

From: Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>
To: Carey, Lauren; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L; Rotstein, David
Sent: 6/10/2019 4:39:12 PM
Subject: couple more related DCM- PFRs-FW: Zignature trout & salmon dry: Lisa Freeman - EON-390034 + Pure VitaVenison and Red Lentisl
Attachments: 2067994-report.pdf; PureVita Venison & Red Lentils Grain-Free Dry Dog Food: [B6] EON-386301; PureVita Venison & Red Lentils Grain-Free Dry Dog Food: [B6] EON-390031; Zignature trout & salmon dry: Lisa Freeman - EON-370715; 2067994-attachments.zip

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place

[B6]



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From: Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>
Sent: Monday, June 10, 2019 11:13 AM
To: Rotstein, David <David.Rotstein@fda.hhs.gov>; Cleary, Michael * <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; [B6]
Subject: Zignature trout & salmon dry: Lisa Freeman - EON-390034

A PFR Report has been received and Related PFR Event [EON-390034] has been created in the EON System.

A "PDF" report by name "2067994-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2067994-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-390034
ICSR #: 2067994
EON Title: Related PFR Event created for Zignature trout & salmon dry; 2067994

AE Date	11/07/2018	Number Fed/Exposed	3
Best By Date		Number Reacted	2

Animal Species	Dog	Outcome to Date	Better/Improved/Recovering
Breed	Retriever - Labrador		
Age	3 Years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2067994

Product Group: Pet Food

Product Name: Zignature trout & salmon dry

Description: Older housemate diagnosed with DCM and CHF. Screening **B6** because he has been eating the same diet. Does not have clearcut DCM on echo but has reduced cardiac contractility. Taurine pending and owner has changed diet and started taurine supplementation

Submission Type: Followup

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Better/Improved/Recovering

Number of Animals Treated With Product: 3

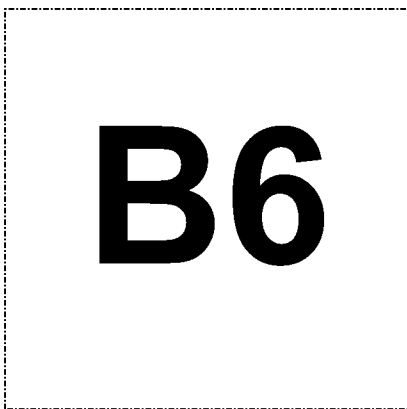
Number of Animals Reacted With Product: 2

Product Name	Lot Number or ID	Best By Date
Zignature trout & salmon dry		

This report is linked to:

Initial EON Event Key: EON-370715

Initial ICSR: 2058683



To view this Related PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-390034>

To view the Related PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspa?decorator=none&e=0&issueType=10100&issuelid=407306&parentIssueTypeId=12>

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B6

Discharge Instructions

B6

Patient ID: B6

B6

Admit Date: 1/24/2019 10:26:41 AM

Discharge Date: 1/24/2019

Diagnoses: Decreased contractile function and mildly enlarged heart (stable).

Clinical Findings:

Thank you for bringing B6 in today for his recheck echocardiogram. You report that B6 is doing well at home, although he sometimes has a dry cough after eating. On physical exam there were no abnormalities while listening to his heart, and he had nice strong pulses.

Today on echocardiogram (ultrasound of the heart), B6 heart looks similar to how it did previously. He still has a slight reduced contractile function and his heart is mildly enlarged which is abnormal for a dog of his age. This is not yet severe enough that B6 requires any additional medications, however, we recommend continuing him on his taurine supplement and we will continue to monitor his heart closely in the future.

Monitoring at Home:

B6 is very stable today and is not close to heart failure. However, please monitor for him for any signs of weakness or collapse, a reduction in appetite, cough, or distension of the belly. If you notice any abnormalities, we would like to see him for a recheck exam.

If you ever have any concerns, please call or have B6 evaluated by a veterinarian. Our emergency clinic is open 24 hours a day.

Diet Suggestions:

Please continue feeding [B6] the Purina Pro Plan diet.

Exercise Recommendations: [B6] may continue his normal activity and exercise regime

Recommended Medications:

1. Taurine Supplement - Give 1000mg by mouth every 12 hours.

(brands we recommend include TwinLab, Swanson, NOW and GNC brands)

Taurine is an amino acid that is shown to be necessary for appropriate heart health. Supplementing Taurine, in some cases, has lead to reduction in heart enlargement and an increase in heart health in dogs with DCM.

Recheck Visits: We would like to see [B6] back for a recheck echocardiogram in 6 months.

Thank you for entrusting us with [B6] care- he is such a good boy!. Please contact our Cardiology liaison at [B6] for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information

<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

[B6]

Discharge Instructions

B6

Patient ID: B6

B6 Canine

B6 years Old Male (Neutered) Golden Retriever
Gold

Cardiology Appointment Report

B6

Presenting Complaint: DCM Study, last echocardiogram performed 11/2018 revealing decreased contractile function - r/o DCM vs. diet induce cardiomyopathy. Did not require medical intervention B6 at that time, but initiated Taurine supplementation and diet change.

Concurrent Diseases: Apparently healthy pet

General Medical History: Owner states B6 coughs once in a while. When inquiring for more detail-owner said she notices it once a day after he eats a lot. Describes it as a dry cough. He vomited a week ago-unsure of consistency.

Diet and Supplements: Eats purina proplan sport, taurine supplement

Cardiovascular History:

Prior CHF diagnosis? No

Prior heart murmur? No

Prior ATE? No

Prior arrhythmia? No

Monitoring respiratory rate and effort at home? No

Cough? Yes

Shortness of breath or difficulty breathing? No

Syncope or collapse? No

Sudden onset lameness? No

Exercise intolerance? No

Current Medications Pertinent to CV System:

B6

Medication:

Formulation/Tab Size:

Administration Frequency:

Need refills?

Medication:

Formulation/Tab Size:

Administration Frequency:

Need refills?

Cardiac Physical Examination:

B6

Muscle condition:

Normal

Mild muscle loss

Moderate cachexia

Marked cachexia

Cardiovascular Physical Exam:

Murmur Grade:

None

I/VI

II/VI

III/VI

IV/VI

V/VI

VI/VI

Murmur location/description:

Jugular vein:

Bottom 1/3 of the neck

Middle 1/3 of the neck

1/2 way up the neck

Top 2/3 of the neck

Arterial pulses:

Weak

Fair

Good

Strong

Bounding

Pulse deficits

Pulsus paradoxus

Other:

Arrhythmia:

None

Sinus arrhythmia

Bradycardia

Tachycardia

Premature beats

Gallop:

- Yes
- No
- Intermittent

- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds

- Pulmonary crackles
- Wheezes
- Upper airway stridor

Abdominal exam:

- Normal
- Hepatomegaly
- Abdominal distension

- Mild ascites
- Marked ascites

Problems:

Differential Diagnoses:

Diagnostic plan:

- Echocardiogram
- Chemistry profile
- ECG
- Renal profile
- Blood pressure
- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests:

Echocardiogram Findings:

B6

Assessment and recommendations: Stable systolic dysfunction with similar LV function compared to previous exam. Recommend continue Taurine supplementation and current diet. Echocardiogram should be repeated in 3 months or sooner in case patient develops clinical signs consistent with worsening of the disease.

Final Diagnosis:

- Decreased contractile function - r/o DCM vs. diet induce cardiomyopathy.

Heart Failure Classification Score:

ISACHC Classification:

- | | |
|--|-------------------------------|
| <input type="checkbox"/> Ia | <input type="checkbox"/> IIIa |
| <input checked="" type="checkbox"/> Ib | <input type="checkbox"/> IIIb |
| <input type="checkbox"/> II | |

ACVIM Classification:

- | | |
|--|----------------------------|
| <input type="checkbox"/> A | <input type="checkbox"/> C |
| <input type="checkbox"/> B1 | <input type="checkbox"/> D |
| <input checked="" type="checkbox"/> B2 | |

M-Mode

IVSd		cm
LVIDd		cm
LVPWd		cm
IVSs		cm
LVIDs		cm
LVPWs		cm
EDV(Teich)		ml
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
Max LA		cm
Time		ms
HR		BPM
CO(Teich)		l/min
CI(Teich)		l/min/m
Ao Diam		cm
LA Diam		cm
LA/Ao		
IVSd		cm
LVIDd		cm
EDV(Teich)		ml
LVIDs		cm
%FS		%
TAPSE		cm

B6

EPSS

cm

M-Mode Normalized

IVSdN

(0.290 - 0.520) !

LVIDdN

(1.350 - 1.730) !

LVPWdN

(0.330 - 0.530)

IVSsN

(0.430 - 0.710) !

LVIDsN

(0.790 - 1.140) !

LVPWsN

(0.530 - 0.780)

2D

SA LA

cm

Ao Diam

cm

SA LA / Ao Diam

IVSd

cm

LVIDd

cm

LVPWd

cm

EDV(Teich)

ml

IVSs

cm

LVIDs

cm

LVPWs

cm

ESV(Teich)

ml

EF(Teich)

%

%FS

%

SV(Teich)

ml

Doppler

MV E Vel

m/s

MV DecT

ms

MV Dec Slope

m/s

MV A Vel

m/s

MV E/A Ratio

E'

m/s

E/E'

A'

m/s

S'

m/s

IVRT

ms

AV Vmax

m/s

AV maxPG

mmHg

PV Vmax

m/s

PV maxPG

mmHg

TR Vmax

m/s

TR maxPG

mmHg

B6

B6

Discharge Instructions

B6

Species: Canine

Gold Male (Neutered) Golden Retriever

Birthdate:

B6

B6

B6

Admit Date: 5/1/2019 12:00:53 PM

Discharge Date: 5/1/2019

Diagnoses: Decreased contractile function and mildly enlarged heart.

Clinical Findings:

Thank you for bringing B6 in today for his recheck echocardiogram. You report that B6 is doing well at home and has not had any coughing or exercise intolerance. On physical exam there were no abnormalities while listening to his heart, and he had nice strong pulses.

Today on echocardiogram (ultrasound of the heart), B6 heart looks similar to how it did previously. His heart is has decreased contractile function and is mildly enlarged which is abnormal for a dog of his age. B6 does not require any additional medications at this time, however, we recommend continuing him on his taurine supplement and we will continue to monitor his heart closely in the future.

Monitoring at Home:

B6 is very stable today and is not close to heart failure. However, please monitor for him for any signs of weakness or collapse, a reduction in appetite, cough, or distension of the belly. If you notice any abnormalities, we would like to see him for a recheck exam.

If you ever have any concerns, please call or have B6 evaluated by a veterinarian. Our emergency clinic is open 24 hours a day.

Diet Suggestions:

Please continue feeding **B6** the Purina Pro Plan diet.

Exercise Recommendations: **B6** may continue his normal activity and exercise regime

Recommended Medications:

B6

Recheck Visits: We would like to see **B6** back for a recheck echocardiogram in 2-3 months. **B6** will call you to schedule this appointment.

Thank you for entrusting us with **B6** care- he is such a sweet boy! Please contact our Cardiology liaison at (508)-887-4696 or email us at cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information
<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

Case **B6**

Owner **B6**

Discharge Instructions

B6

B6

Canine

Years Old Male (Neutered) Golden Retriever

Gold

Cardiology Appointment Report

Date: 5/1/2019

B6

Presenting Complaint: recheck - DCM study; doing well at home, active, no coughing

Concurrent Diseases:

none

General Medical History:

Last echo performed 1/19/19 - decreased contractile function, no intervention needed at this time.
Suspect diet-associated DCM

Diet and Supplements:

Taurine 1000mg BID

Cardiovascular History:

Prior CHF diagnosis? n

Prior heart murmur? n

Prior ATE? n

Prior arrhythmia? n

Monitoring respiratory rate and effort at home? n

Cough? very rarely -o cannot remember the last time he coughed

Shortness of breath or difficulty breathing? n

Syncope or collapse? n

Sudden onset lameness? n

Exercise intolerance? n

Current Medications Pertinent to CV System:

None

Cardiac Physical Examination:

B6

Muscle condition:

- Normal
- Mild muscle loss
- Moderate cachexia
- Marked cachexia

Cardiovascular Physical Exam:

Murmur Grade:

- None
- I/VI
- II/VI
- III/VI
- IV/VI
- V/VI
- VI/VI

Murmur location/description:

Jugular vein:

- Bottom 1/3 of the neck
- Middle 1/3 of the neck
- 1/2 way up the neck
- Top 2/3 of the neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

Arrhythmia:

- None
- Sinus arrhythmia
- Premature beats
- Bradycardia
- Tachycardia

Gallop:

- Yes
- No
- Intermittent
- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds
- Pulmonary crackles
- Wheezes
- Upper airway stridor

Abdominal exam:

- Normal
- Hepatomegaly
- Mild ascites
- Marked ascites

Abdominal distension

Problems:

DCM with mildly decreased contractile function

Differential Diagnoses:

Diet-associated DCM vs primary DCM

Diagnostic plan:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Echocardiogram | <input type="checkbox"/> Dialysis profile |
| <input checked="" type="checkbox"/> Chemistry profile | <input type="checkbox"/> Thoracic radiographs |
| <input checked="" type="checkbox"/> ECG | <input checked="" type="checkbox"/> NT-proBNP |
| <input type="checkbox"/> Renal profile | <input type="checkbox"/> Troponin I |
| <input type="checkbox"/> Blood pressure | <input type="checkbox"/> Other tests: |

Echocardiogram Findings:

B6

Assessment and recommendations:

Findings consistent with stable mild LV dilation and systolic dysfunction with similar LV function compared to previous exam. Recommend continue Taurine supplementation and current diet. Echocardiogram should be repeated in 3 months or sooner in case patient develops clinical signs consistent with worsening of the disease.

Final Diagnosis:

- Decreased contractile function - r/o mild DCM vs. diet induced cardiomyopathy.

Heart Failure Classification Score:

ISACHC Classification:

- | | |
|--|-------------------------------|
| <input type="checkbox"/> Ia | <input type="checkbox"/> IIIa |
| <input checked="" type="checkbox"/> Ib | <input type="checkbox"/> IIIb |
| <input type="checkbox"/> II | |

ACVIM Classification:

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> A | <input type="checkbox"/> C |
|----------------------------|----------------------------|

- B1
- B2

D

M-Mode

IVSd	cm
LVIDd	cm
LVPWd	cm
IVSs	cm
LVIDs	cm
LVPWs	cm
EDV(Teich)	ml
ESV(Teich)	ml
EF(Teich)	%
%FS	%
SV(Teich)	ml
Max LA	cm
Ao Diam	cm
LA Diam	cm
LA/Ao	
TAPSE	cm
EPSS	cm

M-Mode Normalized

IVSdN	{0.290 - 0.520}
LVIDdN	{1.350 - 1.730} !
LVPWdN	{0.330 - 0.530}
IVSsN	{0.430 - 0.710}
LVIDsN	{0.790 - 1.140} !
LVPWsN	{0.530 - 0.780}

2D

SA LA	cm
Ao Diam	cm
SA LA / Ao Diam	
IVSd	cm
LVIDd	cm
LVPWd	cm
EDV(Teich)	ml
IVSs	cm
LVIDs	cm
LVPWs	cm
ESV(Teich)	ml
EF(Teich)	%
%FS	%
SV(Teich)	ml
LV Major	cm
LV Minor	cm

B6

Sphericity Index
LVld A4C
LVEDV MOD A4C
LVls A4C
LVESV MOD A4C
LVEF MOD A4C
SV MOD A4C

Doppler

MR Vmax
MR maxPG
MV E Vel
MV DecT
MV Dec Slope
MV A Vel
MV E/A Ratio
E'
E/E'
A'
S'
IVRT
AV Vmax
AV maxPG
PV Vmax
PV maxPG
TR Vmax
TR maxPG

B6

cm
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ACHIEVING GREATNESS

Inside every dog is a potential athlete and we're dedicated to helping dogs of all activity levels excel through performance nutrition. In Purina Pro Plan® Sport™ Grain Free Performance 30/20 Chicken & Egg Formula, we've formulated to promote strength and endurance - helping your dog to reach his full potential.

FINE-TUNED NUTRITION FOR CANINE ATHLETES

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+ Amino Acids help nourish muscles, including the crucial time immediately following exercise

+ 30% Protein and 20% Fat help support metabolic needs and maintain lean muscle

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- Corn, Wheat or Soy

- Artificial Colors, Flavors or Preservatives

- Poultry By-Product Meal

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ALL LIFE STAGES
PERFORMANCE 30/20 CHICKEN & EGG FORMULA
FOR COMPETITIVE CANINE ATHLETES

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- Real, high-quality protein, including chicken as the first ingredient
- Alternative sources of carbohydrates - made without grain or soy
- EPA, an omega-3 fatty acid, and glucosamine help support joint health and mobility
- Antioxidant-rich nutrition nourishes the immune system and helps defend against free radicals
- Contains no artificial colors, flavors or preservatives and no poultry by-product meal



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Join like-minded pet owners and share what makes your dog exceptional through photos, stories, and more.

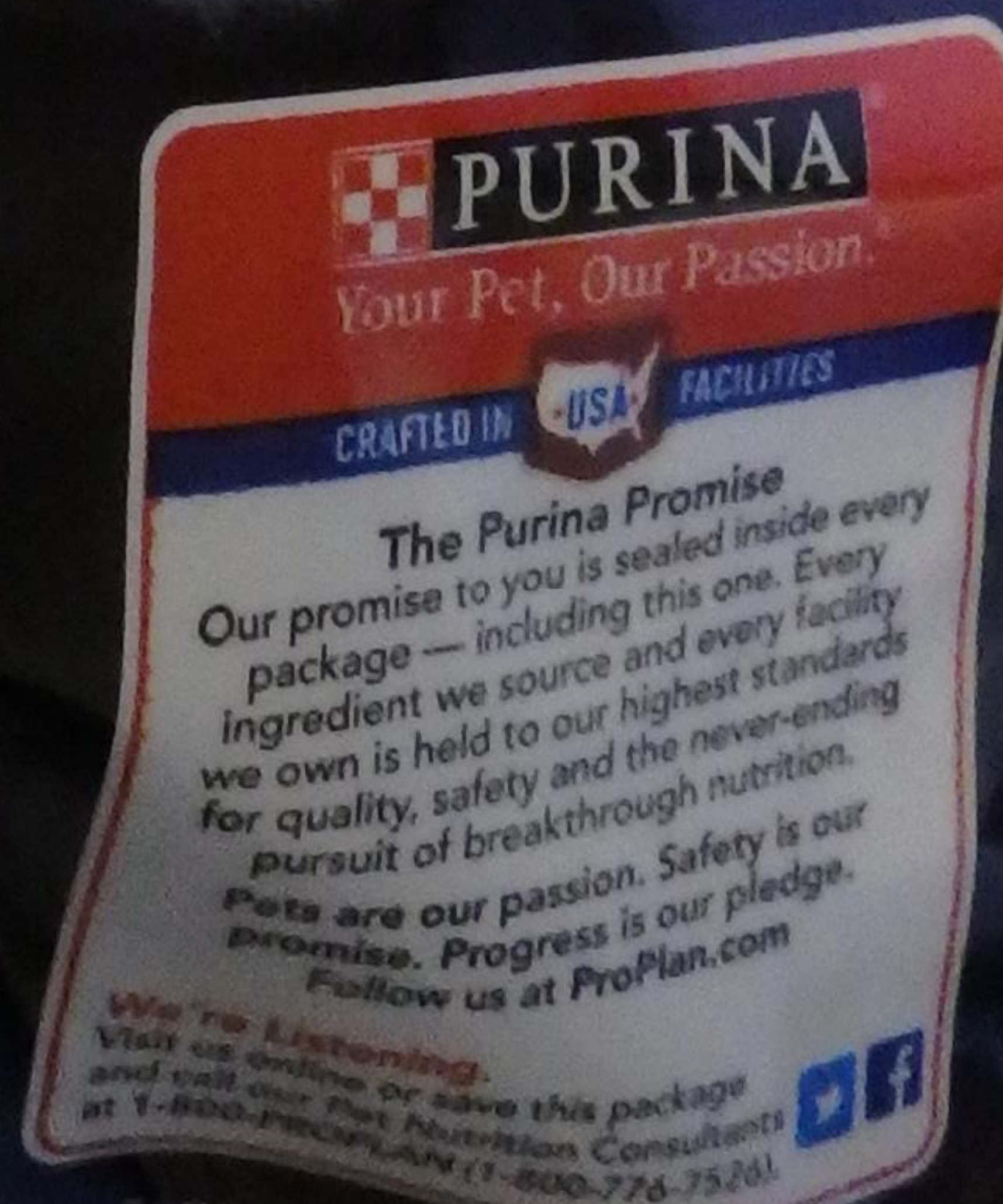
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We guarantee outstanding quality and taste. If for any reason you're not satisfied, simply let us know why. Include the information in the "BEST IF USED BY" date box and the weight circle. Send within 60 days of date on receipt along with your original purchase receipt with the price circled, a brief explanation of why you were dissatisfied with the product, and your name and street address (P.O. Box not accepted) to:

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Purina Consumer Affairs
P.O. Box 2030, Lincoln, NE 68779

STORE IN A COOL, DRY PLACE.

BEST BY FEB 2019
7241 7082 0100 110



Canada: www.ty-proplan.ca
New Zealand: 0800 PET VIP
(0800 738 847)

B6

PET OWNER: **B6**
SPECIES: Canine
BREED: Labrador Retriever
GENDER: Female
AGE: 6 Years
PATIENT ID: **B6**

B6

ACCOUNT #: **B6**
ATTENDING VET: **B6**

LAB ID: **B6**
ORDER ID:
COLLECTION DATE: **2/26/18**
DATE OF RECEIPT: **2/27/18**
DATE OF RESULT: **3/9/18**

IDEXX Services: **B6**

IDEXX SDMA

B6

Jan '18 Feb '18

Creatinine

B6

Jan '18 Feb '18

BUN

B6

Jan '18 Feb '18

Chemistry



2/27/18 (Order Received)
3/9/18 9:58 AM (Last Updated)

1/23/18

TEST	RESULT	REFERENCE VALUE
IDEXX SDMA	B6	0 - 14 µg/dL
Creatinine		0.5 - 1.5 mg/dL
BUN		9 - 31 mg/dL
BUN:Creatinine Ratio		
Phosphorus		2.5 - 6.1 mg/dL
Calcium		8.4 - 11.8 mg/dL
Sodium		142 - 152 mmol/L
Potassium		4.0 - 5.4 mmol/L
Na:K Ratio		28 - 37
Chloride		108 - 119 mmol/L
TCO2 (Bicarbonate)		13 - 27 mmol/L
Anion Gap		11 - 26 mmol/L
Total Protein		5.5 - 7.5 g/dL
Albumin		2.7 - 3.9 g/dL
Globulin		2.4 - 4.0 g/dL
Alb:Glob Ratio		0.7 - 1.5

B6

B6

B6

PET OWNER: **B6**

DATE OF RESULT: **2/27/18**

LAB ID: **B6**

Chemistry (continued)

TEST	RESULT	REFERENCE VALUE
Cholesterol	B6	131 - 345 mg/dL
Hemolysis Index		
Lipemia Index		

B6

- a BOTH SDMA AND CREATININE ARE WITHIN THE REFERENCE INTERVAL which indicates kidney function is likely good. Evaluate a complete urinalysis and confirm there is no other evidence of kidney disease.
- b Index of N, 1+, 2+ exhibits no significant effect on chemistry values.
- c Index of N, 1+, 2+ exhibits no significant effect on chemistry values.

Therapeutics/Toxicology 

2/27/18 (Order Received)
3/9/18 9:58 AM (Last Updated)

TEST	RESULT	REFERENCE VALUE
Serum Iron	B6	73 - 245 ug/dL
Ferritin		
TIBC		

B6

- a Referral test performed at Kansas State University.

B4, B6

Owner:

B6

Accession Number:

B6

Reference Number:

B6

Case Coordinator: LAB, COMP. HEMATOLOGY

Received: 02/27/2018

Finalized: 02/27/2018

Species: DOG

Sex: FEMALE

Animal ID: B6

Specimen: SERUM

Sampled: 02/09/2018

Clinic:

NORTH CAROLINA ST UNIV- CLIN PATH LAB
ROOM C269
1060 WILLIAM MOORE DR
RALEIGH, NC 27607

FINAL REPORT

This report supercedes all previous reports for this case

Clinical Pathology

PROFILE, IRON & TIBC

Animal Id:

B6

Sample Date:

Feb 9, 2018

Specimen Desc:

SERUM

B6

B6 H ug/dL

73 - 245

02/27/2018 05:14 PM

TIBC Comment

UNABLE TO CALCULATE TIBC. UIBC IS BELOW THE ANALYZER TECHNICAL LIMIT.

Gross appearance of

NORMAL

serum:

Chemistry assays

B6

MT, CLIN PATH LAB

reported by:

Accession Number:

B6

Status: Finalized

Tuesday, 27 Feb 2018 5:14 PM

Page 1 of 2

Report Details - B6					
ICSR:	2023228				
Type Of Submission:	Initial				
Report Version:	FPSR.FDA.PETF.V.V1				
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)				
Reporting Type:	Voluntary				
Report Submission Date:	2017-07-11 17:06:59 EDT				
Reported Problem:	<p>Problem Description: Please note: Dr. Jennifer Jones was consulted prior to submission of this report. She would like to be involved in the case review 3 week history of cough treated unsuccessfully with doxycycline and prednisone. 3 day history of inappetence and vomiting prior to presentation to B6 emergency service for dyspnea. Radiographs showed severe pulmonary edema and echocardiogram showed severe Dilated Cardiomyopathy. There was an initial response to diuretic therapy however, he declined and was placed on the ventilator for respiratory support and continued CHF treatment. Attempts to wean off the ventilator were unsuccessful and aquaphoresis was performed. He continued to decline despite aggressive therapy and was euthanized. Infectious disease testing was negative and taurine and carnitine analysis showed adequate levels. Necropsy initially did not reveal a cause for DCM and supported alveolar injury (possibly ventilator related). A re-review of the myocardial histopathology by one of our pathologist showed myofiber vacuoles reminiscent of the changes seen in doxorubicin toxicity. Since the dog had not received doxorubicin B6</p> <p style="text-align: center;">B6</p> <p>B6 had been fed California Naturals Adult - both kangaroo with lentils and venison with lentils along with Milo's kitchen treats. We have samples of these foods from 6/17 but not the original bags from when he was presented 2/17. These samples were provided at the time his housemate B6 unrelated, older miniature schnauzer) also presented with severe DCM and CHF. I will enter this dog as a separate affected patient. Both dogs had extensive infectious disease testing which was negative and nutritional amino acid deficiencies were ruled out. Because of this, their unrelated lineages (although the same breed, they were from different lines), different ages but similar time of presentation B6 had clinical signs at the time B6 was treated, but didn't present with CHF for several months), we are considering common environmental factors which could precipitate DCM, including food contamination or toxin exposure.</p> <p>Date Problem Started: B6</p> <p>Concurrent Medical Problem: No</p> <p>Outcome to Date: Died Euthanized</p> <p>Date of Death: B6</p>				
Product Information:	<p>Product Name: Alternated between: -California Natural Adult Limited Ingredient Grain Free Venison & Green Lentils and Kangaroo & Red Lentils Recipe</p> <p>Product Type: Pet Food</p> <p>Lot Number:</p> <p>UPC: not available</p> <p>Package Type: BAG</p> <p>Package Size: 26 Pound</p> <p>Purchase Date: 06/01/2017</p> <p>Possess Unopened Product: No</p> <p>Possess Opened Product: Yes</p> <p>Storage Conditions: In a cabinet, in the original bag</p> <p>Product Use Information:</p> <table border="1" style="width: 100%;"> <tr> <td>Description:</td> <td>twice daily feeding The sample we have is from 6/17, however, we do not have food samples from 2/17 when both dogs started with clinical signs.</td> </tr> <tr> <td>Time Interval between Product</td> <td>2 Years</td> </tr> </table>	Description:	twice daily feeding The sample we have is from 6/17, however, we do not have food samples from 2/17 when both dogs started with clinical signs.	Time Interval between Product	2 Years
Description:	twice daily feeding The sample we have is from 6/17, however, we do not have food samples from 2/17 when both dogs started with clinical signs.				
Time Interval between Product	2 Years				

Use and Adverse Event:	
Product Use Stopped After the Onset of the Adverse Event:	No
Perceived Relatedness to Adverse Event:	Possibly related
Other Foods or Products Given to the Animal During This Time Period:	Yes

Manufacturer /Distributor Information:	
Purchase Location Information:	Address: United States

Animal Information:

Name:	B6	
Type Of Species:	Dog	
Type Of Breed:	Schnauzer - Miniature	
Gender:	Male	
Reproductive Status:	Neutered	
Weight:	8.2 Kilogram	
Age:	2.5 Years	
Assessment of Prior Health:	Excellent	
Number of Animals Given the Product:	2	
Number of Animals Reacted:	2	
Owner Information:	Owner Information provided:	Yes
	Contact:	Name: B6
		Phone:
		Email:
	Address:	B6

Healthcare Professional Information:	Practice Name:	North Carolina State University, College of Veterinary Medicine	
	Contact:	Name:	Darcy Adin
		Phone:	(919) 513-6694
		Other Phone:	6145829798
		Email:	dbadin@ncsu.edu
	Address:	1060 William Moore Dr Raleigh New York 27607 United States	
	Practice Name:	North Carolina State University College of Veterinary Medici	
	Contact:	Name:	B6
		Phone:	

		Other Phone: B6
	Practice Name:	North Carolina state University, College of Veterinary Medic
	Contact:	Name: B6
		Phone:
		Other Phone:
Sender Information:	Name:	Darcy Adin
	Address:	1060 William Moore Dr Raleigh New York 27607 United States
	Contact:	Phone: 9195136694
		Other Phone: 6145829798
		Email: dbadin@ncsu.edu
	Permission To Contact Sender:	Yes
	Preferred Method Of Contact:	Email
	Reported to Other Parties:	Manufacturer
Additional Documents:		

From: Rotstein, David </O=FDA/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=DAVID.ROTSTEIN>
To: Reimschuessel, Renate; Queen, Jackie L; Palmer, Lee Anne; Jones, Jennifer L; Ceric, Olgica; Carey, Lauren
Sent: 7/11/2017 9:45:50 PM
Subject: Fwd: Alternated feedings between:-California Natural Adult Limited Ingredient Grain Free Venison & Green Lentils Recipe Dog Food and Kangaroo and Lentils: Darcy Adin - EON-323519
Attachments: 2023230-report.pdf

David Rotstein, DVM, MPVM, Dipl.ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place
B6 (BB)

This e-mail message is intended for the exclusive use of the recipient(s) named above. It may contain information that is protected, privileged, or confidential, and it should not be disseminated, distributed, or copied to persons not authorized to receive such information. If you are not the intended recipient, any dissemination, distribution, or copying is strictly prohibited. If you think you received this e-mail message in error, please e-mail the sender immediately at david.rotstein@fda.hhs.gov.

From: PFR Event <pfreventcreation@fda.hhs.gov>
Date: July 11, 2017 at 5:36:16 PM EDT
To: HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>,
B6 Cleary, Michael *
<Michael.Cleary@fda.hhs.gov>
Subject: Alternated feedings between:-California Natural Adult Limited Ingredient Grain Free Venison & Green Lentils Recipe Dog Food and Kangaroo and Lentils: Darcy Adin - EON-323519

A PFR Report has been received and PFR Event [EON-323519] has been created in the EON System.

A "PDF" report by name "2023230-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report:

EON Key: EON-323519

ICSR #: 2023230

EON Title: PFR Event created for Alternated feedings between: California Natural Adult Limited Ingredient Grain Free Venison & Green Lentils Recipe Dog Food and Kangaroo and Lentils; 2023230

AE Date	06/22/2017	Number Fed/Exposed	2
Best By Date		Number Reacted	2
Animal Species	Dog	Outcome to Date	Stable
Breed	Schnauzer - Miniature		
Age	7 Years		
District Involved	PFR-New York DO		

Product information

Individual Case Safety Report Number: 2023230

Product Group: Pet Food

Product Name: Alternated feedings between: California Natural Adult Limited Ingredient Grain Free Venison & Green Lentils Recipe Dog Food and Kangaroo and Lentils

Description: Please note: Dr. Jennifer Jones was consulted prior to submission of this report. She would like to be involved in the case review. [B6] housemate [B6] (separate report submitted) was diagnosed with DCM and CHF 2/17 and was euthanized after aggressive treatment of CHF. At that time [B6] had 2 syncopal events closely related to each other. His appetite for dog food declined but he would eat it if tempted with treats mixed in. He was presented 6/22/17 for more syncopal events and was similarly diagnosed with severe DCM and CHF. He was able to be successfully treated however and is clinically doing well on CHF medications as of 7/10/17. A re-review of the myocardial histopathology for [B6] housemate [B6] was requested at this time because of the unusual diagnosis of DCM in a small breed dog living in the same house as another dog similarly diagnosed a few months ago. This re-review by one of our pathologists showed myofiber vacuoles reminiscent of the changes seen in doxorubicin toxicity. Since the dog had not received [B6]

B6

(unrelated, younger miniature schnauzer), [B6] had been fed California Naturals Adult - both kangaroo with lentils and venison with lentils along with Milo's kitchen treats. We have samples of these foods from 6/17 but not the original bags from when he was presented 2/17. These samples were provided at the time [B6] also presented with severe DCM and CHF. Like [B6] had extensive infectious disease testing which was negative and nutritional amino acid deficiencies were ruled out. Because of this, their unrelated lineages (although the same breed, they were from different lines), different ages but similar time of presentation, we are considering common environmental factors which could precipitate DCM, including food contamination or toxin exposure. We have plasma, serum, urine and myocardial tissue samples (latter only for [B6] stored at -80 Celsius in addition to food and treat samples.

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 2

Number of Animals Reacted With Product: 2

Product Name	Lot Number or ID	Best By Date
Alternated feedings between: California Natural Adult Limited Ingredient Grain Free Venison & Green Lentils Recipe Dog Food and Kangaroo and Lentils		

Sender information

Darcy Adin
1060 William Moore Dr
Raleigh, NY 27607
USA

Owner information

B6

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-323519>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspa?decorator=none&e=0&issueType=12&issueId=338851>

This email and attached document are being provided to you in your capacity as a Commissioned Official with the U.S. Department of Health and Human Services as authorized by law. You are being provided with this information pursuant to your signed Acceptance of Commission.

This email message is intended for the exclusive use of the recipient(s) named above. It may contain information that is protected, privileged, or confidential. Any dissemination, distribution, or copying is strictly prohibited.

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Failure to adhere to the above provisions could result in removal from the approved distribution list. If you think you received this email in error, please send an email to FDAREportableFoods@fda.hhs.gov immediately.

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 SCHNAUZER MC BLACK CANINE	Case # 212267 8.2 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6 B6
---------------------	--	-----------------------------	--	----------------

Admission Date/Time: B6 Discharge Date/Time: B6 Discharge Status:

*****NOTICE OF EUTHANSIA*****

Case Summary

Diagnosis:

- 1) Biventricular congestive heart failure (left significantly worse than right)
- 2) Cardiomyopathy (suspect secondary) vs. myocarditis vs. tachycardia-induced cardiomyopathy vs. other

History:

B6 is a 2 and 1/2 year old male castrated Miniature Schnauzer who presented the NCSU ER on B6 for labored breathing and was subsequently transferred to NCSU Cardiology. B6 initially developed a cough three weeks ago; B6 describes the cough as a wheezing-type cough that occurred more frequently at night. When B6 showed no signs of improvement, B6 presented to his primary veterinarian on Thursday (1/26). Kennel cough was suspected as the underlying cause. On Monday, B6 B6 became uninterested in his food and began vomiting. The following day B6 continued vomiting and developed labored breathing and subsequently re-presented to the rDVM for evaluation. Bloodwork and thoracic radiographs were performed. Bloodwork was reportedly unremarkable at this time and there B6

B6 While in-hospital, B6 regurgitated. On Wednesday, B6 had improvement in respiratory effort but he still was not eating; B6

B6 The day of presentation, B6 syringe fed B6 but as she attempted he B6 developed marked labored breathing following this and was presented to an emergency hospital. Thoracic radiographs were performed (uploaded in eFilm) and revealed cardiomegaly; a diffuse, severe mixed interstitial to alveolar pattern that is most severe caudodorsally; hepatomegaly; and decreased abdominal serosal contrast. B6 was referred to NCSU for further care and ventilation if indicated.

B6

B6 lives with one other dog (not a relative) who is healthy and is currently up to date on his vaccinations. B6 is not current on any flea/tick prevention but receives heartworm prevention. B6 is fed California Natural dog food.

Physical Exam Findings (on presentation):

B6

B6

B6

Brief Daily Summary:

B6 presented late in the evening on **B6** to the ER and after a TFAST was performed showing severe cardiomegaly with hypocontractility of the ventricles in addition to reviewing the rDVM radiographs, **B6** and **B6** were given. An

echocardiogram was then performed (performed sternally cage-side given patient status) and a diagnosis of severe cardiomyopathy (primary vs. secondary DCM vs. myocarditis, vs. pacing-induced cardiomyopathy vs. other) and he was quickly given another dose of

B6

B6 After the second B6 was given he was immediately placed on a B6 and B6 at

B6

B6 Immediately after B6 (approximately 1:30AM) which showed a marked improvement in terms of B6 significantly improved. He was maintained on B6 B6 He handled this quite well and while B6 as the B6 he clinically was markedly improved from presentation. His B6

B6

B6

I am sorry for the loss of your patient. Both B6 were absolutely wonderful to work with. If you have any questions at all, please do not hesitate to call us at B6

B6

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 SCHNAUZER MC GRAY&WHITE CANINE	Case # 216605 9.9 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
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Admission Date/Time: JUN 22, 2017 10:46 AM

Discharge Date/Time: JUN 22, 2017 06:25 PM

Discharge Status: UNDETERM
NED

CASE SUMMARY:

HISTORY:

B6

PHYSICAL EXAM FINDINGS:

B6

DIAGNOSTIC TESTS:

B6

Pending Lab Results:

B6

B6

ASSESSMENT:

B6

B6 Unfortunately, **B6** echocardiogram revealed evidence of mild mitral valve endocardiosis (i.e. chronic mitral valve disease) and suspected dilated cardiomyopathy. Mitral valve endocardiosis is a chronic, progressive condition in which the valve leaflets become progressively thickened and no longer close appropriately allowing mitral regurgitation. Over time, the left atrium will enlarge and this can lead to congestive heart failure. Typically, in patients with mitral valve disease, the systolic heart function/contractility is maintained until late stages of the disease. Unfortunately, **B6** systolic function was significantly decreased, and he showed abnormal dilation of his left atrium and ventricle. These findings were most consistent with a condition called dilated cardiomyopathy (DCM). DCM is a disease of unknown etiology affecting the muscle of the heart and is most commonly seen in large breed dogs (such as Dobermans, Great Danes, and Labrador Retrievers), but there is a small case report of this disease occurring in Standard Schnauzers. Although the exact mechanism of DCM is currently unknown, dietary taurine/carnitine deficiencies, genetics, infectious diseases, and toxins have all been linked to DCM. In order to assess for some of these possible causes, we have submitted testing for multiple nutritional deficiencies and infectious diseases. The NCSU Cardiology Service will call you as these tests become available. DCM leads to poor contractility and low cardiac output, and we suspect that **B6** episodes of collapse are most likely due to his low cardiac output during exertion. DCM can also lead to fibrosis and remodeling of the myocardium, which can lead to secondary arrhythmias. Fortunately, we saw no evidence of arrhythmias on **B6** ECG today. We performed chest radiographs to evaluate **B6** heart and lungs, and **B6** had evidence of left-sided congestive heart failure on his radiographs and impending right-sided congestive heart failure on his echocardiogram today. We are starting him on three medications to treat his heart disease and congestive heart failure today, and we may consider adding additional medications and supplements in the future. **B6**

B6

INSTRUCTIONS FOR CARE OF YOUR PET:

Medications:

B6

B6

B6

SMALL ANIMAL EMERGENCY SERVICE TEAM:

Faculty:

B6

Date: 6/22/17

CASE SUMMARY:

Thank you for entrusting us with the care of your companion. The Discharge Summary will be emailed to you and faxed to your RDVM within 24 hours of release/discharge from our facility at: **B6** If you or your veterinarian do not receive this, please contact the: **B6** to request a copy. The following will briefly outline the care your companion should receive at home and was explained by our staff at the time of discharge:

DIAGNOSIS (ES):

- 1. Left-sided congestive heart failure
- 2. Mitral valve endocardiosis with left atrial enlargement
- 3. Dilated cardiomyopathy

TREATMENTS:

B6

B6

INSTRUCTIONS FOR CARE OF YOUR PET:

Medications:

B6

IF YOU HAVE ANY QUESTIONS OR PROBLEMS, PLEASE CALL THE SMALL ANIMAL EMERGENCY SERVICE AT (919) 513-6911.

PLEASE CALL TO MAKE YOUR FOLLOW UP APPOINTMENT AS RECOMMENDED

_____/_____/_____ / _____ / _____
Owner/Agent Signature Clinician's Signature Student's Signature

Copy to: Owner / Medical Record / Fax to RDVM

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 SCHNAUZER MC GRAY&WHITE CANINE	Case # 216605 9.9 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
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Admission Date/Time: JUL 10, 2017 10:59 AM Discharge Date/Time: JUL 10, 2017 03:16 PM Discharge Status:

CASE SUMMARY

DIAGNOSIS:
Dilated Cardiomyopathy (DCM)
Mitral valve endocardiosis and regurgitation

HISTORY: B6 a 7 year old neutered male miniature Schnauzer, was presented to the NCSU cardiology service for re-evaluation of dilated cardiomyopathy. At his prior visit, B6 presented to our Small Animal Emergency on 6/22/17 for episodes of collapse. B6 had his first two collapse episodes in mid February; he was described to fall over for ~6 seconds with no loss of consciousness, and he immediately returned to normal after. He later has several more collapsing episodes in June 2017, which prompted his presentation to NCSU SAES. Collapse episodes were preceded by excitement or exertion. He was discharged 6/22/17 with B6 house mate, B6 unfortunately passed away from DCM and CHF in February 2017. Infectious disease testing and amino acid testing did not identify a cause for the DCM. Histopathology was relatively unremarkable, however, findings could have been consistent with a toxic insult.

Since 6/22/17 B6 reports B6 is doing much better. He has not had any more collapsing episodes, excepting one moment where he stumbled but did not fall when excited 7/4/17. He is tolerating the medications and eating well. No coughing, sneezing, vomiting or diarrhea. His RR has been very normal since starting medications. His diet has been changed to Science Diet adult small breed from California Naturals.

The tests results from B6 6/22 visit were normal, including vector borne testing (IFA, PCR) and taurine and carnitine analysis. A full amino acid profile did not reveal significant abnormalities, however, consultation with UCD is pending for a full interpretation.

PHYSICAL EXAM FINDINGS:

B6

B6

RESULTS OF DIAGNOSTIC TESTS:

BLOOD PRESSURE- 110 mmHg systolic
CHEST RADIOGRAPHS- Moderate left sided cardiomegally with no signs of congestive heart failure. Moderate hepamegaly.
RENAL PANEL: B6

ASSESSMENT:

B6 was presented today for a recheck of his recently diagnosed dilated cardiomyopathy (DCM). DCM is a disease of unknown cause affecting the muscle of the heart and is most commonly seen in large breed dogs (such as Dobermans, Great Danes, and Labrador Retrievers). Although the exact mechanism of DCM is currently unknown, dietary taurine/carnitine deficiencies, genetics and toxins have all been linked to DCM. Infectious and nutritional causes of DCM have been ruled out to the best of our ability to test for B6. The overall effect of DCM is a decrease in the contractility (pumping ability) of the heart. Because the heart is unable to pump

with enough vigor to move blood adequately forward into circulation, a volume overload occurs and the heart dilates to accommodate it. As a result, the chambers of the heart become very large, and the walls of the heart become very thin. Ultimately, the heart is unable to accommodate and dilate further, the result is back-up of blood from the heart and into the lungs, known as congestive heart failure. It is important to know that this disease is progressive, and ultimately those patients affected with it will experience congestive heart failure.

Given the unusual timing of [B6] and [B6] both developing dilated cardiomyopathy within the same time frame, their different ages, unrelatedness, same environment and lack of an identifiable cause, we are continuing to hunt for an environmental explanation for [B6] DCM. We will keep you up to date as we pursue toxin testing in the food and treats you have brought us. However, negative toxin testing may not completely rule out a toxin since we do not have samples representative of the onset of cardiac signs in both dogs. We have changed [B6] food to address this possibility.

We are glad to see that [B6] is doing well clinically. His chest xrays showed resolution of congestive heart failure and his renal panel was normal indicating that he is tolerating the medications well. We would like to add [B6] to his regime because his [B6] while normal, is at the low end of the range, and because this may have some long term benefit through [B6]. We have also listed doses for supplements, that while unproven in their benefit, are not harmful and may help his myocardial function. Taurine and carnitine supplementation are unlikely to be helpful since his plasma and whole blood concentrations are normal.

MEDICATIONS:

Please continue the following medications:

B6

Please start the following medication:

B6

ACTIVITY:

Please avoid strenuous exercise or situations which place undue stress on your pet. In general, pets with congestive heart failure will self-regulate their exercise. Please monitor for any change in exercise capability.

Please continue to monitor [B6] respiratory rate and call if this increases. Please also call if he begins coughing or collapse episodes recur.

DIET:

A diet that is moderately restricted in salt is ideal for cardiac patients, as excessive salt load can cause fluid accumulation. A commercial "Senior" diet is formulated with an appropriate amount of salt for your pet. Please also avoid salty treats, such as hot dogs or jerky treats.

NEXT APPOINTMENT:

[B6] should have a recheck appointment with NCSU Cardiology in 3-4 months to evaluate chest X-rays, blood pressure, kidney values, echocardiogram, and troponin. If he begins to show signs of heart failure prior to your next recheck, please call NCSU Cardiology so that we can recheck your pet sooner.

CLINICIANS:

[B6]

RESIDENTS:

[B6]

CLINICAL TECHNICIANS:

B6

RESEARCH TECHNICIAN:

B6

CLIENT SERVICES:

B6

In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pet's medical condition.

Owner -

B6

Clinician - Darcy Adin, DVM

Student -

B6

Referring Veterinarians - please visit us online at www.ncstatevets.org/veterinarians and fill out our RDVM Feedback Survey!

From: Freeman, Lisa <Lisa.Freeman@tufts.edu>
To: Jones, Jennifer L
Sent: 8/24/2018 10:17:06 PM
Subject: FW: 800.267-FDA Case Investigation for [REDACTED] (EON-308715)

Hi Jen,
[REDACTED] will send records on [REDACTED] since I wasn't involve in that case but since she and I have worked together on [REDACTED] she asked me to submit that one. I just submitted a report along with his records. I indicated in the report that I had more records but on more careful inspection, I think I've sent you everything I have. [REDACTED] would be very happy to provide more info. She found a small amount of the original diet which she sent to me and I am including that in the food box that I'm submitting to you on Monday.

Thanks for all your work on this!
Lisa

From: Jones, Jennifer L [mailto:Jennifer.Jones@fda.hhs.gov]
Sent: Thursday, August 23, 2018 11:51 AM
To: [REDACTED]
Subject: 800.267-FDA Case Investigation for [REDACTED] and [REDACTED] (EON-308715)

Good morning [REDACTED]
Thank you for submitting your consumer complaint to FDA. I'm sorry to hear about [REDACTED] illness. As part of our investigation, we'd like to request:

- **Full Medical Records**
 - Please email (preferred) or fax (301-210-4685) a copy of [REDACTED] **entire** medical history (not just this event), including any referral diagnostics.
- **Have you submitted a report for [REDACTED]** I was forwarded the medical records and told from Dr. Lisa Freeman that you may have submitted a complaint. I cannot seem to locate it within our system.

I attached a copy of our Vet-LIRN network procedures. The procedures describe how Vet-LIRN operates and how veterinarians help with our case investigations.

Please respond to this email so that we can initiate our investigation.

Thank you kindly,
Dr. Jones

Jennifer L. A. Jones, DVM

Veterinary Medical Officer
U.S. Food & Drug Administration
Center for Veterinary Medicine
Office of Research
Veterinary Laboratory Investigation and Response Network (Vet-LIRN)
8401 Muirkirk Road, G704
Laurel, Maryland 20708
new tel: 240-402-5421
fax: 301-210-4685
e-mail: jennifer.jones@fda.hhs.gov
Web: <http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>



From: [REDACTED] **B6**
To: Jones, Jennifer L
Sent: 8/25/2018 1:12:49 PM
Subject: RE: 800.267-FDA Case Investigation for [REDACTED] **B6** and [REDACTED] **B6** (EON-308715)

Hi Dr. Jones,

Dr. Freeman has taken care of submitting an official report for [REDACTED] **B6**, and I have asked my secretary to send you [REDACTED] **B6** full records. Please let me know if you don't receive them early next week, or have any additional questions.

Best,

B6

From: Jones, Jennifer L [mailto:Jennifer.Jones@fda.hhs.gov]

Sent: Thursday, August 23, 2018 11:51 AM

To: [REDACTED] **B6**

Subject: 800.267-FDA Case Investigation for [REDACTED] **B6** and [REDACTED] **B6** (EON-308715)

Good morning [REDACTED] **B6**

Thank you for submitting your consumer complaint to FDA. I'm sorry to hear about [REDACTED] **B6** illness.

As part of our investigation, we'd like to request:

- **Full Medical Records**

- Please email (preferred) or fax (301-210-4685) a copy of [REDACTED] **B6** entire medical history (not just this event), including any referral diagnostics.

- **Have you submitted a report for [REDACTED] **B6**** I was forwarded the medical records and told from Dr.

Lisa Freeman that you may have submitted a complaint. I cannot seem to locate it within our system.

I attached a copy of our Vet-LIRN network procedures. The procedures describe how Vet-LIRN operates and how veterinarians help with our case investigations.

Please respond to this email so that we can initiate our investigation.

Thank you kindly,

Dr. Jones

Jennifer L. A. Jones, DVM

Veterinary Medical Officer

U.S. Food & Drug Administration

Center for Veterinary Medicine

Office of Research

Veterinary Laboratory Investigation and Response Network (Vet-LIRN)

8401 Muirkirk Road, G704

Laurel, Maryland 20708

new tel: 240-402-5421

fax: 301-210-4685

e-mail: jennifer.jones@fda.hhs.gov

Web: <http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>



Report Details - EON-308715		
ICSR:	1064844	
Type Of Submission:	Initial	
Report Version:	FPSR.FDA.PETF.V.V1	
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)	
Reporting Type:	Voluntary	
Report Submission Date:	2017-03-30 15:52:14 EDT	
Reported Problem:	Problem Description: Presented to local veterinarian for gagging cough. Regular veterinarian concerned about new heart murmur and large heart on ultrasound and referred to Emergency and Cardiology services at B6 . Cardiac workup showed degenerative valvular disease, but also very depressed cardiac contractility and early congestive heart failure. Taurine level (plasma) was checked to rule out taurine deficiency as cause of depressed cardiac contractility and level was extremely low - 5.3 nmol/mL (normal is 60-120 nmol/mL; critical is < 40 nmol/mL). Concerned that diet may not have sufficient precursors to taurine.	
	Date Problem Started: 03/09/2017	
	Concurrent Medical Problem: No	
	Outcome to Date: Stable	
Product Information:	Product Name: Nature's Variety Instinct Limited Ingredient diet Lamb Meal & Peas Formula	
	Product Type: Pet Food	
	Lot Number:	
	UPC: 769949653905	
	Package Type: BAG	
	Package Size: 25.3 Pound	
	Possess Unopened Product: Unknown	
	Possess Opened Product: Yes	
	Storage Conditions: Stored in original bag	
	Product Use Information:	Description: Fed 1 and 1/4 cup twice daily for several years according to pet owner
		Last Exposure Date: 03/09/2017
		Product Use Stopped After the Onset of the Adverse Event: Yes
		Adverse Event Abate After Product Stop: Unknown
		Product Use Started Again: No
Perceived Relatedness to Adverse Event: Possibly related		
Other Foods or Products Given to the Animal During This Time Period: Unknown		
Manufacturer /Distributor Information:		
Purchase Location Information:		
Animal Information:	Name: B6	

	Type Of Species: Dog
	Type Of Breed: Retriever - Golden
	Gender: Male
	Reproductive Status: Neutered
	Weight: 66 Pound
	Age: 8.5 Years
	Assessment of Prior Health: Excellent
	Number of Animals Given the Product: 1
	Number of Animals Reacted: 1
	Owner Information:
	Owner Information provided: Yes
	Contact:
	Name: B6
	Phone: B6
	Other Phone: B6
	Email: B6
	Address: B6
	United States
	Healthcare Professional Information:
Sender Information:	Name: B6
	Address: B6
	United States
	Contact:
	Phone: B6
	Other Phone: B6
	Email: B6
	Reporter Wants to Remain Anonymous: No
	Permission To Contact Sender: Yes
	Preferred Method Of Contact: Email
	Reported to Other Parties: None
Additional Documents:	

Report Details - EON-360238		
ICSR:	2052688	
Type Of Submission:	Initial	
Report Version:	FPSR.FDA.PETF.V.V1	
Type Of Report:	Both	
Reporting Type:	Voluntary	
Report Submission Date:	2018-07-24 19:15:00 EDT	
Reporter is the Animal Owner:	Yes	
Reported Problem:	Problem Description: Just before [B6] second birthday, her energy level dropped and she developed a dry cough in the mornings. On the advice of a friend, I had her blood tested for taurine because she was on a grain-free food high in legumes. The result was [B6] ml by the plasma test (normal level is 60-120 ml). I then took her to cardiologist Dr. Joshua Stern at UCD VMTH. Dr. Stern did an echocardiogram and also found the Mitral Valve Dysplasia, but did not see SAS. He found Mild to Moderate DCM. His report reads: "Moderately dilated left ventricular chamber and LV systolic dysfunction - ddx: taurine responsive DCM vs idiopathic DCM. Lv chamber has significantly increased in the recheck interim (LVIDD 5.13cm today, 4.14cm previous July 2016)." He prescribed increasing the taurine and l-carnitine supplements and return for repeat echo in 3-4 months.	
	Date Problem Started: 05/08/2017	
	Concurrent Medical Problem: Yes	
	Pre Existing Conditions: She had inherited Mitral Valve Displasia that was diagnosed by a board certified cardiologist when she was one year of age. I was told that it was mild and she should live a normal life. He also diagnosed SAS, which was later listed as equivocal.	
	Outcome to Date: Better/Improved/Recovering	
Product Information:	Product Name: Taste of the Wild Pine Forrest, Venison and Legumes	
	Product Type: Pet Food	
	Lot Number:	
	Package Type: BAG	
	Package Size: 28 Pound	
	Purchase Date: 04/01/2016	
	Possess Unopened Product: No	
	Possess Opened Product: No	
	Storage Conditions: In the bag it came in until it was gone.	
	Product Use Information:	Description: Kibble was fed in a stainless steel bowl with water and supplements twice a day
		First Exposure Date: 05/14/2016
		Last Exposure Date: 05/09/2017
		Time Interval between Product Use and Adverse Event: 1 Years
Product Use Stopped After the Onset of the Adverse Event: Yes		
Adverse Event Abate After Product Stop: Yes		
Product Use: No		

		Started Again:	
		Perceived Relatedness to Adverse Event:	Definitely related
		Other Foods or Products Given to the Animal During This Time Period:	No
	Manufacturer /Distributor Information:		
	Purchase Location Information:	Name:	Chewy.com
		Address:	1855 Griffin Road Dania Beach Florida 33004 United States
Animal Information:	Name:	B6	
	Type Of Species:	Dog	
	Type Of Breed:	Retriever - Golden	
	Gender:	Female	
	Reproductive Status:	Intact	
	Pregnancy Status:	Not Pregnant	
	Lactation Status:	Not Applicable	
	Weight:	68.5 Pound	
	Age:	3 Years	
	Assessment of Prior Health:	Good	
	Number of Animals Reacted:	1	
	Owner Information:		
	Healthcare Professional Information:	Practice Name:	UCD VMTH Cardiology
		Contact: Name:	Joshua Stern
		Phone:	1-530-752-2475
		Other Phone:	9259899795
		Address:	1 Garrod Drive Davis California 95616 United States
		Type of Veterinarian:	Referred veterinarian
		Date First Seen:	07/06/2016
		Permission to Release Records to FDA:	Yes
Sender Information:	Name:	B6	
	Address:	B6 United States	
	Contact:	Phone:	B6
		Other Phone:	
		Email:	

Permission To Contact Sender:	Yes
Preferred Method Of Contact:	Email
Reported to Other Parties:	Other

Additional Documents:

Attachment:	[B6] ucd.7.6.17.pdf
Description:	[B6]
Type:	Echocardiogram
Attachment:	7.7.2016 [B6] results [B6].pdf
Description:	[B6] echo at 1 y/o by Dr. [B6] on 7/7/2016
Type:	Echocardiogram
Attachment:	3.29.18 Dr. Stern Rept.pdf
Description:	[B6] third and most recent Echo at UCD 3/29/18
Type:	Echocardiogram
Attachment:	11.17.17 [B6] Dr. Stern UCD echo.pdf
Description:	[B6] second echo at UCD VMTH 11/17/17
Type:	Echocardiogram

Patient Name: **B6** Date of Exam: 7/6/2017
 Medical Rec #: **B6** Breed: Golden Retriever
 DOB: **B6** Weight: 66 lb
 Age: 2 years BSA: 0.98 m²
 Sex: Fi BP-sys: Not taken
 Sonographer: **B6** DVM, Cardiology HR: 103
 Resident

Cardiology Resident: **B6** DVM, Cardiology Resident
 Diagnosis: Dilated Cardiomyopathy (suspect taurine responsive)

CV Exam:

B6

2D UCD LA sax UCD LA lax
 LA d **B6** cm **B6** cm
 Ao s **B6** cm **B6** cm
 LA/Ao (<1.5) (<2.5)

LA 2d/LV mmode **B6**

M-mode	<u>Diastole</u>	<u>Systole</u>			LV EF	%
RV		cm	%FS	B6	ml	
IVS	B6	cm	MRSIm	B6	ml/m ²	
LV		B6 cm	MRSI		l/min	
LVPW		B6 cm	EDVI	B6 ml/m ²	l/min/m ²	
LA		cm	ESVI	B6 ml/m ²	B6 cm	

Normal Canine M-mode values (in cm) for 35 kg dogs.

LVIDd **B6** LVPWd **B6** IVSd **B6** LA **B6** AO **B6** %FS **B6**

Aortic Valve:
 VMax **B6** m/s

Mitral Valve:
 Mn Grad
 P1/2T **B6** msec
 MV Area **B6** cm²
 MV DT **B6** msec
 E Vmax **B6** m/s
 A Vmax **B6** m/s
 E/A
 MV VTI

Tricuspid valve:
 TV E Max
 TV Mn Grad
 TV VTI
 TR Vmax **B6** m/s
 TR Pk Grad **B6** mmHg
 RVSP **B6** mmHg

B6

7/6/2017

B6

Pulmonic valve:
Vmax
PV AT
PV ET
PV AT/ET

B6

CLINICIAN INTERPRETATION:

Mitral Valve: B6

Pulmonary Artery: B6

ECHO SUMMARY:

- Moderately dilated left ventricular chamber and LV systolic dysfunction - ddx: taurine responsive DCM vs idiopathic DCM.
- LV chamber size has significantly increased in the recheck interim (LVIDD: B6 m today, B6 m previous July 2016).
- Mild left atrial enlargement (LA/Ao = B6)
- Mild mitral regurgitation is static in the recheck interim. This likely represents mild mitral valve dysplasia as previously noted, but may be secondary to annular deformation from chamber dilation (cannot determine accurately until reevaluation)
- Max Aortic / LVOT velocity is B6 m/s. This has improved in the recheck interim (previously: B6 m/s), however it is likely due to decreased systolic function.
- Trivial tricuspid regurgitation - can be seen in normal dogs.
- No other congenital heart diseases.

Recommendations:

B6

B6 DVM, Cardiology Resident

Joshua A Stern DVM, PhD, Diplomate ACVIM (Cardiology)
Electronically signed on 7/6/2017 on 12:24:16 PM

B6

B6

7/6/2017

B6

B6

Discharge Instructions - Record Copy

Admission: 06Jul17
Discharge:

Small Animal Outpatient

Visit#: 8042CV
Status: Open

Client #: B6
Client: B6
Address: B6
City, St: B6

Clinician: B6
Patient #: B6 Birth: B6 Sex: F
Patient: B6
Species: K9
Breed: GOLDEN RETRIEVER

Discharge Instructions

- 1) Thank you for bringing B6 to the UC Davis Cardiology service for evaluation of her heart.
- 2) CLINICAL EXAMINATION
- 3) On physical exam, B6 was bright and alert. Her heart sounds were easily audible on physical exam and she has a Grade II/VI heart murmur. Her pulses match her heart beat. The remainder of her physical exam was unremarkable.
- 4) DIAGNOSTIC TESTS:
- 5) 1. Echocardiogram: The chambers of B6 heart are dilated. Her heart also has moderately decreased pumping function. This is due to a condition called dilated cardiomyopathy (DCM). She continues to have mild leak through her mitral valve, which may be mitral valve dysplasia, but can be due to her DCM. Her aortic velocity was normal today, but this may also be due to decreased pumping function of the heart.
- 6) ASSESSMENT:
- 7) Based on B6 previous labwork and taurine levels, we suspect that her DCM is caused by taurine deficiency. If her DCM is caused by a previous deficiency in taurine, we are hopeful that we can reverse her heart disease by supplementing her diet with taurine as you have already started to do.
- 8) B6 echo showed that her left atrium is mildly enlarged, which means there is low immediate risk to develop congestive heart failure (CHF) / fluid accumulation in the lungs.
- 9) B6 was noted to have mild mitral valve regurgitation in her previous echo report. This means that some blood from her left ventricle flows backwards into her left atrium when her heart pumps. This amount of mild mitral valve regurgitation is the same as was seen at her last echo. Her mitral valve regurgitation may be representative of mitral valve dysplasia, but it may also be due to her DCM.
- 10) B6 aortic velocity was normal today. We measure aortic velocity to assess the flow through the aortic valve. B6 was previously noted to have equivocal subaortic stenosis, though today we didn't appreciate any abnormalities of the blood flow through her aortic valve. B6 DCM may be masking her subaortic stenosis, so we would like to assess her aortic velocity flow when her heart is back to a normal size.
- 11) We would like to see if the taurine supplementation can reverse the DCM that we see now. Until we get B6 more stable, we would not advise anesthesia for her B6 or other elective procedures.
- 12) MONITORING
- 13) Please monitor B6 at home for any evidence that her heart disease is progressing. This includes exercise intolerance, increased coughing, collapse, weakness, lethargy, inappetence, abdominal distension, or trouble/difficulty breathing. Please call a veterinarian immediately if any of these signs are

observed.

14) MEDICATIONS

15) 1. Taurine:

16) Supplement B6 diet with 1500mg taurine twice a day. THIS IS A DOSE CHANGE from the amount of taurine B6 was previously getting.

17) 2. L-carnitine:

18) Supplement B6 diet with 2000 mg L-carnitine three times a day.

19) RECHECK

20) Please schedule an appointment in 3-4 months to reassess B6 heart. We will likely repeat an echocardiogram at this time to see how her heart chambers look after supplementing with taurine and carnitine.

21) Thank you again for bringing B6 to the UC Davis Cardiology service. She is SUCH a beautiful and well-behaved girl!

22) If you have any questions or concerns please do not hesitate to contact us at (530) 752-1393.

23) Senior Student: B6

24) Resident Clinician: Dr. B6

25) Faculty Veterinarian: Dr. Joshua Stern

I have read and understand the discharge instructions and I acknowledge receipt of the above animal.

Client Signature _____ Date _____

Meds in Pharmacy Meds in Ward T.A. _____
Please page: Clinician; or _____

Prepared by: ??? _____

Prepared for: ??? _____

Discharged by _____ Date & Time _____

Clinician Signature _____ Date _____

From: Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>
To: Jones, Jennifer L; Peloquin, Sarah; Nemser, Sarah; Carey, Lauren; Ceric, Olgica; Glover, Mark; Palmer, Lee Anne
Sent: 8/13/2018 4:52:20 PM
Subject: follow-up tau EON-360238-FW: Taste of the Wild Pine Forrest: [REDACTED] B6 - EON-362010
Attachments: 2053631-report.pdf; Taste of the Wild Pine Forrest: [REDACTED] B6 - EON-360238; 2053631-attachments.zip

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place
[REDACTED] B6 (BB)



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From: Related PFR Event [mailto:pfrsignificantactivitycreation@fda.hhs.gov]
Sent: Monday, August 13, 2018 12:48 PM
To: Carey, Lauren <Lauren.Carey@fda.hhs.gov>; Cleary, Michael * <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; [REDACTED] B6
Subject: Taste of the Wild Pine Forrest: [REDACTED] B6 - EON-362010

A PFR Report has been received and Related PFR Event [EON-362010] has been created in the EON System.

A "PDF" report by name "2053631-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2053631-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-362010

ICSR #: 2053631

EON Title: Related PFR Event created for Taste of the Wild Pine Forrest Venison and Legumes; 2053631

AE Date	05/08/2017	Number Fed/Exposed	
Best By Date		Number Reacted	1

Animal Species	Dog	Outcome to Date	Better/Improved/Recovering
Breed	Retriever - Golden		
Age	3 Years		
District Involved	PFR-[B6] DO		

Product information

Individual Case Safety Report Number: 2053631

Product Group: Pet Food

Product Name: Taste of the Wild Pine Forrest, Venison and Legumes

Description: Just before [B6] second birthday, her energy level dropped and she developed a dry cough in the mornings. On the advice of a friend, I had her blood tested for taurine at the [B6] at UC Davis because she was on a grain-free food high in legumes. The result was [B6] ml by the plasma test (normal level is 60-120 ml). I then took her to board certified cardiologist Dr. Joshua Stern at UCD VMTH. Dr. Stern did an echocardiogram and also found the Mitral Valve Dysplasia, but did not see SAS. He found Mild to Moderate DCM. His report reads: "Moderately dilated left ventricular chamber and LV systolic dysfunction - ddx: taurine responsive DCM vs idiopathic DCM. Lv chamber has significantly increased in the recheck interim (LVIDD [B6] m today, [B6] previous July 2016)." He prescribed increasing the taurine and l-carnitine supplements and return for repeat echo in 3-4 months. She returned for additional echos in November 2017 and March 2018. Copies of all three visit reports and echos are attached. I'm going to try to attach a copy of her blood report of before and after supplementation.

