

Owner: McMahan

OSUVDL Accession#: V2008-10237

Date received: 2/19/2008


Report
Oregon State University Veterinary Diagnostic Laboratory

P.O. Box 429

Corvallis, OR 97339-0429

Phone: (541)737-3261 Fax: (541)737-6817

<http://www.vet.oregonstate.edu/>

Veterinarian/Submitter: Account#: 22000
 White Shepherd Genetics Project
 PO Box 2068
 Howell, MI 48844-2068

Owner's Name:
 Rhonda McMahan

Attention: cc: Dr. Schultz

Date specimens received: 2/19/2008

Preliminary reports:

Phone Reports:

Final report: Fax 3/12/2008

Client Phone: (517)546-3046

Client Fax: (517)546-3048

Animal ID: Super

Sex: Male

Age: 11 Years

Species: Canine

Breed: German Shepherd

Tests Requested: Necropsy

Specimens Submitted: One dog

Previous Cases:

LABORATORY TEST STATUS	ORDERED	CURRENT STATUS
Routine Culture	2/22/2008	Completed 2/22/2008
Histo, special stains N/C	3/11/2008	Completed 3/11/2008
Necropsy, companion animal	2/20/2008	Completed 3/11/2008
Hist: Companion An Necropsy	2/20/2008	Completed 3/12/2008
Environmental Surcharge	2/20/2008	Completed 2/22/2008

FINAL DIAGNOSIS:
COMMENT:

The primary finding in this dog was a disseminated neoplastic process characterized by a relatively uniform cell population relegated to the vasculature. The neoplastic cells are poorly differentiated, and their site of origin is difficult to determine. Based upon their location and behavior, they are most likely of hematopoietic origin (i.e. likely originated from the bone marrow). However, it is possible that they are not of this lineage at all, and may in fact be neoplastic epithelial cells; adrenal gland and prostate gland origin are suggested by histochemical qualities, but no primary tumor was found in these tissues. Immunohistochemical staining might provide additional clues to the nature of these cells; that testing is available through this laboratory on a fee for service basis.

The spinal column lacked gross lesions; no evidence of stenosis of the spinal canal was observed. The lower spinal cord had occasional dilated axonal sheaths, but this change is consistent with what can be found in many elderly dogs, with or without neurologic signs. Muscle of the hind limbs exhibited marked atrophy; the change was chronic, but no underlying neuronal disorder could be demonstrated.

The liver exhibited marked centrilobular hepatocellular necrosis. There was increased

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centrilobular connective tissue, indicating a chronic process with ongoing acute necrosis. The cause of this is unclear. If the neoplastic process had incited any sort of anemia, that event could have caused the hepatic changes.

The dog also had a seminoma, a testicular tumor, that was an incidental finding. Likewise, foci of hyperplasia were found in the adrenal gland, common in older dogs.

In summary, malignant neoplasia, likely of hematopoietic origin, and hepatic necrosis, possibly secondary to the neoplastic process, are the primary findings in this dog.

Pathologist: Jerry R. Heidel, DVM, PhD, DACVP

Pathology

Date completed: 3/12/2008

Test: Hist:Companion An Necropsy

Animal ID: Super, Canine

Histopathology Report:

Autolysis is prominent in many tissues. Portions of the spinal cord have scattered dilated myelin sheaths. Skeletal muscle from the hind legs has marked variation in muscle cell size; angular, atrophied fibers are scattered amongst those of normal stature. Fat infiltration separates some muscle fibers. Much of the splenic architecture is obscured by accumulations of relatively uniform, large mononuclear cells with variably sized nuclei. The cells have abundant eosinophilic cytoplasm. These cells lie within vascular spaces of the spleen. Similar cells lie within vessels of the liver, adrenal, lung, and thyroid. The adrenal has multiple hyperplastic cortical nodules. The liver has marked centrilobular hepatocellular necrosis; hepatocyte cords are disrupted, and individualized hepatocytes are present. The testicle features tubules filled with neoplastic, large round cells with variably sized nuclei; these cells are arrayed in sheets. Sciatic nerve, brain, pancreas, intestine, heart, and kidney lack lesions. Special stains are pending.

3/12/08: Trichrome staining demonstrates increased connective tissue within the disrupted centrilobular zones. The atypical cell population found in many organs does not stain with toluidine blue.

Date Completed: 3/11/2008

Test: Necropsy, companion animal

Date necropsy completed: 02/20/08

Number of animals: 1

Animal ID: Super, Canine

Necropsy Results:

An 11-year old male White German Shepherd dog is presented for necropsy. The dog weighs 25 kg and is thin; there is marked muscle atrophy, particularly in the hindquarters. Mild to moderate dental calculus is present. All teeth exhibit significant wear. Mucous membranes are pale. The left ear has a tattoo along its inner surface, but it is not readily legible. The medial aspect of the right radius has a 1 cm diameter nodular exostosis. No gross lesions of the brain or spinal cord are found. The spinal canal has no apparent areas of narrowing, even when the column is flexed. Several lumbar intervertebral discs are incised; in each, the nucleus pulposus is dry and crumbles. No disc protrusions are detected. The spleen exhibits nodular hyperplasia. The liver is pale and has a prominent reticular pattern. Nine ascarid worms are retrieved from the small intestine. No gross lesions are found in the pancreas, kidneys, urinary bladder, heart, trachea, esophagus, adrenals, thyroids, or pituitary.

Date completed: 3/11/2008

Test: Histo, special stains N/C

Animal ID

Specimen

Special Stain:

Number prepared:

Owner: McMahan

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Date received: 2/19/2008

Slide	Toluidine Blue	3
Histo, special stains N/C		
Animal ID	Specimen	Special Stain:
Slide	Trichrome-Masson's	Number prepared: Super
		1

Date Completed: 2/22/2008

Test: Environmental Surcharge**Bacteriology**

Date completed: 2/22/2008

Test: Culture Results

Animal ID: Super

Specimen: Liver

Isolate	Growth	
Mixed Environmentals	3+	Heavy mixed growth

Report by: Peggy Dearing

End of Report**BULLETIN:**

Test reliability/function is checked on each run date. Accuracy and/or reproducibility are proven by proficiency testing of known samples (if available). Validation of this test according to the AAVLD/OIE standards is currently in progress. An "*" after the test name indicates the completion of test validation is complete.