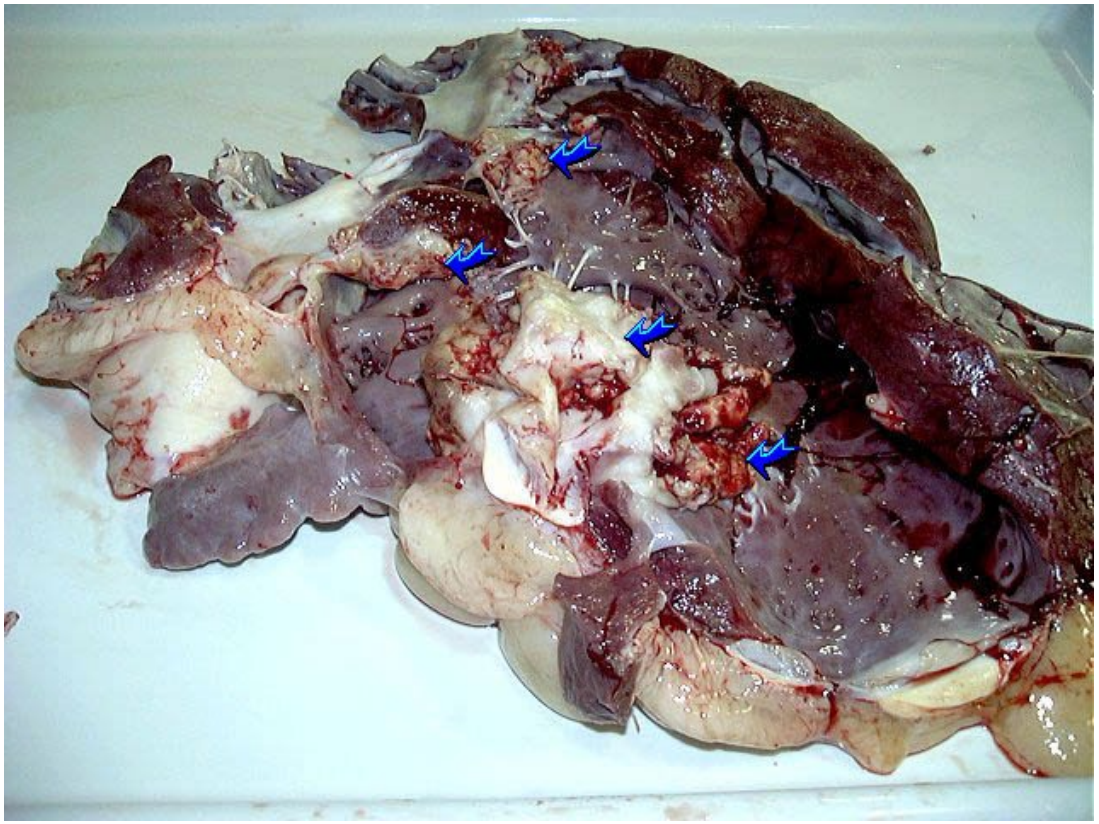
Retain for veterinary disposition when other pathologies are present.

Condemn kidney(s) affected if no other pathologies are present.

Degenerative Liver (Blue Liver)

Presence of large amounts of blood in the liver with resulting degenerative changes.

Condemn these livers, but the establishment may save them for animal food.

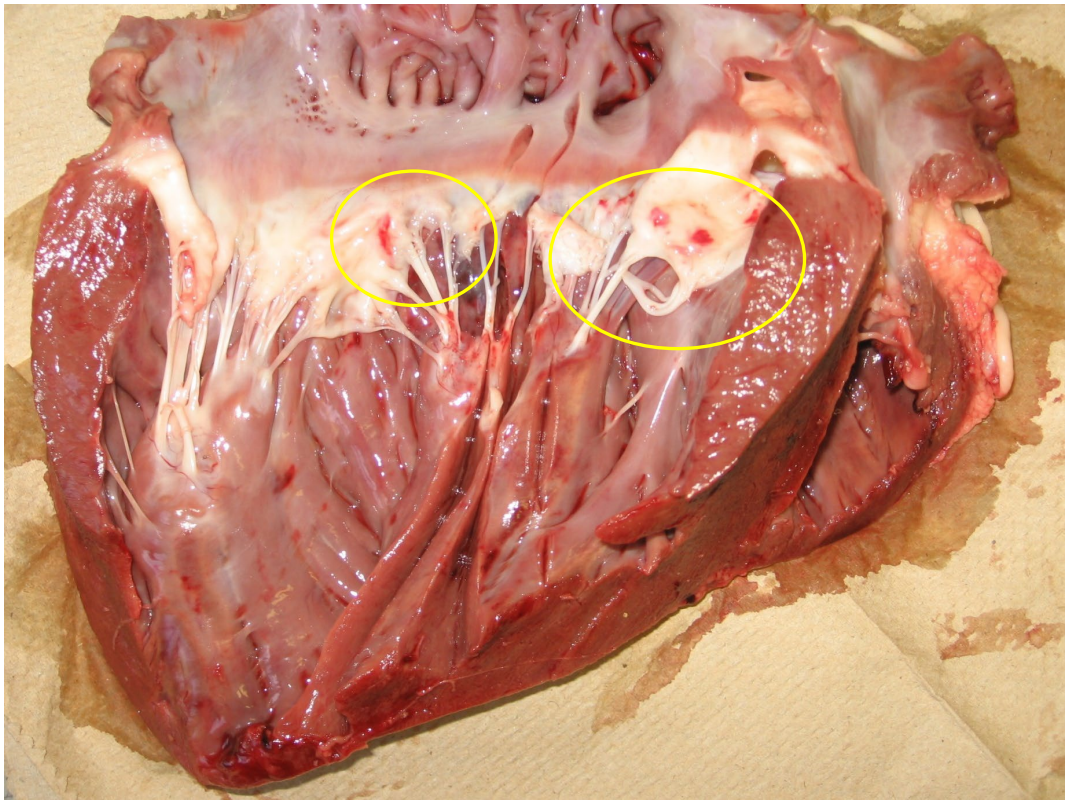


Endocarditis

Inflammation of the endocardium or inner lining of the heart.

Any other changes in the carcass or viscera would require the carcass and parts to be retained for the veterinarian.

Endocarditis



Enteritis

9 CFR 311.16(a)(3)

Intestinal tract is hemorrhagic in appearance.

The small intestines may appear dark red to purple.

If extensive, or acute, retain the carcass and parts for veterinary disposition.

Eosinophilic Myositis (EM) 9 CFR 311.35

Inflammatory condition where eosinophils impart a yellow to green color onto the affected tissue.

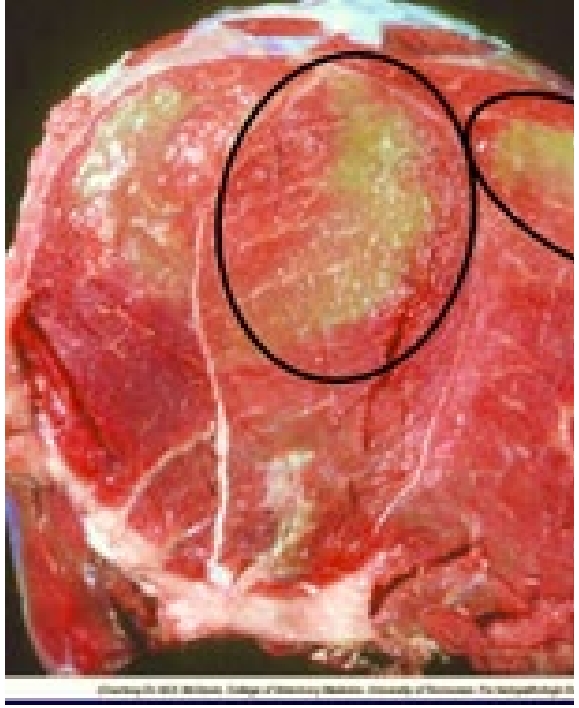
The most common lesions are small, irregularly distributed, yellowish-green, yellowish, or greyish-white pin-head shaped spots.

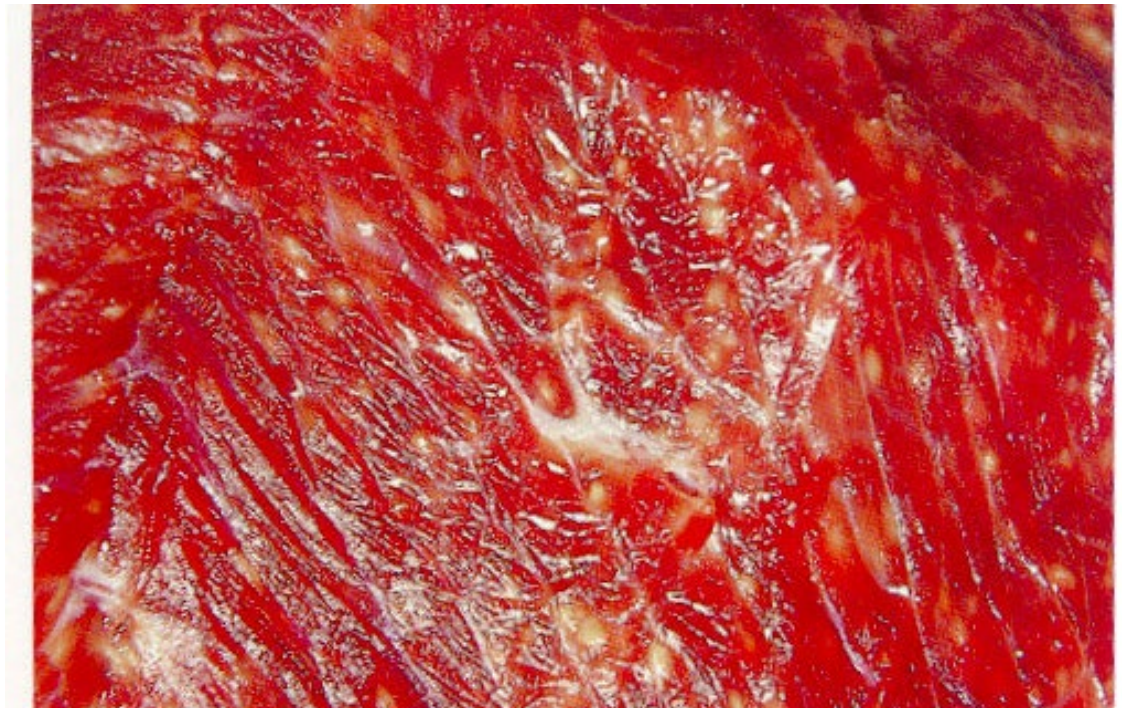
Also appear as larger bright green to greenish-grey areas that vary in size from that of a dime to the size of the palm of the hand.

Most commonly found in active muscles such as: hanging tenders, diaphragm, cheeks, and heart.

Retain the carcass and parts for veterinary disposition.

Eosinophilic Myositis (EM)





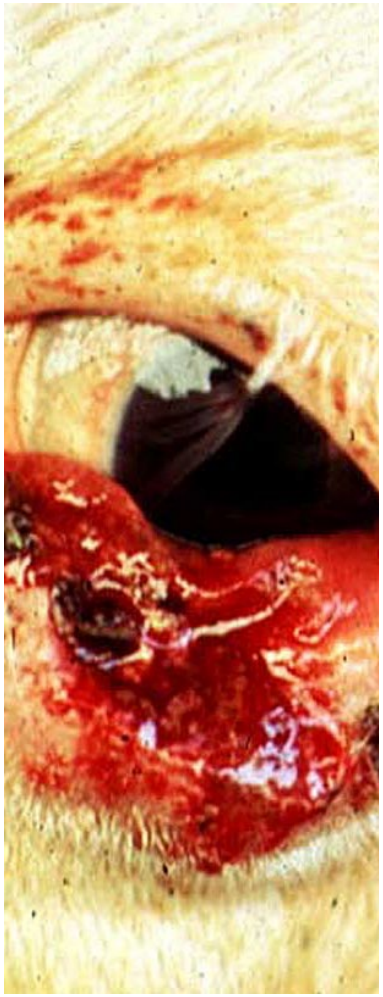
Epithelioma (Cancer Eye/Bug Eye) 9 CFR 311.12

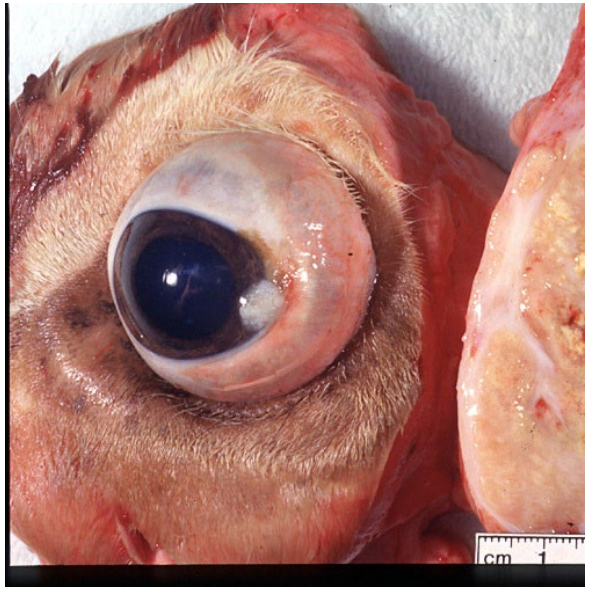
Lesion may appear as a small growth on the cornea or eyelid or there may be no lesion at all. In some cases, the eye may be missing after having been surgically removed prior to slaughter.

Most common in cattle with a white faces but can be found in all breeds.

Can metastasize and spread to lymph nodes and organs.

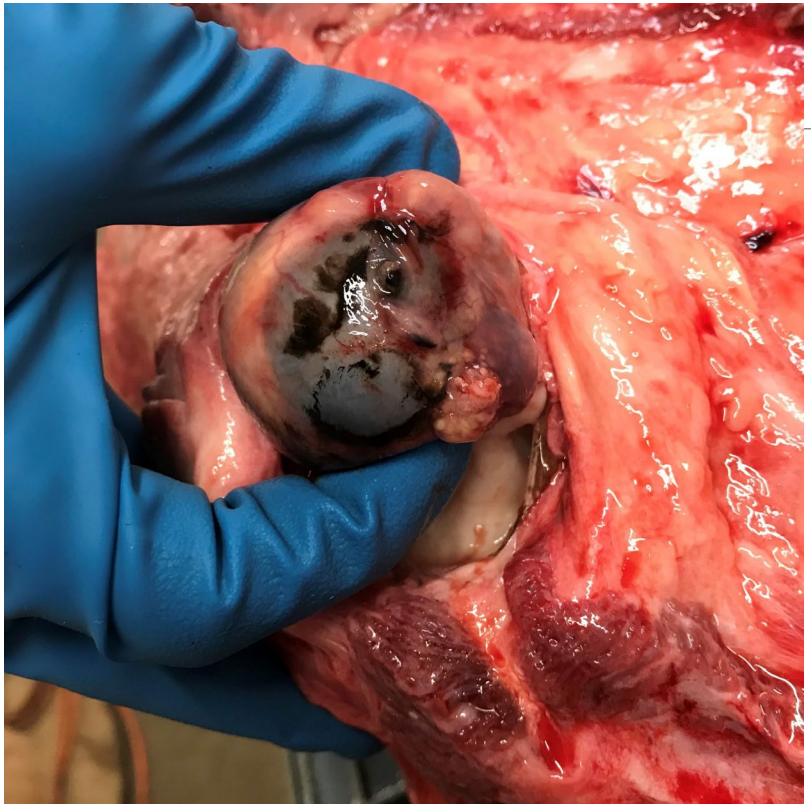
Retain carcass and parts for veterinary disposition.

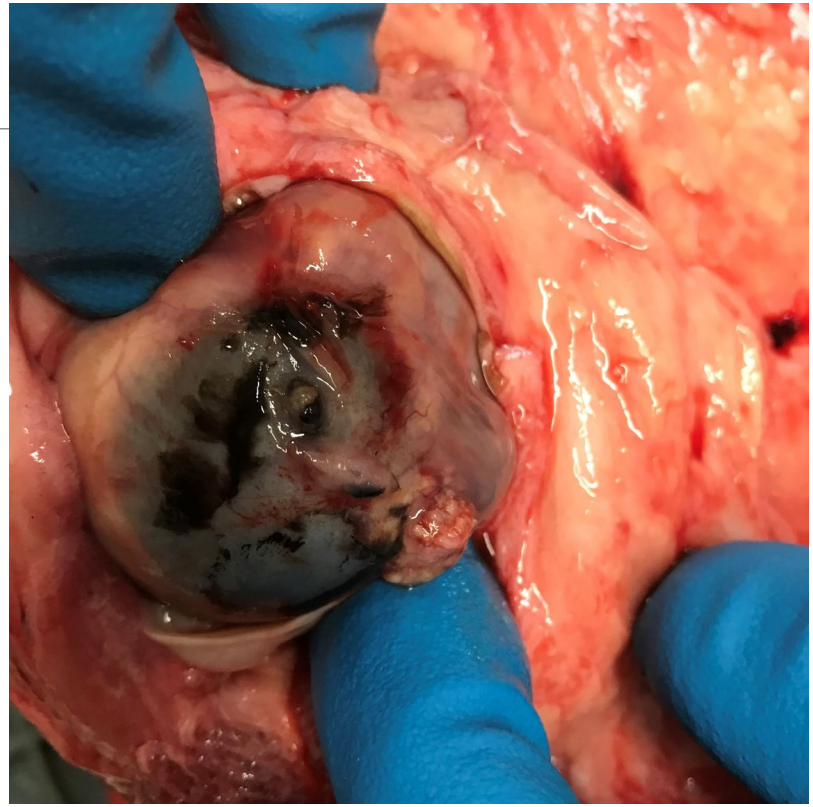




Epithelioma

Epithelioma

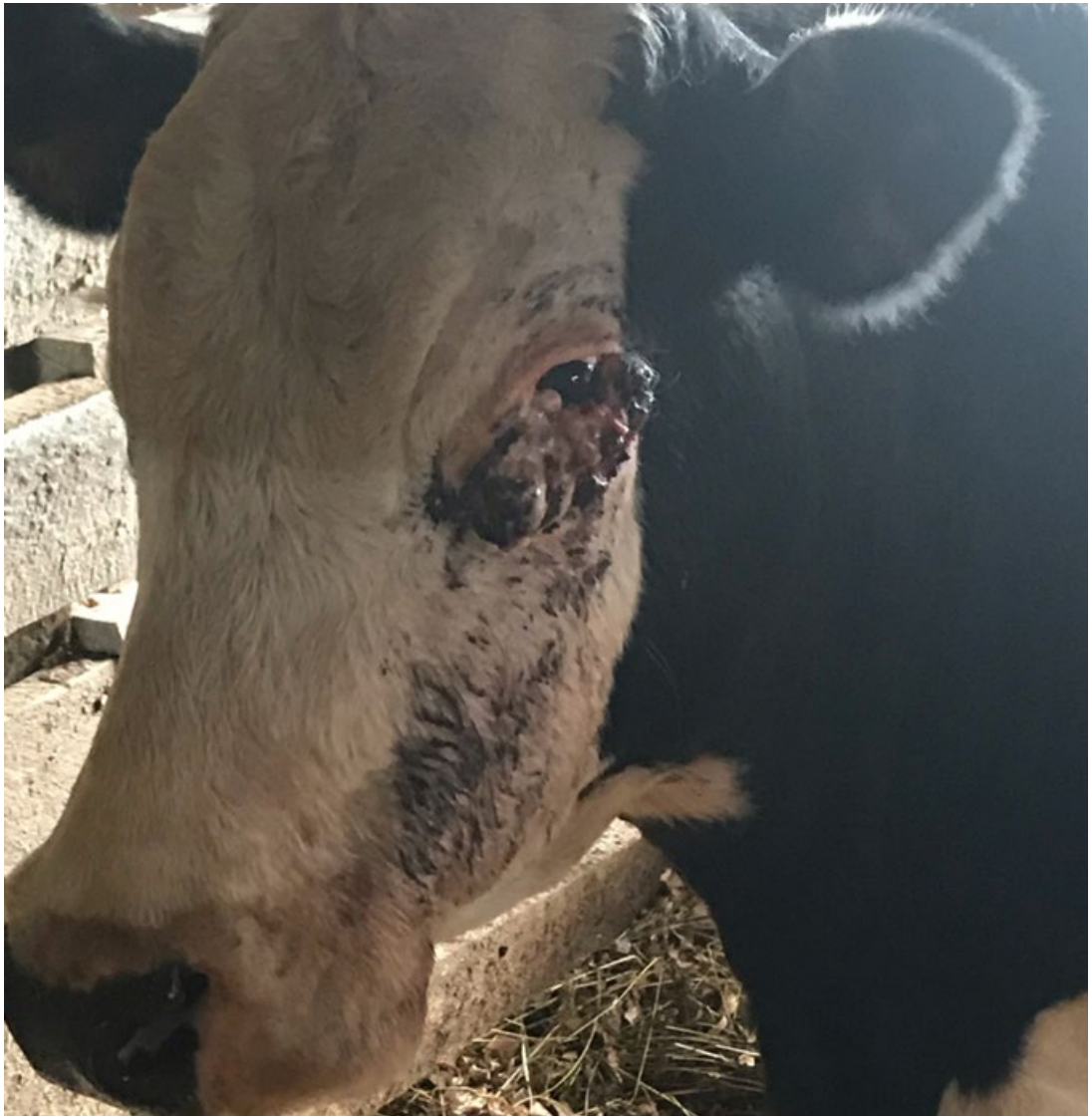




Shown above is chronic inflammation and hyper pigmentation of the eye.