Submission Type: Followup

Report Type: Both

Outcome of reaction/event at the time of last observation: Better/Improved/Recovering

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Taste of the Wild Pine Forrest, Venison and Legumes		

This report is linked to:

Initial EON Event Key: EON-360238

Initial ICSR: 2052688

Sender information

B6

USA

To view this Related PFR Event, please click the link below:

<https://eon.fda.gov/eon/browse/EON-362010>

To view the Related PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jsps?decorator=none&e=0&issueType=10100&issueId=378744&parentIssueTypeId=12>

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Report Details - EON-362010

ICSR:	2053631
Type Of Submission:	Followup
Report Version:	FPSR.FDA.PETF.V.V1
Type Of Report:	Both
Reporting Type:	Voluntary
Report Submission Date:	2018-08-13 12:42:21 EDT
Initial Report Date:	07/24/2018
Reporter is the Animal Owner:	Yes
Parent ICSR:	2052688
Follow-up Report to FDA Request:	Yes

Reported Problem:	Problem Description:	Just before [B6] second birthday, her energy level dropped and she developed a dry cough in the mornings. On the advice of a friend, I had her blood tested for taurine at the [B6] at UC Davis because she was on a grain-free food high in legumes. The result was [B6] ml by the plasma test (normal level is 60-120 ml). I then took her to board certified cardiologist Dr. Joshua Stern at UCD VMTH. Dr. Stern did an echocardiogram and also found the Mitral Valve Dysplasia, but did not see SAS. He found Mild to Moderate DCM. His report reads: "Moderately dilated left ventricular chamber and LV systolic dysfunction - ddx: taurine responsive DCM vs idiopathic DCM. Lv chamber has significantly increased in the recheck interim (LVID [B6] m today, [B6] m previous July 2016)." He prescribed increasing the taurine and l-carnitine supplements and return for repeat echo in 3-4 months. She returned for additional echos in November 2017 and March 2018. Copies of all three visit reports and echos are attached. I'm going to try to attach a copy of her blood report of before and after supplementation.
	Date Problem Started:	05/08/2017
	Concurrent Medical Problem:	Yes
	Pre Existing Conditions:	She had inherited Mitral Valve Displasia that was diagnosed by a board certified cardiologist when she was one year of age. I was told that it was mild and she should live a normal life. He also diagnosed SAS, which was later listed as equivocal. Her initial Echo was done by Dr. [B6] board certified Cardiologist, [B6] Report from visit attached.
	Outcome to Date:	Better/Improved/Recovering

Product Information:	Product Name:	Taste of the Wild Pine Forrest, Venison and Legumes
	Product Type:	Pet Food
	Lot Number:	
	Package Type:	BAG
	Package Size:	28 Pound
	Purchase Date:	04/01/2016
	Possess Unopened Product:	No
	Possess Opened Product:	No
	Storage Conditions:	In the bag it came in until it was gone.
	Product Use Information:	Description: Kibble was fed in a stainless steel bowl with water and supplements twice a day
	First Exposure Date: 05/14/2016	
	Last Exposure Date: 05/09/2017	
	Time Interval between Product 1 Years	

		Use and Adverse Event:	
		Product Use Stopped After the Onset of the Adverse Event:	Yes
		Adverse Event Abate After Product Stop:	Yes
		Product Use Started Again:	No
		Perceived Relatedness to Adverse Event:	Definitely related
		Other Foods or Products Given to the Animal During This Time Period:	No
	Manufacturer /Distributor Information:		
	Purchase Location Information:	Name:	Chewy.com
		Address:	1855 Griffin Road Dania Beach Florida 33004 United States
Animal Information:	Name:	B6	
	Type Of Species:	Dog	
	Type Of Breed:	Retriever - Golden	
	Gender:	Female	
	Reproductive Status:	Intact	
	Pregnancy Status:	Not Pregnant	
	Lactation Status:	Not Applicable	
	Weight:	68.5 Pound	
	Age:	3 Years	
	Assessment of Prior Health:	Good	
	Number of Animals Reacted:	1	
	Owner Information:		
	Healthcare Professional Information:	Practice Name:	UCD VMTH Cardiology
		Contact:	Name: Joshua Stern
			Phone: 1-530-752-2475
			Other Phone: 9259899795
		Address:	1 Garrod Drive Davis California 95616 United States
		Type of Veterinarian:	Referred veterinarian
		Date First Seen:	07/06/2016
		Permission to Release Records to FDA:	Yes

Sender Information:	Name:		
	Address:	B6 United States	
	Contact:	Phone:	B6
		Other Phone:	
		Email:	
	Permission To Contact Sender:	Yes	
Preferred Method Of Contact:	Phone		
Reported to Other Parties:	Other		

Additional Documents:	Attachment:	B6 2017-06-27-0207.pdf
	Description:	This is a copy of two blood runs for B6 . The first led to her visit to Dr. Stern at UCD. The second was after supplementation with taurine and L-carnitine had started and just before our first appoint at UCD. I have no other documentation.
	Type:	Laboratory Report



B6

PET OWNER: B6
SPECIES: Canine
BREED: Golden Retriever
GENDER: Female
AGE: B6
PATIENT ID: B6

B6

ACCOUNT #: B6
ATTENDING VET: B6

LAB ID: B6
ORDER ID:
COLLECTION DATE: 6/25/17
DATE OF RECEIPT: 6/27/17
DATE OF RESULT: 6/27/17

IDEXX Services: **Taurine (Plasma)**^t

Therapeutics/Toxicology



6/27/17 (Order Received)
6/29/17 6:25 PM (Last Updated)

5/8/17

TEST
Taurine (Plasma)

a **B6**

REFERENCE VALUE
60 - 120 NMOL/ML H **B6**

^a Testing performed at University of California, Davis

From: PFR Event <pfpreventcreation@fda.hhs.gov>
To: Cleary, Michael *; HQ Pet Food Report Notification; **B6**
Sent: 8/21/2018 7:48:36 PM
Subject: Zignature Kangaroo Grain Free Formula; **B6** - EON-362973
Attachments: 2054024-report.pdf; 2054024-attachments.zip

A PFR Report has been received and PFR Event [EON-362973] has been created in the EON System.

A "PDF" report by name "2054024-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2054024-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-362973

ICSR #: 2054024

EON Title: PFR Event created for Zignature Kangaroo Grain Free Formula, Earthborne Naturals Lamb Grain Free; 2054024

AE Date	B6	Number Fed/Exposed	
Best By Date		Number Reacted	1
Animal Species	Dog	Outcome to Date	Better/Improved/Recovering
Breed	Mastiff		
Age	6 Years		
District Involved	PFR-Atlanta DO		

Product information

Individual Case Safety Report Number: 2054024

Product Group: Pet Food

Product Name: Zignature Kangaroo Grain Free Formula, Earthborne Naturals Lamb Grain Free

Description: Presented to NCSU ER **B6** for lethargy, coughing and a terminal wretch for 4 days. He was diagnosed and treated for atrial fibrillation, DCM and congestive heart failure. Taurine = **B6** nmol/ml. Slowly transitioned from grain free to regular diet. Returned for recheck on 17 Aug 2018 and has shown significant improvement. Still not sure at this point if the DCM is breed or diet related, or both. Owner has another Mastiff which also was on Zignature Kangaroo Grain Free.

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Better/Improved/Recovering

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Earthborne Naturals Lamb Grain Free		
Zignature Kangaroo Grain Free Formula		

Sender information

B6

USA

Owner information

B6

USA

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-362973>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jsps?decorator=none&e=0&issueType=12&issueId=379707>

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Report Details - EON-362973	
ICSR:	2054024
Type Of Submission:	Initial
Report Version:	FPSR.FDA.PETF.V.V1
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)
Reporting Type:	Voluntary
Report Submission Date:	2018-08-21 15:36:51 EDT
Reported Problem:	Problem Description: Presented to NCSU ER [B6] for lethargy, coughing and a terminal wretch for 4 days. He was diagnosed and treated for atrial fibrillation, DCM and congestive heart failure. Taurine [B6] nmol/ml. Slowly transitioned from grain free to regular diet. Returned for recheck on 17 Aug 2018 and has shown significant improvement. Still not sure at this point if the DCM is breed or diet related, or both. Owner has another Mastiff which also was on Zignature Kangaroo Grain Free.
	Date Problem Started: B6
	Concurrent Medical Problem: No
	Outcome to Date: Better/Improved/Recovering
Product Information:	Product Name: Earthborne Naturals Lamb Grain Free
	Product Type: Pet Food
	Lot Number:
	Package Type: BAG
	Storage Conditions: Please contact owner
	Product Use Information:
	Description: Used as a primary source of food 2013-2015
	First Exposure Date: 01/01/2013
	Last Exposure Date: 01/01/2015
	Time Interval between Product Use and Adverse Event: 5 Years
	Perceived Relatedness to Adverse Event: Possibly related
	Other Foods or Products Given to the Animal During This Time Period: Yes
	Manufacturer /Distributor Information:
	Purchase Location Information:
Product Name: Zignature Kangaroo Grain Free Formula	
Product Type: Pet Food	
Lot Number:	
Package Type: BAG	
Possess Unopened Product: No	
Possess Opened Product: Unknown	
Storage Conditions: Please contact owner	
Product Use Information:	
Description: Used as a primary source for food 2015 -May 2018	
First Exposure 01/01/2015	

		Date:	
		Last Exposure Date:	05/10/2018
		Time Interval between Product Use and Adverse Event:	3 Years
		Product Use Stopped After the Onset of the Adverse Event:	Yes
		Adverse Event Abate After Product Stop:	Yes
		Product Use Started Again:	No
		Perceived Relatedness to Adverse Event:	Possibly related
		Other Foods or Products Given to the Animal During This Time Period:	Yes
	Manufacturer /Distributor Information:		
	Purchase Location Information:		
Animal Information:	Name:	B6	
	Type Of Species:	Dog	
	Type Of Breed:	Mastiff	
	Gender:	Male	
	Reproductive Status:	Neutered	
	Weight:	96.4 Kilogram	
	Age:	6 Years	
	Assessment of Prior Health:	Excellent	
	Number of Animals Reacted:	1	
	Owner Information:	Owner Information provided:	Yes
		Contact:	Name: B6 Phone: B6 Email: B6
		Address:	B6 United States
	Healthcare Professional Information:	Practice Name:	NC State College of Veterinary Medicine
		Contact:	Name: B6 Phone: B6 Email: B6
		Address:	1060 William Moore Dr Raleigh North Carolina

		27607 United States	
	Type of Veterinarian:	Referred veterinarian	
	Permission to Release Records to FDA:	Yes	
Sender Information:	Name:	B6	
	Address:		
		United States	
	Contact:	Phone:	B6
		Email:	
	Permission To Contact Sender:	Yes	
	Preferred Method Of Contact:	Email	
Reported to Other Parties:	None		
Additional Documents:	Attachment:	B6	11 May 2018.pdf
	Description:		7 to 10 day recheck
	Type:	Medical Records	
	Attachment:	B6	7 Aug 2018.pdf
	Description:		3 to 4 month recheck
	Type:	Medical Records	
	Attachment:	B6	B6
	Description:		1st visit
	Type:	Medical Records	

EMILED
5/7/18

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case # B6 95.3 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
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Admission Date/Time: MAY 03, 2018 03:42 PM Discharge Date/Time: MAY 04, 2018 03:30 PM Discharge Status:

CASE SUMMARY

DIAGNOSIS

1. Dilated cardiomyopathy - r/o primary vs diet induced
2. Atrial fibrillation
3. Congestive heart failure - pulmonary edema, abdominal effusion, pleural effusion

HISTORY

B6 is a B6 male castrated English Mastiff, who was presented to the NCSU B6 for lethargy and coughing with a terminal retch for four days. He was hospitalized and transferred to the NCSU Cardiology Service for further care.

B6 has been more lethargic at home for the past couple of weeks. Approximately 1 week ago he also began coughing with a terminal retch. He was taken to his primary veterinarian three days ago where bloodwork and a urinalysis were submitted to B6.

B6 Over the past few days the coughing has progressed, and he is currently coughing 5-6 times per hour. He also refused to eat the morning of presentation, which is abnormal. Due to his progressive decline, he was presented to NCSU for further evaluation.

B6 is otherwise eating, drinking, urinating, and defecating normally. He has a history of allergies, and was started on benedryl and famotidine by his primary veterinarian at his visit a couple of days ago. He also has a history of frequent ear infections, light bulb foreign body, and naproxen toxicity. B6 has been seen by the NCSU B6.

B6 Both events resolved without hospitalization or intervention. He eats Zignature kangaroo diet (grain-free; for another dog's allergic skin disease). To supplement B6 diet, raw liver was added about 5-6 weeks ago to supply additional taurine. He is on no current medications, apart from preventative B6.

PHYSICAL EXAM FINDINGS:

B6

CV/RESP: rapid irregularly irregular tachyarrhythmia, variable and weak femoral pulses, increased lung sounds bilaterally
GI/GU: no pain on abdominal palpation, no overt gastrointestinal distress

B6

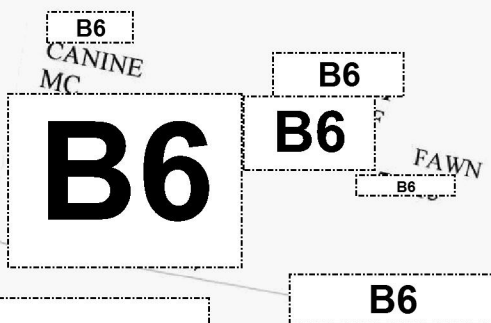
DIAGNOSTICS

1. Big 4 B6
2. Doppler blood pressure on admission B6 mmHg
3. ECG: Atrial fibrillation with a rate of B6 bpm and infrequent left sided VPC's

4. AFAST/TFAST - mild peritoneal effusion, no pleural or pericardial effusion

5. Echocardiogram

- a. Dilated cardiomyopathy - r/o primary vs diet induced
- b. Severely increased LV size
- c. Decreased ventricular wall thickness
- d. Moderately enlarged right ventricle
- e. Moderately reduced RV systolic function
- f. Severely dilated left atrium
- g. Moderate mitral valve regurgitation
- h. Mild to moderate tricuspid regurgitation



6. Thoracic radiographs * final report pending *

- a. Generalized cardiomegaly
- b. Mild pulmonary edema

B6

9. Whole blood taurine: pending

ASSESSMENT:

Thank you for bringing **B6** in to see us today. He is a sweet boy and was a pleasure to work with.

As you know, **B6** has been diagnosed with a heart condition known as dilated cardiomyopathy (DCM). DCM is a disease of unknown cause affecting the muscle of the heart and is most commonly seen in large breed dogs (such as Dobermans, Great Danes, and Labrador Retrievers). Although the exact mechanism of DCM is currently unknown, dietary taurine/carnitine deficiencies, genetics and toxins have all been linked to DCM. The overall effect of DCM is a decrease in the contractility (pumping ability) of the heart. Because the heart is unable to pump with enough vigor to move blood adequately forward into circulation, a volume overload occurs and the heart dilates to accommodate it. As a result, the chambers of the heart become very large, and the walls of the heart become very thin. Ultimately, the heart is unable to accommodate and dilate further; the result is back-up of blood from the heart and into the lungs, known as congestive heart failure ("fluid on the lungs").

It is important to know that this disease is progressive, and ultimately those patients affected with it will experience congestive heart failure. Based on the results of **B6** diagnostics, it appears that he has experienced an episode of congestive heart failure secondary to DCM. This explains the clinical signs you observed at home - lethargy, panting, coughing. **B6** has responded well to heart failure medications in the hospital, and he is breathing comfortably. We will be sending him home on medications to help prevent further fluid accumulation, and improve the function of his heart. We will also recommend starting him on a supplement called taurine - that has been shown to improve heart function in DCM cases caused by nutritional deficiencies.

B6 has also been diagnosed with an arrhythmia call atrial fibrillation (AF). Cardiac enlargement in dilated cardiomyopathy can result in this rhythm. AF arises due to an abnormality in the electrical system of the heart. In AF, the pacemaker cells' normal electrical impulses are overwhelmed by disorganized electrical impulses that originate in other areas of the atria. The result is an erratic, usually rapid, heart rhythm. Although in and of itself not life-threatening, AF may lead to the development of decreased exercise tolerance, fainting, lethargy and decreased appetite. If sustained for prolonged periods of time at very rapid rates, AF can also lead to the development of congestive heart failure, which was likely a contributing factor in **B6** episode of heart failure.

Changes in the muscle of the heart in dogs with DCM can lead to fibrosis and remodeling of the myocardium (heart muscle). This can lead to the development of ventricular arrhythmias. Intermittent ventricular arrhythmias are not dangerous, but if they occur in sequence and rapidly, they can result in sudden death. In the future we would like to place a holter monitor (24 hour ECG) to evaluate **B6** average heart rate at home, but also to evaluate for underlying ventricular arrhythmias. This can be performed at his next recheck appointment.

Although we cannot cure DCM, we hope to manage **B6** clinical signs with medical therapy as outlined below. The average survival for DCM patients after an episode of heart failure is 6-12 months. However, as we discussed, if **B6** DCM is secondary to a nutritional deficiency - his heart structure and function may show improvement with taurine supplementation and diet change. Please see below for diet recommendations.

Please monitor him for signs of worsening of heart failure such as increased exercise intolerance, labored breathing, increased coughing or fainting. Call NCSU Cardiology or your referring veterinarian if any of these signs occur. Also, please learn to take a respiratory (breathing) rate when your pet is resting. This can be done by counting the number of breaths your pet takes in 15 seconds and multiplying by 4 (to get the total breaths per minute). This number should remain less than 36-40 at rest.

INSTRUCTIONS FOR CARE

MEDICATIONS:

B6

MONITORING:

1. Please continue to monitor B6 for signs of recurrent congestive heart failure. These would include exercise intolerance, increased respiratory rate, difficulty breathing, episodes of fainting/collapse, or decreased appetite. If you notice any of these signs, please contact us and have B6 evaluated by a veterinarian.

2. Please also begin to monitor B6 respiratory rate at home when you observe him sleeping. You can do this by counting the number of breaths he takes in 15 seconds, then multiplying this number by 4 to obtain the number of breaths per minute. A normal respiratory rate should be less than 36 breaths per minute. If you feel that B6 respiratory rate is increasing - or if he is having more effort while breathing, please contact us.

ACTIVITY:

Please avoid strenuous exercise or situations which place undue stress on your B6. In general, pets with congestive heart failure will self-regulate their exercise. Please monitor for any change in exercise capability.

DIET:

As we discussed, we would like to change B6 diet due to a concern for dietary induced DCM. We have seen an association between grain free diets and poor cardiac function recently. Although there is currently no scientific evidence, we have seen an increasing number of dogs with this problem. We would recommend transitioning him to a diet that contains grains. Some brands to consider include the major commercial brands (Purina, Hills, Royal Canin, Iams). There is a Royal Canin select protein adult KO diet that contains kangaroo as the protein source.

RECOMMENDATIONS FOR FURTHER EVALUATION:

B6

If you have any concerns with how your pet is doing, or to schedule an appointment, please contact the NC State Veterinary Hospital at 919-513-6694. There is a veterinarian on call 24 hours a day.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pet's medical condition.

B6

B6

Clinician -

B6

Student - c/o 2018

Clinicians:
Dr. Darcy Adin

B6

Residents:

B6

Clinical Technicians:

B6

Research Technician

B6

Client Services:

B6

In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.

B6

CANINE
MC

B6

MASTIFF

B6

FAWN

B6

B6

B6

**NC STATE VETERINARY HOSPITAL
HISTORY & PHYSICAL**

B6
CANINE
MC

B6
MASTIFF

B6 FAWN

B6

B6

Admission / Exam Date: 5/31/2018

Weight: _____ lbs kgs _____

Temp: _____ Pulse: _____ Respiration: _____

Membrane Color: _____ Capillary Refill: _____

Body Condition: _____ Pain Score: _____

VACCINATION STATUS:			YES	NO	DATE				N	ABN	No Exam				N	ABN	No Exam
Rabies	<input type="checkbox"/>	<input type="checkbox"/>				General Appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reproductive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distemper or FVRCP	<input type="checkbox"/>	<input type="checkbox"/>				Integumentary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mammary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lepto or FeLV	<input type="checkbox"/>	<input type="checkbox"/>				Ophthalmic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Urinary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tetanus	<input type="checkbox"/>	<input type="checkbox"/>				Otic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nervous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EEE / WEE / VEE	<input type="checkbox"/>	<input type="checkbox"/>				Musculoskeletal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alimentary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
West Nile Virus	<input type="checkbox"/>	<input type="checkbox"/>				Cardiovascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lymphatic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influenza	<input type="checkbox"/>	<input type="checkbox"/>				Respiratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Rhinopneumonitis	<input type="checkbox"/>	<input type="checkbox"/>				Lactating?	<input type="checkbox"/> Yes <input type="checkbox"/> No										
Other:	<input type="checkbox"/>	<input type="checkbox"/>															

CHIEF COMPLAINT: _____

B6

- I. Present History
 - A. Onset / Duration
 - B. Progression
 - C. Prior Treatment
- II. Past History
 - A. Medical Illness
 - B. Surgical
 - C. Reproductive
 - D. Adverse Drug Reaction
 - E. Trauma
- III. Environment
 - IV. Preventative
 - V. Systems Review

Student Signature: _____

Clinician Signature: **B6** _____

NCSU, COLLEGE OF VETERINARY MEDICINE
NCSU DIAGNOSTIC LABORATORIES

Client _____ Patient _____ Med Rec Case: **B6**

B6

B6
MC 209.475 lbs
TERRY CENTER TC-ICU ICU-XL

MASTIFF FAWN
CANINE **B6**

Completed 17 of 17 Results

Request	Item	Priority	Status	Dates
H-773345	RENAL	ROUTINE	COMPLETE	Requested: 05/04/18 08:55 AM Collection: 05/04/18 08:55 AM Received: 05/04/18 09:05 AM Needed: 05/04/18 08:55 AM Status: 05/04/18 09:52 AM

Requesting DVM: _____
Student: **B6**
Comments:

CHEMISTRY - RENAL PANEL

TEST	RESULT	UNITS	REF RANGE	RESULT DATETIME
UREA NITROGEN	B6	MG/DL	6 - 26	05/04/2018 09:52 AM
CREATININE		MG/DL	.7 - 1.5	05/04/2018 09:52 AM
PHOSPHORUS		MG/DL	2.5 - 5.6	05/04/2018 09:52 AM
CALCIUM		MG/DL	9.4 - 11.4	05/04/2018 09:52 AM
PROTEIN- TOTAL		G/DL	5.2 - 7.3	05/04/2018 09:52 AM
ALBUMIN		G/DL	3 - 3.9	05/04/2018 09:52 AM
GLOBULIN		G/DL	1.7 - 3.8	05/04/2018 09:52 AM
ALB/GLOB RATIO			.9 - 1.8	05/04/2018 09:52 AM
SODIUM		MMOL/L	140 - 156	05/04/2018 09:52 AM
POTASSIUM		MMOL/L	4 - 5.3	05/04/2018 09:52 AM
CHLORIDE		MMOL/L	108 - 122	05/04/2018 09:52 AM
BICARBONATE		MMOL/L	18 - 26	05/04/2018 09:52 AM
ANION GAP			11.2 - 19.9	05/04/2018 09:52 AM
NA / K RATIO			27.7 - 35.9	05/04/2018 09:52 AM
ICTERIC INDEX				05/04/2018 09:52 AM
HEMOLYSIS INDEX				05/04/2018 09:52 AM
LIPEMIA INDEX				05/04/2018 09:52 AM

Comments:
CHLORIDE

B6

Containers
1018-6103

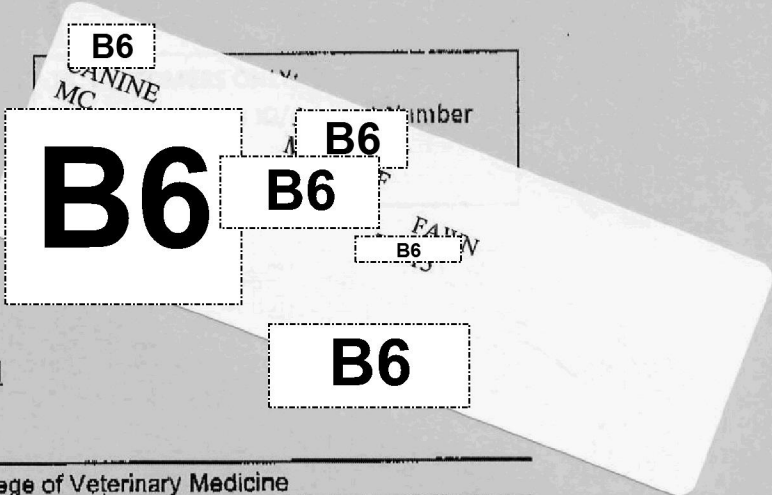
18742

B6

Sample Submission Form

Amino Acid Laboratory
University of California, Davis
1020 Vet Med 3B
1089 Veterinary Medicine Drive
Davis, CA 95616
Tel: (530)752-5058, Fax: (530)752-4698

<http://www.vetmed.ucdavis.edu/vmb/aal/aal.html>



Vet/Tech Contact: B6
Company Name: North Carolina State University College of Veterinary Medicine
Address: Clinical Pathology Lab, Room C-269
1052 William Moore Drive
Raleigh, NC 27607
Email: _____
Tel: B6 Fax: 919 513-6556

Billing Contact: _____ TAX ID: _____
Email: _____ Tel: _____

Patient Name: B6
Species: Canine
Owner's Name: B6

Sample Type: Plasma Whole Blood Urine Food Other: _____
Test Items: Taurine Complete Amino Acid Other: _____

Taurine Results (nmol/ml)
Plasma: _____ Whole Blood: B6 Urine: _____ Food: _____

Reference Ranges (nmol/ml)

	Plasma		Whole Blood	
	Normal Range	No Known Risk for Taurine Deficiency	Normal Range	No Known Risk for Taurine Deficiency
Cat	80-120	>40	300-600	>200
Dog	60-120	>40	200-350	>150

NCSU, COLLEGE OF VETERINARY MEDICINE
NCSU DIAGNOSTIC LABORATORIES

Client Patient Med Rec Case **B6**

B6

B6
MC 209.475 lbs
TERRY CENTER TC-ER ER-01

MASTIFF, BROWN
CANINE **B6**

Completed 29 of 29 Results

Request	Item	Priority	Status	Dates
H-773260	SAF	ROUTINE	COMPLETE	Requested: 05/03/18 04:40 PM Collection: 05/03/18 04:39 PM Received: 05/03/18 04:46 PM Needed: 05/03/18 04:39 PM Status: 05/03/18 05:18 PM
Requesting DVM:		B6		
Student:				
Comments:				

CHEMISTRY - SMALL ANIMAL CHEMISTRY PANEL

TEST	RESULT	UNITS	REF RANGE	RESULT DATETIME
GLUCOSE		MG/DL	70 - 131	05/03/2018 05:18 PM
UREA NITROGEN		MG/DL	6 - 26	05/03/2018 05:18 PM
CREATININE		MG/DL	.7 - 1.5	05/03/2018 05:18 PM
PHOSPHORUS		MG/DL	2.5 - 5.6	05/03/2018 05:18 PM
CALCIUM		MG/DL	9.4 - 11.4	05/03/2018 05:18 PM
MAGNESIUM		MG/DL	1.8 - 2.5	05/03/2018 05:18 PM
PROTEIN- TOTAL		G/DL	5.2 - 7.3	05/03/2018 05:18 PM
ALBUMIN		G/DL	3 - 3.9	05/03/2018 05:18 PM
GLOBULIN		G/DL	1.7 - 3.8	05/03/2018 05:18 PM
ALB/GLOB RATIO			.9 - 1.8	05/03/2018 05:18 PM
CHOLESTEROL		MG/DL	124 - 344	05/03/2018 05:18 PM
BILIRUBIN- TOTAL				05/03/2018 05:18 PM
ALKALINE PHOSPHATASE		IU/L	16 - 140	05/03/2018 05:18 PM
ALT		IU/L	12 - 54	05/03/2018 05:18 PM
AST	B6	IU/L	16 - 140	05/03/2018 05:18 PM
GGT				05/03/2018 05:18 PM
CK		IU/L	43 - 234	05/03/2018 05:18 PM
SODIUM		MMOL/L	140 - 156	05/03/2018 05:18 PM
POTASSIUM		MMOL/L	4 - 5.3	05/03/2018 05:18 PM
CHLORIDE		MMOL/L	108 - 122	05/03/2018 05:18 PM
BICARBONATE		MMOL/L	18 - 26	05/03/2018 05:18 PM
ANION GAP			11.2 - 19.9	05/03/2018 05:18 PM
NA / K RATIO			27.7 - 35.9	05/03/2018 05:18 PM
OSMOLALITY- CALC.		MOSM/KG	278.7 - 311.6	05/03/2018 05:18 PM
AMYLASE		IU/L	236 - 1337	05/03/2018 05:18 PM
LIPASE		IU/L	12 - 147	05/03/2018 05:18 PM
ICTERIC INDEX				05/03/2018 05:18 PM
HEMOLYSIS INDEX				05/03/2018 05:18 PM
LIPEMIA INDEX				05/03/2018 05:18 PM

Comments:
CHLORIDE

B6

Containers
1018-6087

Canine Echocardiography Report

Patient Name: **B6** Date of Exam: **B6**
Medical Rec #: **B6** Breed: Mastiff
DOB: **B6** Weight: 95 kg
Age: **B6** BSA: 2.10 m²
Sex: Mc HR:
Sonographer: **B6** BP-sys:

Report Status: READ
Ref. Clinician: **B6**
Diagnosis: Dilated Cardiomyopathy w/ heart failure
Study Details: 2D Echo/Doppler/Color Doppler. The images were of adequate diagnostic quality. The patient was awake.

2D
IVS
LV
LVPW

2D
LA Long Axis
LA d
Ao s
LA/Ao

M-mode
RV
IVS
LV
LVPW
LV normalized
LA

B6

Mitral Regurgitation:

MR Vmax
MR Peak Gradient
Est SBP by MR

B6

B6
CANINE
MC

B6
MASTIFF

B6

FAWN

B6

Tricuspid valve:
P 1/2 T

B6

B6

CLINICIAN INTERPRETATION:

Left Ventricle: The left ventricular cavity size is severely increased. Ventricular wall thickness is decreased. LV basal fractional shortening is severely decreased.

Left Atrium: The left atrium is severely dilated.

Right Atrium: The right atrium is moderately dilated.

Right Ventricle: The right ventricular size is moderately enlarged. Global RV systolic function is

moderately reduced.

Mitral Valve: The E-point septal separation is increased. Moderate mitral valve regurgitation. The MR jet is centrally-directed.

ECHO SUMMARY:

1. The left ventricular cavity size is severely increased.
2. Ventricular wall thickness is decreased.
3. Moderately enlarged right ventricle.
4. Moderately reduced RV systolic function.
5. Severely dilated left atrium.
6. Moderately dilated right atrium.
7. Moderate mitral valve regurgitation.
8. Mild to moderate tricuspid regurgitation.

CV Exam:

Body condition was overweight. The animal was panting. The mucous membranes appeared pink, with a normal capillary refill time. Femoral pulse quality was difficult to assess.

ECG:

The heart rate measured at 220 beats/minute. The ECG rhythm is atrial fibrillation.

Recommendations: The echocardiogram was limited due to patient size and stability.

This study shows evidence of dilated cardiomyopathy and atrial fibrillation. The LV is severely dilated with thin walls. The systolic function is severely reduced - with the septum moving more adequately than the LV free wall. The mitral regurgitation was difficult to quantify - but appears to be at least moderate. The left atrium is severely dilated.

The ECG shows evidence of atrial fibrillation with a ventricular response rate of B6 bpm.

The patient eats a grain free diet (Zignature Kangaroo). Given the recent association with grain free diets and dilated cardiomyopathy - diet induced DCM is possible. However, given the breed and age idiopathic DCM is also considered.

There is a small volume of free fluid within the abdomen - consistent with R-CHF. Thoracic radiographs show mild pulmonary edema.

B6

B6

B6

Electronically signed on 5/3/2018 on 5:38:12 PM

B6

CANINE
MC

MASTIFF

B6

FAWN

B6

B6

B6

CARDIOLOGY PATIENT QUESTIONNAIRE

Patient Name: **B6**

Client: **B6** **CANINE** **MC** **B6** **MASTIFF** **FAWN** **B6**

I would (betwe **B6** today if possible. **B6**

May we sedate or tranquilize your pet today if necessary? YES NO

Some tests require shaving to obtain the best results – may we shave your pet's fur today if necessary? YES NO

Please indicate any symptoms your pet has experienced since your last visit – please describe in the space provided:

<input checked="" type="checkbox"/> Change in activity level	Improved
<input checked="" type="checkbox"/> Change in water consumption	Increased
<input checked="" type="checkbox"/> Change in urination frequency	The Lasix makes him void on himself
<input type="checkbox"/> Change in appetite	
<input type="checkbox"/> Coughing	
<input type="checkbox"/> Difficulty breathing	
<input checked="" type="checkbox"/> Sneezing	Allergies
<input type="checkbox"/> Weakness / fainting	
<input checked="" type="checkbox"/> Vomiting	once
<input type="checkbox"/> Diarrhea	

Current diet: Fromm Salmon Ad veg mixed i kangaroo Has your pet been fed today? YES NO
 Have you seen your family vet since your last visit? NO If yes, what time 7:30 am/pm
 How much? 3 cups

CURRENT MEDICATIONS:

Drug Name	How often given?	Was medication given today?	What time?	REFILL NEEDED TODAY?	
				YES	NO
B6	BID	YES	7:15	YES	NO
	BID			YES	NO
	BID			YES	NO
	BID	YES		YES	NO
	BID			YES	NO
	BID			YES	NO
	MMThly	NO		YES	NO
	Quarterly	NO		YES	NO

Owner Signature: **B6**

Date: 5/10/18

Use back of sheet for any additional information.

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
 Discharge Comments

MAILED
 5/11/18 JB

Fax: Admin
 Fax: Referral

Small Animal (919) 513-6500
 Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case # B6 93.5 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
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Admission Date/Time: MAY 11, 2018 08:53 AM **Discharge Date/Time:** MAY 11, 2018 03:00 PM **Discharge Status:**

CASE SUMMARY

DIAGNOSIS:

1. Dilated cardiomyopathy - r/o primary vs. diet induced
2. Atrial fibrillation
3. Congestive heart failure - pulmonary edema, pleural effusion, abdominal effusion - resolved

HISTORY

B6 is a 5 year old male castrated Mastiff who was presented to the NCSU Cardiology Service on 5/11/18 for a recheck of dilated cardiomyopathy, atrial fibrillation, and congestive heart failure.

B6 was first presented to the NCSU **B6** for lethargy and coughing with a terminal retch for four days. Bloodwork performed at his regular veterinarian on 5/2/18 showed hypoalbuminemia (2.6), with normal kidney values (BUN **B6**; Creat **B6**). A CBC and T4 were within normal limits. The urinalysis revealed proteinuria, and pyuria, and the collection method was not reported. The coughing progressed until his presentation at the ER, where he was coughing 5-6 times per hour. He also refused to eat the morning of presentation, which was abnormal. While at NCSU an echocardiogram showed evidence of dilated cardiomyopathy, small volume pleural effusion, and moderate volume abdominal effusion. Thoracic radiographs showed mild pulmonary edema. An ECG showed atrial fibrillation with a ventricular response rate of **B6** bpm. **B6** was hospitalized overnight and responded well to treatment. He was discharged on **B6**.

Since discharge, **B6** has been doing well at home. He has increased energy and activity levels. Sleeping respiratory rate has been around **B6** bpm and owner does not feel as though he has an increased respiratory effort. **B6** had one brief episode of coughing this morning and one episode of vomiting a few days ago after being fed a cold food item which is known to cause stomach upset. His owner reports that he has reduced frequency of defecation (1-2x/day as opposed to previous 3-4x/day) and increased water consumption and urination, but is no longer dribbling urine in the house or when lying down.

B6 has a history of allergies, and was started on **B6** by his primary veterinarian at his visit on 5/2/18. He also has a history of frequent ear infections, light bulb foreign body, and naproxen toxicity. **B6** was previously seen by the NCSU **B6**. Both events resolved without hospitalization or intervention. Prior to his diagnosis of cardiac disease, he was eating Zignature kangaroo diet (grain-free; for another dog's allergic skin disease) with raw liver added to supply additional taurine. Since his discharge from the cardiology service on 5/4/18 he has been transitioned to 75% Fromm Salmon a la Veg dry dog food and 25% Zignature with the plan to transition completely to Fromm in the next few days. He also receives monthly preventatives (Sentinel and Bravecto).

B6

B6

CVR: Grade III/VI left apical systolic murmur, irregularly irregular arrhythmia appreciated; eupneic, lung fields clear with normal bronchovesicular sounds noted on bilateral auscultation

B6

B6

ASSESSMENT:

Thank you for bringing **B6** in to see us today - he was a very good boy. We are happy to hear he is doing well at home.

Today we performed chest radiographs and a fluid check echocardiogram to assess **B6** response to congestive heart failure. We are happy to report that his chest radiographs show improvement from previously, and the fluid in his abdomen has resolved. We also performed a renal panel to assess his kidney values - which returned within normal limits and stable compared to previously. We are overall happy with these results - and we would like to continue his heart failure medications **B6** at their current dosages. We would also like to begin one addition medication called **B6**. This medication is a weak diuretic and also works to prevent cardiac remodeling. Please see below for dosing instructions.

B6 heart rate on exam was still quite high in hospital. We had discussed performing a holter monitor today to assess his heart rate and rhythm over a 24 hour period - however, considering his elevated heart rate on exam, we have elected not to perform this test today. Rather, we would like to increase his diltiazem dose and bring him back for a QUICK TEST holter monitor in 7-10 days. Today we also submitted a digoxin level to evaluate his systemic concentrations of this drug - this test is currently pending and we will contact you with the results.

INSTRUCTIONS FOR CARE

B6

MONITORING:

1. Please continue to monitor **B6** for signs of recurrent congestive heart failure. These would include exercise intolerance, increased respiratory rate, difficulty breathing, episodes of fainting/collapse, or decreased appetite. If you notice any of these signs, please contact us and have **B6** evaluated by a veterinarian.
2. Please continue monitoring **B6** respiratory rate at home when you observe him sleeping. A normal respiratory rate should be less than 36 breaths per minute. If you feel that **B6** respiratory rate is increasing - or if he is having more effort while breathing,

please contact us.

ACTIVITY: Please avoid strenuous exercise or situations which place undue stress on your **B6**. In general, pets with congestive heart failure will self-regulate their exercise. Please monitor for any change in exercise capability.

DIET: As we discussed, **B6** should be on a diet that contains grains due to a concern for dietary induced DCM. We have seen an association between grain free diets and poor cardiac function recently. Although there is currently no scientific evidence, we have seen an increasing number of dogs with this problem. The Fromm Salmon a la Veg that you are transitioning him to is an acceptable diet and contains several different grains. Please keep him on this diet and continue taurine supplementation as well.

NEXT VISIT:

1. We would like **B6** to come back to NCSU in 7-10 days for a QUICK TEST appointment. At this visit we will perform a kidney panel after beginning therapy with **B6**. We will also place a holter monitor.
2. We would otherwise like to see **B6** back for a recheck exam, blood pressure, renal panel, and echocardiogram in 3 months.

If you have any concerns with how your pet is doing, or to schedule an appointment, please contact the NC State Veterinary Hospital at 919-513-6694. There is a veterinarian on call 24 hours a day.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pets' medical condition.

B6	B6	Student	
Clinicians: Dr. Darcy Adin	Residents:	Clinical Technicians:	Client Services:
B6	B6	B6	B6
		Research Technician	
		B6	

In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.

B6	
CANINE MC	B6
B6	MASTIFF
	B6
	FAWN
	B6
	B6

NC STATE VETERINARY HOSPITAL
HISTORY & PHYSICAL

Admission / Exam Date: 5/11/18
 Weight: lbs kgs 93.5
 Temp: _____ Pulse: _____ Respiration: part
 Membrane Color: pink Capillary Refill: < 2 sec
 Body Condition: _____ Pain Score: 0/4

B6
 CANINE MASTIFF
 MC B6 FAWN
 B6
 B6

VACCINATION STATUS:			YES	NO	DATE				N	ABN	No Exam				N	ABN	No Exam
Rabies	<input type="checkbox"/>	<input type="checkbox"/>				General Appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reproductive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distemper or FVRCP	<input type="checkbox"/>	<input type="checkbox"/>				Integumentary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mammary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lepto or FeLV	<input type="checkbox"/>	<input type="checkbox"/>				Ophthalmic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Urinary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tetanus	<input type="checkbox"/>	<input type="checkbox"/>				Otic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nervous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EEE / WEE / VEE	<input type="checkbox"/>	<input type="checkbox"/>				Musculoskeletal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alimentary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
West Nile Virus	<input type="checkbox"/>	<input type="checkbox"/>				Cardiovascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lymphatic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influenza	<input type="checkbox"/>	<input type="checkbox"/>				Respiratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Rhinopneumonitis	<input type="checkbox"/>	<input type="checkbox"/>				Lactating?	<input type="checkbox"/> Yes	<input type="checkbox"/> No									
Other:	<input type="checkbox"/>	<input type="checkbox"/>															

CHIEF COMPLAINT:

[Empty box for Chief Complaint]

B6

- I. Present History
 - A. Onset / Duration
 - B. Progression
 - C. Prior Treatment
- II. Past History
 - A. Medical Illness
 - B. Surgical
 - C. Reproductive
 - D. Adverse Drug Reaction
 - E. Trauma
- III. Environment
- IV. Preventative
- V. Systems Review

Student Signature: [Empty box]

Clinician Signature: **B6**

NC State Veterinary Hospital
Cardiology Pet Diet History

Date: 5/11/18

B6	
CANINE MC	MASTIFF B6
B6	FAWN B6
	B6

Current diet:

Brand Fromm & Signature

Variety Salmon Ala Veg / Kangaroo

Is this diet Grain-free? NO / YES

How long has your pet eaten this food? 1 week / 2 years

Are there other pets in your house eating this food? YES

Other diets eaten in the last 3 years and dates:

Earthborn Naturals Meadow Blend
Signature Kangaroo

Other food (treats, rawhides, table food):

Various
No rawhides

Supplements (e.g. fish oil, CoQ10, vitamins etc)

Joint Max triple strength, Taurine

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case # B6 96.2197kg	Attending DVM Student Discharging DV Referring DVM	B6
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Admission Date/Time: AUG 17, 2018 08:54 AM Discharge Date/Time: AUG 17, 2018 11:42 AM Discharge Status:

CASE SUMMARY

DIAGNOSIS:

1. Dilated cardiomyopathy - suspect at least partially diet induced
2. Atrial fibrillation
3. Congestive heart failure - pulmonary edema, pleural effusion, abdominal effusion - well controlled

HISTORY

B6 is a 6 year old male castrated Mastiff who was presented to the NCSU Cardiology Service on 8/17/18 for a recheck of dilated cardiomyopathy, atrial fibrillation, and congestive heart failure.

B6 was first presented to the NCSU ER **B6** for lethargy and coughing with a terminal retch for four days. Bloodwork performed at his regular veterinarian on **B6** showed hypoalbuminemia **B6**, with normal kidney values (BUN **B6** Creat **B6**). A CBC and T4 were within normal limits. The urinalysis revealed proteinuria, and pyuria, and the collection method was not reported. The coughing progressed until his presentation at the ER, where he was coughing 5-6 times per hour. He also refused to eat the morning of presentation, which was abnormal. While at NCSU an echocardiogram showed evidence of dilated cardiomyopathy, small volume pleural effusion, and moderate volume abdominal effusion. Thoracic radiographs showed mild pulmonary edema. An ECG showed atrial fibrillation with a ventricular response rate of ~250bpm. A whole blood taurine returned within normal limits **B6** nmol/mL). **B6** was hospitalized overnight and responded well to treatment. He was discharged on **B6**.

B6

B6 came in on 5/11/18 for a recheck with the NCSU Cardiology Service. At this time, chest radiographs showed similar left sided cardiomegaly, mildly improved pulmonary venous distention, and similar to mildly improved unstructured interstitial pattern. His renal panel showed no significant findings and his digoxin level was **B6** ng/mL. His fluid check showed no evidence of abdominal or pericardial effusion, with possible scant pleural effusion. His heart rate was between **B6** bpm during his exam, therefore his **B6** dose was increased to 360mg BID. In addition, therapy with **B6** (ng SID). A holter monitor performed 1 week later showed adequate atrial fibrillation rate control (average heart rate 95bpm), with a low number of ventricular arrhythmias. **B6** owner began supplementation with fish oil, and no other changes were made.

Since his last visit **B6** has been doing well at home. He has increased energy and activity levels and has been initiating play with his housemate. He has been able to play for up to an hour, limiting his own activity well and still only panting after playing. They have not noticed any periods of increased respiratory effort and have heard only a rare cough. At rest, they have found his respiratory rate to consistently be below 40 brpm consistently and his heart rate to be between **B6** bmp.

B6 has a history of allergies, and was started on benedryl and famotidine by his primary veterinarian at his visit on **B6**. He also has a history of frequent ear infections, light bulb foreign body, and naproxen toxicity. **B6**

B6

Without recognition or intervention prior to his diagnosis of cardiac disease, he was eating Earthborne Naturals Lamb Grain-free from 2013-2015, and then Zignature Kangaroo Grain-free (for another dog's allergic skin disease) with raw liver added to supply additional taurine. Since May, he has been transitioned to Fromm Salmon a la Veg dry dog food (not a grain free diet) and it has gone smoothly. He also receives monthly preventatives (Sentinel and Bravecto).

B6

B6

B6

ASSESSMENT:

Thank you for entrusting us with B6 care, he was a very sweet boy!

Today we performed a recheck echocardiogram to evaluate B6 cardiac structure and function. We are happy to report that his echo shows significant improvement. His heart remains moderately to severely enlarged, and continues to show evidence of reduced function - but overall has shown significant improvement in the past 3 months. This is great news and indicates at least some portion of his cardiac changes are responding to a diet change. As we discussed, it is still very possible B6 has underlying dilated cardiomyopathy secondary to his genetics, but we are very pleased to see this improvement with a diet change. B6 kidney panel showed normal values - indicating he is tolerating his medications well. In addition, B6 heart rate was slow and well controlled during his exam. His heart rate became elevated when stressed, but this is not unexpected. Given these findings, we would like B6 to continue receiving his medications at their current dosages.

We would like to see B6 back in 3-4 months for another recheck echocardiogram. If his heart continues to show improvement, we may be able to discontinue some of his cardiac medications. At this visit, we can also perform a recheck holter monitor, to monitor for any worsening arrhythmias. Please continue to monitor him for any signs of worsening cardiac disease - such as lethargy, increased respiratory rate/effort, coughing, weakness, or collapse. If you are concerned about how he is doing, please contact us and have him evaluated by a veterinarian.

INSTRUCTIONS FOR CARE

B6

B6

MONITORING:

1. Please continue to monitor **B6** for signs of recurrent congestive heart failure. These would include exercise intolerance, increased respiratory rate, difficulty breathing, episodes of fainting/collapse, or decreased appetite. If you notice any of these signs, please contact us and have **B6** evaluated by a veterinarian.

2. Please continue monitoring **B6** respiratory rate at home when you observe him sleeping. If you feel that **B6** respiratory rate is increasing, or if he is having more effort while breathing, please contact us.

ACTIVITY: Please avoid strenuous exercise or situations which place undue stress on you **B6**. In general, pets with congestive heart failure will self-regulate their exercise. Please monitor for any change in exercise capability.

DIE **B6** can continue on his Fromm Salmon a la Veg diet.

PLAN FOR RE-EVALUATION

1. We would like to see **B6** back for a recheck exam, blood pressure, renal panel, echocardiogram, and holter monitor in 3-4 months. Please let us know if you feel he needs to be seen sooner.

If you have any concerns with how your pet is doing, or to schedule an appointment, please contact the NC State Veterinary Hospital at 919-513-6694. There is a veterinarian on call 24 hours a day.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pets' medical condition.

B6

Senior Student: **B6**

Clinicians: Residents: Student:

B6

In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.

179359
CANINE
MC

B6
MASTIFF

B6 FAWN

B6

B6

B6

CARDIOLOGY PATIENT QUESTIONNAIRE

B6
CANINE MC
B6
MASTIFF
B6
FAWN
B6
B6
B6

Contact number **B6**
(Please try to be available between 9:30 and 10:30 am for questions or updates)

I would like to pick up my pet at: _____ today if possible.
(between 1pm and 4pm)

May we sedate or tranquilize your pet today if necessary? YES NO

Some tests require shaving to obtain the best results – may we shave your pet's fur today if necessary? YES NO

Please indicate any symptoms your pet has experienced since your last visit – please describe in the space provided:

<input checked="" type="checkbox"/>	Change in activity level	Increased
<input type="checkbox"/>	Change in water consumption	
<input type="checkbox"/>	Change in urination frequency	
<input type="checkbox"/>	Change in appetite	
<input type="checkbox"/>	Coughing	
<input type="checkbox"/>	Difficulty breathing	
<input type="checkbox"/>	Sneezing	
<input type="checkbox"/>	Weakness / fainting	
<input type="checkbox"/>	Vomiting	
<input type="checkbox"/>	Diarrhea	

Current diet: Fromm 4 star Salmon ala Veg Has your pet been fed today? YES NO
 Have you seen your family vet since your last visit? No If yes, what time 7:30 am/pm
 How much? 3 cups

CURRENT MEDICATIONS:

Drug Name	How often given?	Was medication given today?	What time?	REFILL NEEDED TODAY?	
				YES	NO
B6	BID	yes	0730	YES	<input checked="" type="radio"/> NO
	BID	yes		YES	<input checked="" type="radio"/> NO
	BID			<input checked="" type="radio"/> YES	NO
	BID			<input checked="" type="radio"/> YES	NO
	daily			YES	<input checked="" type="radio"/> NO
	daily			YES	NO
	BID			YES	NO

Owner Signature: _____

B6

Date: _____

→ written prescription
no take to
outside
pharmacy
please

NC State Veterinary Hospital

Cardiology Pet Diet History

Date: 8/17/18

179359
CANINE
MC

B6
MASTIFF

B6 FAWN

B6

B6

Current diet:

Brand Fromm 4 Star

Variety Salmon ala Veg

Is this diet Grain-free? No

How long has your pet eaten this food? 3 months

Are there other pets in your house eating this food? 1 other pet

Other diets eaten in the last 3 years and dates:

Signature Kangaroo Grain-free 2015 - May 2018
Earthborne Naturals Lamb Grain-free 2013-2015

Other food (treats, rawhides, table food):

Treats & table foods

Supplements (e.g. fish oil, CoQ10, vitamins etc)

Joint + Max Triple Strength, Fish oil, Taurine

NC STATE VETERINARY HOSPITAL
HISTORY & PHYSICAL

179359
CANINE
MC

B6

MASTIFF

B6

FAWN

B6

B6

B6

Admission / Exam Date: 8/17/18
 Weight: 212 lbs lbs kgs 96.4 kg
 Temp: — Pulse: 140 Respiration: pink
 Membrane Color: pink Capillary Refill: L2
 Body Condition: W/G Pain Score: 0/4

VACCINATION STATUS:			YES	NO	DATE		N	ABN	No Exam		N	ABN	No Exam
Rabies	<input type="checkbox"/>	<input type="checkbox"/>				General Appearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reproductive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Distemper or FVRCP	<input type="checkbox"/>	<input type="checkbox"/>				Integumentary	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mammary	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lepto or FeLV	<input type="checkbox"/>	<input type="checkbox"/>				Ophthalmic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Urinary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tetanus	<input type="checkbox"/>	<input type="checkbox"/>				Otic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nervous	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EEE / WEE / VEE	<input type="checkbox"/>	<input type="checkbox"/>				Musculoskeletal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alimentary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
West Nile Virus	<input type="checkbox"/>	<input type="checkbox"/>				Cardiovascular	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lymphatic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influenza	<input type="checkbox"/>	<input type="checkbox"/>				Respiratory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Rhinopneumonitis	<input type="checkbox"/>	<input type="checkbox"/>				Lactating?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Pregnant?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CHIEF COMPLAINT: recheck for DCM (diet induced?) + CHF

B6

- I. Present History
 - A. Onset / Duration
 - B. Progression
 - C. Prior Treatment
- II. Past History
 - A. Medical Illness
 - B. Surgical
 - C. Reproductive
 - D. Adverse Drug Reaction
 - E. Trauma
- III. Environment
 - IV. Preventative
 - V. Systems Review

Student Signature
 Clinician Signature

B6

10:32 (UTC)

179359
CANINE
MC

B6

MASTIFF

B6

FAWN

B6

B6

B6

NC STATE VETERINARY HOSPITAL
DAILY TREATMENT RECORD

ALERTS:

IV CATHETER SITE(S):

DATE PLACED: 8/17/18

INITIAL: B6

CLINICAL SUMMARY:

recheck through cardio

DATE:

CAGE: B-3

DIET:

WATER:

WEIGHT: 95 kg

TREATMENT PLAN
(RECORD OBSERVATIONS
ON BACK)

MONITORING

	TIME	①	②	③						
① walk q 6	8:00 AM									
	9:00 AM									
② water q 6	10:00 AM	0	DLC							
	11:00 AM									
③ check all legs	12:00 PM									
	1:00 PM									
	2:00 PM									
	3:00 PM									
	4:00 PM									
	5:00 PM									
	6:00 PM									
	7:00 PM									
	8:00 PM									
	9:00 PM									
	10:00 PM									
	11:00 PM									
	12:00 AM									
	1:00 AM									
	2:00 AM									
	3:00 AM									
	4:00 AM									
	5:00 AM									
	6:00 AM									
	7:00 AM									

STUDENT

B6

CLINICIAN

B6

Canine Echocardiography Report

Patient Name:
Medical Rec #:
DOB:
Age:
Sex:
Sonographer:

B6
B6

Date of Exam: 8/17/2018
Breed: Mastiff
Weight: 96 kg
BSA: 2.12 m²
HR:
BP-sys:

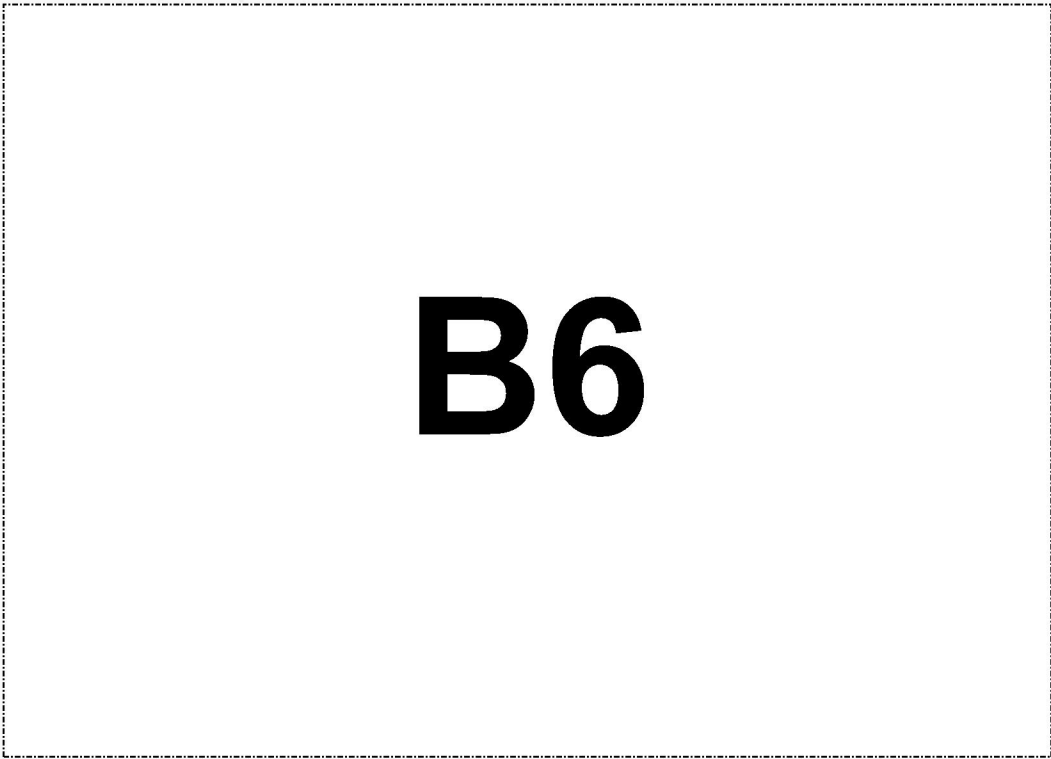
Report Status:
Ref. Clinician:
Diagnosis:
Study Details:

READ
B6
Dilated cardiomyopathy - suspect diet induced, atrial fibrillation
2D Echo/Doppler/Color Doppler. The images were of adequate diagnostic quality. The patient was awake.

2D
IVS
LV
LVPW

LV Area
LV Vol
Vol Index
Maj Axis
2D
LA Long Axis
LA d
Ao s
LA/Ao

M-mode
RV
IVS
LV
LVPW
LV normalized
LA



Normal Canine M-mode values (in cm) for 50 kg dogs.

LVIDd	LVPWd	IVSd	LA	AO	%FS
			B6		

Aortic Valve:
VMax
Pk Grad

B6

Tricuspid valve:
P 1/2 T

B6

CLINICIAN INTERPRETATION:

Left Ventricle: The left ventricular cavity size is moderate to severely increased. Ventricular wall thickness is normal. LV basal fractional shortening is mild to moderately decreased.

Left Atrium: The left atrium is moderately dilated.

Right Atrium: The right atrium is mildly dilated.

Right Ventricle: The right ventricular size is mildly enlarged. RV wall thickness is normal. Global RV systolic function is mildly reduced.

Aortic Valve: No degree of aortic stenosis is present. No evidence of aortic valve regurgitation.

Mitral Valve: The E-point septal separation is increased. Mild to moderate mitral valve regurgitation. The MR jet is centrally-directed.

Pulmonic Valve: The pulmonic valve is normal.

Pericardium/Effusions: No pericardial effusion is seen.

Aorta: The aortic sinuses, arch, ascending and descending aorta appear all normal.

Pulmonary Artery: The pulmonary artery is of normal size and origin.

ECHO SUMMARY:

1. Dilated cardiomyopathy - suspect diet induced
2. The left ventricular cavity size is moderate to severely increased.
3. Moderately dilated left atrium.
4. Mildly dilated right atrium.
5. Mild to moderate mitral valve regurgitation.
6. Mild tricuspid regurgitation.

CV Exam:

Body condition was normal. The animal was panting. The mucous membranes appeared pink, with a normal capillary refill time. Femoral pulse quality was normal. Cardiac auscultation revealed a systolic murmur of grade I-II/VI intensity loudest at the left apex. Pulmonary auscultation revealed normal lung sounds.

ECG:

The heart rate measured at B6 beats/minute. The ECG rhythm is atrial fibrillation. The heart rate in the exam room was B6 pm

Recommendations: This is a recheck echocardiogram and is compared to the prior study. B6 was eating a grain free diet at the time of the prior study - and was transitioned to a non-grain free diet approximately 3 months ago.

This study shows improvement in the cardiac size and function. The LV remains moderately to severely dilated - but has shown a significant decrease in size over the past 3 months. The LV wall thickness has increased as well. The systolic function has shown improvement - but remains mildly to moderately reduced. The mitral regurgitation has decreased in severity, and the left atrium has decreased in size (but remains moderately enlarged).

A diagnostic ECG was not performed. The ECG during the echocardiogram showed atrial fibrillation with a ventricular response rate of B6 pm. The heart rate in the exam room was B6 pm, and the owners count a resting heart rate of B6 pm at home.

Overall these findings show a significant improvement after the patient was transitioned off a grain free diet. Recommend continuing the cardiac medications at the current dosages. Recommend beginning taurine and fish oil supplementation. Recommend a recheck echocardiogram and holter monitor in 3-4 months.

B6

Electronically signed on 8/17/2018 on 5:08:14 PM

From: Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>
To: Carey, Lauren; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L; Rotstein, David
Sent: 9/10/2018 7:44:25 PM
Subject: FW: Earthborn Naturals Lamb Grain Free for 1 year-Zignature Kangaroo Grain Free for 2 years: **B6** - EON-364808 plus first dog's PFR EON-362973
Attachments: 2054800-report.pdf; Zignature Kangaroo Grain Free Formula; **B6** EON-362973; 2054800-attachments.zip

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place
B6 (BB)



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From: PFR Event <pfpreventcreation@fda.hhs.gov>
Sent: Monday, September 10, 2018 3:36 PM
To: Cleary, Michael * <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; usha.gulati@doveltech.com
Subject: Earthborn Naturals Lamb Grain Free for 1 year-Zignature Kangaroo Grain Free for 2 years **B6**
B6 EON-364808

A PFR Report has been received and PFR Event [EON-364808] has been created in the EON System.

A "PDF" report by name "2054800-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2054800-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-364808
ICSR #: 2054800
EON Title: PFR Event created for Earthborn Naturals Lamb Grain Free for 1 year Zignature Kangaroo Grain Free for 2 years; 2054800

AE Date	05/23/2018	Number Fed/Exposed	2
Best By Date		Number Reacted	2

Animal Species	Dog	Outcome to Date	Better/Improved/Recovering
Breed	Mastiff		
Age	6 Years		
District Involved	PFR-Atlanta DO		

Product information

Individual Case Safety Report Number: 2054800

Product Group: Pet Food

Product Name: Earthborn Naturals Lamb Grain Free for 1 year Zignature Kangaroo Grain Free for 2 years

Description: Other mastiff in the house **B6** was presented in congestive heart failure, possibly due to a grain free diet. **B6** was presented on 5/23/18 for occult DCM screening. **B6** has been doing well at home and not showing any signs of heart disease. He had been eating the same grain free diet as **B6** and was transitioned to a diet containing grains 3 weeks prior to this visit. Whole blood taurine basically normal. Echo revealed moderate to severe left ventricular enlargement, mild MR, mildly decreased LV ejection fraction. No arrhythmias detected. **B6** was placed on taurine supplementation. **B6** returned for a 3 month recheck 8/31/18. His echo showed considerable improvement in size, although still enlarged.

Submission Type: Initial

Report Type: Both

Outcome of reaction/event at the time of last observation: Better/Improved/Recovering

Number of Animals Treated With Product: 2

Number of Animals Reacted With Product: 2

Product Name	Lot Number or ID	Best By Date
Earthborn Naturals Lamb Grain Free for 1 year Zignature Kangaroo Grain Free for 2 years		

Sender information

B6

USA

Owner information

B6

USA

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-364808>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspa?decorator=none&e=0&issueType=12&issueld=381567>

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Report Details - EON-364808

ICSR: 2054800
 Type Of Submission: Initial
 Report Version: FPSR.FDA.PETF.V.V1
 Type Of Report: Both
 Reporting Type: Voluntary
 Report Submission Date: 2018-09-10 15:30:53 EDT

Reported Problem:

Problem Description: Other mastiff in the house [B6] was presented in congestive heart failure, possibly due to a grain free diet. [B6] was presented on 5/23/18 for occult DCM screening. [B6] has been doing well at home and not showing any signs of heart disease. He had been eating the same grain free diet as [B6] and was transitioned to a diet containing grains 3 weeks prior to this visit. Whole blood taurine basically normal. Echo revealed moderate to severe left ventricular enlargement, mild MR, mildly decreased LV ejection fraction. No arrhythmias detected. [B6] was placed on taurine supplementation. [B6] returned for a 3 month recheck 8/31/18. His echo showed considerable improvement in size, although still enlarged.

Date Problem Started: 05/23/2018

Concurrent Medical Problem: No

Outcome to Date: Better/Improved/Recovering

Product Information:

Product Name: Earthborn Naturals Lamb Grain Free for 1 year Zignature Kangaroo Grain Free for 2 years

Product Type: Pet Food

Lot Number:

Package Type: BAG

Possess Unopened Product: No

Possess Opened Product: No

Storage Conditions: Unknown

Product Use Information:

Description:	Orally administered
Time Interval between Product Use and Adverse Event:	3 Years
Product Use Stopped After the Onset of the Adverse Event:	Yes
Adverse Event Abate After Product Stop:	Unknown
Product Use Started Again:	No
Perceived Relatedness to Adverse Event:	Possibly related
Other Foods or Products Given to the Animal During This Time Period:	Yes

Manufacturer /Distributor Information:

Purchase Location Information:

Animal Information:	Name:	Has a housemate: B6 reported on 8/21/18	
	Type Of Species:	Dog	
	Type Of Breed:	Mastiff	
	Gender:	Male	
	Reproductive Status:	Neutered	
	Weight:	84.5 Kilogram	
	Age:	6 Years	
	Assessment of Prior Health:	Excellent	
	Number of Animals Given the Product:	2	
	Number of Animals Reacted:	2	
	Owner Information:	Owner Information provided:	Yes
		Contact:	Name: B6
			Phone: B6
			Email: B6
Address:	B6 United States		
Healthcare Professional Information:	Practice Name:	NCSU CVM Cardiology Service	
	Contact:	Name: B6	
		Phone: B6	
	Address:	B6 United States	
	Date First Seen:	05/23/2018	
	Permission to Release Records to FDA:	Yes	
	Practice Name:	B6	
	Contact:	Name: B6	
		Phone: B6	
		Email: B6	
Address:	B6 United States		
Type of Veterinarian:	Primary/regular veterinarian		
Permission to Release Records to FDA:	Yes		
Sender Information:	Name: B6		
	Address: B6		

		B6
	United States	
Contact:	Phone:	B6
	Email:	
Permission To Contact Sender:	Yes	
Preferred Method Of Contact:	Email	
Reported to Other Parties:	None	
Additional Documents:		
	Attachment:	B6 225633.pdf
	Description:	NC State medical records (we do not have the rDVM medical records).
	Type:	Medical Records

From: PFR Event <pfpreventcreation@fda.hhs.gov>
To: Cleary, Michael *; HQ Pet Food Report Notification [B6]
Sent: 8/21/2018 7:48:36 PM
Subject: Zignature Kangaroo Grain Free Formula [B6] EON-362973
Attachments: 2054024-report.pdf; 2054024-attachments.zip

A PFR Report has been received and PFR Event [EON-362973] has been created in the EON System.

