30/01/2016

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	37Y 0M 2D

Date 30/01/2016

Time 00:00

Note Author Jennifer D'Agostino

Significant No

Private No

Active Problems ~

Note Subtype: General

Notes/Comments

Keepers found Chai dead in the yard during morning head check (approximately 7:30am). She was laying on her left side under the hay feeder at the far east side of yard 3. On initial inspection, there was no external signs of trauma and no sign that she struggled to get back up. Suspect acute death. Necropsy will be performed toady.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 11M 29D

Test Request Detail

Date Requested	30/01/2016
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	02/02/2016
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	Yes
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	Yes
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	Yes
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	Yes
EEHV 6 qPCR	0 ge/ml	~	~	~	~	~	Yes

© 2015 International Species Information System

Sample Detail (GSN: S-WCD16-041429)

Collection Date/Time	26/01/2016 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

Necropsy Detail

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	37Y 0M 2D

Submission

Death Date 30/01/2016 00:00
Date Submitted 30/01/2016
Date Discovered 30/01/2016
Submitted By Jennifer D'Agostino
Manner of Death Natural/Non-euthanasia

Carcass Weight

Measurement ~
Estimate No
Exclude from reference intervals No

Death Location

Location Type Enclosure
Enclosure ELEPHANT

Recent History/Observations Note

Elephant was found dead in exhibit yard at 7:30 am as keepers arrived to the barn. There were no previous signs of illness. She fell just under the hay feeder and there were no signs of external trauma or strugggle to get up.

Special Request

Case Info

Pathology Case Number OKCZ-00117
Parties to get copy of final report ~
Responsible Pathologist Michael M. Garner DVM
Responsible Resident ~

Death Numbers

Death Number	Effective Date	Entered By
~	~	~

Workflow Notes and Additional Case Comments

~

Gross Necropsy

Necropsy Info

Necropsy Date	30/01/2016	**Necropsy Prosector**	Jennifer D'Agostino
Carcass Condition Code	Fresh	**Additional Staff**	~
My Institution	HOSP		
Reference Number	~		

© 2015 International Species Information System

Report

Report Written Date 30/01/2016

Necropsy Report/Description

External exam: Animal is in good to slightly thin body condition. There are no external signs of trauma. There is a small amount of dried blood in the oral cavity which is presumed to have originated from the trachea at time of death as no oral lesions are present. There is blood congestion within the mucosa of the hard palate. There is some partially masticated hay in the oral cavity between the upper and lower left molars. The upper right front molar was shed several weeks ago and the socket remains open but clean and free of food debris. There are several (approximately 25) firm, raised nodules (abscesses) in the skin measuring 1-5 cm in diameter along the right side of the body from the submandibular area to the lateral flank. Several of the lesions are covered in scab material and contain thick, cream colored purulent debris. Lesions appeared to be associated with the incident 2 months ago when she required some keeper assistance to rise from a right lateral recumbent position. The lesions were being flushed daily by keepers and were slowly resolving.

Thoracic cavity: The trachea, esophagus, heart and lungs were removed en bloc from the thoracic cavity for examination. Trachea, esophagus, and heart (including great vessels) all appear grossly normal. Overall, lungs subjectively appear to be diffusely congested with blood but are otherwise grossly normal. A single bronchial lymph node contained a white, mineralized nodule measuring approximately 5-7mm in diameter. A thyroid gland was identified and removed (presumed right gland). There was a slightly firm, tan colored nodule approximately 4 cm in diameter in the cranial portion of the thyroid gland.

Abdominal cavity: The contents of the abdominal cavity were removed en bloc for examination. There was minimal abdominal fat noted throughout the body cavity. Several lymph nodes were identified in the subcutaneous tissues along the ventrum and all appeared normal. The liver and biliary ducts were grossly normal. Spleen, pancreas, stomach, small intestine, large intestine, cecum, colon, kidneys, adrenal glands and urinary bladder were all grossly normal. Stomach and intestinal tract were filled with normal feed and fecal material respectively. Both left and right ovaries contained multiple cystic structures throughout the parenchyma. The uterine endometrium was mucoid and hyperplastic in appearance and the uterus contained several firm, round masses of varying sizes (2-10cm in diameter) presumed to be leiomyomas. Vestibule and vaginal canal are grossly normal.

Musculoskeletal system: The head was disarticulated from the body through C1 and it was noted that the vertebral body was anatomically displaced significantly to the right of midline. There was no hemorrhage around the vertebral body or the spinal cord and the joint with the foramen magnum appeared stable. Joint surfaces of the left distal carpal joint, right hip, left elbow and left stifle were examined. The left distal carpal joint and left elbow appeared normal. There were 3 small circular, 1 mm diameter, indentations in the cartilage in the center of the right femoral head, the acetabulum appeared normal. There was an irregularly shaped 3 cm x 2 cm indentation in the cartilage on the articular surface of the lateral side of the trochlea. There are also mild erosive lesions in the cartilage over the lateral and medial ridges (non-articular regions) of the trochlea. The articular surface of the patella appears grossly normal.

Tissues submitted include: Spinal cord, thyroid gland (normal section and nodule), trachea, esophagus, right eye, tongue, lung (several sections), heart (several sections), aorta, pulmonary artery, bronchial lymph node, liver, bile duct, spleen, pancreas, kidney, adrenal gland, urinary bladder, ovary, uterus, stomach, small intestine, large intestine, ceceum, colon, lymph node (submandibular, bronchial, mesenteric), skin (abscess)

Tissues submitted to NVSL for culture: bronchial lymph node and lung

Tissues saved frozen for research:
1) Erin Latimer - tongue, heart, liver, spleen, lymph node
2) Gary Hayward - lung, spleen, lymph node
3) SSP - lung, liver, kidney, spleen, lymph node (store in tissue bank)
4) Northwest ZooPath - lung, liver, kidney, spleen, lymph node (store in tissue bank)

Gross / Preliminary Diagnosis

Diagnoses

Diagnosis	Standardized Diagnosis
~	~

Initial Necropsy Comments & Interpretation

~

Samples & Tests

Samples

Sample Type/Anatomical Source	Preservative
Tissue/Eye	Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/HEART	Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/Skin	Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/Endocrine- Thyroid	Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/COLON (NOS)	Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status

© 2015 International Species Information System

~	~	~	~	~

Tissue/UTERUS — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/Spleen — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/Lung — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/HEART — ~

Laboratory	Test Name	Result	Evaluation	Status
National Zoo Departm	Elephantid herpesvirus 1 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 2 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 3 or 4 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 5 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 6 (quantitative.PCR)	0 ge/ml/ ~	~	released

Tissue/Spleen — ~

Laboratory	Test Name	Result	Evaluation	Status
National Zoo Departm	Elephantid herpesvirus 1 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 2 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 3 or 4 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 5 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 6 (quantitative.PCR)	0 ge/ml/ ~	~	released

Tissue/LIVER — ~

Laboratory	Test Name	Result	Evaluation	Status
National Zoo Departm	Elephantid herpesvirus 1 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 2 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 3 or 4 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 5 (quantitative.PCR)	0 ge/ml/ ~	~	released
National Zoo Departm	Elephantid herpesvirus 6 (quantitative.PCR)	0 ge/ml/ ~	~	released

Tissue/BLADDER — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/ESOPHAGUS — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/STOMACH (NOS) — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/PANCREAS — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/LYMPH NODES (MESENTERIC) — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/LYMPH NODE (SUBMANDIBULAR) — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/Kidney — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/TRACHEA — Formalin, 10% buffered

© 2015 International Species Information System

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/LARGE INTESTINE — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/TONGUE — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/LIVER — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/DUCT (BILE) — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/LYMPH NODE (HILAR) — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/OVARY (NOS) — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/SMALL INTESTINE — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/MUSCLE — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/Adrenal Gland — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Tissue/spinal cord — Formalin, 10% buffered

Laboratory	Test Name	Result	Evaluation	Status
~	~	~	~	~

Measurements

Organ Weights & Lengths

Measurement Date/Time	Type	Measurement Item	Measurement Value	Measured By
~	~	~	~	~

Histopathology

Tissue Processing

Tissue Trim Date	~
Trimmed By	~
Tissue Processing Submission Date	~
Tissue Processed Completion Date	~
My Institution	~

Histopathology Info

Histopathology Report Date	~
Histopathology Report By	~
Responsible Pathologist	Michael M. Garner DVM

Histopathology Report

~

Histopathology Diagnosis

Diagnosis	Standardized Diagnosis
~	~

© 2015 International Species Information System

Finalize

Finalization Date ~
Relevant Death Info ~
Primary Body System Affected
Responsible Pathologist Michael M. Garner DVM
Responsible Resident ~

Significant contributors to death

Diagnosis	Standardized Diagnosis
~	~

Final Summary

~

Necropsy Case Info for Husbandry Staff (R1 Note)

~

Addendum

Date	Note	Reported By
~	~	~

Audit Trail
~

21/01/2016

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 7M 4D

Test Request Detail

Date Requested	21/01/2016
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	22/01/2016
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	Yes
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	Yes
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	Yes

Sample Detail (GSN: S-WCD16-041436)

Collection Date/Time	01/09/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

Test & Result

© 2015 International Species Information System

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 6M 2D

Test Request Detail

Date Requested	21/01/2016
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	22/01/2016
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	Yes
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	Yes
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	Yes

Sample Detail (GSN: S-WCD16-041435)

Collection Date/Time	30/07/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

18/01/2016

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 11M 21D

Basic Info

Date Written	17/01/2016
Start Date	18/01/2016 00:00
Prescribed By	Jennifer D'Agostino
Prescribed For	1 animal
Reason For Terminate	Animal died
Terminate Date	2016-01-30
Reason For Treatment	~

Weight Info

Date	17/01/2016
Measurement Value	3,405 kg
Estimate	Yes
Exclude From Reference Intervals	Yes

© 2015 International Species Information System

Treatment Detail

Treatment Item/Drug Cosequin Equine (726.7 mg/g Solid > Powder) (Chondroitin sulfate (Nutriceutical Grade); Glucosamine Hydrochloride (Nutriceutical Grade)) (NUTRAMAX)

Dose Amount 25,200 mg
Dosage Amount 7.401 mg/kg
Administrated Dose Quantity 34.677 g
Frequency once a day (sid)
Duration 348days
Delivery Route Oral (p.o.)
Loading Dose ~
Form Of Drug Powder
Concentration Of Drug: 726.7 mg/g

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 10 scoops once daily until further notice.

Prescription Notes/Comments

10 scoops

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

17/01/2016

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 11M 20D

Date 17/01/2016
Time 00:00
Note Author Jennifer D'Agostino
Significant No
Private No
Active Problems ~
Note Subtype: General

Notes/Comments

Elephant has completed the initial loading dose of Cosequin. Starting tomorrow will start the once daily maintenance dosing.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

07/01/2016

Prescription/Treatment

© 2015 International Species Information System

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 11M 10D

Basic Info

Date Written	06/01/2016
Start Date	07/01/2016 00:00
Prescribed By	Gretchen Cole
Prescribed For	1 animal
Reason For Terminate	Animal died
Terminate Date	2016-01-30
Reason For Treatment	~

Weight Info

Date	06/01/2016
Measurement Value	3,405 kg
Estimate	Yes
Exclude From Reference Intervals	Yes

Treatment Detail

Treatment Item/Drug Emcelle (500 IU/ml Liquid > Solution) (Tocopherol)

Dose Amount	10,000 IU	**Frequency**	once a day (sid)
Dosage Amount	2.937 IU/kg	**Duration**	365days
Administrated Dose Quantity	20 ml	**Delivery Route**	Oral (p.o.)
		Loading Dose	~

Form Of Drug Solution

Concentration Of Drug: 500 IU/ml

Treatment Response

Clinical Response ~

Adverse Effects ~

Adverse Effects Note:

~

Staff Instructions

Give 10,000 IU [20 ml] of Emcelle, once a day (sid) for 365 days.
Start treatment on 07/01/2016
Administration route: Oral (p.o.)