Epithelioma

Both images show a cow missing an eyeball. Cancer eye can be so destructive that it eats away at the eyeball or leads to the eye needing to be removed.



Shown to the left is cancer eye presenting with multiple lesions surrounding the eye.

Presentation of Epithelioma as seen by NCDA MPID personnel!

30+ month Hereford cow

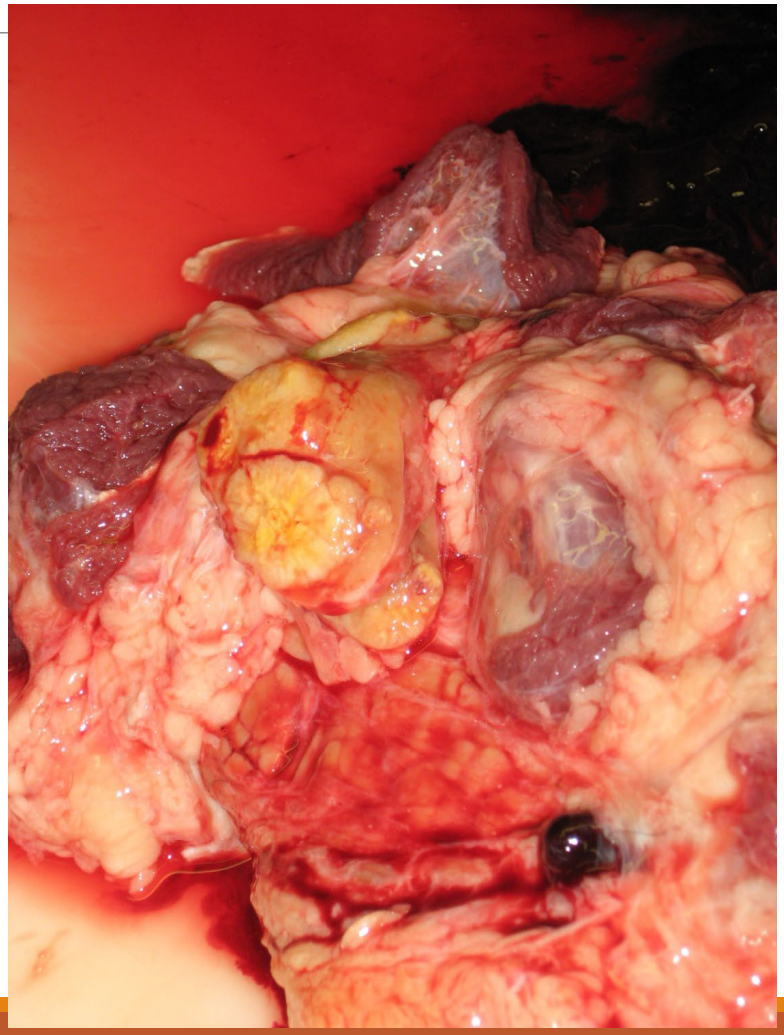
Antemortem: Right eye - erythematous and bulging with conical shape; Left eye – mass near lateral canthus

Postmortem: Right eye – Chronic, keratitis with ruptured corneal ulcer; Left eye – Chronic corneal ulceration, small mass adhered to lateral canthus

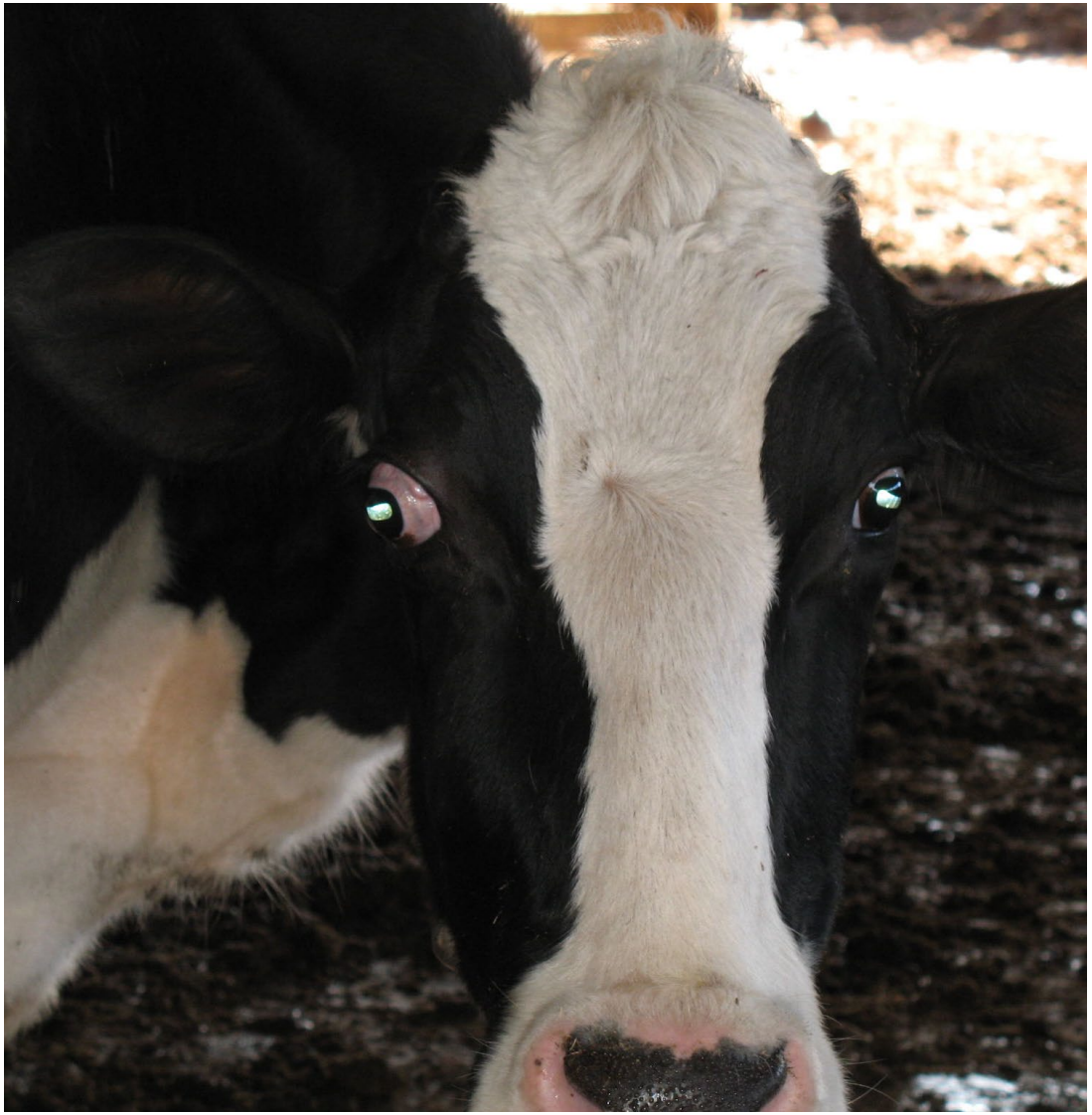
Pathology report: SCC with metastases

Epithelioma seen at Antemortem Inspection

Epithelioma in lymph nodes



Cancer eye has metastasized and is shown by yellowing of the lymph nodes.



Other Eye-Related Conditions

"Bulging Eye"

(This cow should be Suspected on antemortem. There could be lymphoma behind the eye.

Other Eye-Related Conditions

Uveitis – chronic case

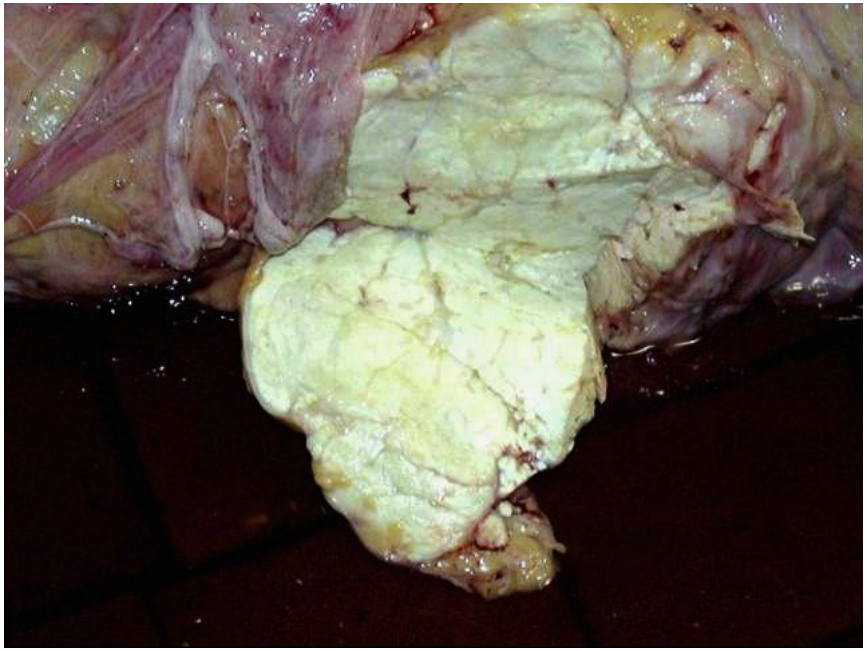
(This does not need to be Suspected on antemortem unless other pathologies are seen.)

Other Eye-Related Conditions "Resolving Corneal Ulcer"

- White lesions seen on the cornea of the eye.
- Can result from a healing pink eye infection, which can be spread by flies.
- This does not need to be Suspected on antemortem unless other pathologies are seen.

Other Eye-Related Condition "Microphthalmia"

- Smaller than normal eyeball
- Seen in cattle that were infected with Bovine Viral Diarrhea (BVD) in-utero
- Central Nervous System (CNS) signs can be associated with Microphthalmia
- If this is seen, Suspect the animal at antemortem a and call for veterinary disposition.



Fat Necrosis (Calcified Fat)

A condition that at times may appear to be serious but actually is not.

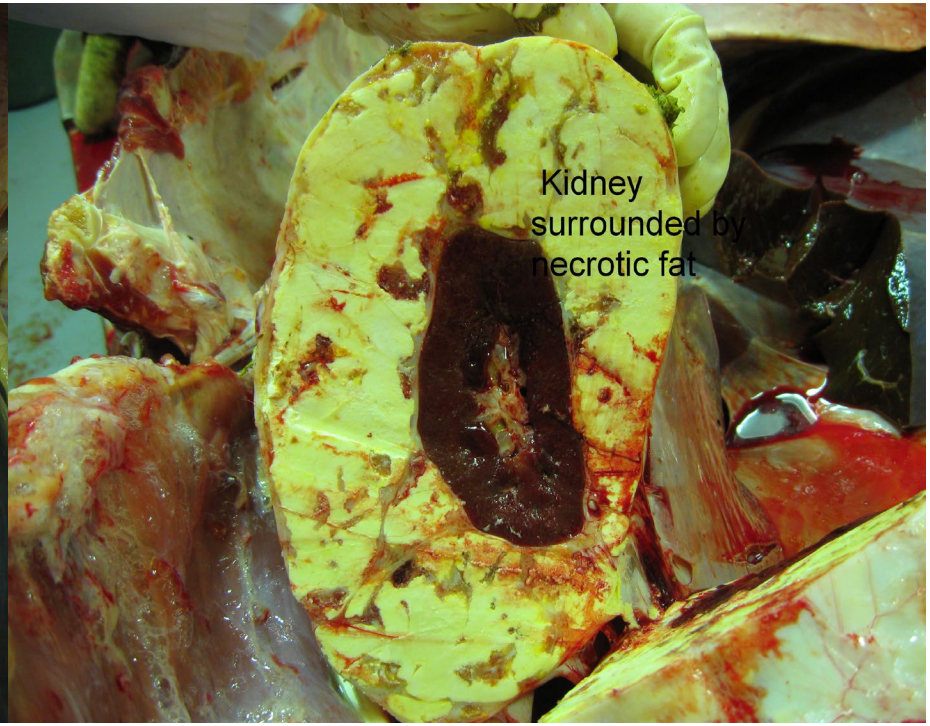
There may be a chalky white substance throughout the kidney fat and on up through the renal area. There are times when the necrosis may appear imbedded or inside the fat.

A related condition is —cheesy brisket. This condition called pre-sternal calcification is usually caused by the rubbing or bumping of the animal's breast against the feed bunk.

The condition would be removed by trimming, and unless other conditions are present, the carcass passed without restriction.

Fat Necrosis

Renal capsule with evidence of necrosis.



Cross-section of photo on the left of a kidney surrounded by necrotic fat.

Hepatic Lipidosis

Healthy liver shown above.

Liver affected with lipidosis shown above.

Seen mostly in pregnant cows as a result of fatty deposition in the liver.

The liver will be pale in appearance.

These livers may be passed for food.

Hydatid Tapeworm Cysts (Echinococcus) 9 CFR 310.14(a)

Human form of the tapeworm which is a serious human health concern.

Dog is the definitive host, but sheep, cattle, and pigs can serve as an intermediate host.

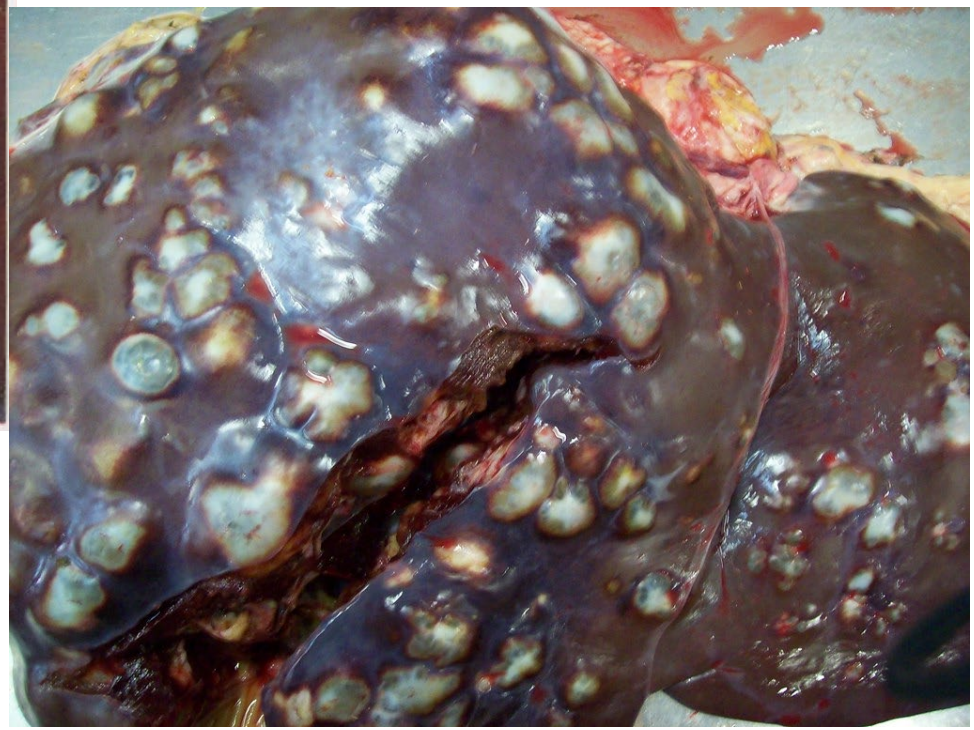
Humans become infected by ingestion of food or water contaminated by dog feces.

Cysts are approximately 2-4 inches (5-10 cm) in diameter and may be multi-compartmented, with a white, thick-walled cyst membrane that contains an amber, clear fluid that may contain sand-like granules.

The cysts are most often seen in the lungs and/or the liver.

The affected tissues must be condemned to tankage and never allowed for use in pet foods.

Hydatid Tapeworm Cysts



Icterus caused by tapeworm cysts.

Hydrocephaly

Caused by a genetic defect.

Cranium: Markedly enlarged and skull bones are malformed.

Cranial cavity: Usually filled with fluid, with little to no recognizable brain tissue evident.

Usually see in conjunction with CNS signs.

If this is seen, Suspect the animal at antemortem and call for veterinary disposition.

Hydrocephaly

Normal cattle heads.

Domed shaped cattle head consistent with Hydrocephaly.

Hydrocephaly

HYDRONEPHROSIS (Water Kidney)

One or both kidneys literally become a "bag of water". Normal kidney tissue is replaced by fluid.

There is generally no effect upon the carcass.

Affected kidneys are removed and condemned.

Hypoderma Larvae (Grubs) 9 CFR 311.25

Late spring/summer female flies lay eggs in hair

Eggs hatch in 3-7 days → Larva penetrate skin and migrate through connective tissues for next 4-6 months

Winter: Larva may cluster near esophagus or spine to stay warm

Spring – Larva move to animal's back so they can pierce through the skin in order to breathe

- Not every grub makes it to the back; some end up in other tissues, dead and degenerated.