A "PDF" report by name "2054024-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2054024-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-362973

ICSR #: 2054024

EON Title: PFR Event created for Zignature Kangaroo Grain Free Formula, Earthborne Naturals Lamb Grain Free; 2054024

AE Date	[B6]	Number Fed/Exposed	
Best By Date		Number Reacted	1
Animal Species	Dog	Outcome to Date	Better/Improved/Recovering
Breed	Mastiff		
Age	6 Years		
District Involved	PFR-Atlanta DO		

Product information

Individual Case Safety Report Number: 2054024

Product Group: Pet Food

Product Name: Zignature Kangaroo Grain Free Formula, Earthborne Naturals Lamb Grain Free

Description: Presented to NCSU ER [B6] for lethargy, coughing and a terminal wretch for 4 days. He was diagnosed and treated for atrial fibrillation, DCM and congestive heart failure. Taurine = [B6] nmol/ml. Slowly transitioned from grain free to regular diet. Returned for recheck on 17 Aug 2018 and has shown significant improvement. Still not sure at this point if the DCM is breed or diet related, or both. Owner has another Mastiff which also was on Zignature Kangaroo Grain Free.

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Better/Improved/Recovering

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Earthborne Naturals Lamb Grain Free		
Zignature Kangaroo Grain Free Formula		

Sender information

B6

USA

Owner information

B6

USA

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-362973>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jsps?decorator=none&e=0&issueType=12&issueId=379707>

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Report Details - EON-362973

ICSR: 2054024
 Type Of Submission: Initial
 Report Version: FPSR.FDA.PETF.V.V1
 Type Of Report: Adverse Event (a symptom, reaction or disease associated with the product)
 Reporting Type: Voluntary
 Report Submission Date: 2018-08-21 15:36:51 EDT

Reported Problem:

Problem Description: Presented to NCSU ER [B6] for lethargy, coughing and a terminal wretch for 4 days. He was diagnosed and treated for atrial fibrillation, DCM and congestive heart failure. Taurine [B6] nmol/ml. Slowly transitioned from grain free to regular diet. Returned for recheck on 17 Aug 2018 and has shown significant improvement. Still not sure at this point if the DCM is breed or diet related, or both. Owner has another Mastiff which also was on Zignature Kangaroo Grain Free.

Date Problem Started: [B6]

Concurrent Medical Problem: No

Outcome to Date: Better/Improved/Recovering

Product Information:

Product Name: Earthborne Naturals Lamb Grain Free

Product Type: Pet Food

Lot Number:

Package Type: BAG

Storage Conditions: Please contact owner

Product Use Information:

Description: Used as a primary source of food 2013-2015

First Exposure Date: 01/01/2013

Last Exposure Date: 01/01/2015

Time Interval between Product Use and Adverse Event: 5 Years

Perceived Relatedness to Adverse Event: Possibly related

Other Foods or Products Given to the Animal During This Time Period: Yes

Manufacturer /Distributor Information:

Purchase Location Information:

Product Name: Zignature Kangaroo Grain Free Formula

Product Type: Pet Food

Lot Number:

Package Type: BAG

Possess Unopened Product: No

Possess Opened Product: Unknown

Storage Conditions: Please contact owner

Product Use Information:

Description: Used as a primary source for food 2015 -May 2018

First Exposure 01/01/2015

Date:	
Last Exposure Date:	05/10/2018
Time Interval between Product Use and Adverse Event:	3 Years
Product Use Stopped After the Onset of the Adverse Event:	Yes
Adverse Event Abate After Product Stop:	Yes
Product Use Started Again:	No
Perceived Relatedness to Adverse Event:	Possibly related
Other Foods or Products Given to the Animal During This Time Period:	Yes

Manufacturer /Distributor Information:
Purchase Location Information:

Animal Information:

Name:	B6 9359													
Type Of Species:	Dog													
Type Of Breed:	Mastiff													
Gender:	Male													
Reproductive Status:	Neutered													
Weight:	96.4 Kilogram													
Age:	6 Years													
Assessment of Prior Health:	Excellent													
Number of Animals Reacted:	1													
Owner Information:	<table border="1"> <tr> <td>Owner Information provided:</td> <td>Yes</td> </tr> <tr> <td>Contact:</td> <td> <table border="1"> <tr> <td>Name:</td> <td>B6</td> </tr> <tr> <td>Phone:</td> <td></td> </tr> <tr> <td>Email:</td> <td></td> </tr> </table> </td> </tr> <tr> <td>Address:</td> <td> <table border="1"> <tr> <td>B6</td> </tr> </table> United States </td> </tr> </table>	Owner Information provided:	Yes	Contact:	<table border="1"> <tr> <td>Name:</td> <td>B6</td> </tr> <tr> <td>Phone:</td> <td></td> </tr> <tr> <td>Email:</td> <td></td> </tr> </table>	Name:	B6	Phone:		Email:		Address:	<table border="1"> <tr> <td>B6</td> </tr> </table> United States	B6
Owner Information provided:	Yes													
Contact:	<table border="1"> <tr> <td>Name:</td> <td>B6</td> </tr> <tr> <td>Phone:</td> <td></td> </tr> <tr> <td>Email:</td> <td></td> </tr> </table>	Name:	B6	Phone:		Email:								
Name:	B6													
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Address:	<table border="1"> <tr> <td>B6</td> </tr> </table> United States	B6												
B6														
Healthcare Professional Information:	<table border="1"> <tr> <td>Practice Name:</td> <td>NC State College of Veterinary Medicine</td> </tr> <tr> <td>Contact:</td> <td> <table border="1"> <tr> <td>Name:</td> <td>B6</td> </tr> <tr> <td>Phone:</td> <td></td> </tr> <tr> <td>Email:</td> <td></td> </tr> </table> </td> </tr> <tr> <td>Address:</td> <td>1060 William Moore Dr Raleigh North Carolina</td> </tr> </table>	Practice Name:	NC State College of Veterinary Medicine	Contact:	<table border="1"> <tr> <td>Name:</td> <td>B6</td> </tr> <tr> <td>Phone:</td> <td></td> </tr> <tr> <td>Email:</td> <td></td> </tr> </table>	Name:	B6	Phone:		Email:		Address:	1060 William Moore Dr Raleigh North Carolina	
Practice Name:	NC State College of Veterinary Medicine													
Contact:	<table border="1"> <tr> <td>Name:</td> <td>B6</td> </tr> <tr> <td>Phone:</td> <td></td> </tr> <tr> <td>Email:</td> <td></td> </tr> </table>	Name:	B6	Phone:		Email:								
Name:	B6													
Phone:														
Email:														
Address:	1060 William Moore Dr Raleigh North Carolina													

		27607 United States
	Type of Veterinarian:	Referred veterinarian
	Permission to Release Records to FDA:	Yes

Sender Information:	Name:	B6		
	Address:			
		United States		
	Contact:	Phone:	B6	
		Email:		
	Permission To Contact Sender:	Yes		
	Preferred Method Of Contact:	Email		
Reported to Other Parties:	None			

Additional Documents:	Attachment:	B6	11 May 2018.pdf
	Description:		7 to 10 day recheck
	Type:	Medical Records	
	Attachment:	B6	7 Aug 2018.pdf
	Description:		3 to 4 month recheck
	Type:	Medical Records	
	Attachment:	B6	B6 .pdf
	Description:		1st visit
	Type:	Medical Records	

EMILED
5/7/18

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case # B6 95.3 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
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Admission Date/Time: MAY 03, 2018 03:42 PM Discharge Date/Time: MAY 04, 2018 03:30 PM Discharge Status:

CASE SUMMARY

DIAGNOSIS

1. Dilated cardiomyopathy - r/o primary vs diet induced
2. Atrial fibrillation
3. Congestive heart failure - pulmonary edema, abdominal effusion, pleural effusion

HISTORY

B6 is a 5 year old male castrated English Mastiff, who was presented to the NCSU B6 for lethargy and coughing with a terminal retch for four days. He was hospitalized and transferred to the NCSU Cardiology Service for further care.

B6 has been more lethargic at home for the past couple of weeks. Approximately 1 week ago he also began coughing with a terminal retch. He was taken to his primary veterinarian three days ago where bloodwork and a urinalysis were submitted to B6 B6

B6 B6 Over the past few days the coughing has progressed, and he is currently coughing 5-6 times per hour. He also refused a eat the morning of presentation, which is abnormal. Due to his progressive decline, he was presented to NCSU for further evaluation.

B6 is otherwise eating, drinking, urinating, and defecating normally. He has a history of allergies, and was started on benedryl and famotidine by his primary veterinarian at his visit a couple of days ago. He also has a history of frequent ear infections, light bulb foreign body, and naproxen toxicity. Murphy has been seen by the NCSU B6

B6 Both events resolved without hospitalization or intervention. He eats Zignature kangaroo diet (grain-free; for another dog's allergic skin disease). To supplement B6 diet, raw liver was added about 5-6 weeks ago to supply additional taurine. He is on no current medications, apart from preventative B6

B6

CV/RESP: rapid irregularly irregular tachyarrhythmia, variable and weak femoral nulses, increased lung sounds bilaterally

B6

DIAGNOSTICS

1. Big 4: PCV B6 TS B6 BC B6 Azo B6
2. Doppler blood pressure on admission: B6 mmHg
3. ECG: Atrial fibrillation with a rate B6 bpm and infrequent left sided VPC's

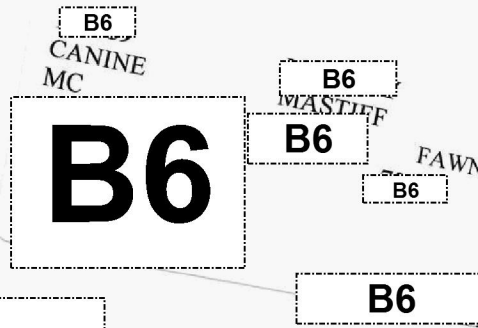
4. AFAST/TFAST - mild peritoneal effusion, no pleural or pericardial effusion

5. Echocardiogram

- a. Dilated cardiomyopathy - r/o primary vs diet induced
- b. Severely increased LV size
- c. Decreased ventricular wall thickness
- d. Moderately enlarged right ventricle
- e. Moderately reduced RV systolic function
- f. Severely dilated left atrium
- g. Moderate mitral valve regurgitation
- h. Mild to moderate tricuspid regurgitation

6. Thoracic radiographs * final report pending *

- a. Generalized cardiomegaly
- b. Mild pulmonary edema



B6

9. Whole blood taurine: pending

ASSESSMENT:

Thank you for bringing **B6** in to see us today. He is a sweet boy and was a pleasure to work with.

As you know, **B6** has been diagnosed with a heart condition known as dilated cardiomyopathy (DCM). DCM is a disease of unknown cause affecting the muscle of the heart and is most commonly seen in large breed dogs (such as Dobermans, Great Danes, and Labrador Retrievers). Although the exact mechanism of DCM is currently unknown, dietary taurine/carnitine deficiencies, genetics and toxins have all been linked to DCM. The overall effect of DCM is a decrease in the contractility (pumping ability) of the heart. Because the heart is unable to pump with enough vigor to move blood adequately forward into circulation, a volume overload occurs and the heart dilates to accommodate it. As a result, the chambers of the heart become very large, and the walls of the heart become very thin. Ultimately, the heart is unable to accommodate and dilate further; the result is back-up of blood from the heart and into the lungs, known as congestive heart failure ("fluid on the lungs").

It is important to know that this disease is progressive, and ultimately those patients affected with it will experience congestive heart failure. Based on the results of **B6** diagnostics, it appears that he has experienced an episode of congestive heart failure secondary to DCM. This explains the clinical signs you observed at home - lethargy, panting, coughing. **B6** has responded well to heart failure medications in the hospital, and he is breathing comfortably. We will be sending him home on medications to help prevent further fluid accumulation, and improve the function of his heart. We will also recommend starting him on a supplement called taurine - that has been shown to improve heart function in DCM cases caused by nutritional deficiencies.

B6 has also been diagnosed with an arrhythmia call atrial fibrillation (AF). Cardiac enlargement in dilated cardiomyopathy can result in this rhythm. AF arises due to an abnormality in the electrical system of the heart. In AF, the pacemaker cells' normal electrical impulses are overwhelmed by disorganized electrical impulses that originate in other areas of the atria. The result is an erratic, usually rapid, heart rhythm. Although in and of itself not life-threatening, AF may lead to the development of decreased exercise tolerance, fainting, lethargy and decreased appetite. If sustained for prolonged periods of time at very rapid rates, AF can also lead to the development of congestive heart failure, which was likely a contributing factor in **B6** episode of heart failure.

Changes in the muscle of the heart in dogs with DCM can lead to fibrosis and remodeling of the myocardium (heart muscle). This can lead to the development of ventricular arrhythmias. Intermittent ventricular arrhythmias are not dangerous, but if they occur in sequence and rapidly, they can result in sudden death. In the future we would like to place a holter monitor (24 hour ECG) to evaluate **B6** average heart rate at home, but also to evaluate for underlying ventricular arrhythmias. This can be performed at his next ~~recheck~~ appointment.

Although we cannot cure DCM, we hope to manage **B6** clinical signs with medical therapy as outlined below. The average survival for DCM patients after an episode of heart failure is 6-12 months. However, as we discussed, if **B6** DCM is secondary to a nutritional deficiency - his heart structure and function may show improvement with taurine supplementation and diet change. Please see below for diet recommendations.

Please monitor him for signs of worsening of heart failure such as increased exercise intolerance, labored breathing, increased coughing or fainting. Call NCSU Cardiology or your referring veterinarian if any of these signs occur. Also, please learn to take a respiratory (breathing) rate when your pet is resting. This can be done by counting the number of breaths your pet takes in 15 seconds and multiplying by 4 (to get the total breaths per minute). This number should remain less than 36-40 at rest.

INSTRUCTIONS FOR CARE

B6

MONITORING:

1. Please continue to monitor **B6** for signs of recurrent congestive heart failure. These would include exercise intolerance, increased respiratory rate, difficulty breathing, episodes of fainting/collapse, or decreased appetite. If you notice any of these signs, please contact us and have **B6** evaluated by a veterinarian.

2. Please also begin to monitor **B6** respiratory rate at home when you observe him sleeping. You can do this by counting the number of breaths he takes in 15 seconds, then multiplying this number by 4 to obtain the number of breaths per minute. A normal respiratory rate should be less than 36 breaths per minute. If you feel that **B6** respiratory rate is increasing - or if he is having more effort while breathing, please contact us.

ACTIVITY:

Please avoid strenuous exercise or situations which place undue stress on your **B6**. In general, pets with congestive heart failure will self-regulate their exercise. Please monitor for any change in exercise capability.

DIET:

As we discussed, we would like to change **B6** diet due to a concern for dietary induced DCM. We have seen an association between grain free diets and poor cardiac function recently. Although there is currently no scientific evidence, we have seen an increasing number of dogs with this problem. We would recommend transitioning him to a diet that contains grains. Some brands to consider include the major commercial brands (Purina, Hills, Royal Canin, Iams). There is a Royal Canin select protein adult KO diet that contains kangaroo as the protein source.

RECOMMENDATIONS FOR FURTHER EVALUATION:

B6

If you have any concerns with how your pet is doing, or to schedule an appointment, please contact the NC State Veterinary Hospital at 919-513-6694. There is a veterinarian on call 24 hours a day.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pet's medical condition.

B6

B6

B6

Clinician

B6

Student - c/o 2018

Clinicians:
Dr. Darcy Adin

B6

Residents:

B6

Clinical Technicians:

B6

Client Services:

B6

Research Technician

B6

In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.

B6
CANINE
MC
B6
MASTIFF
B6
FAWN
B6
B6
B6

**NC STATE VETERINARY HOSPITAL
HISTORY & PHYSICAL**

B6
CANINE
MC

B6
MASTIFF
B6 FAWN

B6

B6

Admission / Exam Date: 5/31/2018

Weight: _____ lbs kgs _____

Temp: _____ Pulse: _____ Respiration: _____

Membrane Color: _____ Capillary Refill: _____

Body Condition: _____ Pain Score: _____

VACCINATION STATUS:			YES	NO	DATE		N	ABN	No Exam		N	ABN	No Exam		
Rabies	<input type="checkbox"/>	<input type="checkbox"/>				General Appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reproductive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Distemper or FVRCP	<input type="checkbox"/>	<input type="checkbox"/>				Integumentary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mammary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Lepto or FeLV	<input type="checkbox"/>	<input type="checkbox"/>				Ophthalmic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Urinary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Tetanus	<input type="checkbox"/>	<input type="checkbox"/>				Otic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nervous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
EEE / WEE / VEE	<input type="checkbox"/>	<input type="checkbox"/>				Musculoskeletal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alimentary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
West Nile Virus	<input type="checkbox"/>	<input type="checkbox"/>				Cardiovascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lymphatic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Influenza	<input type="checkbox"/>	<input type="checkbox"/>				Respiratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Rhinopneumonitis	<input type="checkbox"/>	<input type="checkbox"/>													
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>				Lactating?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Pregnant?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

CHIEF COMPLAINT: _____

B6

- I. Present History
 - A. Onset / Duration
 - B. Progression
 - C. Prior Treatment
- II. Past History
 - A. Medical Illness
 - B. Surgical
 - C. Reproductive
 - D. Adverse Drug Reaction
 - E. Trauma
- III. Environment
 - IV. Preventative
 - V. Systems Review

Student Signature: _____

Clinician Signature: **B6** _____

NCSU, COLLEGE OF VETERINARY MEDICINE
NCSU DIAGNOSTIC LABORATORIES

Client

Patient

Med Rec Case

B6

B6

B6

MC 209.475 lbs
TERRY CENTER TC-ICU ICU-XL

MASTIFF FAWN
CANINE

B6

Completed 17 of 17 Results

Request	Item	Priority	Status	Dates
B6	RENAL	ROUTINE	COMPLETE	Requested: 05/04/18 08:55 AM Collection: 05/04/18 08:55 AM Received: 05/04/18 09:05 AM Needed: 05/04/18 08:55 AM Status: 05/04/18 09:52 AM

Requesting DVM:
Student:
Comments:

B6

CHEMISTRY - RENAL PANEL

TEST	RESULT	UNITS	REF RANGE	RESULT DATETIME
UREA NITROGEN	B6	MG/DL	6 - 26	05/04/2018 09:52 AM
CREATININE		MG/DL	.7 - 1.5	05/04/2018 09:52 AM
PHOSPHORUS		MG/DL	2.5 - 5.6	05/04/2018 09:52 AM
CALCIUM		MG/DL	9.4 - 11.4	05/04/2018 09:52 AM
PROTEIN- TOTAL		G/DL	5.2 - 7.3	05/04/2018 09:52 AM
ALBUMIN		G/DL	3 - 3.9	05/04/2018 09:52 AM
GLOBULIN		G/DL	1.7 - 3.8	05/04/2018 09:52 AM
ALB/GLOB RATIO			.9 - 1.8	05/04/2018 09:52 AM
SODIUM		MMOL/L	140 - 156	05/04/2018 09:52 AM
POTASSIUM		MMOL/L	4 - 5.3	05/04/2018 09:52 AM
CHLORIDE		MMOL/L	108 - 122	05/04/2018 09:52 AM
BICARBONATE		MMOL/L	18 - 26	05/04/2018 09:52 AM
ANION GAP			11.2 - 19.9	05/04/2018 09:52 AM
NA / K RATIO			27.7 - 35.9	05/04/2018 09:52 AM
ICTERIC INDEX				05/04/2018 09:52 AM
HEMOLYSIS INDEX				05/04/2018 09:52 AM
LIPEMIA INDEX				05/04/2018 09:52 AM

Comments:
CHLORIDE

B6

Containers
1018-6103

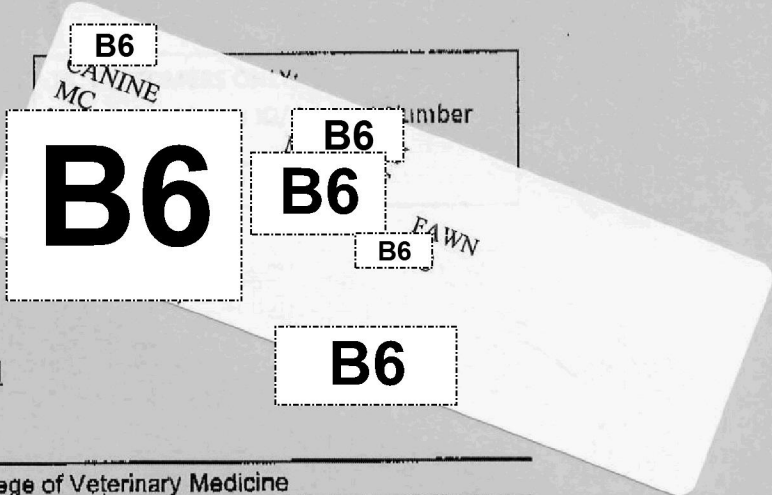
18742

B6

Sample Submission Form

Amino Acid Laboratory
University of California, Davis
1020 Vet Med 3B
1089 Veterinary Medicine Drive
Davis, CA 95616
Tel: (530)752-5058, Fax: (530)752-4698

<http://www.vetmed.ucdavis.edu/vmb/aal/aal.html>



Vet/Tech Contact: **B6**
Company Name: North Carolina State University College of Veterinary Medicine
Address: Clinical Pathology Lab, Room C-269
1052 William Moore Drive
Raleigh, NC 27607

Email: _____
Tel: **B6** Fax: 919 513-6556

Billing Contact: _____ TAX ID: _____
Email: _____ Tel: _____

Patient Name: **B6**
Species: Canine
Owner's Name: **B6**

Sample Type: Plasma Whole Blood Urine Food Other: _____
Test Items: Taurine Complete Amino Acid Other: _____

Taurine Results (nmol/ml)
Plasma: _____ Whole Blood: **B6** Urine: _____ Food: _____

Reference Ranges (nmol/ml)

	Plasma		Whole Blood	
	Normal Range	No Known Risk for Taurine Deficiency	Normal Range	No Known Risk for Taurine Deficiency
Cat	80-120	>40	300-600	>200
Dog	60-120	>40	200-350	>150

Canine Echocardiography Report

Patient Name:
Medical Rec #:
DOB:
Age:
Sex:
Sonographer:

B6
Mc
B6

Date of Exam: **B6**
Breed: Mastiff
Weight: 95 kg
BSA: 2.10 m²
HR:
BP-sys:

Report Status: READ

Ref. Clinician: **B6**

Diagnosis: Dilated Cardiomyopathy w/ heart failure

Study Details: 2D Echo/Doppler/Color Doppler. The images were of adequate diagnostic quality. The patient was awake.

2D
IVS
LV
LVPW

2D
LA Long Axis
LA d
Ao s
LA/Ao

M-mode
RV
IVS
LV
LVPW
LV normalized
LA

B6

Mitral Regurgitation:

MR Vmax
MR Peak Gradient
Est SBP by MR

B6

B6
CANINE
MC

B6

B6
MASTIFF
B6 FAWN
B6

Tricuspid valve:
P 1/2 T

B6

CLINICIAN INTERPRETATION:

Left Ventricle: The left ventricular cavity size is severely increased. Ventricular wall thickness is decreased. LV basal fractional shortening is severely decreased.

Left Atrium: The left atrium is severely dilated.

Right Atrium: The right atrium is moderately dilated.

Right Ventricle: The right ventricular size is moderately enlarged. Global RV systolic function is

B6

5/3/2018

B6

moderately reduced.

Mitral Valve: The E-point septal separation is increased. Moderate mitral valve regurgitation. The MR jet is centrally-directed.

ECHO SUMMARY:

1. The left ventricular cavity size is severely increased.
2. Ventricular wall thickness is decreased.
3. Moderately enlarged right ventricle.
4. Moderately reduced RV systolic function.
5. Severely dilated left atrium.
6. Moderately dilated right atrium.
7. Moderate mitral valve regurgitation.
8. Mild to moderate tricuspid regurgitation.

CV Exam:

Body condition was overweight. The animal was panting. The mucous membranes appeared pink, with a normal capillary refill time. Femoral pulse quality was difficult to assess.

ECG:

The heart rate measured at B6 beats/minute. The ECG rhythm is atrial fibrillation.

Recommendations: The echocardiogram was limited due to patient size and stability.

This study shows evidence of dilated cardiomyopathy and atrial fibrillation. The LV is severely dilated with thin walls. The systolic function is severely reduced - with the septum moving more adequately than the LV free wall. The mitral regurgitation was difficult to quantify - but appears to be at least moderate. The left atrium is severely dilated.

The ECG shows evidence of atrial fibrillation with a ventricular response rate of B6 bpm.

The patient eats a grain free diet (Zignature Kangaroo). Given the recent association with grain free diets and dilated cardiomyopathy - diet induced DCM is possible. However, given the breed and age idiopathic DCM is also considered.

There is a small volume of free fluid within the abdomen - consistent with R-CHF. Thoracic radiographs show mild pulmonary edema.

Treatment Recommendations

B6

B6

B6

Electronically signed on 5/3/2018 on 5:38:12 PM

B6

CANINE
MC

B6

MASTIFF
B6

FAWN
B6

B6

B6

CARDIOLOGY PATIENT QUESTIONNAIRE

Patient Name: **B6**

Client: **B6** CANINE MASTIFF **B6** FAWN **B6**

I would (betwe **B6** today if possible. **B6**

Contact number _____
(Please try to be available between 9:30 and 10:30 am for questions or updates)

May we sedate or tranquilize your pet today if necessary? YES NO

Some tests require shaving to obtain the best results – may we shave your pet's fur today if necessary? YES NO

Please indicate any symptoms your pet has experienced since your last visit – please describe in the space provided:

<input checked="" type="checkbox"/> Change in activity level	Improved
<input checked="" type="checkbox"/> Change in water consumption	Increased
<input checked="" type="checkbox"/> Change in urination frequency	The Lasix makes him void on himself
<input type="checkbox"/> Change in appetite	
<input type="checkbox"/> Coughing	
<input type="checkbox"/> Difficulty breathing	
<input checked="" type="checkbox"/> Sneezing	Allergies
<input type="checkbox"/> Weakness / fainting	
<input checked="" type="checkbox"/> Vomiting	once
<input type="checkbox"/> Diarrhea	

Current diet: Fromm Salmon Ad veg mixed i kangaroo Has your pet been fed today? YES NO
 Have you seen your family vet since your last visit? NO If yes, what time 7:30 am/pm
 How much? 3 cups

CURRENT MEDICATIONS:

Drug Name	How often given?	Was medication given today?	What time?	REFILL NEEDED TODAY?	
B6	BID	YES	7:15	YES	NO
	BID	YES	↓	YES	NO
	BID			YES	NO
	BID			YES	NO
	BID			YES	NO
	BID			YES	NO
MMTHLY	NO		YES	NO	
quarterly	NO		YES	NO	

Owner Signature: **B6**

Date: 5/10/18

Use back of sheet for any additional information.

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
 Discharge Comments

MAILED
 5/11/18 JB

Fax: Admin
 Fax: Referral

Small Animal (919) 513-6500
 Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case # B6 93.5 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
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Admission Date/Time: MAY 11, 2018 08:53 AM Discharge Date/Time: MAY 11, 2018 03:00 PM Discharge Status:

CASE SUMMARY

DIAGNOSIS:

1. Dilated cardiomyopathy - r/o primary vs. diet induced
2. Atrial fibrillation
3. Congestive heart failure - pulmonary edema, pleural effusion, abdominal effusion - resolved

HISTORY

B6 is a 5 year old male castrated Mastiff who was presented to the NCSU Cardiology Service on 5/11/18 for a recheck of dilated cardiomyopathy, atrial fibrillation, and congestive heart failure.

B6 was first presented to the NCSU ER B6 for lethargy and coughing with a terminal retch for four days B6 B6 B6 He also refused to eat the B6 While at NCSU an echocardiogram showed evidence of dilated cardiomyopathy, small volume pleural effusion, and moderate volume abdominal effusion. Thoracic radiographs showed mild pulmonary edema. An ECG showed atrial fibrillation with a ventricular response rate of B6 bpm B6 was hospitalized overnight and responded well to treatment. He was discharged on B6 B6

Since discharge, B6 has been doing well at home. He has increased energy and activity levels. Sleeping respiratory rate has been around 20 bpm and owner does not feel as though he has an increased respiratory effort. B6 had one brief episode of coughing this morning and one episode of vomiting a few days ago after being fed a cold food item which is known to cause stomach upset. His owner reports that he has reduced frequency of defecation (1-2x/day as opposed to previous 3-4x/day) and increased water consumption and urination, but is no longer dribbling urine in the house or when lying down.

B6 has a history of allergies, and was started on B6 his primary veterinarian at his visit on B6 He also has a B6 B6 was previously seen by the NCSU B6 Both events resolved without hospitalization or intervention. Prior to his diagnosis of cardiac disease, he was eating Zignature kangaroo diet (grain-free; for another dog's allergic skin disease) with raw liver added to supply additional taurine. Since his discharge from the cardiology service on 5/4/18 he has been transitioned to 75% Fromm Salmon a la Veg dry dog food and 25% Zignature with the plan to transition completely to Fromm in the next few days. He also receives monthly preventative B6

B6

CVR: Grade III/VI left apical systolic murmur, irregularly irregular arrhythmia appreciated; eupneic, lung fields clear with normal bronchovesicular sounds noted on bilateral auscultation

B6

B6

ASSESSMENT:

Thank you for bringing **B6** in to see us today - he was a very good boy. We are happy to hear he is doing well at home.

Today we performed chest radiographs and a fluid check echocardiogram to assess **B6** response to congestive heart failure. We are happy to report that his chest radiographs show improvement from previously, and the fluid in his abdomen has resolved. We also performed a renal panel to assess his kidney values - which returned within normal limits and stable compared to previously. **B6** are overall happy with these results - and we would like to continue his heart failure medications at their current dosages. We would also like to begin one addition medication called **B6**. This medication is a weak diuretic and also works to prevent cardiac remodeling. Please see below for dosing instructions.

B6 heart rate on exam was still quite high in hospital. We had discussed performing a holter monitor today to assess his heart rate and rhythm over a 24 hour period - however, considering his elevated heart rate on exam, we have elected not to perform this test today. Rather, we would like to increase his diltiazem dose and bring him back for a QUICK TEST holter monitor in 7-10 days. Today we also submitted a digoxin level to evaluate his systemic concentrations of this drug - this test is currently pending and we will contact you with the results.

INSTRUCTIONS FOR CARE

MEDICATIONS:

B6

MONITORING:

1. Please continue to monitor **B6** for signs of recurrent congestive heart failure. These would include exercise intolerance, increased respiratory rate, difficulty breathing, episodes of fainting/collapse, or decreased appetite. If you notice any of these signs, please contact us and have **B6** evaluated by a veterinarian.
2. Please continue monitoring **B6** respiratory rate at home when you observe him sleeping. A normal respiratory rate should be less than 36 breaths per minute. If you feel that **B6** respiratory rate is increasing - or if he is having more effort while breathing,

please contact us.

ACTIVITY: Please avoid strenuous exercise or situations which place undue stress on your [B6]. In general, pets with congestive heart failure will self-regulate their exercise. Please monitor for any change in exercise capability.

DIET: As we discussed, [B6] should be on a diet that contains grains due to a concern for dietary induced DCM. We have seen an association between grain free diets and poor cardiac function recently. Although there is currently no scientific evidence, we have seen an increasing number of dogs with this problem. The Fromm Salmon a la Veg that you are transitioning him to is an acceptable diet and contains several different grains. Please keep him on this diet and continue taurine supplementation as well.

NEXT VISIT:

1. We would like [B6] to come back to NCSU in 7-10 days for a QUICK TEST appointment. At this visit we will perform a kidney panel after beginning therapy with [B6]. We will also place a holter monitor.
2. We would otherwise like to see [B6] back for a recheck exam, blood pressure, renal panel, and echocardiogram in 3 months.

If you have any concerns with how your pet is doing, or to schedule an appointment, please contact the NC State Veterinary Hospital at 919-513-6694. There is a veterinarian on call 24 hours a day.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pets' medical condition.

B6	B6		
B6	B6	Student	
Clinicians: Dr. Darcy Adin	Residents:	Clinical Technicians:	Client Services:
B6	B6	B6	B6
		Research Technician	
		B6	

In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.

B6		
CANINE	B6	
MC	MASTIFF	
B6	B6	FAWN
		B6
	B6	

NC STATE VETERINARY HOSPITAL
HISTORY & PHYSICAL

Admission / Exam Date: 5/11/18
 Weight: lbs kgs 93.5
 Temp: _____ Pulse: _____ Respiration: part
 Membrane Color: pink Capillary Refill: < 2 sec
 Body Condition: _____ Pain Score: 0/4

B6

B6

B6

CANINE
MC

MASTIFF
B6

FAWN
B6

B6

B6

VACCINATION STATUS:			DATE						
YES	NO			N	ABN	No Exam	N	ABN	No Exam
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NC State Veterinary Hospital
Cardiology Pet Diet History

Date: 5/11/18

B6	
CANINE MC	MASTIFF B6
B6	FAWN B6
	B6

Current diet:

Brand Fromm & Signature

Variety Salmon Ala Veg / Kangaroo

Is this diet Grain-free? NO / YES

How long has your pet eaten this food? 1 week / 2 years

Are there other pets in your house eating this food? yes

Other diets eaten in the last 3 years and dates:

Earthborn Naturals Meadow Blend
Signature Kangaroo

Other food (treats, rawhides, table food):

Various
No rawhides

Supplements (e.g. fish oil, CoQ10, vitamins etc)

Joint Max triple strength, Taurine

NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case # B6 96.2197 kg	Attending DVM Student Discharging DVM Referring DVM	B6
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Admission Date/Time: AUG 17, 2018 08:54 AM Discharge Date/Time: AUG 17, 2018 11:42 AM Discharge Status:

CASE SUMMARY

DIAGNOSIS:

1. Dilated cardiomyopathy - suspect at least partially diet induced
2. Atrial fibrillation
3. Congestive heart failure - pulmonary edema, pleural effusion, abdominal effusion - well controlled

HISTORY

B6 is a 6 year old male castrated Mastiff who was presented to the NCSU Cardiology Service on 8/17/18 for a recheck of dilated cardiomyopathy, atrial fibrillation, and congestive heart failure.

B6 was first presented to the NCSU ER c **B6** for lethargy and coughing with a terminalretch for four days. Bloodwork performed at his regular veterinarian c **B6** the urinalysis revealed proteinuria, and pyuria, and the collection method was not reported. The coughing progressed until his presentation at the ER, where he was coughing 5-6 times per hour. He also refused to eat the morning of presentation, which was abnormal. While at NCSU an echocardiogram showed evidence of dilated cardiomyopathy, small volume pleural effusion, and moderate volume abdominal effusion. Thoracic radiographs showed mild pulmonary edema. An ECG showed atrial fibrillation with a ventricular response rate of **B6** bpm. A whole blood taurine returned within normal limits **B6** nmol/mL. **B6** was hospitalized overnight and responded well to treatment. He was discharged on **B6**.

B6

B6 came in on 5/11/18 for a recheck with the NCSU Cardiology Service. At this time, chest radiographs showed similar left sided egally, mildly improved pulmonary venous distention, and similar to mildly improved unstructured interstitial pattern. His renal panel showed no significant findings and his digoxin level was **B6** ng/nL. His fluid check showed no evidence of abdominal or pericardial effusion, with possible scant pleural effusion. His heart rate was between **B6** bpm during his exam, therefore his **B6** dose was increased to 360mg BID. In addition, therapy with **B6** (200mg SID). A holter monitor performed 1 week later showed adequate atrial fibrillation rate control (average heart rate **B6** bpm), with a low number of ventricular arrhythmias. **B6** owner began supplementation with fish oil, and no other changes were made.

Since his last visit **B6** has been doing well at home. He has increased energy and activity levels and has been initiating play with his housemate. He has been able to play for up to an hour, limiting his own activity well and still only panting after playing. They have not noticed any periods of increased respiratory effort and have heard only a rare cough. At rest, they have found his respiratory rate to consistently be below **B6** rpm consistently and his heart rate to be between **B6** bmp.

B6 has a history of allergies, and was started on **B6** by his primary veterinarian at his visit on **B6**. He

B6

Since his presentation of **B6** prior to his diagnosis of cardiac disease, he was eating Earthborne Naturals Lamb Grain-free from 2013-2015, and then Zignature Kangaroo Grain-free (for another dog's allergic skin disease) with raw liver added to supply additional taurine. Since May, he has been transitioned to Fromm Salmon a la Veg dry dog food (not a grain free diet) and it has gone smoothly. He also receives monthly preventatives (Sentinel and Bravecto).

CURRENT MEDICATIONS:

B6

B6

CVR: Grade II/VI left apical systolic murmur, irregular rhythm appreciated; eupneic, lung fields clear with normal bronchovesicular sounds noted on bilateral auscultation

B6

RESULTS OF DIAGNOSTIC TESTS:

1. Blood Pressure **B6**

2. Renal Panel **B6**

3. Echocardiogram

- a. Moderate to severe LV dilation - significantly improved compared to prior
- b. Moderately reduced LV systolic function - static
- c. Moderate left atrial enlargement - significantly improved compared to prior
- d. Mild to moderate mitral regurgitation - significantly improved compared to prior
- e. No free fluid noted

ASSESSMENT:

Thank you for entrusting us with **B6** care, he was a very sweet boy!

Today we performed a recheck echocardiogram to evaluate **B6** cardiac structure and function. We are happy to report that his echo shows significant improvement. His heart remains moderately to severely enlarged, and continues to show evidence of reduced function - but overall has shown significant improvement in the past 3 months. This is great news, and indicates at least some portion of his cardiac changes are responding to a diet change. As we discussed, it is still very possible **B6** has underlying dilated cardiomyopathy secondary to his genetics, but we are very pleased to see this improvement with a diet change. **B6** kidney panel showed normal values - indicating he is tolerating his medications well. In addition, **B6** heart rate was slow and well controlled during his exam. His heart rate became elevated when stressed, but this is not unexpected. Given these findings, we would like **B6** to continue receiving his medications at their current dosages.

We would like to see **B6** back in 3-4 months for another recheck echocardiogram. If his heart continues to show improvement, we may be able to discontinue some of his cardiac medications. At this visit, we can also perform a recheck holter monitor, to monitor for any worsening arrhythmias. Please continue to monitor him for any signs of worsening cardiac disease - such as lethargy, increased respiratory rate/effort, coughing, weakness, or collapse. If you are concerned about how he is doing, please contact us and have him evaluated by a veterinarian.

INSTRUCTIONS FOR CARE

MEDICATIONS:

B6

B6

MONITORING:

1. Please continue to monitor **B6** for signs of recurrent congestive heart failure. These would include exercise intolerance, increased respiratory rate, difficulty breathing, episodes of fainting/collapse, or decreased appetite. If you notice any of these signs, please contact us and have **B6** reevaluated by a veterinarian.

2. Please continue monitoring **B6** respiratory rate at home when you observe him sleeping. If you feel that **B6** respiratory rate is increasing, or if he is having more effort while breathing, please contact us.

ACTIVITY: Please avoid strenuous exercise or situations which place undue stress on your **B6**. In general, pets with congestive heart failure will self-regulate their exercise. Please monitor for any change in exercise capability.

DIET: **B6** can continue on his Fromm Salmon a la Veg diet.

PLAN FOR RE-EVALUATION:

B6
months. Please let us know if you feel he needs to be seen sooner.

If you have any concerns with how your pet is doing, or to schedule an appointment, please contact the NC State Veterinary Hospital at 919-513-6694. There is a veterinarian on call 24 hours a day.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pets' medical condition.

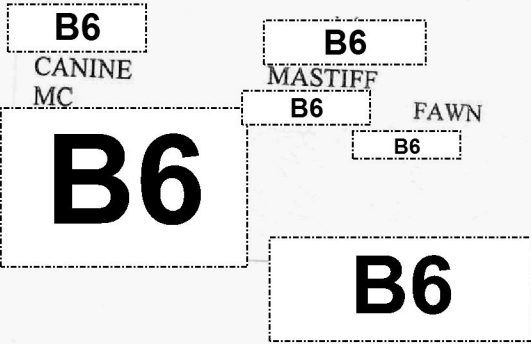
B6

Senior Student **B6**

Clinicians: Residents: Clinical Technicians: Client Services:

B6

In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.



CARDIOLOGY PATIENT QUESTIONNAIRE

B6
CANINE
MC
B6
B6
MASTIFF
FAWN
B6
B6

Contact number **B6**
(Please try to be available between 9:30 and 10:30 am for questions or updates)

I would like to pick up my pet at: _____ today if possible.
(between 1pm and 4pm)

May we sedate or tranquilize your pet today if necessary? YES NO

Some tests require shaving to obtain the best results – may we shave your pet's fur today if necessary? YES NO

Please indicate any symptoms your pet has experienced since your last visit – please describe in the space provided:

<input checked="" type="checkbox"/>	Change in activity level	Increased
<input type="checkbox"/>	Change in water consumption	
<input type="checkbox"/>	Change in urination frequency	
<input type="checkbox"/>	Change in appetite	
<input type="checkbox"/>	Coughing	
<input type="checkbox"/>	Difficulty breathing	
<input type="checkbox"/>	Sneezing	
<input type="checkbox"/>	Weakness / fainting	
<input type="checkbox"/>	Vomiting	
<input type="checkbox"/>	Diarrhea	

Current diet: Fromm 4 star Salmon ala Veg
Have you seen your family vet since your last visit? No

Has your pet been fed today? YES NO
If yes, what time 7:30 am/pm
How much? 3 cups

CURRENT MEDICATIONS:

Drug Name	How often given?	Was medication given today?	What time?	REFILL NEEDED TODAY?	
				YES	NO
B6	BID	yes	0730	YES	<input checked="" type="radio"/> NO
	BID	yes		YES	<input checked="" type="radio"/> NO
	BID			<input checked="" type="radio"/> YES	NO
	BID			<input checked="" type="radio"/> YES	NO
	daily			YES	<input checked="" type="radio"/> NO
	daily			YES	NO
	BID			YES	NO
	BID			<input checked="" type="radio"/> YES	NO

80mg
2 BID

Owner Signature: _____

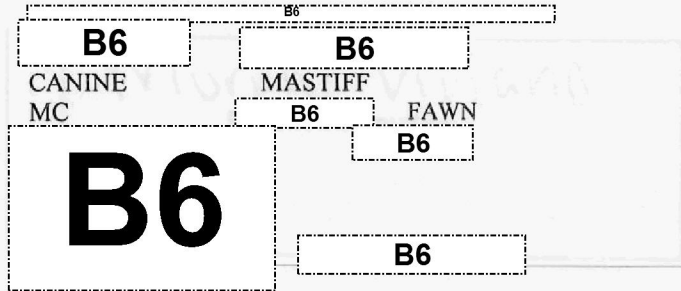
B6

Date: _____

→ written prescription
no take to
outside
pharmacy
please

NC State Veterinary Hospital
Cardiology Pet Diet History

Date: 8/17/18



Current diet:

Brand Fromm 4 Star

Variety Salmon ala Veg

Is this diet Grain-free? No

How long has your pet eaten this food? 3 months

Are there other pets in your house eating this food? 1 other pet

Other diets eaten in the last 3 years and dates:

Signature Kangaroo Grain-free 2015 - May 2018
Earthborne Naturals Lamb Grain-free 2013-2015

Other food (treats, rawhides, table food):

Treats & table foods

Supplements (e.g. fish oil, CoQ10, vitamins etc)

Joint + Max Triple Strength, Fish oil, Taurine

NC STATE VETERINARY HOSPITAL
HISTORY & PHYSICAL

B6
CANINE
MC
B6
MASTIFF
FAWN
B6
B6

Admission / Exam Date: 8/17/18
 Weight: 212 lbs lbs kgs 96.4 kg
 Temp: — Pulse: 140 Respiration: pink
 Membrane Color: pink Capillary Refill: L2
 Body Condition: W/G Pain Score: 0/4

VACCINATION STATUS:			YES	NO	DATE		N	ABN	No Exam		N	ABN	No Exam
Rabies	<input type="checkbox"/>	<input type="checkbox"/>				General Appearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reproductive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Distemper or FVRCP	<input type="checkbox"/>	<input type="checkbox"/>				Integumentary	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mammary	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lepto or FeLV	<input type="checkbox"/>	<input type="checkbox"/>				Ophthalmic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Urinary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tetanus	<input type="checkbox"/>	<input type="checkbox"/>				Otic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nervous	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EEE / WEE / VEE	<input type="checkbox"/>	<input type="checkbox"/>				Musculoskeletal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alimentary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
West Nile Virus	<input type="checkbox"/>	<input type="checkbox"/>				Cardiovascular	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lymphatic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influenza	<input type="checkbox"/>	<input type="checkbox"/>				Respiratory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Rhinopneumonitis	<input type="checkbox"/>	<input type="checkbox"/>				Lactating?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		Pregnant?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Other:	<input type="checkbox"/>	<input type="checkbox"/>											

CHIEF COMPLAINT: recheck for DCM (diet induced?) + CHF

B6

[Faint handwritten notes in a box, possibly bleed-through from the reverse side of the page.]

- I. Present History
 - A. Onset / Duration
 - B. Progression
 - C. Prior Treatment
 - II. Past History
 - A. Medical Illness
 - B. Surgical
 - C. Reproductive
 - D. Adverse Drug Reaction
 - E. Trauma
 - III. Environment
 - IV. Preventative
 - V. Systems Review
- Student Signature _____
 Clinician Signature _____

B6

B6
CANINE
MC

B6
MASTIFF
B6

FAWN
B6

B6

NC STATE VETERINARY HOSPITAL
DAILY TREATMENT RECORD

ALERTS:

IV CATHETER SITE(S): _____ DATE PLACED: 8/17/18 INITIALS: **B6**

CLINICAL SUMMARY: recheck through cardio

DATE: _____ CAGE: B-3 DIET: _____ WATER: _____ WEIGHT: 95kg

TREATMENT PLAN (RECORD OBSERVATIONS ON BACK)	TIME	MONITORING																	
		①	②	③															
① walk q 6	8:00 AM																		
	9:00 AM																		
② water q 6	10:00 AM	0	DLC																
	11:00 AM																		
③ check all legs	12:00 PM																		
	1:00 PM																		
	2:00 PM																		
	3:00 PM																		
	4:00 PM																		
	5:00 PM																		
	6:00 PM																		
	7:00 PM																		
	8:00 PM																		
	9:00 PM																		
	10:00 PM																		
	11:00 PM																		
	12:00 AM																		
	1:00 AM																		
	2:00 AM																		
	3:00 AM																		
	4:00 AM																		
	5:00 AM																		
	6:00 AM																		
	7:00 AM																		

STUDENT: **B6**

CLINIC: **B6**

Canine Echocardiography Report

Patient Name:
Medical Rec #:
DOB:
Age:
Sex:
Sonographer:

B6

6 years
Mc
B6

Date of Exam: 8/17/2018
Breed: Mastiff
Weight: 96 kg
BSA: 2.12 m²
HR:
BP-sys:

Report Status:
Ref. Clinician:
Diagnosis:
Study Details:

READ
B6

Dilated cardiomyopathy - suspect diet induced, atrial fibrillation
2D Echo/Doppler/Color Doppler. The images were of adequate diagnostic quality. The patient was awake.

2D
IVS
LV
LVPW

LV Area
LV Vol
Vol Index
Maj Axis
2D
LA Long Axis
LA d
Ao s
LA/Ao

M-mode
RV
IVS
LV
LVPW
LV normalized
LA



Normal Canine M-mode values (in cm) for 50 kg dogs.

LVIDd LVPWd IVSd LA Ao s
B6

Aortic Valve:
VMax
Pk Grad

B6

Tricuspid valve:
P 1/2 T

CLINICIAN INTERPRETATION:

Left Ventricle: The left ventricular cavity size is moderate to severely increased. Ventricular wall thickness is normal. LV basal fractional shortening is mild to moderately decreased.

Left Atrium: The left atrium is moderately dilated.

Right Atrium: The right atrium is mildly dilated.

Right Ventricle: The right ventricular size is mildly enlarged. RV wall thickness is normal. Global RV systolic function is mildly reduced.

Aortic Valve: No degree of aortic stenosis is present. No evidence of aortic valve regurgitation.

Mitral Valve: The E-point septal separation is increased. Mild to moderate mitral valve regurgitation. The MR jet is centrally-directed.

Pulmonic Valve: The pulmonic valve is normal.

Pericardium/Effusions: No pericardial effusion is seen.

Aorta: The aortic sinuses, arch, ascending and descending aorta appear all normal.

Pulmonary Artery: The pulmonary artery is of normal size and origin.

ECHO SUMMARY:

1. Dilated cardiomyopathy - suspect diet induced
2. The left ventricular cavity size is moderate to severely increased.
3. Moderately dilated left atrium.
4. Mildly dilated right atrium.
5. Mild to moderate mitral valve regurgitation.
6. Mild tricuspid regurgitation.

CV Exam:

Body condition was normal. The animal was panting. The mucous membranes appeared pink, with a normal capillary refill time. Femoral pulse quality was normal. Cardiac auscultation revealed a systolic murmur of grade I-II/VI intensity loudest at the left apex. Pulmonary auscultation revealed normal lung sounds.

ECG:

The heart rate measured at **B6** beats/minute. The ECG rhythm is atrial fibrillation. The heart rate in the exam room was **B6** pm.

Recommendations: This is a recheck echocardiogram and is compared to the prior study. **B6** was eating a grain free diet at the time of the prior study - and was transitioned to a non-grain free diet approximately 3 months ago.

This study shows improvement in the cardiac size and function. The LV remains moderately to severely dilated - but has shown a significant decrease in size over the past 3 months. The LV wall thickness has increased as well. The systolic function has shown improvement - but remains mildly to moderately reduced. The mitral regurgitation has decreased in severity, and the left atrium has decreased in size (but remains moderately enlarged).

A diagnostic ECG was not performed. The ECG during the echocardiogram showed atrial fibrillation with a ventricular response rate of **B6** pm. The heart rate in the exam room was **B6** pm, and the owners count a resting heart rate of **B6** pm at home.

Overall these findings show a significant improvement after the patient was transitioned off a grain free diet. Recommend continuing the cardiac medications at the current dosages. Recommend beginning taurine and fish oil supplementation. Recommend a recheck echocardiogram and holter monitor in 3-4 months.

B6

Electronically signed on 8/17/2018 on 5:08:14 PM

NC State University - Veterinary Hospital

Date of Admission: 08/31/2018

Owner: B6

Client #: B6

Home Phone: B6

Work Phone:

Cell Phone:

Patient: B6

DOB:

Patient #: B6

Sex: MC

Color: FAWN

Species: CANINE
Breed: MASTIFF

Referring Vet: B6

RDVM #: B6
Work Phone: B6
Cell Phone: B6
FAX: B6

Referring Clinic: B6

Clinic #: B6
Phone: B6
FAX: B6

Insurance: None

ID: B6

Is there another veterinarian involved in your pet's care other than the veterinarian listed above? (circle one)

Yes No
(Name of Veterinarian and Clinic)

FINANCIAL AGREEMENT:

I assume full financial responsibility for all charges incurred for diagnostic, therapeutic, surgical and preventative services. I agree to make a payment prior to services received to be used towards my pet's care during hospitalization of the low end of my estimate range. I understand that my bill will go through a verification process where charges will be compared to my pet's medical record to determine accuracy for services rendered at this visit. I also understand that if there are any additional charges or credits found during this process (which can take up to 10 business days from the date on which my pet is discharged) I will receive additional invoices reflecting this in the mail.

Owner's Signature: B6 (SEAL)

Date: 8/31/18

Owner's EMAIL: B6

PERMISSION TO USE IMAGES/AUDIO RECORDINGS:

NC State may take and use photographs, video or other images or recordings (including audio) related to my animal's examination and treatment at the Veterinary Hospital. These images and recordings may be used for nonprofit educational and advanced learning purposes.

Check only if:

() I do not agree to photo/media use by NC State. Please inform your clinician if you do not agree to this.

PERMISSION TO USE SAMPLES THAT REMAIN AFTER DIAGNOSTIC TESTING:

Unused blood and urine are usually discarded after 7 days. Excess tissue is frequently available. In some instances, these samples have research or teaching value. Clients who prefer that pet's samples not be used may strike through this paragraph and initial and date the strikethrough. Please inform your clinician if you do this.

EMAILED
8/31/18 JB

**NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments**

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case # B6 84.5 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
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Admission Date/Time: AUG 31, 2018 09:52 AM Discharge Date/Time: AUG 31, 2018 11:27 AM Discharge Status:

CASE SUMMARY

DIAGNOSIS:

1. Occult dilated cardiomyopathy - suspect diet induced
2. Historic otitis externa and atopic dermatitis

HISTORY:

B6 is a 6 year old male castrated Mastiff that was presented to NCSU Cardiology Service on 8/31/18 for a recheck evaluation of occult dilated cardiomyopathy.

B6 was initially evaluated by the NCSU Cardiology Service on 5/23/18. He was proactively screened after his littermate **B6** was diagnosed with DCM, atrial fibrillation, and congestive heart failure earlier in May. An echocardiogram revealed evidence of dilated cardiomyopathy, with moderate to severe LV enlargement and reduced systolic function. A whole blood taurine level returned within normal limits. No cardiac medications were prescribed, but taurine supplementation (3000mg BID) was recommended. Both **B6** were eating the same grain free diet for years prior to diagnosis. Both dogs were transitioned to FROMM Salmon Al La Veg (contains whole grains) after **B6** diagnosis in May 2018.

Since his last visit **B6** has been doing well at home, and remains asymptomatic. He has shown no episodes of collapse, weakness, trouble breathing, or coughing. He is eating and drinking well with no vomiting or diarrhea. He was initially eating Earthbound Naturals Lamb Grain Free, and was transitioned to Zignature Kangaroo Grain Free in 2016. He is now eating 6 cups daily of Fromm Salmon A La Veg (contains whole grains). **B6** has a history of otitis externa and atopic dermatitis.

B6

CV/RESP: Soft grade II/VI left basilar systolic murmur. No arrhythmia auscultated. Femoral pulses strong and synchronous. Clear bronchovesicular sounds bilaterally.

B6

RESULTS OF DIAGNOSTIC TESTS:

1. ECHOCARDIOGRAM
 - a. Moderate LV dilation - improved from prior study
 - b. Mild left atrial enlargement - improved from prior study

- c. Mild mitral regurgitation - static
- d. Mildly reduced LV systolic function - static

ASSESSMENT:

Thank you for entrusting us with [B6] care, he was a very good boy.

Today we performed a recheck echocardiogram to evaluate [B6] cardiac structure and function. We are happy to report that his echo shows considerable improvement in his heart size. His heart remains enlarged, and continues to show evidence of reduced function - but overall has shown improvement in the past 3 months. This is great news, and indicates at least some portion of his cardiac changes are responding to a diet change. As we discussed, it is still possible [B6] has underlying dilated cardiomyopathy secondary to his genetics, but we are very pleased to see this improvement with a diet change. We would like him to continue receiving taurine supplementation.

We would like to see [B6] back in 4-6 months for another recheck echocardiogram to evaluate for further improvement. As we discussed, [B6] heart may return to normal over time, or he may have mild cardiac changes throughout his life. Please continue to monitor him for any signs of worsening cardiac disease - such as lethargy, increased respiratory rate/effort, coughing, weakness, or collapse. If you are concerned about how he is doing, please contact us and have him evaluated by a veterinarian.

INSTRUCTIONS FOR CARE

MEDICATIONS: No cardiac medications are currently indicated. Please continue to supplement taurine (3000mg twice daily).

ACTIVITY:

Please avoid strenuous exercise or situations which place undue stress on [B6]. In general, pets with heart disease will self-regulate their exercise. Please monitor for any change in exercise capability.

DIET: [B6] can continue to enjoy his current diet.

MONITORING:

Please continue to monitor [B6] for any signs of worsening cardiac disease - such as lethargy, increased respiratory rate/effort, coughing, weakness, or collapse. If you are concerned about how he is doing, please contact us and have him evaluated by a veterinarian.

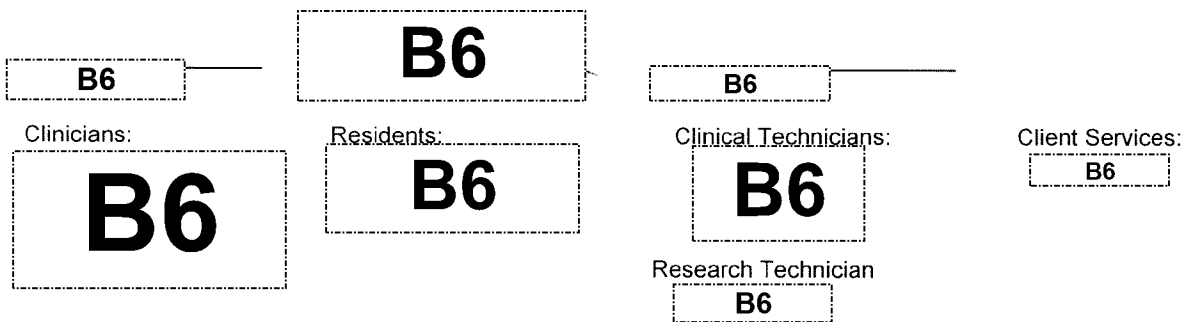
PLAN FOR NEXT EVALUATION:

1. We would like to see [B6] back in 4-6 months for a recheck exam, blood pressure, and echocardiogram. Please let us know if you feel he needs to be seen sooner.

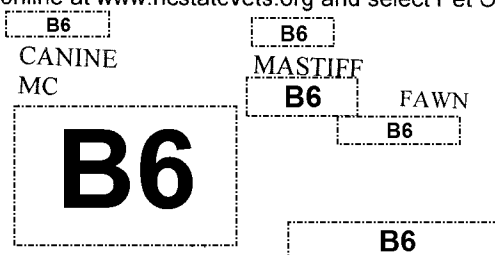
COMMENTS:

If you have any concerns with how your pet is doing, or to schedule an appointment, please contact the NC State Veterinary Hospital at 919-513-6694. There is a veterinarian on call 24 hours a day.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pets' medical condition.



In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.



Patier B6 B6
 CANINE MASTIEF
 MC B6 FAWN
 Client B6 B6

CARDIOLOGY PATIENT QUESTIONNAIRE

Contact number _____
 (Please try to be available between
 9:30 and 10:30 am for questions or
 updates)

I would like to pick up my pet at: _____ today if possible.
(between 1pm and 4pm)

May we sedate or tranquilize your pet today if necessary? YES NO

Some tests require shaving to obtain the best results – may we shave your pet's fur today if necessary? YES NO

Please indicate any symptoms your pet has experienced since your last visit – please describe in the space provided:

<input type="checkbox"/> Change in activity level
<input type="checkbox"/> Change in water consumption
<input type="checkbox"/> Change in urination frequency
<input type="checkbox"/> Change in appetite
<input type="checkbox"/> Coughing
<input type="checkbox"/> Difficulty breathing
<input checked="" type="checkbox"/> Sneezing allergy slawm
<input type="checkbox"/> Weakness / fainting
<input type="checkbox"/> Vomiting
<input type="checkbox"/> Diarrhea

Current diet: _____
 Have you seen your family vet since your last visit? _____

Has your pet been fed today? YES NO
 If yes, what time _____ am/pm
 How much? _____

CURRENT MEDICATIONS:

Drug Name	How often given?	Was medication given today?	What time?	REFILL NEEDED TODAY?
B6	BID	yes	8am	YES NO
	BID	yes	8am	YES NO
	quarterly	NO		YES NO
	BID	yes	8am	YES NO
	MONTHLY	NO		YES NO

Owner Signature: B6

Date: 8/31/18

Use back of sheet for any additional information.

NC STATE VETERINARY HOSPITAL
HISTORY & PHYSICAL

B6
CANINE
MC
B6
MASTIFF
FAWN
B6
B6
B6

Admission / Exam Date: 8/31/18
 Weight: lbs kgs 84.5
 Temp: Pulse: 124 Respiration: part
 Membrane Color: pink, moist Capillary Refill: <2s
 Body Condition: 6/9 Pain Score: 0/4

VACCINATION STATUS:	YES	NO	DATE		N	ABN	No Exam		N	ABN	No Exam
Rabies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	General Appearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reproductive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Distemper or FVRCP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Integumentary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mammary	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lepto or FeLV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Ophthalmic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Urinary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tetanus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Otic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nervous	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EEE / WEE / VEE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Musculoskeletal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alimentary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
West Nile Virus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Cardiovascular	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lymphatic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influenza	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Respiratory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Rhinopneumonitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>								
Other: <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Lactating?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		Pregnant?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

CHIEF COMPLAINT: Re check occult DCM

B6

- I. Present History
 - A. Onset / Duration
 - B. Progression
 - C. Prior Treatment
- II. Past History
 - A. Medical Illness
 - B. Surgical
 - C. Reproductive
 - D. Adverse Drug Reaction
 - E. Trauma
- III. Environment
- IV. Preventative
- V. Systems Review

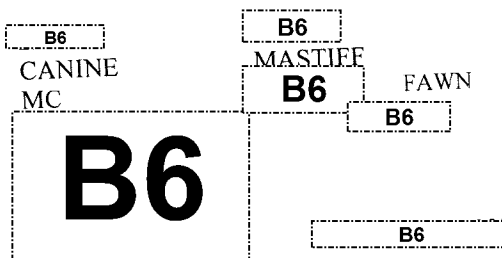
Student Signature:
 Clinician Signature:

B6

NC State Veterinary Hospital

Cardiology Pet Diet History

Date: 8/31/18



Current diet:

Brand fromm 4-star

Variety Salmon ala veg

Is this diet Grain-free? NO

How long has your pet eaten this food? 3 months

Are there other pets in your house eating this food? yes

Other diets eaten in the last 3 years and dates:

Signature Kangaroo
Earthborn Natural Meadow Feast

Other food (treats, rawhides, table food):

all of the above X rawhide

Supplements (e.g. fish oil, CoQ10, vitamins etc)

MegaVite, joint max tripe strength
canine

8/31/18 J.B

Canine Echocardiography Report

Patient Name: **B6**
Medical Rec #: **B6**
DOB: **B6**
Age: 6 years
Sex: Mc
Sonographer: **B6**

Date of Exam: 8/31/2018
Breed: Mastiff
Weight: 83 kg
BSA: 1.92 m²
HR:
BP-sys:

Report Status: READ
Ref. Clinician: **B6**
Diagnosis: Dilated cardiomyopathy - suspect diet induced
Study Details: 2D Echo/Doppler/Color Doppler. The images were of adequate diagnostic quality. The patient was awake.

2D
IVS
LV
LVPW

2D
LA Long Axis
LA d
Ao s
LA/Ao

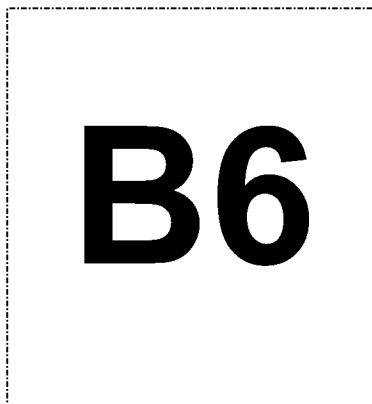
M-mode
RV
IVS
LV
LVPW
LV normalized
LA



Normal Canine M-mode values (in cm) for 50 kg dogs.

LVIDd	LVPWd	IVSd	LA	AO	%FS
B6					




Aortic Valve:
VMax
Pk Grad



Tricuspid valve:
P 1/2 T

Pulmonic valve:
Vmax
Pk Grad

B6
CANINE
MC **B6** MASTIEF **B6** FAWN **B6**



CLINICIAN INTERPRETATION:

Left Ventricle: The left ventricular cavity size is moderately increased. Ventricular wall thickness is normal. LV basal fractional shortening is mildly decreased.

Left Atrium: The left atrium is mildly dilated.

Right Atrium: The right atrium is normal in size.

Right Ventricle: The right ventricular size is normal. RV wall thickness is normal.

Aortic Valve: No degree of aortic stenosis is present. No evidence of aortic valve regurgitation.

Mitral Valve: The E-point septal separation is increased. Mild mitral valve regurgitation. The MR jet is centrally-directed.

Pulmonic Valve: The pulmonic valve is normal.

Pericardium/Effusions: No pericardial effusion is seen.

Aorta: The aortic sinuses, arch, ascending and descending aorta appear all normal.

Pulmonary Artery: The pulmonary artery is of normal size and origin.

ECHO SUMMARY:

1. The left ventricular cavity size is moderately increased.
2. Mildly dilated left atrium.
3. Mild mitral valve regurgitation.
4. No tricuspid regurgitation.

CV Exam:

Body condition was normal. Normal respirations. The mucous membranes appeared pink, with a normal capillary refill time. Femoral pulse quality was normal. No pulse deficits were noted. Cardiac auscultation revealed a systolic murmur of grade I-II/VI intensity loudest at the left base. Pulmonary auscultation revealed normal lung sounds.

ECG:

The heart rate measured at **B6** beats/minute. The ECG rhythm is regular sinus rhythm.

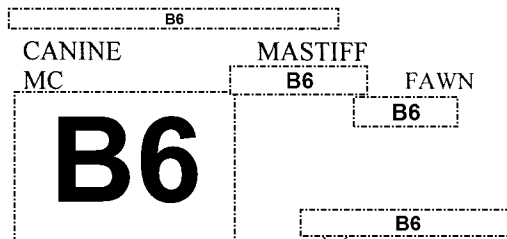
Recommendations: A standing echocardiogram was performed and was limited by panting. This is a recheck echocardiogram and is compared to the prior study dated 5/23/18. **B6** has been supplemented with taurine (3000mg BID) since that time, and he has continued to eat a diet containing grains.