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

01/01/2016

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 11M 4D

© 2015 International Species Information System

Basic Info

Date Written	01/01/2016
Start Date	01/01/2016 00:00
Prescribed By	Gretchen Cole
Prescribed For	1 animal
Reason For Terminate	Animal died
Terminate Date	2016-01-30
Reason For Treatment	~

Weight Info

Date	01/01/2016
Measurement Value	3,405 kg
Estimate	Yes
Exclude From Reference Intervals	Yes

Treatment Detail

Treatment Item/Drug	RED CELL			
Dose Amount	75 g	**Frequency**	once a day (sid)	**Form Of Drug** ~
Dosage Amount	0.022 g/kg	**Duration**	365days	Concentration Of Drug: ~
Administrated Dose Quantity	75 g	**Delivery Route**	Oral (p.o.)	
		Loading Dose	~	

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:
~

Staff Instructions

Give 75 g of RED CELL, once a day (sid) for 365 days.
Start treatment on 01/01/2016
Administration route: Oral (p.o.)

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

29/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 11M 1D

Date	Time	Note Author
29/12/2015	00:00	Gretchen Cole
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Keepers report this animal has returned to normal. They have observed, through overnight video monitoring, this animal lay down on its right side twice in the past week and stand without assistance. Examination of animal in stall. It was bright, alert, and active. The swelling on the right foreleg has reduced to a small pocket on the caudal elbow. All other edema has resolved. The hindleg was not palpated due to position, but edema also appears to have resolved. Will plan to not continue firocoxib at this time. Keepers to

© 2015 International Species Information System

monitor.
Complete blood count: Recheck slide evaluation performed and toxic changes are still reported. This animal does not have clinical illness that would be expected to cause this, will evaluate laboratory methods to ensure correct findings.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 11M 1D

Test Request Detail

Date Requested	29/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	29/12/2015 15:39
Analysis By	Julia Jones
Analysis Equipment	VetScan HM5
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Slide Evaluation: Bilobed Monocytes [m]: 31%
Target Cells seen
Toxic heterophils: 1+tox(6/28); 2+tox(2/28)

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	16.09 *10^9 cells/L	~	7.1	19.9	~	No	No
RBC [a]	2.66 *10^12 cells/L	~	2.15	3.98	~	No	No
HGB [a]	12.8 g/dL	~	8.7	16.5	~	No	No
HCT [a]	34.17 %	~	25.6	47.9	~	No	No
MCV	129 fL	~	94.8	143.9	~	No	No
MCH [a]	48.1 pg	~	31	50	~	No	No
MCHC	37.4 g/dL	~	28.0	40.1	~	No	No
RDW	16.9 %	~	~	~	~	~	No
Platelets	156 *10^9 cells/L	~	~	~	~	No	No
Plateletcrit	0.11 %	~	~	~	~	~	No
Mean Plate. Vol.	6.9 fL	~	~	~	~	No	No
PDW-cv	29.6 %	~	~	~	~	~	No
Neutrophil % [m]	28 %	~	~	~	~	No	No
Lymphocyte % [m]	12 %	~	~	~	~	No	No
Monocyte % [m]	29 %	~	~	~	~	No	No
Anisocytosis	few (2+)	~	~	~	~	~	No
Poikilocytosis	few (2+)	~	~	~	~	~	No
Polychromasia	rare (1+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-040613)

Collection Date/Time	29/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Recheck/Follow-up
Additives/Preservatives	EDTA, Potassium	**Exclude from reference intervals**	No

© 2015 International Species Information System

25/12/2015

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 27D

Basic Info

Date Written	24/12/2015
Start Date	25/12/2015 00:00
Prescribed By	Gretchen Cole
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

Weight Info

Date	24/12/2015
Measurement Value	3,405 kg
Estimate	Yes
Exclude From Reference Intervals	Yes

Treatment Detail

Treatment Item/Drug	Firocoxib (227 mg Solid > Tablet) (Firocoxib)			
Dose Amount	454 mg	**Frequency**	once a day (sid)	**Form Of Drug** Tablet
Dosage Amount	0.133 mg/kg	**Duration**	5doses	Concentration Of Drug: 227 mg
Administrated Dose Quantity	2 count	**Delivery Route**	Oral (p.o.)	
		Loading Dose	~	

Treatment Response

Clinical Response	~
Adverse Effects	~

Adverse Effects Note:

~

Staff Instructions

Give 454 mg [2 count] of Firocoxib, once a day (sid) for 5 doses.
Start treatment on 25/12/2015
Administration route: Oral (p.o.)

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

24/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 26D

© 2015 International Species Information System

Date	Time	Note Author
24/12/2015	00:00	Gretchen Cole

Significant	Private	Active Problems
No	No	~

Note Subtype: General

Notes/Comments

Keepers report this animal has been doing well. Reviews of overnight video shows the animal lays down on its left side nightly and has no problems rising. There is swelling on the right fore and hindlegs over the bony prominences. It was palpated and found to be soft, fluctuant, and on the hindleg associated with increased warmth. This is not unexpected with the recent recumbency and will likely take a few weeks to resolve. Expect edema to move ventrally before resolving. Will continue firocoxib for 5 additional days.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

22/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 24D

Date	Time	Note Author
22/12/2015	00:00	Gretchen Cole

Significant	Private	Active Problems
No	No	~

Note Subtype: General

Notes/Comments

Keeper (KR) reported a swelling on right shoulder seen during morning bath. Animal visualized by JCJ and it was reported that there was an approximately 35cm x 15cm area of edema over the pressure point of the scapula. This is most likely due to the recumbency overnight 2 days ago. Edema will likely shift to gravity dependent area of the thorax and leg, then resolve spontaneously. Continue to monitor.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

21/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 23D

Date	Time	Note Author
21/12/2015	11:30	Gretchen Cole

Significant	Private	Active Problems
No	No	~

Note Subtype: General

Notes/Comments

Veterinary technician JCJ communicated with supervisor (NN) and reported that this animal was found recumbant overnight and was laying down for about 5 hours. Animal did get up in the AM (815am). Collected blood for chemistry analysis and if able will get blood for CBC in PM. Keepers to monitor
Complete blood count: Normal leukogram with fewer toxic heterophils than recent samples.
Chemistry: Improving elevation in creatine kinase, 710u/l, consistent with improving muscle injury after recumbency.
Continue to monitor.

© 2015 International Species Information System

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 23D

Test Request Detail

Date Requested	21/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	21/12/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

200 cell differential
toxic heterophils:
1+ toxicity: 66% of the heterophils
2+ toxicity: 26% of the heterophils
3+ toxicity: 1.3% of the heterophils

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	18.34 *10^9 cells/L	~	7.1	19.9	~	No	No
RBC [a]	2.58 *10^12 cells/L	~	2.15	3.98	~	No	No
HGB [a]	13.8 g/dL	~	8.7	16.5	~	No	No
HCT [a]	32.99 %	~	25.6	47.9	~	No	No
MCV	128 fL	~	94.8	143.9	~	No	No
MCH [a]	53.4 pg	~	31	50	High	No	No
MCHC	41.7 g/dL	~	28.0	40.1	High	No	No
RDW	17 %	~	~	~	~	~	No
Platelets	135 *10^9 cells/L	~	~	~	~	No	No
Plateletcrit	0.10 %	~	~	~	~	~	No
Mean Plate. Vol.	7.0 fL	~	~	~	~	No	No
PDW-cv	29.1 %	~	~	~	~	~	No
Neutrophil % [m]	37.5 %	~	~	~	~	No	No
Lymphocyte % [m]	10.5 %	~	~	~	~	No	No
Monocyte % [m]	19.5 %	~	~	~	~	No	No
Eosinophil % [m]	0 %	~	~	~	~	No	No
Basophil % [m]	0 %	~	~	~	~	No	No
HCT [m]	36 %	~	25.6	47.9	~	No	No
Est. Platelets	adequate	~	~	~	~	~	No
Anisocytosis	rare (1+)	~	~	~	~	~	No
Polychromasia	rare (1+)	~	~	~	~	~	No
Poikilocytosis	rare (1+)	~	~	~	~	~	No
Target Cells	few (2+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040588)

Collection Date/Time	21/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Recheck/Follow-up
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 23D

Test Request Detail

Date Requested	21/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	21/12/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Colorless
Color Intensity	~
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	3.0 g/dL	~	2.3	4.2	~	No	No
Alk. Phos. [a]	37 U/L	~	44	270	Low	No	No
ALT	9 U/L	~	0	31	~	No	No
Amylase [a]	5,500 U/L	~	414	7,023	~	No	No
Tot. Bili.	0.3 mg/dL	~	0.1	0.6	~	No	No
BUN	11 mg/dL	~	6.0	20.0	~	No	No
Ca	9.3 mg/dL	~	9.2	12.0	~	No	No
Phos	3.6 mg/dL	~	3.1	7.4	~	No	No
Creat [a]	1.2 mg/dL	~	0.8	2.3	~	No	No
Glucose	111 mg/dL	~	51	131	~	No	No
Na	120 mmol/L	~	123	141	Low	No	No
K	4.5 mmol/L	~	3.8	5.8	~	No	No
Total Protein	7.6 g/dL	~	6.5	9.6	~	No	No
Globulin	4.6 g/dL	~	3.0	6.5	~	No	No

Sample Detail (GSN: S-WCD15-040587)

Collection Date/Time	21/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Serum	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Recheck/Follow-up
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 23D

Test Request Detail

Date Requested	21/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	21/12/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Colorless
Color Intensity	~
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	4.7 g/dL	~	2.3	4.2	High	No	No
Alk. Phos. [a]	33 U/L	~	44	270	Low	No	No
AST [a]	29 U/L	~	6	38	~	No	No
Ca	9.2 mg/dL	~	9.2	12.0	~	No	No
GGT [a]	0 U/L	~	1	15	Low	No	No
Total Protein	7.6 g/dL	~	6.5	9.6	~	No	No
Globulin	2.9 g/dL	~	3.0	6.5	Low	No	No
BUN	11 mg/dL	~	6.0	20.0	~	No	No
CK [a]	710 U/L	~	53	461	High	No	No
Phos	3.8 mg/dL	~	3.1	7.4	~	No	No
Mg	2.1 mg/dL	~	1.62	2.94	~	No	No

Sample Detail (GSN: S-WCD15-040587-S01)

Collection Date/Time	21/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Serum	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Recheck/Follow-up
Additives/Preservatives	~	**Exclude from reference intervals**	No

20/12/2015

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 22D

Basic Info

Date Written	20/12/2015
Start Date	20/12/2015 00:00
Prescribed By	Jennifer D'Agostino
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

Weight Info

Date	20/12/2015
Measurement Value	3,405 kg
Estimate	Yes
Exclude From Reference Intervals	Yes

© 2015 International Species Information System

Treatment Detail

Treatment Item/Drug Cosequin Equine (726.7 mg/g Solid > Powder) (Chondroitin sulfate (Nutriceutical Grade); Glucosamine Hydrochloride (Nutriceutical Grade)) (NUTRAMAX)

Dose Amount 25,200 mg
Dosage Amount 7.401 mg/kg
Administrated Dose Quantity 34.677 g
Frequency twice a day (bid)
Duration 30days
Delivery Route Oral (p.o.)
Loading Dose ~
Form Of Drug Powder
Concentration Of Drug: 726.7 mg/g

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 10 scoops orally twice daily for 30 days.