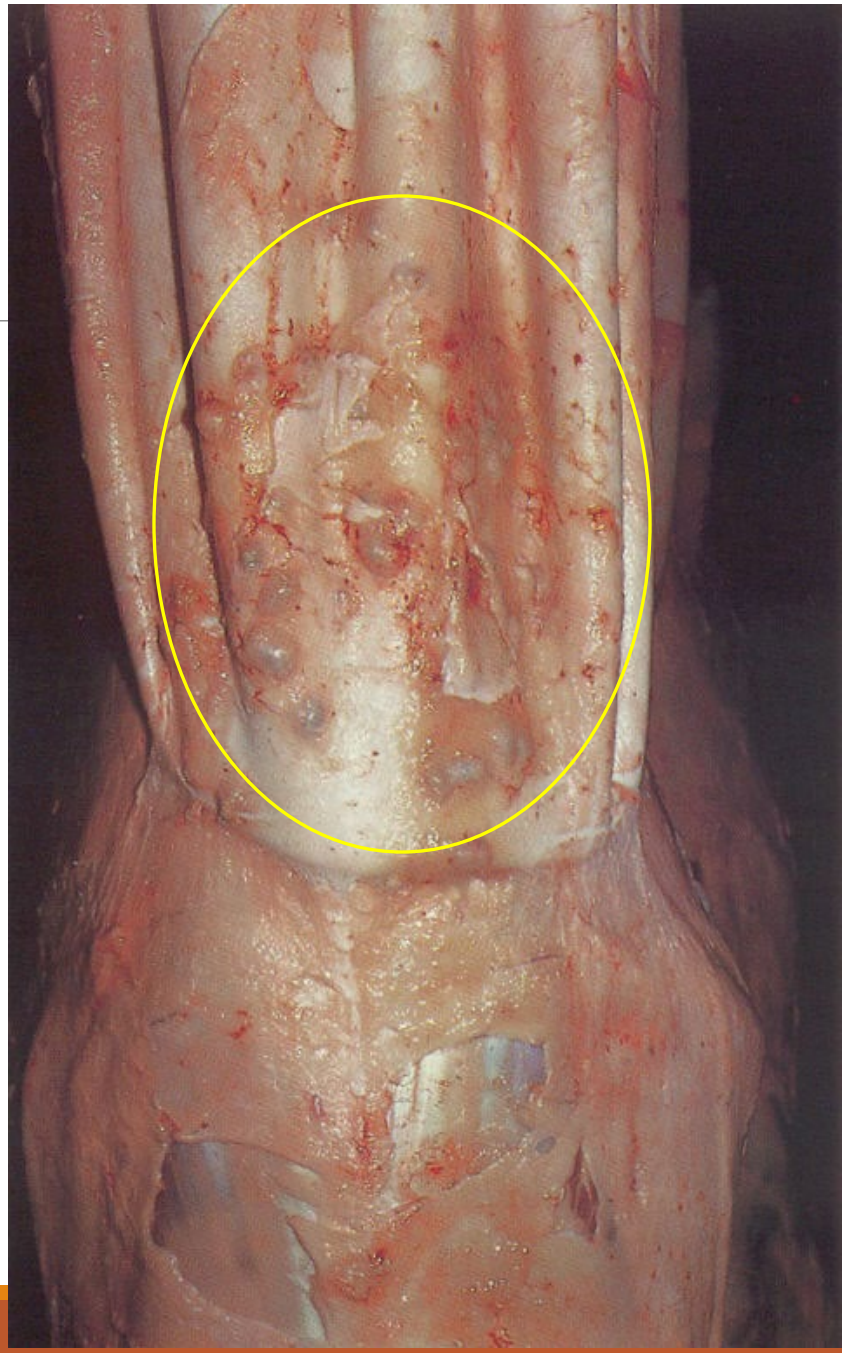
Remain at this location until larval development complete → Drop to ground, transform into adult fly

Cycle repeats itself

Retain for veterinary disposition.

- All grubs and/or the evidence of grubs must be trimmed, leaving only normal tissue.

Hypoderma Larvae (Grubs)



Icterus
9 CFR 311.19

Icterus, or jaundice is the yellowing of tissues due to the buildup of bile pigment (bilirubin) in the body.

The buildup is always secondary to some other condition.

The yellowing of a carcass due to icterus is usually more intense in the interior surfaces of the carcass and the viscera.

In true icterus, normally white tissues (such as the tendons and sclera of the eye) are affected.

Carcasses and parts suspected of being icteric should always be retained for veterinary disposition.

Icterus

Icterus

SHOWN INSIDE THE CARCASS AND IN ASSOCIATED VISCERA.

Icterus vs. Pigmentary change???

Injection Sites/Lesions

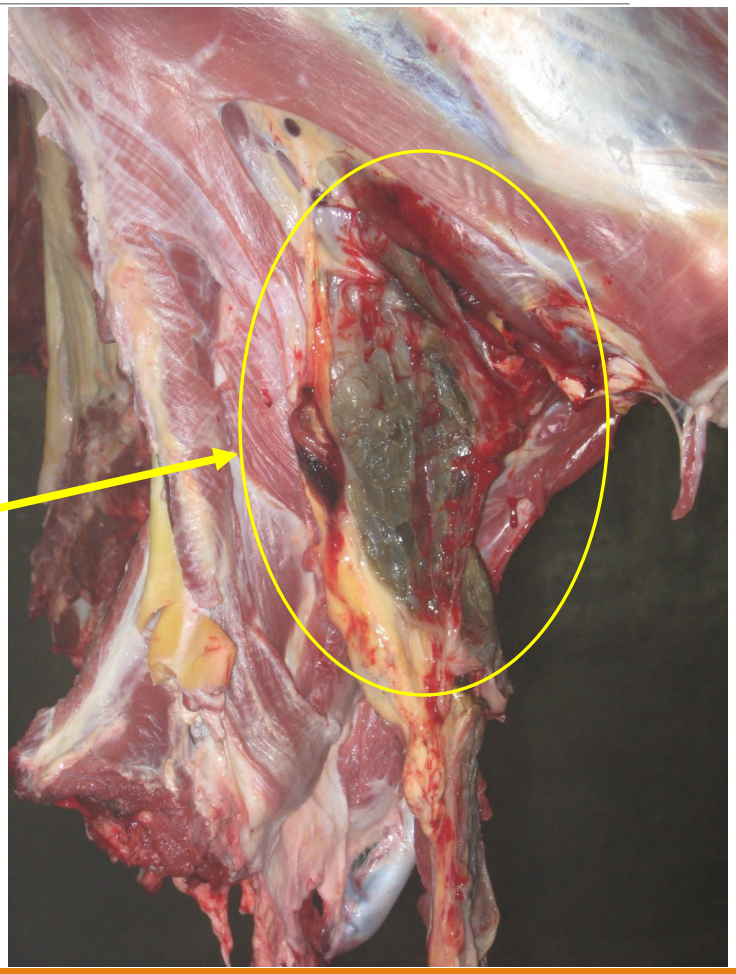
Carcasses with lesions associated with injections.

Injection sites may be found in a variety of locations including the neck, shoulder, thorax, axilla, ventral abdomen (along the subcutaneous abdominal vein), flank, hindquarter, pelvic area (perirectal), and tail.

If lesions have the appearance of being recent, retain the carcass and parts for residue testing.

See FSIS Directive 10,800.1 for more information.

Injection Sites

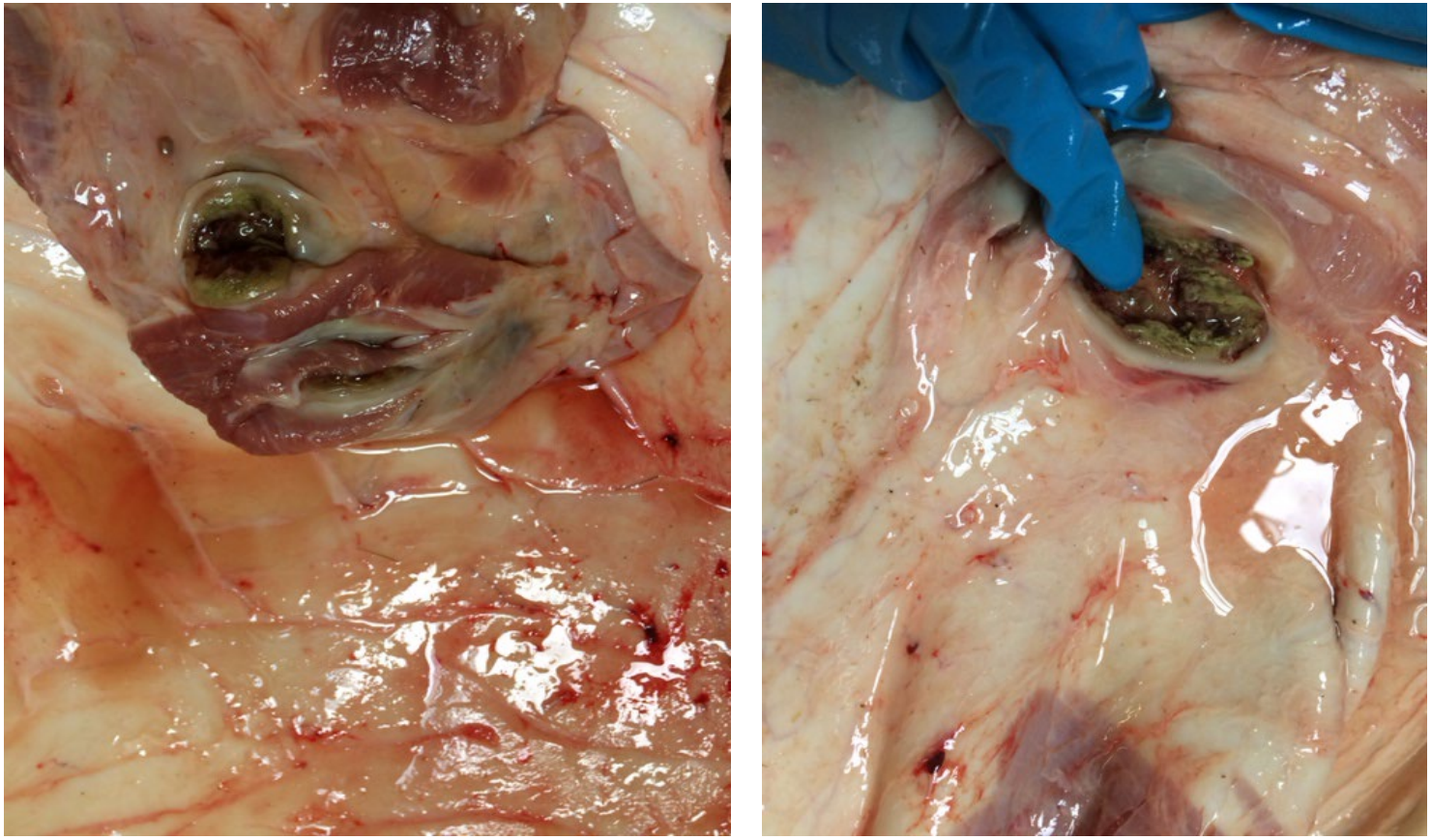


Injection Sites

Cross-section of the abscess shown to the left. Oxytetracycline (LA 200) is an easily accessible antibiotic sold at many farm supply stores that is commonly used in cattle. This antibiotic is yellow in color and typically imparts a yellowish appearance to injection sites.

Injection Sites

Injection sites



An injection site that was seen and was pulled off with the removal of the hide.

Kidney Stones

Liver Flukes
9 CFR 311.25

The primary purpose in opening the bile duct during liver inspection is to detect flukes.

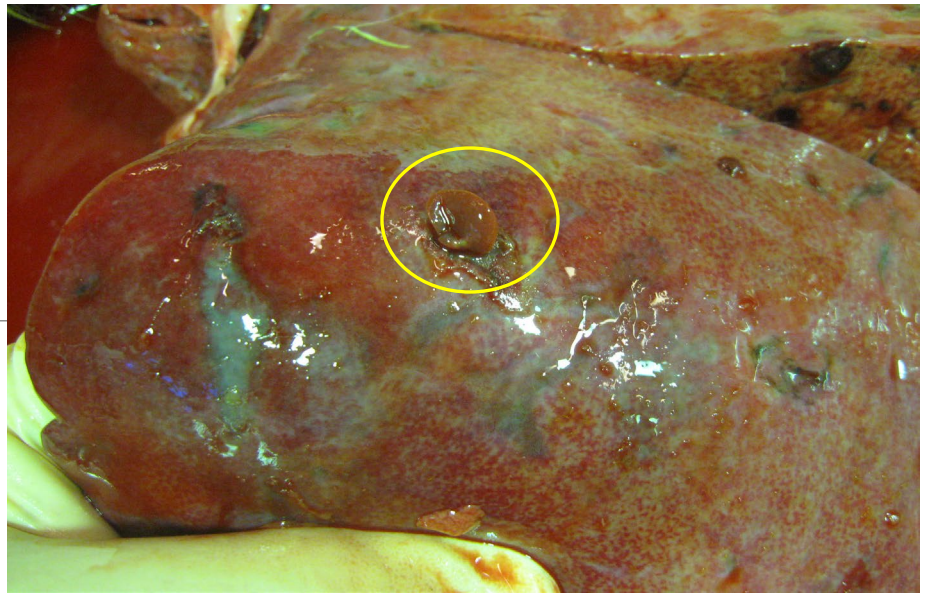
The appearance of a fluke infested liver depends a great deal on the amount of fluke infestation.

A slight infestation will probably not affect the liver tissue as such.

A heavy infestation may cause a cirrhotic effect on the organ, with the surface becoming scarred. Many times, there are bumpy, raise and/or depressed areas, and sometimes a discoloration showing dark blue to black sections on and within the tissue. The liver may take on a "hobnail appearance."

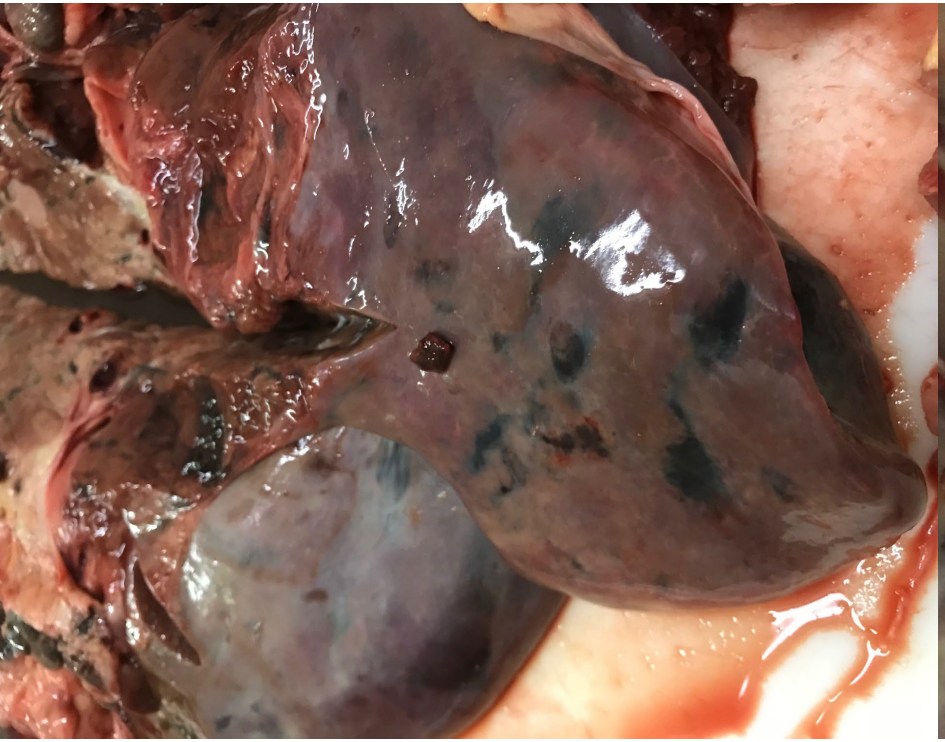
In all cases of liver fluke infestation, the liver is condemned and not eligible for human consumption. The liver *may* be salvaged and used for animal food.

Liver Flukes



Liver Flukes in the Bile Duct

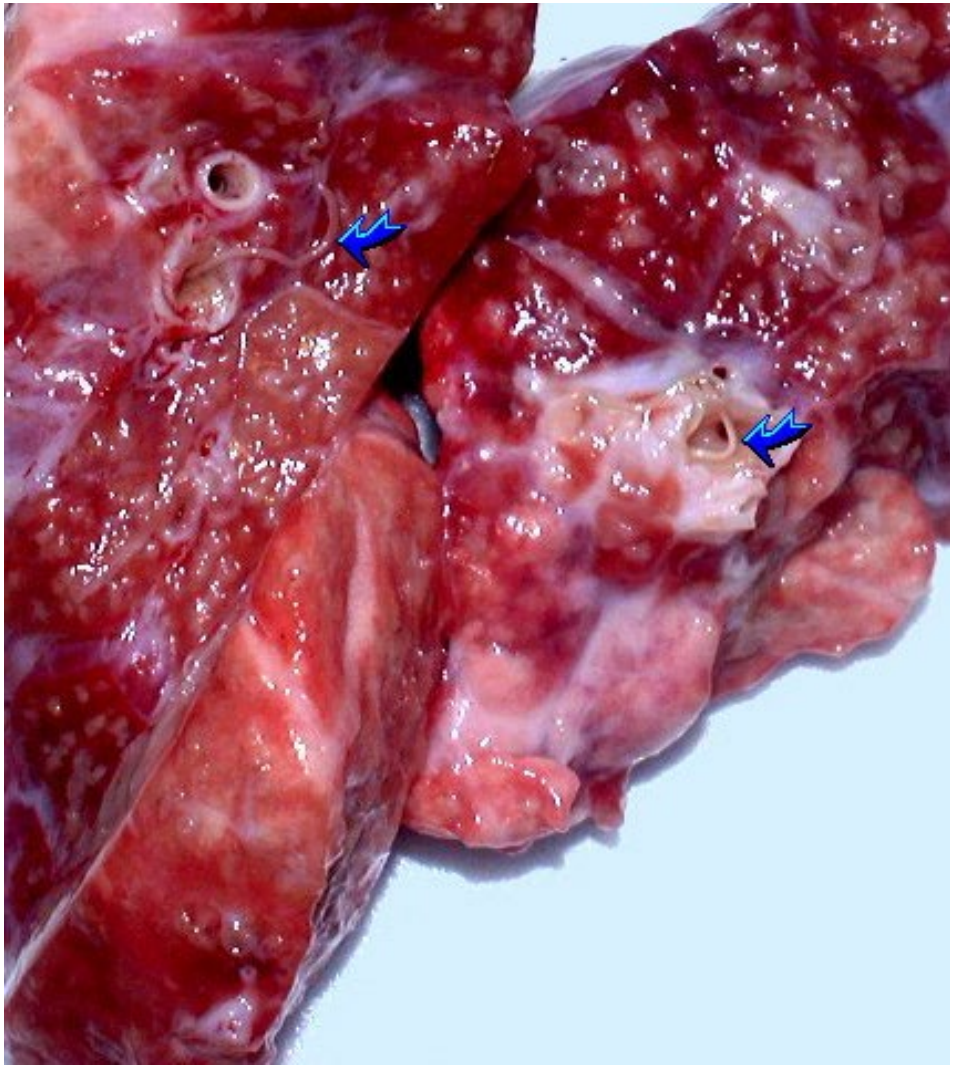
Liver Fluke Migration



Evidence of migration through the liver.

