

2017.008

Figure 8-G

MEXICAN WOLF NECROPSY PROTOCOL Am J Vet Res, Vol 52, No. 11, November

INSTITUTION/OWNER Dakota Zoo
ADDRESS 602 Riverside Park Road, P.O. Box 711
Bismarck, ND 58502

CANID SPECIES Mexican Wolf ANIMAL ISIS ID # 2452- MIG12-29925432
STUD BOOK # 636 SEX M
BIRTH DATE/AGE 4/1/2000 WEIGHT 68.5 lbs.

REPRODUCTIVE HISTORY:
SHOWN BEHAVIORAL ESTRUS? _____
EVER BRED? _____
PRODUCED PUPS? _____
EVER HOUSED WITH OPPOSITE SEX? yes

DATE OF DEATH 12/21/2016 DATE OF NECROPSY 12/21/2016

HISTORY: (Briefly summarize clinical signs, circumstances of death.)
11-18-2016 - experienced seizure lasting @ 5 minutes.
11-21-2016 - weak, back legs especially weak
11-30-2016 - observed in exhibit, laying down, easily approached,
moved to clinic stall
12-14-2016 - immobilized with 0.5ml BDM, x-rayed and
found tumors in abdomen and severely enlarged bladder.
12-21-2016 - immobilized with 2.0 ml BDM (studying overdose
consequences) -
12-21-2016 - euthanized with Euthasol

Please have your pathologist perform a histopathology on the tissues. Then send the gross examination worksheets and pathologist's report to Dr. Linda Munson, Mexican Wolf SSP® Pathology Advisor; Department VM-PMI, Haring Hall; School of Veterinary Medicine; University of California; Davis, CA 95616; PH: 530-754-7963; Fax: 530-752-

3349. Copies of the completed necropsy reports should be faxed to the SSP[®] Coordinator Peter Siminski, The Living Desert, 47-900 Portola Avenue; Palm De Figure 8-G cont.
PH: 760-346-5694, ext. 2103; FX: 760-568-9685; Email: psiminsk

Animal ISIS ID# _____

GROSS EXAMINATION WORKSHEET

PROSECTOR: _____

GENERAL CONDITION: (Nutritional condition, physical condition)

NEONATES: Examine for malformations (cleft palate, deformed limbs, etc.)

SKIN: (Including pinna, feet)

MUSCULOSKELETAL SYSTEM: (Bones, joints, muscles)

BODY CAVITIES: (Fat stores, abnormal fluids)

NEONATES: Assess hydration (tissue moistness)

HEMOLYMPHATIC: (Spleen, lymph nodes, thymus)

RESPIRATORY SYSTEM: (Nasal cavity, larynx, trachea, lungs, regional lymph nodes)

NEONATES: Determine if breathing occurred (Do the lungs float in formalin?)

CARDIOVASCULAR SYSTEM: (Heart, pericardium, great vessels)

DIGESTIVE SYSTEM: (Mouth, teeth, esophagus, stomach, intestines, liver, pancreas, mesenteric lymph nodes)

NEONATES: Is milk present in stomach?

URINARY SYSTEM: (Kidneys, ureters, urinary bladder, urethra)

REPRODUCTIVE SYSTEM: (Testis/ovary, uterus, vagina, penis, prepuce, prostate, mammary glands, placenta)

ENDOCRINE SYSTEM: (Adrenals, thyroid, parathyroids, pituitary)

NERVOUS SYSTEM: (Brain, spinal cord, peripheral nerves)

SENSORY ORGANS: (Eyes, ears)

PRELIMINARY DIAGNOSES:

Figure 8-G cont.

LABORATORY STUDIES: (List bacterial and viral cultures submitted and results, if available.)

FIXED TISSUE CHECK LIST

Preserve the following tissues in 10% buffered formalin at a ratio of 1 part tissue to 10 parts formalin. Tissues should be no thicker than 1 cm. **INCLUDE SECTIONS OF ALL LESIONS AND SAMPLES OF ALL LISTED TISSUES.** For NEONATES, see the additional tissues on the NEONATAL PROTOCOL. Information on specific TISSUE SECTIONING PROCEDURES are on the following pages.