Prescription Notes/Comments

10 scoops twice daily for loading dose

Calendar Items

Date	Title	Assigned To	Done
18/01/2016	776414 / Asian elephant / 21517980 Cosequin Equine treatment is complete	Jennifer D'Agostino	No

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

19/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 21D

Date 19/12/2015
Time 00:00
Note Author Gretchen Cole
Significant No
Private No
Active Problems ~
Note Subtype: General

Notes/Comments

Keepers report that this animal did well overnight and did lay down to sleep on its left side and was able to rise on its own. Today this animal did well throughout the day on exhibit. Visual examination confirmed animal to be bright, alert, and active. Fecal boluses were moderately larger than normal, but not surprising after yesterday's stress and with the recent dental attrition.
Complete blood count: Normal leukogram with persistent of toxic heterophils.
Chemistry: Increased creatine kinase, 1066 u/l. This is a moderate increase and is consistent with muscle injury from being recumbent yesterday. No other significant findings.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

© 2015 International Species Information System

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 21D

Test Request Detail

Date Requested	19/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	19/12/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Bi-lobed monocytes: 36.5%
Heterophil Toxicity: 1+ toxicity: 19% of the heterophils; 2+ toxicity:15% of heterophils; 3+ toxcity:5.7% of heterophils

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	17.82 *10^9 cells/L	~	7.1	19.9	~	No	No
RBC [a]	2.69 *10^12 cells/L	~	2.15	3.98	~	No	No
HGB [a]	13.6 g/dL	~	8.7	16.5	~	No	No
HCT [a]	34.17 %	~	25.6	47.9	~	No	No
MCV	127 fL	~	94.8	143.9	~	No	No
MCH [a]	50.3 pg	~	31	50	High	No	No
MCHC	39.7 g/dL	~	28.0	40.1	~	No	No
RDW	17 %	~	~	~	~	~	No
Platelets	126 *10^9 cells/L	~	~	~	~	No	No
Plateletcrit	0.09 %	~	~	~	~	~	No
Mean Plate. Vol.	6.8 fL	~	~	~	~	No	No
PDW-cv	28.5 %	~	~	~	~	~	No
Neutrophil % [m]	26 %	~	~	~	~	No	No
Lymphocyte % [m]	19 %	~	~	~	~	No	No
Monocyte % [m]	18.5 %	~	~	~	~	No	No
Eosinophil % [m]	0 %	~	~	~	~	No	No
Basophil % [m]	0 %	~	~	~	~	No	No
HCT [m]	37 %	~	25.6	47.9	~	No	No
Est. Platelets	adequate	~	~	~	~	~	No
Reactive Lymph % [m]	0.5 %	~	~	~	~	~	No
Anisocytosis	rare (1+)	~	~	~	~	~	No
Poikilocytosis	rare (1+)	~	~	~	~	~	No
Polychromasia	rare (1+)	~	~	~	~	~	No
Target Cells	rare (1+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040579)

Collection Date/Time	19/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

© 2015 International Species Information System

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 21D

Test Request Detail

Date Requested	19/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	19/12/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	4.6 g/dL	~	2.3	4.2	High	No	No
Alk. Phos. [a]	43 U/L	~	44	270	Low	No	No
AST [a]	40 U/L	~	6	38	High	No	No
Ca	9.7 mg/dL	~	9.2	12.0	~	No	No
GGT [a]	5 U/L	~	1	15	~	No	No
Total Protein	8.4 g/dL	~	6.5	9.6	~	No	No
Globulin	3.8 g/dL	~	3.0	6.5	~	No	No
BUN	10 mg/dL	~	6.0	20.0	~	No	No
CK [a]	1,066 U/L	~	53	461	High	No	No
Phos	3.3 mg/dL	~	3.1	7.4	~	No	No
Mg	2.3 mg/dL	~	1.62	2.94	~	No	No

Sample Detail (GSN: S-WCD15-040578-S01)

Collection Date/Time	19/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	Heparin, Lithium	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 21D

Test Request Detail

Date Requested	19/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	19/12/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	VetScan VS2
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	2.9 g/dL	~	2.3	4.2	~	No	No
Alk. Phos. [a]	32 U/L	~	44	270	Low	No	No
ALT	12 U/L	~	0	31	~	No	No
Amylase [a]	5,500 U/L	~	414	7,023	~	No	No
Tot. Bili.	0.3 mg/dL	~	0.1	0.6	~	No	No
BUN	9 mg/dL	~	6.0	20.0	~	No	No
Ca	9.5 mg/dL	~	9.2	12.0	~	No	No
Phos	3.3 mg/dL	~	3.1	7.4	~	No	No
Creat [a]	1.5 mg/dL	~	0.8	2.3	~	No	No
Glucose	88 mg/dL	~	51	131	~	No	No
Na	122 mmol/L	~	123	141	Low	No	No
K	4.5 mmol/L	~	3.8	5.8	~	No	No
Total Protein	8.6 g/dL	~	6.5	9.6	~	No	No
Globulin	5.6 g/dL	~	3.0	6.5	~	No	No
Total Protein (R)	9.0 g/dL	~	6.5	9.6	~	No	No

Sample Detail (GSN: S-WCD15-040578)

Collection Date/Time	19/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	Heparin, Lithium	**Exclude from reference intervals**	No

18/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 20D

Date	Time	Note Author
18/12/2015	00:00	Gretchen Cole
Significant	**Private**	**Active Problems**
No	No	☑ LATERAL RECUMBENCY

Note Subtype: General

Notes/Comments

Keepers reported finding this animal recumbent and unable to rise. They reviewed overnight video monitoring and determined it had laid down at approximately 0545 and was seen attempting to rise without success. Visual observation of animal in stall. It was alert but quiet and in right lateral recumbency. It was responsive to keepers and would accept food with ease. Using sling and hoist animal was lifted using previously described procedure into standing position without difficulty. From there it transferred to another stall and was alert and bright, participating in an examination and bath. Pulse (left ear): 40 beats/minute. Eyes: clear. Oral cavity: pink mucous membranes, upper right molar eruption is visible. Integument: normal, no external injury found. Musculoskeletal: Evaluated the right fore and hindlegs with palpation. There was minor swelling over the right front digit 3 over P1 and P2. Palpation did not elicit a pain withdrawal and is likely a secondary injury from the time the animal was laying down and attempting to rise. Abdomen: There was decreased abdominal fill noted initially after rising. As animal eats the morning food this will likely resolve.
Ultrasound: Peformed cardiac evaluation from the left thorax, with leg lifted on a box in a forward position. Was able to visualize the ventricles well and observed normal contractility, no pericardial effusion. Unable to evaluate heart base or atria. Heart rate: 45 beats/minute. This is elevated for this animal, but is likely due to stress of being recumbent.
Complete blood count: Normal leukogram, but noted toxic heterophils in decreasing proportion from earlier this week. This can be due to inflammation or infection in the body.
Chemistry: Mild increase in creatine kinase, 775 u/l. This is consistent with its most recent chemistry following assisted standing. Likely mild muscular inflammation from todays recumbency.
Fibrinogen: normal.
Protein electrophoresis: There are no normal values for protein electrophoresis for elephants, but the total protein and albumin/globulin ratio are normal. Compared to one conspecific 776313, that has had many samples evaluated by this technique there is a mild increase in the Beta-1 fraction. In other mammals this can be due to change in transferrin concentration, but it is unknown in an elephant. This animal does not currently demonstrate other symptoms of iron-binding disease.
Will prescribe oral antiinflammatory medication and monitor.

© 2015 International Species Information System

Addendum: Keepers reported this animal continued to do well through the morning and is standing and eating. At 1330, animal was alert, active, and participated well during radiographic examination. Abdominal fill has returned to normal.
Radiographs: Obtained radiographs of right fore and hind legs from feet to the highest point possible (humeroulnar and femorotibial joints). There was mild to moderate osteoarthritis of the carpus and tarsus. This is consistent with aging. No fractures seen. There is no radiographically evident cause for this animal's difficulty standing from a right lateral position.
Assessment: This elephant has had two episodes of inability to rise this week. Both times it was on the right side. Examinations have not determined the cause. Once animal is elevated it immediately resumes normal activity and attitude. As there is no obvious causes, suspect a soft-tissue injury such as a strain or sprain that limits mobility from that position. Treatment with antiinflammatory and rest is the ideal treatment at this time. Continue to monitor.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 20D

Basic Info

Date Written	18/12/2015
Start Date	18/12/2015 00:00
Prescribed By	Gretchen Cole
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

Weight Info

Date	18/12/2015
Measurement Value	3,405 kg
Estimate	Yes
Exclude From Reference Intervals	Yes

© 2015 International Species Information System

Treatment Detail

Treatment Item/Drug Firocoxib (227 mg Solid > Tablet) (Firocoxib)

Dose Amount 454 mg
Dosage Amount 0.133 mg/kg
Administrated Dose Quantity 2 count
Frequency once a day (sid)
Duration 7doses
Delivery Route Oral (p.o.)
Loading Dose ~
Form Of Drug Tablet
Concentration Of Drug: 227 mg

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 454 mg [2 count] of Firocoxib, once a day (sid) for 7 doses.
Start treatment on 18/12/2015
Administration route: Oral (p.o.)

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
24/12/2015	776414 / Asian elephant / 21517980 Firocoxib treatment is complete	Gretchen Cole	No

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 20D

Test Request Detail

Date Requested 18/12/2015
Requested By Gretchen Cole
Analysis Start Date & Time 18/12/2015 10:09
Analysis By Liz McCrae
Analysis Equipment VetScan VS2
Insufficient Sample No

Sample Quality

Color Colorless
Color Intensity ~
Clarity Clear
Consistency ~
Additional Characteristics ~
Degraded No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	3.1 g/dL	~	2.3	4.2	~	No	No
Alk. Phos. [a]	37 U/L	~	44	270	Low	No	No
AST [a]	33 U/L	~	6	38	~	No	No
Ca	9.5 mg/dL	~	9.2	12.0	~	No	No
GGT [a]	3 U/L	~	1	15	~	No	No
Total Protein	8.3 g/dL	~	6.5	9.6	~	No	No
Globulin	5.2 g/dL	~	3.0	6.5	~	No	No
BUN	10 mg/dL	~	6.0	20.0	~	No	No
CK [a]	775 U/L	~	53	461	High	No	No
Phos	3.6 mg/dL	~	3.1	7.4	~	No	No
Mg	2.1 mg/dL	~	1.62	2.94	~	No	No

Sample Detail (GSN: S-WCD15-040582-S01)

Collection Date/Time	18/12/2015 09:06	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	Heparin, Lithium	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 20D

Test Request Detail

Date Requested	18/12/2015
Requested By	Gretchen Cole
Laboratory	ANTECH
Analysis Start Date	18/12/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

ANTECH Accession No. DLBC45649674

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Total Protein	8.1 g/dL	~	6.5	9.6	~	No	No
Albumin EPH	3.2 g/dL	~	~	~	~	No	No
Total Globulin EPH	4.9 g/dL	~	~	~	~	~	No
α-1 Globulin EPH	0.9 g/dL	~	~	~	~	No	No
α-2 Globulin EPH	0.7 g/dL	~	~	~	~	No	No
β-1 Globulin EPH	2.3 g/dL	~	~	~	~	~	No
γ Globulin EPH	1.0 g/dL	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040581)

Collection Date/Time	18/12/2015 09:06	**Collection Method**	Phlebotomy
Sample Type	Serum	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 20D

Test Request Detail

Date Requested	18/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	18/12/2015 10:00
Analysis By	Liz McCrae
Analysis Equipment	VetScan HM5
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Slide Evaluation:
Bilobed Monocytes [m]: 17%
1 nucleated red blood cell seen.
Most heterophils are toxic, some with less basophilic granules than her previous sample.

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	18.73 *10^9 cells/L	~	7.1	19.9	~	No	No
RBC [a]	2.91 *10^12 cells/L	~	2.15	3.98	~	No	No
HGB [a]	14.2 g/dL	~	8.7	16.5	~	No	No
HCT [a]	37.27 %	~	25.6	47.9	~	No	No
MCV	128 fL	~	94.8	143.9	~	No	No
MCH [a]	48.7 pg	~	31	50	~	No	No
MCHC	38.0 g/dL	~	28.0	40.1	~	No	No
RDW	17.1 %	~	~	~	~	~	No
Platelets	141 *10^9 cells/L	~	~	~	~	No	No
Plateletcrit	0.09 %	~	~	~	~	~	No
Mean Plate. Vol.	6.7 fL	~	~	~	~	No	No
PDW-cv	29.1 %	~	~	~	~	~	No
Neutrophil % [m]	43 %	~	~	~	~	No	No
Lymphocyte % [m]	2 %	~	~	~	~	No	No
Monocyte % [m]	38 %	~	~	~	~	No	No
HCT [m]	38 %	~	25.6	47.9	~	No	No
Anisocytosis	moderate (3+)	~	~	~	~	~	No
Poikilocytosis	rare (1+)	~	~	~	~	~	No
Target Cells	few (2+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040583)

Collection Date/Time	18/12/2015 09:06	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	EDTA, Potassium	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 20D

Test Request Detail

Date Requested	18/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	18/12/2015 09:55
Analysis By	Liz McCrae
Analysis Equipment	VetScan VS2
Insufficient Sample	No

Sample Quality

Color	Colorless
Color Intensity	~
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	3.0 g/dL	~	2.3	4.2	~	No	No
Alk. Phos. [a]	45 U/L	~	44	270	~	No	No
ALT	8 U/L	~	0	31	~	No	No
Amylase [a]	>5500 U/L	~	414	7,023	~	No	No
Tot. Bili.	0.4 mg/dL	~	0.1	0.6	~	No	No
BUN	9 mg/dL	~	6.0	20.0	~	No	No
Ca	9.3 mg/dL	~	9.2	12.0	~	No	No
Phos	3.7 mg/dL	~	3.1	7.4	~	No	No
Creat [a]	1.4 mg/dL	~	0.8	2.3	~	No	No
Glucose	105 mg/dL	~	51	131	~	No	No
Na	122 mmol/L	~	123	141	Low	No	No
K	3.7 mmol/L	~	3.8	5.8	Low	No	No
Total Protein	8.6 g/dL	~	6.5	9.6	~	No	No
Globulin	5.6 g/dL	~	3.0	6.5	~	No	No
Total Protein (R)	8.8 g/dL	~	6.5	9.6	~	No	No

Sample Detail (GSN: S-WCD15-040582)

Collection Date/Time	18/12/2015 09:06	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	Heparin, Lithium	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 20D

Test Request Detail

Date Requested	18/12/2015
Requested By	Gretchen Cole
Laboratory	ANTECH
Analysis Start Date	18/12/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

ANTECH Accession No. DLBC45649674

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Fibrinogen [a]	369 mg/dL	~	1	927	~	No	No

Sample Detail (GSN: S-WCD15-040584)

Collection Date/Time	18/12/2015 09:06	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	Citrate	**Exclude from reference intervals**	No

© 2015 International Species Information System

15/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 17D

Date
15/12/2015

Time
00:00

Note Author
Jennifer D'Agostino

Significant
No

Private
No

Active Problems
~

Note Subtype: General

Notes/Comments

This morning Chai is alert and active. Appetite remains normal and feces and urination remain normal. She appears to be moving very well and has no further muscle fasciculations noted. She is participating in training sessions and interacting with keepers normally. Oral exam shows normal, pink mucous membranes. there is some food material in the empty tooth socket but keepers are keeping it flushed out daily. Plan to put her with the herd today and allow normal access outdoors. Blood collected for repeat CBC/Chemistry and objective body condition scoring performed. Body condition is slightly thin and lies between 3-4/9 depending on which scoring method is used. Plan to increase diet slightly with the goal of increasing her body weight approximately 300-400 pounds.