Fluke excrement on the lining of the pleura.

Liver with the associated liver fluke beside of it. Note the bluish-colored migration sites on the surface of the liver.



Lung Worms

Lung Lesion – Smoke Inhalation

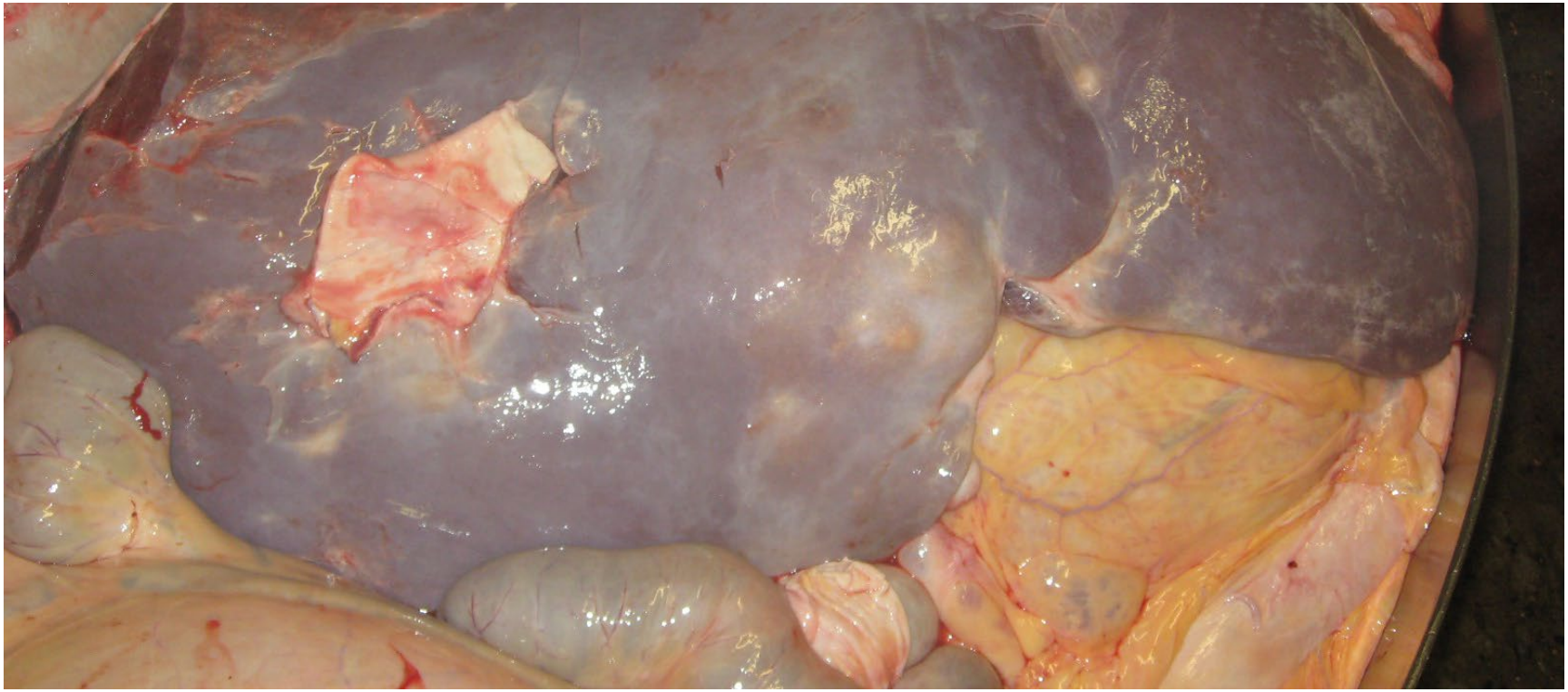
Mastitis

Inflammation of the udder tissue usually associated with a bacterial infection.

Suspect the affected animal and call for veterinary disposition.

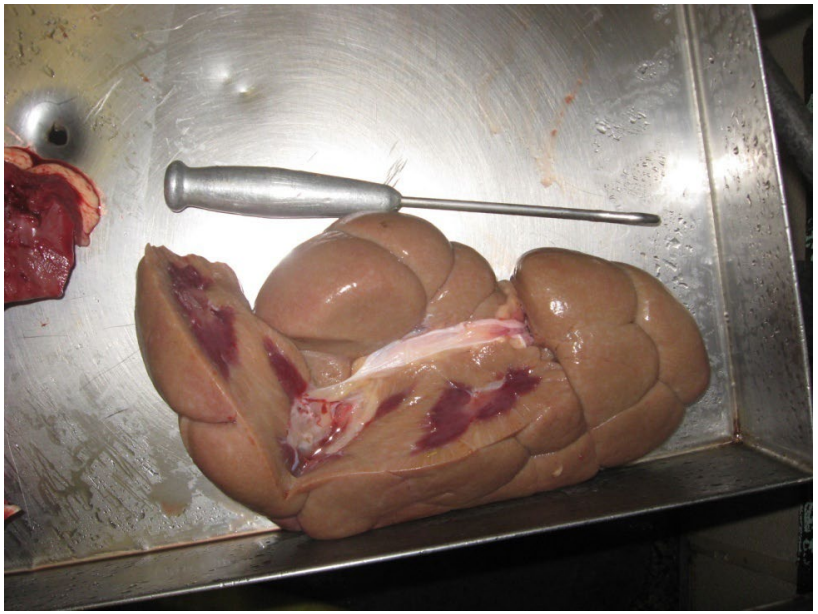
Mastitis

INFLAMED UDDER TISSUE AND ASSOCIATED ENLARGED MAMMARY LYMPH NODE.



Mastitis

DEGENERATIVE CHANGES IN THE LIVER CAUSED BY MASTITIS.



Mastitis

PHOTO ON THE LEFT: HYPEREMIA (INCREASED AMOUNT OF BLOOD) IN THE KIDNEY.

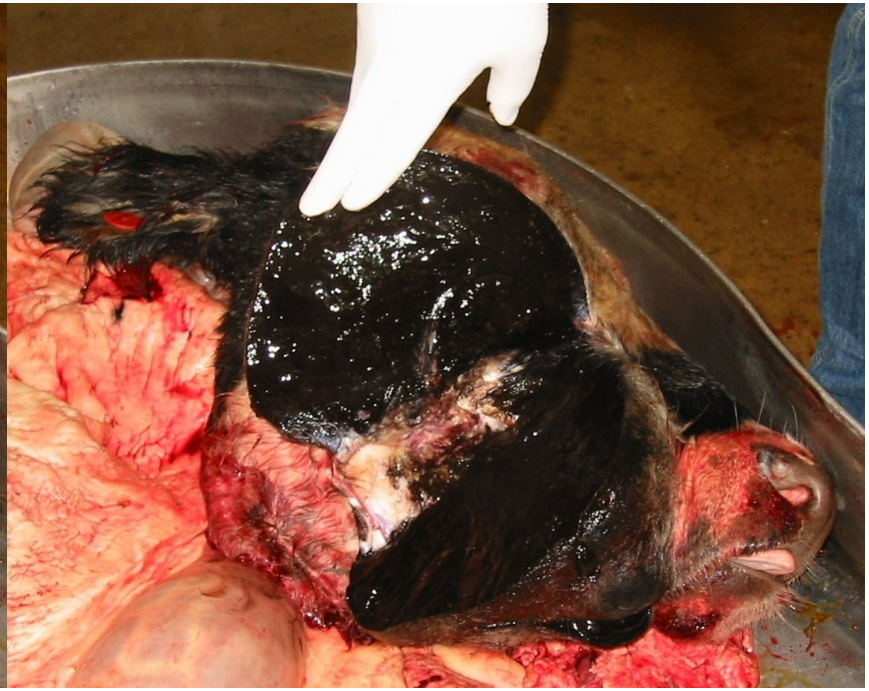
PHOTO ON THE RIGHT: PLEURITIS

Melanoma
9 CFR 311.11(a)

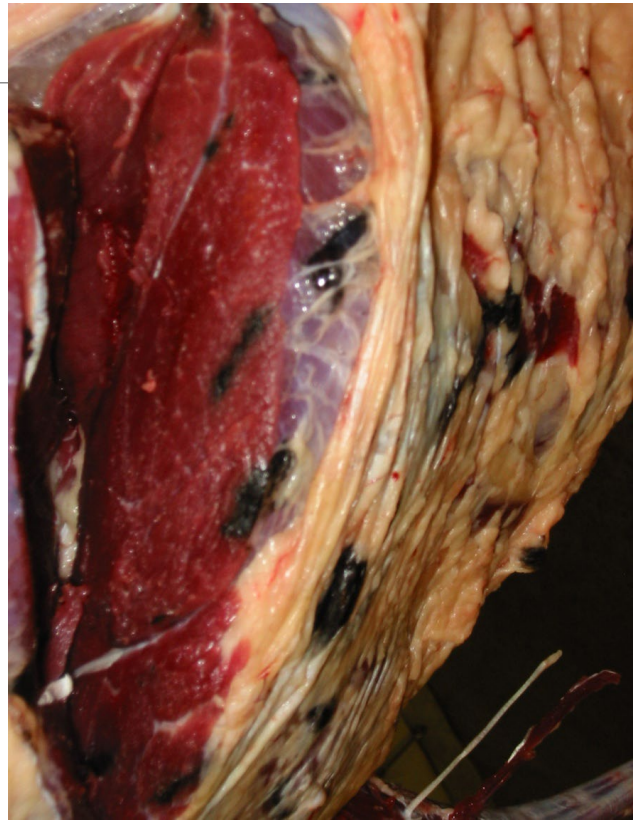
Tumors that contain black pigment (melanin).

Retain carcass and associated parts for veterinary disposition.

Melanoma

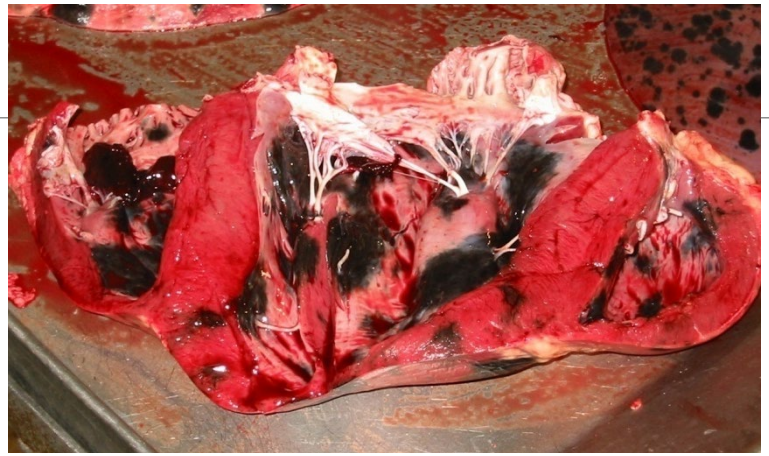


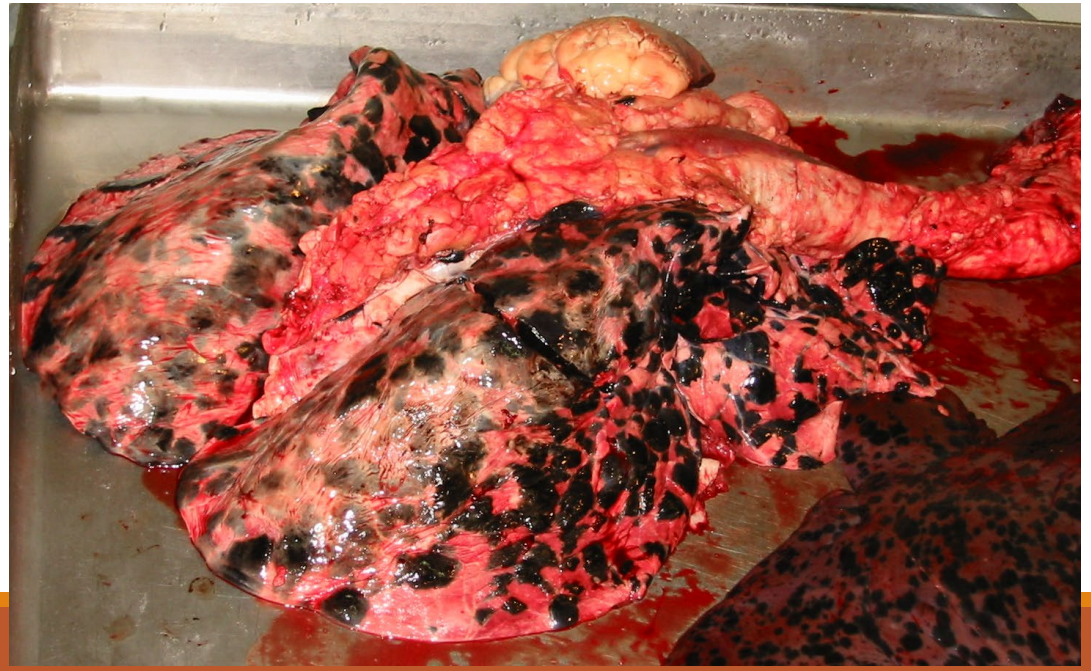
Melanoma



Tumors containing melanin pigment in the muscle and fat.

Melanoma





Tumors containing melanin pigment in the liver, heart and lungs.

Melanosis

Created by the abnormal deposition of the melanin pigment in various tissues.

It is most commonly found in the lungs and liver.

Often difficult to differentiate between melanoma and melanosis without histopathology.

Retain carcass and parts and for veterinary disposition.

Melanosis

Melanin deposits the lungs (top) and in left ventricle of the heart (bottom).

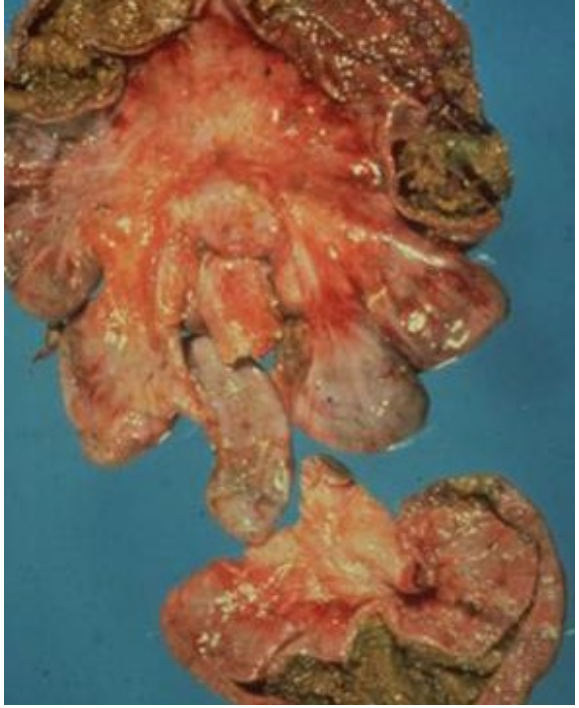
Melanosis

Melanin deposits in the spinal cord (top) and mesenteric lymph node (bottom).

Metritis

Inflammation of the uterus

- Pyometra
  - Uterus full of pus
- Retained placenta or fetus
  - Uterus will appear to have something in it, accompanied by inflammation, pus, etc.
- If degree of involvement is excessive, retain for veterinary disposition.



Metritis

Neoplasia (Malignant Lymphoma) 9 CFR 311.11(b)

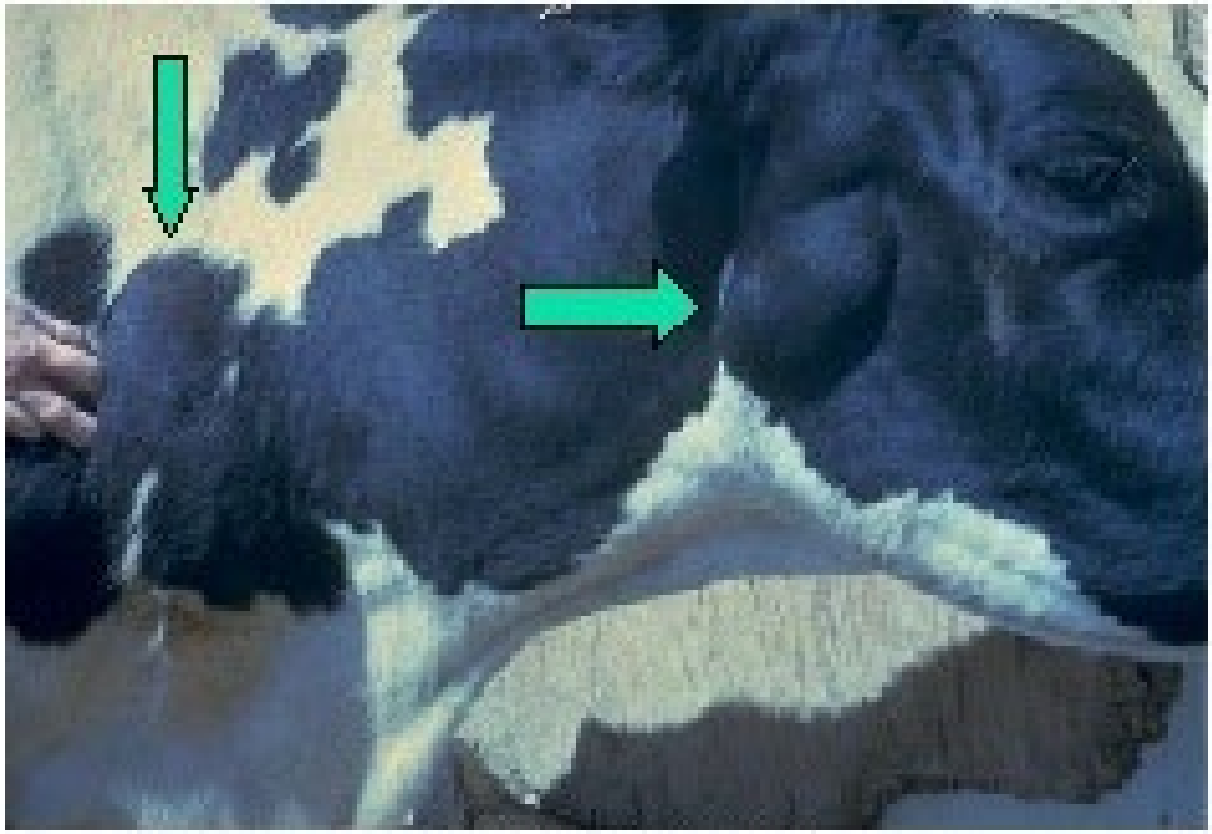
A cancerous disease of the lymph nodes.

Characterized by lymph nodes 5 times or more normal size.

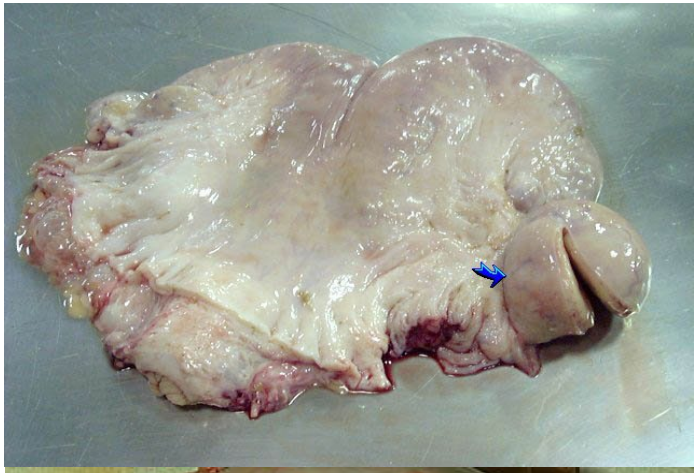
Lymphoma can also be seen in the right atrium of the heart, abomasum, and uterus.