The LV has shown a reduction in size and is now moderately enlarged. The systolic function remains mildly reduced and is unchanged compared to prior. There is evidence of persistent mild mitral regurgitation. The left atrium has shown a reduction in size as well, and is now equivocally enlarged.

Overall these changes support a diagnosis of diet induced DCM - with improving cardiac structure and function. No cardiac medications are indicated. Recommend continuing taurine supplementation (3000mg BID). Recommend a recheck echocardiogram in 3-6 months to evaluate for further improvement.

B6

Electronically signed on 8/31/2018 on 4:42:59 PM



NC State University - Veterinary Hospital

Date of Admission: 05/23/2018

Owner: B6

Client #: B6

Home Phone: B6

Work Phone:

Cell Phone:

Patient: B6

Patient #: B6

DOB:

Sex: MC

Color: FAWN

Species: CANINE

Breed: MASTIFF

Referring Vet: B6

RDVM #: B6

Work Phone: B6
Cell Phone: B6
FAX:

Referring Clinic: B6

Clinic #: 394

Phone: B6
FAX:

Insurance: None

ID: B6

Is there another veterinarian involved in your pet's care other than the veterinarian listed above? (circle one)

Yes No
(Name of Veterinarian and Clinic)

FINANCIAL AGREEMENT:

I assume full financial responsibility for all charges incurred for diagnostic, therapeutic, surgical and preventative services. I agree to make a payment prior to services received to be used towards my pet's care during hospitalization of the low end of my estimate range. I understand that my bill will go through a verification process where charges will be compared to my pet's medical record to determine accuracy for services rendered at this visit. I also understand that if there are any additional charges or credits found during this process (which can take up to 10 business days from the date on which my pet is discharged) I will receive additional invoices reflecting this in the mail.

Owner's Signature: B6 SEAL) Date: 5/23/18

Owner's EMAIL:

PERMISSION TO USE IMAGES/AUDIO RECORDINGS:

NC State may take and use photographs, video or other images or recordings (including audio) related to my animal's examination and treatment at the Veterinary Hospital. These images and recordings may be used for nonprofit educational and advanced learning purposes.

Check only if:

() I do not agree to photo/media use by NC State. Please inform your clinician if you do not agree to this.

PERMISSION TO USE SAMPLES THAT REMAIN AFTER DIAGNOSTIC TESTING:

Unused blood and urine are usually discarded after 7 days. Excess tissue is frequently available. In some instances, these samples have research or teaching value. Clients who prefer that pet's samples not be used may strike through this paragraph and initial and date the strikethrough. Please inform your clinician if you do this.

EMAILED
5/24/18 MK

**NC State University
Veterinary Hospital
1052 William Moore Drive
Raleigh, NC 27607
Discharge Comments**

Fax: Admin
Fax: Referral

Small Animal (919) 513-6500
Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case # B6 82.3 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
---------------------	---	--------------------------	--	--------------

Admission Date/Time: MAY 23, 2018 08:54 AM **Discharge Date/Time:** MAY 23, 2018 10:00 AM **Discharge Status:**

CLINICIAN: B6

Date: 5/22/18

CASE SUMMARY:

Thank you for entrusting us with the care of your companion. The Discharge Summary will be emailed to you and faxed to your RDVM within 24 hours of release/discharge from our facility via email. If you or your veterinarian do not receive this, please contact the B6 B6 to request a copy. The following will briefly outline the care your companion should receive at home and was explained by our staff at the time of discharge:

DIAGNOSIS (ES):

1. Suspected DCM

INSTRUCTIONS FOR CARE OF YOUR PET:

Medications: None at this time

Activity / Cautions:

Please monitor B6 for lethargy, weakness, increased respiratory rate and effort and coughing. If this happens please contact a veterinarian.

PLAN FOR RE-EVALUATION OF YOUR PET: We would like to see B6 at the NCSU Cardiology service after 3 months for an echocardiogram. Please schedule this appointment at your earliest convenience.

IF YOU HAVE ANY QUESTIONS OR PROBLEMS, PLEASE CALL THE SMALL ANIMAL EMERGENCY SERVICE AT (919) 513-6911.

PLEASE CALL TO MAKE YOUR FOLLOW UP APPOINTMENT AS RECOMMENDED

B6

Copy to: Owner / Medical Record / Fax to RDVM

CASE SUMMARY

DIAGNOSIS

- 1) Occult Dilated Cardiomyopathy (r/o diet related vs taurine deficiency vs idiopathic)
- 2) Otitis Externa
- 3) Suspected Atopic Dermatitis

HISTORY

B6 is a B6 male castrated Mastiff who was presented to the NCSU Cardiology Service on 5/23/18 for screening for occult dilated cardiomyopathy (DCM) after his littermate was diagnosed with the same earlier this month. The owner reports that B6 has been doing well at home. He has had no visible changes to respiratory rate or effort, no coughing, lethargy, vomiting or diarrhea and has a normal appetite. He was transitioned off of a grain free diet (Earthborn Naturals Lamb Grain Free and Zignature Kangaroo Grain Free) three weeks ago onto Fromm 4 Star Salmon A La Veg which is a grain containing diet. His medical history includes

B6

B6

DIAGNOSTICS

- 1) Echocardiogram: Moderate to severe left ventricular enlargement, mild mitral valve regurgitation, mildly decreased left ventricular ejection fraction
- 2) ECG: NSR (Normal Sinus Rhythm), no arrhythmias detected
- 3) Taurine Levels (whole blood): pending

ASSESSMENT

Thank you for bringing **B6** into the Cardiology Service, he is a very sweet dog and a wonderful patient! Today we performed an echocardiogram which revealed moderate dilation of the left ventricle and decreased systolic function (ability of the heart to pump blood effectively). Based on these findings, we suspect occult (early, asymptomatic) dilated cardiomyopathy (DCM). Although the exact mechanism of DCM is currently unknown, dietary taurine/carnitine deficiencies, genetics and toxins have been linked to DCM. Recent clinical cases of DCM in atypical breeds have also resulted in an association being elicited between some grain free diets and DCM.

We discussed that the underlying cause of **B6** DCM could be dietary or related to taurine deficiency based on his history but that he is also the correct breed and age to develop primary DCM. Based on the current stage of his heart disease, we are recommending continuing his new grain containing diet and subsequent monitoring with echocardiogram. We also submitted his blood sample to estimate taurine levels during this visit. We will contact you with the results are available and discuss supplementation at that time if he is deficient. Furthermore, we also did an ECG in order to detect the presence of any abnormal heart rhythms (arrhythmias) and are happy to report that his heart rhythm is normal at this time.

It is impossible to predict how **B6** DCM will progress. We have seen several cases in which transition off of the grain free diet has resulted in significant improvement of the structural changes and cardiac function. Taurine responsive DCM also carries a good prognosis. If his DCM is not diet or taurine responsive, then it is more difficult to predict the time frame of his disease and we will continue to monitor his structural changes and cardiac function and may prescribe medication **B6** in order to optimize his cardiac health. Please monitor **B6** at home for any increased respiratory rate or effort, exercise intolerance, coughing, syncope (collapse), lethargy and decreased appetite. If you notice any of these signs, please contact the Cardiology Service, the Small Animal Emergency Service or your primary care veterinarian.

INSTRUCTIONS FOR CARE

MEDICATIONS

No medications are being prescribed at this time

ACTIVITY

Please allow **B6** to set his own activity level. Please try and avoid any extremely stressful or strenuous activity

DIET

Please continue to feed the Fromm 4 Star A La Veg dry food. If you choose to transition to another diet, please select a senior diet containing grain.

MONITORING

Please monitor [B6] for coughing, syncopal (collapse) episodes or increased respiratory rate or effort. Please count his respiratory rate when he is at rest and not panting. We would like his respiratory rate to stay under 40 breaths per minute (no more than 10 breaths in 15 seconds). Other signs of difficulty breathing include abdominal effort, extended head and neck and cyanotic (blue tinged) or pale gums. Please also watch him for lethargy, exercise intolerance, decreased appetite, vomiting, diarrhea or changes in urination or drinking. If you notice any of these signs, please contact the NCSU CVM Cardiology Service, your primary care veterinarian or an emergency clinic immediately.

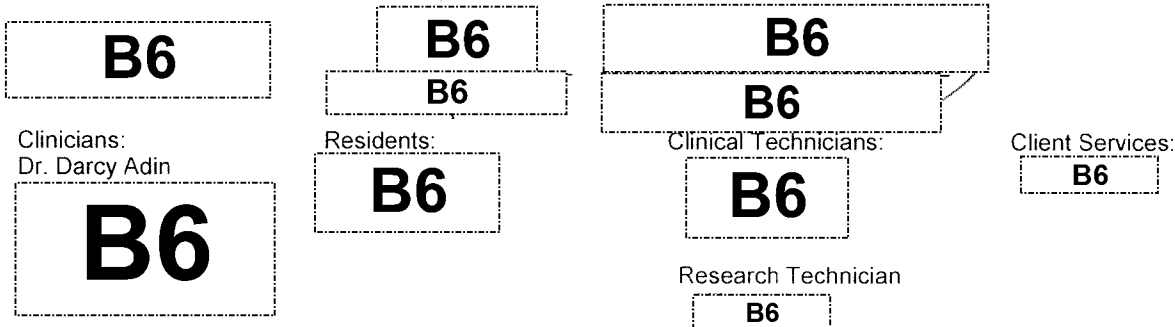
PLAN FOR FURTHER EVALUATION

Please plan to recheck with the Cardiology Service in 3 months for an echocardiogram to monitor the progression of his heart disease.

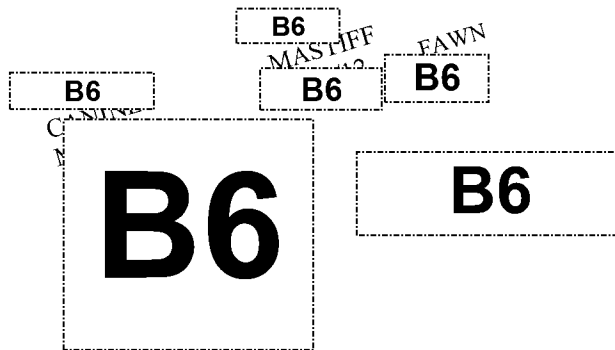
COMMENTS:

If you have any concerns with how your pet is doing, or to schedule an appointment, please contact the NC State Veterinary Hospital at 919-513-6694. There is a veterinarian on call 24 hours a day.

NOTE: If your pet is in need of emergency aid and you are not able to get to the NC State Veterinary Hospital quickly, please seek care at the nearest veterinary emergency facility. Take these discharge instructions and current medications with you so that the treating veterinarian will know as much as possible regarding your pets' medical condition.



In order to help expedite medication refills, please visit us online at www.ncstatevets.org and select Pet Owners, Pharmacy Refills.



**NC State University
 Veterinary Hospital
 1052 William Moore Drive
 Raleigh, NC 27607
 Discharge Comments**

Fax: Admin

Fax: Referral

Small Animal (919) 513-6500

Large Animal (919) 513-6630

Client B6	Patient B6 MASTIFF MC FAWN CANINE	Case B6 82.3 kg	Attending DVM Student Discharging DVM Referring DVM	B6 B6
---------------------	---	------------------------------	--	----------

Admission Date/Time: MAY 23, 2018 08:54 AM

Discharge Date/Time: MAY 23, 2018 10:00 AM

Discharge Status:

CLINICIAN: B6

Date: 5/22/18

CASE SUMMARY:

Thank you for entrusting us with the care of your companion. The Discharge Summary will be emailed to you and faxed to your RDVM within 24 hours of release/discharge from our facility via email. If you or your veterinarian do not receive this, please contact the B6 to request a copy. The following will briefly outline the care your companion should receive at home and was explained by our staff at the time of discharge:

DIAGNOSIS (ES):

- 1. Suspected DCM

INSTRUCTIONS FOR CARE OF YOUR PET:

Medications: None at this time

Activity / Cautions:

Please monitor B6 for lethargy, weakness, increased respiratory rate and effort and coughing. If this happens please contact a veterinarian.

PLAN FOR RE-EVALUATION OF YOUR PET: We would like to see B6 at the NCSU Cardiology service after 3 months for an echocardiogram. Please schedule this appointment at your earliest convenience.

IF YOU HAVE ANY QUESTIONS OR PROBLEMS, PLEASE CALL THE SMALL ANIMAL EMERGENCY SERVICE AT (919) 513-6911.

PLEASE CALL TO MAKE YOUR FOLLOW UP APPOINTMENT AS RECOMMENDED

B6

B6 (owner) B6 (clinician)

Copy to: Owner / Medical Record / Fax to RDVM

NC STATE VETERINARY HOSPITAL
HISTORY & PHYSICAL

B6
CANINE
MC
B6
MASTIFF
FAWN
B6
B6
B6

Admission / Exam Date: 5/23/18

Weight: 82.3 lbs kgs

Temp: Pulse: 90 Respiration: pant

Membrane Color: pink Capillary Refill: <2

Body Condition: 5/9 Pain Score: 0/4

VACCINATION STATUS:	YES	NO	DATE		N	ABN	No Exam		N	ABN	No Exam
Rabies	<input type="checkbox"/>	<input type="checkbox"/>		General Appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reproductive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distemper or FVRCP	<input type="checkbox"/>	<input type="checkbox"/>		Integumentary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mammary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lepto or FeLV	<input type="checkbox"/>	<input type="checkbox"/>		Ophthalmic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Urinary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tetanus	<input type="checkbox"/>	<input type="checkbox"/>		Otic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nervous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EEE / WEE / VEE	<input type="checkbox"/>	<input type="checkbox"/>		Musculoskeletal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alimentary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
West Nile Virus	<input type="checkbox"/>	<input type="checkbox"/>		Cardiovascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lymphatic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influenza	<input type="checkbox"/>	<input type="checkbox"/>		Respiratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Rhinopneumonitis	<input type="checkbox"/>	<input type="checkbox"/>									
Other:	<input type="checkbox"/>	<input type="checkbox"/>		Lactating?	<input type="checkbox"/> Yes <input type="checkbox"/> No			Pregnant?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

CHIEF COMPLAINT: [Redacted]

B6

- I. Present History
 - A. Onset / Duration
 - B. Progression
 - C. Prior Treatment
- II. Past History
 - A. Medical Illness
 - B. Surgical
 - C. Reproductive
 - D. Adverse Drug Reaction
 - E. Trauma
- III. Environment
- IV. Preventative
- V. Systems Review

Student Signature: [Redacted]

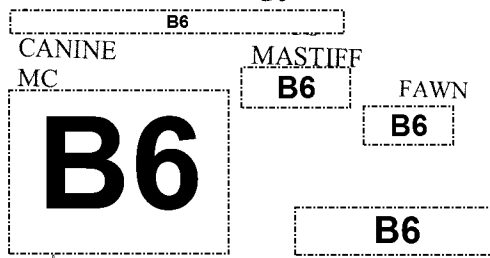
Clinician Signature: [Redacted]

B6

NC State Veterinary Hospital

Cardiology Pet Diet History

Date: 5/23/18



Current diet:

Brand Fromm

Variety 4 Star Salmon aka Veg

Is this diet Grain-free? No

How long has your pet eaten this food? 3 weeks

Are there other pets in your house eating this food? yes

Other diets eaten in the last 3 years and dates:

Earthborn Naturals Lamb grain-free ^{1 yr}
Signature Kangaroo grain-free - 2 yrs until 3wks ago

Other food (treats, rawhides, table food):

woof gang's wheat-free or grain-free treats, table food, antlers

Supplements (e.g. fish oil, CoQ10, vitamins etc)

Joint max triple strength
Bravecho & Sentinel, Benadryl 100mg BID

**NCSU, COLLEGE OF VETERINARY MEDICINE
NCSU DIAGNOSTIC LABORATORIES**

Client _____ Patient _____ Med Rec Case: **B6**

B6 **B6** MC 181.4715 lbs MASTIFF_EAWN
CANINE: **B6**

Completed 2 of 2 Results

Request	Item	Priority	Status	Dates
H-776718	TA	ROUTINE	COMPLETE	Requested: 05/23/18 10:16 AM Collection: 05/23/18 10:15 AM Received: 05/23/18 10:20 AM Needed: 05/23/18 10:15 AM Status: 05/29/18 09:47 AM

Requesting DVM: **B6**
Student:
Comments:

SENDOUT LAB - TESTING

TEST	RESULT	UNITS	REF RANGE	RESULT DATETIME
------	--------	-------	-----------	-----------------

TAURINE- WHOLE BLOOD SEE SCANNED DOCUMENT

Questions and Answers:

TAURINE- WHOLE BLOOD HISTORY? TEXT-Poss DCM,
TAURINE- WHOLE BLOOD NEW SAMPLE OR ONE PREVIOUSLY SUBMITTED TO CLINPATH NEW

Containers
9018-759

18932

Sample Submission Form

Amino Acid Laboratory
University of California, Davis
1020 Vet Med 3B
1089 Veterinary Medicine Drive
Davis, CA 95616
Tel: (530)752-5058, Fax: (530)752-4698

UC CUSTOMERS ONLY
Non-federal funds ID/Account Number
to bill: _____

<http://www.vetmed.ucdavis.edu/vmb/aal/aal.html>

Vet/Tech Contact: **B6**
Company Name: North Carolina State University College of Veterinary Medicine

Address: Clinical Pathology Lab, Room C-269
1052 William Moore Drive
Raleigh, NC 27607

Email: _____
Tel: **B6** Fax: 919 513-6556

Billing Contact: _____
Email: _____ TAX ID: _____
Tel: _____

Patient Name: **B6**

Species: IC9

Owner's Name: **B6**

Sample Type: Plasma Whole Blood Urine Food Other: _____
Test Items: Taurine Complete Amino Acid Other: _____

Taurine Results (nmol/ml)

Plasma: _____ Whole Blood: **B6** Urine: _____ Food: _____

Reference Ranges (nmol/ml)

	Plasma		Whole Blood	
	Normal Range	No known Risk for Taurine Deficiency	Normal Range	No Known Risk for Taurine Deficiency
Cat	80-120	>40	300-600	>200
Dog	60-120	>40	200-350	>150

Canine Echocardiography Report

Patient Name:	B6	Date of Exam:	5/23/2018
Medical Rec #:		Breed:	Mastiff
DOB:	B6	Weight:	82 kg
Age:	5 years	BSA:	1.91 m ²
Sex:	Mc	HR:	
Sonographer:	B6	BP-sys:	

Report Status: READ
Ref. Clinician: **B6**
Diagnosis: Dilated cardiomyopathy
Study Details: 2D Echo/Doppler/Color Doppler. The images were of adequate diagnostic quality. The patient was awake.

Additional Comments:

DCM screening. Littermate diagnosed with DCM recently- both were eating a grain-free diet until 3 weeks ago. Now eating Fromm's adult diet.

2D

LA d
Ao s
LA/Ao

M-mode

RV
IVS
LV
LVPW
LV normalized
LA

B6

CLINICIAN INTERPRETATION:

Left Ventricle: The left ventricular cavity size is moderate to severely increased. LV ejection fraction is mildly decreased. LV basal fractional shortening is mild to moderately decreased.

Left Atrium: The left atrium is normal in size.

Right Atrium: The right atrium is normal in size.

Right Ventricle: The right ventricular size is normal. RV wall thickness is normal.

Aortic Valve: No evidence of aortic valve regurgitation.

Mitral Valve: The E-point septal separation is increased. Mild mitral valve regurgitation.

Pulmonic Valve: The pulmonic valve is normal.

Pericardium/Effusions: No pericardial effusion is seen.

Aorta: The aortic sinuses, arch, ascending and descending aorta appear all normal.

Pulmonary Artery: The pulmonary artery is of normal size and origin.

ECHO SUMMARY:

1. The left ventricular cavity size is moderate to severely increased.
2. Mild mitral valve regurgitation.
3. No tricuspid regurgitation.

4. Mildly decreased LV ejection fraction.

ECG:

The heart rate measured at **B6** beats/minute. The ECG rhythm is regular sinus rhythm. Was/were noted. Complexes suggest no ventricular enlargement. The frontal axis has a normal orientation. ECG complex measurements are normal.

Recommendations: A standing echo was performed. Image quality affected by panting.

The LV is moderately to severely dilated with increased LV end-diastolic and end-systolic dimensions. Systolic function is mildly to moderately reduced. There is mild MR. No ectopy was noted during the diagnostic or echo ECG.

Findings are consistent with occult DCM. Based on the dog's signalment and history (full sibling with DCM and AF), idiopathic DCM and/or diet-associated DCM (recent grain-free diet) are possible. Recommend recheck echo in 3 months (due to recent diet change). Taurine level pending. No cardiac meds are recommended at this time pending the recheck echo in 3 months. If changes are persistent/progressive at the recheck echo, initiation of **B6** can be considered.

B6

Electronically signed on 5/23/2018 on 3:48:48 PM

B6
CANINE

B6
MASTIFF

B6
FAWN

B6

B6

B6

5/23/2018

9:58:46 AM

B6

NCSU CARDIOLOGY

B6

B6

CASTIFF

FAWN

B6

B6

Fac: NCSU-CVM

B6

C
V

B6

B6

aVR

B6

From: PFR Event <pfpreventcreation@fda.hhs.gov>

To: Cleary, Michael *; HQ Pet Food Report Notification; B6

Sent: 9/25/2018 5:16:12 PM

Subject: Fromms Four Star Grain Free Beef Frittata Veg Dry Dog Food; B6
EON-366756

Attachments: 2055325-report.pdf

A PFR Report has been received and PFR Event [EON-366756] has been created in the EON System.

A "PDF" report by name "2055325-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report:

EON Key: EON-366756

ICSR #: 2055325

EON Title: PFR Event created for Fromms Four Star Grain Free Beef Frittata Veg Dry Dog Food, The Farmer's Dog Beef Recipe; 2055325

AE Date	09/24/2018	Number Fed/Exposed	1
Best By Date		Number Reacted	1
Animal Species	Dog	Outcome to Date	Stable
Breed	Retriever - Golden		
Age	8.5 Years		
District Involved			

Product information

Individual Case Safety Report Number: 2055325

Product Group: Pet Food

Product Name: Fromms Four Star Grain Free Beef Frittata Veg Dry Dog Food, The Farmer's Dog Beef Recipe

Description: B6 has been fed grain free dog food since 2013. I acquired B6 at 9 weeks of age from a reputable breeder. She was fed Purina ProPlan for Puppies from birth - early 2013. In early 2013, B6 was diagnosed with an impacted anal gland that ruptured and the vet recommended she be fed grain-free dog food. At that time, I began feeding Fromm's Beef Firtitta Grain Free. In late 2016, B6 began to experience steady diarrhea. After much vet intervention including a 2 night stay at vet hospital on IV, I changed B6 from Fromm's to a short transition time on ground beef w/rice and then to a fresh dog food, The Farmer's Dog Beef with Lentils.

Her diarrhea completed cleared and she remained on The Farmer's Dog Beef with Lentils until I begin reading about the issue with Low Taurine in Golden Retrievers. Based on UC Davis and Dr Stern studies, I obtained a blood sample for testing. UC Davis completed the test and her taurine level is low at **B6** while the level for a Golden Retriever is 250+. I had an echocardiogram done yesterday, Sept 24, 2018. The canine cardiologist evaluation is as follows: "Mild/early dilated cardiomyopathy-suspect taurine responsive. Trace mitral valve regurgitation. Normal left atrial dimensions. High normal left ventricular dimensions with moderately decreased heart muscle function. Normal right heart size. History of eating a grain-free diet. Low taurine." "No medications are indicated at this time. Begin Taurine 1000 mg twice daily. In two weeks, begin L-carnitine 1850 mg three times daily. In four weeks, begin fish oil supplements (omega-3 fatty acids) at approximately EPA 1500 mg and DHA 925 mg total per day. Change diet from grain free, legume foods. Cardiologist recommends follow up in 6 months.

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 1

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Fromms Four Star Grain Free Beef Frittata Veg Dry Dog Food		
The Farmer's Dog Beef Recipe		

Sender information

B6

USA

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-366756>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jsps?decorator=none&e=0&issueType=12&issueId=383670>

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From: Freeman, Lisa <Lisa.Freeman@tufts.edu>
To: Jones, Jennifer L
Sent: 8/27/2018 1:23:54 PM
Subject: FW: Taurine result for patients [B6]
Attachments: T_20484.pdf; T_20485.pdf

Taurine results on [B6]
Lisa

Lisa M. Freeman, DVM, PhD, DACVN
Board Certified Veterinary Nutritionist™
Professor
Cummings School of Veterinary Medicine
Friedman School of Nutrition Science and Policy
Tufts Clinical and Translational Science Institute
Tufts University
www.petfoodology.org

B6

Sample Submission Form

Amino Acid Laboratory
University of California, Davis
1020 Vet Med 3B
1089 Veterinary Medicine Drive
Davis, CA 95616
Tel: (530)752-5058, Fax: (530)752-4698

UC CUSTOMERS ONLY:
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to bill: _____

<http://www.vetmed.ucdavis.edu/vmb/aal/aal.html>

B6

8/20/2018 1:58 PM
TAURINE (WHOLE BLOOD)
Lithium Heparin

Vet/Tech Contact: **B6**
Company Name: Tufts Cummings School of Vet Med - Clinical Pathology Labor
Address: 200 Westboro Road
North Grafton, MA 01536
Email: clinpath@tufts.edu; cardiovet@tufts.edu
Tel: 508-887-4669 Fax: 508-839-7936

Billing Contact: **B6** TAX ID: _____
Email: **B6** Tel: **B6**

Patient Name: **B6**
Species: canine
Owner's Name: **B6**

Sample Type: Plasma Whole Blood Urine Food Other: _____
Test Items: Taurine Complete Amino Acid Other: _____

Taurine Results (nmol/ml)
Plasma: _____ Whole Blood: **B6** Urine: _____ Food: _____

Reference Ranges (nmol/ml)

	Plasma		Whole Blood	
	Normal Range	No Known Risk for Taurine Deficiency	Normal Range	No Known Risk for Taurine Deficiency
Cat	80-120	>40	300-600	>200
Dog	60-120	>40	200-350	>150

B6

B6

8/16/2018 2:11 PM
TAURINE (WHOLE BLOOD)
Lithium Heparin

n

Amino Acid Laboratory
University of California, Davis
1020 Vet Med 3B
1089 Veterinary Medicine Drive
Davis, CA 95616
Tel: (530)752-5058, Fax: (530)752-4698

UC CUSTOMERS ONLY:
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to bill: _____

<http://www.vetmed.ucdavis.edu/vmb/aal/aal.html>

Vet/Tech Contact: **B6**
Company Name: Tufts Cummings School of Vet Med - Clinical Pathology Laboratory
Address: 200 Westboro Road
North Grafton, MA 01536
Email: clinpath@tufts.edu; cardiovet@tufts.edu
Tel: 508-887-4669 Fax: 508-839-7936

Billing Contact: **B6** TAX ID: _____
Email: **B6** Tel: **B6**

Patient Name: **B6**
Species: Canine
Owner's Name: **B6**

Sample Type: Plasma Whole Blood Urine Food Other: _____
Test Items: Taurine Complete Amino Acid Other: _____

Taurine Results (nmol/ml) **B6**
Plasma: _____ Whole Blood: _____ Urine: _____ Food: _____

Reference Ranges (nmol/ml)

	Plasma		Whole Blood	
	Normal Range	No Known Risk for Taurine Deficiency	Normal Range	No Known Risk for Taurine Deficiency
Cat	80-120	>40	300-600	>200
Dog	60-120	>40	200-350	>150

From: Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>
To: Rotstein, David; Queen, Jackie L; Palmer, Lee Anne; Carey, Lauren
CC: Peloquin, Sarah; Ceric, Olgica
Sent: 10/2/2018 6:36:27 PM
Subject: RE: 800.267-EON-362878-[B6]-Acana Free Run Poultry dry
Attachments: EON-362878-owner interview-10.2.2018.pdf

Jennifer Jones, DVM
Veterinary Medical Officer
Tel: 240-402-5421



From: Jones, Jennifer L
Sent: Thursday, September 20, 2018 10:27 AM
To: Rotstein, David <David.Rotstein@fda.hhs.gov>; Queen, Jackie L <Jackie.Queen@fda.hhs.gov>; Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Carey, Lauren <Lauren.Carey@fda.hhs.gov>
Cc: Peloquin, Sarah <Sarah.Peloquin@fda.hhs.gov>; Ceric, Olgica <Olgica.Ceric@fda.hhs.gov>; 'Reimschuessel, Renate (Renate.Reimschuessel@fda.hhs.gov)' <Renate.Reimschuessel@fda.hhs.gov>
Subject: RE: 800.267-EON-362878-[B6]-Acana Free Run Poultry dry

Interview pending, Cough since early 2017! Norm Tau; Housemate [B6]-also Tau norm, maybe got echo (checking)

[B6] MC Doberman Pinscher

Hx: [B6] report of nonproductive hacking cough recently-O thought after sniffing dust, eating Valor Freeze dried food; 3/10/2017-PD, morning cough-o thinks allergies, MAP crytals are check had none-rare; 7/26/2017-possible anxiety in dark, seasonal allergies (spring/summer) worse, occ little cough but normal for him, on Grandma Lucy raw and Earthborne; 2/14/2018-Grandma Lucy and Acana poultry

B6

B6

B6 Housemate
8/20/2018 WB Tau: **B6**

Jennifer Jones, DVM
Veterinary Medical Officer
Tel: 240-402-5421



From: PFR Event <pfpreventcreation@fda.hhs.gov>
Sent: Monday, August 20, 2018 4:44 PM
To: Cleary, Michael * <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov> **B6**
Subject: Acana Free Run Poultry dry: Lisa Freeman - EON-362878

A PFR Report has been received and PFR Event [EON-362878] has been created in the EON System.

A "PDF" report by name "2053969-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2053969-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-362878
ICSR #: 2053969
EON Title: PFR Event created for Acana Free Run Poultry dry; 2053969

AE Date	08/06/2018	Number Fed/Exposed	2
Best By Date		Number Reacted	1
Animal Species	Dog	Outcome to Date	Stable
Breed	Doberman Pinscher		
Age	B6 Years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2053969

Product Group: Pet Food

Product Name: Acana Free Run Poultry dry

Description: Taken to RDVM for lameness. Dilated cardiomyopathy and CHF diagnosed 8/6/18 **B6**

B6 We saw at Tufts 8/16/18. Clinically improved but still has significant DCM and **B6** We added **B6** fish oil, and taurine. WB taurine

pending. Another dog in household (also a Doberman) was eating the same food but was echoed today and has no signs of DCM.

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 2

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Acana Free Run Poultry dry		

Sender information

Lisa Freeman
200 Westboro Rd
North Grafton, MA 01536
USA

Owner information

B6

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-362878>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=12&>

B6

=====

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**Follow-up Case Information Uniform Data Entry Form
Vet-LIRN**

Date (mm/dd/yy)

EON/CC Number:

PATIENT INFORMATION

Pet Name

Dog Cat

Breed

Age in years (if < 6 months, put 0.5)

Gender:

M MN F FS

This form serves as a Uniform Data Entry Form to capture additional case specific information not clear from the Consumer Complaint or Medical Records in a standardized manner. Because each follow-up interview made with owners features questions tailored specifically to the case, each box of information contained in this Uniform Data Entry Form may not be completed.

HISTORY-Additional Comments from Owner

Owner's Description of What Happened:

Any Health Problems Prior to the Event (e.g. allergies, surgeries):

Sensitive GI tract (e.g. stomach upset when switching foods, eats a lot of grass) Yes

Changes to the pet's diet prior to illness Yes

Date Diet Change:

CLINICAL INFORMATION--Additional Comments from Owner on What Happened

Appetite Increased Decreased

Water Consumption Increased Decreased

Vomiting Yes

Urination Increased Decreased

Diarrhea Yes

Lethargy Yes

Duration of Diarrhea (days)

Other:

Blood in Feces Fresh,Red
 Coffee Ground
 Black,Tarry

MEDICATIONS-Taken Prior to the Event and Mentioned by Owner

List medications mentioned by owner (e.g. NSAIDs, steroids, heartworm/flea prevention, antibiotics, etc.)

List probiotics, vitamins, or supplements mentioned by owner:

**Follow-up Case Information Uniform Data Entry Form
Vet-LIRN**

EON/CC Number: 362,878

Owner:

B6

Pet's Name:

B6

DIET-Any other foods the owner mentions were given to the animal during this period. (check all that apply)

Commercial Dry Product Use as Part of Diet: Primary Secondary Occasional

List Product Label Name

fed Taste of the Wild until 1.5 to 2 yr ago, then switched to Acana Free Run Poultry-only variety, fed b/c mineral levels, first fed 1.5 to 2 year ago, 2 cups BID for each dog, measuring cup, last fed this food

Commercial Wet-Canned Product Use as Part of Diet: Primary Secondary Occasional

List Product Label Name

Commercial Wet-Pouch Product Use as Part of Diet: Primary Secondary Occasional

List Product Label Name:

Commercial-Raw Product Use as Part of Diet: Primary Secondary Occasional

List Product Label Name:

Grandma Lucy's Freeze Dried Raw (more of this than kibble)-Grain Free, 1 scoop for each dog BID, anywhere from 1/4 to 1/2 cup mixed with water, BID for each dog; Chicken flavor fed most often but

Homemade-Raw Product Use as Part of Diet: Primary Secondary Occasional

Describe Product Type:

Homemade-Cooked Product Use as Part of Diet: Primary Secondary Occasional

Describe Product Type:

chicken breast, green beans, carrots, long grain brown rice-sometimes in lieu of raw

Table Scraps/Human Food (as an occasional contribution to diet) Describe Product Type(s): frozen blueberries, organic pumpkin puree, peanut butter, apples,

Pet Treat Products Product Use as Part of Diet: Primary Secondary Occasional

Commercial Product Label Name/Lot: Mother Hubbard tiny cookies Date first fed

How Product Administered: gotten occasionally, not handfuls daily Date last fed

Rawhides or Pig Ears Product Label Name/Lot: Bully sticks for B6 as a puppy but not recently Date first fed

How Product Administered: Date last fed

Marrow Bones Product Label Name/Lot: occ got knuckle bone but was 3 years ago Date first fed

How Product Administered: Date last fed

Chicken Jerky Product Label Name/Lot: Date first fed

How Product Administered: Date last fed

Duck Jerky Product Label Name/Lot: Date first fed

How Product Administered: Date last fed

Sweet Potato Jerky or Treats Product Label Name/Lot: Date first fed

How Product Administered: Date last fed

**Follow-up Case Information Uniform Data Entry Form
Vet-LIRN**

EON/CC Number: 362,878

Owner:

B6

Pet's Name:

B6

DIET-continued-Any other foods the owner mentions were given to the animal during this period. (check all that apply)

Other Treats Product Label Name/Lot: _____ Date first fed _____
How Product Administered: _____ Date last fed _____

ENVIRONMENTAL EXPOSURES-Environmental Exposures Mentioned by the Owner Potentially Affecting the Animal's Overall State of Health Prior to the Event . (check all that apply)

- Indoor Outdoor Indoor & Outdoor Carrion Rodents Grapes or Raisins Nuts
- Plants Trash Hunt Pet Shows Sporting Events Pet Recreation Facilities
- Livestock Poultry Reptiles Pet Birds Small Mammals Untreated Surface Water
- Anti-freeze Mushrooms Heavy Metals Ticks Urban Suburban Rural

Comments: with owner 24/7, in and out all day long-owner: B6 outside supervised, big fenced in backyard, owner goes to barn often-exposure to whatever dog/cat/horse touched the clothing, dogs don't go to the barn with the owner;
grape vines were growing along fence and became curious of them recently, trying to get them-owner cut them down; B6 will nibble grass; B6 will constantly try to eat mushrooms or acorns
B6 used to do sporting events or dog social facilities until a little after they got; B6 will go hiking; see ticks crawling on them and last year both dogs were bitten once (unclear if attached)

HOUSEHOLD-Signalment of Additional Animals Given the Product mentioned by the owner.

Animal 1: B6 -normal Taurine and Echocardiogram, had a minor sinus B6 does weird hacking cough: she will eat dust bunnies or Reacted

Animal 2: _____ Reacted

Animal 3: _____ Reacted

Comments: _____

Submit

From: PFR Event <pfpreventcreation@fda.hhs.gov>
To: Cleary, Michael *; HQ Pet Food Report Notification; [B6]
Sent: 12/27/2018 3:16:35 PM
Subject: Acana Free Run Poultry dry: Lisa Freeman - EON-374786
Attachments: 2060599-report.pdf; 2060599-attachments.zip

A PFR Report has been received and PFR Event [EON-374786] has been created in the EON System.

A "PDF" report by name "2060599-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2060599-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-374786

ICSR #: 2060599

EON Title: PFR Event created for Acana Free Run Poultry dry; 2060599

AE Date	08/20/2018	Number Fed/Exposed	2
Best By Date		Number Reacted	2
Animal Species	Dog	Outcome to Date	Stable
Breed	Doberman Pinscher		
Age	10 Years		
District Involved	PFR [B6] DO		

Product information

Individual Case Safety Report Number: 2060599

Product Group: Pet Food

Product Name: Acana Free Run Poultry dry

Description: Housemate was diagnosed with DCM ([B6] previously reported). [B6] was asymptomatic but eating same diet (Acana) so was screened 8/20/18 - reduced contractile function. Owner changed diet to Pro Plan Weight Management dry. No improvement on 12/12/18 echo. Will recheck in 3 months
 WB taurine [B6]

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 2

Number of Animals Reacted With Product: 2

Product Name	Lot Number or ID	Best By Date
Acana Free Run Poultry dry		

Sender information

Lisa Freeman
200 Westboro Rd
North Grafton, MA 01536
USA



To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-374786>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=12&issueId=391795>

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Failure to adhere to the above provisions could result in removal from the approved distribution list. If you think you received this email in error, please send an email to FDAREportableFoods@fda.hhs.gov immediately.

Report Details - EON-374786

ICSR: 2060599
 Type Of Submission: Initial
 Report Version: FPSR.FDA.PETF.V.V1
 Type Of Report: Adverse Event (a symptom, reaction or disease associated with the product)
 Reporting Type: Voluntary
 Report Submission Date: 2018-12-27 10:09:22 EST

Reported Problem:

Problem Description: Housemate was diagnosed with DCM (B6 - previously reported). B6 was asymptomatic but eating same diet (Acana) so was screened 8/20/18 - reduced contractile function. Owner changed diet to Pro Plan Weight Management dry. No improvement on 12/12/18 echo. Will recheck in 3 months WB taurine. B6

Date Problem Started: 08/20/2018

Concurrent Medical Problem: Yes

Pre Existing Conditions: Hypothyroidism, incontinence, history of UTIs/crystalluria

Outcome to Date: Stable

Product Information:

Product Name: Acana Free Run Poultry dry

Product Type: Pet Food

Lot Number:

Package Type: BAG

Product Use Information: **Description:** Fed since approximately 9/2016 (see diet history form) Changed to Pro Plan Weight Management Aug 2018

Manufacturer /Distributor Information:

Purchase Location Information:

Animal Information:

Name: B6

Type Of Species: Dog

Type Of Breed: Doberman Pinscher

Gender: Female

Reproductive Status: Neutered

Weight: 38.1 Kilogram

Age: 10 Years

Assessment of Prior Health: Excellent

Number of Animals Given the Product: 2

Number of Animals Reacted: 2

Owner Information: **Owner Information provided:** Yes

Contact: **Name:** B6
Phone: B6
Email:

Address: B6
 United States

Healthcare Professional Information: **Practice Name:** Tufts Cummings School of Veterinary Medicine
Contact: **Name:** Lisa Freeman

			Phone: (508) 887-4523
			Email: lisa.freeman@tufts.edu
		Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States
Sender Information:	Name:	Lisa Freeman	
	Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States	
	Contact:	Phone:	5088874523
		Email:	lisa.freeman@tufts.edu
	Permission To Contact Sender:	Yes	
Preferred Method Of Contact:	Email		
Additional Documents:	Attachment:	B6	medical records.pdf
	Description:	Medical records	
	Type:	Medical Records	

From: Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>
To: Carey, Lauren; Cleary, Michael *; HQ Pet Food Report Notification; [B6]
Sent: 3/21/2019 9:41:00 PM
Subject: Acana Free Run Poultry dry: Lisa Freeman - EON-383005
Attachments: 2064397-report.pdf; 2064397-attachments.zip

A PFR Report has been received and Related PFR Event [EON-383005] has been created in the EON System.

A "PDF" report by name "2064397-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2064397-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-383005

ICSR #: 2064397

EON Title: Related PFR Event created for Acana Free Run Poultry dry; 2064397

AE Date	08/20/2018	Number Fed/Exposed	2
Best By Date		Number Reacted	2
Animal Species	Dog	Outcome to Date	Better/Improved/Recovering
Breed	Doberman Pinscher		
Age	[B6]		
District Involved	PFR-[B6]DO		

Product information

Individual Case Safety Report Number: 2064397

Product Group: Pet Food

Product Name: Acana Free Run Poultry dry

Description: Housemate was diagnosed with DCM ([B6] - previously reported). [B6] was asymptomatic but eating same diet (Acana) so was screened [B6] - reduced contractile function. Owner changed diet to Pro Plan Weight Management dry. No improvement on [B6] echo. Will recheck in 3 months WB taurine [B6]

Submission Type: Followup

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Better/Improved/Recovering

Number of Animals Treated With Product: 2

Number of Animals Reacted With Product: 2

Product Name	Lot Number or ID	Best By Date
Acana Free Run Poultry dry		

This report is linked to:

Initial EON Event Key: EON-374786

Initial ICSR: 2060599

Sender information

Lisa Freeman
200 Westboro Rd
North Grafton, MA 01536
USA

Owner information

B6

To view this Related PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-383005>

To view the Related PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=10100&issueId=400103&parentIssueTypeId=12>

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Failure to adhere to the above provisions could result in removal from the approved distribution list. If you think you received this email in error, please send an email to FDAREportableFoods@fda.hhs.gov immediately.

All Medical Records

Client: [B6]
Address: [B6]

Patient: [B6]
Breed: Doberman
DOB: [B6]

Species: Canine
Sex: Female
(Spayed)

Home Phone: [B6]
Work Phone: () -
Cell Phone: [B6]

Referring Information

[B6]

Client: [B6]
Patient: [B6]

Initial Complaint:

Cardiology Study Appointment

SOAP Text Aug 20 2018 1:58PM - [B6]

Initial Complaint:

Recheck - [B6] - DCM study

SOAP Text Dec 12 2018 12:23PM - [B6]

Initial Complaint:

Recheck - [B6] - DCM study

Initial Complaint:

PAGE ANTOON - HOLTER REMOVAL

Client: **B6**
Patient:

Disposition/Recommendations

Client: **B6**
Patient:

Client: **B6**
Patient:

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

Foster Hospital for Small Animals

55 Willard Street
North Grafton, MA 01536
(508) 839-5395

Client:	B6
Veterinarian:	
Patient ID:	B6
Visit ID:	

Patient:	B6
Species:	Canine
Breed:	Doberman
Sex:	Female (Spayed)
Age:	B6 Years Old

Lab Results Report

Accession ID:			
Test	Results	Reference Range	Units



Client: **B6**
Patient:

UCDavis Taurine Level

B6

Sample Submission Form

Amino Acid Laboratory
University of California, Davis
1020 Vet Med 3B
1089 Veterinary Medicine Drive
Davis, CA 95616
Tel: (530)752-5058, Fax: (530)752-4698

UC CUSTOMERS ONLY:
Non-federal funds ID/Account Number
to bill: _____

<http://www.vetmed.ucdavis.edu/vmb/aal/aal.html>

B6

Vet/Tech Contact: **B6**
Company Name: Tufts Cummings School of Vet Med - Clinical Pathology Labor
Address: 200 Westboro Road
North Grafton, MA 01536
Email: clinpath@tufts.edu; cardiovet@tufts.edu
Tel: 508-887-4669 Fax: 508-839-7936

B6 Canine
8/20/2018 1:58 PM
TAURINE (WHOLE BLOOD)
Lithium Heparin

Billing Contact: **B6** TAX ID: _____
Email: **B6** Tel: **B6**

Patient Name: **B6**
Species: canine
Owner's Name: **B6**

Sample Type: Plasma Whole Blood Urine Food Other: _____
Test Items: Taurine Complete Amino Acid Other: _____

Taurine Results (nmol/ml)
Plasma: _____ Whole Blood: **B6** Urine: _____ Food: _____

Reference Ranges (nmol/ml)

	Plasma		Whole Blood	
	Normal Range	No Known Risk for Taurine Deficiency	Normal Range	No Known Risk for Taurine Deficiency
Cat	80-120	>40	300-600	>200
Dog	60-120	>40	200-350	>150

Client: **B6**
Patient:

Lab Results IDEXX CARDIOPET proBNP 12/12/18

IDEXX Reference Laboratories

B6

Client: **B6**
Patient:
Species: CANINE
Breed: DOBERMAN_PINSCH
Gender: FEMALE SPAYED
Age: 10Y

Date: 12/12/2018
Requisition #: 455387
Accession #: **B6**
Ordered by: **B6**

IDEXX VetConnect 1-888-433-9987

TUFTS UNIVERSITY
200 WES TBORO RD
NORTH GRAFTON, Massachusetts 01536-1828
508-839-5395

Account #80735

CARDIOPET proBNP - CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP - CANINE	B6	0 - 900 pmol/L	HIGH		B6

Comments:

B6

Please note: Complete interpretive comments for all concentrations of cardiopet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: **B6**
 Patient:

Diet history 12/12/18

CARDIOLOGY DIET HISTORY FORM
 Please answer the following questions about your pet

Pet's name: **B6** Owner's name: **B6** Today's date: **12/12/18**

- How would you assess your pet's appetite? On a scale of 1-10 with 1 being poor and 10 being excellent: **10**
- Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)
 Eats about the same amount as usual Eats less than usual Eats more than usual
 Seems to prefer different foods than usual Other: Meals divided into 3 daily servings. 1/m scared of blood. Her brother passed due to blood 10/15.
- Over the last few weeks, has your pet (check one)
 Lost weight Gained weight Stayed about the same weight Don't know
- Please list below ALL pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats. Please include the brand, specific product, and flavor so we know exactly what you pet is eating.

Food (include specific product and flavor) Form Amount How often? Fed since
Examples are shown in the table – please provide enough detail that we could go to the store and buy the exact same food.

Food (include specific product and flavor)	Form	Amount	How often?	Fed since
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2018
85% lean hamburger	microwaved	3 oz	1x/week	Jan 2015
Pupperoni original beef flavor	treat	1/2	1x/day	Aug 2015
Rawhide	treat	6 inch twist	1x/week	Dec 2015
Purina Pro Plan Healthy Weight Adult	dry	1.5 cups	2x/day	August 2018
Purina Pro Plan Healthy Weight Adult (1.5 cups 2x/day + 1 cup 1x/day)	dry	1 cup	1x/day	Oct. 2018
Hills Science Diet Beef&Barley Chicken&Barley Chicken&Beef	wet	1/4 can	2x/day with 1.5dry	August 2018
Organic salt free, sugar free peanut butter	wet/frozen	1 teaspoon	1x/day or less	since little
Organic pumpkin puree	wet/frozen	1 to 2 teaspoons	1x/day or less	2015?
Banana	mashed	1/2 banana or small	1x/day or less	since little
blue berries or watermelon	organic	a taste	seasonally	since little

**Any additional diet information can be listed at the bottom of this sheet*

- Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)? Yes No If yes, please list which ones and give brands and amounts:

	Brand/Concentration	Amount per day
Taurine	<input type="radio"/> Yes <input type="radio"/> No	_____
Carnitine	<input type="radio"/> Yes <input type="radio"/> No	_____
Antioxidants	<input type="radio"/> Yes <input type="radio"/> No	_____
Multivitamin	<input type="radio"/> Yes <input type="radio"/> No	_____
Fish oil	<input checked="" type="radio"/> Yes <input type="radio"/> No <small>CVS Natures Bounty 1200mg 360 omega 3</small>	<small>2 per day but unsure, have questions</small>
Coenzyme Q10	<input type="radio"/> Yes <input type="radio"/> No	_____
Other (please list): Example: Vitamin C	<small>Nature's Bounty</small>	<small>500 mg tablets – 1 per day</small>
Thyrotab	<small>0.8mg</small>	<small>1 tablet twice per day</small>

- How do you administer pills to your pet?
 I do not give any medications I put them directly in my pet's mouth without food
 I put them in my pet's dog/cat food I put them in a Pill Pocket or similar product
 I put them in foods (list foods): I put the thyrotab in a little ball of canned food and she takes it. The fish oil gel tab she'll happily take as is

Additional diet or supplement information: _____

Information below to be completed by the veterinarian:

Current body weight: _____ kg Current body condition score (1-9): ____/9
 Muscle Condition Score: normal muscle mild muscle loss moderate muscle loss severe muscle loss

Client: **B6**
 Patient: **B6**

Diet history 8/20/18

CARDIOLOGY DIET HISTORY FORM
 Please answer the following questions about your pet

Pet's name: **B6** Owner's name: **B6** Today's date: **8/20/18**

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)
 Example: **Poor** _____ **Excellent**
 Poor _____ Excellent

2. Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)
 Eats about the same amount as usual Eats less than usual Eats more than usual
 Seems to prefer different foods than usual Other _____

3. Over the last few weeks, has your pet (check one)
 Lost weight Gained weight Stayed about the same weight Don't know

4. Please list below ALL pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats. Please include the brand, specific product, and flavor so we know exactly what you pet is eating.

Food (include specific product and flavor) Form Amount How often? Fed since
 Examples are shown in the table - please provide enough detail that we could go to the store and buy the exact same food.

Food (include specific product and flavor)	Form	Amount	How often?	Fed since
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2018
85% lean hamburger	microwaved	3 oz	1x/week	Jan 2015
Pupperoni original beef flavor	treat	1/2	1x/day	Aug 2015
Rawhide	treat	6 inch twist	1x/week	Dec 2015
Yoga Free Run Purtery		1.5 cups	2x/day	9/16?
Blueberries, watermelon		handful	throughout day	
Apples, organic pumpkin		"	Seasonal	
Bananas		1/2	few times/week	
organic peanut butter		1 teaspoon	few times/wk	
Boiled eggs		1	every other day	
Chicken		1/2 cup	1 day every other	

*Any additional diet information can be listed on the back of this sheet.

5. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)? Yes No. If yes, please list which ones and give brands and amounts.

	Brand/Concentration	Amount per day
Taurine	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Carnitine	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Antioxidants	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Multivitamin	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Fish oil	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Coenzyme Q10	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Other (please list): Example: Vitamin C	Nature's Bounty	500 mg tablets - 1 per day
_____	_____	_____
_____	_____	_____
_____	_____	_____

6. How do you administer pills to your pet?
 I do not give any medications
 I put them directly in my pet's mouth without food
 I put them in my pet's dog/cat food
 I put them in a Pill Pocket or similar product
 I put them in foods (list foods): in peanut butter / banana / canned food

Client: **B6**
Patient:

Holter Diary

B6

Client: **B6**
 Patient: **B6**

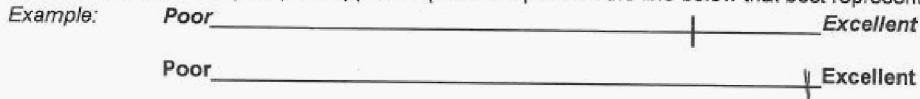
Diet Hx 3/6/19

CARDIOLOGY DIET HISTORY FORM

Please answer the following questions about your pet

Pet's name: **B6** Owner's name: **B6** Today's date: 3/6/19

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)



2. Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)
 Eats about the same amount as usual Eats less than usual Eats more than usual
 Seems to prefer different foods than usual Other _____

3. Over the last few weeks, has your pet (check one)
 Lost weight Gained weight Stayed about the same weight Don't know

1. Please list below ALL pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats and that you have fed in the last 2 years.

Please provide enough detail that we could go to the store and buy the exact same food - examples are shown in the table

Food (include specific product and flavor)	Form	Amount	How often?	Dates fed
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2016-present
85% lean hamburger	microwaved	3 oz	1x/week	June -Aug 2016
Pupperoni original beef flavor	treat	1/2	1x/day	Sept 2016-present
Rawhide	treat	6 inch twist	1x/week	Dec 2018-present
Russian Pro Plan weight management	kibble	1.5 cups	3 x /day	
Hills Science Beef Barley Canned	can food	1/3 can	2 x /day	
Bananas	fresh	1/2 banana	few times a week as treat	
Organic Peanutbutter (Salt & sugar free)	fresh	teaspoon	1 x /day or less on kung	
Organic Pumpkin	organic canned	tablespoon	1 x /day	1 Kang
blueberries	fresh	handful	3 or so daily as treat	
watermelon	fresh	handful	"	

*Any additional diet information can be listed on the back of this sheet

2. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)? Yes No If yes, please list which ones and give brands and amounts:

	Brand/Concentration	Amount per day
Taurine	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____
Carnitine	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____
Antioxidants	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____
Multivitamin	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____
Fish oil	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____
Coenzyme Q10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____
Other (please list): Example: Vitamin C	Nature's Bounty	500 mg tablets - 1 per day
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. How do you administer pills to your pet?

- I do not give any medications
- I put them directly in my pet's mouth without food
- I put them in my pet's dog/cat food
- I put them in a Pill Pocket or similar product
- I put them in foods (list foods): put them in a little ball of canned food and she takes it like a treat

Client: **B6**
Patient:

Vitals Results

8/20/2018 1:25:17 PM

Weight (kg)

B6

Client: **B6**
Patient:

ECG from Cardio

B6

8/20/2018 1:26:13 PM

Page 1 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology



B6

Client:
Patient: **B6**

ECG from Cardio

B6

8/20/2018 1:26:13 PM

Page 2 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology

B6

Client: **B6**
Patient:

ECG from Cardio

B6

8/20/2018 1:25:05 PM

Tufts University
Tufts Cummings School of Vet Med
Cardiology



B6

Client: **B6**
Patient:

ECG from Cardio

B6

3/6/2019 12:36:12 PM

Page 1 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology



B6

Client: **B6**
Patient:

ECG from Cardio

B6

3/6/2019 12:36:12 PM

Page 2 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology



B6

Client: **B6**
Patient:

ECG from Cardio

B6

3/6/2019 12:36:17 PM

Page 1 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology



B6

Client: **B6**
Patient:

ECG from Cardio

B6

3/6/2019 12:36:17 PM

Page 2 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology

B6

Client: **B6**
Patient:

ECG from Cardio

B6

3/6/2019 12:37:14 PM

Page 1 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology

B6

Client: **B6**
Patient:

ECG from Cardio

B6

3/6/2019 12:37:14 PM

Page 2 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology

B6

Client: **B6**
Patient:

Patient History

08/20/2018 12:48 PM	UserForm
08/20/2018 01:07 PM	Treatment
08/20/2018 01:20 PM	UserForm
08/20/2018 01:25 PM	Vitals
08/20/2018 01:26 PM	Purchase
08/20/2018 01:27 PM	Purchase
08/20/2018 01:27 PM	Purchase
10/17/2018 09:42 AM	Appointment
12/11/2018 07:22 PM	Appointment
12/12/2018 11:04 AM	UserForm
12/12/2018 11:07 AM	Treatment
12/12/2018 11:59 AM	Purchase
12/12/2018 11:59 AM	Purchase
12/12/2018 12:09 PM	UserForm
12/12/2018 12:24 PM	Purchase
12/12/2018 12:47 PM	Appointment
03/06/2019 11:05 AM	UserForm
03/06/2019 11:30 AM	UserForm
03/06/2019 11:58 AM	Purchase
03/06/2019 11:58 AM	Purchase
03/06/2019 11:58 AM	Purchase
03/06/2019 12:04 PM	Treatment
03/06/2019 12:31 PM	Purchase
03/06/2019 01:10 PM	Appointment
03/07/2019 09:24 AM	Appointment
03/07/2019 02:34 PM	Purchase

B6

Patient Account History	Description	Qty	price	Extended	Disc	Pmt
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Client:
Patient:

B6

Patient Account History	Description	Qty	price	Extended	Disc	Pmt
Monday, 20 August 2018 13:27	Appointment: Cardiology Study	1.000	0.000	0.0000	0.0000	0.0000

Client:
Patient:

B6

Patient Account History	Description	Qty	price	Extended	Disc	Pmt
Wednesday, 12 December 2018 11:59	Appointment: Cardiology Study	1.000	0.000	0.0000	0.0000	0.0000

Client: **B6**
Patient:

Patient Account History	Description	Qty	price	Extended	Disc	Pmt
Wednesday, 12 December 2018 12:24	NT Pro BNP Canine (IDEXX 2665) - FHSA					B6

Client: **B6**
Patient:

Patient Account History	Description	Qty	price	Extended	Disc	Pmt
Wednesday, 06 March 2019 11:57	Appointment: Cardiology Study	1.000	0.000	0.0000	0.0000	0.0000

Client: **B6**
Patient:

Patient Account History	Description	Qty	price	Extended	Disc	Pmt
Wednesday, 06 March 2019 12:31	Alba Holter Monitor	B6				

Client: B6
Patient:

Patient Account History	Description	Qty	price	Extended	Disc	Pmt
Thursday, 07 March 2019 14:34	Appointment: Cardiology Holter Removal	1.000	0.000	0.0000	0.0000	0.0000

Discharge Instructions

Patient

Name: B6

Species: Canine

Black/Tan Female (Spayed) Doberman

Birthdate: B6

Owner

Name: B6

Address: B6

Patient ID: B6

Attending Cardiologist: John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Student: B6

Cardiology Technician:

B6

Admit Date: 8/20/2018 12:44:33 PM

Discharge Date: 8/20/2018

Diagnoses: Apparently healthy animal!

Clinical Findings: On physical exam, her heart rate had mild irregularities called an arrhythmia. Her arrhythmia is called sinus arrhythmia, which happens when the heart rate decreases and increases with respiration. This is a normal finding in dogs. On auscultation, there was no murmurs heard at this time. Her physical exam was within normal limits.

Echocardiogram & ECG Findings:

The echocardiogram today found no evidence of Dilated Cardiomyopathy at this time. She does have slightly decreased contractility of the heart, which is something that does not need to be treated at this time; however, it is something to monitor in the future. The ECG showed a sinus arrhythmia, which is consistent with our auscultation.

Monitoring at Home:

1. We would like you to monitor your dog's breathing rate and effort at home, ideally during sleep or at a time of rest. If you noticed any trends or abnormalities, please contact us.
2. We also want you to watch for weakness or collapse, a reduction in appetite, worsening cough, or distention of the belly as these findings indicate that we should do a recheck examination.
3. If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

Diet Suggestions:

We would like to change B6 diet to a low sodium diet. A few diet options would be:

Dry Food:

Royal Canin Early Cardiac diet

Purina Canin Boxer

Purina Pro Plan Adult Weight Management (this does not have low calories in spite of the name of the food)

Canned Food:

Hills Science diet adult beef and barley entree

Exercise Recommendations:

B6 does not need any exercise restriction at this time.

Recommended Medications:

B6 does not need any cardiac medications at this time. Depending on the results of her bloodwork, taurine supplementation may need to be initiated. We will call you with the bloodwork results when they become available.

Recheck Visits: A recheck visit is scheduled for 4 months. At this visit we will want to check breathing effort and heart function and do a blood test. A recheck echocardiogram is recommended at this time as well to track any progression of structural or functional abnormalities.

Thank you for entrusting us with B6 care. Please contact our Cardiology liaison at (508)-887-4696 or email us at cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information

<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

Case: B6

Owner: B6

Discharge Instructions

B6

Patient ID: B6
B6 Canine
B6 Female (Spayed) Doberman
Black/Tan

Cardiology Appointment Report

Date: 8/20/2018

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: **B6**

Presenting Complaint:

Brother from same litter was unexpectedly diagnosed with DCM with secondary CHF recently

Concurrent Diseases:

Hypothyroidism (for 3 yrs) - medically managed
Spay incontinence
History of UTIs/crystalluria - managed with diet

General Medical History:

Acting normally, eating and drinking normally, no changes in bathroom habits, coughing occasionally (randomly), no vomiting, diarrhea, or sneezing noticed.

Diet and Supplements:

Akana Free-Reign Poultry Formulation 1.5-2 cups BID

Cardiovascular History:

Prior CHF diagnosis? No
Prior heart murmur? No
Prior ATE? No
Prior arrhythmia? No
Monitoring respiratory rate and effort at home? Yes, occasionally
Cough? Occasionally, random events

Shortness of breath or difficulty breathing? No

Syncope or collapse? No

Sudden onset lameness? No

Exercise intolerance? No

Current Medications Pertinent to CV System:

B6

Cardiac Physical Examination:

B6

Muscle condition:

- Normal
- Mild muscle loss
- Moderate cachexia
- Marked cachexia

Cardiovascular Physical Exam:

Murmur Grade:

- None
- I/VI
- II/VI
- III/VI
- IV/VI
- V/VI
- VI/VI

Jugular vein:

- Bottom 1/3 of the neck
- Middle 1/3 of the neck
- 1/2 way up the neck
- Top 2/3 of the neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

Arrhythmia:

- None
- Sinus arrhythmia
- Premature beats
- Bradycardia
- Tachycardia

Gallop:

- Yes
- No
- Intermittent
- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Pulmonary crackles
- Wheezes
- Upper airway stridor

Normal BV sounds

Abdominal exam:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Mild ascites |
| <input type="checkbox"/> Hepatomegaly | <input type="checkbox"/> Marked ascites |
| <input type="checkbox"/> Abdominal distension | |

Problems:

Apparently healthy animal
Genetic predisposition to DCM

Differential Diagnoses:

DCM

Diagnostic plan:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Echocardiogram | <input type="checkbox"/> Dialysis profile |
| <input type="checkbox"/> Chemistry profile | <input type="checkbox"/> Thoracic radiographs |
| <input checked="" type="checkbox"/> ECG | <input checked="" type="checkbox"/> NT-proBNP |
| <input type="checkbox"/> Renal profile | <input type="checkbox"/> Troponin I |
| <input type="checkbox"/> Blood pressure | <input type="checkbox"/> Other tests: |

B6

Assessment and recommendations:

Normal cardiac structure, although the contractile function is mildly decreased. This may be indicative of early cardiomyopathy. Taurine levels were submitted for analysis, and the patient will be switched off of the grain-free diet. If contractile function is not improved at the 4 month rechecked despite change in diet, then we should submit a NT-proBNP to help us diagnose if the changes is indicated of primary DCM and not diet related.

Final Diagnosis:

Mild MMVD
R/O diet-related vs. primary DCM related mild decrease in contractile function vs normal variation

Heart Failure Classification Score:

ISACHC Classification:

- | | |
|--|-------------------------------|
| <input checked="" type="checkbox"/> Ia | <input type="checkbox"/> IIIa |
|--|-------------------------------|

- Ib
- II

IIIb

ACVIM Classification:

- A
- B1
- B2

- C
- D

M-Mode

IVSd

LVIDd

LVPWd

IVSs

LVIDs

LVPWs

%FS

Ao Diam

LA Diam

LA/Ao

Max LA

M-Mode Normalized

IVSdN

LVIDdN

LVPWdN

IVSsN

LVIDsN

LVPWsN

Ao Diam N

LA Diam N

2D

SA LA

Ao Diam

SA LA / Ao Diam

LVLd A4C

LVEDV MOD A4C

LVLs A4C

LVESV MOD A4C

LVEF MOD A4C

SV MOD A4C

Doppler

MV E Vel

MV DecT

MV A Vel

MV E/A Ratio

E'



cm

cm

cm

cm

cm

cm

%

cm

cm

cm

(0.29 - 0.52)

(1.35 - 1.73)

(0.33 - 0.53)

(0.43 - 0.71) !

(0.79 - 1.14) !

(0.53 - 0.78) !

(0.68 - 0.89)

(0.64 - 0.90)

cm

cm

cm

ml

cm

ml

%

ml

m/s

ms

m/s

m/s

m/s

A'
E/E'
PV Vmax
PV maxPG
AV Vmax
AV maxPG

B6

m/s
m/s
mmHg
m/s
mmHg

Discharge Instructions

Patient

Name: B6

Species: Canine

Black/Tan Female (Spayed) Doberman

Birthdate: B6

Owner

Name: B6

Address: B6

Patient ID: B6

Attending Cardiologist:

John E. Bush, DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6

Admit Date: 8/20/2018 12:44:33 PM

Discharge Date: 12/12/2018

Diagnoses:

Mild decreased contractile function

Clinical Findings:

Thank you for bringing B6 to Tufts for her recheck echocardiogram (ultrasound of the heart).

On physical examination today, B6 vital parameters (heart rate, respiratory rate, and temperature) were within normal limits. We performed an echocardiogram (ultrasound of the heart) in order to reassess her mild decreased contractile function. As we discussed, just by looking at the pictures everything appeared stable. However, when we got the official measurements, the chambers of her heart measured slightly bigger than previously and her contractile function measures slightly lower as well.

As we discussed it is possible that those changes are just a variation of normal for B6. However, we cannot rule out that this is the early sign of dilated cardiomyopathy. In order to get more information on her cardiac status, we submitted a blood test called NT-proBNP. We will have the results by tomorrow and will call you in order to discuss the next step for

B6

Monitoring at home:

1. We would like you to monitor your dog's breathing rate and effort at home, ideally during sleep or at a time of rest. If you noticed any trends or abnormalities, please contact us.
2. We also want you to watch for weakness or collapse, a reduction in appetite, worsening cough, or distention of the belly as these findings indicate that we should do a recheck examination.

3. If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

Diet Recommendations:

Please continue feeding B6 her Purina Pro Plan Weight Management dry food and Hill's Science Diet adult beef and barley entree. These foods are low in sodium and do not have low calories despite the name.

Exercise Recommendations:

B6 does not need any exercise restriction at this time.

Recommended Medications:

B6 does not need any cardiac medications at this time.

Recheck Visits:

A recheck appointment March 6th 11 am with B6. At this time we will recheck an echocardiogram.