Addendum: Bloodwork remains normal.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 17D

Test Request Detail

Date Requested	15/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	15/12/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	3.1 g/dL	~	2.3	4.2	~	No	No
Alk. Phos. [a]	49 U/L	~	44	270	~	No	No
ALT	9 U/L	~	0	31	~	No	No
Amylase [a]	5,500 U/L	~	414	7,023	~	No	No
Tot. Bili.	0.3 mg/dL	~	0.1	0.6	~	No	No
BUN	7 mg/dL	~	6.0	20.0	~	No	No
Ca	9.9 mg/dL	~	9.2	12.0	~	No	No
Phos	2.6 mg/dL	~	3.1	7.4	Low	No	No
Creat [a]	1.5 mg/dL	~	0.8	2.3	~	No	No
Glucose	101 mg/dL	~	51	131	~	No	No
Na	125 mmol/L	~	123	141	~	No	No
K	4.7 mmol/L	~	3.8	5.8	~	No	No
Total Protein	7.9 g/dL	~	6.5	9.6	~	No	No
Globulin	4.8 g/dL	~	3.0	6.5	~	No	No

Sample Detail (GSN: S-WCD15-040558)

Collection Date/Time	15/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Serum	**Collected By**	Julia Jones
Anatomical Source/Tissue	EAR VEIN	**Reason**	Recheck/Follow-up
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 17D

Test Request Detail

Date Requested	15/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	15/12/2015 00:00
Analysis By	Jennifer D'Agostino
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	3.3 g/dL	~	2.3	4.2	~	No	No
Alk. Phos. [a]	37 U/L	~	44	270	Low	No	No
AST [a]	35 U/L	~	6	38	~	No	No
Ca	10.1 mg/dL	~	9.2	12.0	~	No	No
GGT [a]	5 U/L	~	1	15	~	No	No
Total Protein	7.8 g/dL	~	6.5	9.6	~	No	No
Globulin	4.5 g/dL	~	3.0	6.5	~	No	No
BUN	7 mg/dL	~	6.0	20.0	~	No	No
CK [a]	726 U/L	~	53	461	High	No	No
Phos	2.1 mg/dL	~	3.1	7.4	Low	No	No
Mg	2.6 mg/dL	~	1.62	2.94	~	No	No

Sample Detail (GSN: S-WCD15-040558-S01)

Collection Date/Time	15/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Serum	**Collected By**	Julia Jones
Anatomical Source/Tissue	EAR VEIN	**Reason**	Recheck/Follow-up
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 17D

Test Request Detail

Date Requested	15/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	15/12/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

bi-lobed monocytes: 31%
Total Proein: 8.5g/dl

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	19.05 *10^9 cells/L	~	7.1	19.9	~	No	No
RBC [a]	2.61 *10^12 cells/L	~	2.15	3.98	~	No	No
HGB [a]	15 g/dL	~	8.7	16.5	~	No	No
HCT [a]	33.29 %	~	25.6	47.9	~	No	No
MCV	128 fL	~	94.8	143.9	~	No	No
MCH [a]	57.7 pg	~	31	50	High	No	No
MCHC	45.2 g/dL	~	28.0	40.1	High	No	No
RDW	16.3 %	~	~	~	~	~	No
Platelets	141 *10^9 cells/L	~	~	~	~	No	No
Plateletcrit	0.10 %	~	~	~	~	~	No
Mean Plate. Vol.	7 fL	~	~	~	~	No	No
PDW-cv	29.1 %	~	~	~	~	~	No
Neutrophil % [m]	34 %	~	~	~	~	No	No
Lymphocyte % [m]	19 %	~	~	~	~	No	No
Monocyte % [m]	15 %	~	~	~	~	No	No
Eosinophil % [m]	1 %	~	~	~	~	No	No
Basophil % [m]	0 %	~	~	~	~	No	No
HCT [m]	38 %	~	25.6	47.9	~	No	No
Est. Platelets	adequate	~	~	~	~	~	No
Anisocytosis	rare (1+)	~	~	~	~	~	No
Poikilocytosis	rare (1+)	~	~	~	~	~	No
Polychromasia	rare (1+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040557)

Collection Date/Time	15/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Julia Jones
Anatomical Source/Tissue	EAR VEIN	**Reason**	Recheck/Follow-up
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

14/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 16D

Date	Time	Note Author
14/12/2015	00:00	Jennifer D'Agostino
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Problem: This morning Chai appeared completely normal in behavior, attitude and appetite. During routine morning bath and training session, keeper asked Chai to lay down which is part of the normal routine. Today he had her lay on her right side when normally she is asked to lay on her left side. After the bath was complete she appeared to be unwilling or unable to rise and vet staff was alerted. After about 15 minutes, Asha and Chandra were allowed access to her stall in an effort to have them assist her in geting up. Chandra tried to help Chai get up but Chai was uncooperative, started to vocalize and was still not able to rise. At that time, all other elephants were shifted into the exhibit yard for the day and staff immediately started to assist Chai.
Exam: Visual examination performed and showed slight lethargy although she continued to respond relatively well to keepers. Eyes were normal but she tended to hold them closed. Mucous membranes were pale and slightly blue/purple in color. Respirations were normal in frequency but appear somewhat labored. There were no external lesions

© 2015 International Species Information System

noted and feet were normal. Chai passed several piles of normal feces this morning before and during her bath. While assisting her she did pass some liquid diarrhea. Urine appears normal. All four limbs and trunk have normal voluntary motion. Chai did try several times to get up on her own but appeared unable to lift her head enough to get to a sternal position.
Assist procedure: Straps were placed under her shoulder and hip and attached to the hoist. The hoist was gently elevated lifting Chai to a sitting position. Once she was in a sitting position she was able to get her feet under her and stood readily. She was able to extricate herself from the straps quickly and started walking around the stall. Keepers shifted her to the adjoining stall and further examination was completed. Mucous membrane quickly returned to a normal pink coloration, respirations returned to normal. On oral exam it was noted that she lost a tooth last night in the upper right quadrant and the socket appears normal. There was some muscle fasciculations in the hind limbs and she seemed a bit more weak than normal when asked to raise her trunk. She did immediately eat food and participated in training allowing keepers to get blood samples and trunk wash for diagnostic analysis.
Diagnostics: 1) Blood collected for CBC/Chemistry/I-stat/Fibrinogen/EEHV screening 2) Trunk wash collected for EEHV screening
Plan: It is unclear what caused her inability to rise. No physical abnormalities were detected. It is possible that she is not able to sit up as easily from her right side as from her left. The muscle weakness noted could have been part of the cause of her inability to rise or fatigue from the efforts of trying to get up. Plan to keep her inside the barn today for rest and observation.

Addendum: At the end of the day Chai is doing much better and has basically returned to normal, other than being slightly slow to shift to adjacent stall this afternoon. She is eating very well and has had no more muscle weakness or fasciculations. Feces and urine are normal. Bloodwork is unremarkable. Plan to repeat bloodwork tomorrow.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 16D

Test Request Detail

Date Requested	14/12/2015
Requested By	Jennifer D'Agostino
Laboratory	ANTECH
Analysis Start Date	15/12/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

antech Accession #: DLBC45557572

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Fibrinogen [a]	311 mg/dL	~	1	927	~	No	No

Sample Detail (GSN: S-WCD15-040553)

Collection Date/Time	14/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 16D

© 2015 International Species Information System

Test Request Detail

Date Requested	14/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	14/12/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	VetScan VS2
Insufficient Sample	No

Sample Quality

Color	Colorless
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	4.5 g/dL	~	2.3	4.2	High	No	No
Alk. Phos. [a]	32 U/L	~	44	270	Low	No	No
AST [a]	30 U/L	~	6	38	~	No	No
Ca	9.7 mg/dL	~	9.2	12.0	~	No	No
GGT [a]	2 U/L	~	1	15	~	No	No
Total Protein	8.4 g/dL	~	6.5	9.6	~	No	No
Globulin	4 g/dL	~	3.0	6.5	~	No	No
BUN	9 mg/dL	~	6.0	20.0	~	No	No
CK [a]	380 U/L	~	53	461	~	No	No
Phos	3.1 mg/dL	~	3.1	7.4	~	No	No
Mg	2.2 mg/dL	~	1.62	2.94	~	No	No

Sample Detail (GSN: S-WCD15-040550)

Collection Date/Time	14/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	Heparin, Lithium	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 16D

Test Request Detail

Date Requested	14/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	16/12/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	VetScan HM5
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

bi-lobed monocytes: 22%

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	13.9 *10^9 cells/L	~	7.1	19.9	~	No	No
RBC [a]	2.48 *10^12 cells/L	~	2.15	3.98	~	No	No
HGB [a]	14.5 g/dL	~	8.7	16.5	~	No	No
HCT [a]	31.64 %	~	25.6	47.9	~	No	No
MCV	128 fL	~	94.8	143.9	~	No	No
MCH [a]	58.5 pg	~	31	50	High	No	No
MCHC	45.8 g/dL	~	28.0	40.1	High	No	No
RDW	17 %	~	~	~	~	~	No
Platelets	104 *10^9 cells/L	~	~	~	~	No	No
Plateletcrit	0.07 %	~	~	~	~	~	No
Mean Plate. Vol.	6.9 fL	~	~	~	~	No	No
PDW-cv	29.6 %	~	~	~	~	~	No
Neutrophil % [m]	32 %	~	~	~	~	No	No
Lymphocyte % [m]	18 %	~	~	~	~	No	No
Monocyte % [m]	28 %	~	~	~	~	No	No
Eosinophil % [m]	0 %	~	~	~	~	No	No
Basophil % [m]	0 %	~	~	~	~	No	No
HCT [m]	40 %	~	25.6	47.9	~	No	No
Est. Platelets	adequate	~	~	~	~	~	No
Anisocytosis	rare (1+)	~	~	~	~	~	No
Poikilocytosis	rare (1+)	~	~	~	~	~	No
Polychromasia	rare (1+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040549)

Collection Date/Time	14/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 16D

Test Request Detail

Date Requested	14/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	14/12/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	VetScan VS2
Insufficient Sample	No