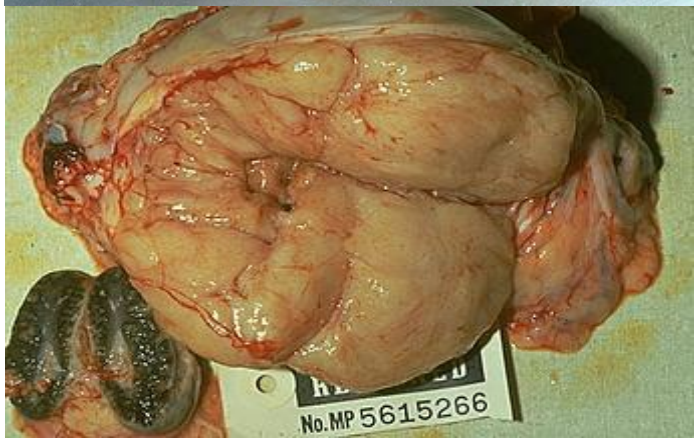
If lymphoma is suspected, always retain the carcass and parts for veterinary disposition.

Malignant Lymphoma

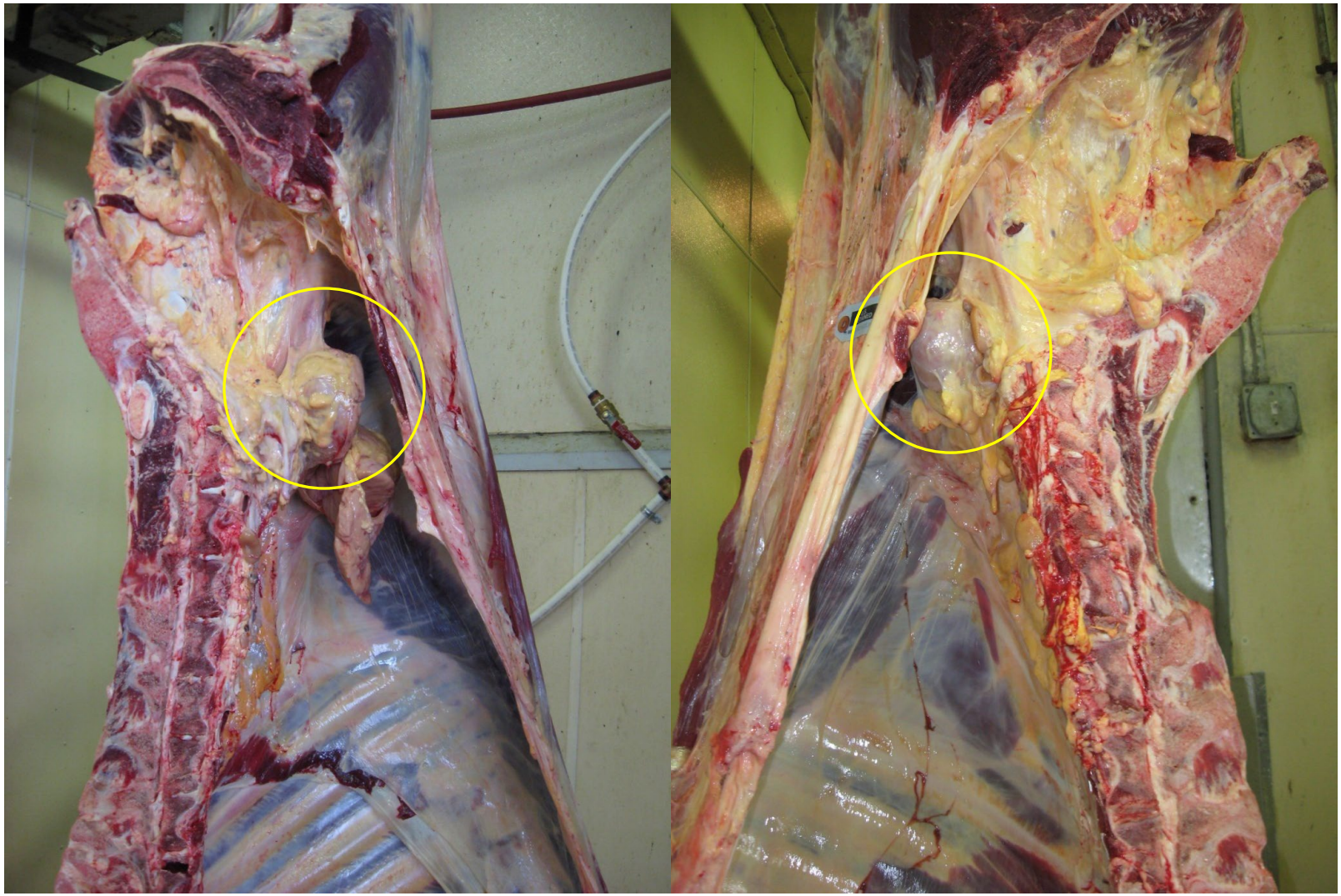


Lymphoma presenting as enlarged lymph nodes…





Lymphoma



Extremely swollen internal iliac lymph nodes.

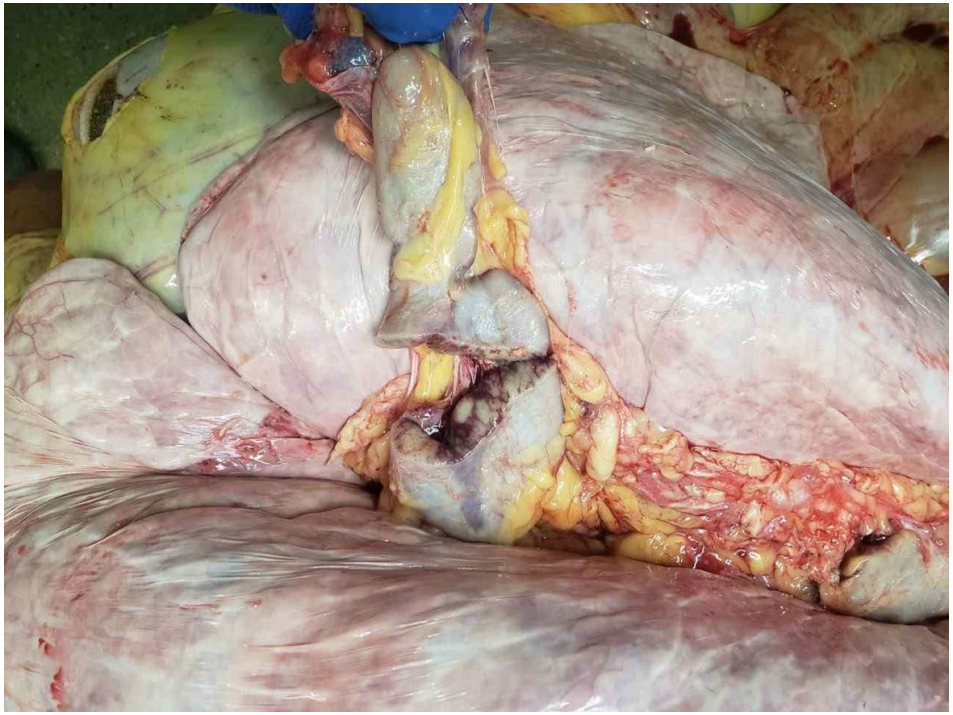
Lymphoma

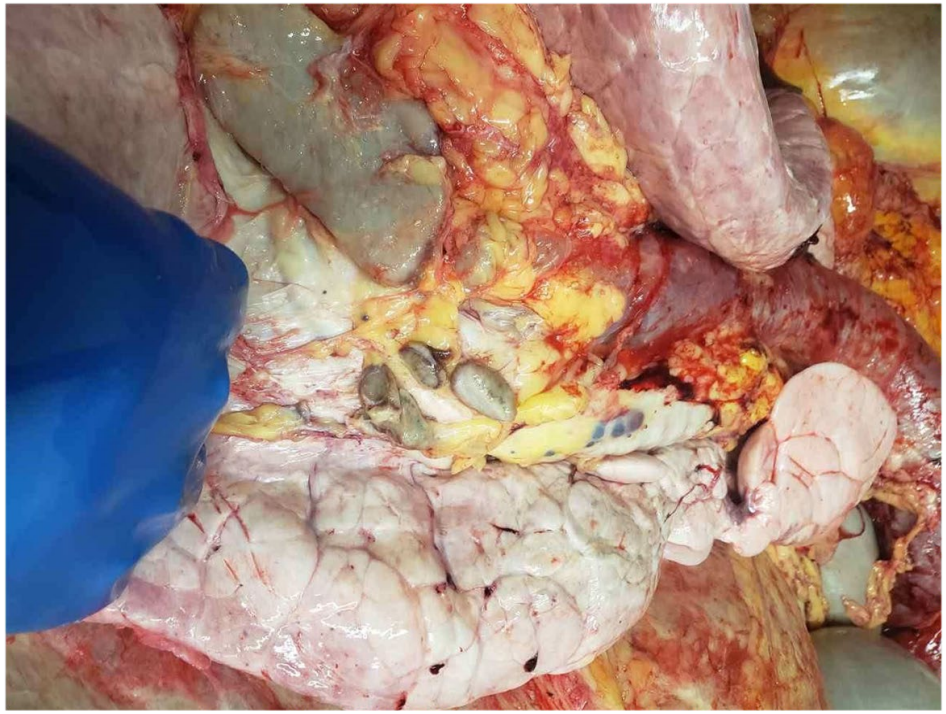
CROSS-SECTION OF A LYMPH NODE. NOTICE THE UNUSUAL CHEESY-LIKE TEXTURE.

Lymphoma

Cross-section of lymph nodes. Notice the unusual texture; necrotic centers that may resemble calcified fat.

Lymphoma as shown in the lungs' lymph nodes…





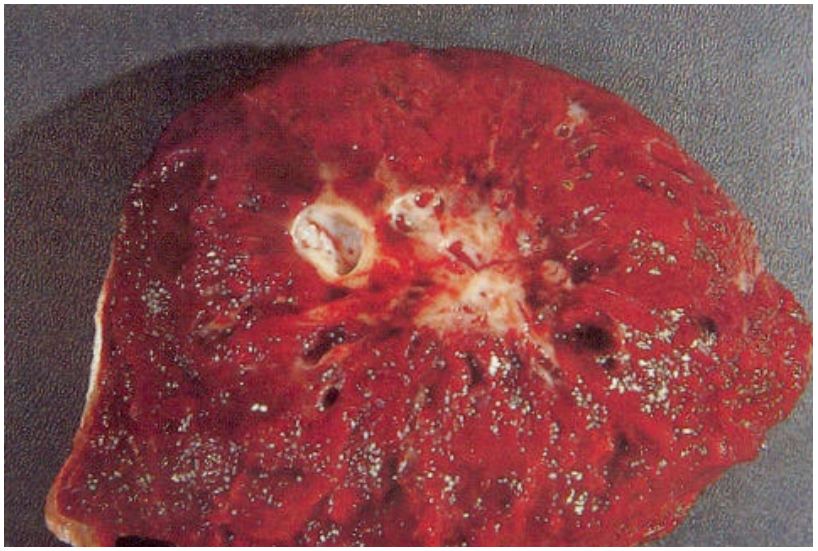
Lymphoma as shown in the kidneys…

Neoplasms
9 CFR 311.11

These tumors typically would appear as nodules or lumps in or on visceral parts.

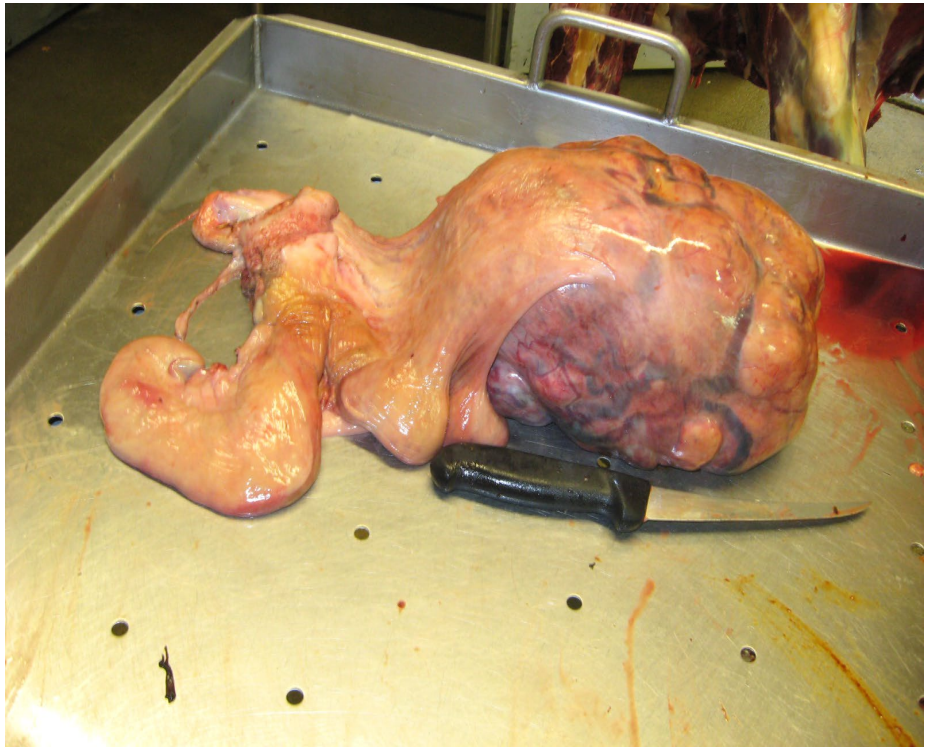
Many of these neoplasms have the capability of spreading to other parts of the carcass and parts.

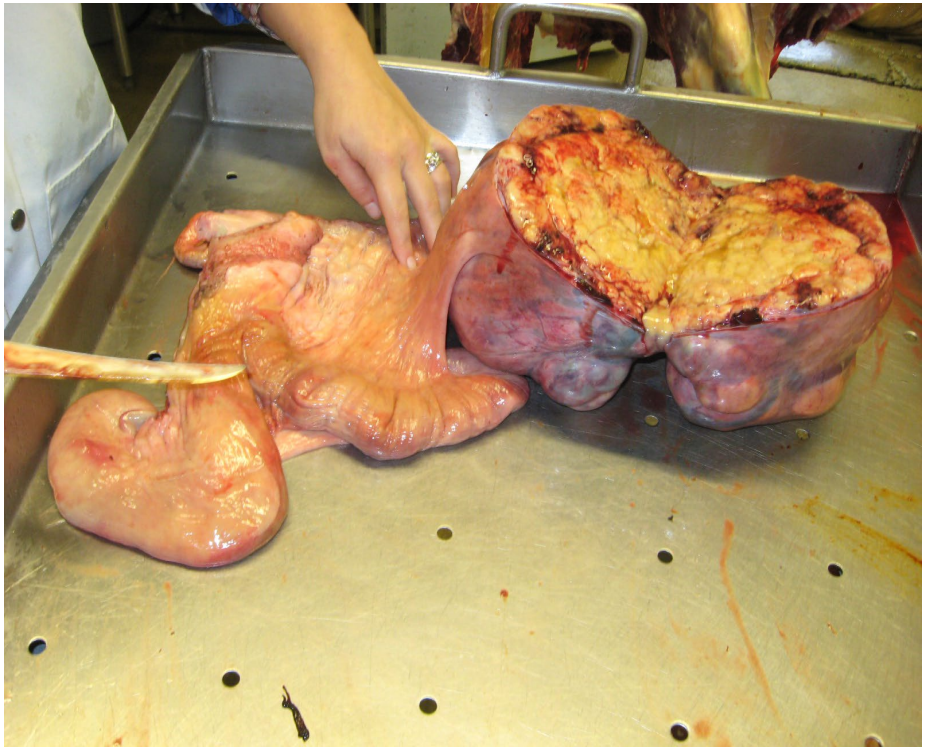
Whenever you see a neoplasm, the carcass and all parts would be retained for veterinary disposition.



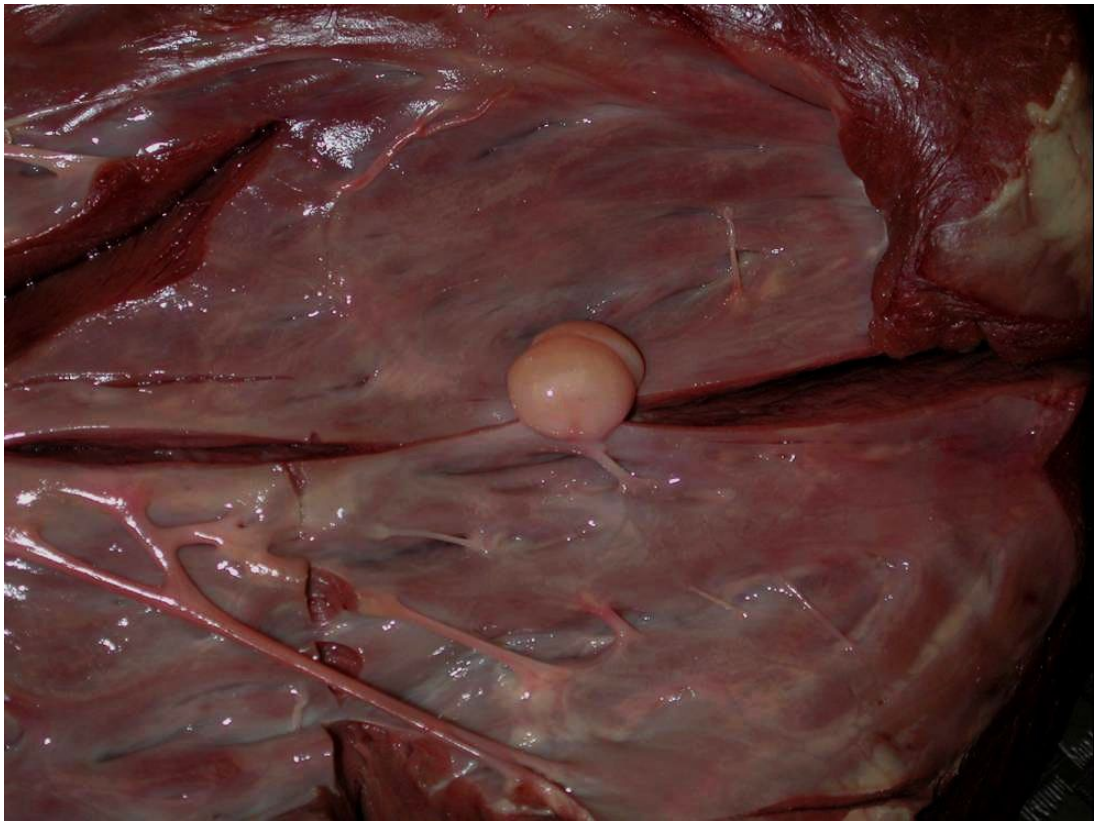
Neoplasm (Tumor) in the spleen…

Neoplasm (Ovarian Tumor)





Fairly common in old cattle. They usually present as variably sized masses growing in or on the ovaries or uterus.