Thank you for entrusting us with B6 care. Please contact our Cardiology liaison at (508)-887-4696 or email us at cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Sincerely,

B6

Please visit our HeartSmart website for more information

<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvms/clinical-studies

Case: B6

Owner: B6

Discharge Instructions

B6

Patient ID: B6
B6 Canine
B6 Female (Spayed) Doberman
Black/Tan

Cardiology Appointment Report

Date: 12/12/2018

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6

Presenting Complaint:

Mild MMVD

Mild decreased contractile function R/O diet-related vs. primary DCM related mild decrease in contractile function vs normal variation

DCM Study

B6

Diet and Supplements:

Purina Pro Plan (Weight Management) B6

afternoon

Has stopped Fish Oil - has questions about causing bloat

Cardiovascular History:

Prior CHF diagnosis? N
Prior heart murmur? N
Prior ATE? N
Prior arrhythmia? Sinus arrhythmia
Monitoring respiratory rate and effort at home? Not as much, frequent panting
Cough? Occasional, no change from prior
Shortness of breath or difficulty breathing? N
Syncope or collapse? N
Sudden onset lameness? N
Exercise intolerance? N - will occasionally wheeze with cold

Current Medications Pertinent to CV System:

Medication: B6
Formulation/Tab Size: B6
Administration Frequency: B6
Need refills? No

Cardiac Physical Examination:

B6

Muscle condition:

- Normal
- Mild muscle loss
- Moderate cachexia
- Marked cachexia

Cardiovascular Physical Exam:

Murmur Grade:

- None
- I/VI
- II/VI
- III/VI
- IV/VI
- V/VI
- VI/VI

Jugular vein:

- Bottom 1/3 of the neck
- Middle 1/3 of the neck
- 1/2 way up the neck
- Top 2/3 of the neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

Arrhythmia:

- None
- Sinus arrhythmia
- Premature beats
- Bradycardia
- Tachycardia

Gallop:

- Yes
- Pronounced

- No
- Intermittent

Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds
- Pulmonary crackles
- Wheezes
- Upper airway stridor

Abdominal exam:

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites
- Marked ascites

Problems:

Mild MMVD

Mildly decreased contractile function r/o diet-related vs. primary DCM related mild decrease in contractile function vs normal variation

Diagnostic plan:

- Echocardiogram
- Chemistry profile
- ECG
- Renal profile
- Blood pressure
- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests:

B6

Assessment and recommendations:

Subjectively today's echo appeared very similar than previously but when comparing the numbers it appears that the contractile function is slightly decreased. Depending on which measurement is assess, the LV cavity appears stable to slightly bigger. It is unclear if the changes visualized today are just a variant of normal for this patient versus true progression of a heart disease. The patient was switched

diet since the last appointment and Taurine level were also normal. Since the significance of today's findings is unclear, an NT-proBNP was submitted today. If the level is higher than normal for a Doberman (i.e. >550) then we would most likely recommend starting pimobendan BID. A recheck echocardiogram is recommended in 3 months or sooner if the patient develops clinical signs consistent with worsening heart disease such as increased RR/RE, cough, exercise intolerance, or syncope.

Final Diagnosis:

- Very early DMVD
- Mild decreased contractile function r/o diet-related vs. primary DCM related mild decrease in contractile function vs normal variation

Heart Failure Classification Score:

ISACHC Classification:

- | | |
|--|-------------------------------|
| <input type="checkbox"/> Ia | <input type="checkbox"/> IIIa |
| <input checked="" type="checkbox"/> Ib | <input type="checkbox"/> IIIb |
| <input type="checkbox"/> II | |

ACVIM Classification:

- | | |
|--|----------------------------|
| <input type="checkbox"/> A | <input type="checkbox"/> C |
| <input type="checkbox"/> B1 | <input type="checkbox"/> D |
| <input checked="" type="checkbox"/> B2 | |

M-Mode

IVSd	B6	cm
LVIDd		cm
LVPWd		cm
IVSs		cm
LVIDs		cm
LVPWs		cm
EDV(Teich)		ml
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
Ao Diam		cm
LA Diam		cm
LA/Ao		
Max LA		cm

2D

SA LA	cm
Ao Diam	cm
SA LA / Ao Diam	
IVSd	cm
LVIDd	cm
LVPWd	cm
EDV(Teich)	ml
IVSs	cm
LVIDs	cm

LVPWs
ESV(Teich)
EF(Teich)
%FS
SV(Teich)
LVld A4C
LVEDV MOD A4C
LVls A4C
LVESV MOD A4C
LVEF MOD A4C
SV MOD A4C

Doppler

MV E Vel
MV DecT
MV Dec Slope
MV A Vel
MV E/A Ratio
E'
E/E'
A'
AV Vmax
AV maxPG
PV Vmax
PV maxPG

B6

cm
ml
%
%
ml
cm
ml
cm
ml
%
ml

m/s
ms
m/s
m/s

m/s

m/s
m/s
mmHg
m/s
mmHg

Discharge Instructions

Patient

Name: B6

Species: Canine

Black/Tan Female (Spayed) Doberman

Birthdate: B6

Owner

Name: B6

Address: B6

Patient ID: B6

Attending Cardiologist:

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6

Admit Date: 3/6/2019 10:59:12 AM

Discharge Date: 3/6/2019

Diagnoses:

Mild decreased contractile function that is improved compared to previously.

Case summary:

Thank you for bringing B6 to Tufts cardiology service for her recheck echocardiogram.

Today we performed a recheck echocardiogram (ultrasound of the heart) which revealed that B6 heart is slightly smaller than before and her contractile function appears better than before although still not completely normal. This is excellent news! At this time it is unclear if the changes visualized are secondary to the recent addition of B6 versus the recent change in diet.

As discussed, B6 has occasional isolated premature beats on electrocardiogram (ECG, which measures the electrical rhythms of the heart), meaning that her heart occasionally beats sooner than it should. Today we discussed possible diagnostics - such as a Holter monitor, which records an ECG over 24 hours - and possible treatment options. At this time you elect to use the Holter monitor prior to starting any treatment. We will send B6 home wearing the monitor and a journal to record her activities. We will see B6 again tomorrow to remove the monitor. It will take 1-2 weeks to get the ECH recording analysis finalized and we will contact you in order to decide if we need to start new cardiac medications or not.

Monitoring at home:

- We would like you to monitor your dog's breathing rate and effort at home, ideally during sleep or at a time of rest.

In general, most dogs have a breathing rate at rest of less than 35 to 40 breaths per minute. In addition, the breathing effort, noted by the amount of belly wall motion used for each breath, is fairly minimal in normal dogs.

- We also want you to watch for weakness or collapse, a reduction in appetite, worsening cough, or distention of the belly as these findings indicate that we should do a recheck examination.
- If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

B6

Diet suggestions:

Please continue feeding [B6] her Purina Pro Plan Weight Management dry food and Hill's Science Diet adult beef and barley entree. These foods are low in sodium but contain appropriate calories.

Exercise Recommendations:

[B6] does not need any exercise restriction at this time.

Recheck Visits:

Please bring [B6] in tomorrow to have her Holter monitor removed.

We would like [B6] to have a recheck echocardiogram in 3 months as part of the DCM study, as long as she continues to do well at home. She has an appointment schedule with [B6] June 11th at 11am.

Thank you for entrusting us with [B6] care. Please contact our Cardiology liaison at (508)-887-4696 or email us at cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Sincerely,

[B6]

Please visit our HeartSmart website for more information

<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

Case [B6]

Owner: [B6]

Discharge Instructions

Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Cardiology Liaison: 508-887-4696

B6

Patient ID: B6

B6

Canine

B6

Female (Spayed) Doberman

Black/Tan

Cardiology Appointment Report ENROLLED IN DCM DIET STUDY

Date: 3/6/2019

Attending Cardiologist:

John E. Rush, DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student:

B6

Presenting Complaint:

Mild MMVD

Mild decreased contractile function R/O diet-related vs. primary DCM related mild decrease in contractile function vs normal variation

DCM Study

B6

Diet and Supplements:

Purina Pro Plan (Weight Management) 1.5c AM w/ Hill's Sci Diet canned (1/4 can) AM and PM, 1 cup afternoon

Cardiovascular History:

Prior CHF diagnosis? N

Prior heart murmur? N

Prior ATE? N

Prior arrhythmia? Sinus arrhythmia

Monitoring respiratory rate and effort at home? Not as much, frequent panting

Cough? Occasional, no change from prior

Shortness of breath or difficulty breathing? N

Syncope or collapse? N

Sudden onset lameness? N

Exercise intolerance? N

B6

Cardiac Physical Examination:

B6

Muscle condition:

- Normal
- Mild muscle loss
- Moderate cachexia
- Marked cachexia

Cardiovascular Physical Exam:

Murmur Grade:

- None
- I/VI
- II/VI
- III/VI
- IV/VI
- V/VI
- VI/VI

Jugular vein:

- Bottom 1/3 of the neck
- Middle 1/3 of the neck
- 1/2 way up the neck
- Top 2/3 of the neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

Arrhythmia:

- None
- Sinus arrhythmia
- Premature beats
- Bradycardia
- Tachycardia

Gallop:

- Yes
- No
- Intermittent

- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal *BV* sounds

- Pulmonary crackles
- Wheezes
- Upper airway stridor

Abdominal exam:

- Normal
- Hepatomegaly
- Abdominal distension

- Mild ascites
- Marked ascites

Problems:

Mild MMVD

Mildly decreased contractile function r/o diet-related vs. primary DCM related mild decrease in contractile function vs normal variation

Elevated proBNP

Diagnostic plan:

- Echocardiogram
- Chemistry profile
- ECG
- Renal profile
- Blood pressure

- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests:

B6

B6

Assessment and recommendations:

Echocardiogram reveals improvement of the cardiac dimensions and contractile function. All of the measurements obtained today were improved compared to the previous examination. It is unclear if the changes visualized are secondary to the start of pimobendan vs. being on a new diet for a longer period of time. **B6** did have relatively frequent VPCs today which were all isolated. However, due to her breed and predisposition for arrhythmia, there is some concern that she has more malignant arrhythmia. A Holter was placed today in order to assess the amount and severity of arrhythmia and decide if we want to start a beta-blocker vs. sotalol vs. amiodarone. No blood was pulled today. A recheck echocardiogram and ECG are recommended in 3 months or sooner if the patient develops clinical signs consistent with worsening heart disease.

Final Diagnosis:

- Very early DMVD
- Mild decreased contractile function that is improved compared to last examination.

Heart Failure Classification Score:

ISACHC Classification:

- | | |
|--|-------------------------------|
| <input type="checkbox"/> Ia | <input type="checkbox"/> IIIa |
| <input checked="" type="checkbox"/> Ib | <input type="checkbox"/> IIIb |
| <input type="checkbox"/> II | |

ACVIM Classification:

- | | |
|--|----------------------------|
| <input type="checkbox"/> A | <input type="checkbox"/> C |
| <input type="checkbox"/> B1 | <input type="checkbox"/> D |
| <input checked="" type="checkbox"/> B2 | |

M-Mode

IVSd		cm
LVIDd		cm
LVPWd		cm
IVSs		cm
LVIDs		cm
LVPWs		cm
EDV(Teich)		ml
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
Ao Diam		cm
LA Diam		cm
LA/Ao		
TAPSE		cm

B6

EPSS

cm

M-Mode Normalized

IVSdN

(0.290 - 0.520)

LVIDdN

(1.350 - 1.730)

LVPWdN

(0.330 - 0.530)

IVSsN

(0.430 - 0.710)

LVIDsN

(0.790 - 1.140)

LVPWsN

(0.530 - 0.780)

Ao Diam N

(0.680 - 0.890)

LA Diam N

(0.640 - 0.900) !

2D

SA LA

cm

Ao Diam

cm

SA LA / Ao Diam

IVSd

cm

LVIDd

cm

LVPWd

cm

EDV(Teich)

ml

IVSs

cm

LVIDs

cm

LVPWs

cm

ESV(Teich)

ml

EF(Teich)

%

%FS

%

SV(Teich)

ml

LV Major

cm

LV Minor

cm

Sphericity Index

LVLd A4C

cm

LVEDV MOD A4C

ml

LVLs A4C

cm

LVESV MOD A4C

ml

LVEF MOD A4C

%

SV MOD A4C

ml

Doppler

MV E Vel

m/s

MV DecT

ms

MV Dec Slope

m/s

MV A Vel

m/s

MV E/A Ratio

E'

m/s

E/E'

A'

m/s

S'

m/s

AV Vmax

m/s

AV maxPG

mmHg

PV Vmax

m/s

B6

PV maxPG

B6

mmHg

From: Carey, Lauren </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F0226BD682844FA2B71EA3750D4FCB82-LAUREN.CARE>
To: Rotstein, David; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L
Sent: 2/25/2019 6:54:31 PM
Subject: RE: DCM - More from L Freeman 2/25/2019 0915

EON-380745 is part of that household as well. 3 with DCM so far.

From: Rotstein, David
Sent: Monday, February 25, 2019 9:19 AM
To: Carey, Lauren <Lauren.Carey@fda.hhs.gov>; Ceric, Olgica <Olgica.Ceric@fda.hhs.gov>; Glover, Mark <Mark.Glover@fda.hhs.gov>; Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Peloquin, Sarah <Sarah.Peloquin@fda.hhs.gov>; Queen, Jackie L <Jackie.Queen@fda.hhs.gov>; Rotstein, David <David.Rotstein@fda.hhs.gov>
Subject: DCM - More from L Freeman 2/25/2019 0915

Note: 380742 & 380743 are from the same household. Other dogs in household – 2 not tested yet & 1 normal BNP

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place
B6 (BB)



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From: Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>
To: 'Freeman, Lisa'
Sent: 3/4/2019 12:13:14 PM
Subject: RE: taurine results for [REDACTED] **B6**

Thanks, Lisa!

Jennifer Jones, DVM
Veterinary Medical Officer
Tel: 240-402-5421



From: Freeman, Lisa <Lisa.Freeman@tufts.edu>
Sent: Friday, March 01, 2019 4:51 PM
To: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Subject: FW: taurine results for [REDACTED] **B6**

FYI

[REDACTED] 3 bulldogs from same household and on same diet
B6 DCM and CHF had [REDACTED] **B6**
– with ARVC and arrhythmias had [REDACTED] **B6**
this most recent one (likely ARVC) was [REDACTED] **B6**

Lisa

Lisa M. Freeman, DVM, PhD, DACVN
Board Certified Veterinary Nutritionist™
Professor
Cummings School of Veterinary Medicine
Friedman School of Nutrition Science and Policy
Tufts Clinical and Translational Science Institute
Tufts University
www.petfoodology.org

Client: **B6**
Address:

Home Phone: **B6**
Work Phone:
Cell Phone:

All Medical Records

Patient: **B6**
Breed: English Bulldog
DOB: **B6**

Species: Canine
Sex: Female
(Spayed)

Referring Information

B6
Client: **B6**
Patient:

Initial Complaint:

New **B6** DCM study

SOAP Text Feb 20 2019 3:37PM **B6**

Disposition/Recommendations

Client:

B6

Patient:

Client: **B6**
Patient:

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

Foster Hospital for Small Animals

55 Willard Street
North Grafton, MA 01536
(508) 839-5395

Client:	B6
Veterinarian:	
Patient ID:	B6
Visit ID:	

Patient:	B6
Species:	Canine
Breed:	English Bulldog
Sex:	Female (Spayed)
Age:	B6 Years Old

Lab Results Report

Accession ID:			
Test	Results	Reference Range	Units



Client: **B6**
Patient: **B6**

CBC/CHEM



Tufts Cummings School Of Veterinary Medicine

200 Westboro Road
North Grafton, MA 01536

DUPLICATE

Name/DOB: **B6** Sex: SF Provider: **B6**
Patient ID: **B6** Age: 8 Order Location: V3205597 Investigation into
Phone number: Species: Canine Sample ID: 1902200170
Collection Date: 2/20/2019 3:39 PM Breed:
Approval date: 2/20/2019 5:50 PM

CBC, Comprehensive, Sm Animal (Research)

02/20/19	5:50 PM	B6	
SMACHUNSKI			Ref. Range/Females
WBC (ADVIA)		B6	4.40-15.10 K/uL
RBC (Advia)		B6	5.80-8.50 M/uL
Hemoglobin (ADVIA)		B6	13.3-20.5 g/dL
Hematocrit (Advia)		B6	39-55 %
MCV (ADVIA)		B6	64.5-77.5 fL
MCH (ADVIA)		B6	21.3-25.9 pg
CHCM		B6	
MCHC (ADVIA)		B6	31.9-34.3 g/dL
RDW (ADVIA)		B6	11.9-15.2
Platelet Count (Advia)		B6	173-486 K/uL
Mean Platelet Volume (Advia)		B6	8.29-13.20 fl
02/20/19	3:56 PM	B6	
Platelet Crit		B6	0.129-0.403 %
02/20/19	3:56 PM	B6	
PDW		B6	
Reticulocyte Count (Advia)		B6	0.20-1.60 %
Absolute Reticulocyte Count (Advia)		B6	14.7-113.7 K/uL
CHr		B6	
MCVr		B6	

Microscopic Exam of Blood Smear (Advia)

SMACHUNSKI			Ref. Range/Females
Seg Neuts (%)		B6	43-86 %
Lymphocytes (%)		B6	7-47 %
Monocytes (%)		B6	1-15 %
Eosinophils (%)		B6	0-16 %
Seg Neutrophils (Abs) Advia		B6	2.800-11.500 K/uL
Lymphs (Abs) Advia		B6	1.00-4.80 K/uL
Mono (Abs) Advia		B6	0.10-1.50 K/uL
Eosinophils (Abs) Advia		B6	0.00-1.40 K/uL
WBC Morphology		B6	
RBC Morphology		B6	
Poikilocytosis		B6	

Research Chemistry Profile - Small Animal (Cobas)

Sample ID: 1902200170/1
This report continues... (Final)

Reviewed by: _____

Client: **B6**
Patient:

CBC/CHEM



Tufts Cummings School Of Veterinary Medicine

200 Westboro Road
North Grafton, MA 01536

DUPLICATE

Name/DOB:	B6	Sex:	SF	Provider:	B6
Patient ID:		Age:	8	Order Location:	V320559: Investigation info
Phone number:		Species:	Canine	Sample ID:	1902200170
Collection Date:	2/20/2019 3:39 PM	Breed:			
Approval date:	2/20/2019 5:50 PM				

Research Chemistry Profile - Small Animal (Cobas) (cont'd)

		Ref. Range/Females
DNOYES	B6	
Glucose		67-135 mg/dL
Urea		8-30 mg/dL
Creatinine		0.6-2.0 mg/dL
Phosphorus		2.6-7.2 mg/dL
Calcium 2		9.4-11.3 mg/dL
Magnesium 2+		1.8-3.0 mEq/L
Total Protein		5.5-7.8 g/dL
Albumin		2.8-4.0 g/dL
Globulins		2.3-4.2 g/dL
A/G Ratio		0.7-1.6
Sodium		140-150 mEq/L
Chloride		106-116 mEq/L
Potassium		3.7-5.4 mEq/L
tCO2(Bicarb)		14-28 mEq/L
AGAP		8.0-19.0
NA/K		29-40
Total Bilirubin		0.10-0.30 mg/dL
Alkaline Phosphatase		12-127 U/L
GGT		0-10 U/L
ALT	14-86 U/L	
AST	9-54 U/L	
Creatine Kinase	22-422 U/L	
Cholesterol	82-355 mg/dL	
Triglycerides	30-338 mg/dl	
Amylase	409-1250 U/L	
Osmolality (calculated)	291-315 mmol/L	

Sample ID: 1902200170/2
REPRINT: Orig. printing on 2/20/2019 (Final)

Reviewed by: _____
Page 2

Client: **B6**
Patient:

IDEXX BNP - 2/20/2019

IDEXX Reference Laboratories

Client: **B6**

Client: **B6**
Patient:
Species: CANINE
Breed: BULLDOG
Gender: FEMALE SPAYED
Age: 8Y

Date: 02/20/2019
Requisition #: 1A
Accession: **B6**
Ordered by: **B6**

IDEXX VetConnect 1-888-433-9987

TUFTS UNIVERSITY
200 WESTBORO RD
NORTH GRAFTON, Massachusetts 01536
508-839-5395

Account #88933

CARDIOPET proBNP - CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPET - CANINE	B6	0 - 900 pmol/L		B6	

Comments

1. **B6**

Please note: Complete interpretive comments for all concentrations of cardiopet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: **B6**
 Patient:

Diet history 2/20/19

CARDIOLOGY DIET HISTORY FORM
 Please answer the following questions about your pet

Pet's name: **B6** Owner's name: **B6** Today's date: 2/20/19

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)
 Example: **Poor** _____ | _____ **Excellent**
Poor _____ | _____ **Excellent**

2. Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)
 Eats about the same amount as usual Eats less than usual Eats more than usual
 Seems to prefer different foods than usual Other _____

3. Over the last few weeks, has your pet (check one)
 Lost weight Gained weight Stayed about the same weight Don't know

1. Please list below ALL pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats and that you have fed in the last 2 years.

Please provide enough detail that we could go to the store and buy the exact same food - examples are shown in the table

Food (include specific product and flavor)	Form	Amount	How often?	Dates fed
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2016-present
85% lean hamburger	microwaved	3 oz	1x/week	June -Aug 2016
Pupperoni original beef flavor	treat	1/2	1x/day	Sept 2016-present
Rawhide	treat	6 inch twist	1x/week	Dec 2018-present
<u>Same as</u> B6				

*Any additional diet information can be listed on the back of this sheet

2. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)? Yes No If yes, please list which ones and give brands and amounts:

	Brand/Concentration	Amount per day
Taurine <input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Carnitine <input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Antioxidants <input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Multivitamin <input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Fish oil <input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Coenzyme Q10 <input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Other (please list): Example: Vitamin C		
<u>Pro Biotic</u>	<u>Nature's Bounty</u>	<u>500 mg tablets - 1 per day</u>
	<u>Nature's Promise</u>	<u>50 billion</u>

3. How do you administer pills to your pet?
 I do not give any medications
 I put them directly in my pet's mouth without food
 I put them in my pet's dog/cat food
 I put them in a Pill Pocket or similar product
 I put them in foods (list foods): _____

CHANGE TO
RE CARBIDE

Client: B6
Patient: B6

Vitals Results

2/20/2019 3:00:08 PM

Weight (kg)

B6

Client:
Patient:

B6

ECG from cardio

B6

2/20/2019 4:05:01 PM

Tufts University
Tufts Cummings School of Vet Med
Cardiology

12 Lead: Standard Placement

B6

Client: **B6**
Patient: **B6**

ECG from cardio

B6

2/20/2019 4:05:13 PM

Page 1 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology

12-Lead Standard Placement

B6

Client: **B6**
Patient:

ECG from cardio

B6

2/20/2019 4:05:13 PM

Page 2 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology

B6

Client: **B6**
Patient:

ECG from cardio

B6

2/20/2019 4:05:43 PM

Tufts University
Tufts Cummings School of Vet Med
Cardiology

12 Lead: Standard Placement

B6

Client: **B6**
Patient:

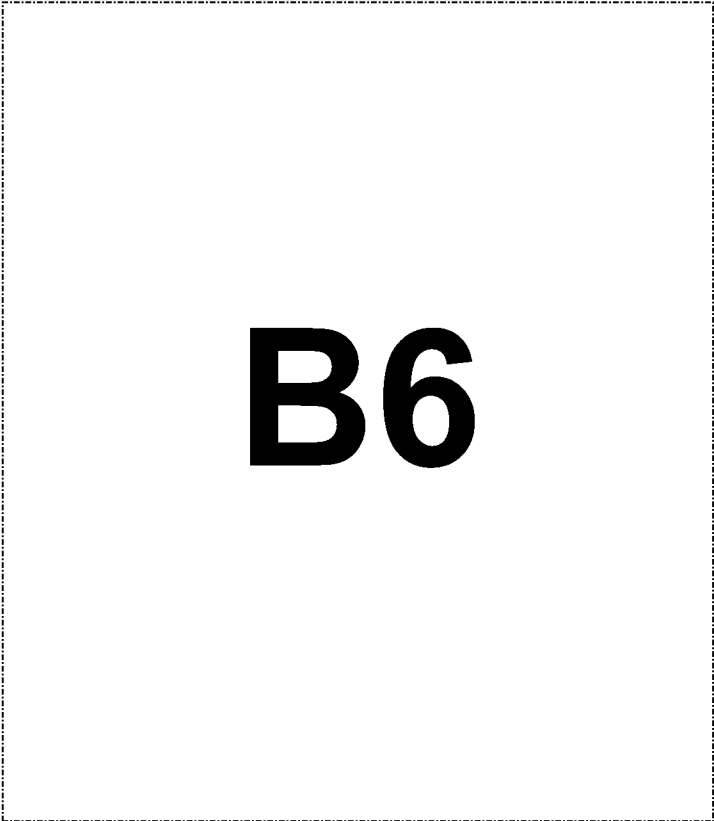
Patient History

02/08/2019 09:18 AM Appointment
02/12/2019 10:57 AM Appointment
02/13/2019 09:14 AM Appointment

02/13/2019 10:56 AM Appointment

02/20/2019 02:30 PM UserForm
02/20/2019 02:56 PM Treatment
02/20/2019 02:57 PM Treatment
02/20/2019 03:00 PM Vitals
02/20/2019 03:00 PM Purchase
02/20/2019 03:19 PM Purchase
02/20/2019 03:19 PM Purchase
02/20/2019 03:47 PM UserForm

02/20/2019 10:42 PM Email
02/22/2019 05:15 PM Appointment



Discharge Instructions

Patient

Name: B6

Species: Canine

Brown/White Female (Spayed) English

Bulldog

Birthdate: B6

Owner

Name: B6

Address: B6

Patient ID: B6

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Intern:

B6

Student: B6

Date: 2/20/2019

Diagnoses:

Mild cardiac changes that could be consistent with early arrhythmogenic right ventricular cardiomyopathy (ARVC) or a component of nutritional cardiomyopathy

Clinical Findings:

Thank you for bringing B6 to the Tufts cardiology service today for evaluation of her heart as part of a study on DOM. You report that other than an elevated BNP, there has been no indication that B6 has had any heart issues. Her breathing rate and activity levels at home have appeared normal.

To evaluate the health of her heart, we performed an echocardiogram (echo). We also evaluated B6 heart rhythm with an electrocardiogram (EKG). On echo B6 had mildly decreased contractile function of the left ventricle. Her left atrium was mildly enlarged. Her right heart, however, was more significantly enlarged, which is something we can see with ARVC. No arrhythmias were detected on the EKG today, but we cannot rule out intermittent arrhythmia. Overall B6 changes do not clearly require medication at this stage, but we will want to monitor for progression over time. It is unclear whether the changes to Bella's heart are related to ARVC, nutrition, or some combination of things.

A blood sample was also collected for bloodwork for the study, and we will contact you as the results come in.

At this time, we will only treat B6 with the taurine supplement. We do recommend periodic echo rechecks to make sure there have been no changes to her heart over time and for the DOM study that she has been enrolled in.

Monitoring at Home:

Please monitor [B6] at home for any concerning cardiac signs such as increased breathing rate or effort, exercise intolerance, or collapsing episodes. If she collapses, evaluate her gums for any darker coloration. If this occurs, please have [B6] seen by a veterinarian immediately.

Please obtain a Kardia/Alivecor ECG reading from [B6] at home once every few weeks. You can email this result to cardiovet@tufts.edu.

Diet Suggestions:

We recommend feeding [B6] a commercial dog food diet, as directed by Dr Freeman.

Exercise Recommendations:

[B6] may continue her regular exercise regimen.

Recommended Medications:

[B6]
We may not need to continue this once we get [B6] taurine results back.

Recheck Visits: Please call to schedule an appointment for about 3 months for a recheck echocardiogram as part of the DOM study.

Thank you for entrusting us with [B6] care. She is such a sweet girl, and was an excellent patient to work with!

Please contact our Cardiology liaison at (508)-887-4696 or email us at cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information

<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

Case: [B6]

Owner: [B6]

Discharge Instructions

Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Cardiology Liaison: 508-887-4696

B6

Patient ID: B6

B6 Canine

B6 years Old Female (Spayed) English Bulldog
Brown/White

Cardiology Appointment Report

Date: 2/20/2019

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6

Presenting Complaint:

DCM Study

Concurrent Diseases:

None

General Medical History:

Elevated BNP: B6

Had surgery for B6 finished pain meds about a week ago.

B6

B6

{O doesn't remember} - sx corrected as a puppy

B6

Diet and Supplements:

CORE Wellness grain-free diet (dry (fish) and wet (turkey and chicken)) - 3 ounces of wet food BID, 1/4 cup dry BID

Probiotic for B6

Cardiovascular History:

Prior CHF diagnosis? N

Prior heart murmur? N

Prior ATE? N

Prior arrhythmia? N

Monitoring respiratory rate and effort at home? Y, owner thinks no higher than 40 at rest, usually 20-30

Cough? N

Shortness of breath or difficulty breathing? Not when at rest

Syncope or collapse? N

Sudden onset lameness? N

Exercise intolerance? Yes, when taken for long walks

Current Medications Pertinent to CV System:

None at this time

Cardiac Physical Examination:

B6

Muscle condition:

- | | |
|--|--|
| <input type="checkbox"/> Normal | <input type="checkbox"/> Moderate cachexia |
| <input checked="" type="checkbox"/> Mild muscle loss: mild wasting over epaxials | <input type="checkbox"/> Marked cachexia |

Cardiovascular Physical Exam:

Murmur Grade:

- | | |
|--|--------------------------------|
| <input checked="" type="checkbox"/> None | <input type="checkbox"/> IV/VI |
| <input type="checkbox"/> I/VI | <input type="checkbox"/> V/VI |
| <input type="checkbox"/> II/VI | <input type="checkbox"/> VI/VI |
| <input type="checkbox"/> III/VI | |

Jugular vein:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Bottom 1/3 of the neck | <input type="checkbox"/> 1/2 way up the neck |
| <input type="checkbox"/> Middle 1/3 of the neck | <input type="checkbox"/> Top 2/3 of the neck |

Arterial pulses:

- | | |
|---------------------------------|---|
| <input type="checkbox"/> Weak | <input type="checkbox"/> Bounding |
| <input type="checkbox"/> Fair | <input type="checkbox"/> Pulse deficits |
| <input type="checkbox"/> Good | <input type="checkbox"/> Pulsus paradoxus |
| <input type="checkbox"/> Strong | <input checked="" type="checkbox"/> Other: difficult to assess due to trembling |

Arrhythmia:

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> Bradycardia |
| <input checked="" type="checkbox"/> Sinus arrhythmia | <input type="checkbox"/> Tachycardia |
| <input type="checkbox"/> Premature beats | |

Gallop:

- | | |
|--|-------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> Pronounced |
| <input checked="" type="checkbox"/> No | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Intermittent | |

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds

- Pulmonary crackles
- Wheezes
- Upper airway stridor

Abdominal exam:

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites
- Marked ascites

Problems:

No cardiac anomalies to report

Diagnostic plan:

- Echocardiogram
- Chemistry profile
- ECG
- Renal profile
- Blood pressure
- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests:

Echocardiogram Findings:

General/2-D findings: B6

B6

Doppler findings:

B6

Mitral inflow:

- Summated
- Normal
- Delayed relaxation
- Pseudonormal
- Restrictive

ECG findings:

B6

Assessment and recommendations:

Echocardiogram reveals structural changes that could be consistent with ARVC, but no arrhythmia was documented today. 24 hour Holter monitor could be considered to rule out intermittent arrhythmia. Owner has a Kardia at home and will obtain monthly readings. No cardiac medications are clearly indicated based on today's exam, but recommend supplementing with taurine until blood levels return from the lab. Patient was enrolled in the DCM study. Recheck echo in 3 and 6 months for the study.

Final Diagnosis:

Possible early ARVC; r/o nutrition related cardiomyopathy or a combination

Heart Failure Classification Score:

ISACHC Classification:

- Ia
- Ib
- IIIa
- IIIb

II

ACVIM Classification:

- A
- B1
- B2

- C
- D

M-Mode

IVSd	B6	cm
LVIDd		cm
LVPWd		cm
IVSs		cm
LVIDs		cm
LVPWs		cm
EDV(Teich)		ml
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
Ao Diam		cm
LA Diam		cm
LA/Ao		
Max LA		cm
TAPSE		cm
EPSS	cm	

M-Mode Normalized

IVSdN	B6	(0.290 - 0.520)
LVIDdN		(1.350 - 1.730)
LVPWdN		(0.330 - 0.530)
IVSsN		(0.430 - 0.710)
LVIDsN		(0.790 - 1.140)
LVPWsN		(0.530 - 0.780)
Ao Diam N		(0.680 - 0.890) !
LA Diam N		(0.640 - 0.900) !

2D

SA LA	B6	cm
Ao Diam		cm
SA LA / Ao Diam		
IVSd		cm
LVIDd		cm

LVPWd	cm
EDV(Teich)	ml
IVSs	cm
LVIDs	cm
LVPWs	cm
ESV(Teich)	ml
EF(Teich)	%
%FS	%
SV(Teich)	ml
LV Major	cm
LV Minor	cm
Sphericity Index	
LVLd LAX	cm
LVAAd LAX	cm
LVEDV A-L LAX	ml
LVEDV MOD LAX	ml
LVLs LAX	cm
LVAAs LAX	cm
LVESV A-L LAX	ml
LVESV MOD LAX	ml
HR	BPM
EF A-L LAX	%
LVEF MOD LAX	%
SV A-L LAX	ml
SV MOD LAX	ml
CO A-L LAX	l/min
CO MOD LAX	l/min
<u>Doppler</u>	
MV E Vel	m/s
MV DecT	ms
MV Dec Slope	m/s
MV A Vel	m/s
MV E/A Ratio	
E'	m/s
E/E'	
A'	m/s
S'	m/s
AV Vmax	m/s
AV maxPG	mmHg
PV Vmax	m/s
PV maxPG	mmHg
TR Vmax	m/s
TR maxPG	mmHg

B6

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

B6

Foster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01536
Telephone (508) 839-5395
Fax (508) 839-7951
<http://vetmed.tufts.edu/>

B6
B6 Female (Spayed)
Canine English Bulldog
Brown/White
B6

2/21/2019

Dear B6

Thank you for referring B6 with their pet B6

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

B6 DVM (Cardiology)

From: Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>
To: Carey, Lauren; Cleary, Michael *; HQ Pet Food Report Notification;
B6
Sent: 6/11/2019 7:00:42 PM
Subject: Wellness CORE Grain-Free Ocean Whitefish dry-Wellness Core grain free turkey: Lisa Freeman - EON-390205
Attachments: 2068096-report.pdf

A PFR Report has been received and Related PFR Event [EON-390205] has been created in the EON System.

A "PDF" report by name "2068096-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report:

EON Key: EON-390205

ICSR #: 2068096

EON Title: Related PFR Event created for Wellness CORE Grain-Free Ocean Whitefish dry Wellness Core grain free turkey chicken liver and turkey liver formula canned Wellness Core Hearty Cuts grain-free in gravy chicken and turkey recipe; 2068096

AE Date	02/01/2019	Number Fed/Exposed	6
Best By Date		Number Reacted	4
Animal Species	Dog	Outcome to Date	Died Other
Breed	Bulldog		
Age	8 Years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2068096

Product Group: Pet Food

Product Name: Wellness CORE Grain-Free Ocean Whitefish dry Wellness Core grain free turkey, chicken liver, and turkey liver formula canned Wellness Core Hearty Cuts grain-free in gravy chicken and turkey recipe

Description: Housemate (half sister; B6) - (ICSR) of 2063133) diagnosed with DCM and CHF so screened by RDVM for BNP which was elevated. Evaluated at Tufts 2/1/19. ARVC/diet-induced DCM with ventricular arrhythmia. Diet changed to Royal Canin Early Cardiac and will re-evaluate in 3 months I have diet

sample. 3 other dogs in household (1 had normal BNP, other 2 not yet evaluated) Patient DOA when owners arrived home on (B6) Suspected sudden death. Heart muscle samples were collected by rDVM and submitted to FDA for further evaluation.

Submission Type: Followup

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Died Other

Number of Animals Treated With Product: 6

Number of Animals Reacted With Product: 4

Product Name	Lot Number or ID	Best By Date
Wellness CORE Grain-Free Ocean Whitefish dry Wellness Core grain free turkey, chicken liver, and turkey liver formula canned Wellness Core Hearty Cuts grain-free in gravy chicken and turkey recipe		

This report is linked to:

Initial EON Event Key: EON-380743

Initial ICSR: 2063134

Sender information

Lisa Freeman
200 Westboro Rd
North Grafton, MA 01536
USA

Owner information

B6

To view this Related PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-390205>

To view the Related PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=10100&issueId=407477&parentIssueTypeId=12>

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Report Details - EON-390205

ICSR:	2068096
Type Of Submission:	Followup
Report Version:	FPSR.FDA.PETF.V.V1
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)
Reporting Type:	Voluntary
Report Submission Date:	2019-06-11 14:55:22 EDT
Initial Report Date:	02/25/2019
Parent ICSR:	2063134
Follow-up Report to FDA Request:	Yes

Reported Problem:	Problem Description:	Housemate (half sister: [B6]) (ICSR) of 2063133) diagnosed with DCM and CHF so screened by RDVM for BNP which was elevated. Evaluated at Tufts 2/1/19. ARVC/diet-induced DCM with ventricular arrhythmia. Diet changed to Royal Canin Early Cardiac and will re-evaluate in 3 months I have diet sample. 3 other dogs in household (1 had normal BNP, other 2 not yet evaluated) Patient DOA when owners arrived home on [B6] Suspected sudden death. Heart muscle samples were collected by rDVM and submitted to FDA for further evaluation.
	Date Problem Started:	02/01/2019
	Concurrent Medical Problem:	Yes
	Pre Existing Conditions:	Spinal trauma as puppy
	Outcome to Date:	Died Other
	Date of Death:	[B6]

Product Information:	Product Name:	Wellness CORE Grain-Free Ocean Whitefish dry Wellness Core grain free turkey, chicken liver, and turkey liver formula canned Wellness Core Hearty Cuts grain-free in gravy chicken and turkey recipe
	Product Type:	Pet Food
	Lot Number:	
	Product Use Information:	Description: Please see diet history for more info (and refer to [B6] [B6] diet history for more complete info - all dogs eat same diets)
	Manufacturer /Distributor Information:	
	Purchase Location Information:	

Animal Information:	Name:	[B6]
	Type Of Species:	Dog
	Type Of Breed:	Bulldog
	Gender:	Male
	Reproductive Status:	Neutered
	Weight:	22.1 Kilogram
	Age:	8 Years
	Assessment of Prior Health:	Good
	Number of Animals Given the Product:	6
	Number of Animals Reacted:	4
Owner Information:	Owner Information provided:	Yes
	Contact: Name:	[B6]

			Phone:	B6	
			Email:		
		Address:	B6		
Healthcare Professional Information:	Practice Name:	Tufts Cummings School of Veterinary Medicine			
	Contact:	Name:	Lisa Freeman		
		Phone:	(508) 887-4523		
		Email:	lisa.freeman@tufts.edu		
Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States				
Sender Information:	Name:	Lisa Freeman			
	Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States			
		Contact:	Phone:	5088874523	
			Email:	lisa.freeman@tufts.edu	
			Permission To Contact Sender:	Yes	
Preferred Method Of Contact:	Email				
Additional Documents:					

From: Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>
To: Carey, Lauren; Cleary, Michael *; HQ Pet Food Report Notification;
B6
Sent: 6/11/2019 6:52:47 PM
Subject: Wellness CORE Grain-Free Ocean Whitefish dry-Wellness Core grain free turkey: Lisa Freeman - EON-390203
Attachments: 2068095-report.pdf; 2068095-attachments.zip

A PFR Report has been received and Related PFR Event [EON-390203] has been created in the EON System.

A "PDF" report by name "2068095-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2068095-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-390203

ICSR #: 2068095

EON Title: Related PFR Event created for Wellness CORE Grain-Free Ocean Whitefish dry Wellness Core grain free turkey chicken liver and turkey liver formula canned Wellness Core Hearty Cuts grain-free in gravy chicken and turkey recipe; 2068095

AE Date	02/20/2019	Number Fed/Exposed	6
Best By Date		Number Reacted	4
Animal Species	Dog	Outcome to Date	Stable
Breed	Bulldog		
Age	B6 years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2068095

Product Group: Pet Food

Product Name: Wellness CORE Grain-Free Ocean Whitefish dry Wellness Core grain free turkey, chicken liver, and turkey liver formula canned Wellness Core Hearty Cuts grain-free in gravy chicken and turkey recipe

Description: Eating BEG diet - 2 other dogs in household diagnosed with DCM

B6

already reported) RDVM screened this dog with NT-proBNP which was elevated so we evaluated at Tufts 2/20/19 Probable ARVC/diet-associated DCM but no arrhythmia detected (enlarged right ventricle, reduced contractility) Changing diet to Royal Canin Early Cardiac and will re-evaluate in 3 months. Low plasma and whole blood taurine levels - started taurine supplement 3/1/2019 Troponin - B6

Submission Type: Followup

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 6

Number of Animals Reacted With Product: 4

Product Name	Lot Number or ID	Best By Date
Wellness CORE Grain-Free Ocean Whitefish dry Wellness Core grain free turkey, chicken liver, and turkey liver formula canned Wellness Core Hearty Cuts grain-free in gravy chicken and turkey recipe		

This report is linked to:

Initial EON Event Key: EON-380745

Initial ICSR: 2063135

Sender information

Lisa Freeman
200 Westboro Rd
North Grafton, MA 01536
USA

Owner information

B6

To view this Related PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-390203>

To view the Related PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspa?decorator=none&e=0&issueType=10100&issueId=407475&parentIssueTypeId=12>

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Report Details - EON-390203

ICSR:	2068095
Type Of Submission:	Followup
Report Version:	FPSR.FDA.PETF.V.V1
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)
Reporting Type:	Voluntary
Report Submission Date:	2019-06-11 14:43:13 EDT
Initial Report Date:	02/25/2019
Parent ICSR:	2063135
Follow-up Report to FDA Request:	Yes

Reported Problem:	Problem Description:	Eating BEG diet - 2 other dogs in household diagnosed with DCM [B6] and [B6] - already reported) RDVM screened this dog with NT-proBNP which was elevated so we evaluated at Tufts 2/20/19 Probable ARVC/diet-associated DCM but no arrhythmia detected (enlarged right ventricle, reduced contractility) Changing diet to Royal Canin Early Cardiac and will re-evaluate in 3 months. Low plasma and whole blood taurine levels - started taurine supplement 3/1/2019 Troponin [B6]
	Date Problem Started:	02/20/2019
	Concurrent Medical Problem:	Yes
	Pre Existing Conditions:	B6
	Outcome to Date:	Stable

Product Information:	Product Name:	Wellness CORE Grain-Free Ocean Whitefish dry Wellness Core grain free turkey, chicken liver, and turkey liver formula canned Wellness Core Hearty Cuts grain-free in gravy chicken and turkey recipe
	Product Type:	Pet Food
	Lot Number:	
	Product Use Information:	Description: Please see diet history for more info (and also see [B6] [B6] diet history for exact diets)
	Manufacturer /Distributor Information:	
	Purchase Location Information:	

Animal Information:	Name:	[B6]
	Type Of Species:	Dog
	Type Of Breed:	Bulldog
	Gender:	Female
	Reproductive Status:	Neutered
	Weight:	24.2 Kilogram
	Age:	[B6] Years
	Assessment of Prior Health:	Good
	Number of Animals Given the Product:	6
	Number of Animals Reacted:	4
	Owner Information:	Owner Information provided: Yes
	Contact: Name: [B6]	
	Phone: [B6]	

		Email: B6
	Address:	B6
Healthcare Professional Information:	Practice Name:	Tufts Cummings School of Veterinary Medicine
	Contact:	Name: Lisa Freeman
		Phone: (508) 887-4523
		Email: lisa.freeman@tufts.edu
Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States	
Sender Information:	Name:	Lisa Freeman
	Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States
	Contact:	Phone: 5088874523
		Email: lisa.freeman@tufts.edu
	Permission To Contact Sender:	Yes
Preferred Method Of Contact:	Email	
Additional Documents:	Attachment:	Follow-up med records pt 2.pdf
	Description:	Med records
	Type:	Medical Records
	Attachment:	Follow-up med records pt 1.pdf
	Description:	Med records
	Type:	Medical Records

Client: **B6**
 Patient: **B6**

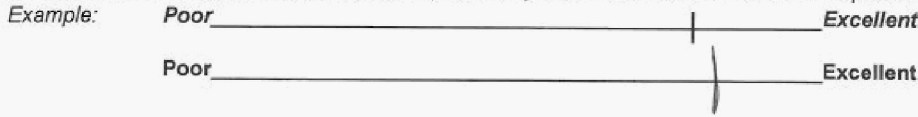
Diet hx 5/8/2019

B6

CARDIOLOGY DIET HISTORY FORM
 Please answer the following questions about your pet

Pet's name: **B6** Owner's name: **B6** Today's date: **5/8/19**

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)



2. Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)
 Eats about the same amount as usual Eats less than usual Eats more than usual
 Seems to prefer different foods than usual Other _____
3. Over the last few weeks, has your pet (check one)
 Lost weight Gained weight Stayed about the same weight Don't know

1. Please list below ALL pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats and that you have fed in the last 2 years.

Please provide enough detail that we could go to the store and buy the exact same food - examples are shown in the table

Food (include specific product and flavor)	Form	Amount	How often?	Dates fed
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2016-present
85% lean hamburger	microwaved	3 oz	1x/week	June -Aug 2016
Pupperoni original beef flavor	treat	1/2	1x/day	Sept 2016-present
Rawhide	treat	6 inch twist	1x/week	Dec 2018-present
Royal Canin Cardiac	dry	1 1/2 cup	2x/day	FEB 2019-PRES

*Any additional diet information can be listed on the back of this sheet

2. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)? Yes No If yes, please list which ones and give brands and amounts:
- | | Brand/Concentration | Amount per day |
|--|------------------------|-----------------------------------|
| Taurine | Now 1500 | 2x |
| Carnitine | _____ | _____ |
| Antioxidants | _____ | _____ |
| Multivitamin | _____ | _____ |
| Fish oil | _____ | _____ |
| Coenzyme Q10 | _____ | _____ |
| Other (please list):
Example: Vitamin C | Nature's Bounty | 500 mg tablets - 1 per day |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

3. How do you administer pills to your pet?
 I do not give any medications
 I put them directly in my pet's mouth without food
 I put them in my pet's dog/cat food
 I put them in a Pill Pocket or similar product
 I put them in foods (list foods): _____

Client: **B6**
Patient:

Idexx NT-proBNP 5/8/2019

IDEXX Reference Laboratories

Client: **B6**

Client: **B6**
Patient:
Species: CANINE
Breed: ENGLISH_BULLDOG
Gender: FEMALE SPAYED
Age: 8Y

Date: 05/08/2019
Requisition #: 1A
Accession #: **B6**
Ordered by: **B6**

IDEXX VetConnect 1-888-433-9967
TUFTS UNIVERSITY
200 WESTBORO RD
NORTH GRAFTON, Massachusetts 01536
508-839-5395
Account: **B6**

CARDIOPET proBNP - CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP - CANINE	B6	0 - 900 pmol/L		B6	

B6

Please note: Complete interpretive comments for all concentrations of cardiopet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: **B6**
Patient:

Troponin 5/31/2019



Gastrointestinal Laboratory
Dr. J.M. Steiner
Department of Small Animal Clinical Sciences
Texas A&M University
4474 TAMU
College Station, TX 77843-4474



Website User ID: **B6**@tufts.edu

GI Lab Assigned Clinic ID: 23523

B6
Tufts Cummings School of Vet Med - Cardiology/Nutrition
200 Westboro Road
North Grafton, MA 01536
USA

Phone: 508 887 4696

Fax:

Animal Name:

Owner Name:

Species:

Date Received:

Canine

May 30, 2019

B6

Tufts Cummings School of Vet Med -
Cardiology/Nutrition Tracking Number:
438993

GI Lab Accession: **B6**

Test	Result	Reference Interval	Assay Date
Ultra-Sensitive Troponin I Fasting	B6	≤0.06	05/31/19

B6

Comments:

GI Lab Contact Information

Phone: (979) 862-2861

Fax: (979) 862-2864

Email: gilab@cvm.tamu.edu

vetmed.tamu.edu/gilab

Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Cardiology Liaison: 508-887-4696

B6

Patient ID: B6

B6 Canine

B6 years Old Female (Spayed) English Bulldog
Brown/White

Cardiology Appointment Report

Date: 5/8/2019

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6

Presenting Complaint: 3 month recheck DCM study

Hx BNP of B6 at rDVM. Possible ARVC but no hx of arrhythmia.

Concurrent Diseases:

Chronic enteritis

General Medical History:

0 reports doing well at home.

B6

Diet and Supplements:

RC Cardiac diet

Now Taurine 500 mg BID

Cardiovascular History:

Prior CHF diagnosis? N

Prior heart murmur? N

Prior ATE? N

Prior arrhythmia? N

Monitoring respiratory rate and effort at home? Y, 30-40 breaths/min when resting

Cough? N

Shortness of breath or difficulty breathing? N

Syncope or collapse? N
Sudden onset lameness? N
Exercise intolerance? N

Current Medications Pertinent to CV System:

None

Cardiac Physical Examination:

B6

Muscle condition:

- Normal
- Mild muscle loss
- Moderate cachexia
- Marked cachexia

Cardiovascular Physical Exam:

Murmur Grade:

- None
- I/VI
- II/VI
- III/VI
- IV/VI
- V/VI
- VI/VI

Jugular vein:

- Bottom 1/3 of the neck
- Middle 1/3 of the neck
- 1/2 way up the neck
- Top 2/3 of the neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

Arrhythmia:

- None
- Sinus arrhythmia
- Premature beats
- Bradycardia
- Tachycardia

Gallop:

- Yes
- No
- Intermittent
- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds
- Pulmonary crackles
- Wheezes
- Upper airway stridor

Abdominal exam:

- Normal
- Hepatomegaly
- Mild ascites
- Marked ascites

Abdominal distension

Problems:

History of possible early ARVC

Diagnostic plan:

- Echocardiogram
- Chemistry profile
- ECG
- Renal profile
- Blood pressure

- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests: bloodwork for DCM study

B6

Assessment and recommendations:

Echocardiogram reveals stable to possibly mildly improved systolic function. There is still RH dilation consistent with ARVC, but no arrhythmia was documented today. No cardiac medications are clearly indicated based on today's exam, but recommend continuing to supplement with taurine. Redcheck echo in 3 and 6 months for the DCM study.

Final Diagnosis:

Mild cardiac changes that may be consistent with early arrhythmogenic right ventricular cardiomegaly (ARVC) or associated with nutritional cardiomyopathy - stable to slightly improved from appointment in February 2019

Heart Failure Classification Score:

ISACHC Classification:

- Ia
- Ib
- II
- IIIa
- IIIb

ACVIM Classification:

- A
- B1
- B2
- C
- D

M-Mode

IVSd	cm
LVIDd	cm
LVPWd	cm
IVSs	cm
LVIDs	cm
LVPWs	cm
EDV(Teich)	ml
ESV(Teich)	ml
EF(Teich)	%
%FS	%
SV(Teich)	ml
Ao Diam	cm
LA Diam	cm
LA/Ao	
Max LA	cm
TAPSE	cm
EPSS	cm

M-Mode Normalized

IVSdN	{0.290 - 0.520}
LVIDdN	{1.350 - 1.730}
LVPWdN	{0.330 - 0.530} !
IVSsN	{0.430 - 0.710}
LVIDsN	{0.790 - 1.140}
LVPWsN	{0.530 - 0.780} !
Ao Diam N	{0.680 - 0.890} !
LA Diam N	{0.640 - 0.900}

2D

SA LA	cm
Ao Diam	cm
SA LA / Ao Diam	
IVSd	cm
LVIDd	cm
LVPWd	cm
EDV(Teich)	ml
IVSs	cm
LVIDs	cm
LVPWs	cm
ESV(Teich)	ml
EF(Teich)	%
%FS	%
SV(Teich)	ml
LVLd A4C	cm
LVEDV MOD A4C	ml
LVLs A4C	cm
LVESV MOD A4C	ml

B6

LVEF MOD A4C
SV MOD A4C

Doppler

MV E Vel

MV DecT

MV Dec Slope

MV A Vel

MV E/A Ratio

E'

E/E'

A'

S'

AV Vmax

AV maxPG

PV Vmax

PV maxPG

B6

%
ml

m/s

ms

m/s

m/s

m/s

m/s

m/s

m/s

mmHg

m/s

mmHg

Discharge Instructions

Patient

Name: B6

Species: Canine

Brown/White Female (Spayed) English

Bulldog

Birthdate: B6

Owner

Name: B6

Address: B6

Patient ID: B6

Attending Cardiologist: John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6

Date: 5/8/2019**Diagnoses:**

Mild cardiac changes that may be consistent with early arrhythmogenic right ventricular cardiomegaly (ARVC) or associated with nutritional cardiomyopathy - stable to slightly improved from appointment in February 2019

Clinical Findings:

Thank you for bringing B6 in for her three month recheck as a part of the DCM study. You report that B6 has been doing well at home and that you have been giving her Taurine supplement twice a day. Her respiratory rate has been normal and she has had a good energy level at home.

During the appointment today, we performed a recheck echocardiogram (ultrasound of the heart). On the echocardiogram, the structural changes to B6 heart that we had previously seen in February were still present, but are stable to slightly improved. We also used electrocardiogram (EKG) to assess B6 heart rhythm and did not see any arrhythmias. Based on B6 echocardiogram and EKG today, we still do not think that B6 needs any medication at this point. Please continue to give her Taurine supplement twice daily.

We drew a blood sample from B6 for the DCM study and will contact you once we have the results back.

Monitoring at Home:

Please continue to watch B6 at home for any signs such as increased respiratory rate or effort, exercise intolerance or episodes of collapse. If you see any of these signs, please contact a veterinarian.

Diet Suggestions:

Please continue to feed B6 the Royal Canin Cardiac diet.

Exercise Recommendations:

B6 may continue her normal exercise at home.

Recommended Medications:

Please continue to give B6 her Taurine supplement (500 mg by mouth twice daily).

Recheck Visits: We would like to see B6 for a recheck appointment in 3 months. At this visit we will want to check breathing effort and heart function, do a blood test for the DOM study, and perform a recheck echocardiogram. B6 will contact you to schedule this appointment once the troponin results are back in a week or so.

Thank you for entrusting us with B6 care. She is a wonderful dog! Please contact our Cardiology liaison at (508)-887-4696 or email us at cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information
<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

Case: B6

Owner: B6

Discharge Instructions

From: Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>
To: Carey, Lauren; Palmer, Lee Anne; Jones, Jennifer L
Sent: 11/8/2018 12:07:21 PM
Subject: **B6** FW: Merrick LID Grain Free dry (salmon: Lisa Freeman - EON-369322
Attachments: 2057941-report.pdf; 2057941-attachments.zip

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place

B6 (BB)



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From: PFR Event <ppreventcreation@fda.hhs.gov>
Sent: Thursday, October 25, 2018 7:29 AM
To: Cleary, Michael * <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov> **B6**
Subject: Merrick LID Grain Free dry (salmon: Lisa Freeman - EON-369322

A PFR Report has been received and PFR Event [EON-369322] has been created in the EON System.

A "PDF" report by name "2057941-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2057941-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-369322
ICSR #: 2057941
EON Title: PFR Event created for Merrick LID Grain Free dry (salmon duck or chicken); 2057941

AE Date	02/09/2018	Number Fed/Exposed	1
Best By Date		Number Reacted	1
Animal Species	Dog	Outcome to Date	Died Euthanized
Breed	Retriever - Labrador		

Age	9 Years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2057941

Product Group: Pet Food

Product Name: Merrick LID Grain Free dry (salmon, duck, or chicken)

Description: DCM and CHF Euthanized for worsening heart failure and arrhythmia in September

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Died Euthanized

Number of Animals Treated With Product: 1

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Merrick LID Grain Free dry (salmon, duck, or chicken)		

Sender information

Lisa Freeman
 200 Westboro Rd
 North Grafton, MA 01536
 USA

Owner information

B6

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-369322>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=12&issueld=386244>

=====

This email and attached document are being provided to you in your capacity as a Commissioned Official with the U.S. Department of Health and Human Services as authorized by law. You are being provided with this information pursuant to your signed Acceptance of Commission.

This email message is intended for the exclusive use of the recipient(s) named above. It may contain information that is protected, privileged, or confidential. Any dissemination, distribution, or copying is strictly prohibited.

The information is provided as part of the Federal-State Integration initiative. As a Commissioned Official and state government official, you are reminded of your obligation to protect non-public information, including trade

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Failure to adhere to the above provisions could result in removal from the approved distribution list. If you think you received this email in error, please send an email to FDAREportableFoods@fda.hhs.gov immediately.

Report Details - EON-369322		
ICSR:	2057941	
Type Of Submission:	Initial	
Report Version:	FPSR.FDA.PETF.V.V1	
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)	
Reporting Type:	Voluntary	
Report Submission Date:	2018-10-25 07:21:15 EDT	
Reported Problem:	Problem Description: DCM and CHF Euthanized for worsening heart failure and arrhythmia in September	
	Date Problem Started: 02/09/2018	
	Concurrent Medical Problem: No	
	Outcome to Date: Died Euthanized	
	Date of Death: B6	
Product Information:	Product Name: Merrick LID Grain Free dry (salmon, duck, or chicken)	
	Product Type: Pet Food	
	Lot Number:	
	Package Type: BAG	
	Product Use Information: Description: Merrick for ~1 year Please see diet history for other foods and previous diets (Canidae LID grain free)	
	Manufacturer /Distributor Information:	
	Purchase Location Information:	
Animal Information:	Name: B6	
	Type Of Species: Dog	
	Type Of Breed: Retriever - Labrador	
	Gender: Male	
	Reproductive Status: Neutered	
	Weight: 47 Kilogram	
	Age: 9 Years	
	Assessment of Prior Health: Excellent	
	Number of Animals Given the Product: 1	
	Number of Animals Reacted: 1	
	Owner Information:	Owner Information provided: Yes
		Contact: Name: B6
		Phone: B6
	Email: B6	
	Address:	B6
United States		
Healthcare Professional Information:	Practice Name: Tufts Cummings School of Veterinary Medicine	
	Contact: Name: Lisa Freeman	
	Phone: (508) 887-4523	
	Email: lisa.freeman@tufts.edu	

		Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States
--	--	-----------------	---

Sender Information:	Name:	Lisa Freeman	
	Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States	
	Contact:	Phone:	5088874523
		Email:	lisa.freeman@tufts.edu
	Permission To Contact Sender:	Yes	
Preferred Method Of Contact:	Email		

Additional Documents:	Attachment:	B6 compiled record.pdf
	Description:	Compiled medical record
	Type:	Medical Records

Client:

B6

Address:

B6

All Medical Records

Patient:

B6

Breed:

Labrador Retriever

DOB:

B6

Species: Canine

Sex:

Male

(Neutered)

Referring Information

B6

Initial Complaint:

Emergency

SOAP Text Feb 9 2018 1:21PM - Clinician, Unassigned FHSA

Subjective

NEW VISIT (ER)

Doctor:

B6

Student:

B6

Presenting complaint: Increased lethary and difficulty breathing since last night and this morning

Past pertinent medical history: On Dec 2, brought to rDVM for 2 weeks of diarrhea, coughing/gagging, wheezing lethary and decreased appetite. rDVM preformed bloodwork which came back essentially normal. At this time referred for an AUS which found dilated hepatic vessels along with a murmur, tachycardia, and heart enlargement. He was diagnosed with suspected "early CHF" and started on [B6] but due to concern for elevated kidney values, furosemide was discontinued after about 2 weeks of treatment. He had been doing well at

Client:
Patient:

B6

home until the end of January where he started to have more coughing and gagging, so **B6** was restarted, but at a lower dose (20 mg Q12h).

Medications currently administered at home:

B6

Dietary history:

Type of food: For the past month has been feeding mostly beef and rice (homemade), but prior to that would feed commercial kibble (Blue Buffalo, Canidae) with added home cooked meat (duck and bison)

Travel: Born in **B6** and lived there for 2 years. Moved to **B6** 7 years ago.

Visit is a referral: Yes

Bloodwork/Procedures completed prior to arrival: CBC/Chem in December (see below)

Referred for specific test: Cardiology consult

Subjective (S):

BAR,
BCS:

B6

mm slightly muddy, CRT <2 sec

Objective (O)

B6

DIAGNOSTICS:

B6

12/13/17 (rDVM):

Chem: **B6** remaining values WNL

Client: **B6**
Patient: **B6**

2/9/18 (Tufts):

NOVA: **B6**

PCV/TS: **B6** g/dL

EKG: initial concern for possible a-fib, but more consistent with frequent VPCs/bigeminy

TFAST/AFAST: no pleural, pericardial, or peritoneal effusion; moderate to marked left atrial enlargement with left ventricular dilation and decreased contractility; moderate coalescing B-lines (worse on the right)

Lateral thoracic radiograph: cardiomegaly, no significant pulmonary edema (taken after furosemide administration)

Assessment (A)

A1: Dilated cardiomyopathy with left ventricular wall thinning and chamber dilation, left atrial enlargement, ventricular arrhythmias (frequent VPCs), and increased respiratory effort and muddy gums consistent with congestive heart failure - rule-out idiopathic vs. taurine deficiency vs. other

Plan (P)

B6

TGH following cardiology consult:

ADD taurine, **B6**

B6

recheck with cardiology on 2/21 @ 3:30 pm - will recheck labwork at that time

Client Communication:

Discussed extensively with owner concern for heart failure - very bad MVD vs. more likely DCM given left ventricular dilation that I see and large breed status. Given some respiratory difficulty, **B6**

B6 Prognosis with DCM is 6 months to 1 year depending on if/when arrhythmias develop - risk for sudden death. Owner consented and echocardiogram was consistent with DCM. **B6** is fairly crazy and worked up in hospital. Could not place IVC despite sedation - no real effect on him. Pulmonary edema did not seem significant on radiograph, so recommended owner take him home which she was happy to do. Will supplement with taurine as it is relatively inexpensive and testing taurine levels is **B6**. Cardiology would like to recheck in a couple of weeks - owner ok with recheck time.

CPR status: **B6**

SOAP completed by: ???

SOAP reviewed by: **B6**, DVM, ECC Resident

Initial Complaint:

Recheck **B6** consult done thru ER

SOAP Text Feb 21 2018 5:15PM - **B6**

Client:
Patient:

B6

Initial Complaint:

Nutrition Phone/In person

SOAP Text Feb 22 2018 2:31PM - Freeman, Lisa

Subjective

(See Diet History Form for additional details on diet)

History: DCM and CHF diagnosed Dec 2017, history of chronic intermittent diarrhea for years; evaluated by Tufts Cardiology 2/9/18 and recheck today

Meds:

B6

Current Diet: (See Diet History Form in Documents and comm log for additional information)
Canidae grain free (variable flavors) or Merrick LID grain free (variable flavors)
Approximately 40% of diet comes from other foods - rice, veggies, meat, eggs, cheese, treats

Supplements: Taurine (from Tufts),

B6

Owner Goals: Optimal diet to help manage heart disease and diarrhea

Assessment:

B6

B6

Plan: Modify diet to lower sodium, more nutritional balanced; adjust supplements, treats, table food, medication administration, etc

Initial Complaint:

Emergency

SOAP Text Apr 9 2018 1:47PM - Clinician, Unassigned FHSA

Subjective

NEW VISIT (ER)

Doctor:

B6

Student:

B6

V'18

Presenting complaint: possible arrhythmia

Referral visit? No

Diagnostics completed prior to visit

- Renal profile 4/6/18

HISTORY:

Client: **B6**
Patient: **B6**

Signalment: 8 yo MN Lab

Current history: **B6** was diagnosed in 12/2017 with DCM and CHF (sees cardio), has been managed since then on **B6**. He has been increasingly less tolerant of walks at home, no coughing, not a lot of gagging, but HR and RR have been very high at home. Since 3/27 added **B6** to meds which seemed to have been helping. Yesterday 4/8 after 15 min walk his HR seemed irregular, O was concerned he was having VPCs last night and this morning. His RR this morning was up in the 40s-50s. The O is interested in whether he needs a holter monitor/medication change/echo sooner than when scheduled in May. Had bloodwork at rDVM last week 4/6.

Prior medical history: No other medical issues

Current medications:

B6

Diet: Purina DCM cardiac diet, sometimes poor appetite so mixed with canidae chicken and rice; sometimes cooked veggies

EXAM:

S: BAR, **B6**
O: Wt **B6**

BCS(1-9): **B6**

MCS(normal,mild,moderate,severe): Normal

Hydration: Euhydrated

B6

ASSESSMENT:

A1: DCM
A2: Elevated BUN: r/o secondary to Lasix

PLAN:

P1: ECG
P2: TFAST - evidence of DCM, few small B-lines bilaterally, no PCE

Client: **B6**
Patient:

Diagnostics completed:

4/6/18 rDVM

- Renal chem: **B6**

- ECG: nsf

Diagnostics pending:

Client communication: **B6** appears stable today, sinus arrhythmia but no concerning rhythms that we noticed. Recommended cardiology consultation today and chest x-rays. Offered day ECG monitoring as well. O declined and elected to take home for monitoring and contact Dr. **B6**

Deposit & estimate status:

Resuscitation code (if admitting to ICU):

SOAP approved (DVM to sign): **B6** DVM

Initial Complaint:

Recheck **B6** - DCM protocol

SOAP Text Aug 17 2018 12:44PM **B6**

Initial Complaint:

Nutrition Phone/In person

SOAP Text Aug 27 2018 1:27PM - Freeman, Lisa

Subjective

Nutrition Phone Consult Notes

****PHONE CONSULTATION - NO EXAM PERFORMED****

(See Diet History Form and information from referring veterinarian in Documents for additional details)

History: Dilated cardiomyopathy, congestive heart failure, chronic intermittent diarrhea.