Sample Quality

Color	Colorless
Color Intensity	light
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	2.7 g/dL	~	2.3	4.2	~	No	No
Alk. Phos. [a]	40 U/L	~	44	270	Low	No	No
ALT	9 U/L	~	0	31	~	No	No
Amylase [a]	5,120 U/L	~	414	7,023	~	No	No
Tot. Bili.	0.3 mg/dL	~	0.1	0.6	~	No	No
BUN	8 mg/dL	~	6.0	20.0	~	No	No
Ca	9.4 mg/dL	~	9.2	12.0	~	No	No
Phos	3.5 mg/dL	~	3.1	7.4	~	No	No
Creat [a]	1.0 mg/dL	~	0.8	2.3	~	No	No
Glucose	93 mg/dL	~	51	131	~	No	No
Na	120 mmol/L	~	123	141	Low	No	No
K	4.2 mmol/L	~	3.8	5.8	~	No	No
Total Protein	8.3 g/dL	~	6.5	9.6	~	No	No
Globulin	5.7 g/dL	~	3.0	6.5	~	No	No
Total Protein (R)	8.8 g/dL	~	6.5	9.6	~	No	No

Sample Detail (GSN: S-WCD15-040550-S01)

Collection Date/Time	14/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	Heparin, Lithium	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 16D

Test Request Detail

Date Requested	14/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	14/12/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	VetScan i-STAT 1
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Arterial pH	7.470 pH	~	~	~	~	~	No
pCO2	39.4 mmHg	~	~	~	~	No	No
Arterial pO2	122 mmHg	~	~	~	~	~	No
Base Excess	5 mmol/L	~	~	~	~	~	No
HCO3	28.7 mmol/L	~	~	~	~	No	No
Total CO2 [a]	30 mmol/L	~	18.5	31.1	~	No	No
O2 sat (BGA)	99 %	~	~	~	~	~	No
Na	125 mmol/L	~	123	141	~	No	No
K	3.6 mmol/L	~	3.8	5.8	Low	No	No
ion Ca++	0.98 mmol/L	~	~	~	~	No	No
Glucose	98 mg/dL	~	51	131	~	No	No
HCT [a]	40 %	~	25.6	47.9	~	No	No
HGB [a]	13.6 g/dL	~	8.7	16.5	~	No	No

Sample Detail (GSN: S-WCD15-040552)

Collection Date/Time	14/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	Heparin, Lithium	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 16D

Test Request Detail

Date Requested	14/12/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	17/12/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040568)

Collection Date/Time	14/12/2015 00:00	**Collection Method**	~
Sample Type	Wash/Lavage Fluid	**Collected By**	Keeper Staff
Anatomical Source/Tissue	~	**Reason**	Diagnostic
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 16D

Test Request Detail

Date Requested	14/12/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	15/12/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	0 ge/ml	~	~	~	~	~	No

© 2015 International Species Information System

Sample Detail (GSN: S-WCD15-040549-S01)

Collection Date/Time	14/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Diagnostic
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

10/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 12D

Date	Time	Note Author
10/12/2015	00:00	Gretchen Cole
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Repeat fecal sample provided and it did not have an unusual odor today.
Also provided urine for routine urinalysis: There was a low specific gravity on dipstick. All other values were normal.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

08/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 10D

Date	Time	Note Author
08/12/2015	00:00	Jennifer D'Agostino
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Routine CBC performed. Results are normal.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 10D

© 2015 International Species Information System

Test Request Detail

Date Requested	08/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	08/12/2015 11:50
Analysis By	Liz McCrae
Analysis Equipment	VetScan HM5
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Slide Evaluation: Bilobed Monocytes [m]: 19%

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	16.73 *10^9 cells/L	~	7.1	19.9	~	No	No
RBC [a]	2.38 *10^12 cells/L	~	2.15	3.98	~	No	No
HGB [a]	13.6 g/dL	~	8.7	16.5	~	No	No
HCT [a]	30.43 %	~	25.6	47.9	~	No	No
MCV	128 fL	~	94.8	143.9	~	No	No
MCH [a]	57.3 pg	~	31	50	High	No	No
MCHC	44.8 g/dL	~	28.0	40.1	High	No	No
RDW	17.0 %	~	~	~	~	~	No
Platelets	126 *10^9 cells/L	~	~	~	~	No	No
Plateletcrit	0.08 %	~	~	~	~	~	No
Mean Plate. Vol.	6.6 fL	~	~	~	~	No	No
PDW-cv	27.2 %	~	~	~	~	~	No
Neutrophil % [m]	24 %	~	~	~	~	No	No
Lymphocyte % [m]	8 %	~	~	~	~	No	No
Monocyte % [m]	48 %	~	~	~	~	No	No
Basophil % [m]	1 %	~	~	~	~	No	No
HCT [m]	37 %	~	25.6	47.9	~	No	No
Anisocytosis	moderate (3+)	~	~	~	~	~	No
Target Cells	rare (1+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040503)

Collection Date/Time	08/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA, Potassium	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 10D

Test Request Detail

Date Requested	08/12/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	08/12/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Colorless
Color Intensity	~
Clarity	Clear
Consistency	~
Additional Characteristics	~
Degraded	No

© 2015 International Species Information System

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Total Protein (R)	8.6 g/dL	~	6.5	9.6	~	No	No

Sample Detail (GSN: S-WCD15-040502)

Collection Date/Time	08/12/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Plasma	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA, Potassium	**Exclude from reference intervals**	No

03/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 5D

Date	Time	Note Author
03/12/2015	00:00	Gretchen Cole
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

In discussion with keeper staff about the atypical stool appearance, they mentioned that this animal has an abnormal tooth. Opportunistic examination of animal in yard. This animal's right maxillary molar is abnormal. It is placed more rostrally than the left maxillary molar, and both deviates medially and has a curvature. Unable to visualize lower teeth at this time, but I suspect that occlusal surfaces do not match. The left side appears normal.
This may be the source of the different fibrous feed material in the stool. In discussion with staff, this tooth abnormality was known by the former keeper staff at this animal's previous institution and they said it had been that way for 20 years. With molar attrition, it is likely all teeth of this arcade are abnormal and this will continue to occur even when the next tooth erupts. No further monitoring of teeth needed unless staff notices a new problem.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

01/12/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 3D

Date	Time	Note Author
01/12/2015	00:00	Gretchen Cole
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Routine fecal examination was performed on this animal today. When compared to the conspecifics its stool had a longer stem length and sweeter smell. This may be due to a novel dietary addition or dental changes. Will continue to monitor.

Animal Care Staff Medical Summary

© 2015 International Species Information System

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 10M 3D

Test Request Detail

Date Requested	01/12/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	01/12/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Brown/Tan
Color Intensity	~
Clarity	~
Consistency	formed
Additional Characteristics	~
Degraded	No

Notes/Comments

Sample Note: Sweet smelling, hay still very large, not chopped up.

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Direct Exam.	No parasites found	~	~	~	~	~	No
Sheather's/Centrifug	No parasites found	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040425)

Collection Date/Time	01/12/2015 00:00	**Collection Method**	Obtained off substrate
Sample Type	Feces	**Collected By**	Keeper Staff
Anatomical Source/Tissue	~	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

12/11/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 9M 15D

Date	Time	Note Author
12/11/2015	00:00	Gretchen Cole
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Received results of serum vitamin E analysis. This animal's result, 0.88 ug/ml is at the recommended level of 0.80ug/ml. Will discuss if additional supplementation is needed.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

07/11/2015

Clinical note

© 2015 International Species Information System

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 9M 10D

Date 07/11/2015 **Time** 00:00 **Note Author** Gretchen Cole

Significant No **Private** No **Active Problems** ~

Note Subtype: General

Notes/Comments

Keepers report this animal had been pushed into lateral recumbency yesterday by conspecific , during routine training demonstration. Animal made contact with hotwire and laid in lateral position for a minute before rising and returning to barn. They reported no swelling, lameness, or other visual injury. Visual examination of animal during morning training session. Animal was alert and active. Confirmed that animal was in good condition with no evidence of injury. Animal was eating, drinking, urinating, and defecating normally. Keepers to monitor.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

03/11/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 9M 6D

Test Request Detail

Date Requested	03/11/2015
Requested By	Jennifer D'Agostino
Laboratory	MSU DCPAH
Analysis Start Date	07/11/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

DCPAH Diagnostic Center for Population & Animal Health Report #: C15311005

Case Comments: In approximately 1000 elephant serum samples analyzed at DCPAH over the last five years the percentile values for serum vitamin E concentrations were 5th - 0.23, 25th - 0.5, 50th - 0.81, 75th - 1.19, and 95th - 2.02 ug/mL. These were all clinical samples received for analysis; no health or diet information was available. Many were repeat samples from the same animal.

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Vit. E HPLC	0.88 µg/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-040184)

Collection Date/Time	03/11/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Serum	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

06/10/2015

Test & Result

© 2015 International Species Information System

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 8D

Test Request Detail

Date Requested	06/10/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	06/10/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041352)

Collection Date/Time	06/10/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

05/10/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 7D

Test Request Detail

Date Requested	05/10/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	05/10/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No

© 2015 International Species Information System

Sample Detail (GSN: S-WCD16-041350)

Collection Date/Time	05/10/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

04/10/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 6D

Test Request Detail

Date Requested	04/10/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	04/10/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041349)

Collection Date/Time	04/10/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

03/10/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 5D

Date	Time	Note Author
03/10/2015	00:00	Gretchen Cole
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Routine complete blood count performed. Total white blood cell count, 15870 cells/mm3, was normal, but there was a relative monocytosis, 42%. This is only midly above a previous sample, which was 36%
Animal is behaving normally. No treatment indicated at this time.

Animal Care Staff Medical Summary

~

© 2015 International Species Information System

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 5D

Test Request Detail

Date Requested	03/10/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	03/10/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-039539-S01)

Collection Date/Time	03/10/2015 00:00	**Collection Method**	~
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	~
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 5D

Test Request Detail

Date Requested	03/10/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	03/10/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

Hets- 14%
Bilobed -28%
HCT- 37.5%
Total Protein- 8.8g/dl
occasional traget cells

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	~ *10^9 cells/L	~	7.1	19.9	~	No	~
Lymphocyte count [a]	~ *10^9 cells/L	~	0.38	10.31	~	No	~
Monocyte count [a]	~ *10^9 cells/L	~	0.000	9.227	~	No	~
Neutrophil count [a]	~ *10^9 cells/L	~	0.95	8.77	~	No	~
Eosinophil count [a]	~ *10^9 cells/L	~	0.000	0.830	~	No	~
Basophil count [a]	~ *10^9 cells/L	~	0.000	0.135	~	No	~
Lymphocyte % [a]	12 %	~	~	~	~	No	Yes
Monocyte % [a]	42 %	~	~	~	~	No	Yes
Neutrophil % [a]	~ %	~	~	~	~	No	~
Eosinophil % [a]	4 %	~	~	~	~	No	Yes
Basophil % [a]	~ %	~	~	~	~	No	~
RBC [a]	2.51 *10^12 cells/L	~	2.15	3.98	~	No	Yes
HGB [a]	14.30 g/dL	~	8.7	16.5	~	No	Yes
HCT [a]	37.75 %	~	25.6	47.9	~	No	Yes
MCV	126 fL	~	94.8	143.9	~	No	Yes
MCH [a]	55.8 pg	~	31	50	High	No	Yes
MCHC	44.1 g/dL	~	28.0	40.1	High	No	Yes
RDW	17.1 %	~	~	~	~	~	Yes
Platelets	110 *10^9 cells/L	~	~	~	~	No	Yes
Plateletcrit	0.08 %	~	~	~	~	~	Yes
Mean Plate. Vol.	6.9 fL	~	~	~	~	No	Yes
PDW-cv	29.6 %	~	~	~	~	~	Yes
Anisocytosis	rare (1+)	~	~	~	~	~	Yes
Poikilocytosis	rare (1+)	~	~	~	~	~	Yes

Sample Detail (GSN: S-WCD15-039539)

Collection Date/Time	03/10/2015 00:00	**Collection Method**	~
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	~
Additives/Preservatives	~	**Exclude from reference intervals**	No

02/10/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 4D

© 2015 International Species Information System

Test Request Detail

Date Requested	02/10/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	02/10/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041348)

Collection Date/Time	02/10/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Routine
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

