



Connecticut Veterinary Medical Diagnostic Laboratory

Department of Pathobiology and Veterinary Science • College of Agriculture and Natural Resources
61 North Eagleville Road Unit 3089 • Storrs, CT 06269-3089
phone: 860-486-3738 • fax: 860-486-3936 • web: www.CVMDL.uconn.edu

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PRELIMINARY REPORT

MYSTIC AQUARIUM
55 COOGAN BLVD
MYSTIC CT 06355

Date Collected: 8/6/2021
Date Submitted: 8/6/2021
Date Reported: 8/9/2021

PH: 860-572-5955 FAX: 860 - 572-5972

Animal ID:	Species:	Breed:	Sex:	Age:	Wt:
Havok	Marine	Beluga	M	6Y	

FINAL DIAGNOSIS:
PENDING

MORPHOLOGIC DIAGNOSIS:

Whole Body: emaciation
Skin: epidermal erosions and ulcers, multifocal, moderate to severe
Heart: epicardial vascular proliferation, locally extensive, marked
Trachea and Lung: edema, tracheobronchial, diffuse, marked
Esophagus: ulcers, multiple, marked
Stomach, Second Compartment: ulcers, multiple, marked
Epaxial Muscles: edema, regional, severe
Vertebral column: scoliosis, lumbocaudal, severe

COMMENTS:

Multiple grossly apparent lesions were identified in this beluga whale. The esophageal and gastric ulcers appear chronic in some instances and will be evaluated further by microscopic evaluation of histologic sections. Allowing for speculation, these ulcers could have contributed to the emaciation of this whale. The scoliosis and muscular edema could be associated with chronic muscle wasting and exertion of wasted muscles. Tissues were submitted for histologic processing and microscopic evaluation, which is pending.

PATHOLOGIC FINDINGS

HISTORY:

History of reduced appetite and weight loss (est. 2 month duration). Transferred to medical pool for ongoing medical management and advanced diagnostics. Blood work suggestive of inflammation, mild anemia, elevated muscle and liver enzymes. History of gastritis/gastric ulceration, responsive to medical management. Recently developed spinal curvature that has progressed over last 3 days. Current medications include: antibiotics, antifungals, muscle relaxers, GI medications, misoprostol, probiotics, liver support, fluid therapy, nutritional support.

GROSS FINDINGS:

A 6-year-old, approximately 300kg, male, Beluga Whale (*Delphinapterus leucas*, Mystic Aquarium ID: Havok) was presented for postmortem examination. The whale was in thin body condition with prominent dorsal and transverse spinous processes. An S-shaped lateral curvature of the spine (scoliosis) was evident involving the mid-lumbar spine to the peduncle. Spanning the segment of the body involved in the scoliosis, there was severe bilateral subcutaneous and intramuscular edema of the epaxial muscles. Multiple abrasions of the skin were present on the head, dorsum, lateral body wall, peduncle, and fluke with the more severe including an ulcer of the rostrum and a large, oval ulcer on the fluke with raised margins. The peduncular subcutis and underlying connective tissue was hemorrhagic. Trachea and bronchi contained abundant foam. The mediastinum was emphysematous. The right atrial surface was irregular with pale pitted regions

and reddened raised regions. Minimal fluid was present in the pericardial sac. Along the heart base and the coronary sulcus, there was marked proliferation of enlarged and tortuous epicardial blood vessels. There were several areas of smooth, grey, endocardium at the base of the chordae tendinae along the endocardial surface of the left and right ventricles. Minimal fluid was in the abdomen. The liver had rounded edges with irregular depressed areas along its surface. Along the hepatic surface, there were multiple 1-2mm white foci. Located along the esophageal mucosa just caudal to the larynx and extending to the thoracic esophagus, there were multiple and discrete, linear and elliptical ulcers, which had raised, curled margins. In the second compartment of the stomach, there were multiple and discrete, black ulcers. The first compartment contained fish. The intestine contained bright to dark green, semi-fluidic to semi-solid digesta and fecal material.

Measurements:

Snout to melon: 6cm
Snout to angle of mouth: 23.5cm
Snout to blowhole: 50cm
Snout to center of eye: 37.25cm
Smout to anterior insertion of the dorsal fin: 145cm
Snout to tip of dorsal fin: 176cm
Snout to fluke notch: 312cm
Snout to anterior insertion of flipper: 78cm
Snout to caudal end of ventral groove: 54cm
Smout to center of genital aperture: 183cm
Snout to center of anus: 223cm
Flipper length: 41.5cm
Flipper width (maximum): 26cm
Fluke width: 77.5cm
Dorsal fin height: not measured
Girth, axillary: 134cm
Girth, maximum (17cm caudal to axilla): 151cm
Girth at level of anus: 80cm
Blubber thickness (dorsal): 3cm
Blubber thickness (lateral at mid-length): 3.5cm
Blubber thickness (ventral at mid-length): 3cm

HISTOPATHOLOGY:
PENDING

N. Tocco, DVM; Veterinary Pathology Resident
E. Reinhardt, BVM&S; Veterinary Pathology Academic Assistant
S. Frasca, Jr., VMD, PhD, DACVP; Veterinary Pathologist

Preliminary Report: 8/9/2021

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