Plan was to change diet at last visit (2/22/18) but **B6** had CHF at that time and wouldn't eat (improved significantly after starting **B6**). Currently eating Merrick LID/Grain Free salmon, duck, or chicken dry + 30-40% of calories from meat, veggies, cheese, carrots, deli meat, peas, pasta, rice, etc

Meds: **B6**

Current Diet: (See Diet History Form in Documents and comm log for additional information)

Supplements: **B6**

Assessment: DCM and CHF - need to change to non-BEG diet asap to see if any improvement in cardiac function is

Client:
Patient:

B6

possible. Also, need to manage GI signs, small kibble size.

Plan: Diet recommendations

****PHONE CONSULTATION - NO EXAM PERFORMED****

Disposition/Recommendations

Client:
Patient:

B6

Client: **B6**
 Patient:



Foster Hospital for Small Animals

55 Willard Street
 North Grafton, MA 01536
 (508) 839-5395

Client: **B6**
 Veterinarian:
 Patient ID: **B6**
 Visit ID:

Patient:	B6
Species:	Canine
Breed:	Labrador Retriever
Sex:	Male (Neutered)
Age:	B6 Years Old

Lab Results Report

Nova Full Panel-ICU 2/9/2018 7:02:25 PM Accession ID: **B6**

Test	Results	Reference Range	Units
SO2%	B6	94 - 100	%
HCT (POC)		38 - 48	%
HB (POC)		12.6 - 16	g/dL
NA (POC)		140 - 154	mmol/L
K (POC)		3.6 - 4.8	mmol/L
CL(POC)		109 - 120	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
BUN (POC)		12 - 28	mg/dL
CREAT (POC)		0.2 - 2.1	mg/dL
TCO2 (POC)		0 - 0	mmol/L
nCA		0 - 0	mmol/L
nMG		0 - 0	mmol/L
GAP		0 - 0	mmol/L
CA/MG		0 - 0	mol/mol
BEeef		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE	0 - 0		



Client: **B6**
 Patient: **B6**

FiO2	B6	0 - 0	%
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

Nova Full Panel-ICU 2/9/2018 7:08:32 PM Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)	B6	0 - 0	g/dl
PCV **		0 - 0	%
TS (FHSA)		0 - 0	g/dl

Nova Full Panel-ICU 2/21/2018 5:16:21 PM Accession ID: **B6**

Test	Results	Reference Range	Units
GLUCOSE	B6	67 - 135	mg/dL
UREA		8 - 30	mg/dL
CREATININE		0.6 - 2	mg/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
T. PROTEIN		5.5 - 7.8	g/dL
ALBUMIN		2.8 - 4	g/dL
GLOBULINS		2.3 - 4.2	g/dL
A/G RATIO		0.7 - 1.6	
SODIUM		140 - 150	mEq/L
CHLORIDE		106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
D.BILIRUBIN		0 - 0.1	mg/dL
I BILIRUBIN		0 - 0.2	mg/dL
ALK PHOS		12 - 127	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CHOLESTEROL		82 - 355	mg/dL
OSMOLALITY (CALCULATED)	291 - 315	mmol/L	
COMMENTS (CHEMISTRY)	0 - 0		

Nova Full Panel-ICU 8/17/2018 12:45:20 PM Accession ID: **B6**

Test	Results	Reference Range	Units
GLUCOSE	B6	67 - 135	mg/dL
UREA		8 - 30	mg/dL



10/73

B6

Printed Thursday, October 25, 2018

Client: **B6**
Patient:

CREATININE	B6	0.6 - 2	mg/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
T. PROTEIN		5.5 - 7.8	g/dL
ALBUMIN		2.8 - 4	g/dL
GLOBULINS		2.3 - 4.2	g/dL
A/G RATIO		0.7 - 1.6	
SODIUM		140 - 150	mEq/L
CHLORIDE		106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
D.BILIRUBIN		0 - 0.1	mg/dL
I BILIRUBIN		0 - 0.2	mg/dL
ALK PHOS		12 - 127	U/L
ALT		14 - 86	U/L
AST	9 - 54	U/L	
CHOLESTEROL	82 - 355	mg/dL	
OSMOLALITY (CALCULATED)	291 - 315	mmol/L	



11/73

B6

Printed Thursday, October 25, 2018

Client: **B6**
Patient:

RDVN **B4, B6** lab results 11/30/17-12/13/17

B4, B6

Test Required	Results	Reference Range	Units
Alkaline Phosphatase	B6	50-124	U/L
Aspartate Aminotransferase	B6	0-37	U/L
Bilirubin	B6	0.1-1.2	mg/dL
Alanine Aminotransferase	B6	0-40	U/L
Gamma-GT	B6	0-31	U/L
Cholesterol	B6	0-200	mg/dL
Triglycerides	B6	0-160	mg/dL
Calcium	B6	8.8-10.4	mg/dL
Sodium	B6	135-145	mEq/L
Potassium	B6	3.5-5.0	mEq/L
Urea Nitrogen	B6	0-20	mg/dL
Creatinine	B6	0.6-1.2	mg/dL

B4, B6

Client: **B6**
Patient:

Diet History Form

Client Diet History Form

Submitted: 02/14/2018

PET INFORMATION

Pet Name: **B6**
Pet Last Name: **B6**
Pet Species/Breed: Dog / Labrador Retriever
Pet's Color: Black
Pet's Birthdate: **B6**
Pet's Sex: Male
Spayed or Neutered?: Yes

CLIENT INFORMATION

Client Name: **B6**
Client Address: **B6**
Client Phone Fx:
Client Email:
Co-Owner Name:
Co-Owner Phone:
Co-Owner Email:

CONSULT INFORMATION

Type of Consult:
HCD Being Requested?
Reasons & Goals for Consult: **B6**
Attachments:

PRIMARY VETERINARIAN INFORMATION

(DVM Name): **B6**
(DVM Clinic):
(DVM Phone):
(DVM Fax):
(DVM Email):

Client:
Patient:

B6

Diet History Form

B6

Client:
Patient:

B6

Diet History Form

B6

Client: **B6**
Patient:

Diet History Form

B6

Client:
Patient:

B6

Diet History Form

B6

Client:
Patient:

B6

Diet History Form

B6

Client: **B6**
Patient:

Diet History Form

B6

Client:
Patient:

B6

Diet History Form

B6

Client:
Patient:

B6

Nutrition appointment report 2-22-18

Clinical Nutrition Service
Foster Hospital for Small Animals
200 Westboro Road
North Grafton, MA 01526
Phone: (508) 897-4600 ADH, Nutrition Liaison
Fax: (508) 897-4262
www.clinicalnutrition.com
nutrition@fhsu.edu

Cummings
Veterinary Medical Center
ST TAPPA UNIVERSITY

Nutrition Consultation

B6

Client: Howe, Susan
Patient: Riley

Nutrition appointment report 2-22-18

B6

Client:
Patient:

B6

Nutrition appointment report 2-22-18

B6

Client: **B6**
Patient:

Nutrition appointment report 2-22-18

B6

Sincerely,

Lisa M. Freeman, DVM, PhD, DACVN
Professor, Clinical Nutrition
508-887-4866 (telephone)
vfnutrition@tufts.edu (email)
www.vfnutrition.com

Client: **B6**
Patient:

3/6/18 e-mail from client with spreadsheet

B6

[Faint, illegible text from a spreadsheet or document, likely representing the content of the spreadsheet mentioned in the header.]

Client:
Patient:

B6

B6

3/8/18-CBC/Chem

B6

B6

Client:
Patient:

B6

B6

abs 3/8/18-CBC/Chem

B6

B6

Client
Patient

B6

RDVM

B6

results 4/6/18

B6

Client:
Patient:

B6

rDVM:

B6

labs 5/8/18

B6

Page 6

FOIA

For search results please visit <https://www.accessdata.fda.gov/oc/foia/>

Client:
Patient:

B6

Nutrition consultation 8-27-18

Clinical Nutrition Service
Foster Hospital for Small Animals
200 Westboro Road
North Grafton, MA 01526
Phone: (508) 897-4900 ADH Nutrition Liaison
Fax: (508) 897-4303
www.veterinarynutrition.com
nutrition@tufts.edu

Cummings
Veterinary Medical Center
ST TUFTS UNIVERSITY

Nutrition Consultation

B6

Client: **B6**
Patient:

Nutrition consultation 8-27-18

B6

Client:
Patient:

B6

Nutrition consultation 8-27-18

B6

Client:
Patient:

B6

Nutrition consultation 8-27-18

B6

Sincerely,

Lisa M. Freeman, DVM, PhD, DACVP
Professor, Clinical Nutrition
508.887.4590 (telephone)
wefreeml@tufts.edu (email)
www.livestrong.org

Client:
Patient:

B6

Lab Results 12/2/17 - 8/18/18

B6

Client: **B6**
Patient:

Lab Results 12/2/17 - 8/18/18

B6

Client:
Patient:

B6

RDVM/

B6

Practice Renal Profile 6/9/18

B6

B6

Client:
Patient:

B6

Email from owner 9/11/18

B6

Client: **B6**
Patient:

Email from owner 9/11/18

B6

2

B6

Client:
Patient:

B6

Vitals Results

2/9/2018 3:12:22 PM
2/9/2018 3:12:23 PM
2/9/2018 3:12:24 PM
2/9/2018 3:12:25 PM
2/9/2018 3:41:50 PM
2/9/2018 3:52:17 PM
2/9/2018 4:29:58 PM
2/9/2018 6:21:42 PM
2/9/2018 6:31:58 PM
2/9/2018 6:57:57 PM
2/9/2018 7:55:28 PM
2/9/2018 7:57:28 PM
2/22/2018 5:37:36 PM
2/22/2018 5:37:37 PM
2/22/2018 5:37:38 PM
4/9/2018 1:30:52 PM
4/9/2018 1:30:53 PM
4/9/2018 1:30:54 PM
4/9/2018 1:30:55 PM
8/17/2018 12:16:11 PM
8/27/2018 1:27:16 PM
8/27/2018 1:27:17 PM
8/27/2018 1:27:18 PM

B6

Client:
Patient:

B6

ECG from Cardio

B6

02/22/2018 4:18:10 AM Page 3 of 8
Title: [Redacted]
Ref: [Redacted] (of the [Redacted])
[Redacted]

B6

Client:
Patient:

B6

ECG from Cardio

B6

01/12/2010 4:18:10 PM Page 1 of 1
Talla University
Health Sciences Center of the Sea
System

B6

Client:
Patient:

B6

ECG from Cardio

B6

01/27/2010 4:18:13 AM

Table Generated:
Red Cross Blood Bank of the West
System

B6

Client:
Patient:

B6

ECG from Cardio

B6

01/17/2018 4:18:39 AM Page 3 of 8
Title: [redacted]
Ref: [redacted] of the [redacted]
[redacted]

B6

Client: **B6**
Patient:

ECG from Cardio

B6

01/12/2018 4:18:39 AM Page 2 of 8
Title: Summary;
Ref: Discharge Summary of the test
System

B6

Client:
Patient:

B6

ECG 2/9/18

B6

Client:
Patient:

B6

ECG 2/9/18

B6

Client:
Patient:

B6

ECG 4/9/18

B6

Client:
Patient:

B6

ECG from cardio

B6

WALGREENS STORE # 001, INC. Date: 8/14/18
Federal Government This message and its contents
are confidential are confidential

B6

Client:
Patient:

B6

ECG from cardio

B6

WALGREENS STORE # 123456789
Pharm. Information
Pharm. Information
123456789

B6

Client: **B6**
Patient:

ECG from cardio

B6

WELLS RICHMOND COLLEGE
Public University
Public Knowledge Award of the Year
2019/2020

B6

Client:
Patient:

B6

ECG from cardio

B6

WELLS RICHMOND COLLEGE
Public University
Public University
Public University
Public University

B6

Client: **B6**
Patient

ECG from cardio

B6

WELLS RICHMOND COLLEGE
Public University
Public University of the West
California

B6

Client: **B6**
Patient: **B6**

ECG from cardio

B6

WELLS RICHMOND BANK, INC. Page 2 of 2
Member FDIC
Equal Housing Lender
Member SBA

B6

Client:
Patient:

B6

ECG from cardio

B6

WILSON JONES (2018-01-11) 00:00:00
WILSON JONES (2018-01-11) 00:00:00
WILSON JONES (2018-01-11) 00:00:00
WILSON JONES (2018-01-11) 00:00:00

B6

Client:
Patient:

B6

ECG from cardio

B6

WILSON JONES, MD
Medical Director
North Carolina School of Public Health
12001

B6

Client:
Patient:

B6

Patient History

02/09/2018 01:17 PM
02/09/2018 02:50 PM
02/09/2018 02:50 PM
02/09/2018 02:57 PM

02/09/2018 03:05 PM
02/09/2018 03:12 PM
02/09/2018 03:12 PM
02/09/2018 03:12 PM
02/09/2018 03:12 PM
02/09/2018 03:16 PM
02/09/2018 03:41 PM
02/09/2018 03:41 PM
02/09/2018 03:41 PM
02/09/2018 03:52 PM
02/09/2018 03:52 PM
02/09/2018 04:25 PM
02/09/2018 04:29 PM

02/09/2018 04:29 PM
02/09/2018 05:23 PM

02/09/2018 05:24 PM
02/09/2018 05:32 PM
02/09/2018 05:33 PM
02/09/2018 05:33 PM
02/09/2018 05:34 PM

02/09/2018 06:02 PM
02/09/2018 06:02 PM
02/09/2018 06:04 PM

02/09/2018 06:04 PM

02/09/2018 06:21 PM
02/09/2018 06:21 PM
02/09/2018 06:31 PM
02/09/2018 06:31 PM
02/09/2018 06:57 PM
02/09/2018 06:57 PM
02/09/2018 07:02 PM
02/09/2018 07:02 PM
02/09/2018 07:06 PM
02/09/2018 07:08 PM
02/09/2018 07:10 PM
02/09/2018 07:15 PM

B6

Client:
Patient:

B6

Patient History

02/09/2018 07:46 PM
02/09/2018 07:55 PM
02/09/2018 07:55 PM
02/09/2018 07:57 PM
02/09/2018 07:57 PM
02/18/2018 04:25 PM

02/21/2018 03:34 PM
02/21/2018 04:07 PM
02/21/2018 04:59 PM

02/21/2018 05:15 PM
02/21/2018 06:05 PM
02/22/2018 10:49 AM

02/22/2018 02:32 PM
02/22/2018 02:33 PM
02/22/2018 05:37 PM
02/22/2018 05:37 PM
02/22/2018 05:37 PM

02/23/2018 11:03 AM
02/23/2018 11:04 AM
03/02/2018 09:53 AM
04/09/2018 01:30 PM
04/09/2018 01:30 PM
04/09/2018 01:30 PM
04/09/2018 01:30 PM
04/09/2018 03:22 PM
04/09/2018 03:38 PM
04/09/2018 03:38 PM
04/09/2018 03:39 PM
04/10/2018 03:25 AM
05/04/2018 12:42 PM

05/04/2018 12:42 PM

08/08/2018 07:27 PM

08/17/2018 11:29 AM
08/17/2018 11:39 AM

08/17/2018 12:09 PM
08/17/2018 12:09 PM
08/17/2018 12:10 PM
08/17/2018 12:16 PM
08/17/2018 12:29 PM

08/17/2018 12:45 PM

B6

Client:
Patient:

B6

Patient History

08/17/2018 01:00 PM
08/17/2018 01:14 PM

08/17/2018 01:17 PM
08/17/2018 01:21 PM
08/21/2018 02:42 PM

08/27/2018 09:16 AM
08/27/2018 11:17 AM

08/27/2018 01:27 PM
08/27/2018 01:27 PM

08/27/2018 01:27 PM
10/23/2018 03:01 PM

B6

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

Forster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01526
Telephone (508) 829-5295
Fax (508) 829-7951
<http://vetmed.tufts.edu/>

B6

B6

Male (Neutered)

Color: Labrador Retriever Black

B6

B6

Dear Dr. **B6**

Thank you for referring **B6** with their pet **B6**

B6

Please see attached discharge instructions for additional details as needed. If you have any questions, or concerns, please contact us at 508-827-4331.

Thank you,

B6

(Resident, Emergency & Critical Care)

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

Forster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01526
Telephone (508) 829-5295
Fax (508) 829-7951
<http://vetmed.tufts.edu/>

B6

B6

Male (Neutered)

Color: Labrador Retriever: Black

B6

B6

Dear Dr. **B6**

Thank you for referring **B6** with their pet **B6**

If you have any questions, or concerns, please contact us at 508-827-1981.

Thank you,

B6 DVM, DACVP (Cardiology), PhD

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

Forster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01526
Telephone (508) 829-5295
Fax (508) 829-7951
<http://vetmed.tufts.edu/>

B6

B6

Male (Neutered)

Gender: Labrador Retriever Black

B6

B6

Dear Dr. **B6**

Thank you for referring **B6** with their pet **B6**

Please see the attached discharge letter.

If you have any questions, or concerns, please contact us at 508-829-1981.

Thank you.

B6 (SAM Rotating Intern)

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

Forster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01526
Telephone (508) 829-5295
Fax (508) 829-7951
<http://vetmed.tufts.edu/>

B6

B6

Male (Neutered)

Color: Labrador Retriever: Black

B6

B6

Dear Dr. **B6**

Thank you for referring **B6** with their pet **B6**

If you have any questions, or concerns, please contact us at 508-827-1981.

Thank you,

B6 DVM, DACVM (Cardiology), PhD

From: Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>
To: Carey, Lauren; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L; Rotstein, David
Sent: 10/25/2018 11:54:09 AM
Subject: [REDACTED]ase-FW: Taste of the Wild High Prairie: Lisa Freeman - EON-369325
Attachments: 2057945-report.pdf; 2057945-attachments.zip

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place
[REDACTED] (BB)



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From: PFR Event <ppreventcreation@fda.hhs.gov>
Sent: Thursday, October 25, 2018 7:53 AM
To: Cleary, Michael * <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; [REDACTED]
Subject: Taste of the Wild High Prairie: Lisa Freeman - EON-369325

A PFR Report has been received and PFR Event [EON-369325] has been created in the EON System.

A "PDF" report by name "2057945-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2057945-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-369325
ICSR #: 2057945
EON Title: PFR Event created for Taste of the Wild High Prairie; 2057945

AE Date	02/20/2018	Number Fed/Exposed	1
Best By Date		Number Reacted	1
Animal Species	Dog	Outcome to Date	Died Naturally

Breed	Great Dane		
Age	9 Years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2057945

Product Group: Pet Food

Product Name: Taste of the Wild High Prairie

Description: DCM, CHF, atrial fibrillation WB taurine = **B6** Dog's diet previously submitted to FDA Note: this may be a duplicate submission

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Died Naturally

Number of Animals Treated With Product: 1

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Taste of the Wild High Prairie		

Sender information

Lisa Freeman
 200 Westboro Rd
 North Grafton, MA 01536
 USA

Owner information

B6

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-369325>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=12&issuelid=386247>

=====

This email and attached document are being provided to you in your capacity as a Commissioned Official with the U.S. Department of Health and Human Services as authorized by law. You are being provided with this information pursuant to your signed Acceptance of Commission.

This email message is intended for the exclusive use of the recipient(s) named above. It may contain information that is protected, privileged, or confidential. Any dissemination, distribution, or copying is strictly prohibited.

The information is provided as part of the Federal-State Integration initiative. As a Commissioned Official and state government official, you are reminded of your obligation to protect non-public information, including trade secret and confidential commercial information that you receive from the U.S. Food and Drug Administration from further disclosure. The information in the report is intended for situational awareness and should not be shared or acted upon independently. Any and all actions regarding this information should be coordinated through your local district FDA office.

Failure to adhere to the above provisions could result in removal from the approved distribution list. If you think you received this email in error, please send an email to FDAReportableFoods@fda.hhs.gov immediately.

From: Carey, Lauren </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F0226BD682844FA2B71EA3750D4FCB82-LAUREN.CARE>
To: Rotstein, David; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L
Sent: 10/25/2018 7:10:28 PM
Subject: RE: [B6] case-FW: Taste of the Wild High Prairie: Lisa Freeman - EON-369325

Dr. Freeman stated this might be a duplicate submission. I dug through the database and I don't find anything so I think this is an original report for this case.

From: Rotstein, David
Sent: Thursday, October 25, 2018 7:54 AM
To: Carey, Lauren <Lauren.Carey@fda.hhs.gov>; Ceric, Olgica <Olgica.Ceric@fda.hhs.gov>; Glover, Mark <Mark.Glover@fda.hhs.gov>; Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Peloquin, Sarah <Sarah.Peloquin@fda.hhs.gov>; Queen, Jackie L <Jackie.Queen@fda.hhs.gov>; Rotstein, David <David.Rotstein@fda.hhs.gov>
Subject: [B6] case-FW: Taste of the Wild High Prairie: Lisa Freeman - EON-369325

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place
[B6] (BB)



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From: PFR Event <pfpreventcreation@fda.hhs.gov>
Sent: Thursday, October 25, 2018 7:53 AM
To: Cleary, Michael * <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; usha.gulati@doveltech.com
Subject: Taste of the Wild High Prairie: Lisa Freeman - EON-369325

A PFR Report has been received and PFR Event [EON-369325] has been created in the EON System.

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ICSR #: 2057945

EON Title: PFR Event created for Taste of the Wild High Prairie; 2057945

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Product Group: Pet Food

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Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Died Naturally

Number of Animals Treated With Product: 1

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Taste of the Wild High Prairie		

Sender information

Lisa Freeman

200 Westboro Rd

North Grafton, MA 01536

USA

Owner information

B6

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-369325>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jsps?decorator=none&e=0&issueType=12&issuelid=386247>

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Failure to adhere to the above provisions could result in removal from the approved distribution list. If you think you received this email in error, please send an email to FDAReportableFoods@fda.hhs.gov immediately.

From: Freeman, Lisa <Lisa.Freeman@tufts.edu>
To: Jones, Jennifer L
CC: Reimschuessel, Renate
Sent: 7/20/2018 11:01:57 PM
Subject: RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

PS – I have food samples for [B6] and [B6]

Lisa M. Freeman, DVM, PhD, DACVN
Professor
Cummings School of Veterinary Medicine
Friedman School of Nutrition Science and Policy
Tufts Clinical and Translational Science Institute
Tufts University
www.petfoodology.org

From: Freeman, Lisa
Sent: Friday, July 20, 2018 6:32 PM
To: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Cc: Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>
Subject: RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Hi Jen and Renate

I'll get permission from all 3 owners and send records. I might wait another week before calling [B6] and [B6] owners based on updates below.
Lisa

Updates:

For [B6], WB taurine was [B6]. On [B6] We talked to owner: [B6] was having trouble breathing, they were planning to pts today but he died at home yesterday.

For [B6], taurine came back normal (plasma = [B6] WB= [B6]). Owner left a message that [B6] died on [B6] so no repeat echo. We're calling the vet to see if we can find out any additional info.

For [B6] owner told us on [B6] He collapsed twice on [B6] once at home and again at [B6] where we had him put to sleep
No autopsy done. Not sure if I sent before but his taurine was plasma [B6] and WB [B6]

Lisa M. Freeman, DVM, PhD, DACVN
Professor
Cummings School of Veterinary Medicine
Friedman School of Nutrition Science and Policy
Tufts Clinical and Translational Science Institute
Tufts University
www.petfoodology.org

From: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Sent: Friday, July 20, 2018 8:47 AM
To: Freeman, Lisa <lisa.freeman@tufts.edu>
Cc: Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>
Subject: RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Good morning Lisa,

Yes, we got the reports you previously submitted and recorded the information for our database. Will you please forward any medical records for:

- [REDACTED] B6 are you able to send any updates on the Taurine testing or echocardiogram (if done?)
- [REDACTED] B6 Also was an autopsy done?

Thank you in advance and for your time to report all the cases!

Jen

Jennifer Jones, DVM
Veterinary Medical Officer
Tel: 240-402-5421



From: Freeman, Lisa [mailto:Lisa.Freeman@tufts.edu]
Sent: Friday, July 20, 2018 8:06 AM
To: Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>
Cc: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Subject: RE: 800.267-FDA Case Investigation for [REDACTED] B6 (EON-358523)

Dear Renata and Jennifer

That seems reasonable. I was never contacted about the other cases that I submitted. There was some confusion about the way I submitted them so I want to be sure you actually got them ([REDACTED] B6 [REDACTED] B6). I'm sure you're all getting slammed with reports (and there will probably be even more coming now) but just wanted to check to be sure they got recorded.

Thanks

Lisa

From: Reimschuessel, Renate [mailto:Renate.Reimschuessel@fda.hhs.gov]
Sent: Friday, July 20, 2018 7:55 AM
To: Freeman, Lisa <Lisa.Freeman@tufts.edu>
Cc: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Subject: RE: 800.267-FDA Case Investigation for [REDACTED] B6 (EON-358523)

Dear Lisa

Thanks for gathering the information.

I think, since we are getting so many reports since our CVM update, we should pass on the [REDACTED] B6 case as it is not clear-cut.

I think Jen is more familiar with the [REDACTED] B6 case, so I'll let her respond regarding that one.

Thank you again for all your work on this investigation.

rr

Renate Reimschuessel V.M.D. Ph.D. Director Vet-LIRN

Phone 1- 240-402-5404

Fax 301-210-4685

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>

From: Freeman, Lisa [mailto:Lisa.Freeman@tufts.edu]
Sent: Thursday, July 19, 2018 5:59 PM
To: Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>
Subject: RE: 800.267-FDA Case Investigation for [REDACTED] B6 (EON-358523)

Dear Renate

In looking back through this case, I'm not sure this is a completely clear-cut one. The dog has degenerative mitral valve disease and CHF but also has reduced cardiac contractility so might be a combination. Do you still want me to collect the info below?

Also, I have an update on [B6] who died at home last week. I do have food from the owner if you want that.

Thanks
Lisa

Lisa M. Freeman, DVM, PhD, DACVN
Professor
Cummings School of Veterinary Medicine
Friedman School of Nutrition Science and Policy
Tufts Clinical and Translational Science Institute
Tufts University
www.petfoodology.org

From: Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>
Sent: Tuesday, July 17, 2018 11:48 AM
To: Freeman, Lisa <lisa.freeman@tufts.edu>
Subject: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Dr. Freeman,

Thank you for submitting your consumer complaint to FDA. I'm sorry to hear about [B6] illness. As part of our investigation, we'd like to request:

- **Full Medical Records**

- Please email (preferred) or fax (301-210-4685) a copy of [B6] **entire** medical history (not just this event), including any referral diagnostics.

- **Phone interview** about [B6] diet and environmental exposures

- Please confirm permission to contact the owner.
- The interview generally lasts 30 minutes.

I attached a copy of our Vet-LIRN network procedures. The procedures describe how Vet-LIRN operates and how veterinarians help with our case investigations.

Please respond to this email so that we can initiate our investigation.

Thank you kindly, especially for submitting multiple cases,
Dr. Reimschuessel

Renate Reimschuessel V.M.D. Ph.D.
Director: Vet-LIRN

(Veterinary Laboratory Investigation and Response Network)

Center For Veterinary Medicine, FDA,
8401 Muirkirk Road, Laurel, MD 20708

Phone 1- 240-402-5404 Fax 301-210-4685

EMAIL : renate.reimschuessel@fda.hhs.gov

Vet-LIRN

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>

Phish-Pharm

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ToolsResources/Phish-Pharm/default.htm>

Aquaculture

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ResearchAreas/ucm130892.htm>

Client: B6
Patient: B6
Species: CANINE
Breed: GREAT_DANE
Gender: MALE
Age: 8Y

Date: 02/21/2018
Requisition #: 366354
Accession #: B6
Ordered by: B6

IDEXX VetConnect 1-888-433-9987
TUFTS UNIVERSITY
200 WES TBORO RD
NORTH GRAFTON, Massachusetts 01536-1828
508-839-7936
Account #80735

CARDIOPET proBNP - CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP - CANINE	B6	0 - 900 pmol/L			HIGH

Comments:

B6

Please note: Complete interpretive comments for all concentrations of Cardiotet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY
Cardiology Liaison: 508-887-4696

B6

Patient ID: **B6**

B6 Canine

B6 Years Old Male Great Dane

Fawn BW: Weight(lbs) 0.00

Cardiology Inpatient

Date: 2/20/2018

Weight: Weight(lbs) 82kg

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Thoracic radiographs available for review?

- Yes - in SS
- Yes - in PACS
- No

Presenting complaint and important concurrent diseases:

collapse, lethargy, hyporexia, suspected A-fib at rDVM

Current medications and doses:

one dose of lasix IV yesterday, no other meds

Key indication for consultation:

suspect DCM, A-fib, RCHF

Questions to be answered from the Consult:

confirm above, long term prognosis

Is your consult time-sensitive? (e.g., anesthesia today, owner waiting, trying to get biopsy today)

- Yes (explain) - owners waiting
- No

STOP - remainder of form to be filled out by Cardiology

Physical Examination

B6

Muscle condition:

- Normal
- Mild muscle loss
- Moderate cachexia
- Marked cachexia

Cardiovascular Physical Exam

Murmur Grade:

- None
- I/VI
- II/VI
- III/VI
- IV/VI
- V/VI
- VI/VI

Murmur location/description: systolic left apical

Jugular vein:

- Bottom 1/3 of neck
- Middle 1/3 of neck
- Top 2/3 of neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other (describe):

Arrhythmia:

- None
- Sinus arrhythmia
- Premature beats
- Bradycardia
- Tachycardia, irregular

Gallop:

- Yes
- No
- Intermittent
- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds
- Pulmonary Crackles
- Wheezes
- Upper airway stridor
- Other auscultatory findings:

Abdominal exam:

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites

Echocardiogram Findings:

General/2-D findings:

Echocardiogram performed with patient standing

B6

Doppler findings:

B6

Mitral inflow:

B6

ECG findings:

B6

Radiographic findings:

Ideally recommend obtaining

Assessment and recommendations:

Echocardiogram reveals severe DCM with moderate secondary LAE, and EKG reveals atrial fibrillation with rapid ventricular response rate. Changes are consistent with CHF being the cause for effusions and trouble breathing. The collapse episode could be related to CHF or intermittent more severe arrhythmia.

B6

B6

Recommend

B6

B6

Ideally the patient would be hospitalized for monitoring with telemetry and titration of medication doses. Recommend submitting baseline blood work, and ideally thoracic radiographs (could be done standing in large animal if needed). Recheck renal values, digoxin level 6-8 hours post pill, fluid check, and ECG in 7-10 days. Recheck echo/fluid check in ~3 months, or sooner if clinical sign occur such as increased RR/RE, cough, collapse, or exercise intolerance.

Addendum: Patient appears more comfortable, but HR is still elevated. Recommend increasing ER to 150mg PO BID.

B6

Diet - Taste of the Wild High Prairie (buffalo/lamb/chicken). Owners plan to change diet.

Treatment plan:

B6

Final Diagnosis:

DCM, CHF

Atrial fibrillation with rapid ventricular response rate

Heart Failure Classification Score:

ISACHC Classification:

- Ia
- Ib

- IIIa
- IIIb

II

ACVIM CHF Classification:

- A
- B1
- B2

- C
- D

M-Mode

IVSd

LVIDd

LVPWd

IVSs

LVIDs

LVPWs

%FS

Ao Diam

LA Diam

LA/Ao

Max LA

EPSS

M-Mode Normalized

IVSdN

LVIDdN

LVPWdN

IVSsN

LVIDsN

LVPWsN

Ao Diam N

LA Diam N

2D

SA LA

Ao Diam

SA LA / Ao Diam

IVSd

LVIDd

LVPWd

EDV(Teich)

IVSs

LVIDs

LVPWs

ESV(Teich)

EF(Teich)

%FS

SV(Teich)

LVLd LAX

LVAd LAX

LVEDV A-L LAX

LVEDV MOD LAX

B6

cm

cm

cm

cm

cm

cm

%

cm

cm

cm

cm

(0.29 - 0.52)

(1.35 - 1.73) !

(0.33 - 0.53)

(0.43 - 0.71) !

(0.79 - 1.14) !

(0.53 - 0.78) !

(0.68 - 0.89) !

(0.64 - 0.90) !

B6

cm

cm

cm

cm

cm

ml

cm

cm

cm

ml

%

%

ml

cm

cm

ml

ml

LVLs LAX
LVA_s LAX
LVESV A-L LAX
LVESV MOD LAX
HR
EF A-L LAX
LVEF MOD LAX
SV A-L LAX
SV MOD LAX
CO A-L LAX
CO MOD LAX

B6

cm
cm
ml
ml
BPM
%
%
ml
ml
l/min
l/min

Doppler
MR Vmax
MR maxPG
MVE Vel
AV Vmax
AV maxPG
TR Vmax
TR maxPG
Time
HR

B6

m/s
mmHg
m/s
m/s
mmHg
m/s
mmHg
ms
BPM

B6

Patient ID: B6
B6 Canine
Years Old Male Great Dane
Fawn

Cardiology Appointment Report

Date: 4/12/2018

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6 V19

Presenting Complaint: Recheck visit for fluid check and kidney values. Owners had no new concerns.

Concurrent Diseases: DCM, CHF, A fib

General Medical History:

Diagnosed with DCM and CHF and A fib 02/20/18 following episode of collapse and increased respiratory rate

Doing really well - overall good energy, just normal old big dog slowing down. Jumps up into back of truck no problem.

Owner noticed slight bulging out of left flank. Slight tremor in the head and neck occasionally seen when he lays down but is still holding his head up.

HR 130-140 when resting at home, RR 12-14 when resting at home.

Diet and Supplements:

Old food - taste of the wild high prairie - about 5 cups daily (down from 8)

Also getting boiled chicken with his pills

When he eats more food, he gets soft stool (O asked for B6 script)

Nutro Blueberry Crunchies - dog treats

Cardiovascular History:

Prior CHF diagnosis? Yes

Prior ATE? No

Prior arrhythmia? Yes - A fib

Cough? Occasional single cough first thing in the morning, but no other cough

Shortness of breath or difficulty breathing? No. Snuffly sounding breathing more pronounced when he has to pee

Syncope or collapse? Yes - hx of collapse in February. None since then

Sudden onset lameness? No. Just normal old great dane stiffness

Exercise intolerance? No. Owners limit length of walks, good energy

Prior heart murmur? Yes - II/VI left apical systolic

Current Medications Pertinent to CV System:

B6

Cardiac Physical Examination:

B6

Muscle condition:

- | | |
|--|--|
| <input type="checkbox"/> Normal | <input type="checkbox"/> Moderate cachexia |
| <input checked="" type="checkbox"/> Mild muscle loss | <input type="checkbox"/> Marked cachexia |

Cardiovascular Physical Exam:

Murmur Grade:

- | | |
|---|--------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> IV/VI |
| <input type="checkbox"/> I/VI | <input type="checkbox"/> V/VI |
| <input checked="" type="checkbox"/> II/VI | <input type="checkbox"/> VI/VI |
| <input type="checkbox"/> III/VI | |

Murmur location/description: Left apical to mid-cardiac systolic

Jugular vein:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Bottom 1/3 of neck | <input type="checkbox"/> Top 2/3 rd of neck |
| <input type="checkbox"/> Middle 1/3 of neck | |

Arterial pulses:

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

Arrhythmia:

- None
- Sinus arrhythmia
- Premature beats
- Bradycardia
- Irregular - A fib

Gallop:

- Yes
- No
- Intermittent
- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds
- Pulmonary crackles
- Wheezes
- Upper airway stridor

Abdominal exam:

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites
- Marked ascites

Problems: DCM, hx of CHF, A fib

Diagnostic plan:

- Echocardiogram
- Chemistry profile
- ECG
- Renal profile
- Blood pressure
- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests: Fluid check

Echocardiogram Findings:

General/2-D findings:

B6

ECG findings:

B6

Assessment and recommendations:

Patient is doing very well at home after some tweaking of medications. B6

B6 and GI signs and his ventricular response rate has still been well controlled. Chem 21, PCV/TS submitted today. REcommend continuing current medications unless otherwise directed based on blood work. Redcheck fluid check/brief echo in 2-4 months, or sooner if clinical signs occur at home such as increased RR/RE, cough, collapse, abdominal distension, or lethargy. Continue with monthly ECGs at home or more often if there are clinical concerns.

Final Diagnosis:

DCM

History of biventricular CHF

Atrial fibrillation

Heart Failure Classification Score:

ISACHC Classification:

- Ia
- Ib
- II
- IIIa
- IIIb

ACVIM Classification:

- A
- B1
- B2
- C
- D

M-Mode

IVSd		om
LVIDd		om
LVPWd		om
IVSs		om
LVIDs		om
LVPWs		om
%FS		%
Max LA		om

B6

M-Mode Normalized

IVSdN	(0.29 - 0.52) !
LVIDdN	(1.35 - 1.73) !
LVPWdN	(0.33 - 0.53)
IVSsN	(0.43 - 0.71)
LVIDsN	(0.79 - 1.14) !
LVPWsN	(0.53 - 0.78)

2D

SA LA		om
Ao Diam		om
SA LA / Ao Diam		
IVSd		om
LVIDd		om
LVPWd		om
EDV(Teich)		ml
IVSs		om
LVIDs		om
LVPWs		om
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml

B6

Discharge Instructions

Patient

Name: B6
Species: Canine
Breed: Fawn Male Great Dane
Birthdate: B6

Owner

Name: B6
Address: B6

Patient ID: B6

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Student: B6 V18

Cardiology Technician:

B6

Admit Date: B6

Discharge Date: B6

Diagnoses: Dilated cardiomyopathy (DCM) with congestive heart failure; Atrial fibrillation

Case summary:

Thank you for bringing B6 to Tufts for evaluation of his collapse episode, increased breathing effort, and irregular heart rhythm. B6 has been diagnosed with a primary heart muscle disease called dilated cardiomyopathy (DCM). This disease is more common in large and giant breed dogs and is characterized by thinning of the walls of the heart, reduced cardiac pump function, and enlargement of the upper chambers of the heart. Many dogs with DCM will also have significant arrhythmias which can be life-threatening and also require medical management. In B6's case, he has atrial fibrillation, which we believe caused his collapsing events, and to help treat this arrhythmia, we try to reduce the heart rate rather than convert that back to sinus rhythm. The heart enlargement has now progressed to the point of congestive heart failure, meaning that fluid is backing up into the lungs or belly. Unfortunately this is a progressive disease and we cannot reverse the changes to the heart muscle, however we can use cardiac medications and some changes to the diet to make B6 comfortable and have him breathing easier.

Diagnostic test results and findings:

B6

Monitoring at home:

B6

Recommended Medications:

B6

Diet suggestions:

Dogs with heart failure accumulate more fluid in their body if they eat large amounts of sodium (salt). Sodium can be found in all foods, but some foods are lower in sodium than others. Many pet treats, people foods, and supplements used to give pills often have more sodium than is desirable - a sheet that has suggestions for low sodium treats can be found on the

HeartSmart web site (<http://vet.tufts.edu/heartsmart/diet/>)

B6 usual diet may also have more sodium than recommended - we want him to continue to eat his normal diet for the first 7 to 14 days so we can make sure he is tolerating medications well, but after that time we would recommend slowly introducing one of the lower sodium diets on the HeartSmart list (25% of the new diet and 75% old diet for 2-3 days, then 50:50, etc.). Hopefully you can find a diet on the list that your dog likes to eat. Alternatively, if you are attached to the current diet you can research the amount of sodium in the diet to ensure that the sodium content is similar to those on the list.

There have been some anecdotal reports of certain dog foods being associated with decreased contractile function in dogs. We would ideally want to avoid grain free diets or any diet that may have been associated with heart problems in dogs.

Exercise Recommendations:

For the first 7 to 10 days after starting medications for heart failure we recommend very limited activity. Leash walking only is ideal, and short walks to start. Once the heart failure is better controlled, then slightly longer walks are acceptable. However, if you find that B6 is lagging behind or needs to stop on a walk then this was too long a walk and shorter walks are advised in the future. Repetitive or strenuous high energy activities (repetitive ball chasing, running fast off-leash, etc.) are generally not advised at this stage of heart failure.

Recheck Visits:

We would like Kenji to get bloodwork in 1-2 weeks to make sure he is tolerating his medications. We would like to check his B6 levels and to assess his renal function. This blood sample needs to be taken 6-8 hours after his B6 is given. We have scheduled you an appointment for Friday March 2nd at 3PM, but if B6 is doing well at home, you can get this recheck done at your primary vet if more convenient. A recheck ECG is also recommended at that time.

We would like to see B6 back for a re-check echo in 3-4 months to re-assess his heart and the progression of his DOM.

Thank you for entrusting us with B6's care. He is such a sweet and handsome boy! Please contact our Cardiology liaison, B6, at B6 or email us at cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information

<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

Case: B6

Owner: B6

Discharge Instructions

Discharge Instructions

Patient

Name: B6
Species: Canine
Fawn Male Great Dane
Birthdate: B6

Owner

Name: B6
Address: B6

Patient ID: B6

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Student: B6 V19

Cardiology Technician:

B6

Date: 4/12/2018

Diagnoses: Dilated cardiomyopathy (DCM), Atrial fibrillation, history of congestive heart failure

Clinical Findings:

Thank you for bringing B6 to Tufts to recheck how his heart is doing. He is such a sweet boy!
Today we did a brief ultrasound of his heart and abdomen today. He looks good - we saw no fluid around his heart or abdomen, and his hepatic vessels do not look dilated which is great. His heart looks stable compared to previous exams.

We also collected some blood today to check his kidney values, and we will call you tonight or tomorrow when we get the results back. We are so happy with how he is looking!

Monitoring at Home:

B6

B6

Diet Suggestions:

Please continue trying to keep his sodium levels low. We are happy with him getting a varied diet. We want him to keep weight on, so as long as he is eating his food and snacks, that is good.

Exercise Recommendations:

Repetitive or strenuous high energy activities (repetitive ball chasing, running fast off-leash, etc.) are generally not advised at this stage of heart failure. Moderate walks are okay now that his heart failure is better controlled as long as he is not lagging behind or needing to stop frequently.

Continue Medications:

Continue

B6

Please continue to send periodic ECGs any time you have a concern, or at least once a month.

Thank you for entrusting us with B6's care. He was a perfect boy for us, as always. Please contact our Cardiology liaison, B6, at B6 or email us at cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information

<http://vet.tufts.edu/heartsmart/>

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Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

Case

B6

Owner

B6

Discharge Instructions

Client: **B6**
 Veterinarian:
 Patient ID: **B6**
 Visit ID: 2477624

Patient: **B6**
 Species: Canine
 Breed: Great Dane
 Sex: Male
 Age: **B6** Years Old

Lab Results Report

Chemistry 21 (Cobas)		6/5/2018 11:07:21 AM	Accession ID: B6
Test	Results	Reference Range	Units
GLUCOSE	B6	67 - 135	mg/dL
UREA		8 - 30	mg/dL
CREATININE		0.6 - 2	mg/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
T. PROTEIN		5.5 - 7.8	g/dL
ALBUMIN		2.8 - 4	g/dL
GLOBULINS		2.3 - 4.2	g/dL
A/G RATIO		0.7 - 1.6	
SODIUM		140 - 150	mEq/L
CHLORIDE		106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
D.BILIRUBIN		0 - 0.1	mg/dL
I BILIRUBIN		0 - 0.2	mg/dL
ALK PHOS		12 - 127	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CHOLESTEROL		82 - 355	mg/dL
OSMOLALITY (CALCULATED)	291 - 315	mmol/L	
COMMENTS (CHEMISTRY)	0 - 0		
Slight hemolysis,Slight lipemia			

Radiology Request & Report

Patient

Name: B6
Species: Canine
Fawn Male Great Dane
Birthdate: B6

Owner

Name: B6
Address: B6

Patient ID: B6
Date of request: 2/20/2018

Attending Clinician: B6 VM (SAM Rotating Intern)

Student:

Date of exam: 2/20/18

Patient Location: Ward/Cage: ICU

Weight(lbs) 0.00

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

Sedation

- BAG
- OBAG
- 1/2 dose OBAG
- DexDomitor/Butorphanol
- Anesthesia to sedate/anesthetize

Examination Desired: CXR (do standing in large animal)

Presenting Complaint and Clinical Questions you wish to answer:
Emergency

Pertinent History: collapse episode, dx with DCM, CHF, and A-fib

Findings:

B6

Conclusions:

- Generalized cardiomegaly with mild to moderate left atrial enlargement. No clear evidence of cardiogenic pulmonary edema on this limited exam.

Radiologists

Primary: [B6], DVM
Reviewing: [B6] DVM, DACVR

Dates

Reported: 2/20/18

Finalized: 2/21/18

Client: **B6**
 Veterinarian: **B6**
 Patient ID: **B6**
 Visit ID: 2477624

Patient: **B6**
 Species: Canine
 Breed: Great Dane
 Sex: Male
 Age: **B6** Years Old

Lab Results Report

Taurine: Whole Blood Level		6/5/2018 11:06:00 AM	Accession ID: B6
Test	Results	Reference Range	Units
TAURINE WB	B6	200 - 350	nmol/mL

From: Freeman, Lisa <Lisa.Freeman@tufts.edu>
To: Jones, Jennifer L
Sent: 8/22/2018 6:17:24 PM
Subject: RE: [REDACTED] B6

PS – [REDACTED] B6 died [REDACTED] B6

Lisa M. Freeman, DVM, PhD, DACVN
Board Certified Veterinary Nutritionist™
Professor
Cummings School of Veterinary Medicine
Friedman School of Nutrition Science and Policy
Tufts Clinical and Translational Science Institute
Tufts University
www.petfoodology.org

From: Freeman, Lisa
Sent: Wednesday, August 22, 2018 1:43 PM
To: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Subject: [REDACTED] B6

Hmm – that's strange.
I'll send those along
Here's [REDACTED] B6
Lisa

Lisa M. Freeman, DVM, PhD, DACVN
Board Certified Veterinary Nutritionist™
Professor
Cummings School of Veterinary Medicine
Friedman School of Nutrition Science and Policy
Tufts Clinical and Translational Science Institute
Tufts University
www.petfoodology.org

From: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Sent: Wednesday, August 22, 2018 12:54 PM
To: Freeman, Lisa <lisa.freeman@tufts.edu>
Subject: RE: updates

Hi Lisa,
I don't have the report in our records from [REDACTED] B6. If she submitted one and has an ICSR number, we can track it down.

Also, I had our team check for reports for [REDACTED] B6 and [REDACTED] B6 but there weren't any. Are you also able to send those along with records?

Thank you again for all of your efforts gathering the records, getting permission for interviews with owners, and submitting these complaints. You've been a great help to the investigation!!
Jen

Jennifer Jones, DVM
Veterinary Medical Officer
Tel: 240-402-5421



From: Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]
Sent: Tuesday, August 21, 2018 10:56 AM
To: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Subject: RE: updates

Hi Jen
Actually, [B6] from [B6] submitted [B6]. If you don't have that one, let me know and I can submit
Owner would be very happy to talk to you
Thanks
Lisa

Lisa M. Freeman, DVM, PhD, DACVN
Board Certified Veterinary Nutritionist™
Professor
Cummings School of Veterinary Medicine
Friedman School of Nutrition Science and Policy
Tufts Clinical and Translational Science Institute
Tufts University
www.petfoodology.org

From: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Sent: Tuesday, August 21, 2018 10:46 AM
To: Freeman, Lisa <lisa.freeman@tufts.edu>
Subject: RE: updates

Thank you, Lisa.
We're going to send you the box this week with 7 whirl-pak bags. Each bag will be labelled for the dog and our internal identifier number (EON-XXXXXX). Please fill the bags with the respective food. I've calculated the return weight based on filling 7 bags full.

Also, I have the medical records for [B6], but did you submit a pet food report for him? I'm wondering if I didn't see it on our end.

Jennifer Jones, DVM
Veterinary Medical Officer
Tel: 240-402-5421



From: Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]
Sent: Monday, August 20, 2018 6:18 PM
To: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>
Subject: updates

Hi Jen
I forgot to note on the report I submitted today that I have a food sample and UPC code for the Acana food that the 2 Dobies were eating.

Also, for **B6** whose heart has improved significantly, I just got a sample from the owner who found some food remaining at her summer house – it is not fresh but I'm saving for you in case you want

Thanks

Lisa

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Tufts University
www.petfoodology.org

55 Willard Street
 North Grafton, MA 01536
 (508) 839-5395

Client: **B6**
 Veterinarian: **B6**
 Patient ID: **B6**
 Visit ID: 2477624

Patient: **B6**
 Species: Canine
 Breed: Great Dane
 Sex: Male
 Age: **B6** Years Old

Lab Results Report

Taurine: Whole Blood Level		6/5/2018 11:06:00 AM	Accession ID: B6
Test	Results	Reference Range	Units
TAURINE WB	B6	200 - 350	nmol/mL

From: Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>
To: Carey, Lauren; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L; Rotstein, David
Sent: 11/11/2018 1:15:58 PM
Subject: DCM case-Tufts-- repeat submission EON-370776 and 370708
Attachments: Earthborn grain free weight management dry: Lisa Freeman - EON-370708; Earthborn Holistic Weight Control (Grain Free); B6 - EON-370776

Please note that these are for the same dog

From: PFR Event <pfpreventcreation@fda.hhs.gov>
To: Cleary, Michael *; HQ Pet Food Report Notification; B6
Sent: 11/9/2018 10:08:47 PM
Subject: Earthborn grain free weight management dry: Lisa Freeman - EON-370708
Attachments: 2058678-report.pdf; 2058678-attachments.zip

A PFR Report has been received and PFR Event [EON-370708] has been created in the EON System.

A "PDF" report by name "2058678-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2058678-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-370708

ICSR #: 2058678

EON Title: PFR Event created for Earthborn grain free weight management dry; 2058678

AE Date	11/05/2018	Number Fed/Exposed	1
Best By Date		Number Reacted	1
Animal Species	Dog	Outcome to Date	Stable
Breed	Doberman Pinscher		
Age	B6 years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2058678

Product Group: Pet Food

Product Name: Earthborn grain free weight management dry

Description: Diagnosed with DCM, CHF, and atrial fibrillation 11/5/18. Currently hospitalized. Taurine submitted to UC Davis. Unclear if related to diet, given breed but eating boutique, grain-free diet. Only prior history is traumatic injury in 2015.

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 1

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Earthborn grain free weight management dry		

Sender information

Lisa Freeman
200 Westboro Rd
North Grafton, MA 01536
USA

Owner information

B6
USA

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-370708>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=12&issueId=387677>

This email and attached document are being provided to you in your capacity as a Commissioned Official with the U.S. Department of Health and Human Services as authorized by law. You are being provided with this information pursuant to your signed Acceptance of Commission.

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Failure to adhere to the above provisions could result in removal from the approved distribution list. If you think you received this email in error, please send an email to FDAREportableFoods@fda.hhs.gov immediately.

Report Details - EON-370708

ICSR: 2058678
 Type Of Submission: Initial
 Report Version: FPSR.FDA.PETF.V.V1
 Type Of Report: Adverse Event (a symptom, reaction or disease associated with the product)
 Reporting Type: Voluntary
 Report Submission Date: 2018-11-09 16:57:32 EST

Reported Problem:
Problem Description: Diagnosed with DCM, CHF, and atrial fibrillation 11/5/18. Currently hospitalized. Taurine submitted to UC Davis. Unclear if related to diet, given breed but eating boutique, grain-free diet. Only prior history is traumatic injury in 2015.
Date Problem Started: 11/05/2018
Concurrent Medical Problem: No
Outcome to Date: Stable

Product Information:
Product Name: Earthborn grain free weight management dry
Product Type: Pet Food
Lot Number:
Package Type: BAG
Product Use Information:
Manufacturer /Distributor Information:
Purchase Location Information:

Animal Information:
Name: B6
Type Of Species: Dog
Type Of Breed: Doberman Pinscher
Gender: Male
Reproductive Status: Neutered
Weight: 45.2 Kilogram
Age: B6 Years
Assessment of Prior Health: Excellent
Number of Animals Given the Product: 1
Number of Animals Reacted: 1
Owner Information:
Owner Information provided: Yes
Contact:
Name: B6
Phone: B6
Email: B6
Address: B6
 United States
Healthcare Professional Information:
Practice Name: Tufts Cummings School of Veterinary Medicine
Contact:
Name: Lisa Freeman
Phone: (508) 887-4523
Email: lisa.freeman@tufts.edu

		Address: 200 Westboro Rd North Grafton Massachusetts 01536 United States
Sender Information:	Name:	Lisa Freeman
	Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States
	Contact:	Phone: 5088874523 Email: lisa.freeman@tufts.edu
	Permission To Contact Sender:	Yes
	Preferred Method Of Contact:	Email
Additional Documents:	Attachment:	compiled medical record B6 .pdf
	Description:	Medical records
	Type:	Medical Records

Medical Record for B6

Client: **B6**
Address: **B6**

Patient: **B6**
Breed: Doberman Pinscher
DOB: **B6**

Species: Canine
Sex: Male
(Neutered)

Home Phone: **B6**
Work Phone: () -
Cell Phone: **B6**

Referring Information

B6

Client: **B6**
Patient: **B6**

Initial Complaint:

Emergency

SOAP Text Nov 5 2018 6:41PM - Clinician, Unassigned FHSA

Subjective

NEW VISIT (ER)

Doctor: **B6**
Student: **B6** V19
Presenting complaint: CHF
Referral visit? yes
Diagnostics completed prior to visit: at rDVM 11/5
Bloodwork: **B6**
Chest x-rays: Marked cardiomegaly, pulmonary edema
EKG: atrial fibrillation reported

HISTORY:

Signalment: 8 yo NM Doberman

Current history:

Patient presented as referral from rDVM for CHF and suspected DCM. Yesterday, owner noted that when playing fetch, patient yelped while running back and immediately went inside to lay down. Patient was lethargic remainder of evening, but went on 30 minute walk and was willing to eat dinner. Owners noticed he was intermittently breathing

Client: **B6**
Patient:

heavier last night with a dry cough which owners mistook initially as him attempting to vomit. This morning, patient not willing to eat breakfast or go for walk. Maintains thirst.

Was evaluated by rDVM today, **B6** for clinical signs. Radiographs showed cardiomegaly and an arrhythmia was ausculted. ECG indicated atrial fibrillation. Patient was given 2 doses of furosemide (4mg/kg total) and referred here for cardiology workup.

Patient has no known history of heart disease, collapse, weakness, or respiratory changes. Patient diagnosed with idiopathic head shake 1 year ago.

Prior medical history: No known heart disease until today.

Current medications: Desaquin

Diet: earth borne grain free mixed with wellness diet wet food.

Vaccination status/flea & tick preventative use: HW and F&T preventatives.

Travel history: unknown

EXAM:

B6

C/V: no murmur, Tachycardic, atrial fibrillation, poor femoral pulses

B6

ASSESSMENT:

A1: CHF secondary to DCM

PLAN:

B6

Client: **B6**
Patient: **B6**

B6

Enroll in DCM diet study

B6

Diagnostics completed:

ECG on intake-- Atrial fibrillation

AFAST/TFAST-- no FF, enlargement of chambers, consistent with DCM

NOVA-- no significant findings

PCV/TS: **B6**

Diagnostics pending:

BNP

Taurine

Troponin

Client communication:

B6

Introduced o to Dr. Freeman, o intersted in being enrolled in DCM study.

Deposit & estimate status: **B6**

Resuscitation code (if admitting to ICU): **B6**

SOAP approved (DVM to sign): **B6** DVM

SOAP Text Nov 6 2018 7:16AM - Clinician, Unassigned FHSA

Subjective

History

B6 is an 8yo MN Dobie presented as referral yesterday for CHF and suspected DCM. Owner took to rDVM after a day of lethargy, inappetance and possible coughing episode. Evaluated by rDVM 11/5 at that time radiographs showed cardiomegaly and ECG indicated atrial fibrillation. Patient was given 2 doses of **B6** (4mg/kg total) and referred here. Patient has no known history of heart disease, collapse, weakness, or respiratory changes. Patient diagnosed with idiopathic head shake 1 year ago. Current diet: Earth borne grain-free mixed with wellness diet wet food. Medications include Dasequin, HW and F&T preventatives.

Overnight respiratory rate between 20-30 with normal slight effort. Given **B6** (1.7 mg/kg dose) at intake at 7 PM (2AM dose of **B6**). Started on **B6**. EKG monitoring

Client: **B6**
Patient:

overnight showed persistent A-fib and tachycardia **B6** Had 2+ diarrhea overnight and vomited bile at 9 PM after quickly drinking water. Ate EN Proplan overnight. Interested in Dr. Freeman's study.

B6

Heart: No murmurs/gallops ausculted, irregularly irregular rhythm ausculted, femoral pulses weak

B6

Assessments [refined to the highest level; list Rule Outs if appropriate]

A1: Enlarged heart- R/O- DCM (Dobie occult DCM vs. taurine-deficiency vs. BEG diet induced)

A2: Atrial fibrillation- R/O- secondary to DCM

A3. Wide complex QRS- R/O- atrial fibrillation w ashman's vs. VPC's vs. R on T

A4. Mass on ventral neck- R/O- thyroid tumor (thymoma vs. carcinoma) vs. lipoma vs. soft tissue sarcoma

A5. Neutrophilia- R/O- stress leukogram

A6. Elevated ALT/ALP- R/O: hepatic congestion vs. less likely primary liver disease (Doberman chronic hepatitis)

Plan

B6

Client: **B6**
Patient: **B6**

B6

SOAP completed by: **B6** V'19
SOAP reviewed by: **B6**

SOAP Text Nov 7 2018 7:19AM - Clinician, Unassigned FHSA

Subjective

B6

B6

Client: **B6**
Patient:

Heart: Grade III/VI left apical systolic murmur, jugular pulses bottom 1/3 of neck, irregularly irregular heart beat, femoral pulses variable,

B6

Assessments [refined to the highest level; list Rule Outs if appropriate]

- A1: Enlarged heart- R/O- DCM (Dobie occult DCM vs. taurine-deficiency vs. BEG diet induced)
- A2: Atrial fibrillation- R/O- secondary to DCM
- A3. Grade III/VI- R/O- DMVD
- A4. Wide complex QRS- R/O- atrial fibrillation w ashman's vs. VPC's vs. R on T
- A5. Mass on ventral neck- R/O- thyroid tumor (thymoma vs. carcinoma) vs. lipoma vs. soft tissue sarcoma
- A6. Neutrophila- R/O- stress leukogram
- A7. Elevated ALT/ALP- R/O: hepatic congestion vs. less likely primary liver disease (Doberman chronic hepatitis)

Plan

B6

SOAP completed by: **B6** V19

SOAP reviewed by:

Disposition/Recommendations

Client:
Patient:

B6

Client: **B6**
 Patient: **B6**

Cummings
Veterinary Medical Center
 AT TUFTS UNIVERSITY

Foster Hospital for Small Animals

55 Willard Street
 North Grafton, MA 01536
 (508) 839-5395

Client: **B6**
 Veterinarian:
 Patient ID: **B6**
 Visit ID:

Patient: **B6**
 Species: Canine
 Breed: Doberman Pinscher
 Sex: Male (Neutered)
 Age: **B6** Years Old

Lab Results Report

CBC, Comprehensive, Sm Animal 11/5/2018 8:12:13 PM **Accession ID: B6**

Test	Results	Reference Range	Units
MPV (ADVIA)	B6	8.29 - 13.2	fL
RETICS (ABS) ADVIA		14.7 - 113.7	K/uL
HCT(ADVIA)		39 - 55	%
WBC (ADVIA)		4.4 - 15.1	K/uL
PLTCRT		0.129 - 0.403	%
PLT(ADVIA)		173 - 486	K/uL
MCV(ADVIA)		64.5 - 77.5	fL
MCHC(ADVIA)		31.9 - 34.3	g/dL
RDW (ADVIA)		11.9 - 15.2	
MCH(ADVIA)		21.3 - 25.9	pg
RETIC(ADVIA)		0.2 - 1.6	%
COMMENTS (HEMATOLOGY)		0 - 0	
HGB(ADVIA)		13.3 - 20.5	g/dL
RBC(ADVIA)		5.8 - 8.5	M/uL

Chemistry Profile - Small Animal (Pa) 11/5/2018 8:12:13 PM **Accession ID: B6**

Test	Results	Reference Range	Units
TRIGLYCERIDES	B6	30 - 338	mg/dl
CHOLESTEROL		82 - 355	mg/dL



Client: **B6**
 Patient: **B6**

SODIUM		140 - 150	mEq/L
CALCIUM2		9.4 - 11.3	mg/dL
GLOBULINS		2.3 - 4.2	g/dL
POTASSIUM		3.7 - 5.4	mEq/L
I BILIRUBIN		0 - 0.2	mg/dL
ALK PHOS		12 - 127	U/L
PHOSPHORUS		2.6 - 7.2	mg/dL
T BILIRUBIN		0.1 - 0.3	mg/dL
MAGNESIUM 2+		1.8 - 3	mEq/L
ALBUMIN		2.8 - 4	g/dL
GLUCOSE		67 - 135	mg/dL
CK		22 - 422	U/L
CHLORIDE	B6	106 - 116	mEq/L
T. PROTEIN		5.5 - 7.8	g/dL
GGT		0 - 10	U/L
ALT		14 - 86	U/L
tCO2 (BICARB)		14 - 28	mEq/L
AMYLASE		409 - 1250	U/L
D.BILIRUBIN		0 - 0.1	mg/dL
NA/K		29 - 40	
AGAP		8 - 19	
OSMOLALITY (CALCULATED)		291 - 315	mmol/L
AST		9 - 54	U/L
CREATININE		0.6 - 2	mg/dL
A/G RATIO		0.7 - 1.6	
UREA		8 - 30	mg/dL

Microscopic Exam of Blood Smear (A)		11/5/2018 8:12:13 PM	Accession ID: B6
Test	Results	Reference Range	Units
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
L YMPHS%		7 - 47	%
MONOS%	B6	1 - 15	%
SEGS%		43 - 86	%
L YMPHS (ABS)ADVIA		1 - 4.8	K/uL
WBC MORPHOLOGY		0 - 0	
No Morphologic Abnormalities			
SEGS (AB)ADVIA	B6	2.8 - 11.5	K/ul



Client: **B6**
 Patient: **B6**

POIKILOCYTOSIS **B6** 0 - 0

Nova Full Panel-ICU 11/5/2018 8:12:13 PM **Accession ID: B6**

Test	Results	Reference Range	Units
nMG	B6	0 - 0	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
TCO2 (POC)		0 - 0	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
MG (POC)		0.1 - 0.4	mmol/L
HCT (POC)		38 - 48	%
CREAT (POC)		0.2 - 2.1	mg/dL
SO2%		94 - 100	%
K (POC)		3.6 - 4.8	mmol/L
FiO2		0 - 0	%
NOVA SAMPLE		0 - 0	
CAMG		0 - 0	mol/mol
BUN (POC)		12 - 28	mg/dL
NA (POC)		140 - 154	mmol/L
LACTATE		0 - 2	mmol/L
GAP		0 - 0	mmol/L
nCA		0 - 0	mmol/L
CL(POC)		109 - 120	mmol/L
HB (POC)		12.6 - 16	g/dL
A		0 - 0	mmHg
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

None 11/5/2018 8:12:13 PM **Accession ID: B6**

Test	Results	Reference Range	Units
TS (FHSA)	B6	0 - 0	g/dl
PCV **	B6	0 - 0	%



Client: **B6**
Patient: **B6**

TS (FHSA) **B6** 0 - 0 g/dl

11/5/2018 8:12:13 PM Accession ID: **B6**

Test	Results	Reference Range	Units
Troponin I (i-STAT) Cardiology - FHSA	B6	0 - 0	ng/ml

Chemistry 21 (Cobas) 11/5/2018 8:12:13 PM Accession ID: **B6**

Test	Results	Reference Range	Units
AST	B6	9 - 54	U/L
UREA		8 - 30	mg/dL
A/G RATIO		0.7 - 1.6	
CHOLESTEROL		82 - 355	mg/dL
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
D.BILIRUBIN		0 - 0.1	mg/dL
GLUCOSE		67 - 135	mg/dL
ALBUMIN		2.8 - 4	g/dL
CALCIUM2		9.4 - 11.3	mg/dL
T. PROTEIN		5.5 - 7.8	g/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
POTASSIUM		3.7 - 5.4	mEq/L
I BILIRUBIN		0 - 0.2	mg/dL
SODIUM		140 - 150	mEq/L
ALT		14 - 86	U/L
OSMOLALITY (CALCULATED)		291 - 315	mmol/L
ALK PHOS		12 - 127	U/L
CHLORIDE	106 - 116	mEq/L	
GLOBULINS	2.3 - 4.2	g/dL	
CREATININE	0.6 - 2	mg/dL	

None 11/5/2018 8:12:13 PM Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)	B6	0 - 0	g/dl
PCV **		0 - 0	%
TS (FHSA)		0 - 0	g/dl



Client: **B6**
Patient: **B6**

IDEXX BNP **B6**

IDEXX Reference Laboratories

Client: **B6** Patient: **B6**

Client: **B6**
Patient: **B6**
Species: CANINE
Breed: DOBERMAN_PINSCH
Gender: MALE
Age: 8Y

Date: 11/06/2018
Requisition #: 1A
Accession #: **B6**
Ordered by: **B6**

IDEXX VetConnect 1-888-433-9967
TUFTS UNIVERSITY
200 WESTBORO RD
NORTH GRAFTON, Massachusetts 01536
508-839-5395
Account #88933

CARDIOPET proBNP- CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP -CANINE	B6	0 - 900 pmol/L	HIGH		B6

Comments:

1: **B6**

Please note: Complete interpretive comments for all concentrations of Cardiotet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: **B6**
Patient:

Vitals Results

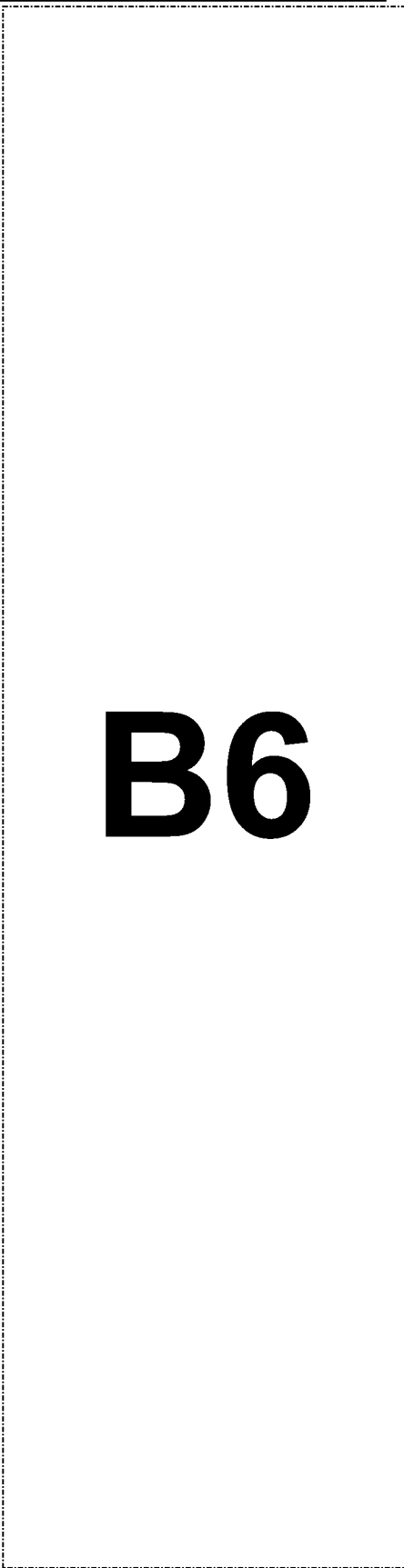
11/5/2018 7:10:41 PM	Lasix treatment note
11/5/2018 7:15:25 PM	Heart Rate (/min)
11/5/2018 7:15:26 PM	Respiratory Rate
11/5/2018 7:15:27 PM	Temperature (F)
11/5/2018 7:15:28 PM	Weight (kg)
11/5/2018 8:50:18 PM	Amount eaten
11/5/2018 8:59:52 PM	Respiratory Rate
11/5/2018 9:00:02 PM	Cardiac rhythm
11/5/2018 9:00:03 PM	Heart Rate (/min)
11/5/2018 9:00:07 PM	Nursing note
11/5/2018 9:04:11 PM	Respiratory Rate
11/5/2018 9:41:42 PM	Respiratory Rate
11/5/2018 9:42:35 PM	Cardiac rhythm
11/5/2018 9:42:36 PM	Heart Rate (/min)
11/5/2018 11:05:47 PM	Cardiac rhythm
11/5/2018 11:05:48 PM	Heart Rate (/min)
11/5/2018 11:05:58 PM	Respiratory Rate
11/5/2018 11:27:54 PM	Eliminations
11/5/2018 11:28:35 PM	Eliminations
11/5/2018 11:28:49 PM	Catheter Assessment
11/6/2018 12:16:11 AM	Heart Rate (/min)
11/6/2018 12:16:12 AM	Cardiac rhythm
11/6/2018 12:16:24 AM	Respiratory Rate
11/6/2018 12:25:01 AM	Nursing note
11/6/2018 1:03:51 AM	Cardiac rhythm
11/6/2018 1:03:52 AM	Heart Rate (/min)
11/6/2018 1:04:30 AM	Respiratory Rate
11/6/2018 1:57:40 AM	Respiratory Rate
11/6/2018 1:58:50 AM	Cardiac rhythm
11/6/2018 1:58:51 AM	Heart Rate (/min)
11/6/2018 1:59:44 AM	Nursing note
11/6/2018 3:04:07 AM	Cardiac rhythm
11/6/2018 3:04:08 AM	Heart Rate (/min)
11/6/2018 3:06:27 AM	Respiratory Rate
11/6/2018 3:32:24 AM	Catheter Assessment
11/6/2018 3:34:43 AM	Amount eaten
11/6/2018 4:06:30 AM	Cardiac rhythm
11/6/2018 4:06:31 AM	Heart Rate (/min)
11/6/2018 4:06:49 AM	Respiratory Rate
11/6/2018 5:00:14 AM	Eliminations

B6

Client: **B6**
Patient:

Vitals Results

11/6/2018 5:24:57 AM	Cardiac rhythm
11/6/2018 5:24:58 AM	Heart Rate (/min)
11/6/2018 5:25:15 AM	Respiratory Rate
11/6/2018 5:46:22 AM	Respiratory Rate
11/6/2018 5:46:49 AM	Cardiac rhythm
11/6/2018 5:46:50 AM	Heart Rate (/min)
11/6/2018 6:31:20 AM	Cardiac rhythm
11/6/2018 6:31:21 AM	Heart Rate (/min)
11/6/2018 6:31:40 AM	Respiratory Rate
11/6/2018 7:12:38 AM	Respiratory Rate
11/6/2018 7:12:54 AM	Temperature (F)
11/6/2018 7:13:08 AM	Cardiac rhythm
11/6/2018 7:13:09 AM	Heart Rate (/min)
11/6/2018 7:13:51 AM	Weight (kg)
11/6/2018 7:13:59 AM	Catheter Assessment
11/6/2018 7:16:21 AM	Body Condition Score (BCS)
11/6/2018 7:16:22 AM	Muscle Condition Score (MCS)
11/6/2018 7:16:23 AM	Pain assessment
11/6/2018 9:19:06 AM	Respiratory Rate
11/6/2018 9:36:24 AM	Cardiac rhythm
11/6/2018 9:36:25 AM	Heart Rate (/min)
11/6/2018 9:58:09 AM	Cardiac rhythm
11/6/2018 9:58:10 AM	Heart Rate (/min)
11/6/2018 10:06:41 AM	Lasix treatment note
11/6/2018 10:07:04 AM	Catheter Assessment
11/6/2018 10:15:59 AM	Eliminations
11/6/2018 10:16:39 AM	Respiratory Rate
11/6/2018 11:31:33 AM	Cardiac rhythm
11/6/2018 11:31:34 AM	Heart Rate (/min)
11/6/2018 11:33:55 AM	Respiratory Rate
11/6/2018 11:37:52 AM	Eliminations
11/6/2018 12:02:52 PM	Cardiac rhythm
11/6/2018 12:02:53 PM	Heart Rate (/min)
11/6/2018 12:03:56 PM	Respiratory Rate
11/6/2018 1:11:16 PM	Respiratory Rate
11/6/2018 1:13:44 PM	Cardiac rhythm
11/6/2018 1:13:45 PM	Heart Rate (/min)
11/6/2018 1:16:08 PM	Eliminations
11/6/2018 1:38:13 PM	Respiratory Rate
11/6/2018 1:51:30 PM	Cardiac rhythm
11/6/2018 1:51:31 PM	Heart Rate (/min)



Client: **B6**
Patient:

Vitals Results

11/6/2018 3:03:10 PM	Respiratory Rate
11/6/2018 3:10:58 PM	Cardiac rhythm
11/6/2018 3:10:59 PM	Heart Rate (/min)
11/6/2018 3:36:48 PM	Lasix treatment note
11/6/2018 3:37:03 PM	Catheter Assessment
11/6/2018 4:33:09 PM	Respiratory Rate
11/6/2018 4:33:31 PM	Cardiac rhythm
11/6/2018 4:33:32 PM	Heart Rate (/min)
11/6/2018 5:08:41 PM	Cardiac rhythm
11/6/2018 5:08:42 PM	Heart Rate (/min)
11/6/2018 5:18:43 PM	Respiratory Rate
11/6/2018 6:31:11 PM	Amount eaten
11/6/2018 6:31:46 PM	Cardiac rhythm
11/6/2018 6:31:47 PM	Heart Rate (/min)
11/6/2018 6:31:55 PM	Respiratory Rate
11/6/2018 6:32:03 PM	Eliminations
11/6/2018 9:01:47 PM	Respiratory Rate
11/6/2018 9:02:04 PM	Heart Rate (/min)
11/6/2018 9:02:15 PM	Cardiac rhythm
11/6/2018 9:32:43 PM	Catheter Assessment
11/6/2018 9:32:57 PM	Respiratory Rate
11/6/2018 9:33:11 PM	Cardiac rhythm
11/6/2018 9:33:12 PM	Heart Rate (/min)
11/6/2018 9:45:07 PM	Eliminations
11/6/2018 11:17:03 PM	Respiratory Rate
11/6/2018 11:18:05 PM	Cardiac rhythm
11/6/2018 11:18:06 PM	Heart Rate (/min)
11/6/2018 11:58:17 PM	Cardiac rhythm
11/6/2018 11:58:18 PM	Heart Rate (/min)
11/6/2018 11:59:06 PM	Respiratory Rate
11/7/2018 12:45:06 AM	Respiratory Rate
11/7/2018 12:45:29 AM	Cardiac rhythm
11/7/2018 12:45:30 AM	Heart Rate (/min)
11/7/2018 1:53:36 AM	Eliminations
11/7/2018 1:53:49 AM	Respiratory Rate
11/7/2018 1:54:14 AM	Cardiac rhythm
11/7/2018 1:54:15 AM	Heart Rate (/min)
11/7/2018 2:49:27 AM	Cardiac rhythm
11/7/2018 2:49:28 AM	Heart Rate (/min)
11/7/2018 2:50:03 AM	Respiratory Rate
11/7/2018 3:26:42 AM	Catheter Assessment

B6

Client: **B6**
Patient:

Vitals Results

11/7/2018 4:00:38 AM	Cardiac rhythm
11/7/2018 4:00:39 AM	Heart Rate (/min)
11/7/2018 4:01:06 AM	Respiratory Rate
11/7/2018 5:12:19 AM	Cardiac rhythm
11/7/2018 5:12:20 AM	Heart Rate (/min)
11/7/2018 5:12:33 AM	Respiratory Rate
11/7/2018 5:19:34 AM	Nursing note
11/7/2018 5:21:05 AM	Amount eaten
11/7/2018 5:34:53 AM	Weight (kg)
11/7/2018 5:35:01 AM	Eliminations
11/7/2018 5:54:55 AM	Respiratory Rate
11/7/2018 5:55:09 AM	Cardiac rhythm
11/7/2018 5:55:10 AM	Heart Rate (/min)
11/7/2018 6:27:18 AM	Cardiac rhythm
11/7/2018 6:27:19 AM	Heart Rate (/min)
11/7/2018 6:27:52 AM	Respiratory Rate
11/7/2018 7:18:19 AM	Respiratory Rate
11/7/2018 7:18:32 AM	Heart Rate (/min)
11/7/2018 7:18:33 AM	Cardiac rhythm
11/7/2018 7:19:29 AM	Temperature (F)
11/7/2018 7:19:30 AM	Body Condition Score (BCS)
11/7/2018 7:19:31 AM	Muscle Condition Score (MCS)
11/7/2018 7:19:32 AM	Pain assessment
11/7/2018 7:42:35 AM	Lasix treatment note
11/7/2018 8:47:36 AM	Cardiac rhythm
11/7/2018 8:47:37 AM	Heart Rate (/min)
11/7/2018 8:47:47 AM	Respiratory Rate
11/7/2018 8:50:11 AM	Catheter Assessment
11/7/2018 9:09:21 AM	Respiratory Rate
11/7/2018 11:08:26 AM	Cardiac rhythm
11/7/2018 11:08:27 AM	Heart Rate (/min)
11/7/2018 11:20:51 AM	Respiratory Rate
11/7/2018 11:21:02 AM	Eliminations
11/7/2018 12:06:15 PM	Cardiac rhythm
11/7/2018 12:06:16 PM	Heart Rate (/min)
11/7/2018 12:06:28 PM	Respiratory Rate
11/7/2018 12:39:17 PM	Nursing note
11/7/2018 1:03:57 PM	Cardiac rhythm
11/7/2018 1:03:58 PM	Heart Rate (/min)
11/7/2018 1:04:22 PM	Respiratory Rate
11/7/2018 1:20:21 PM	Cardiac rhythm

B6

Client: **B6**
Patient:

Vitals Results

11/7/2018 1:20:22 PM	Heart Rate (/min)
11/7/2018 1:20:59 PM	Respiratory Rate
11/7/2018 1:21:06 PM	Eliminations
11/7/2018 3:15:43 PM	Cardiac rhythm
11/7/2018 3:15:44 PM	Heart Rate (/min)
11/7/2018 3:16:26 PM	Respiratory Rate
11/7/2018 3:48:16 PM	Respiratory Rate
11/7/2018 3:48:26 PM	Cardiac rhythm
11/7/2018 3:48:27 PM	Heart Rate (/min)
11/7/2018 3:48:41 PM	Catheter Assessment
11/7/2018 5:47:11 PM	Nursing note

B6

Client: **B6**
Patient:

ECG from Cardio

B6

11/6/2018 11:06:07 AM

Tufts University
Tufts Cummings School of Vet Med
Cardiology

B6

Client:
Patient:

B6

ECG from Cardio

B6

11/6/2018 11:06:48 AM

Page 1 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology

B6

Client:
Patient:

B6

ECG from Cardio

B6

11/6/2018 11:06:48 AM

Page 2 of 2

Tufts University
Tufts Cummings School of Vet Med
Cardiology

B6

Client:
Patient:

B6

ECG from Cardio

B6

11/6/2018 11:07:04 AM

Tufts University
Tufts Cummings School of Vet Med
Cardiology

12 Lead: Standard Placement

B6

Client: **B6**
Patient:

ECG from Cardio

B6

11/6/2018 11:07:15 AM

Tufts University
Tufts Cummings School of Vet Med
Cardiology



Client: **B6**
Patient:

Patient History

11/05/2018 07:05 PM Prescription
11/05/2018 07:07 PM Prescription
11/05/2018 07:10 PM Vitals
11/05/2018 07:15 PM Vitals
11/05/2018 07:15 PM Vitals
11/05/2018 07:15 PM Vitals
11/05/2018 07:15 PM Vitals
11/05/2018 07:23 PM Purchase
11/05/2018 07:23 PM Purchase
11/05/2018 07:23 PM Purchase
11/05/2018 08:12 PM Purchase
11/05/2018 08:12 PM Purchase
11/05/2018 08:13 PM Purchase
11/05/2018 08:36 PM Labwork
11/05/2018 08:38 PM Treatment
11/05/2018 08:50 PM Treatment

11/05/2018 08:50 PM Treatment

11/05/2018 08:50 PM Treatment
11/05/2018 08:59 PM Treatment
11/05/2018 08:59 PM Vitals
11/05/2018 09:00 PM Treatment

11/05/2018 09:00 PM Vitals
11/05/2018 09:00 PM Vitals
11/05/2018 09:00 PM Vitals
11/05/2018 09:04 PM Treatment
11/05/2018 09:04 PM Vitals
11/05/2018 09:19 PM Purchase
11/05/2018 09:41 PM Treatment
11/05/2018 09:41 PM Vitals
11/05/2018 09:42 PM Treatment

11/05/2018 09:42 PM Vitals
11/05/2018 09:42 PM Vitals
11/05/2018 09:42 PM Vitals
11/05/2018 11:05 PM Treatment

11/05/2018 11:05 PM Vitals
11/05/2018 11:05 PM Vitals
11/05/2018 11:05 PM Treatment
11/05/2018 11:05 PM Vitals
11/05/2018 11:27 PM Vitals
11/05/2018 11:28 PM Treatment
11/05/2018 11:28 PM Treatment

B6

Client: **B6**
Patient:

Patient History

11/05/2018 11:28 PM	Vitals
11/05/2018 11:28 PM	Treatment
11/05/2018 11:28 PM	Vitals
11/06/2018 12:16 AM	Treatment
11/06/2018 12:16 AM	Vitals
11/06/2018 12:16 AM	Vitals
11/06/2018 12:16 AM	Treatment
11/06/2018 12:16 AM	Vitals
11/06/2018 12:25 AM	Vitals
11/06/2018 01:03 AM	Treatment
11/06/2018 01:03 AM	Vitals
11/06/2018 01:03 AM	Vitals
11/06/2018 01:04 AM	Treatment
11/06/2018 01:04 AM	Vitals
11/06/2018 01:57 AM	Treatment
11/06/2018 01:57 AM	Vitals
11/06/2018 01:58 AM	Treatment
11/06/2018 01:58 AM	Vitals
11/06/2018 01:58 AM	Vitals
11/06/2018 01:59 AM	Vitals
11/06/2018 03:04 AM	Treatment
11/06/2018 03:04 AM	Vitals
11/06/2018 03:04 AM	Vitals
11/06/2018 03:06 AM	Treatment
11/06/2018 03:06 AM	Vitals
11/06/2018 03:31 AM	Treatment
11/06/2018 03:32 AM	Treatment
11/06/2018 03:32 AM	Vitals
11/06/2018 03:34 AM	Treatment
11/06/2018 03:34 AM	Vitals
11/06/2018 03:34 AM	Vitals
11/06/2018 04:06 AM	Treatment
11/06/2018 04:06 AM	Vitals
11/06/2018 04:06 AM	Vitals
11/06/2018 04:06 AM	Treatment
11/06/2018 04:06 AM	Vitals
11/06/2018 05:00 AM	Treatment
11/06/2018 05:00 AM	Vitals
11/06/2018 05:24 AM	Treatment
11/06/2018 05:24 AM	Vitals
11/06/2018 05:24 AM	Vitals
11/06/2018 05:25 AM	Treatment
11/06/2018 05:25 AM	Vitals

B6

Client: **B6**
Patient:

Patient History

11/06/2018 05:46 AM	Treatment
11/06/2018 05:46 AM	Vitals
11/06/2018 05:46 AM	Treatment
11/06/2018 05:46 AM	Vitals
11/06/2018 05:46 AM	Vitals
11/06/2018 06:31 AM	Treatment
11/06/2018 06:31 AM	Vitals
11/06/2018 06:31 AM	Vitals
11/06/2018 06:31 AM	Treatment
11/06/2018 06:31 AM	Vitals
11/06/2018 07:12 AM	Treatment
11/06/2018 07:12 AM	Vitals
11/06/2018 07:12 AM	Treatment
11/06/2018 07:12 AM	Vitals
11/06/2018 07:13 AM	Treatment
11/06/2018 07:13 AM	Treatment
11/06/2018 07:13 AM	Vitals
11/06/2018 07:13 AM	Vitals
11/06/2018 07:13 AM	Treatment
11/06/2018 07:13 AM	Treatment
11/06/2018 07:13 AM	Vitals
11/06/2018 07:13 AM	Treatment
11/06/2018 07:13 AM	Vitals
11/06/2018 07:14 AM	Treatment
11/06/2018 07:16 AM	Vitals
11/06/2018 07:16 AM	Vitals
11/06/2018 07:16 AM	Vitals
11/06/2018 08:10 AM	Purchase
11/06/2018 08:38 AM	Purchase
11/06/2018 08:44 AM	Purchase
11/06/2018 08:44 AM	Purchase
11/06/2018 09:19 AM	Treatment
11/06/2018 09:19 AM	Vitals
11/06/2018 09:33 AM	Deleted Reason
11/06/2018 09:36 AM	Treatment
11/06/2018 09:36 AM	Vitals
11/06/2018 09:36 AM	Vitals
11/06/2018 09:44 AM	Purchase
11/06/2018 09:44 AM	Purchase
11/06/2018 09:44 AM	Purchase
11/06/2018 09:44 AM	Purchase
11/06/2018 09:57 AM	Treatment

B6

Client: **B6**
Patient:

Patient History

11/06/2018 09:58 AM	Treatment
11/06/2018 09:58 AM	Vitals
11/06/2018 09:58 AM	Vitals
11/06/2018 10:06 AM	Vitals
11/06/2018 10:07 AM	Treatment
11/06/2018 10:07 AM	Treatment
11/06/2018 10:07 AM	Vitals
11/06/2018 10:15 AM	Treatment
11/06/2018 10:15 AM	Vitals
11/06/2018 10:16 AM	Treatment
11/06/2018 10:16 AM	Vitals
11/06/2018 10:19 AM	Purchase
11/06/2018 10:19 AM	Purchase
11/06/2018 10:19 AM	Purchase
11/06/2018 10:19 AM	Purchase
11/06/2018 10:43 AM	Prescription
11/06/2018 11:03 AM	Purchase
11/06/2018 11:25 AM	Purchase
11/06/2018 11:31 AM	Treatment
11/06/2018 11:31 AM	Vitals
11/06/2018 11:31 AM	Vitals
11/06/2018 11:33 AM	Treatment
11/06/2018 11:33 AM	Vitals
11/06/2018 11:37 AM	Treatment
11/06/2018 11:37 AM	Vitals
11/06/2018 12:02 PM	Treatment
11/06/2018 12:02 PM	Vitals
11/06/2018 12:02 PM	Vitals
11/06/2018 12:03 PM	Treatment
11/06/2018 12:03 PM	Vitals
11/06/2018 12:55 PM	UserForm
11/06/2018 12:57 PM	UserForm
11/06/2018 12:58 PM	Treatment
11/06/2018 01:10 PM	Treatment
11/06/2018 01:11 PM	Treatment
11/06/2018 01:11 PM	Vitals
11/06/2018 01:13 PM	Treatment
11/06/2018 01:13 PM	Vitals
11/06/2018 01:13 PM	Vitals
11/06/2018 01:16 PM	Treatment
11/06/2018 01:16 PM	Vitals

B6

Client: **B6**
Patient:

Patient History

11/06/2018 01:30 PM Treatment
11/06/2018 01:30 PM Treatment
11/06/2018 01:38 PM Treatment
11/06/2018 01:38 PM Vitals
11/06/2018 01:43 PM UserForm

11/06/2018 01:51 PM Treatment

11/06/2018 01:51 PM Vitals
11/06/2018 01:51 PM Vitals
11/06/2018 03:03 PM Treatment
11/06/2018 03:03 PM Vitals
11/06/2018 03:10 PM Treatment

11/06/2018 03:10 PM Vitals
11/06/2018 03:10 PM Vitals
11/06/2018 03:36 PM Vitals
11/06/2018 03:37 PM Treatment
11/06/2018 03:37 PM Treatment
11/06/2018 03:37 PM Vitals

11/06/2018 04:33 PM Treatment
11/06/2018 04:33 PM Vitals
11/06/2018 04:33 PM Treatment

11/06/2018 04:33 PM Vitals
11/06/2018 04:33 PM Vitals
11/06/2018 05:08 PM Treatment

11/06/2018 05:08 PM Vitals
11/06/2018 05:08 PM Vitals
11/06/2018 05:18 PM Treatment
11/06/2018 05:18 PM Vitals
11/06/2018 06:29 PM Prescription
11/06/2018 06:31 PM Treatment

11/06/2018 06:31 PM Treatment

11/06/2018 06:31 PM Treatment

11/06/2018 06:31 PM Vitals
11/06/2018 06:31 PM Treatment
11/06/2018 06:31 PM Treatment

11/06/2018 06:31 PM Vitals
11/06/2018 06:31 PM Vitals
11/06/2018 06:31 PM Treatment
11/06/2018 06:31 PM Vitals
11/06/2018 06:32 PM Treatment
11/06/2018 06:32 PM Vitals
11/06/2018 09:01 PM Treatment

B6

Client: B6
Patient:

Patient History

11/06/2018 09:01 PM	Treatment
11/06/2018 09:01 PM	Vitals
11/06/2018 09:02 PM	Vitals
11/06/2018 09:02 PM	Vitals
11/06/2018 09:32 PM	Treatment
11/06/2018 09:32 PM	Treatment
11/06/2018 09:32 PM	Treatment
11/06/2018 09:32 PM	Vitals
11/06/2018 09:32 PM	Treatment
11/06/2018 09:32 PM	Vitals
11/06/2018 09:33 PM	Treatment
11/06/2018 09:33 PM	Vitals
11/06/2018 09:33 PM	Vitals
11/06/2018 09:44 PM	Treatment
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11/06/2018 09:45 PM	Vitals
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11/06/2018 11:17 PM	Vitals
11/06/2018 11:18 PM	Treatment
11/06/2018 11:18 PM	Vitals
11/06/2018 11:18 PM	Vitals
11/06/2018 11:58 PM	Treatment
11/06/2018 11:58 PM	Vitals
11/06/2018 11:58 PM	Vitals
11/06/2018 11:59 PM	Treatment
11/06/2018 11:59 PM	Vitals
11/07/2018 12:45 AM	Treatment
11/07/2018 12:45 AM	Vitals
11/07/2018 12:45 AM	Treatment
11/07/2018 12:45 AM	Vitals
11/07/2018 12:45 AM	Vitals
11/07/2018 01:11 AM	Treatment
11/07/2018 01:53 AM	Treatment
11/07/2018 01:53 AM	Vitals
11/07/2018 01:53 AM	Treatment
11/07/2018 01:53 AM	Vitals
11/07/2018 01:53 AM	Treatment
11/07/2018 01:54 AM	Treatment
11/07/2018 01:54 AM	Vitals
11/07/2018 01:54 AM	Vitals
11/07/2018 02:49 AM	Treatment
11/07/2018 02:49 AM	Vitals

B6

Client: **B6**
Patient:

Patient History

11/07/2018 02:49 AM Vitals
11/07/2018 02:50 AM Treatment
11/07/2018 02:50 AM Vitals
11/07/2018 03:26 AM Treatment
11/07/2018 03:26 AM Vitals
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11/07/2018 04:00 AM Vitals
11/07/2018 04:00 AM Vitals
11/07/2018 04:01 AM Treatment
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11/07/2018 05:12 AM Treatment

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11/07/2018 05:12 AM Vitals
11/07/2018 05:12 AM Treatment
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11/07/2018 05:19 AM Treatment

11/07/2018 05:19 AM Vitals
11/07/2018 05:20 AM Treatment

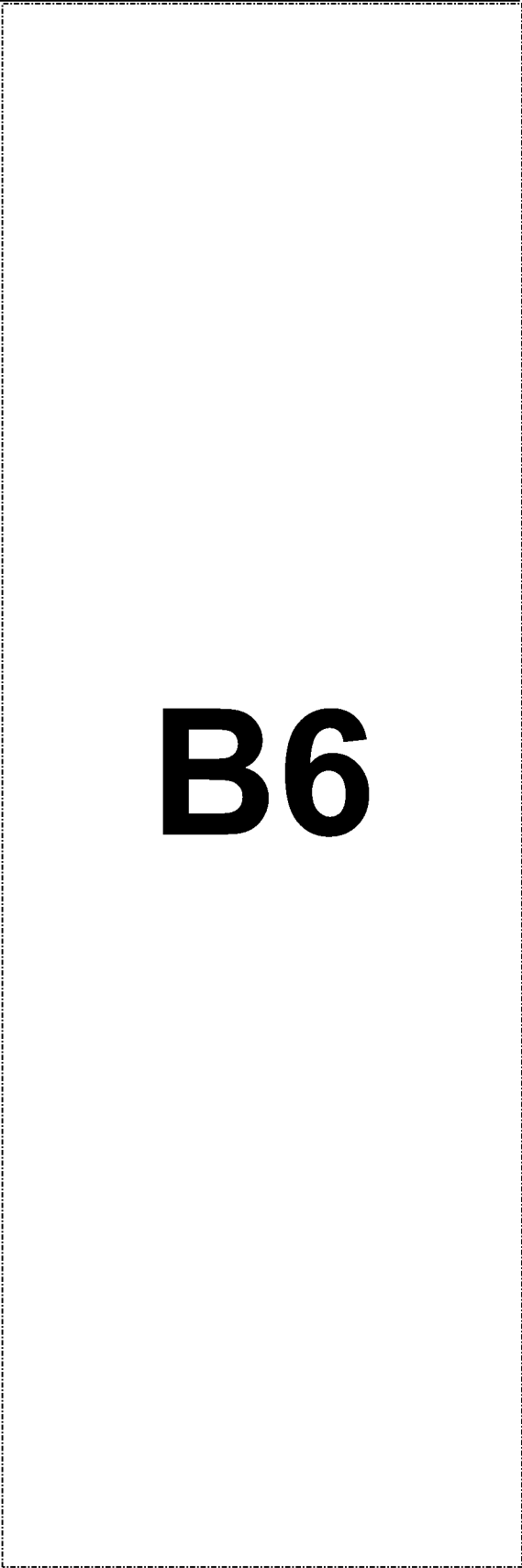
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11/07/2018 05:21 AM Vitals
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11/07/2018 05:35 AM Vitals
11/07/2018 05:54 AM Treatment
11/07/2018 05:54 AM Vitals
11/07/2018 05:55 AM Treatment

11/07/2018 05:55 AM Vitals
11/07/2018 05:55 AM Vitals
11/07/2018 06:27 AM Treatment

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11/07/2018 06:27 AM Vitals
11/07/2018 06:27 AM Treatment
11/07/2018 06:27 AM Vitals
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11/07/2018 07:18 AM Vitals
11/07/2018 07:18 AM Treatment

11/07/2018 07:18 AM Vitals
11/07/2018 07:18 AM Vitals
11/07/2018 07:19 AM Vitals



Client: **B6**
Patient:

Patient History

11/07/2018 07:19 AM Vitals
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11/07/2018 07:19 AM Vitals
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11/07/2018 08:47 AM Treatment

11/07/2018 08:47 AM Vitals
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11/07/2018 08:56 AM Treatment

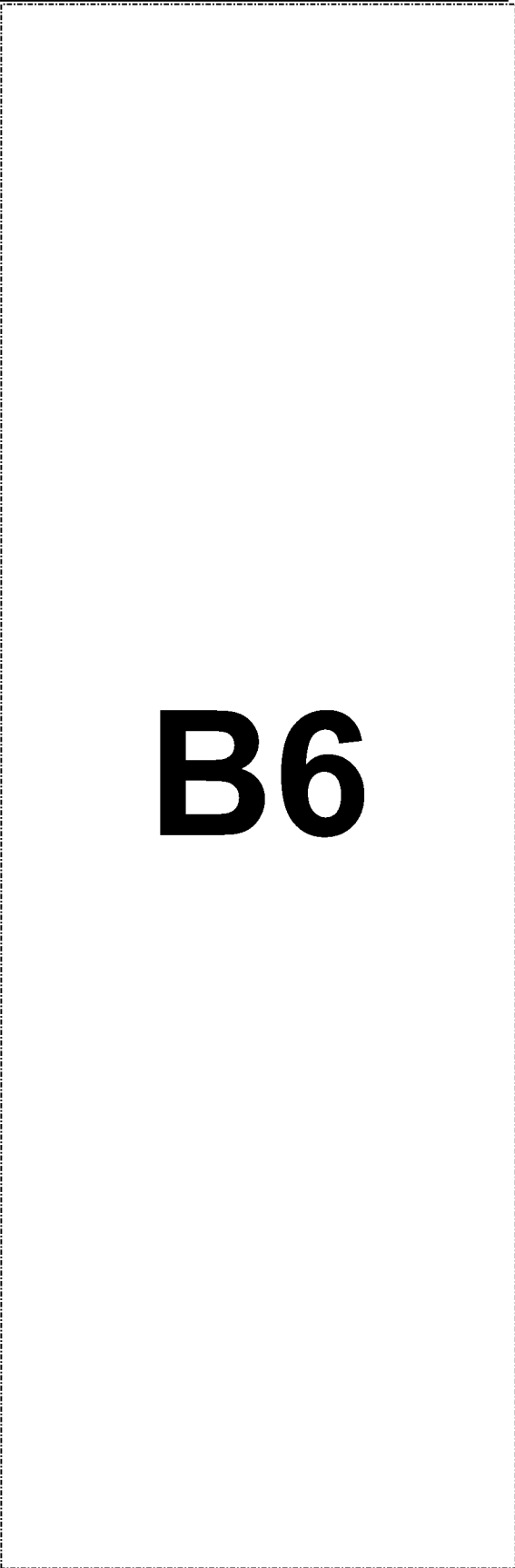
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11/07/2018 09:09 AM Vitals
11/07/2018 11:08 AM Treatment

11/07/2018 11:08 AM Vitals
11/07/2018 11:08 AM Vitals
11/07/2018 11:20 AM Treatment
11/07/2018 11:20 AM Vitals
11/07/2018 11:21 AM Treatment
11/07/2018 11:21 AM Vitals
11/07/2018 12:06 PM Treatment

11/07/2018 12:06 PM Vitals
11/07/2018 12:06 PM Vitals
11/07/2018 12:06 PM Treatment
11/07/2018 12:06 PM Vitals
11/07/2018 12:39 PM Vitals
11/07/2018 01:03 PM Treatment

11/07/2018 01:03 PM Vitals
11/07/2018 01:03 PM Vitals
11/07/2018 01:04 PM Treatment
11/07/2018 01:04 PM Vitals
11/07/2018 01:04 PM Treatment
11/07/2018 01:20 PM Treatment

11/07/2018 01:20 PM Vitals
11/07/2018 01:20 PM Vitals
11/07/2018 01:20 PM Treatment
11/07/2018 01:20 PM Vitals
11/07/2018 01:21 PM Treatment
11/07/2018 01:21 PM Vitals
11/07/2018 02:53 PM Purchase
11/07/2018 03:15 PM Treatment



Client: **B6**
Patient:

Patient History

11/07/2018 03:15 PM	Vitals
11/07/2018 03:15 PM	Vitals
11/07/2018 03:16 PM	Treatment
11/07/2018 03:16 PM	Vitals
11/07/2018 03:40 PM	Labwork
11/07/2018 03:48 PM	Treatment
11/07/2018 03:48 PM	Vitals
11/07/2018 03:48 PM	Treatment
11/07/2018 03:48 PM	Vitals
11/07/2018 03:48 PM	Vitals
11/07/2018 03:48 PM	Treatment
11/07/2018 03:48 PM	Vitals
11/07/2018 04:45 PM	Prescription
11/07/2018 04:45 PM	Prescription
11/07/2018 04:47 PM	Prescription
11/07/2018 04:47 PM	Prescription
11/07/2018 04:48 PM	Prescription
11/07/2018 05:47 PM	Treatment
11/07/2018 05:47 PM	Treatment
11/07/2018 05:47 PM	Treatment
11/07/2018 05:47 PM	Vitals

B6

Radiology Request & Report

Patient

Name: B6
Species: Canine
Black/Tan Male (Neutered)
Doberman Pinscher
Birthdate: B6

Owner

Name: B6
Address: B6

Patient ID: B6
Date of request: B6

Attending Clinician: B6 DVM (Resident - Cardiology)

Student:

Date of exam: 11/7/18

Patient Location: Ward/Cage:

Weight (kg) 45.20

Sedation

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

- BAG
- OBAG
- 1/2 dose OBAG
- DexDomitor/Butorphanol
- Anesthesia to sedate/anesthetize

Examination Desired: 1 view thoracic radiograph (lateral) - to be done standing in large animal, please.

Presenting Complaint and Clinical Questions you wish to answer:

Emergency

Pertinent History: B6 is an 8yo MN Dober presented as referral yesterday for CHF and suspected DCM. Evaluated by rDVM B6 at that time radiographs showed cardiomegaly, pulmonary edema and ECG indicated atrial fibrillation. Patient was given 2 doses of B6 and referred here. 1 dose of B6 overnight.

Findings:

THORAX, SINGLE LATERAL VIEW, TWO IMAGES (compared to RDVM study dated 11/5/18 in SS): Evaluation of the cardiac silhouette is slightly limited due to superimposed thoracic limb and collimation of the ventral portion of the thorax. The cardiac silhouette remains enlarged in height with straightening of the caudal cardiac border. The pulmonary vessels are within normal limits. The previously seen marked perihilar interstitial pattern appears markedly improved, however the lung fields are not completely evaluated. A small amount of gas is seen within the thoracic esophagus. The imaged cranial abdomen is within normal limits. No osseous abnormalities are detected.

Conclusions:

- Resolving pulmonary edema and unchanged cardiomegaly consistent with diagnosed DCML. A complete thoracic series may be considered for full evaluation.

Radiologists

Primary: B6 DVM

Reviewing: B6 DVM, DACVR

Dates

Reported: 11/6/18

Finalized: 11/7/18

Discharge Instructions

Patient

Name: B6

Species: Canine

Black/Tan Male (Neutered) Doberman

Pinscher

Birthdate: B6

Owner

Name: B6

Address: B6

Patient ID: B6

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6 V19

Admit Date: 11/5/2018 6:19:57 PM

Discharge Date: 11/6/2018

Diagnoses:

1. Dilated cardiomyopathy (DCM) with congestive heart failure
2. Atrial fibrillation with ventricular beats
3. Mild degenerative mitral valve disease

Case summary:

Thank you for bringing B6 into Tufts! He is a lovely boy!

On presentation, B6 was quiet but alert. His heart rate was elevated and irregular, and an EKG confirmed atrial fibrillation as well. He was on telemetry (continuous EKG) and received supportive care in the ICU and was started on cardiac medications in order to help decrease his heart rate and pump better.

An echocardiogram (ultrasound of the heart) revealed dilation and thinning of the walls of his heart consistent with a disease called dilated cardiomyopathy (DCM). On his EKG in addition to his atrial fibrillation, he had ventricular beats (presented as couplets and triplets) which can be concerning as they can lead to life-threatening arrhythmias. We also repeated chest x-rays on B6 which showed improvement in the congestion in his lung. His bloodwork showed normal kidney value but slightly elevated liver enzymes. We suspect this is secondary to his heart disease but is something we will monitor through bloodwork in the future. His ventricular arrhythmia improved overnight and he continued to breathe well. We feel he is ready to go home with you for continued care and monitoring.

B6 has been diagnosed with a primary heart muscle disease called dilated cardiomyopathy (DCM). This disease is

more common in large and giant breed dogs and is characterized by thinning of the walls of the heart, reduced cardiac pump function, and enlargement of the upper chambers of the heart. Doberman pinschers are predisposed to developing this disease. Many dogs with DCM will also have significant arrhythmias which can be life-threatening and also require medical management. The heart enlargement has now progressed to the point of congestive heart failure, meaning that fluid is backing up into the lungs or belly. Unfortunately this is a progressive disease and we cannot reverse the changes to the heart muscle, however we can use cardiac medications and some changes to the diet to make your dog comfortable and have him breathing easier.

Monitor at home:

B6

Recommended Medications:

B6

B6

Diet suggestions:

Dogs with heart failure accumulate more fluid in their body if they eat large amounts of sodium (salt). Sodium can be found in all foods, but some foods are lower in sodium than others. Many pet treats, people foods, and supplements used to give pills often have more sodium than is desirable - a sheet that has suggestions for low sodium treats can be found on the HeartSmart web site (<http://vet.tufts.edu/heartsmart/diet/>)

Your dog's usual diet may also have more sodium than recommended - we want him/her to continue to eat his/her normal diet for the first 7 to 14 days so we can make sure he is tolerating medications well, but after that time we would recommend slowly introducing one of the lower sodium diets on the HeartSmart list (25% of the new diet and 75% old diet for 2-3 days, then 50/50, etc.). Hopefully you can find a diet on the list that your dog likes to eat. As you have been trying to reduce B6 weight, we recommend Purina Pro Plan Adult Weight Management as it is a good weight management diet that is low in sodium. If you would like to put a small amount of wet food to entice him to eat, there are canned food recommendations below as well.

- The FDA is currently investigating an apparent association between diet and a type of heart disease called dilated cardiomyopathy. The exact cause is still unclear, but it appears to be associated with boutique diets and those containing exotic ingredient or are grain-free. Therefore, we are currently recommending that dogs do not eat these types of diets.
- We recommend switching Bode to commercial diet made by a well-established company that is not grain-free and does not contain any exotic ingredients, such as kangaroo, duck, lamb, venison, lentils, peas, beans, buffalo, tapioca, barley, and chickpeas.
- The FDA issued a statement regarding this issue (<https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/uom613305.htm>) and a recent article published by Dr. Lisa Freeman on the Cummings School's Pet Foodology blog can further explain these findings (<http://vetnutrition.tufts.edu/2018/06/a-broken-heart-risk-of-heart-disease-in-boutique-or-grain-free-diets-and-exotic-ingredients/>).
- Our nutritionists have compiled a list of dog foods that are good options for dogs with heart disease.

Dry Food Options:

Purina Pro Plan Adult Weight Management.

Canned Food Options:

Hill's Science Diet Adult Beef and Barley Entree

Hill's Science Diet Adult 1-6 Healthy Cuisine Roasted Chicken, Carrot, and Spinach Stew

Royal Canin Mature 8+

Exercise Recommendations:

For the first 7 to 10 days after starting medications for heart failure we recommend very limited activity. Leash walking only is ideal, and short walks to start. Once the heart failure is better controlled, then slightly longer walks are acceptable. However, if you find that B6 is lagging behind or needs to stop on a walk then this was too long a walk and shorter walks are advised in the future. Repetitive or strenuous high energy activities (repetitive ball chasing, running fast off-leash, etc.) are generally not advised at this stage of heart failure.

Recheck Visits:

A recheck visit is recommended in 1-2 weeks after any medication adjustments are made. At this visit we will check your dog's breathing effort and heart function, do a blood test to recheck kidney and liver values. A recheck echocardiogram is recommended in 3-4 months.

Thank you for entrusting us with B6 care. Please contact our Cardiology liaison at (508)-887-4696 or email us at

cardiovet@tufts.edu for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information

<http://vet.tufts.edu/heartsmart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-4629) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/cvmc/clinical-studies

Case: B6

Owner: B6

Discharge Instructions

AliveCor/Kardia Handout

If you have an iPhone or Android, you may want to explore the option of purchasing an AliveCor/Kardia ECG monitor which will allow you to record and email your pet's heart rate and rhythm at home.

The device (Kardia) can be purchased at www.alivecor.com or www.amazon.com. The app for your phone is free.

If you have an iPhone:

- Search for 'Veterinary AliveECG' app in the Apple Store
- You will need to sign-up for an account
- Make sure to have your pet's name in the information so we know whom it is from
- If the app asks for permission to access headphone port/speaker portal, say **'OK/allow'**

If you have an Android:

- Search for 'Kardia' app in the Google Playstore
- You will need to sign-up for an account.
- Make sure to have your pet's name in the information so we know whom it is from
- If the app asks for permission to access headphone port/speaker portal, say **'OK/allow'**
- Once downloaded, it will require you to send a "test ECG" for activation of the app. Just place your fingers on the silver sensors and let it record
- If the test ECG is unable to record, try again, with less movement. If it still fails, then your phone is not compatible with the device

Recording an ECG:

- Apply rubbing alcohol (soaked cotton ball will work) to the chest region behind your pet's elbow (where you can feel the heartbeat)
- Enough to wet the regions where both silver boxes will touch the animal
- If your pet is fluffy, you may have to clip a small patch of fur to allow for better contact
- Hold the device against your pet's chest with the silver areas being up and down (vertical) in contact with the animal
- With the app open, hold your phone near (within a few inches) the device.
- There is a signal bar in the upper left corner of the app to show whether it detects the device. If there are no bars then move your phone around/get closer to the device until they appear.
- Once you see a recording, hold everything in place for at least 30 seconds if possible.
- *The human Kardia app will attempt to interpret the ECG; just ignore this as it is not always accurate.*
- *The heart rate that the apps report is also not always accurate.*

Saving an ECG:

- The app will automatically save the ECG as long as the recording is long enough (>20seconds)
- You can click on the ID (box with pencil icon) in the Veterinary AliveECG app to add your pet's name

Emailing an ECG:

- If you are in the recording screen on the Veterinary AliveECG app, click on "ECGs" to see the list of saved ECGs
- If you are in the home screen on the Kardia app, click "History".
- Select the ECG you wish to send. Go to "Share". Select "Email PDF". **SKIP** the Password protect feature and select the email app you wish to send it by (Gmail, outlook, yahoo, etc). **You must have a working email on your phone for this to work.**
- Select an ECG that you wish to send
- Click the mail icon (either a box with arrow or a letter symbol), and select "Email"
- Email to: cardiovet@tufts.edu (*only monitored Monday-Friday 9AM-5PM*)

Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY
Cardiology Liaison: 508-887-4696

B6

Patient ID: **B6**
B6 Canine
B6 Years Old Male (Neutered)
Doberman Pinscher
Black/Tan BW: Weight (kg) 45.20

Cardiology Inpatient

Date: 11/6/2018

Weight: Weight (kg) 45.20

Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Thoracic radiographs available for review?

- Yes - in SS
 Yes - in PACS
 No

Presenting complaint and important concurrent diseases:

DCM, CHF, a-fib

STOP - remainder of form to be filled out by Cardiology

Physical Examination

B6

Muscle condition:

- Normal
 Mild muscle loss
 Moderate cachexia
 Marked cachexia

Cardiovascular Physical Exam

Murmur Grade:

- None
 I/VI
 II/VI
 III/VI
 IV/VI
 V/VI
 VI/VI

Murmur location/description: left apical systolic

Jugular vein:

- Bottom 1/3 of the neck
- Middle 1/3 of the neck

- Top 2/3 of the neck
- 1/2 way up the neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong

- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other (describe):

Arrhythmia:

- None
- Sinus arrhythmia
- Premature beats

- Bradycardia
- Tachycardia - atrial fibrillation

Gallop:

- Yes
- No
- Intermittent

- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds

- Pulmonary Crackles
- Wheezes
- Upper airway stridor
- Other auscultatory findings:

Abdominal exam:

- Normal
- Hepatomegaly

- Abdominal distension
- Mild ascites

B6

Doppler findings:

Mitral inflow:

- Summated
- Normal
- Delayed relaxation

- Pseudonormal
- Restrictive

Blood Pressure (mmHg):

Cuff size:

Limb:

B6

B6

Assessment and recommendations: Findings consistent with active congestive heart failure due to dilated cardiomyopathy (DCM) and atrial fibrillation. Considering breed predisposition, unclear whether DCM is a primary cause or this is diet induced (patient has been on grain free diet for years). Patients on DCM with CHF demands lifelong treatment in order to improve systolic function and avoid fluid accumulation. However, recommend Taurine supplementation as some patients can benefit from it. Atrial fibrillation with fast ventricular rate worsens systolic function, which makes prognosis and life expectancy lower than in animals without the arrhythmia. Thus decrease HR is necessary and B6 is recommended. Patient should be under telemetry monitoring during hospitalization and as B6 doses were administered over the past 24 hours, kidney and electrolytes values should be monitored during hospitalization. Recommend switch diet to a normal large breed diet, such as Pro Plan Weight Management. Echocardiogram should be repeated in 3 months or sooner in case patient develops clinical signs consistent with worsening of the disease.

Treatment plan:

B6

Addendum

11/7/2018 - Patient improved respiratory rate overnight but had frequent ventricular arrhythmias (multimorphic VPCs, couplets and triplets) that can potentially be life treating. B6 BID for 7 days and then SID is recommended. Blood work revealed normal kidney function and mild elevation on liver enzymes and hypokalemia B6 /L. Recommend B6 D and supplement potassium 2mEq orally BID.

B6 - Respiratory rate is within normal limits with slight effort. Ventricular arrhythmias are less frequent and rare episodes of couplets and no triplets was visualized. Blood work stable and potassium levels improved B6 /L. Patient was discharged from the hospital.

Final Diagnosis:

- Dilated cardiomyopathy - r/o primary vs. diet induced.
- Congestive heart failure
- Atrial fibrillation
- Ventricular arrhythmias.

Heart Failure Classification Score:

ISACH Classification:

- Ia
- Ib
- II
- IIIa
- IIIb

ACVIM CHF Classification:

- A
- C

B1
 B2

D

Notice of Patient Admit

Date: 11/5/2018 6:19:57 PM

Case No: B6

Referring Doctor: B6

Client Name: B6

Patient Name: B6

Dear B6

Your patient presented to our Emergency service. Please make note of the following information to facilitate communication with our team.

The attending doctor is: B6

The reason for admission to the FHSA is: DCM, Afib

If you have any questions regarding this particular case, please call 508-887-4988 to reach the Cardiology Service. Information is updated daily, by noon.

Thank you for your referral to our Emergency Service.

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

Foster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01536
Telephone (508) 839-5395
Fax (508) 839-7951
<http://vetmed.tufts.edu/Bode>

B6

B6 Male (Neutered)
Canine Doberman Pinscher
Black/Tan
B6

Daily Update From the Cardiology Service

Today's date: 11/8/2018

Dear **B6**

Thank you for referring patients to the Foster Hospital for Small Animals at the Cummings School of Tufts University.

Your patient **B6** was admitted and is being cared for by the Cardiology Service.

Today, **B6**

- is in stable condition
- is still in the oxygen cage
- is critically ill
- discharged from the hospital 11/7/2018

Today's treatments include:

- bloodwork planned/pending
- echocardiography
- cardiac catheter procedure planned
- treatment for CHF secondary to DCM
- ongoing treatment for thrombosis
- ongoing treatment for arrhythmia (atrial fibrillation)

Additional plans:

Please allow 3-5 business days for reports to be finalized upon patient discharge.

Please call (508) 887-4696 before 5pm or email us at cardiovet@tufts.edu if you have any questions.
Thank you!

Attending Clinician: **B6** DVM (Resident - Cardiology)

Faculty Clinician: **B6** DVM, DACVIM

Senior student:

From: PFR Event <pfpreventcreation@fda.hhs.gov>
To: Cleary, Michael *; HQ Pet Food Report Notification; **B6**
Sent: 11/11/2018 2:32:25 AM
Subject: Earthborn Holistic Weight Control (Grain Free); **B6** - EON-370776
Attachments: 2058702-report.pdf

A PFR Report has been received and PFR Event [EON-370776] has been created in the EON System.

A "PDF" report by name "2058702-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report:

EON Key: EON-370776

ICSR #: 2058702

EON Title: PFR Event created for Earthborn Holistic Weight Control (Grain Free); 2058702

AE Date	B6	Number Fed/Exposed	1
Best By Date	11/09/2019	Number Reacted	1
Animal Species	Dog	Outcome to Date	Stable
Breed	Doberman Pinscher		
Age	9 Years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2058702

Product Group: Pet Food

Product Name: Earthborn Holistic Weight Control (Grain Free)

Description: Diagnosed and treated for DCM at Cummings Medical Center at Tufts. Have fed Earthborn Holistic Weight Management Grain Free diet for about 5 years. Read FDA Study Report and decided to report experience. I wrote a comprehensive description of what happened twice and got timed out both times. Call if I can be of further help.

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 1

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Earthborn Holistic Weight Control (Grain Free)		11/09/2019

Sender information

B6

USA

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-370776>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=12&issueId=387745>

This email and attached document are being provided to you in your capacity as a Commissioned Official with the U.S. Department of Health and Human Services as authorized by law. You are being provided with this information pursuant to your signed Acceptance of Commission.

This email message is intended for the exclusive use of the recipient(s) named above. It may contain information that is protected, privileged, or confidential. Any dissemination, distribution, or copying is strictly prohibited.

The information is provided as part of the Federal-State Integration initiative. As a Commissioned Official and state government official, you are reminded of your obligation to protect non-public information, including trade secret and confidential commercial information that you receive from the U.S. Food and Drug Administration from further disclosure. The information in the report is intended for situational awareness and should not be shared or acted upon independently. Any and all actions regarding this information should be coordinated through your local district FDA office.

Failure to adhere to the above provisions could result in removal from the approved distribution list. If you think you received this email in error, please send an email to FDAREportableFoods@fda.hhs.gov immediately.

Report Details - EON-370776

ICSR:	2058702		
Type Of Submission:	Initial		
Report Version:	FPSR.FDA.PETF.V.V1		
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)		
Reporting Type:	Voluntary		
Report Submission Date:	2018-11-10 21:21:30 EST		
Reporter is the Animal Owner:	Yes		
Reported Problem:	Problem Description:	Diagnosed and treated for DCM at Cummings Medical Center at Tufts. Have fed Earthborn Holistic Weight Management Grain Free diet for about 5 years. Read FDA Study Report and decided to report experience. I wrote a comprehensive description of what happened twice and got timed out both times. Call if I can be of further help.	
	Date Problem Started:	11/04/2018	
	Concurrent Medical Problem:	No	
	Outcome to Date:	Stable	
Product Information:	Product Name:	Earthborn Holistic Weight Control (Grain Free)	
	Product Type:	Pet Food	
	Lot Number:	Expiration Date: 11/09/2019	
	UPC:	3484671932	
	Package Type:	BAG	
	Package Size:	28 Pound	
	Purchase Date:	09/14/2018	
	Number Purchased:	1	
	Possess Unopened Product:	No	
	Possess Opened Product:	Yes	
	Storage Conditions:	In sealable bag that it came in in dry room	
	Product Use Information:	Description:	Kibbles fed along with Wellness wet food
		First Exposure Date:	10/01/2018
		Last Exposure Date:	11/05/2018
		Time Interval between Product Use and Adverse Event:	6 Hours
		Product Use Stopped After the Onset of the Adverse Event:	Yes
Adverse Event Abate After Product Stop:		No	
Product Use Started Again:		Unknown	
Perceived Relatedness to Adverse Event:		Possibly related	
Other Foods or Products Given	Yes		

to the Animal
During This Time
Period:

**Manufacturer
/Distributor Information:**

Name: Earborn Holistic
Type(s): Manufacturer
Address: United States
Contact:
Possess One or More Labels from This Product: Yes

**Purchase Location
Information:**

Name: Amazon
Address: United States

Animal Information:

Name: B6
Type Of Species: Dog
Type Of Breed: Doberman Pinscher
Gender: Male
Reproductive Status: Neutered
Weight: 100 Pound
Age: 9 Years
Assessment of Prior Health: Excellent
Number of Animals Given the Product: 1
Number of Animals Reacted: 1
Owner Information:

**Healthcare Professional
Information:**

Practice Name: B6
Contact: **Name:** B6
Phone: B6
Other Phone: B6
Address: B6
United States
Type of Veterinarian: Primary/regular veterinarian
Date First Seen: 11/05/2018
Permission to Release Records to FDA: Yes
Practice Name: Cummings Veterinary Medical Center at Tufts University
Contact: **Name:** B6
Phone: B6
Other Phone:
Address: 55 Willard St
North Grafton
Massachusetts
01536
United States
Type of Veterinarian: Referred veterinarian
Date First Seen: 11/05/2018

Permission to Release Records to FDA: Yes

Sender Information:

Name: B6

Address: B6
United States

Contact: Phone: B6

Other Phone: B6

Email: B6

Permission To Contact Sender: Yes

Preferred Method Of Contact: Phone

Additional Documents:

Client: **B6**
Patient:

Chem 3/14/19



Tufts Cummings School Of Veterinary Medicine

200 Westboro Road
North Grafton, MA 01536

DUPLICATE

Name/DOB:	B6	Sex: CM	Provider: B6
Patient ID:		Age: 9	Order Location: V320559: Investigation into
Phone number:		Species: Canine	Sample ID: 1903140161
Collection Date: 3/14/2019 4:02 PM		Breed: Doberman Pinscher	
Approval date: 3/14/2019 6:30 PM			

Research Chemistry Profile - Small Animal (Cobas)

		Ref. Range/Males
DNOYES	B6	
Glucose		67-135 mg/dL
Urea		8-30 mg/dL
Creatinine		0.6-2.0 mg/dL
Phosphorus		2.6-7.2 mg/dL
Calcium 2		9.4-11.3 mg/dL
Magnesium 2+		1.8-3.0 mEq/L
Total Protein		5.5-7.8 g/dL
Albumin		2.8-4.0 g/dL
Globulins		2.3-4.2 g/dL
A/G Ratio		0.7-1.6
Sodium		140-150 mEq/L
Chloride		106-116 mEq/L
Potassium		3.7-5.4 mEq/L
tCO2(Bicarb)		14-28 mEq/L
AGAP		8.0-19.0
NA/K		29-40
Total Bilirubin		0.10-0.30 mg/dL
Alkaline Phosphatase		12-127 U/L
GGT		0-10 U/L
ALT	14-86 U/L	
AST	9-54 U/L	
Creatine Kinase	22-422 U/L	
Cholesterol	82-355 mg/dL	
Triglycerides	30-338 mg/dl	
Amylase	409-1250 U/L	
Osmolality (calculated)	291-315 mmol/L	
Comments (Chemistry)		

Sample ID: 1903140161/1
REPRINT: Orig. printing on 3/14/2019 (Final)

Reviewed by: _____

Client: **B6**
 Patient: **B6**

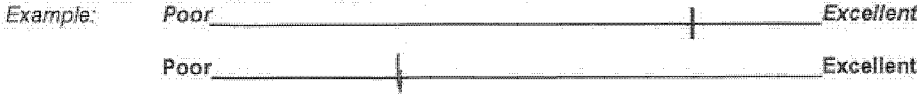
Diet Hx 3/14/19

CARDIOLOGY DIET HISTORY FORM

Please answer the following questions about your pet

Pet's name: **B6** Owner's name: **B6** Today's date: **3/14/19**

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)



2. Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)
 Eats about the same amount as usual Eats less than usual Eats more than usual
 Seems to prefer different foods than usual Other _____

3. Over the last few weeks, has your pet (check one)
 Lost weight Gained weight Stayed about the same weight Don't know

4. Please list below ALL pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats. Please include the brand, specific product, and flavor so we know exactly what you pet is eating.

Examples are shown in the table - please provide enough detail that we could go to the store and buy the exact same food.

Food (include specific product and flavor)	Form	Amount	How often?	Fed since
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2018
85% lean hamburger	microwaved	3 oz	1x/week	Jan 2015
Pupperoni original beef flavor	treat	1/2	1x/day	Aug 2015
Rawhide	treat	6 inch twist	1x/week	Dec 2015
Salmon / RICE	2c	2x day	Jan 2018	
Salmon / RICE		2c	2x day	Jan 2018
Chicken / RICE				Dec 2018
Beef / RICE				Jan 2018
Dr. Marty's Dabne Diet -		2c	2x day	Feb - (10 days)
People food - eating sweet potato (doesn't want rice anymore)		1/2c	2x day	Feb 11, 2019
Loves salmon - sweet potato		1/2c	2x day	
appetite dropped by a bit -				
Still eating a diet of people food -				

*Any additional diet information can be listed on the back of this sheet - I can visit a date time exact foods daily diary - I keep for **B6** since he got home

5. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)? Yes No If yes, please list which ones and give brands and amounts:

	Brand/Concentration	Amount per day
Taurine	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Carnitine	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Antioxidants	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Multivitamin	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Fish oil	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Coenzyme Q10	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Other (please list): Example: Vitamin C	Nature's Bounty	500 mg tablets - 1 per day

6. How do you administer pills to your pet?

- I do not give any medications
- I put them directly in my pet's mouth without food
- I put them in my pet's dog/cat food
- I put them in a Pill Pocket or similar product *I use the chicken or Peanut Butter*
- I put them in foods (list foods): *HE never takes them in pill packets - the AM - I always have to put pill packet down throat and PM he eats them*

When we took **B6** home initially he refused to eat!
 We tried the dry food, and Hills canned food as prescribed -
 He ate NOTHING! We tried to give him his old food - he refused
 By the 4th day I got worried - tried chicken breast - No!
 He refused to eat - I could get him to take
 100 cubes & drink water only -

B6 prescribed the medicine "Entyce".
 By the 5th day home - and after the Entyce - he finally
 ate a can of urgent care hills diet it smelled like
 cat food & came in the same small can -

* He then rejected the prescribed diet of dog food again
 and began eating - Salmon/Rice or chicken/Rice/ or
 Beef/Rice/ or Scrambled eggs! Then my husband
 ordered Dr. Marky's - for about ^{or 10 days} [2 weeks] he ate this
 then he began rejecting this and is regularly eating

People food - chicken - carrots - potatoes - Beef
 Salmon - he no longer wants
 rice - ZC - 2x daily

In the past 3 days 3/11/19 - his appetite has
 dropped off - he is only eating 1x a day
 almost 2 1/2 - 3C People food -

I keep a deskbound hand written record from the day **B6** came home with
 exactly what he has eaten / how many times he pees / or poops - / his walks /
 I can e-mail this to you

Client: **B6**
Patient: **B6**

Notes from owner 3/14/19

MEMORANDUM

TO: **B6**

TUFTS UNIVERSITY - Cummings School of Veterinary Medicine

Re: **B6** - Cummings Patient ID No. **B6** Doberman Pinscher b. **B6**

EXPERIENCE WITH PROTOCOL FOR DILATED CARDIOMYOPATHY (DCM)

RESEARCH REVIEW VOLUNTEER

Antecedents - On Sunday, 11\4\2018, **B6** came running back to me retrieving a tennis ball and let out a yelp for no apparent reason. He dropped the ball and walked around somewhat disoriented - an apparent hypoxic event. We brought him into the house and kept a close watch on him with no signs of distress. The next morning when he seemed somewhat lethargic, I put a stethoscope on him and was surprised that his heart rate was very rapid. I also detected a gurgle in his abdomen. We took him to our local vet **B6**, diagnosed him as having DCM and recommended that he be taken to Tufts. As we had had him at Tufts before, we immediately agreed and our vet made contact with Tufts and told us that they would be expecting us.

I might also note, retrospectively that approximately six months earlier, he was running in the backyard and let out an "idiopathic yelp", but without any disorientation or unusual behavior.

In the intervening six months and perhaps some months before he had numerous incidents of head tremors which were described by our vet as benign and idiopathic - but perhaps are not idiopathic and may be symptomatic of cardiovascular output issues.

B6 was admitted to Tufts on 11.05.2018 and spent 1-1/2 days in the ICU with our interfacing with Dr. **B6**. A medicinal regimen was put in place (with minor modifications over the first few weeks in consultation with **B6**). The current dosages are as follows:

B6

We left Tufts with a prognosis of a 4-8 month potential survival with reasonable quality of life, but with sudden death a possibility at any time. We were also told that while DCM can be managed for an indeterminate period it is not a reversible condition.

His heart rate remained very high **B6** for most of the first two months as did his resting respiration rate (mid 20's to mid 30's). Over the past two months his respiration rate has been quite

Client: **B6**
Patient: **B6**

Notes from owner **B6**

normal and his heart rate has not been visibly rapid (although I was surprised at the heart rate shown on the Kardia ecg app when I recorded it today at **B6**)

BEHAVIORAL CHANGES.

There have been numerous behavioral changes.

1. He sleeps a lot more than pre-incident.
2. His appetite has diminished considerably and **B6** has had to be very creative to assure adequate nutrition. We started him out on the diet recommended by the Nutrition Dept consisting of Purina Pro Plan Adult Weight Management and Hill's Science Diet Adult Beef & Barley Entree. He basically refused this diet after our trying various ways to entice him to eat this. He also refused his prior diet of Earthborn Holistic Adult Weight Management Kibbles and Wellness grain free Beef, Chicken, Lamb, or Turkey. He kept losing weight and after consulting with **B6**, he suggested we feed him whatever it takes to maintain body mass. We started out with roasted chicken and rice. Whatever we fed him he seemed to lose interest in rather quickly. At one point we resorted to Hills Science Urgent Care a/d to stimulate his appetite. We now tend to feed him baked salmon, hamburger, steak, turkey, pork, halibut, etc. It is generally difficult to get him to eat other than at our dinner hour when he indicates he'll have the same thing we are having. We have also had some intermittent success with Dr. Marty's freeze dried raw meat, fish, poultry and eggs.

This is a dog that lived for food and exercise. He ate anything that we put in front of him with gusto and always had his head on my arm at meal time. He always wanted a dog biscuit when he came in from outside. Now he often has no interest in such a treat or will refuse 3 choices hoping to get what might be his current favorite.

3. We have had and continue to have considerable trouble with diarrhea. He'll be good for a few days then bad for a few days - but quite difficult to permanently stabilize.
4. He is not as assertive as he was pre-treatment as instead of bounding out the door and running around the property being a watchdog, he now walks out the door and waits to be sure I am with him.

QUALITY OF LIFE

I would say that once his respiration stabilized and his apparent heart rate appeared non burdensome, he has had a good quality of life. He thoroughly enjoys his walks and we take him out for 15 minute to 45 minute walks when the weather is reasonably comfortable. On colder days, if he stops walking due to me chatting with somebody, he will start shivering after a few minutes; but as long as he is moving he is fine. When a vehicle pulls into the driveway he goes into watch dog mode and barks loudly - although he misses some of the delivery trucks that do not ring the bell (which he never missed before). He maintains his very gentle charming self when not sleeping and enjoys a little ball playing in the house. He bounds up to the second floor bedroom as if everything is just fine.

Client: **B6**
Patient: **B6**

Notes from owner **B6**

MANAGEMENT

The two biggest management issues have been (1) diet and diarrhea and (2) frequent urination around the clock. **B6** stays up with him until 12:00 - 2:00 a.m. and I get the graveyard shift with a wake-up generally between 2:00 and 4:00 a.m. where I accompany him outside for five to ten minutes with perhaps a wind chill of 10 degrees below zero. This is a feature of the **B6** which has kept his lungs clear and his respiratory rate comfortable.

QUESTIONS

We are most interested in your evaluation and any suggestions that you might have for us.

Would any of the supplements that are prescribed for humans such as CoQ10, magnesium or arginine be of any value?

Would a raw food diet be of any benefit?

We are very grateful for the **B6** days we have had with our pal. We were not sure he would last until we got back to **B6** when we left Cummings. **B6** was very responsive to any questions and suggested modifications to the protocol based on conditions presented once we were home. All the staff that we interacted with at Tufts were top notch.

Client: **B6**
Patient: **B6**

IDEXX BNP - 3/14/2019

IDEXX Reference Laboratories

Client: **B6** Patient: **B6**

Client: **B6**
Patient: **B6**
Species: CANINE
Breed: DOBERMAN_PINSCHE
Gender: MALE NEUTERED
Age: 9Y

Date: **B6**
Requisition #: 1A
Accession #: **B6**
Ordered by: **B6**

IDEXX VetConnect 1-888-433-9987
TUFTS UNIVERSITY
200 WESTBORO RD
NORTH GRAFTON, Massachusetts 01536
508-839-5395
Account #88933

CARDIOPEP proBNP - CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPEP proBNP - CANINE	B6	0 - 900 pmol/L	HIGH		B6

Comments:

1 **B6**

Please note: Complete interpretive comments for all concentrations of cardiopet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: **B6**
Patient: **B6**

B6 records

03/19/2019 14:10

B6

B6

PAGE 01/05

B6

Attention:

B6
Phone: **B6**
Fax: **B6**

In regards to our 3/19/2019 visit with:

PATIENT: **B6** Canine
ACCT NO: **B6**
OWNER: **B6**

Patient Medical History:

B6 is a 9y CM dobie who is evaluated today for inappetance that is likely induced by his current cardiac medications, as it has begun to improve since adjusting medications 4-5 days ago. He is currently happily eating a variety of human products and his people plan to start introducing some of the dog foods previously recommended by the nutrition department at Tufts. His DCM is being managed by cardiology at Tufts as well and a thyroid panel, leptospirosis panel are currently pending. Based on those results the plan is to check an amiodarone level provided the abdominal ultrasound he was sent here for does not reveal any underlying cause for his appetite. He was diagnosed with DCM and hospitalized for this about 4 months ago.