01/10/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 3D

Test Request Detail

Date Requested	01/10/2015
Requested By	Lynnette Waugh
Analysis Start Date & Time	01/10/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	~ *10^9 cells/L	~	7.1	19.9	~	No	~
Lymphocyte count [a]	~ *10^9 cells/L	~	0.38	10.31	~	No	~
Monocyte count [a]	~ *10^9 cells/L	~	0.000	9.227	~	No	~
Neutrophil count [a]	~ *10^9 cells/L	~	0.95	8.77	~	No	~
Eosinophil count [a]	~ *10^9 cells/L	~	0.000	0.830	~	No	~
Basophil count [a]	~ *10^9 cells/L	~	0.000	0.135	~	No	~
Lymphocyte % [a]	~ %	~	~	~	~	No	~
Monocyte % [a]	~ %	~	~	~	~	No	~
Neutrophil % [a]	~ %	~	~	~	~	No	~
Eosinophil % [a]	~ %	~	~	~	~	No	~
Basophil % [a]	~ %	~	~	~	~	No	~
RBC [a]	2.20 *10^12 cells/L	~	2.15	3.98	~	No	Yes
HGB [a]	12.4 g/dL	~	8.7	16.5	~	No	Yes
HCT [a]	27.77 %	~	25.6	47.9	~	No	Yes
MCV	126 fL	~	94.8	143.9	~	No	Yes
MCH [a]	56.3 pg	~	31	50	High	No	Yes
MCHC	44.6 g/dL	~	28.0	40.1	High	No	Yes
RDW	16.1 %	~	~	~	~	~	Yes
Platelets	105 *10^9 cells/L	~	~	~	~	No	Yes
Plateletcrit	0.07 %	~	~	~	~	~	Yes
Mean Plate. Vol.	6.7 fL	~	~	~	~	No	Yes
PDW-cv	29.1 %	~	~	~	~	~	Yes

Sample Detail (GSN: S-WCD15-039536)

Collection Date/Time	01/10/2015 00:00	**Collection Method**	~
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	~
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 3D

Test Request Detail

Date Requested	01/10/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	01/10/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	100 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-039536-S01)

Collection Date/Time	01/10/2015 00:00	**Collection Method**	~
Sample Type	Whole Blood	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	~
Additives/Preservatives	~	**Exclude from reference intervals**	No

30/09/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 2D

Date	Time	Note Author
30/09/2015	00:00	Lynnette Waugh
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Routine serum chemistry.
Albumin is mildly elevated at 4.9 g/dL (ISIS reference interval 2.3-4.2). 4/4 elephants tested today were all elevated (relative to their normal values and elephant ISIS interval). Will recheck the animal with the highest albumin in one to two weeks and the rest of the animals during routine lab work- suspect transient or spurious result.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

29/09/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 8M 1D

© 2015 International Species Information System

Test Request Detail

Date Requested	29/09/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	29/09/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	VetScan VS2
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	4.9 g/dL	~	2.3	4.2	High	No	No
Alk. Phos. [a]	32 U/L	~	44	270	Low	No	No
AST [a]	19 U/L	~	6	38	~	No	No
Ca	9.5 mg/dL	~	9.2	12.0	~	No	No
GGT [a]	3 U/L	~	1	15	~	No	No
Total Protein	7.2 g/dL	~	6.5	9.6	~	No	No
Globulin	2.3 g/dL	~	3.0	6.5	Low	No	No
BUN	8 mg/dL	~	6.0	20.0	~	No	No
CK [a]	141 U/L	~	53	461	~	No	No
Phos	4.2 mg/dL	~	3.1	7.4	~	No	No
Mg	2.3 mg/dL	~	1.62	2.94	~	No	No

Sample Detail (GSN: S-WCD15-039506)

Collection Date/Time	29/09/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Serum	**Collected By**	Keeper Staff
Anatomical Source/Tissue	EAR VEIN	**Reason**	Opportunistic
Additives/Preservatives	~	**Exclude from reference intervals**	No

17/07/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 5M 19D

Test Request Detail

Date Requested	17/07/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	17/07/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041456)

Collection Date/Time	17/07/2015 00:00	**Collection Method**	Wash/lavage
Sample Type	Wash/Lavage Fluid	**Collected By**	Keeper Staff
Anatomical Source/Tissue	TRUNK	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

15/07/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 5M 17D

Date
15/07/2015

Time
00:00

Note Author
Gretchen Cole

Significant
No

Private
No

Active Problems
~

Note Subtype: General

Notes/Comments

Will begin animal on nutrition supplement, Red Cell.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 5M 17D

© 2015 International Species Information System

Basic Info

Date Written	15/07/2015
Start Date	15/07/2015 00:00
Prescribed By	Gretchen Cole
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

Weight Info

Date	15/07/2015
Measurement Value	3,450 kg
Estimate	Yes
Exclude From Reference Intervals	Yes

Treatment Detail

Treatment Item/Drug	RED CELL			
Dose Amount	80 g	**Frequency**	once a day (sid)	**Form Of Drug** ~
Dosage Amount	0.023 g/kg	**Duration**	169doses	Concentration Of Drug: ~
Administrated Dose Quantity	80 g	**Delivery Route**	Oral (p.o.)	
		Loading Dose	~	

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 80 g of RED CELL, once a day (sid) for 169 doses.
Start treatment on 15/07/2015
Administration route: Oral (p.o.)

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
30/12/2015	776414 / Asian elephant / 21517980 RED CELL treatment is complete	Gretchen Cole	No

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

13/07/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 5M 15D

Date	Time	Note Author
13/07/2015	00:00	Jennifer D'Agostino
Significant	**Private**	**Active Problems**
No	No	☑ PRURITUS

Note Subtype: General

Notes/Comments

Verbal uopdate from keepers, pruritus is no longer present. Since introduction to the herd and yard 3, pruritus has resolved. Suspect that this was a combination of true pruritus and behavior. Plan to stop the diphenhydramine once prescription is completed and monitor for recurrence.

© 2015 International Species Information System

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

09/07/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 5M 11D

Test Request Detail

Date Requested	09/07/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	09/07/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041455)

Collection Date/Time	09/07/2015 00:00	**Collection Method**	Wash/lavage
Sample Type	Wash/Lavage Fluid	**Collected By**	Keeper Staff
Anatomical Source/Tissue	TRUNK	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

02/07/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 5M 4D

© 2015 International Species Information System

Test Request Detail

Date Requested	02/07/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	02/07/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

repli-g with EEHV6
concentration: undil, TNF (+), EEHV6 (-)
concentration: 1:20, TNF (+), EEHV6 (-)

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	1 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041453)

Collection Date/Time	02/07/2015 00:00	**Collection Method**	Wash/lavage
Sample Type	Wash/Lavage Fluid	**Collected By**	Keeper Staff
Anatomical Source/Tissue	TRUNK	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

01/07/2015

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 5M 3D

Basic Info

Date Written	30/06/2015
Start Date	01/07/2015 00:00
Prescribed By	Jennifer D'Agostino
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

Weight Info

Date	30/06/2015
Measurement Value	3,450 kg
Estimate	Yes
Exclude From Reference Intervals	Yes

© 2015 International Species Information System

Treatment Detail

Treatment Item/Drug Diphenhydramine

Dose Amount 2,000 mg
Dosage Amount 0.580 mg/kg
Administrated Dose Quantity 2,000 mg

Frequency once a day (sid)
Duration 14days
Delivery Route Oral (p.o.)
Loading Dose ~

Form Of Drug ~
Concentration Of Drug: ~

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 2,000 mg orally once daily for 14 days.

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
14/07/2015	776414 / Asian elephant / 21517980 Diphenhydramine treatment is complete	Jennifer D'Agostino	No

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

25/06/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 28D

Test Request Detail

Date Requested 25/06/2015
Requested By Jennifer D'Agostino
Laboratory National Zoo Departm
Analysis Start Date 25/06/2015
Analysis Equipment ~
Insufficient Sample No

Sample Quality

Color ~
Color Intensity ~
Clarity ~
Consistency ~
Additional Characteristics ~
Degraded No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041452)

Collection Date/Time	25/06/2015 00:00	**Collection Method**	Wash/lavage
Sample Type	Wash/Lavage Fluid	**Collected By**	Keeper Staff
Anatomical Source/Tissue	TRUNK	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

18/06/2015

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 21D

Basic Info

Date Written	15/06/2015
Start Date	18/06/2015 00:00
Prescribed By	Jennifer D'Agostino
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

Weight Info

Date	15/06/2015
Measurement Value	8,150 lb
Estimate	Yes
Exclude From Reference Intervals	Yes

© 2015 International Species Information System

Treatment Detail

Treatment Item/Drug Diphenhydramine

Dose Amount 2,000 mg
Dosage Amount ~
Administrated Dose Quantity 2,000 mg

Frequency once a day (sid)
Duration 14days
Delivery Route Oral (p.o.)
Loading Dose ~

Form Of Drug ~

Concentration Of Drug: ~

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 2,000 mg orally once daily for 14 day (starting June 18).

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
01/07/2015	776414 / Asian elephant / 21517980 Diphenhydramine treatment is complete	Jennifer D'Agostino	No
18/06/2015	**Start** Diphenhydramine 2000 mg once a day (sid) 14 days Oral (p.o.) / Asian elephant / 776414 / 21517980	Jennifer D'Agostino	No

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

12/06/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 15D

Date 12/06/2015
Time 00:00
Note Author Gretchen Cole

Significant No
Private No
Active Problems ☑ PRURITUS

Note Subtype: General

Notes/Comments

Received results of Fecal testing collected 12 Jun 2015.
Gastrointestinal disease PCR panel: negative.
Fecal culture: no salmonella, shigella, yersinia isolated.
Campylobacter: Negative at 24 hours

Animal Care Staff Medical Summary

~

© 2015 International Species Information System

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 15D

Test Request Detail

Date Requested	12/06/2015
Requested By	Jennifer D'Agostino
Laboratory	ANTECH
Analysis Start Date	12/06/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

ANTECH Accession No. DLBC42349398
Fastpanel PCR Canine GI ProfileANAAnte
Negative; Canine enteric coronavirus
Negative; Campylobacter jejuni/coli
Negative; Cryptosporidium spp
Negative; Salmonella spp
Negative; Giardia spp
Negative; Clostridium difficile toxins A/B
Negative; Clos perfingens enterotoxin
Negative; Canine parvovirus

Fecal Culture
Final Report; Mixed gastrointestinal flora isolated; No Salmonella, Shigella, Yersinia isolated

Campylobacter
Negative for Campylobacter in 72 hours

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Enteric Path. Cult.	No clinically significant microorganism was isolated	~	~	~	~	~	~
Salmonella/Shigella	No clinically significant microorganism was isolated	~	~	~	~	~	~
Yersinia culture	No clinically significant microorganism was isolated	~	~	~	~	~	~
Campylobacter cultur	No clinically significant microorganism was isolated	~	~	~	~	~	~
Crypto. PCR	negative	~	~	~	~	~	No
Giardia PCR	negative	~	~	~	~	~	No
C diff toxin A/B PCR	negative	~	~	~	~	~	No
C perfringen culture	No clinically significant microorganism was isolated	~	~	~	~	~	~

Sample Detail (GSN: S-WCD15-038508)

Collection Date/Time	12/06/2015 00:00	**Collection Method**	Obtained off substrate
Sample Type	Feces	**Collected By**	Julia Jones
Anatomical Source/Tissue	~	**Reason**	Other
Additives/Preservatives	~	**Exclude from reference intervals**	No

11/06/2015

© 2015 International Species Information System

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 14D

Basic Info

Date Written	10/06/2015
Start Date	11/06/2015 00:00
Prescribed By	Jennifer D'Agostino
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

Weight Info

Date	10/06/2015
Measurement Value	8,150 lb
Estimate	Yes
Exclude From Reference Intervals	Yes

Treatment Detail

Treatment Item/Drug	Diphenhydramine			
Dose Amount	2,000 mg	**Frequency**	once a day (sid)	**Form Of Drug** ~
Dosage Amount	~	**Duration**	7days	Concentration Of Drug: ~
Administrated Dose Quantity	2,000 mg	**Delivery Route**	Oral (p.o.)	
		Loading Dose	~	

Treatment Response

Clinical Response ~

Adverse Effects ~

Adverse Effects Note:

~

Staff Instructions

Give 2,000 mg orally once daily for 7 days.

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
17/06/2015	776414 / Asian elephant / 21517980 Diphenhydramine treatment is complete	Jennifer D'Agostino	No

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 14D

© 2015 International Species Information System

Test Request Detail

Date Requested	11/06/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	11/02/2016
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

repli-g with EEHV6
concentration: undiluted, TNF (-)
concentration: 1:20, TNF (-)

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	1 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041449)

Collection Date/Time	11/06/2015 00:00	**Collection Method**	Wash/lavage
Sample Type	Wash/Lavage Fluid	**Collected By**	Keeper Staff
Anatomical Source/Tissue	TRUNK	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

10/06/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 13D

Date	Time	Note Author
10/06/2015	00:00	Jennifer D'Agostino
Significant	**Private**	**Active Problems**
No	No	☑ PRURITUS

Note Subtype: General

Notes/Comments

Pruritus appears to be somewhat improved, although not resolved. Elephant has been transferred over now to yard 2 which may be helping along with the diphenhydramine. Suspect it could be the new load of sand that was placed in yard 1 prior to the arrival of this elephant that is contributing to the pruritus. Plan to continue the diphenhydramine at the current dose until the cows are integrated into one herd and in yard 3. Yard 3 does not have sand and has a larger, deeper pool. Once in yard 1, plan to discontinue diphenhydramine and monitor closely. Skin continues to be normal with no redness, irritation or lesions noted. Appetite and attitude also remain normal.

