# ZOOLOGICAL PATHOLOGY PROGRAM STRANDED CETACEAN NECROPSY REPORT

**Field ID: 7**1IMMS071110

Additional Identifier: D-0022 (Alternate field ID); 10-264C (slide accession number)

**ZPP Accession Number:** 11-47Tt

Species: Tursiops truncatus Strand Date: 07-11-10 Strand Location: Biloxi, MS

Sex: female (gravid)
Age Class: Adult

Necropsy Date: 07-11-10

Condition code: 2 Total Length: 240 cm

Weight:

Blubber Depth: Body Condition:

Gross Necropsy: Oiled marine mammal necropsy report available for review.

**Slides/Tissues Received:** 20 regular slides.

Microscopic Findings: Autolysis is moderate.

#### Slide 1:

Lymph node: Regionally the sinuses contain many extravasated erythrocytes. There are numerous large cortical follicles with prominent germinal centers.

#### Slide 2:

Lymph nodes (2): Both nodes are moderately, multifocally congested and have prominent follicles as for slide 1.

#### Slide 3:

Trachea: The submucosa is moderately to markedly congested. Scattered throughout are low to moderate numbers of plasma cells and lesser lymphocytes.

Heart valve: No Significant Findings (NSF)

Lymph node: Sinuses contain moderate numbers of erythrocytes and eosinophils.

Adrenal: NSF

Slide 4:

Pancreas: NSF

Heart valve: NSF

Pituitary gland (NSF

Slide 5:

Adrenal: NSF

Lung (2): Regionally the pleura and subpleural interstitium are expanded by moderate quantities of dense collagenous fibrous tissue containing frequent thick-walled arterioles (angiomatosis). Throughout the remainder of the lung are frequent small, irregular aggregates of similar tissue widening, distorting and replacing small quantities of alveolar parenchyma. A large caliber bronchus contains luminal erythrocytes, fibrin and leukocytes (hemorrhage). A large caliber pulmonary artery has a small, focal, crescentic subintimal accumulation of fibrous tissue.

#### Slide 6:

Liver: Portal triads are closely spaced (lobular collapse) and have slightly increased quantities of fibrous tissue. Few have mildly to moderately increased numbers of small bile ductules (hyperplasia).

Intestine: NSF

Lymph node: Sinuses contain low numbers of neutrophils, eosinophils, and mildly increased numbers of macrophages.

Aorta: NSF

Slide 7:

Urinary bladder: NSF

Lymph node (attached to above urinary bladder): Sinuses contain large numbers of eosinophils. Medullary cords contain few small aggregates of macrophages containing black granular cytoplasmic pigment.

Vagina: NSF

Slide 8:

Skeletal muscle: NSF

Heart: NSF

Spleen: Diffusely the spleen is moderately congested.

Thymus: The interstitium and parenchyma multifocally contain large numbers of extravasated erythrocytes (hemorrhage).

Lung: There are few small areas of angiomatosis as for Slide 5. Multifocally alveoli and bronchioles contain scant to large numbers of erythrocytes (hemorrhage). One bronchial lumen contains a fragmented nematode cross section and few necrotic neutrophils and macrophages. An adjacent bronchiole contains abundant luminal mucus, few similar cells and eosinophils, and the surrounding interstitium contains low numbers of lymphocytes.

## Slide 9:

Tongue: NSF

Heart (left free wall): There are few, minimal, perivascular areas of fibrosis with separation and or loss of rare to few myocytes.

Heart (atrium): NSF

## Slide 10:

Skeletal muscle: NSF

Lymph node: There are rare neutrophils in cortical sinuses and minimally increased numbers of cortical and medullary plasma cells.

Cervix and vagina: NSF

Corpus luteum: NSF

Intestine (2): NSF

# <u>Slide 11:</u>

Uterus: NSF

Large caliber artery: NSF

Heat (atrium): NSF

Kidney: Many glomeruli have a mild to rarely moderate, segmental to global increase in mesangial matrix.

Vagina: NSF

#### Slide 12:

Intestine: NSF

Trachea: The submucosa is moderately congested.

Skeletal muscle: NSF

Blood clot (per submitter): NSF

# <u>Slide 13:</u>

Liver: NSF

Spinal cord: NSF

Fundic stomach: The apical lamina propria contains few scattered lymphocytes, plasma cells and rare eosinophils.

Slide 14:

Skin with blubber: NSF

Unidentified connective tissue: NSF

# Slide 15:

Brain: There is mild, multifocal congestion.

#### Slide 16:

Skin with blubber: In blubber layer at deep margin of the section there are few granulomas composed of mineralized central debris surrounded by low to moderate numbers of macrophages and multinucleated giant cells and further encompassed by several concentric bands of dense collagenous fibrous tissue.

#### Slide 17:

Skin with blubber: NSF

Slide 18:

Skin with blubber: As for Slide 16.

#### Slide 19:

Eye: NSF

Slide 20: Eye: NSF

## **Final Diagnoses:**

- 1. Moderately severe, multifocal, thymic hemorrhage
- 2. Moderate, multifocal, pulmonary hemorrhage
- 3. Mild to moderate, multifocal, pulmonary angiomatosis
- 4. Minimal, focal, suppurative and granulomatous bronchitis with intralesional nematode (lungworm)
- 5. Moderate diffuse, tracheal congestion
- 6. Moderate, multicentric, lymph node congestion
- 7. Moderate splenic congestion
- 8. Mild, multifocal, cerebral congestion
- 9. Mild, multifocal, membranous glomerulonephritis

- 10. Multiple blubber layer granulomas with central mineralized debris drainage reaction, few lymph nodes
- 11. Mild, multifocal, chronic bronchiolitis with intralesional nematode remnants
- 12. Mild, regional, pulmonary angiomatosis

#### **Comments:**

Given gross findings and consistent histologic findings, death was due to traumatic injury. Most histologic findings were related to hemorrhage and agonal circulatory collapse (multicentric congestion).

Pulmonary angiomatosis is a common finding in Gulf of Mexico Tursiops and as for most cases, in this individual this was an incidental finding.

Blubber layer granulomas were presumed due to prior encysted (now necrotic and mineralized) parasites, again not uncommon in free ranging dolphins.

Lungworm infection was minimal and of no clinical consequence.

Reported By:	
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