Neoplasm (Neurofibroma)

Usually presents itself as small, firm, pearl-like nodules on the heart and along the nerves in the chest cavity, particularly between the ribs.

Nephritis
9 CFR 311.16(a)(7)

An inflammation of the kidney and is usually characterized by swelling, off- color, or abscess.

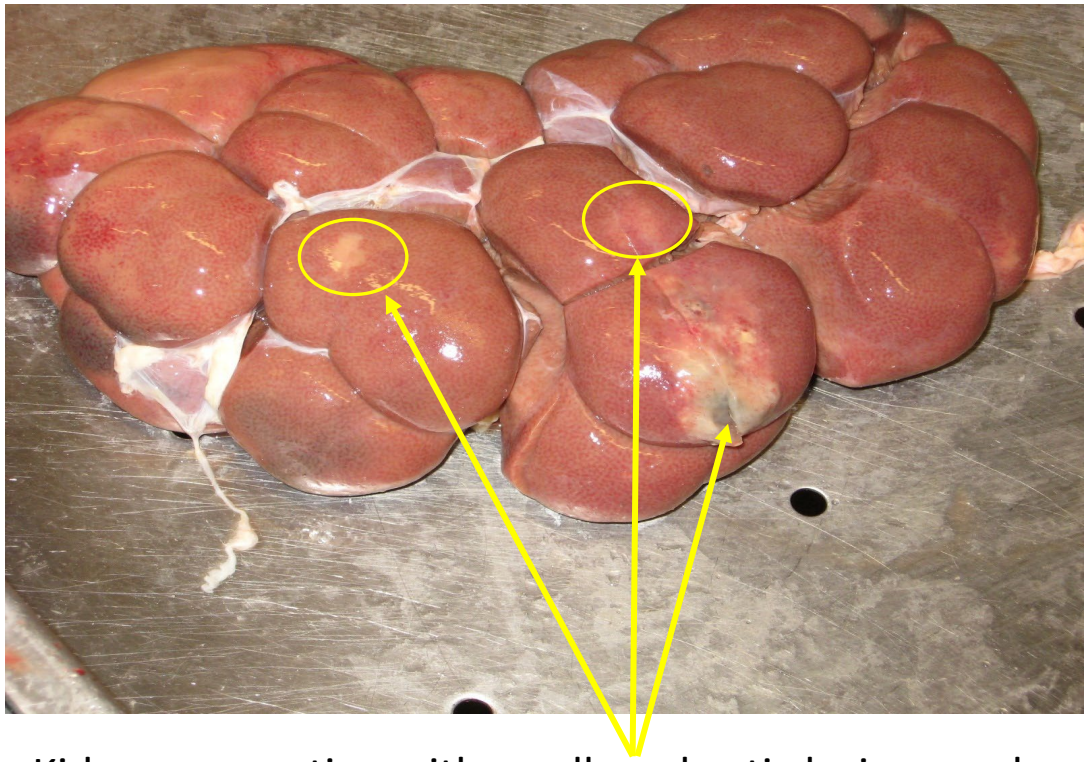
Generally, nephritis is a secondary cause resulting from other disease conditions within the animal.

When the urinary tract, bladder, and other organs show signs of involvement, the carcass and parts should be retained for veterinary disposition.

If the nephritic condition is considered localized or chronic, the kidney is removed and condemned, and the carcass passed.

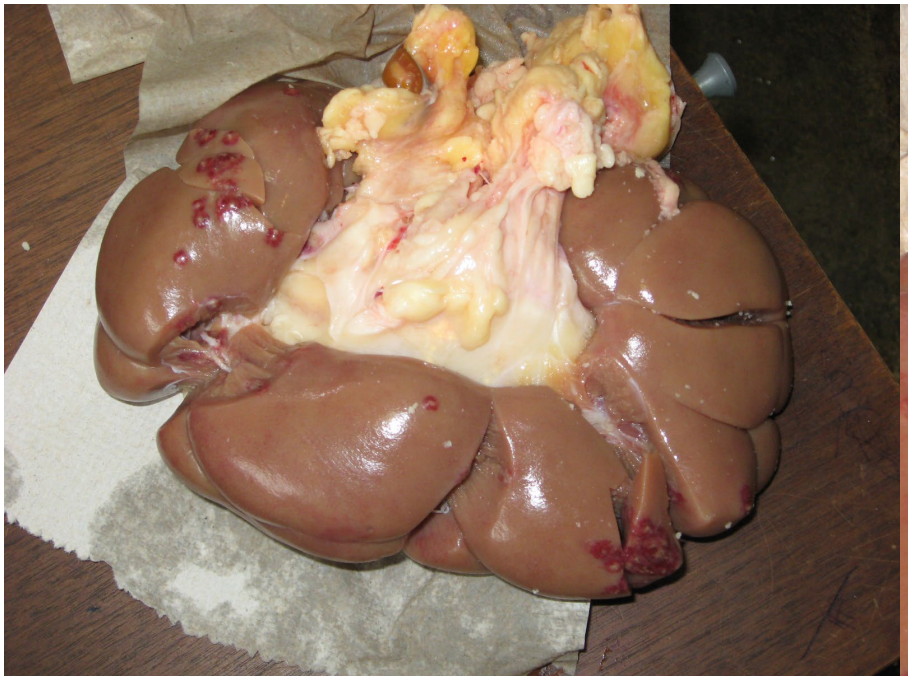
Nephritis (Top left picture is a normal kidney)

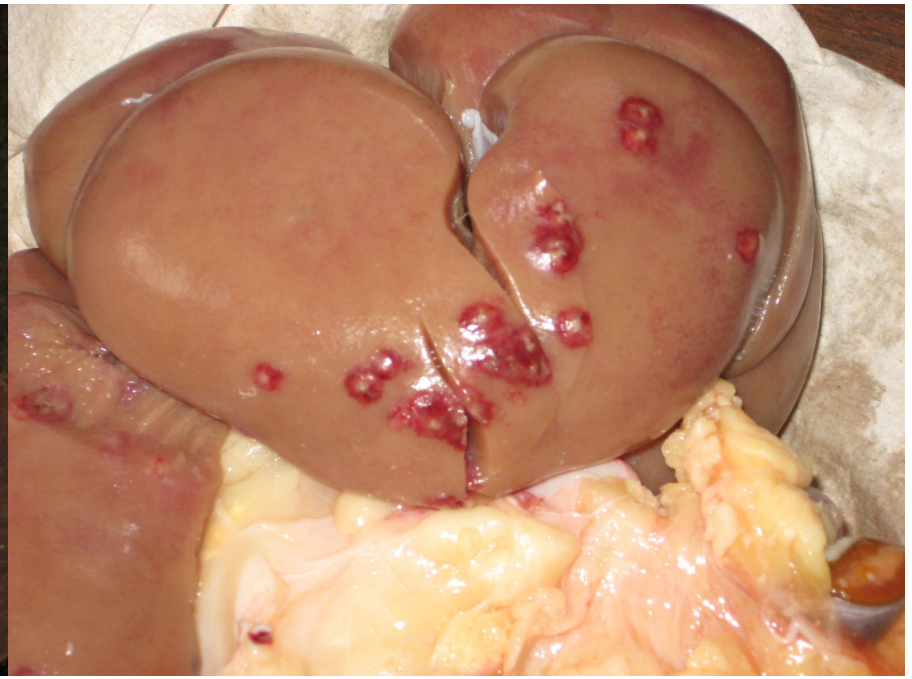
Nephritis



Kidney presenting with small nephrotic lesions and a cyst.

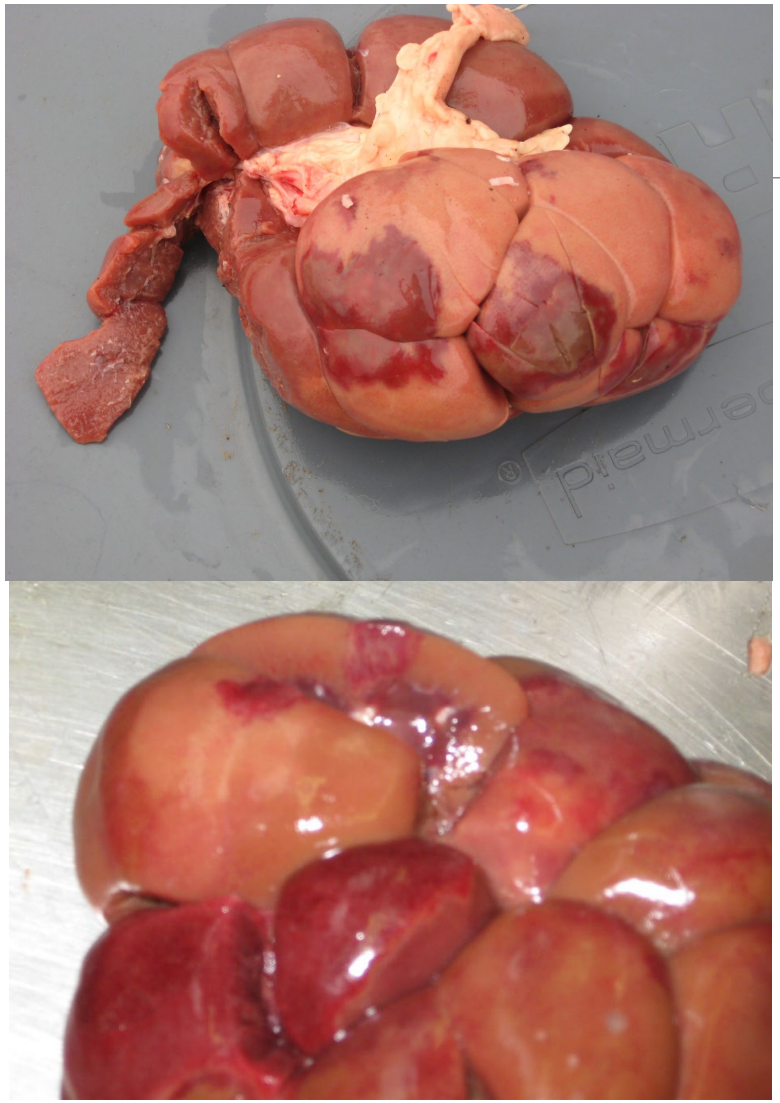
Nephritis with microabscesses





Nephritis

Nephritis with acute infarcts



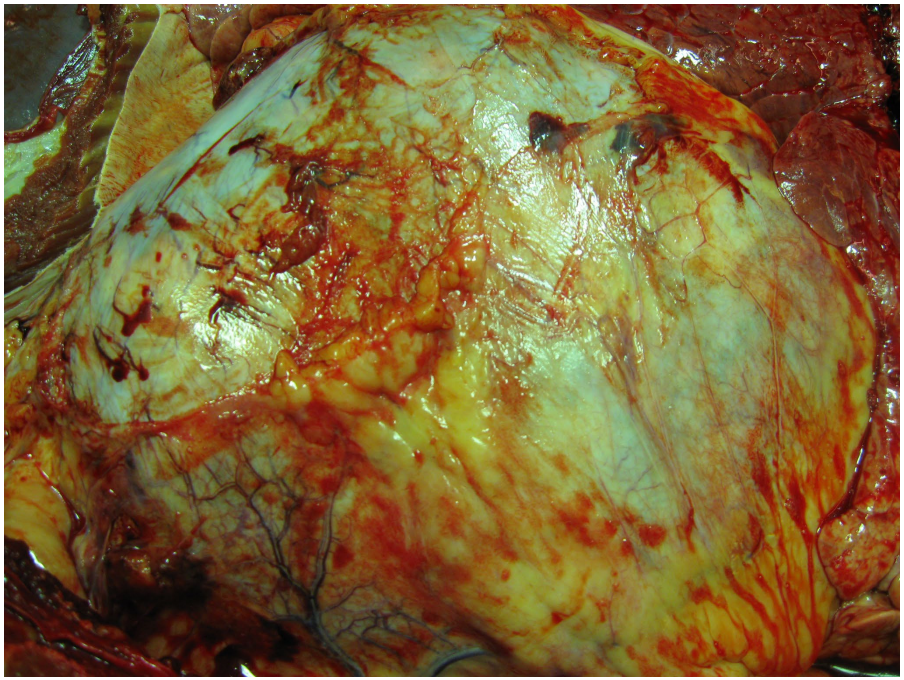
The red splotches on the surface of the kidneys above notate an acute infection.

Pericarditis
9 CFR 311.16(a)

Inflammation of the pericardium or heart sac.

If the condition is acute, or there are secondary changes to the carcass and other organs, the carcass and parts must be retained for the veterinarian.

Pericarditis



The heart encased by the inflamed pericardium.

Pericardial sac pulled away from the myocardium.

Peritonitis
9 CFR 311.16(a)(1)

Inflammation of the lining of the abdominal cavity.

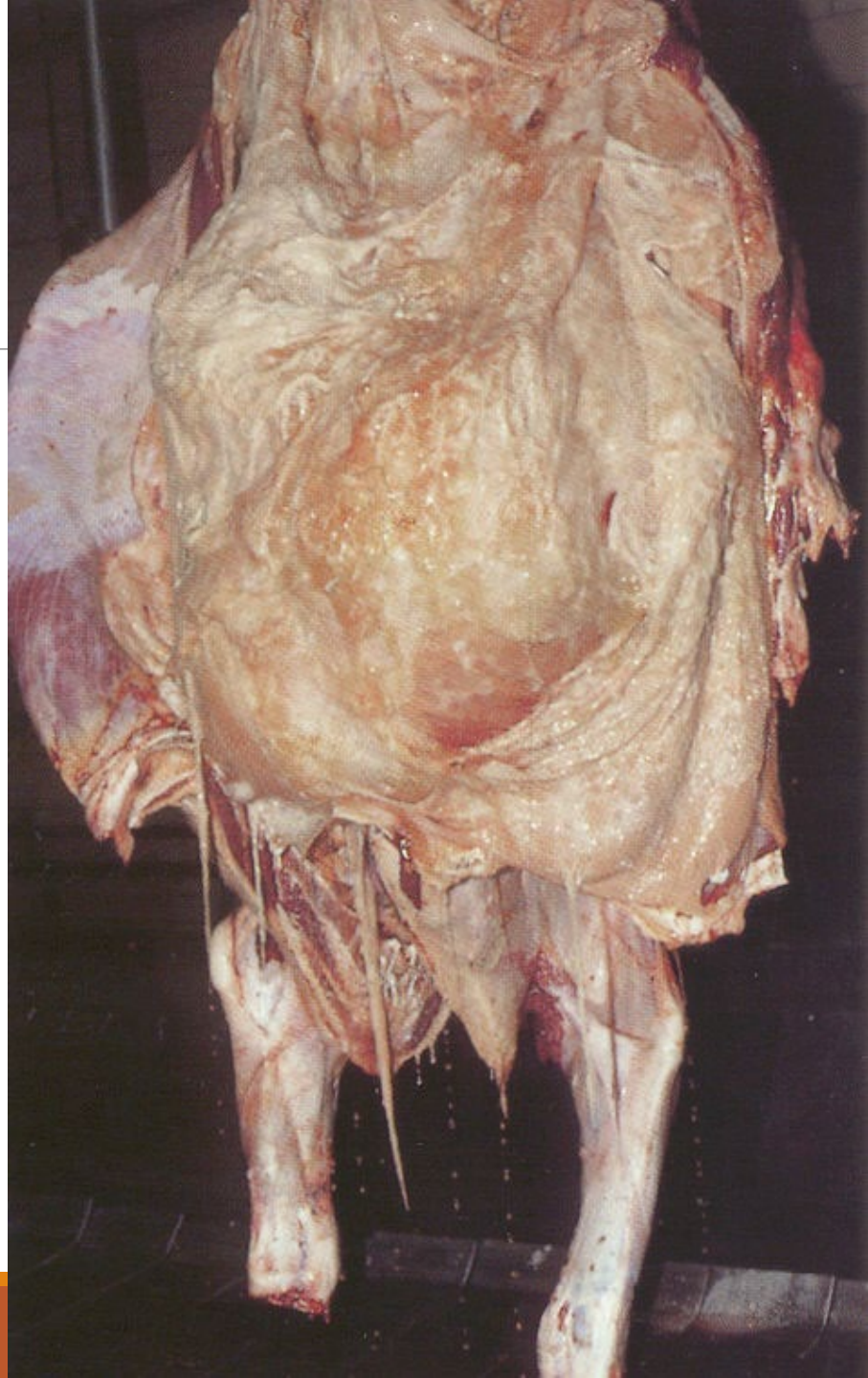
If acute, extensive, or there are secondary changes, the carcass and parts must be retained for the veterinarian.

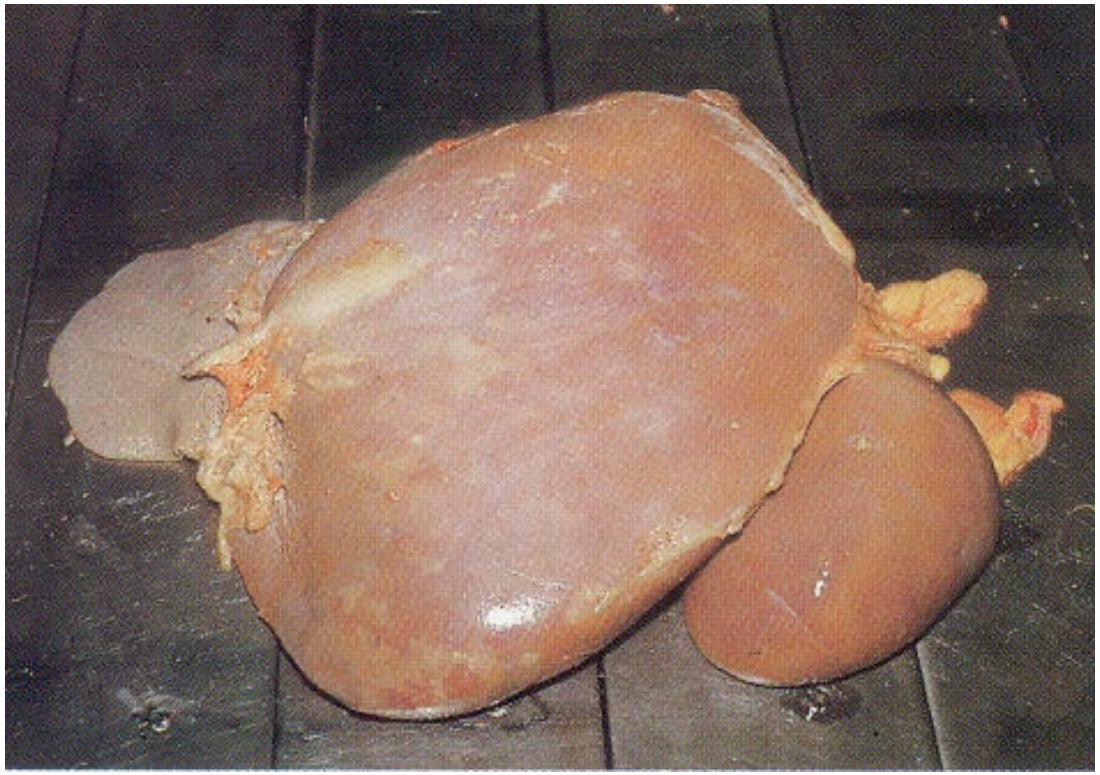
Localized, chronic inflammatory processes with adhesions may be "peeled out" with the remainder of the carcass passed for food

Adhesions represent a chronic situation in which the pleuritis or peritonitis has been resolved by the formation of fibrous connective tissue.