Animal Care Staff Medical Summary

~

© 2015 International Species Information System

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

07/06/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 10D

Date 07/06/2015 **Time** 00:00 **Note Author** Jennifer D'Agostino

Significant No **Private** No **Active Problems** ☑ PRURITUS

Note Subtype: General

Notes/Comments

Fecal Salmonella testing is negative. Keepers will shift Bamboo and Chai over to yard 2 today while still maintaining isolation from the rest of the herd until completion of quarantine on Wednesday. Plan to see if reducing exposure to sand in the yard will help decrease pruritus.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

06/06/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 9D

Date 06/06/2015 **Time** 00:00 **Note Author** Gretchen Cole

Significant No **Private** No **Active Problems** ☑ PRURITUS

Note Subtype: General

Notes/Comments

Keeper (TR) reported this animal's pruritis is not substantially changed. Visual examination of animal in stall. It was bright, alert, active. Observed repeated front and hindleg scratching and animal spraying water on back. Will increase dose and reevaluate effectiveness.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 9D

© 2015 International Species Information System

Basic Info

Date Written	06/06/2015
Start Date	06/06/2015 00:00
Prescribed By	Gretchen Cole
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

Weight Info

Date	06/06/2015
Measurement Value	8,150 lb
Estimate	Yes
Exclude From Reference Intervals	Yes

Treatment Detail

Treatment Item/Drug	Diphenhydramine			
Dose Amount	2,000 mg	**Frequency**	once a day (sid)	**Form Of Drug** ~
Dosage Amount	0.541 mg/kg	**Duration**	5days	Concentration Of Drug: ~
Administrated Dose Quantity	2,000 mg	**Delivery Route**	Oral (p.o.)	
		Loading Dose	~	

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 2,000 mg of Diphenhydramine, once a day (sid) for 5 days.
Start treatment on 06/06/2015
Administration route: Oral (p.o.)

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

04/06/2015

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 7D

Basic Info

Date Written	04/06/2015
Start Date	04/06/2015 00:00
Prescribed By	Jennifer D'Agostino
Prescribed For	1 animal
Reason For Terminate	Administration success too low
Terminate Date	2015-06-05
Reason For Treatment	~

Weight Info

Date	04/06/2015
Measurement Value	8,150 lb
Estimate	Yes
Exclude From Reference Intervals	Yes

© 2015 International Species Information System

Treatment Detail

Treatment Item/Drug Diphenhydramine

Dose Amount 1,000 mg
Dosage Amount ~
Administrated Dose Quantity 1,000 mg

Frequency once a day (sid)
Duration 5days
Delivery Route Oral (p.o.)
Loading Dose ~

Form Of Drug ~

Concentration Of Drug: ~

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 1000mg orally once daily for 5 days.

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
~	~	~	~

03/06/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 6D

Date 03/06/2015
Time 00:00
Note Author Gretchen Cole
Significant No
Private No
Active Problems ☑ PRURITUS

Note Subtype: General

Notes/Comments

Recieved results of fecal testing.
Gastrointestinal disease PCR panel: negative results
Fecal culture: negative for salmonella, shigella, yersinia.
Campylobacter: negative at 72 hours.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Clinical note

© 2015 International Species Information System

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 6D

Date 03/06/2015 **Time** 00:00 **Note Author** Jennifer D'Agostino

Significant No **Private** No **Active Problems** ☑ PRURITUS

Note Subtype: General

Notes/Comments

Keepers and curator all report that Chai has seemed increasingly pruritic since her arrival three weeks ago. On visual exam today Chai is bright, alert and active. Urination and defecation are normal. Appetite is normal. When standing in the stall she consistently rubs her feet and seems to scratch her legs with her trunk. She also throws sand and dirt over her back more often than the other elephants. During training sessions she appears antsy and won't hold still because she is rubbing her feet. Skin is normal and there are no raised lesions or redness noted. Suspect that she may have a mild allergic reaction to plant material in the exhibit or irritation from insects (flies and mosquitoes are abundant due to recent rains). Plan to try a course of low dose antihistimine to see if that reduces pruritus.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 6D

Test Request Detail

Date Requested	03/06/2015
Requested By	Gretchen Cole
Laboratory	ANTECH
Analysis Start Date	03/06/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	formed
Additional Characteristics	~
Degraded	No

Notes/Comments

Antech Accession # DBLC42155483
Canine enteric coronoavirus Negative
Campylobacter jejuni/coli Negative
Clos perfringens enterotoxin Negative
Canine Parvovirus Negative

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Enteric Path. Cult.	No clinically significant microorganism was isolated	~	~	~	~	~	~
Salmonella/Shigella	No clinically significant microorganism was isolated	~	~	~	~	~	~
Yersinia culture	No clinically significant microorganism was isolated	~	~	~	~	~	~
Campylobacter cultur	No clinically significant microorganism was isolated	~	~	~	~	~	~
C diff toxin A/B PCR	negative	~	~	~	~	~	No
Giardia PCR	negative	~	~	~	~	~	No
Salmonella PCR	negative	~	~	~	~	~	No
Crypto. PCR	negative	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-038428)

Collection Date/Time	03/06/2015 00:00	**Collection Method**	Obtained off substrate
Sample Type	Feces	**Collected By**	Julia Jones
Anatomical Source/Tissue	~	**Reason**	Preventative Health
Additives/Preservatives	~	**Exclude from reference intervals**	No

01/06/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 4D

Test Request Detail

Date Requested	01/06/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	01/06/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Brown/Tan
Color Intensity	~
Clarity	~
Consistency	formed
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Direct Exam.	No parasites found	~	~	~	~	~	No
Sheather's/Centrifug	No parasites found	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-038409)

Collection Date/Time	01/06/2015 00:00	**Collection Method**	Obtained off substrate
Sample Type	Feces	**Collected By**	Julia Jones
Anatomical Source/Tissue	~	**Reason**	Other
Additives/Preservatives	~	**Exclude from reference intervals**	No

28/05/2015

Test & Result

© 2015 International Species Information System

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 4M 0D

Test Request Detail

Date Requested	28/05/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	28/05/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

repli-g with EEHV6:
Concentration:undiluted, TNF (+), EEHV6 (-)
concentration 1:20, TNF (-)

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	1 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041447)

Collection Date/Time	28/05/2015 00:00	**Collection Method**	Wash/lavage
Sample Type	Wash/Lavage Fluid	**Collected By**	Keeper Staff
Anatomical Source/Tissue	TRUNK	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

25/05/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 27D

Test Request Detail

Date Requested	25/05/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	25/05/2015 00:00
Analysis By	Julia Jones
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Brown/Tan
Color Intensity	~
Clarity	~
Consistency	formed
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Direct Exam.	No parasites found	~	~	~	~	~	No
Sheather's/Centrifug	No parasites found	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-038366)

Collection Date/Time	25/05/2015 00:00	**Collection Method**	Obtained off substrate
Sample Type	Feces	**Collected By**	Keeper Staff
Anatomical Source/Tissue	~	**Reason**	Other
Additives/Preservatives	~	**Exclude from reference intervals**	No

20/05/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 22D

Date	Time	Note Author
20/05/2015	00:00	Jennifer D'Agostino
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Chai continues to settle in very well. Daily routine is has normalized and she participates normally in training sessions with both Woodland Park and OKC Zoo keeper staff. Appetite is normal and diet transition is going smoothly. Urination and defecation are normal. Fecal boluses are normal in size, shape and consistency and is produced in a normal amount. Both animals have been utilizing the indoor and outdoor space. Healthy elephant, continue quarantine as planned.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

18/05/2015

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 20D

Test Request Detail

Date Requested	18/05/2015
Requested By	Jennifer D'Agostino
Laboratory	OSU CVM
Analysis Start Date	19/05/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Brown/Tan
Color Intensity	medium
Clarity	~
Consistency	formed
Additional Characteristics	~
Degraded	No

Notes/Comments

Acession Munber: 15051110

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Sugar Flotation	No parasites found	~	~	~	~	~	No
ZnSO4 Flotation	No parasites found	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-038343)

Collection Date/Time	18/05/2015 00:00	**Collection Method**	Obtained off substrate
Sample Type	Feces	**Collected By**	Julia Jones
Anatomical Source/Tissue	~	**Reason**	Diagnostic
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 20D

Test Request Detail

Date Requested	18/05/2015
Requested By	Jennifer D'Agostino
Laboratory	National Zoo Departm
Analysis Start Date	18/05/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
EEHV 1 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 2 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 3/4 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 5 qPCR	0 ge/ml	~	~	~	~	~	No
EEHV 6 qPCR	0 ge/ml	~	~	~	~	~	No

Sample Detail (GSN: S-WCD16-041446)

Collection Date/Time	18/05/2015 00:00	**Collection Method**	Wash/lavage
Sample Type	Wash/Lavage Fluid	**Collected By**	Keeper Staff
Anatomical Source/Tissue	TRUNK	**Reason**	Routine
Additives/Preservatives	~	**Exclude from reference intervals**	No

14/05/2015

Clinical note

© 2015 International Species Information System

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 16D

Date	Time	Note Author
14/05/2015	00:00	Jennifer D'Agostino
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Summary of travel provided by Dr. Kelly Helmick.

Clinical notes May 11-May 14, 2015 for elephants Bamb00/20073 and Chai/2113. Left San Diego Zoo approximately 745 PM PST on May 11, arrived Oklahoma City Zoo approximately 3 AM CST on May 13, transport time approximately 29 hr.

Elephant Bamboo/20073 administered 150 mg zuclophenthixol acetate IM RT hip approximately 10 hr prior to crating. In veterinary application, a long-acting calming agent with a wide margin of safety used in a variety of hoofstock species to facilitate safe transport, including captive and wild elephants, administered with the goal to lessen behaviors (leaning, stretching, and sitting) observed on transport from Seattle, WA to San Diego, CA. Behaviors were attributed to restlessness in the crate, leading to concerns that physical fatigue could develop over time if allowed to continue (see notes April 20). This medication is not expected to cause tranquilization, sedation, or other noticeable changes and no adverse effects associated with zuclophenthixol administration noted before, during, or after transport. No change in attitude, trained behaviors, appetite/water consumption or fecal/urine output noted. No changes in mentation or attitude before, during, or after transport. Behaviors (leaning, stretching, and sitting) were not observed as frequently as prior transport, may/may not reflect zuclophenthixol effects.

Crate inspections performed day of load and no concerns noted. Physical exam conducted day of loading, both elephants BAR, normal ambulation, resting RR WNL, eyes bright and clear, oral findings WNL, good skin quality w/o abrasions or other concerns, perineal region clean, all feet WNL, all other findings WNL. RT hip callous and tail WNL for elephant Bamboo/20073 without concerns or changes noted. Both elephants eating/drinking and urinating/defecating normally. Both elephants visually inspected in crates after loading, both BAR and calm in crates, taking food from keeper staff, no concerns or changes noted.

Both elephants crated easily, and voluntarily walked into crates within minutes of crate access. Load and travel leaving San Diego was scheduled for evening to allow for travel through warmer regions when ambient temperatures were cool. Monitoring through real-time close-circuit video throughout transport, visual inspections at each welfare stop, and crate and ambient temperature and humidity monitoring. Ambient temperatures throughout transport were mild, inclement or other weather changes not encountered, and crate temperatures stayed above 45F and below 75F throughout transport. Supplemental heating or cooling was not required during transport. Both elephants ate and drank, produced normal feces and urine throughout travel. Both elephants were alert, responsive, and interacted with keeper staff at welfare stops. Travel was uneventful.