TISSUES TO SAMPLE (ALL TISSUES CAN BE PUT IN ONE CONTAINER):

- Heart
- Trachea
- Thyroid/parathyroid glands
- Lungs
- Thymus
- Lymph nodes - C, P
- Spleen
- Liver
- Stomach
- Small intestines
- Pancreas
- Large intestines
- Adrenal
- Kidneys
- Urinary bladder
- Testis/Ovary
- Uterus
- Brain
- Skin
- ~~Skeletal muscle~~
- Bone marrow
- Long bone (if bone disease)
- Spinal cord (if neurological disease)

fixed

FROZEN TISSUE: Store in plastic bags at -70 or -20 C for toxicology: Liver, brain, kidney, and (if possible) antemortem serum and plasma frozen. If you suspect an infectious disease, also freeze samples of small intestines, lung, spleen, and lymph nodes.

NEONATAL NECROPSY PROTOCOL

Please follow the adult protocol in addition to the following:

1. Fix umbilical stump and surrounding tissues.
2. Examine of malformations (cleft palate, deformed limbs, heart defects).
3. Assess hydration (tissue moistness) and evidence of nursing (milk in stomach).
4. Determine if breathing occurred. (Do the lungs float in formalin?)
5. Check foot pads for erosions and ulcers.

Additional tissues for histopathology from neonates:

- All tissues from the adult necropsy check list
- Umbilicus (including external and internal vessels and surrounding skin)
- Foot pads from all feet.
- Extra sections of lung.

RECOMMENDED TISSUE SAMPLING PROCEDURES

Adrenal glands: Entire gland with transverse incision.

Brain: Cut longitudinally along the midline. Submit entire brain and pituitary gland except for frozen sections.

Eye: Both eyes intact. Remove extraocular muscles and periorbital tissues.

Gastrointestinal tract: Open carefully along the long axis.

- ✓ Esophagus - 3 cm long section
- ✓ Stomach - multiple sections from cardia, fundus (body), and atrium of pylorus.
- ✓ Small intestines - duodenum, jejunum, ileum
- ✓ Large intestines - cecum, colon
- ✓ Omentum - 3 cm square

Heart: longitudinal section including atrium, ventricle, and valves from (both) right and left heart. (Include large vessels.)

Kidney: Cortex and medulla from each kidney.

Liver: Sections from 3 lobes with capsule and gall bladder.

Lungs: Sections from several lobes including a major bronchus.

Lymph nodes: Cervical, mediastinal, bronchial, mesenteric, and lumbar cut transversely.

Opened rib or longitudinally sectioned half femur: Marrow must be exposed for proper fixation.

Oral/pharyngeal mucosa and tonsil: Plus any areas with erosions, ulcerations, or proliferative lesions.

Pancreas: Representative sections from two areas including central ducts.

Pituitary glands: Entire gland.

Frozen



Figure 8-G cont.

Reproductive tract: Ovaries and entire uterus with longitudinal cut into lumens of uterine horns. Both testes (transversely cut) with epididymis. Entire prostate, transversely cut.

Salivary gland:

Sciatic nerve: 3 cm section.

Skeletal muscle: Cross section of thigh muscle.

Skin: Full thickness of abdominal skin, lip, and ear pinna.

Spinal Cord: If neurological disease, sections from cervical, thoracic, and lumbar cord.

Spleen: Cross sections including capsule.

Thymus:

Thyroid/parathyroids: Leave glands intact.

Tongue: Cross section near tip including both mucosal surfaces.

Trachea:

Urinary bladder/ureters/urethra: Cross section of bladder and 2 cm sections of tubular structures.

SHIPPING TISSUES:

After at least 72 hrs in fixative, ship tissues in a lead proof container in adequate formalin to keep tissues moist. Tissues can be shipped by U.S. Mail or UPS to:

Dr. Linda Munson
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School of Veterinary Medicine
University of California
Davis, CA 95616