Peritonitis

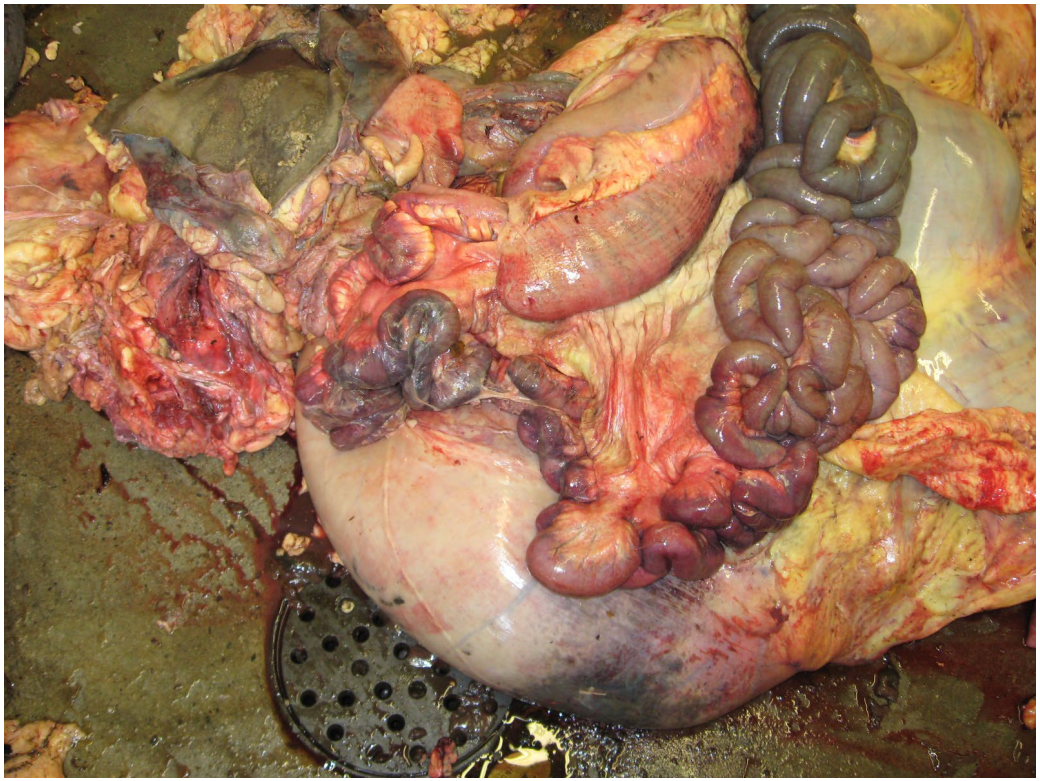
A very chronic, but extensive case. It takes the body a long time to create all the fibrin seen in the photo to the right.

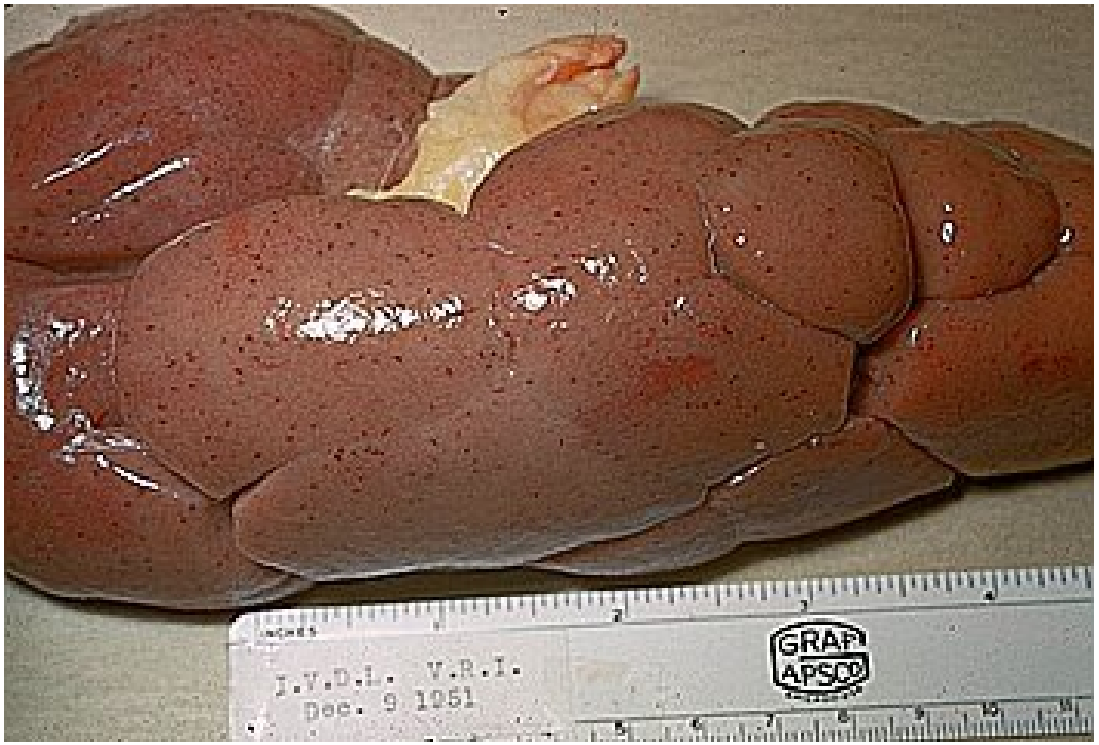




Peritonitis shown as fibrin tags on surface of the liver…

Peritonitis





Petichiated Kidney

Small pinpoint blood vessel hemorrhages.

Can be associated with an animal that is septic/has Septicemia.

Retain for veterinary disposition when other pathologies are present.

Condemn kidney(s) affected if no other pathologies are present.

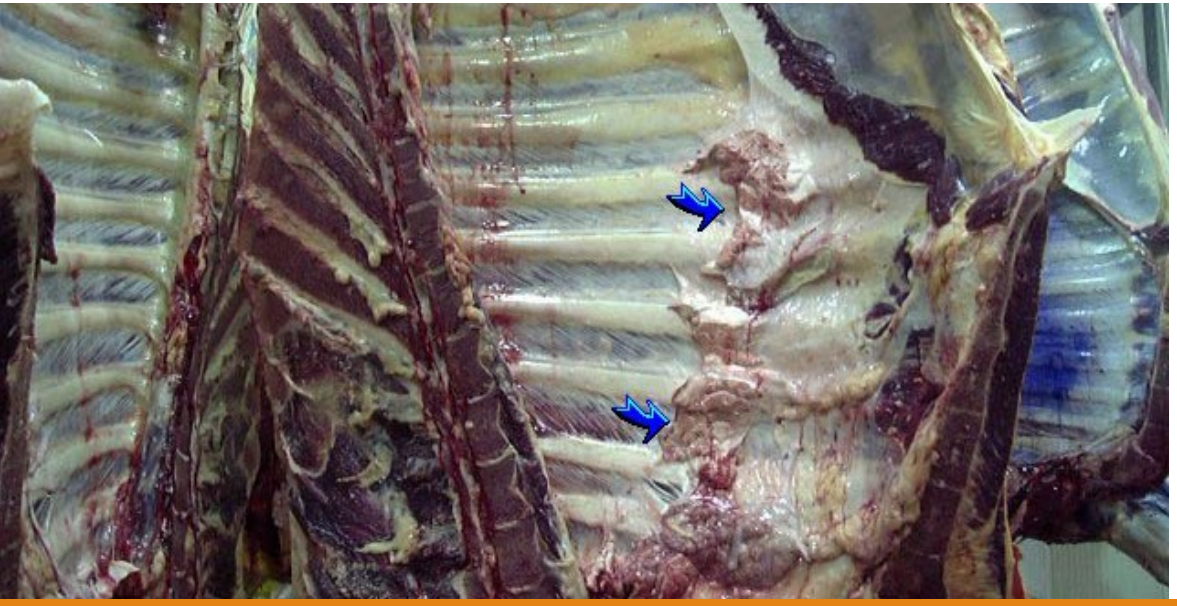
Pleuritis
9 CFR 311.16

Inflammatory condition affecting the pleural lining.

If the inflammation is not acute and extensive and there is no generalized effect on the carcass, you would have the affected tissues removed and the carcass passed.

If acute, extensive, or other associated pathology is present, the carcass and its parts should be retained for veterinary examination

Adhesions represent a chronic situation in which the pleuritis or peritonitis has been resolved by the formation of fibrous connective tissue.



Pleuritis

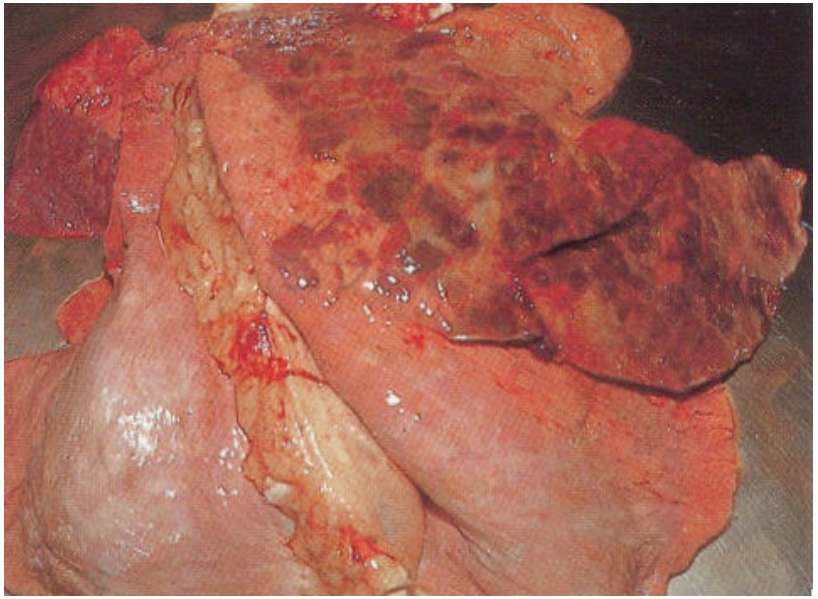
Pneumonia 9 CFR 311.16(a)(1)

Acute pneumonia is characterized by enlarged, edematous (wet) lymph nodes and/or dark red to purple sections or spots in the lung tissue.

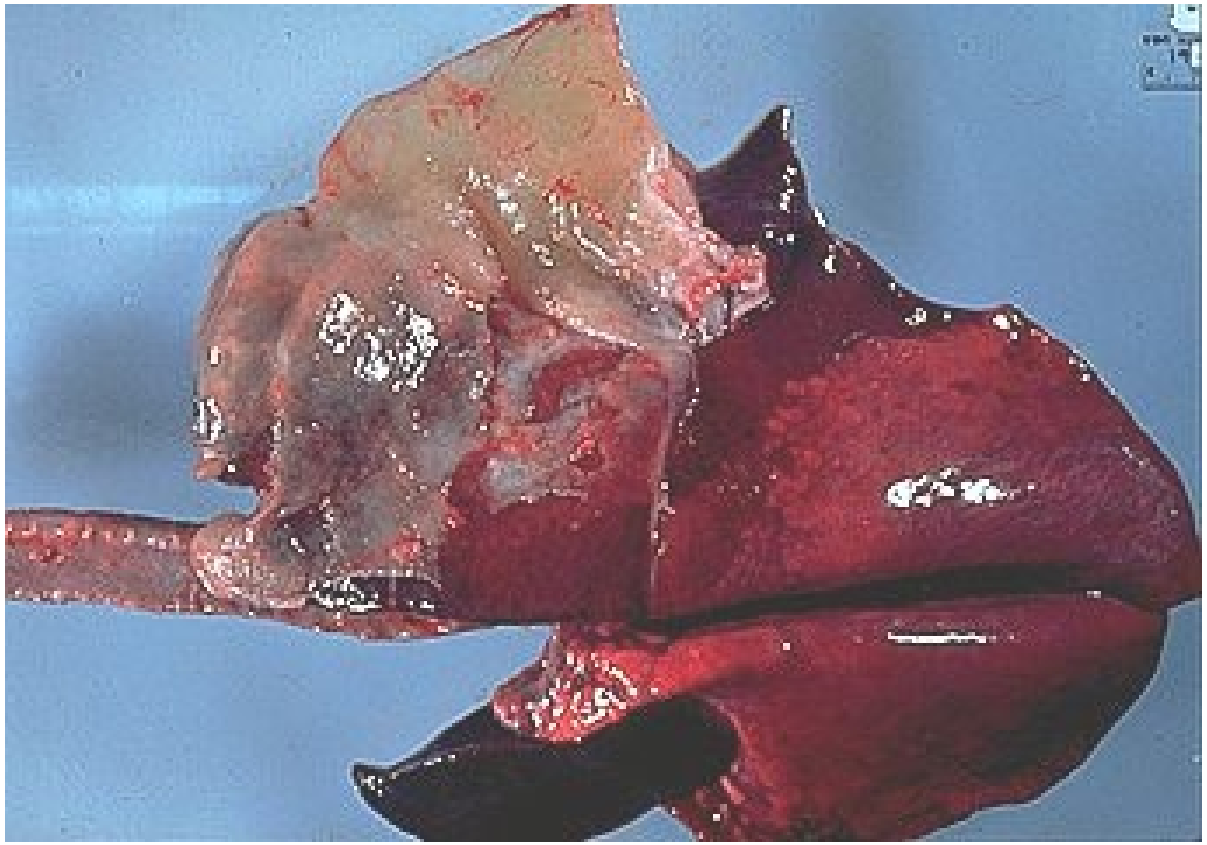
You will retain the carcass and all parts upon detecting a generalized condition.

When the condition is strictly localized, the lungs would be condemned, as well as any contaminated organs, and the carcass retained for removal of any adhesions that may be present.

A chronic pneumonia may be characterized by a localized abscess within the lungs, or many times evidence that the lung has become adhered to the pleura (lining of the thoracic cavity), frequently called pleuritis.



Pneumonia



Stage 1- Acute Pneumonia

NOTICE THE REDNESS AND WETNESS.

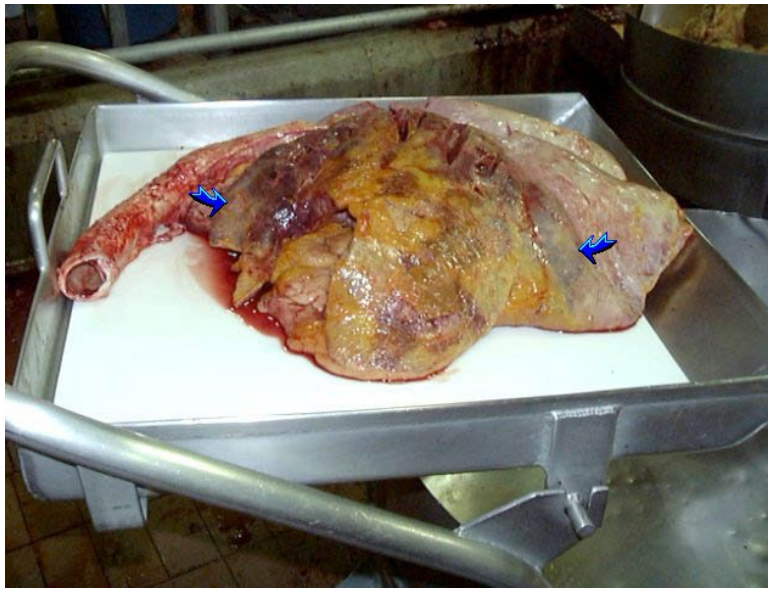
Stage 2 – Acute & Chronic Pneumonia

COMBINATION OF PURPLE (CHRONIC) AND RED (ACUTE) COLORATION.

Stage 3 – Chronic Pneumonia

PURPLE COLORATION OF LOBE, PROBABLY VERY FIRM TO THE TOUCH.

Pneumonia

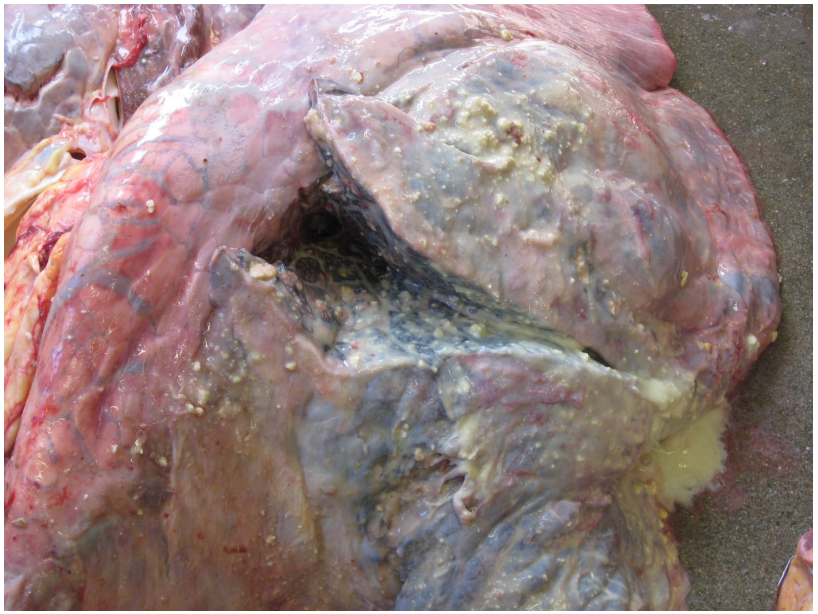


Enlarged and hemorrhaged lobe.

Enlarged lobe.

Pneumonia

GRANULOMAS SEEN IN THE INTERIOR OF THE LOBES.



Pneumonia

LUNGS OOZING PUS; FULL OF INFECTION.

Presentation of Renal (Kidney) Failure seen by MPID Inspection Personnel!

Under 30-month black angus steer presents for veterinary postmortem disposition.

Carcass and parts were condemned due to nephritis associated with generalized/systemic disease processes.

Renal (Kidney) Failure

Kidney was pale and severely enlarged (approximate size of football).

Renal (Kidney) Failure

Too numerous to count (TNTC) large, grape sized calculi (i.e., kidney stones) within renal pelvis and medulla.

Renal (Kidney) Failure

Bladder mucosa severely inflamed and thickened.

Renal (Kidney) Failure

Hemorrhagic spleen with attached fibrins.

Renal (Kidney) Failure

Generalized peritonitis with multiple adhesions throughout the abdominal cavity. Petechial hemorrhage observed on the interior abdominal musculature.

Actinobacillosis as seen at Postmortem…

Granulomas in the Mandibular and Medial Retropharyngeal LNs.

Tongue is stunted and firm in texture.

Spotted Livers Sawdust and Telangiectasis (Telgang)

The condition in which a liver has pinkish-white to yellow- gray necrotic (dead) spots that make the liver appear as if sawdust had been sprinkled or scattered through it is called "sawdust."

The area around the spots appears normal and the liver's surface over the spots is usually smooth.