Elephant Bamboo/20073 demonstrated behaviors observed during prior travel (leaning, sitting, and stretching) shortly after leaving San Diego. Behaviors were observed only by camera monitoring and ceased at welfare stops. These behaviors would appear for a short interval when travel resumed after welfare stops but did not persist and Bamboo demonstrated long periods of rest or other normal activity between welfare stops compared to prior transport. Persistent signs of restlessness, other abnormal behaviors, muscle weakness, or fatigue were not noted in either elephant throughout travel. No colic or cramping was observed in either elephant, before, during, or after transport. No health concerns noted or developed in either elephant before, during, or after transport.

Both elephants walked quickly and easily out of the crates upon arrival at Oklahoma City Zoo. No gait changes, stiffness, or soreness noted in either elephant. Both elephants ate and drank upon arrival and produced normal urine and feces. Due to early AM arrival, both elephants were allowed to rest and slept for several hours. Both elephants were compliant with behaviors for diagnostic sample collection conducted later the day of arrival. Veterinary inspections and monitoring conducted upon arrival and for the next 36 hr were WNL, both elephants remained BAR, eyes bright and clear, normal ambulation, no abnormal behavioral changes, good food/water intake, appropriate urine/fecal production, all other findings during visual inspections WNL. Reviewed medical history and provided summary of transport and visual inspection findings to OKCZ.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 16D

Date	Time	Note Author

© 2015 International Species Information System

14/05/2015	00:00	Jennifer D'Agostino
Significant	**Private**	**Active Problems**
No	No	~

Note Subtype: General

Notes/Comments

Elephant continues to settle in well. Today Chai is bright, alert and active. Behavior is normal and appetite continues to improve. Feces continue to be dry and somewhat reduced in amount but bolus size is good and there is no straining observed. Urinations are normal. Anklets were removed through behavioral restraint. Chai received a bath this morning as part of the normal routine. Keepers collected fecal sample for parasite analysis and enteric pathogen culture. Continue quarantine as planned.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 16D

Test Request Detail

Date Requested	14/05/2015
Requested By	Jennifer D'Agostino
Laboratory	ANTECH
Analysis Start Date	14/05/2015
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Brown/Tan
Color Intensity	~
Clarity	~
Consistency	formed
Additional Characteristics	~
Degraded	No

Notes/Comments

Antech Accession Number: DBLC41831378
Canine Enteric coronavirus PCR: Negative
Campylocabter jejuni/coli PCR: Negative
Clos perfringens enterotoxin PCR: Negative
Canine parovirus PCR: Negative

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Crypto. PCR	negative	~	~	~	~	~	No
Giardia PCR	negative	~	~	~	~	~	No
C diff toxin A/B PCR	negative	~	~	~	~	~	No
Salmonella PCR	negative	~	~	~	~	~	No
Salmonella culture	No clinically significant microorganism was isolated	~	~	~	~	~	~
Salmonella/Shigella	No clinically significant microorganism was isolated	~	~	~	~	~	~
Yersinia culture	No clinically significant microorganism was isolated	~	~	~	~	~	~
Campylobacter cultur	No clinically significant microorganism was isolated	~	~	~	~	~	~

© 2015 International Species Information System

Sample Detail (GSN: S-WCD15-038299-S01)

Collection Date/Time	14/05/2015 00:00	**Collection Method**	Obtained off substrate
Sample Type	Feces	**Collected By**	Liz McCrae
Anatomical Source/Tissue	~	**Reason**	Other
Additives/Preservatives	~	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 16D

Test Request Detail

Date Requested	14/05/2015
Requested By	Gretchen Cole
Analysis Start Date & Time	14/05/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	~
Insufficient Sample	No

Sample Quality

Color	Brown/Tan
Color Intensity	~
Clarity	~
Consistency	formed
Additional Characteristics	~
Degraded	No

Notes/Comments

~

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Direct Exam.	Taxon Result - coccidia / Coccidia	rare (1+)	~	~	~	~	No
Sheather's/Centrifug	Taxon Result - coccidia / Coccidia	moderate (3+)	~	~	~	~	No
Sheather's/Centrifug	Other Result - Coccidia-like organisms; probably pollen (4+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-038299)

Collection Date/Time	14/05/2015 00:00	**Collection Method**	Obtained off substrate
Sample Type	Feces	**Collected By**	Liz McCrae
Anatomical Source/Tissue	~	**Reason**	Other
Additives/Preservatives	~	**Exclude from reference intervals**	No

13/05/2015

Clinical note

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 15D

Date
13/05/2015

Time
00:00

Note Author
Jennifer D'Agostino

Significant
No

Private
No

Active Problems
- ☐ OPACITY, EYE (NOS)
- ☐ NEOPLASIA, LEIOMYOMA
- ☐ OVARY (RIGHT), CYST
- ☐ HYPERKERATOSIS, REAR MEDIAL HOOF (NOS)
- ☐ CORNEAL OPACITY, BILATERAL

Note Subtype: General

Notes/Comments

Proc: Quarantine entry and visual exam
Animal arrived into the zoo from San Diego this morning at 3am with conspecific "Bamboo". Unloading was uneventful and both animals were together in the stall by 4:30am.

© 2015 International Species Information System

Visual exam: Animal is bright and alert in the stall. No external lesions are noted. Ambulation and gait are normal, no sign of stiffness or lameness. Mucous membranes are pink and moist. There is a small amount of white ocular discharge OU but eyes appear otherwise normal. Elephant is taking dried cranberries from keeper but is not interested in other food items yet. Elephant immediately began exploring surroundings and responded to keepers appropriately. Drank water from the hose and took a sand bath. Urination and defecation not witnessed but was normal during transport. Proceed with quarantine as planned.

Addendum 9am: USDA vet inspection. Both animals are alert and active. Both appear normal and appear to be settling in well. Both have been outside in yard 1 and have access. Chai has eaten a few more food items (hay and produce) and interacts normally with keepers. Normal urination observed but no defecation yet. Instructed keepers to administer 1 gallon mineral oil mixed in bran prophylactically to help keep the GI tract moving. Keepers were also instructed to obtain a blood sample if possible for routine CBC/Chemistry and trunk wash for routine EEHV screening.

Addendum 4pm: Chai took half the dose of mineral oil and bran mixture. Bloodwork is unremarkable. Appetite continues to improve. Animal did defecate a small amount of feces and continues to urinate normally. Fecal bolus size is good and is slightly dry.

Animal Care Staff Medical Summary

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Prescription/Treatment

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age (at the start date)
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 15D

Basic Info

Date Written	13/05/2015
Start Date	13/05/2015 00:00
Prescribed By	Jennifer D'Agostino
Prescribed For	1 animal
Reason For Terminate	~
Terminate Date	~
Reason For Treatment	~

© 2015 International Species Information System

Treatment Detail

Treatment Item/Drug MINERAL OIL

Dose Amount 1 gal liq (US)
Dosage Amount ~
Administrated Dose Quantity 1 gal liq (US)

Frequency once
Duration 1doses
Delivery Route Oral (p.o.)
Loading Dose ~

Form Of Drug ~

Concentration Of Drug
~

Treatment Response

Clinical Response ~
Adverse Effects ~
Adverse Effects Note:

~

Staff Instructions

Give 1 gallon orally mixed in bran prophylactically to help with GI motility.

Prescription Notes/Comments

~

Calendar Items

Date	Title	Assigned To	Done
~	~	~	~

Dispensing Records

Date Dispensed	Dispensed By	Quantity Dispensed
~	~	~

Administration Records

Administration Date/Time	Administered By	Success	Notes
13/05/2015 00:00	Jennifer D'Agostino	50%	Adminstered by Woodland Park keepers mixed in bran.

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 15D

Test Request Detail

Date Requested 13/05/2015
Requested By Jennifer D'Agostino
Analysis Start Date & Time 13/05/2015 15:05
Analysis By Liz McCrae
Analysis Equipment VetScan HM5
Insufficient Sample No

Sample Quality

Color ~
Color Intensity ~
Clarity ~
Consistency ~
Additional Characteristics ~
Degraded No

Notes/Comments

bi-lobed Monocytes: 24%

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
WBC	17.72 *10^9 cells/L	~	7.1	19.9	~	No	No
RBC [a]	2.86 *10^12 cells/L	~	2.15	3.98	~	No	No
HGB [a]	14.7 g/dL	~	8.7	16.5	~	No	No
HCT [a]	36.72 %	~	25.6	47.9	~	No	No
MCV	129 fL	~	94.8	143.9	~	No	No
MCH [a]	51.5 pg	~	31	50	High	No	No
MCHC	40.1 g/dL	~	28.0	40.1	~	No	No
RDW	14.9 %	~	~	~	~	~	No
Platelets	248 *10^9 cells/L	~	~	~	~	No	No
Mean Plate. Vol.	7.5 fL	~	~	~	~	No	No
PDW-cv	29.6 %	~	~	~	~	~	No
Neutrophil % [m]	27 %	~	~	~	~	No	No
Lymphocyte % [m]	12 %	~	~	~	~	No	No
Monocyte % [m]	36 %	~	~	~	~	No	No
Eosinophil % [m]	1 %	~	~	~	~	No	No
Basophil % [m]	0 %	~	~	~	~	No	No
HCT [m]	39 %	~	25.6	47.9	~	No	No
Anisocytosis	moderate (3+)	~	~	~	~	~	No
Poikilocytosis	few (2+)	~	~	~	~	~	No
Target Cells	few (2+)	~	~	~	~	~	No

Sample Detail (GSN: S-WCD15-038322)

Collection Date/Time	13/05/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Whole Blood	**Collected By**	Jennifer D'Agostino
Anatomical Source/Tissue	EAR VEIN	**Reason**	Medical
Additives/Preservatives	EDTA	**Exclude from reference intervals**	No

Test & Result

Animal Type	GAN	Preferred ID	Taxonomy	Sex	Birth Date	Age
Individual	21517980	776414	Elephas maximus/Asian elephant	Female	~ from 28/01/1978 to 28/01/1980	36Y 3M 15D

Test Request Detail

Date Requested	13/05/2015
Requested By	Jennifer D'Agostino
Analysis Start Date & Time	13/05/2015 00:00
Analysis By	Liz McCrae
Analysis Equipment	VetScan VS2
Insufficient Sample	No

Sample Quality

Color	~
Color Intensity	~
Clarity	~
Consistency	~
Additional Characteristics	~
Degraded	No

Notes/Comments

~

© 2015 International Species Information System

Test Requests & Test Results

Test	Primary Result	Secondary Result	Low RI	High RI	Evaluation	Excld. from RI	Reviewed
Albumin	5.3 g/dL	~	2.3	4.2	High	No	No
Albumin	3.7 g/dL	~	2.3	4.2	~	No	No
Alk. Phos. [a]	91 U/L	~	44	270	~	No	No
Alk. Phos. [a]	98 U/L	~	44	270	~	No	No
AST [a]	39 U/L	~	6	38	High	No	No
ALT	9 U/L	~	0	31	~	No	No
Ca	10.5 mg/dL	~	9.2	12.0	~	No	No
Amylase [a]	3,835 U/L	~	414	7,023	~	No	No
Tot. Bili.	0.4 mg/dL	~	0.1	0.6	~	No	No
GGT [a]	6 U/L	~	1	15	~	No	No
BUN	5 mg/dL	~	6.0	20.0	Low	No	No
Total Protein	8.2 g/dL	~	6.5	9.6	~	No	No
Globulin	2.8 g/dL	~	3.0	6.5	Low	No	No
Ca	10.4 mg/dL	~	9.2	12.0	~	No	No
Phos	3.6 mg/dL	~	3.1	7.4	~	No	No
BUN	5 mg/dL	~	6.0	20.0	Low	No	No
Creat [a]	1.7 mg/dL	~	0.8	2.3	~	No	No
CK [a]	1,901 U/L	~	53	461	High	No	No
Phos	3.9 mg/dL	~	3.1	7.4	~	No	No
Glucose	116 mg/dL	~	51	131	~	No	No
Mg	2.0 mg/dL	~	1.62	2.94	~	No	No
Na	131 mmol/L	~	123	141	~	No	No
K	3.7 mmol/L	~	3.8	5.8	Low	No	No
Total Protein	8.6 g/dL	~	6.5	9.6	~	No	No
Globulin	4.9 g/dL	~	3.0	6.5	~	No	No

Sample Detail (GSN: S-WCD15-038323)

Collection Date/Time	13/05/2015 00:00	**Collection Method**	Phlebotomy
Sample Type	Serum	**Collected By**	Jennifer D'Agostino
Anatomical Source/Tissue	EAR VEIN	**Reason**	Medical
Additives/Preservatives	~	**Exclude from reference intervals**	No

© 2015 International Species Information System