

**ZOOLOGICAL PATHOLOGY PROGRAM
STRANDED CETACEAN NECROPSY REPORT**

Field ID: RIB20110111-LA02
Additional Identifier: LA 441
ZPP Accession Number: 11-08Tt
Species: *Tursiops truncatus*
Strand Date: 01/11/11
Strand Location: Grand Isle, LA
Sex: Female
Age Class: unknown
Necropsy Date:
Condition code: 2
Total Length: 183 cm
Weight:
Blubber Depth:
Body Condition: emaciated

Gross Necropsy: Report on file.

Gross findings include (from gross report):
External: Emaciated

Internal: blubber thin, no visible lesions

Mouth: all teeth present, papillae present on tongue

Lungs: moderate numbers of parasite granulomas throughout entire lung parenchyma bilaterally, with moderate numbers of visible worms associated with granulomas

Digestive system: small amount of light brown/grey pasty material in forestomach- possibly partially digested milk. Esophagus empty. Multiple encysted parasites present in second and third stomach chambers, with small amount of dark brown fluid digesta.

Intestines: no parasites noted, small to moderate amount of digesta present

Slides/Tissues Received: 24 regular slides, 1 large slide

Microscopic Findings:

Slide 1:

Heart, left ventricle: There is no epicardial adipose tissue. A few clusters of myocytes are hyper eosinophilic, have smudgy cross striations and hyperchromatic nuclei.

Lymph node: The paracortex and cortex contain moderately increased numbers of plasma cells.

Slide 2:

Heart, atria: Epicardial adipose tissue is thin and collapsed.

Inguinal lymph node: Subcapsular and medullary sinuses contain moderate numbers of histiocytes.

Slide 3:

Lung: Regionally, bronchioles and peribronchiolar parenchyma is obscured by multiple, moderately sized accumulations of mineral surrounded by moderate numbers of macrophages, lymphocytes and dense fibrous connective tissue (mineralized granulomas). One bronchiole adjacent to a mineral accumulation is markedly dilated and lined by flattened epithelium (bronchiectasis). Alveolar septae adjacent to the accumulations are mildly compressed and contain small to moderate numbers of lymphocytes, histiocytes, fewer plasma cells, and mild to moderate amounts of fibrous connective tissue. Alveolar spaces occasionally contain small amounts of eosinophilic fluid and a few foamy macrophages. Multifocally scattered throughout the remaining parenchyma, often adjacent to bronchioles are small accumulations of lymphocytes.

Tracheobronchial lymph nodes: Sinuses contain small numbers of histiocytes and eosinophils. The cortex and paracortex contain mild to moderately increased numbers of plasma cells.

Slide 4:

Diaphragm: No significant findings (NSF).

Adrenal glands: Multifocally, the cortices contain small to moderately sized areas of congestion and extravasated erythrocytes.

Lymph node: NSF

Slide 5:

Skin: Focally, the epidermis has a partial to centrally full thickness defect in the epidermis. Remaining epidermis is covered by and contains moderate amounts of necrotic debris, moderate numbers of viable and necrotic neutrophils, small amounts of pale eosinophilic fluid, and small numbers of basophilic cocci and bacilli. There are scattered extravasated erythrocytes. Immediately adjacent intact epidermis is mildly thickened and hyperplastic and covered by a thickened layer of keratin containing small numbers of neutrophils and bacteria. Rete pegs are widened.

Cervical lymph node: There is mild cortical follicular hyperplasia and mild lympholysis in the paracortex. Sinuses contain small numbers of histiocytes.

Slide 6:

Skin: Focally there is a small indentation in the epidermis that extends centrally to the dermis (rake mark, presumed). Along one area of the depression are a small number of neutrophils that mildly extends into the dermis.

Skeletal muscle: NSF

Slide 7:

Kidney: There are a few small accumulations of lymphocytes and plasma cells in the cortex.

Spleen: There are moderately sized lymphoid follicles in the white pulp. Red pulp contains moderate numbers of erythroid and myeloid precursors.

Slide 8:

Trachea: NSF

Spinal cord: NSF

Slide 9:

Pancreas: Acinar cells have moderate depletion of zymogen

Liver: Hepatocytes are diffusely moderately atrophied. Portal triads are surrounded by small amounts of fibrous connective tissue. Multifocally within periportal areas and in some sinusoids are small clusters of myeloid precursors and plasma cells.

Slide 10:

Colonic lymph node: NSF

Stomach, squamous portion: There is mild retention of superficial epithelium.

Slide 11:

Stomach: There is mild retention of superficial epithelium.

Slide 12:

Intestine: NSF

Slide 13:

Intestine: NSF

Slide 14:

Colon/cecum: NSF

Urinary bladder: NSF

Slide 15:

Ovaries: Multiple developing follicles. NSF

Uterus: Immature. NSF

Slide 16:

Cervix: NSF

Slide 17:

Bone/bone marrow: NSF

Slide 18:

Eye: NSF

Slide 19:

Brain, medulla: NSF

Slide 20:

Brain, cerebellum: NSF

Slide 21:

Brain, cerebellum: NSF

Slides 22 - 24:

Brain, cerebrum: NSF

Final Diagnoses:

- 1) Body as a whole: Emaciation (gross and histologic diagnoses)
- 2) Pancreas: Moderate zymogen depletion
- 3) Stomach, squamous portion: Mild retention of superficial epithelium
- 4) Liver: Moderate diffuse hepatocellular atrophy; mild extramedullary hematopoiesis; mild portal fibrosis
- 5) Lung: Moderate multifocal chronic granulomas with mineralization and intralesional parasites (gross and histologic diagnoses)
- 6) Heart: Minimal multifocal acute myocardial degeneration
- 7) Skin: Moderate focal acute to subacute ulcerative dermatitis
- 8) Spleen: Moderate lymphoid hyperplasia and extramedullary hematopoiesis
- 9) Tracheobronchial lymph node: Mild sinus histiocytosis and eosinophilia and moderate plasmacytosis
- 10) Cervical lymph node: Mild lymphoid hyperplasia and sinus histiocytosis
- 11) Inguinal lymph node: Moderate sinus histiocytosis
- 12) Kidney: Minimal multifocal lymphoplasmacytic interstitial nephritis
- 13) Stomach: Multiple encysted parasites (gross diagnosis)

Ancillary Test Results:

Pseudomonas aeruginosa and *Aeromonas hydrophila* from lung foam.

Comments:

Cause of death was not evident in this dolphin, however, given the emaciated body condition noted grossly and the depleted adipose tissue described around the heart, poor body condition may have contributed to debilitation. The pancreatic zymogen depletion, retention of

superficial epithelium in the stomach, and hepatocellular atrophy in the liver are all indicative of reduced food intake.

Multiple mineralized granulomas were noted in the lung histologically corresponding to the parasitic granulomas noted during gross examination. Inflammation was not considered severe enough in the sections examined to have significantly contributed to debilitation. No bacteria were observed within the lesions.

A cause for the skin ulceration was not found, however, minor trauma is a differential. The skin lesion was mild.

Acute myocardial degeneration can occur during a live stranding or may be a peri-terminal lesion.

The lymph node and spleen changes were considered within acceptable limits for a juvenile free-ranging dolphin with mild to moderate parasitism.

The reproductive tract was immature, indicating that this animal was a juvenile.

Reported By:

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