The condition in which a liver has purple-red to bluish-black spots present both on the surface as well as throughout the organ is called telangiectasis and is referred to as "telang." Usually, the surface of the liver is slightly depressed when affected with telang.

To determine the disposition of sawdust and telang conditions, *three* degrees of involvement are used:

1. Slight: Where the lesions are small in size and slight in number. A liver meeting the “slight” criteria is passed for food without restriction.

2. More severe than slight but involves *less* than one-half of the organ: The portion of the liver that is *not* affected or only slightly involved may be passed for food without restriction, while the remainder of the liver is condemned.

3. More severe than slight and involves *more* than one-half of the organ: The entire organ is condemned. (It may be salvaged for animal food).

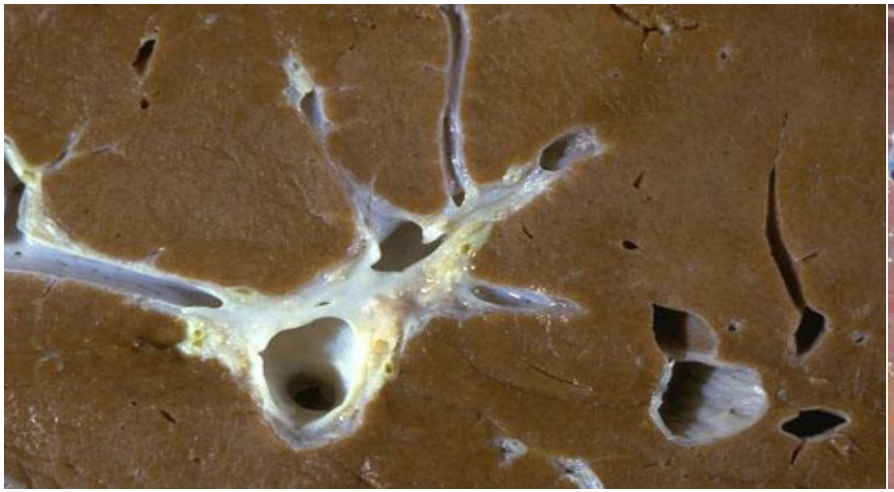
Sawdust Liver

There are more than a slight number of lesions and it appears the lesions cover more than half the surface of the liver. This liver would be condemned.

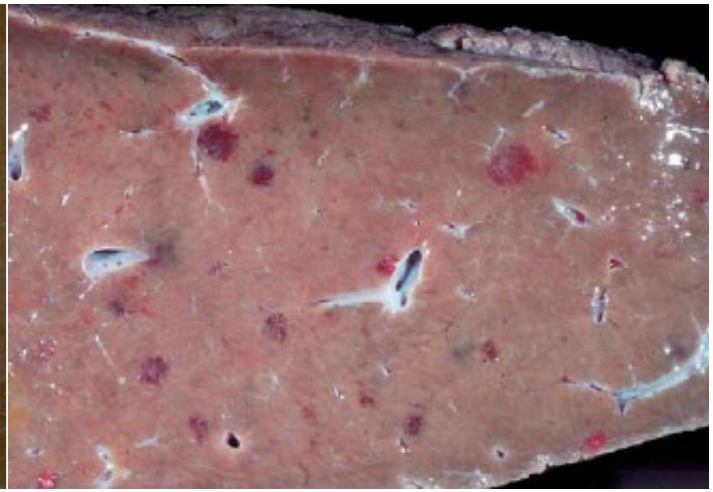
Sawdust Liver

There are more than a slight number of lesions and the lesions cover more than half the surface of the liver. This liver would be condemned.

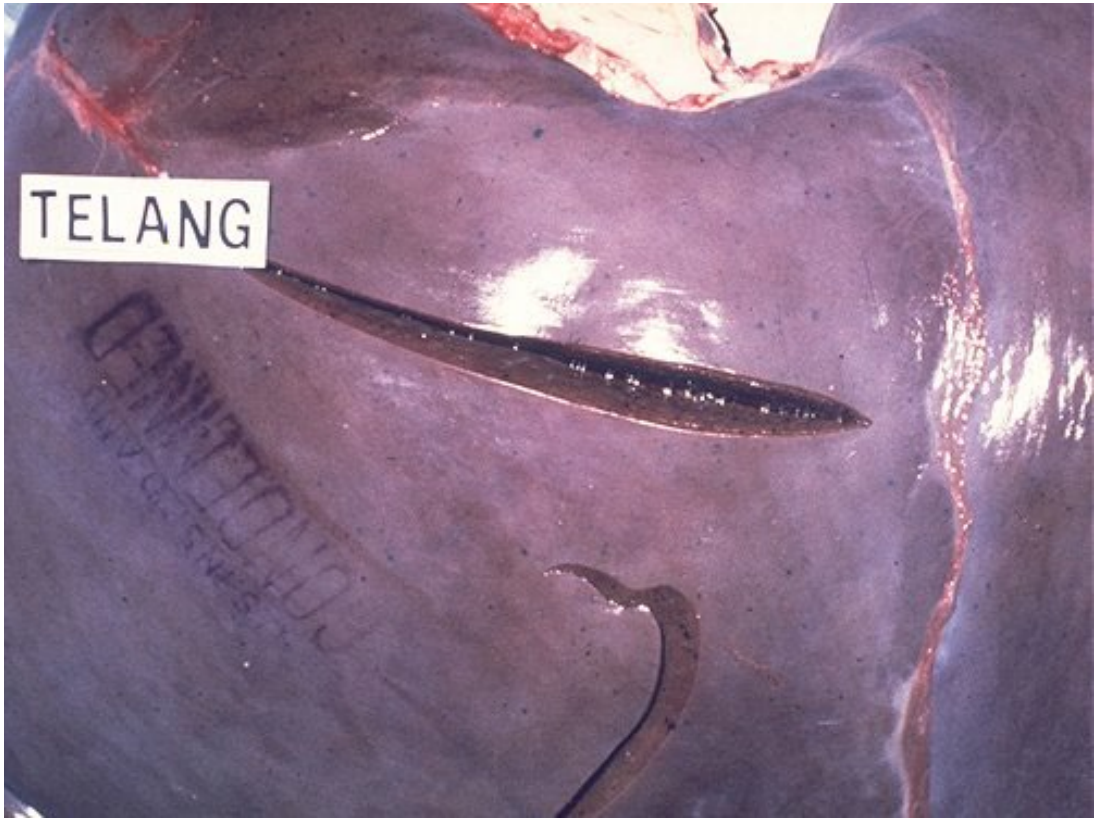
Telangiectasis (Telang)



Cross-section of a normal liver.



Cross-section of a liver affected with telang. Notice the purple-red spots throughout.



Telangiectasis (Telang)

Note the multiple petechiae (small blue spots) covering the liver above. There are more than a slight number of lesions and the lesions cover more than half the surface of the liver. This liver would be condemned.

Steatosis
9 CFR 311.35

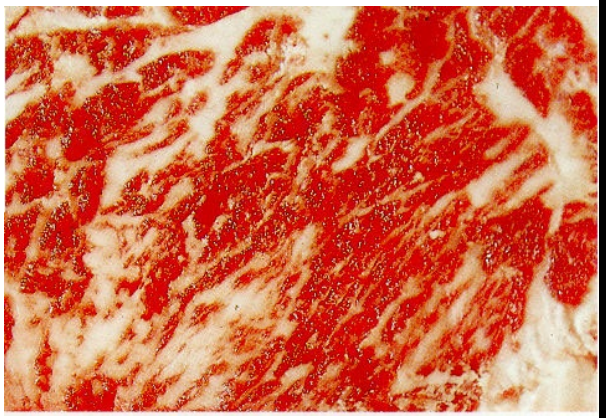
This muscular condition principally affects cattle in feedlots and is characterized by a replacement of the muscle fibers by fat tissue.

There is no inflammation involved.

It usually occurs in the heavier muscles of the back and shoulders.

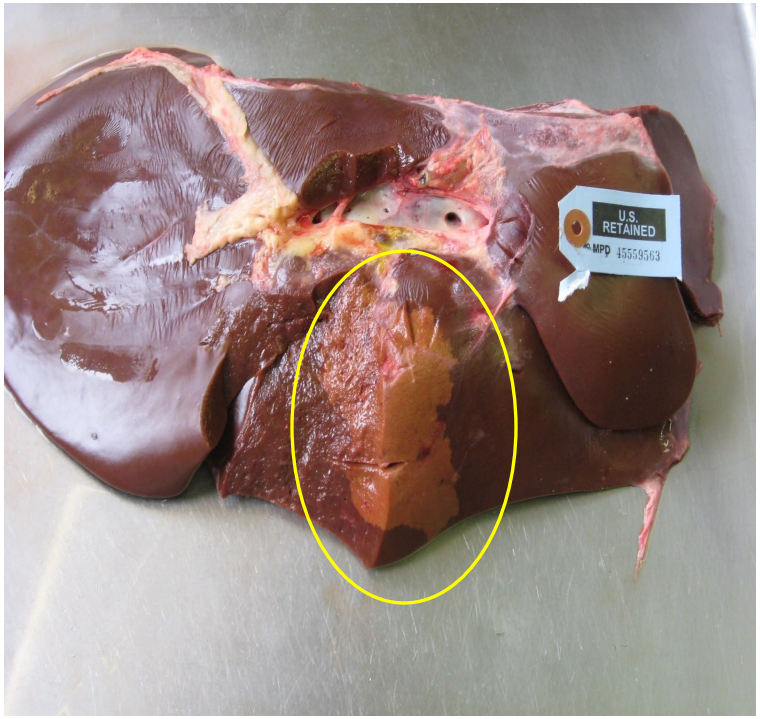
The condition does not affect the carcass in any other way, so after removal of the affected area, the carcass is passed for food.

Steatosis



Muscular steatosis in ribeyes.

Tension Lipidosis



Fatty infiltration and commonly seen near mesenteric and gall bladder attachments.

Sometimes, seen in pregnant females.

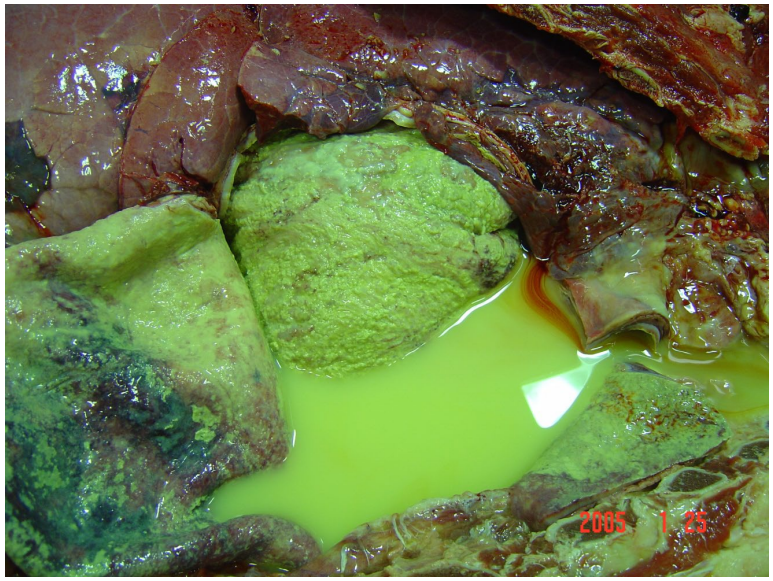
Liver may be passed for food.

Traumatic Reticulitis (Hardware Disease)

Caused by the migration of ingested metallic objects through the reticulum, diaphragm and can eventually reach the heart.

Often the liver, diaphragm and lung lobes are adhered together.

Severe case of Traumatic Reticulitis



Piece of metal found and that caused the Traumatic Reticulitis as seen in the photo on the left.

Tuberculosis
9 CFR 311.2

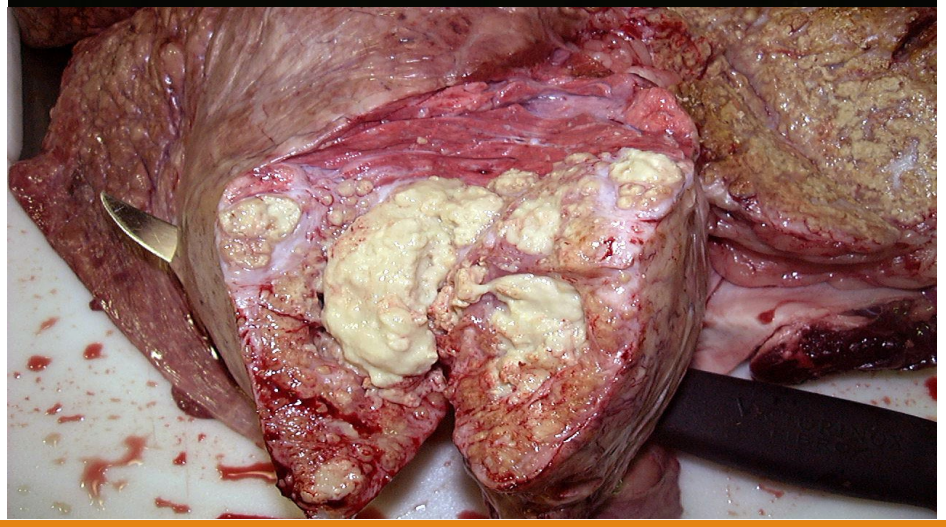
One of the primary reasons you incise lymph nodes is to detect TB. Evidence can be found during head and viscera inspection (when slicing the lungs' LNs).

The affected lymph node involvement will vary from slightly involved to totally involved.

When incised, the node affected usually exhibits a yellowish semi-liquid to caseous (cheese-like) mass of tissue interspersed with some normal tissue, greyish in color, and often showing signs of inflammation.

When you detect what you suspect is TB, you must retain the carcass and parts for veterinary disposition.

Tuberculosis – As seen in lymph nodes and lungs…



Urine Leakage due to a broken penis

Wry Neck

Can be genetically dispositioned, vitamin deficiency or associated with a CNS disorder.

Always Suspect at Antemortem.

Xanthosis
9 CFR 311.13

Brown atrophy of the musculature.

This brownish discoloration of the skeletal and heart muscles is the result of excessive quantities of waste pigment being deposited in the muscles.

Xanthosis is usually found in older cattle and those cattle suffering from chronic wasting disease.

The masseter (cheek) muscle, tongue, and heart are most often affected.

When there is extensive discoloration of the musculature of the carcass, it is unfit for food. Retain the carcass and parts for veterinary disposition.

When the condition is slight and localized, the carcass is passed for food after the localized condition has been removed by trimming. If you have any doubt about how extensive the condition is, you should retain the carcass and parts for veterinary disposition.

Xanthosis
9 CFR 311.13

Other interesting things you could see at antemortem…

Congenital cleft lip and oronasal fistula

Hoof Malformation - double hoof on one leg

Muffin Top in an Obese Cow

Onset of Parturition

9 CFR 309.10

Any livestock showing signs of the onset of parturition shall be withheld from slaughter until after parturition and passage of the placenta. Slaughter or other disposition may then be permitted if the animal is otherwise acceptable.

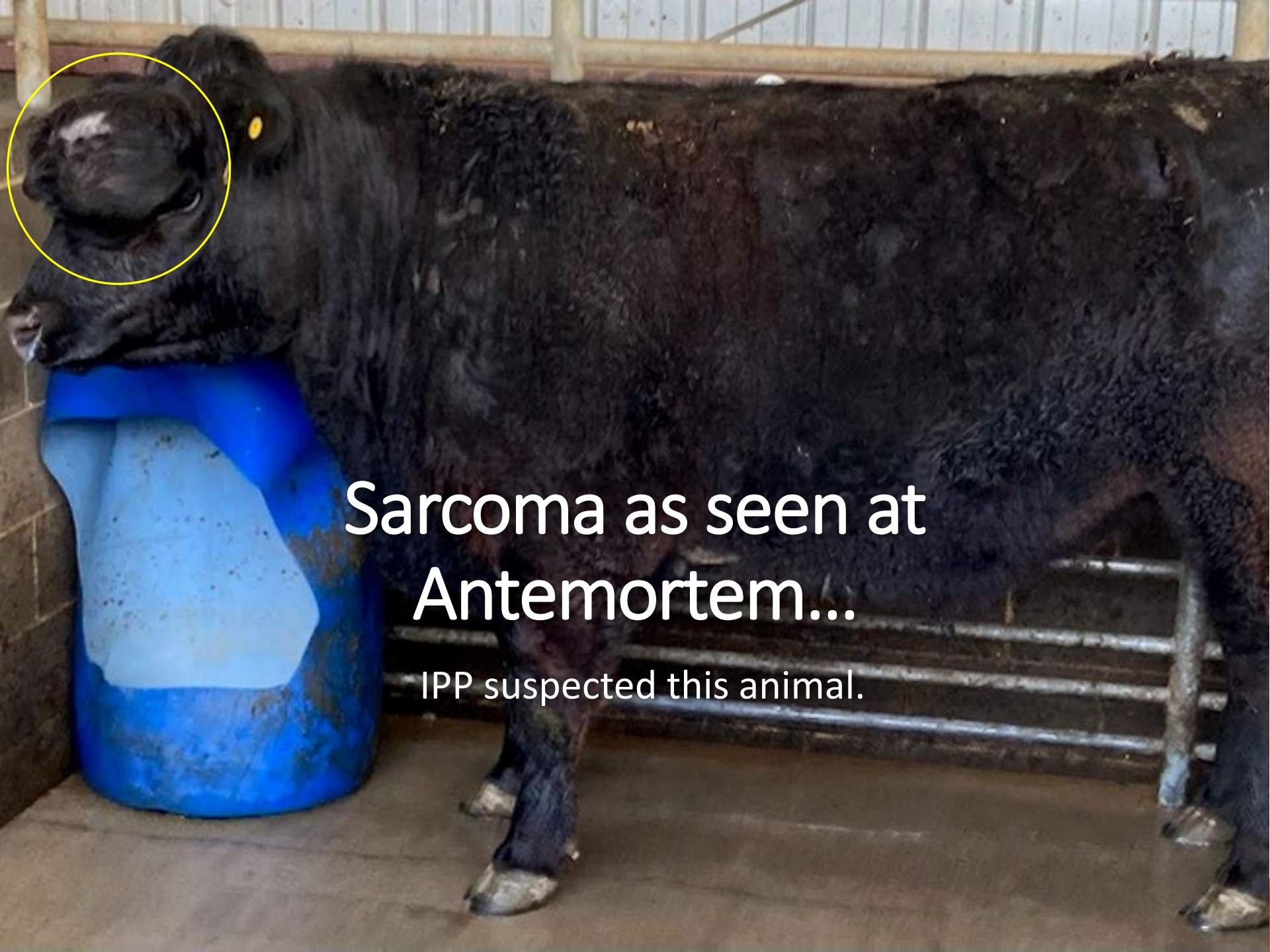
Papillomatosis (warts)

Presentation of Sarcoma as seen by NCDA MPID personnel!

30+ month old Steer

Antemortem: Football-sized mass about 1” from the left eye. No CNS signs, good body condition, alert and responsive.

Postmortem: Mass was light yellow in color and firm. There was slight deterioration of osseous structure in the head around the mass. This area did not show signs of infection. No other significant findings in the carcass or viscera.


Sarcoma as seen at Antemortem…
IPP suspected this animal.

Unusual Growths

Pathology is undetermined, but based on looks could be a tumor or deformed horn tissue.

If seen at antemortem this should be suspected.