B6

Treatment Plan:

B6

Client: **B6**
Patient:

B6 records

03/19/2019 14:10

B6

B6

PAGE 02/05

Client Instructions:

We love your sweet boy and are happy not to have seen anything concerning in his abdomen today! We agree with the suspicion that his cardiac medications have led to the reduced appetite which has already started to improve. We discussed the concern for deficiencies in his current diet of a variety of healthy human food and you have reached out to the nutritionist at Tufts to discuss a supplement. You are also cautiously optimistic that he will eat some dog food with his improvement and will start to try and introduce the diets recommended by Tufts.

Please continue with his cardiac medications as previously directed.

Please let **B6** know how things are going with him and if there is anything else we can help with for his care!

Thank you for letting us assist you in **B6** care.

Sincerely,
B6 DVM DACVIM

Attachments: u/s report, discharge instruction

Transcription: **B6** Edits: **B6**

If **B6** is scheduled to return to **B6** for further services, please forward any new medical history and lab work to **B6** or fax to **B6**

Client: **B6**
Patient: **B6**

B6 records

03/19/2019 14:10

B6

B6

PAGE 03/06

B6

Sonographic Evaluation - Abdomen

Patient: **B6**
Owner: **B6**
Account Number: **B6**

Date: **B6**

B6

Procedure Performed by: **B6** DVM DACVIM

Client: **B6**
Patient:

B6 records

03/19/2019 14:18

B6

B6

PAGE 04/06

B6

Medical Discharge Instructions

B6

B6

Patient Update:

B6 is a 9y CM dobie who is evaluated today for inappetence that is likely induced by his current cardiac medications as it has begun to improve since adjusting medications 4-5 days ago. He is currently happily eating a variety of human products and his people plan to start introducing some of the previously recommended dog foods by the nutrition department at Tufts. His DCM is being managed by cardiology at Tufts as well and a thyroid panel, leptospirosis panel are currently pending. Based on those results the plan is to check an amiodarone level provided the abdominal ultrasound he was sent here for does not reveal any underlying cause for his appetite. He was diagnosed with DCM and hospitalized for this about 4 months ago.

B6

Discharge Instructions:

We love your sweet boy and are happy not to have seen anything concerning in his abdomen today! We agree with the suspicion that his cardiac medications have led to the reduced appetite which has already started to improve. We discussed the concern for deficiencies in his current diet of a variety of healthy human food and you have reached out to the nutritionist at Tufts to discuss a supplement. You are also cautiously optimistic that he will eat some dog food with his improvement and will start to try and introduce the diets recommended by Tufts.

B6

B6

Client: **B6**
Patient:

B6 records

03/19/2019 14:10

B6

B6

PAGE 05/06

Please continue with his cardiac medications as previously directed.

Please let **B6** know how things are going with him and if there is anything else we can help with for his care!

Please call our office at **B6** if you have any questions or concerns before your next scheduled progress exam. If you have a medical emergency outside of our normal office hours, please contact your regular veterinarian, or consult the list of emergency clinics below.

B6 DVM, DACVIM

B6

B6

B6

Client: **B6**
Patient:

B6 records

03/19/2019 14:10

B6

B6

PAGE 05/05

B6

Urinalysis

Date: **B6**

Doctor: **B6**

Cysto

Catheter

Freecatch

B6

B6 (Dog)
Breed: Doberman Pinscher
Color: Black & Tan
Sex: Neutered Male Wt: 88.7 lbs
Birthday: **B6** Age: 9y

Gross Examination: Color: Straw Appearance: Clear

Pellet: _____ Specific Gravity: 1.014

Strip Reading: Urobili (mg/dL): normal 2 4 8
Glucose (mg/dL): negative 50 100 250 500 1000
Ketone (mg/dL): negative trace 15(+) 40(++) 80(+++) 160(++++)
Bilirubin: negative + ++ +++
Protein (mg/dL): negative trace 30(+) 100(++) 300(+++) 2000(++++)
Blood: negative Non-Hemolyzed trace moderate
Hemolyzed trace small(+) moderate(++) large(+++)
pH: 5 6 6.5 7 8 9

Sediment Analysis: WBC: none RBC: none Bacteria: none

Casts: none

Crystals: rare amorph

Epithelium: none

Notes: _____

B6 **SCANNED**

Client: **B6**
Patient:

B6 Records - 3/21/2019

03/21/2019 3:39:07 PM -0400 **B6**

PAGE 1 OF 1

B6

B6
B6

REPORT OF LABORATORY EXAMINATION

Client: **B6**

Owner: **B6**

Rcvd Date: 3/19/2019 3:40:00 PM
Admitted By: **B6**
Ordered By: N/A
Encounter: 02617248
CR#: AP

Animal: **B6**
Species: Canine
Age: 8 years
Tag/Reg ID:
Other ID:

MRN: 37181
Breed: Doberman Pinscher
Gender: Male, Castrated

37181
514

Pending Order Summary

Received Date: 03/18/2019
Order Name: Endocrinology Interpretation
Status: Ordered

Endocrinology

Endocrine Results

Collected Date/Time (If Provided)	03/18/2019 11:00:00		
Procedure		Ref Range	Units
Total Thyroxine (TT4) (RIA)	B6	[11-60]	nmol/L
Total Triiodothyronine (TT3) (RIA) *		[0.8-2.1]	nmol/L
Free T4 by dialysis (RIA)		[6-42]	pmol/L
T4 Autoantibody (RIA)		[0-20]	%
T3 Autoantibody (RIA)		[0-10]	%
Thyroid Stimulating Hormone (CLIA)		[0.00-0.58]	ng/mL
Thyroglobulin Autoantibody (ELISA) *		[0-35]	%

B6

L = Low Result; H = High Result; @ = Critical Result; ^ = Corrected Result; * = Interpretive Data; # = Result Footnote

Print Date/Time: 3/21/2019 3:39 PM

Page 1 of 1
B6
3/22/2019
PR. D

Client: **B6**
Patient:

B6 /Records - 3/21/2019

B6

Final Report

B6

Case#: **B6**
Accessioned: 03/20/19
Report Generated: 03/20/19 @ 3:35 PM by AS1
Results Last Modified: 03/20/19 @ 3:35 PM

37181
SM

Case ID	Owner	Coordinator	
B6	B6	B6	
Breed	Species	Sex / Fixed	Age
Doberman Pinscher	Canine (dog)	Male - Neutered /	B6 Years

Microbiology

Lepto Titer Verified: 03/20/19 3:27 PM by **B6**

Animal L. autumn L. brat L. can L. grip L. hard L. ict L. pom
B6

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LOADED
B6
3/21/19

B6

Client: **B6**
Patient: **B6**

B6 - 3/27/2019



B6

PET OWNER: **B6**

SPECIES: Canine

BREED: Doberman Pinscher

GENDER: Male

AGE: 8 Years

PATIENT ID: **B6**

LAB ID:

ORDER ID: 23743

DATE OF RECEIPT: 3/27/19

DATE OF RESULT: 3/27/19

ACCOUNT #:

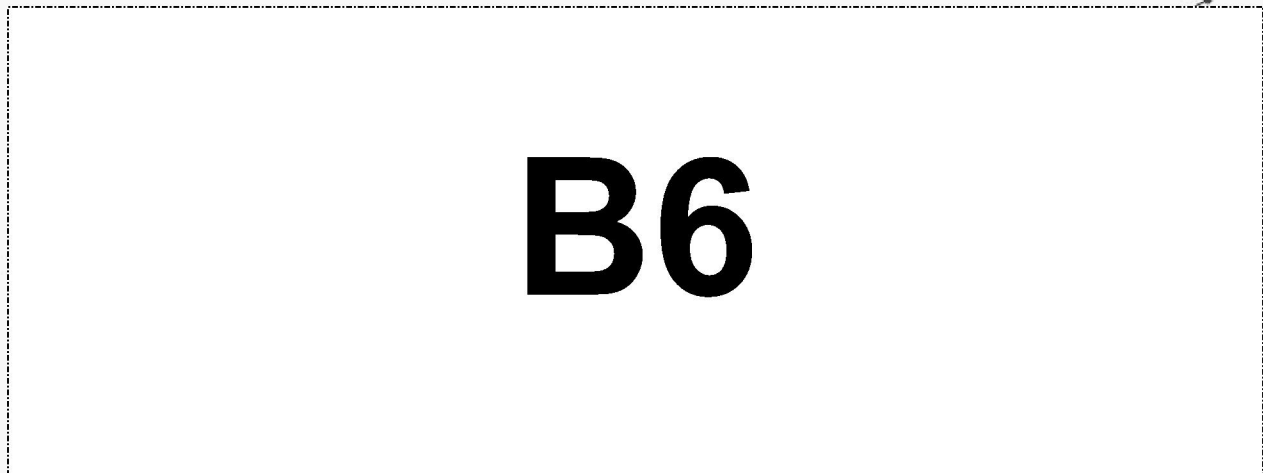
ATTENDING VET: **B6** DVM

IDEXX Services: ProCyte Dx Hematology Analyzer, Catalyst Dx Chemistry Analyzer, VetLyte Electrolyte Analyzer

Hematocrit

WBC

Creatinine



Hematology

3/27/19

11:29 AM

11/30/18
12:41 PM

11/14/18
11:14 AM

TEST	RESULT	REFERENCE VALUE		
RBC	B6	5.65 - 8.87 M/ μ L	B6	B6
Hematocrit	B6	37.3 - 61.7 %	B6	B6
Hemoglobin	B6	13.1 - 20.5 g/dL	B6	B6
MCV	B6	61.6 - 73.5 fL	B6	B6
MCH	B6	21.2 - 25.9 pg	B6	B6
MCHC	B6	32.0 - 37.9 g/dL	B6	B6
RDW	B6	13.6 - 21.7 %	B6	B6
% Reticulocyte	B6	%	B6	B6
Reticulocytes	B6	10 - 110 K/ μ L	B6	B6

Client: **B6**
Patient: **B6**

B6 - 3/27/2019



B6 PET OWNER: **B6** DATE OF RESULT: 3/27/19 LAB ID:

Hematology (continued)

TEST	RESULT	REFERENCE VALUE		
Reticulocyte	B6	22.3 - 29.6 pg	B6	B6
Hemoglobin				
WBC		5.05 - 16.76 K/ μ L		
% Neutrophils		%		
% Lymphocytes		%		
% Monocytes		%		
% Eosinophils		%		
% Basophils		%		
Neutrophils		2.95 - 11.64 K/ μ L		
Lymphocytes		1.05 - 5.1 K/ μ L		
Monocytes		0.16 - 1.12 K/ μ L		
Eosinophils		0.06 - 1.23 K/ μ L		
Basophils		0 - 0.1 K/ μ L		
Platelets		148 - 484 K/ μ L		
PDW		9.1 - 19.4 fL		
MPV		8.7 - 13.2 fL		
Plateletcrit		0.14 - 0.46 %		
RBC Run		B6		
WBC Run				

Client: **B6**
Patient: **B6**

B6 3/27/2019



B6 PET OWNER: **B6** DATE OF RESULT: 3/27/19 LAB ID:

Chemistry

3/27/19



11:36 AM



11:29 AM



11/30/18
12:49 PM



11/14/18
11:21 AM

TEST	RESULT	REFERENCE VALUE
Glucose		70 - 143 mg/dL
Creatinine		0.5 - 1.8 mg/dL
BUN		7 - 27 mg/dL
BUN: Creatinine Ratio		
Phosphorus		2.5 - 6.8 mg/dL
Calcium		7.9 - 12.0 mg/dL
Sodium		144 - 160 mmol/L
Potassium		3.5 - 5.8 mmol/L
Chloride		109 - 122 mmol/L
Total Protein		5.2 - 8.2 g/dL
Albumin		2.2 - 3.9 g/dL
Globulin		2.5 - 4.5 g/dL
Albumin: Globulin Ratio		
ALT		10 - 125 U/L
ALP		23 - 212 U/L
GGT		0 - 11 U/L
Bilirubin - Total		0.0 - 0.9 mg/dL
Cholesterol		110 - 320 mg/dL
Amylase		500 - 1,500 U/L
Lipase		200 - 1,800 U/L

B6

B6

B6

B6

Client: **B6**
Patient:

B6 - 4/6/2019

Client: **B6** Gender: Male/Castrated
Patient Name: **B6** Weight:
Species: Canine Age: 8 Years
Breed: Doctor:

B6

Test	Results	Reference Interval	LOW	NORMAL	HIGH
ProCyte Dx (April 6, 2019 10:18 AM)					
RBC	B6	5.65 - 8.87			
HCT	B6	37.3 - 61.7			
HGB	B6	13.1 - 20.5			
MCV	B6	61.6 - 73.5			
MCH	B6	21.2 - 25.9			
MCHC	B6	32.0 - 37.9			
RDW	B6	13.6 - 21.7			
%RETIC	B6				
RETIC	B6	10.0 - 110.0			
RETIC-HGB	B6	22.3 - 29.6			
WBC	B6	5.05 - 16.76			
%NEU	B6				
%LYM	B6				
%MONO	B6				
%EOS	B6				
%BASO	B6				
NEU	B6	2.95 - 11.64	HIGH		
LYM	B6	1.05 - 5.10	LOW		
MONO	B6	0.16 - 1.12			
EOS	B6	0.06 - 1.23			
BASO	B6	0.00 - 0.10	HIGH		
PLT	B6	148 - 484			
MPV	B6	8.7 - 13.2			
PDW	B6	9.1 - 19.4			
PCT	B6	0.14 - 0.46			

B6

Client:
Patient:

B6

B6

- 4/6/2019

Client: **B6**
Patient Name: **B6**
Species: Canine
Breed:

Gender: Male/Castrated
Weight:
Age: 8 Years
Doctor:

B6

Test	Results	Reference Interval	LOW	NORMAL	HIGH
Catalyst Dx (April 6, 2019 10:25 AM)					
GLU	B6	70 - 143			
CREA		0.5 - 1.8			
BUN		7 - 27			
BUN/CREA					
PHOS		2.5 - 6.8			
CA		7.9 - 12.0			
TP		5.2 - 8.2			
ALB		2.2 - 3.9			
GLOB		2.5 - 4.5			
ALB/GLOB					
ALT		10 - 125			
ALKP		23 - 212			
GGT		0 - 11			
TBIL		0.0 - 0.9			
CHOL		110 - 320			
AMYL	500 - 1500				
LIPA	200 - 1800				
VetLyte (April 6, 2019 10:19 AM)					
Na	B6	144 - 160			
K		3.5 - 5.8			
Cl		109 - 122			

3/27/19
11:36 AM

B6

B6

Client: **B6**
Patient:

Troponin 4/4/19



Gastrointestinal Laboratory
Dr. J.M. Steiner
Department of Small Animal Clinical Sciences
Texas A&M University
4474 TAMU
College Station, TX 77843-4474



Website User ID: clinpath@tufts.edu

GI Lab Assigned Clinic ID: 11405

B6
Tufts University Clinical Pathology Lab
Attn: **B6**
200 Westboro Road
North Grafton, MA 01536
USA

Phone: **B6**
Fax: **B6**
Animal Name: **B6**
Owner Name: **B6**
Species: Canine
Date Received: Apr 04, 2019

Clinical Pathology Tracking Number: 329174

GI Lab Accession: **B6**

Test	Result	Control Range	Assay Date
Ultra-Sensitive Troponin I Fasting	B6	≤0.06	04/05/19

B6

Comments:

Client: **B6**
Patient:

Troponin 4/4/19

**Important
Notices:**

Internal Medicine Conference

Join us for a unique continuing education event in Phuket, Thailand Oct 7th - 11th, 2019. For details see <http://texasimconference.tamu.edu>

Ongoing studies

Cobalamin Supplementation Study- Dogs and cats with cobalamin deficiency with normal PLI, and either normal or low (consistent with EPI) TLI to compare the efficacy of oral vs parenteral cobalamin supplementation. Contact Dr. Chang at chchang@cvm.tamu.edu for further information.

Chronic Pancreatitis with Uncontrolled Diabetes Mellitus- Seeking dogs with chronic pancreatitis and uncontrolled diabetes mellitus for enrollment into a drug trial (medication provided at no cost). Contact Dr. Sue Yee Lim at slim@cvm.tamu.edu or Dr. Sina Marsilio at smarsilio@cvm.tamu.edu

Dogs with Primary Hyperlipidemia- Prescription diet naive dogs newly diagnosed with primary hyperlipidemia are eligible to be enrolled in a dietary trial. Contact Dr. Lawrence at ylawrence@cvm.tamu.edu for more information.

Dogs with Chronic Pancreatitis- Dogs with chronic pancreatitis (cPLI >400 µg/L) and hypertriglyceridemia (>300 mg/dl) are eligible to be enrolled in a dietary trial. Contact Dr. Lawrence at ylawrence@cvm.tamu.edu

Chronic enteropathies in dogs- Please fill out this brief form <http://tinyurl.com/ibd-enroll> to see if your patient qualifies.

Feline Chronic Pancreatitis- Cats with chronic pancreatitis for more than 2 weeks and fPLI >10 µg/L are eligible for enrollment into a treatment trial investigating the efficacy of prednisolone or cyclosporine. Please contact Dr. Yamkate for further information at pyamkate@cvm.tamu.edu.

We can not accept packages that are marked "Bill Receiver"

Use our preprinted shipping labels to save on shipping. Call 979-862-2861 for assistance. The GI Lab is not here to accept packages on the weekend. Samples may be compromised if you ship for arrival on Saturday or Sunday or if shipped via US Mail.

GI Lab Contact Information

Phone: (979) 862-2861

Fax: (979) 862-2864

Email: gilab@cvm.tamu.edu

vetmed.tamu.edu/gilab

Client: **B6**
Patient: **B6**

B6 - 5/4/2019



B6

PET OWNER: **B6**

SPECIES: Canine

BREED: Doberman Pinscher

GENDER: Male

AGE: 8 Years

PATIENT ID: **B6**

LAB ID:

ORDER ID: 24138

DATE OF RECEIPT: 5/4/19

DATE OF RESULT: 5/4/19

ACCOUNT #:

ATTENDING VET:

IDEXX Services: Catalyst Dx Chemistry Analyzer, VetLyte Electrolyte Analyzer

Chemistry

5/4/19

11:10 AM

11:02 AM

4/6/19
10:25 AM

3/27/19
11:36 AM

TEST	RESULT	REFERENCE VALUE		
Glucose	B6	70 - 143 mg/dL	B6	B6
Creatinine		0.5 - 1.8 mg/dL		
BUN		7 - 27 mg/dL		
BUN: Creatinine Ratio				
Phosphorus		2.5 - 6.8 mg/dL		
Calcium		7.9 - 12.0 mg/dL		
Sodium		144 - 160 mmol/L		
Potassium		3.5 - 5.8 mmol/L		
Chloride		109 - 122 mmol/L		
Total Protein		5.2 - 8.2 g/dL		
Albumin		2.2 - 3.9 g/dL		
Globulin		2.5 - 4.5 g/dL		
Albumin: Globulin Ratio				
ALT		10 - 125 U/L		
ALP		23 - 212 U/L		
GGT		0 - 11 U/L		
Bilirubin - Total		0.0 - 0.9 mg/dL		
Cholesterol		110 - 320 mg/dL		
Amylase		500 - 1,500 U/L		
Lipase		200 - 1,800 U/L		

Client:
Patient:

B6

NC State Genetics 6/5/2019

NC State College of Veterinary Medicine

Veterinary Cardiac Genetics Laboratory

1060 William Moore Dr., RB 326
Raleigh, NC 27607
vcgl@lists.ncsu.edu
(919) 513-3314



To request swab collection kits, please visit
<https://cvm.ncsu.edu/genetics/cheek-swab-request/>

Doberman Pinscher Dilated Cardiomyopathy (DCM) Genetic Testing

Dilated cardiomyopathy mutation (DCM) is a form of heart disease in the Doberman pinscher dog. It is an inherited disease, and our laboratory has identified two mutations responsible for the development of DCM. Dogs that are positive for both mutations are at the highest risk of developing DCM

Owner Name: **B6**

NCSU Doberman DCM1 (PDK4) Result: **Negative**

Dog's Name: **B6**

NCSU Doberman DCM2 Result: **Negative**

ID #: **B6**

Below is an explanation for each possible test result so you can better understand all the possible results and make informed breeding decisions:

Negative Result for both DCM1 and DCM2:	The absence of both mutations in a Doberman indicates that the risk of developing DCM is low. It is still possible for a dog to develop heart disease. However, a negative result for both DCM1 and DCM2 indicates that a dog does not have either mutation known to cause DCM.
Positive result for NCSU DCM1 only:	About 40% of dogs with this mutation will develop DCM. Dogs that are positive for only DCM1 will not necessarily develop significant heart disease.
Breeding recommendations:	Dogs are positive for DCM1 should NEVER be bred to a dog that is positive for NCSU DCM 2 since this will lead to dogs that are highest risk of developing DCM. Dogs that are positive homozygous for DCM1 should ideally not be bred.
Positive Result for NCSU DCM2 only:	About 50% of dogs with this mutation will develop DCM. Dogs that are positive for only DCM2 will not necessarily develop significant heart disease.
Breeding recommendations:	Dogs are positive for DCM2 should NEVER be bred to a dog that is positive for NCSU DCM1 (PDK4) since this will lead to dogs that are highest risk of developing DCM. Dogs that are positive homozygous for DCM2 should ideally not be bred.
Positive result for both NCSU DCM1 and NCSU DCM2:	Dogs that positive for BOTH DCM1 & DCM2 are at a very HIGH risk of developing DCM and should be carefully monitored by your veterinarian for signs of disease. Annual evaluation by a cardiologist with an echocardiogram and Holter monitor after 3 years of age is recommended.
Breeding recommendations:	Dogs that are positive for both DCM1 & DCM2 are at the HIGHEST risk of developing DCM and should ideally not be bred since they can pass both traits on. They should never be bred to a dog that is positive for either test.



As always, breeding decisions should be made carefully. Removal of a significant number of dogs from the breeding population could be very bad for the Doberman Pinscher breed. Remember that dogs that carry this mutation may also carry other important good genes that we do not want to lose from the breed.



Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Cardiology Liaison: 508-887-4696

B6

Patient ID: **B6**

B6 Canine

B6 Years Old Male (Neutered) Doberman

Pinscher

Black/Tan

Cardiology Appointment Report ENROLLED IN DCM DIET STUDY

Date: **B6**

Attending Cardiologist:

John E. Rush, DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Presenting Complaint:

recheck DCM

Concurrent Diseases:

B6

B6

B6

B6

Muscle condition:

- | | |
|--|---|
| <input type="checkbox"/> Normal | <input checked="" type="checkbox"/> Moderate cachexia |
| <input checked="" type="checkbox"/> Mild muscle loss | <input type="checkbox"/> Marked cachexia |

Cardiovascular Physical Exam:

Murmur Grade:

- | | |
|--|--------------------------------|
| <input checked="" type="checkbox"/> None | <input type="checkbox"/> IV/VI |
| <input type="checkbox"/> I/VI | <input type="checkbox"/> V/VI |
| <input type="checkbox"/> II/VI | <input type="checkbox"/> VI/VI |
| <input type="checkbox"/> III/VI | |

Jugular vein:

- Bottom 1/3 of the neck
- Middle 1/3 of the neck

- 1/2 way up the neck
- Top 2/3 of the neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong

- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

Arrhythmia: slow afib?

- None
- Sinus arrhythmia
- Premature beats

- Bradycardia
- Tachycardia

Gallop:

- Yes
- No
- Intermittent

- Pronounced
- Other:

Pulmonary assessments:

- Eupneic
- Mild dyspnea
- Marked dyspnea
- Normal BV sounds

- Pulmonary crackles
- Wheezes
- Upper airway stridor

Abdominal exam:

- Normal
- Hepatomegaly
- Abdominal distension

- Mild ascites
- Marked ascites

Problems:

-DCM

Diagnostic plan:

- Echocardiogram
- Chemistry profile
- ECG
- Renal profile
- Blood pressure

- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests:

B6

Mitral inflow:

- E waves present only - AFib

B6

B6

Assessment and recommendations:

Findings consistent with mild improvement in contractile function and decrease in LA size. It is unclear whether it is secondary to better control of ventricular rate, better management of DCM with pimobendan, or diet-induced DCM with improvement on systolic function.

Blood work revealed marked azotemia [redacted] B6 [redacted] increased liver values (T Bili [redacted] B6 [redacted] and cholesterol also elevated [redacted] B6 [redacted] dl). Liver enzymes and cholesterol elevation could be secondary to amiodarone hepatic +/- thyroid toxicity, with concurrent overzealous diuresis; however the combination of elevated kidney and liver values could also be consistent with leptospirosis. Recommend [redacted] B6 [redacted]

B6

B6

Final Diagnosis:

Dilated cardiomyopathy with atrial fibrillation - r/o primary DCM vs. diet induced DCM.

Azotemia - rule out secondary to furosemide vs primary renal disease vs infection

Elevated LFT - rule out amiodarone toxicity vs primary hepatopathy vs infection (leptospirosis v other)

Heart Failure Classification Score:

ISACHC Classification:

- | | |
|--|-------------------------------|
| <input type="checkbox"/> Ia | <input type="checkbox"/> IIIa |
| <input type="checkbox"/> Ib | <input type="checkbox"/> IIIb |
| <input checked="" type="checkbox"/> II | |

ACVIM Classification:

- | | |
|-----------------------------|---------------------------------------|
| <input type="checkbox"/> A | <input checked="" type="checkbox"/> C |
| <input type="checkbox"/> B1 | <input type="checkbox"/> D |
| <input type="checkbox"/> B2 | |

M-Mode

IVSd

LVIDd

LVPWd

IVSs

LVIDs

LVPWs

EDV(Teich)

ESV(Teich)

EF(Teich)

%FS

SV(Teich)

Max LA

TAPSE

EPSS

B6

cm
cm
cm
cm
cm
ml
ml
%
%
ml
cm
cm
cm

M-Mode Normalized

IVSdN

LVIDdN

LVPWdN

IVSsN

LVIDsN

LVPWsN

B6

(0.290 - 0.520)
(1.350 - 1.730)
(0.330 - 0.530)
(0.430 - 0.710)
(0.790 - 1.140) !
(0.530 - 0.780)

2D

SA LA

Ao Diam

SA LA / Ao Diam

IVSd

LVIDd

LVPWd

EDV(Teich)

IVSs

LVIDs

LVPWs

ESV(Teich)

EF(Teich)

%FS

SV(Teich)

IVSd

LVIDd

EDV(Teich)

LVPWd

IVSs

LVIDs

ESV(Teich)

EF(Teich)

ESV(Cube)

EF(Cube)

B6

cm
cm

cm
cm
cm
ml
cm
cm
ml
%
%
ml
cm
cm
ml
cm
cm
cm
ml
%
ml
%

%FS
SV(Teich)
SI(Teich)
SV(Cube)
SI(Cube)
LVPWs
LV Major
LV Minor
Sphericity Index
LVld LAX
LVAd LAX
LVEDV A-L LAX
LVEDV MOD LAX
LVls LAX
LVAs LAX
LVESV A-L LAX
LVESV MOD LAX
HR
EF A-L LAX
LVEF MOD LAX
SV A-L LAX
SV MOD LAX
CO A-L LAX
CO MOD LAX
R-R
HR
CO A-L LAX
CO MOD LAX

B6

%
ml
ml/m
ml
ml/m
cm
cm
cm
cm
cm
ml
ml
cm
cm
ml
ml
BPM
%
%
ml
ml
l/min
l/min
ms
BPM
l/min
l/min

Doppler
E'
S'
IVRT
AV Vmax
AV maxPG

B6

m/s
m/s
ms
m/s
mmHg

Report Details - EON-390034

ICSR:	2067994
Type Of Submission:	Followup
Report Version:	FPSR.FDA.PETF.V.V1
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)
Reporting Type:	Voluntary
Report Submission Date:	2019-06-10 11:03:47 EDT
Initial Report Date:	11/09/2018
Parent ICSR:	2058683
Follow-up Report to FDA Request:	Yes

Reported Problem:	Problem Description:	Older housemate diagnosed with DCM and CHF. Screening: B6 because he has been eating the same diet. Does not have clearcut DCM on echo but has reduced cardiac contractility. Taurine pending and owner has changed diet and started taurine supplementation
	Date Problem Started:	11/07/2018
	Concurrent Medical Problem:	No
	Outcome to Date:	Better/Improved/Recovering

Product Information:	Product Name:	Zignature trout & salmon dry
	Product Type:	Pet Food
	Lot Number:	
	Package Type:	BAG
	Product Use Information:	Description: B6 is four and was born on B6. He ate Zignature trout & salmon from 09/30/15-10/01/18. 1.25 cups twice daily of Zignature. The primary cookies he ate was Earthborn Holistic Grain-Free, all varieties, and he might have had 3-4 cookies per day. The only other cookies he would have eaten were misc. varieties brought by misc. delivery people (propane, UPS, etc.) and not regularly. If we ever had to give medication, we always used the Greenies Pill Pockets.
	Manufacturer /Distributor Information:	
	Purchase Location Information:	

Animal Information:	Name:	B6
	Type Of Species:	Dog
	Type Of Breed:	Retriever - Labrador
	Gender:	Male
	Reproductive Status:	Neutered
	Weight:	25.9 Kilogram
	Age:	3 Years
	Assessment of Prior Health:	Excellent
	Number of Animals Given the Product:	3
	Number of Animals Reacted:	2
Owner Information:	Owner Information provided:	Yes
	Contact: Name:	B6
	Phone:	B6

			Email: B6	
	Address:	B6		
		United States		
Healthcare Professional Information:	Practice Name:	Tufts Cummings School of Veterinary Medicine		
	Contact:	Name:	Lisa Freeman	
		Phone:	(508) 887-4523	
		Email:	lisa.freeman@tufts.edu	
Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States			
Sender Information:	Name:	Lisa Freeman		
	Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	Contact:	Phone:	5088874523	
		Email:	lisa.freeman@tufts.edu	
	Permission To Contact Sender:	Yes		
	Preferred Method Of Contact:	Email		
Reported to Other Parties:	None			
Additional Documents:	Attachment:	Med Records pt 2.pdf		
	Description:	Medical Records		
	Type:	Medical Records		
	Attachment:	Med Records pt 1.pdf		
	Description:	Medical Records		
	Type:	Medical Records		

From: Carey, Lauren </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F0226BD682844FA2B71EA3750D4FCB82-LAUREN.CARE>
To: Rotstein, David; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L
Sent: 11/13/2018 8:56:20 PM
Subject: RE: DCM cases- Lisa Freeman and/or Tufts-related- 11/10/18

To stay on the same page: EON-370713 and EON-370715 are 2 pets from the same household reported by Dr. Freeman. EON-370762 is the owner report for this household.

From: Rotstein, David
Sent: Saturday, November 10, 2018 8:56 PM
To: Carey, Lauren <Lauren.Carey@fda.hhs.gov>; Ceric, Olgica <Olgica.Ceric@fda.hhs.gov>; Glover, Mark <Mark.Glover@fda.hhs.gov>; Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Peloquin, Sarah <Sarah.Peloquin@fda.hhs.gov>; Queen, Jackie L <Jackie.Queen@fda.hhs.gov>; Rotstein, David <David.Rotstein@fda.hhs.gov>
Subject: DCM cases- Lisa Freeman and/or Tufts-related- 11/10/18

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place
B6 (BB)



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From: Carey, Lauren </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F0226BD682844FA2B71EA3750D4FCB82-LAUREN.CARE>
To: Rotstein, David; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L
Sent: 11/19/2018 11:49:14 AM
Subject: RE: DCM cases 11/16/2018 1500

EON-371239 is the 2nd report for this dog, the 4th report for this household. Dr. Freeman submitted a report for each dog (EON-370713 and EON-370715) and the owner has now submitted a report for each dog (EON-370762 and EON-371239).

From: Rotstein, David
Sent: Friday, November 16, 2018 2:59 PM
To: Carey, Lauren <Lauren.Carey@fda.hhs.gov>; Ceric, Olgica <Olgica.Ceric@fda.hhs.gov>; Glover, Mark <Mark.Glover@fda.hhs.gov>; Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Peloquin, Sarah <Sarah.Peloquin@fda.hhs.gov>; Queen, Jackie L <Jackie.Queen@fda.hhs.gov>; Rotstein, David <David.Rotstein@fda.hhs.gov>
Subject: DCM cases 11/16/2018 1500

Please note for(EON370762) EON-371239-Zignature, that there was a report for another dog in the household.

David Rotstein, DVM, MPVM, Dipl. ACVP
CVM Vet-LIRN Liaison
CVM OSC/DC/CERT
7519 Standish Place
B6 BB)



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From: PFR Event <pfpreventcreation@fda.hhs.gov>
To: Cleary, Michael *; HQ Pet Food Report Notification; B6
Sent: 11/9/2018 10:52:44 PM
Subject: Zignature trout & salmon dry: Lisa Freeman - EON-370715
Attachments: 2058683-report.pdf; 2058683-attachments.zip

A PFR Report has been received and PFR Event [EON-370715] has been created in the EON System.

A "PDF" report by name "2058683-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2058683-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-370715

ICSR #: 2058683

EON Title: PFR Event created for Zignature trout & salmon dry; 2058683

AE Date	11/07/2018	Number Fed/Exposed	3
Best By Date		Number Reacted	2
Animal Species	Dog	Outcome to Date	Stable
Breed	Retriever - Labrador		
Age	3 Years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2058683

Product Group: Pet Food

Product Name: Zignature trout & salmon dry

Description: Older housemate diagnosed with DCM and CHF. Screening B6 because he has been eating the same diet. Does not have clearcut DCM on echo but has reduced cardiac contractility. Taurine pending and owner has changed diet and started taurine supplementation

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 3

Number of Animals Reacted With Product: 2

Product Name	Lot Number or ID	Best By Date
Zignature trout & salmon dry		

Sender information

Lisa Freeman
200 Westboro Rd
North Grafton, MA 01536
USA

Owner information

B6

B6

USA

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon/browse/EON-370715>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon/EventCustomDetailsAction!viewReport.jspa?decorator=none&e=0&issueType=12&issueId=387684>

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Report Details - EON-370715

ICSR: 2058683
 Type Of Submission: Initial
 Report Version: FPSR.FDA.PETF.V.V1
 Type Of Report: Adverse Event (a symptom, reaction or disease associated with the product)
 Reporting Type: Voluntary
 Report Submission Date: 2018-11-09 17:46:50 EST

Reported Problem:
Problem Description: Older housemate diagnosed with DCM and CHF. Screening: B6 because he has been eating the same diet. Does not have clearcut DCM on echo but has reduced cardiac contractility. Taurine pending and owner has changed diet and started taurine supplementation
Date Problem Started: 11/07/2018
Concurrent Medical Problem: No
Outcome to Date: Stable

Product Information:
Product Name: Zignature trout & salmon dry
Product Type: Pet Food
Lot Number:
Package Type: BAG
Product Use Information: **Description:** B6 is four and was born on B6. He ate Zignature trout & salmon from 09/30/15-10/01/18. 1.25 cups twice daily of Zignature. The primary cookies he ate was Earthborn Holistic Grain-Free, all varieties, and he might have had 3-4 cookies per day. The only other cookies he would have eaten were misc. varieties brought by misc. delivery people (propane, UPS, etc.) and not regularly. If we ever had to give medication, we always used the Greenies Pill Pockets.
Manufacturer /Distributor Information:
Purchase Location Information:

Animal Information:
Name: B6
Type Of Species: Dog
Type Of Breed: Retriever - Labrador
Gender: Male
Reproductive Status: Neutered
Weight: 25.9 Kilogram
Age: 3 Years
Assessment of Prior Health: Excellent
Number of Animals Given the Product: 3
Number of Animals Reacted: 2
Owner Information: Owner Information provided: Yes
Contact: Name: B6
 Phone: B6
 Email: B6
Address: B6

			B6 United States	
Healthcare Professional Information:	Practice Name:	Tufts Cummings School of Veterinary Medicine		
	Contact:	Name:	Lisa Freeman	
		Phone:	(508) 887-4523	
		Email:	lisa.freeman@tufts.edu	
Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States			
Sender Information:	Name:	Lisa Freeman		
	Address:	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	Contact:	Phone:	5088874523	
		Email:	lisa.freeman@tufts.edu	
	Permission To Contact Sender:	Yes		
Preferred Method Of Contact:	Email			
Additional Documents:	Attachment:	compiled medical record.pdf		
	Description:	Records		
	Type:	Medical Records		



Foster Hospital for Small Animals

55 Willard Street
North Grafton, MA 01536
(508) 839-5395

All Medical Records

Client: B6
Address: B6

Patient: B6
Breed: Golden Retriever
DOB: B6

Species: Canine
Sex: Male
(Neutered)

Home Phone: B6
Work Phone: () -
Cell Phone: B6

Referring Information

B6

Client: B6
Patient: B6

Initial Complaint:

Scanned Record

Initial Complaint:

New - B6 - DCM study

SOAP Text B6 12:08PM - B6

Disposition/Recommendations

Client:
Patient:

B6

Client: **B6**
Patient: **B6**



Foster Hospital for Small Animals

55 Willard Street
North Grafton, MA 01536
(508) 839-5395

Client:	B6
Veterinarian:	
Patient ID:	B6
Visit ID:	

Patient:	B6
Species:	Canine
Breed:	Golden Retriever
Sex:	Male (Neutered)
Age:	B6 Years Old

Lab Results Report

11/7/2018 1:29:30 PM Accession ID: **B6**

Test	Results	Reference Range	Units
Troponin I Research - FHSA	B6	0 - 0.08	mg/dl



3/22

B6

B6

Printed Friday, November 09, 2018

Client:
Patient:

B6

RDVM

B6

records

B6

B6

Client: **B6**
Patient:

RDVM **B6** records

B6

B6

Page 3 of 9

Client:
Patient:

B6

RDVM

B6

records

B6

B6

Page 2 of 9

Client:
Patient:

B6

RDVM

B6

records

B6

B6

Page 7 of 9

Client:
Patient:

B6

RDVM

B6

records

B6

B6

Page 8 of 8

Client:
Patient:

B6

RDVM

B6

records

B6

B6

05/01/2018 02:15 PM

RBC
HCT
HGB
MCV
MCH
MCHC
RDW
%RETIC
RETIC
WBC
%NEU
%LYM
%MONO
%EOS

B6

5.30-8.30 Hg/L
37.0-50.0 %
12.0-16.0 g/dL
80.0-100.0 fL
27.0-32.0 pg
30.0-37.0 g/dL
34.7-47.9 %
%
100-115.0 Hg/L
2.50-16.00 Hg/L

B6

Page 1 of 8

Client: **B6**
Patient:

RDVM **B6** records

B6

NEURO
HEU
LYM
MOBG
EOS
BASO
PLT
MPV
PDW
PCT
GLU
CREA
BUN
BUNCREA
TP
ALB
GLOB
HGBGLOB
ALT
ALP
AP_AB
EC-EE
HW
Lyme

200-12.00 Kpa
0.50-4.00 Kpa
0.30-2.00 Kpa
0.10-1.00 Kpa
0.00-0.01 Kpa
175-500 Kpa

g
g
g

74-143 mg/dL
0.5-1.8 mg/dL
7-27 mg/dL

5.0-5.2 g/dL
2.3-4.0 g/dL
27-43 g/dL

10-125 U/L
25-215 U/L

B6

B6

SMA Panel Dx
10/26/2017 07:18 PM

AP_AB
EC-EE
HW
Lyme

B6

Client: **B6**
Patient:

RDVM: **B6** records

FECAL ANALYSIS: (In House)

B6

B6

Technician: _____
Date: _____

Appearance: Normal Loose Liquid
Mucous Blood Color: Normal

Fecal Centrifugation: Negative Positive

Direct Smear: Negative Positive

Parasites:

Trichostrongylus	<input type="checkbox"/>	Coccidia	<input type="checkbox"/>
Strongylus	<input type="checkbox"/>	Oocysts	<input type="checkbox"/>
Whipworm	<input type="checkbox"/>	Other	<input type="checkbox"/>
Tapeworm	<input type="checkbox"/>		<input type="checkbox"/>
Protozoa	<input type="checkbox"/>		<input type="checkbox"/>

* Zoonotic - transmissible to humans and other animals.

Unusable Sample Why? _____

Comments: _____

Client: **B6**
Patient:

RDVM: **B6** records

FECAL ANALYSIS: (In House)

B6

B6

Appearance: Normal Loose Diarr
Mucous Blood Color/B

Fecal Centrifugation: Negative Positive

Direct Smear: Negative Positive

Parasites: Tricostromin Clontaban
Moxidectin Ivermectin
Moxidectin Other
Tricostromin

* Zoonotic- transmissible to humans and other animals

Unusable Sample Why?

Comments:

Client: **B6**
Patient:

RDVM **B6** records

B6

10/18/2018 02:30 PM

GLU
BUN
CREA
BUNCREA
TP
ALB
GLOB
ALBULOB
ALT
ALAP
AP_300
ECOE
HW
Lime

B6

14-143 mg/dL
7.27 mg/dL
0.5-1.8 mg/dL
3.3-5.2 g/dL
2.3-4.0 g/dL
2.5-4.0 g/dL
10-20 U/L
20-212 U/L

B6

Client: **B6**
Patient: **B6**

RDVM: **B6** records

FECAL ANALYSIS: (In House)

B6

B6

Appearance: Normal Loose Diarr
Mucous Blood Color/B

Fecal Centrifugation: Negative Positive

Direct Smear: Negative Positive

Parasites: Tricostromma Coccidia
Microsporidia Giardia
Whipworm Coccidia
Tapeworm Other

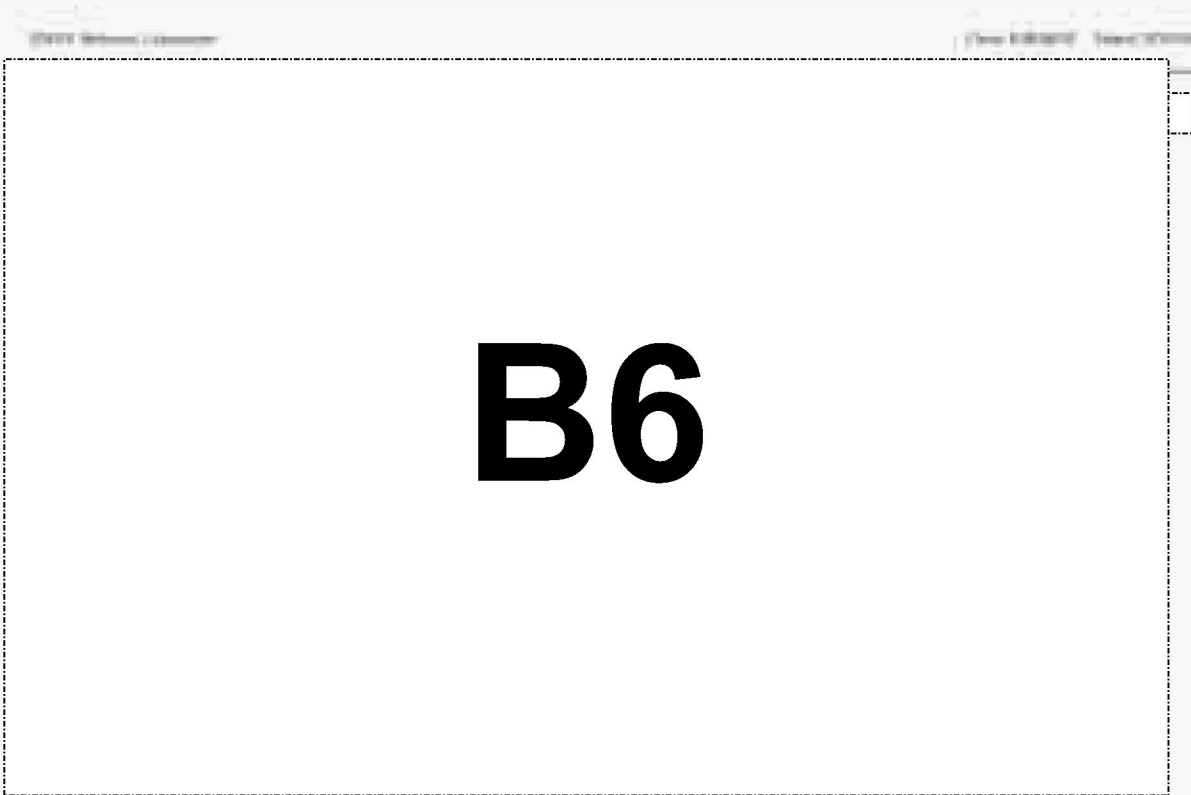
* Zoonotic: transmissible to humans and other animals.

Unusable Sample Why?

Comments:

Client: **B6**
Patient:

IDEXX BNP - 11/8/2018



Client: **B6**
 Patient: **B6**

CBC/Chem - 11/7/2018



Tufts Cummings School Of Veterinary Medicine
 300 Westboro Road
 South Grafton, MA 01116

DUPLICATE

Name DOB: **B6** Sex: CM Provider: **B6**
 Patient ID: **B6** Age: J Order Location: VADM22: Radley Feed Ligne Study
 Floor number: Species: Canine Sample ID: **B6**
 Collection Date: 11/7/2018 12:10 PM Breed: Golden Retriever
 Approval Date: 11/7/2018 2:29 PM

CBC (Research) (Advia)

Parameter	Value	Ref. Range/Units
DN0V03	B6	
WBC (ADVIA)	B6	4.45-13.00 K/uL
RBC (ADVIA)	B6	1.80-9.00 M/uL
Hemoglobin (ADVIA)	B6	13.3-20.7 g/dL
Hematocrit (ADVIA)	B6	39-53 %
MCV (ADVIA)	B6	84.9-77.5 fL
MCH (ADVIA)	B6	21.3-23.8 pg
MCHC (ADVIA)	B6	31.8-34.3 g/dL
RDW (ADVIA)	B6	11.9-15.2
Coagulation (Chemology)	platelets: 100x 5/dl (estimated count of 200,000-300,000/dl)	

Microscopic Exam of Blood Smear (Advia)

Parameter	Value	Ref. Range/Units
DN0V03	B6	
Seg Neut (%)	B6	43-66 %
Lymphocytes (%)	B6	7-47 %
Monocytes (%)	B6	1-11 %
Eosinophils (%)	B6	0-15 %
Seg Neutrophils (Wt)	B6	2,000-11,000 K/uL
Adms	B6	
Lymph (Abs) Adms	B6	1,000-4,000 K/uL
Mon (Abs) Adms	B6	0-100-1,500 K/uL
Eosinophils (Abs) Adms	B6	0-600-1,000 K/uL
WBC Morphology	Morphologic Abnormalities	
Erythrocytes		

Research Chemistry Profile - Small Animal (Cobas)

Parameter	Value	Ref. Range/Units
ABLAD070	B6	
Glucose	B6	67-137 mg/dL
Urea	B6	6-30 mg/dL
Creatinin	B6	0.6-2.0 mg/dL
Phosphorus	B6	2.8-7.2 mg/dL
Calcium T	B6	9.4-11.3 mg/dL
Magnesium T	B6	1.8-2.0 mg/dL
Total Protein	B6	5.5-7.8 g/dL
Albumin	B6	2.8-4.0 g/dL
Globulin	B6	2.3-4.2 g/dL
BUN (Sum)	B6	0-73 g
Sodium	B6	140-160 mEq/L
Chloride	B6	100-120 mEq/L
Potassium	B6	3.0-6.4 mEq/L
KCO3/Bicarb	B6	14-28 mEq/L
ADAP	B6	0-20.0
NA T	B6	30-40
Total Bilirubin	B6	0.20-0.30 mg/dL

Sample ID: 18110102-13 Date/Time: 11/7/2018 12:10 PM

Client: **B6**
Patient: **B6**

CBC/Chem - 11/7/2018



Tufts Cummings School Of Veterinary Medicine

300 Winthrop Road
North Grafton, MA 01134

DUPLICATE

Owner DOB: B6	Provider: B6
Patient ID: B6	Order Location: MA20000 Stability Prod License Study
Phone number: B6	Sample ID: B6
Collection Date: 11/7/2018 11:10 PM	Species: Canine
Approval Date: 11/7/2018 2:29 PM	Breed: Golden Retriever

Research Chemistry Profile - Small Animal (Cobas) (cont'd)

	Ref. Range (Male)
BILIRUBIN	0.00-0.18 mg/dL
INDICATOR BILIRUBIN	0.00-0.20 mg/dL
ALBUMIN Phosphatase	10-127 U/L
GGT	0-10 U/L
ALT	14-60 U/L
AST	0-24 U/L
Creatine Kinase	27-422 U/L
Cholesterol	83-253 mg/dL
Triglycerides	10-338 mg/dL
Iron (total)	600-1250 U/L
Creatinine (calculated)	0.95-2.11 mg/dL

Sample ID: **B6**
REPORT: Drug prescriber 11/7/2018 (final)

Reviewed By: _____
Page 1

Client:
Patient:

B6

Vitals Results

11/7/2018 11:32:13 AM

Weight (kg)

B6

Client:
Patient:

B6

ECG from cardio

B6

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 08-14-18 BY 60322/UC/STP/STP

B6

Client: **B6**
Patient:

Patient History

11/05/2018 10:46 AM	Appointment
11/05/2018 12:36 PM	Appointment
11/07/2018 10:07 AM	UserForm
11/07/2018 10:48 AM	UserForm
11/07/2018 10:53 AM	Treatment
11/07/2018 11:32 AM	Vitals
11/07/2018 12:08 PM	Purchase
11/07/2018 12:18 PM	UserForm
11/07/2018 01:29 PM	Labwork
11/07/2018 01:30 PM	Purchase
11/07/2018 01:30 PM	Purchase
11/07/2018 01:30 PM	Purchase

B6

From: PFR Event <pfpreventcreation@fda.hhs.gov>
To: Cleary, Michael *; HQ Pet Food Report Notification [B6]
Sent: 1/1/2019 9:48:33 PM
Subject: Orijen grain free original dry: Lisa Freeman - EON-375114
Attachments: 2060741-report.pdf; 2060741-attachments.zip

A PFR Report has been received and PFR Event [EON-375114] has been created in the EON System.

A "PDF" report by name "2060741-report.pdf" is attached to this email notification for your reference. Please note that all documents received in the report are compressed into a zip file by name "2060741-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

EON Key: EON-375114

ICSR #: 2060741

EON Title: PFR Event created for Orijen grain free original dry; 2060741

AE Date	12/28/2018	Number Fed/Exposed	1
Best By Date		Number Reacted	1
Animal Species	Dog	Outcome to Date	Stable
Breed	Doberman Pinscher		
Age	9 Years		
District Involved	PFR-New England DO		

Product information

Individual Case Safety Report Number: 2060741

Product Group: Pet Food

Product Name: Orijen grain free original dry

Description: DCM and CHF diagnosed 12/28/18 at emergency clinic. Started on [B6]

[B6] Seen by Tufts cardiology 12/31/18. Eating Orijen grain free original dry so unclear if just genetically associated DCM or if diet associated.

Submission Type: Initial

Report Type: Adverse Event (a symptom, reaction or disease associated with the product)

Outcome of reaction/event at the time of last observation: Stable

Number of Animals Treated With Product: 1

Number of Animals Reacted With Product: 1

Product Name	Lot Number or ID	Best By Date
Orijen grain free original dry		

Sender information

Lisa Freeman
200 Westboro Rd
North Grafton, MA 01536
USA

Owner information

B6
USA

To view this PFR Event, please click the link below:

<https://eon.fda.gov/eon//browse/EON-375114>

To view the PFR Event Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=12&issueId=392123>

=====

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All Medical Records

Client: **B6**
Address: **B6**

Patient: **B6**
Breed: Doberman Pinscher
DOB: **B6**

Species: Canine
Sex: Male

Home Phone: **B6**
Work Phone: () - -
Cell Phone: () - -

Referring Information

B6

Client: **B6**
Patient: **B6**

Initial Complaint:

Emergency

SOAP Text Apr 5 2017 12:55PM - Clinician, Unassigned FHSA

4/5/2017 12:56:09 PM NEW VISIT (ER)

Doctor: **B6**
Student: **B6**
Presenting complaint: **B6**

Referral visit? No

Diagnostics completed prior to visit: n/a

HISTORY:

Signalment: 7 yo male intact doberman pinscher

Current history: Owner heard patient yelp out Sunday morning. Owner noticed that patient was very timid, he didnt want to run or jump. Owner took patient to RDVM on Sunday where they diagnosed neck pain and prescribed pain medication (tramadol and gabapentin). Patient has been receiving pain meds since discharge and doing fine until Tuesday. On Tuesday patient yelped again at one point and seems painful again. The owner is not able to associate the yelping with any certain movement or event. Patient was not interested in his food starting yesterday.

Prior medical history: No major history; owner mentioned that patient has an enlarged prostate

B6

Diet: Dry kibble 2cups BID; some table scraps

Vaccination status/flea & tick preventative use: UTD vaccines; no flea, tick. On heartgard.

Travel history: No

EXAM:

S: **B6**
O: **B6**

Client: **B6**
Patient:

BCS: **B6**

Hydration: **B6**

B6

ASSESSMENT:

A1: **B6**
A2:

PLAN:

P1: **B6**
P2:
P3:
P4:
P5:
P6:

Diagnostics completed: **B6**

Diagnostics pending:

Client communication: **B6**

B6

DVM summary:

B6

Deposit & estimate status:

Resuscitation code (if admitting to ICU):

SOAP approved (DVM to sign): **B6**

4/5/2017 3:48:11 PM: **B6**
4/5/2017 3:48:11 PM:

4/5/2017 3:51:02 PM

Prescribed **B6** - FHSA (10)

Instructions - give 1 tablet by mouth every 12 hours WITH FOOD for 5 days - Expires: 4/5/2018 No Refills

Client: **B6**
Patient: **B6**

Initial Complaint:

Emergency

SOAP Text Dec 31 2018 12:26PM - **B6**

B6 9yo MC Doberman, presenting for Cardio consult for recent DCM diagnosis

History: referral for cardiology consult. increased respiratory effort and rate on Friday night (12/28), saw **B6** who owner reports saw fluid in chest, started on cardio meds for DCM. Patient has been doing much better since starting medications.

Current medications: **B6**
B6
(received all meds this morning)

Diet: Orijen grain free

No major previous medical history

Subjective:

B6

C/V: II/VI systolic murmur, tachycardic with irregular rhythm

B6

Assessment:

- A1: DCM - r/o genetic vs. diet induced
- A2: CHF - r/o secondary to A1
- A3: Atrial fibrillation - secondary to A1

Plan:

Client:
Patient:

B6

CARDIO CONSULT/CHEST RADIOGRAPH FINDINGS:

Echocardiogram reveals DCM with marked LA enlargement, active CHF, and atrial fibrillation with fast ventricular rate. Since the patient is a Doberman we are more inclined to believe that the origin of the DCM is genetic although the patient is on a grain free diet which could potentially contribute to the markedly decreased systolic function. The patient was officially enrolled in Dr. Freeman's study today and blood was pulled for all of the required test. Chest radiographs revealed persistence of the previously diagnosed CHF and the ventricular rate is still relatively fast.

B6

also be started and the patient should be switched diet. Recheck BW including a digoxin level (especially since the current dose is still on the higher end) and ECG is recommended in 7-10 days. Recheck echocardiogram in 3 months or sooner if the patient develops clinical signs consistent with worsening heart disease such as increased RR/RE, cough, exercise intolerance, or syncope.

Medications:

B6

Taurine supplementation - 1000mg PO BID
Diet change - sent home with multiple samples

Recheck exam/BW and EKG in 7-10 days with Cardio

B6

VMD

Disposition/Recommendations

Client:
Patient:

B6

Client: **B6**
 Patient: **B6**



Foster Hospital for Small Animals

55 Willard Street
 North Grafton, MA 01536
 (508) 839-5395

Client: **B6**
 Veterinarian:
 Patient ID: **B6**
 Visit ID:

Patient:	B6
Species:	Canine
Breed:	Doberman Pinscher
Sex:	Male
Age:	B6 Years Old

Lab Results Report

Nova Full Panel-ICU **4/5/2017 3:37:25 PM** **Accession ID: B6**

Test	Results	Reference Range	Units
SO2%	B6	94 - 100	%
HCT (POC)		38 - 48	%
HB (POC)		12.6 - 16	g/dL
NA (POC)		140 - 154	mmol/L
K (POC)		3.6 - 4.8	mmol/L
CL(POC)		109 - 120	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
BUN (POC)		12 - 28	mg/dL
CREAT (POC)		0.2 - 2.1	mg/dL
TCO2 (POC)		0 - 0	mmol/L
nCA		0 - 0	mmol/L
nMG		0 - 0	mmol/L
GAP		0 - 0	mmol/L
CA/MG		0 - 0	mol/mol
BEeef		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE	0 - 0		



Client: **B6**
Patient:

FiO2	B6	0 - 0	%
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

Nova Full Panel-ICU **4/5/2017 3:48:12 PM** **Accession ID: B6**

Test	Results	Reference Range	Units
TS (FHSA)	B6	0 - 0	g/dl
PCV **		0 - 0	%
TS (FHSA)		0 - 0	g/dl



7/28

B6

Printed Tuesday, January 01, 2019

Vitals Results

4/5/2017 3:51:11 PM	Heart Rate (/min)	B6
4/5/2017 3:51:12 PM	Respiratory Rate	
4/5/2017 3:51:13 PM	Temperature (F)	
4/5/2017 3:51:14 PM	Weight (kg)	

Patient History

04/05/2017 12:53 PM	UserForm	B6
04/05/2017 02:00 PM	UserForm	
04/05/2017 03:34 PM	Purchase	
04/05/2017 03:34 PM	Treatment	
04/05/2017 03:37 PM	Purchase	
04/05/2017 03:42 PM	UserForm	
04/05/2017 03:48 PM	Labwork	
04/05/2017 03:51 PM	Vitals	
04/05/2017 03:51 PM	Vitals	
04/05/2017 03:51 PM	Vitals	
04/05/2017 03:51 PM	Vitals	
04/05/2017 03:56 PM	Prescription	
04/05/2017 03:58 PM	Purchase	
04/05/2017 04:04 PM	Purchase	
12/31/2018 12:38 PM	UserForm	
12/31/2018 03:48 PM	Purchase	
12/31/2018 03:48 PM	Purchase	
12/31/2018 03:55 PM	UserForm	

Client:
Patient:

B6

Patient History

12/31/2018 04:07 PM	Treatment
12/31/2018 04:07 PM	Purchase
12/31/2018 04:13 PM	Treatment
12/31/2018 05:01 PM	Prescription
12/31/2018 05:04 PM	Prescription
12/31/2018 05:05 PM	Purchase
12/31/2018 05:14 PM	Deleted Reason
12/31/2018 05:16 PM	Purchase
01/01/2019 05:31 AM	UserForm
01/01/2019 05:36 AM	Email

B6

B6

B6

Male

Genie Dobberman Prescher Black/Tan

Patient ID: **B6**

STANDARD CONSENT FORM

I am the owner, or agent for the owner, of the above described animal and have the authority to execute consent. I hereby authorize the Cummings School of Veterinary Medicine at Tufts University (herein after Cummings School) to prescribe for treatment of said animal according to the following terms and conditions.

Cummings School and its officers, agents and employees will provide such veterinary medical care as they deem reasonable and appropriate under the circumstances.

Cummings School and its officers, agents, and employees will use all reasonable care in the treatment of the above mentioned animal, but will not be liable for any loss or accident that may occur or any disease that may develop as a result of the care and treatment provided.

I understand that the above identified animal may be treated by Cummings School students under the supervision and assistance of Cummings School staff members.

In executing this form, I hereby expressly acknowledge that risks, benefits and alternative forms of treatment have been explained to me. I understand said explanation, and I consent to treatment. Should any additional treatments or diagnostics be required during the continued care of my animal, I understand that I will be given the opportunity to discuss and consent to these additional procedures. I understand that further or additional treatment may be required without an opportunity for discussion and consideration by me, in the case of the development of any life-threatening emergency during the continued care of my animal and I expressly consent to all such reasonable treatment as required. I realize and understand that results cannot be guaranteed.

If any equipment is left with the animal, it will be accepted with the understanding that Cummings School assumes no responsibility for any loss of equipment that may occur.

I agree to pick up the animal when notified that it is ready for release.

In the event the animal is not picked up, and if ten (10) days have expired since a registered letter was sent to the address given above, notifying me to call for the animal, the animal may be sold or otherwise disposed of in a humane manner and the proceeds applied to the charges incurred in caring and treating the animal. Failure to remove said animal will not and does not relieve me from obligation for the costs of services rendered.

I hereby grant to the Cummings School of Veterinary Medicine at Tufts University, its officers and employees (collectively referred to herein as Cummings School), and its agents and assigns (the Grantors) the irrevocable rights to photograph / videotape the operation or procedure to be performed, including appropriate and otherwise use such photographs and images for, and in connection with, a Grantor's medical, scientific, educational, and publicity purposes, by any means, methods and media (print and electronic) now known or, in the future, developed that the Grantor deems appropriate (provided that such photographs and images may not be used in for-profit commercials, unless such commercials are publicizing educational programs of Cummings School). As medical and surgical treatment necessitates the removal of tissue, cells, fluids or body parts of my animal, I authorize the Grantors to dispose of or use these tissues, cells, fluids or body parts for scientific and educational purposes.

I understand that a FINANCE CHARGE will be applied to all accounts unpaid after 30 days. The FINANCE CHARGE is computed on a monthly rate of 1.33% per month, which is an annual percentage rate of 16% applied to the average daily balance outstanding, with a minimum fee of \$5.00.

I do further agree that should any payment, or the full amount of the sum stated above, become overdue more than 30 days from the above-approved upon time of payment or payments, the entire balance shall be considered in default and become due and payable. I further agree to be responsible for any or all collection agency and/or attorney fees necessary to collect the full amount.

I do further agree to comply with hours of visitation in conjunction with our Hospital's policy.

I have read, understand, and agree to accept the terms and conditions herein.

Owner's name: B6

Date: B6

Owner's address: B6

B6

Date:

If the individual admitting the animal is someone other than the legal owner, please complete the portion below.

The owner of the animal B6 has granted me authority to obtain medical treatment and to bind this owner to pay the veterinary medical services provided at Cummings School pursuant to the terms and conditions described above.

Authorized Agent - Please Print

Agent's Signature

Street Address

Date

Town/City

State

Zip



Cummings School of
Veterinary Medicine

Healing Animals, Helping Humans, Transforming Global Health

B6

B6

~~Male~~

~~Cancer: Unknown/Prostate: Black/Lean~~

B6

~~Primary Clinician:~~

B6

~~Cage Location: Waiting room~~

~~Owner:~~

B6

B6

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				front legs					
				4 Hopping hind legs					
				4 Bone hopping right					
				4 Bone hopping left					
				4 Crunching feet					
				4 Crunching feet					
				4 Digging after					
				4 Extreme protrud throat					
				4 Wheel bassinet wheel					
				4 Wheel bassinet hood/neck extended					
				4 Flippy wheel					
				4 Flippy bottle					

Common/HC animal

				L	REFLEXES & TONE					R	
					4 Extreme corgi walk (C7-T6)						
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					4 Withdrawal (C5-T6)						
					4 Machine fore						
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					4 Withdrawal (C7-16)						
					4 Machine fore						
					4 Pinch (18-20)						
					4 Bulky vertical after						
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0 absent 1 decreased 2 normal 3 increased 4 marked increase

Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Foster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01536
Telephone: (508) 833-5395
Fax: (508) 833-8739
<http://vetmed.tufts.edu/>

Emergency & Critical Care: Latham (508) 867-4245

Patient

Name:

B6

Owner

Name:

B6

Signalment:

B6 7 Years Old Black/Tan Male
Doberman Pinscher

Address:

Patient ID:

B6

Emergency Clinician:

B6

ITW/IMed (Emergency and Critical Care Resident)

Consulting Clinician:

IR Supervisor:

B6

Discharge Instructions

Admit Date: 4/5/2017 12:52:11 PM

Check Out Date: 4/5/2017

Case Summary

Diagnosis:

1. B6

B6

B6

Medications:

Continue:

1. **B6** as prescribed previously.

New medications:

B6

B6

Case: **B6**

Chemical: **B6**

Drug usage instructions:

Radiology Request & Report

Patient:

Name: B6
Species: Canine
Breed/Tan: Male Doberman
Proceder:
Birthdate: B6

Owner:

Name: B6
Address: B6

Patient ID: B6

Date of request: B6

Attending Clinician: B6

MD/Intern: B6

Student:

Date of exam: 12/31/18

Patient Location: Ward/Cage: Exam room 13

Weight (kg): 43.60

- Inpatient
 Outpatient Time:
 Waiting
 Emergency

Sedation

- IMAG
 OMAG
 1/2 dose OMAG
 Dex/Domitor/Butorphanol
 Anesthesia to sedate/anesthetize

Examination Desired: 1 lateral radiograph (can do standing)

Presenting Complaint and Clinical Questions you wish to answer:
Emergency - r/o CHF

Pertinent History: DCM, had echocardiogram today.

Findings:

Conclusions:

Radiologist:

Primary:

Reviewing:

Dates:

Reported:

Finalized:

Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY
Cardiology Liaison: 508-887-4696

B6

Patient ID: **B6**

B6

Case#

B6 Years Old Male Doberman Pinscher
Black/Tan BW Weight (kg) 43.60

Cardiology Consultation ENROLLED IN DCM STUDY

Date: 12/31/2018

Weight: Weight (kg) 43.60

Requesting Clinician: **B6** VMD (Intern) **B6**

Attending Cardiologist:

John F. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

Cardiology Resident:

B6

Thoracic radiographs available for review?

- Yes - in SS
- Yes - in PACS
- No

Patient location: Exam room

Presenting complaint and important concurrent diseases: referral for cardiology consult. Increased respiratory effort and rate on Friday night (12/28). saw Boston Road who owner reports saw fluid in chest, started on cardio meds for DCM. Patient has been doing much better since starting medications.

Current medications and doses: **B6**

B6

At-home diet: (name, form, amount, frequency) Orijen dry dog food

Key indication for consultation: (murmur, arrhythmia, needs fluids, etc.) arrhythmia, DCM

Questions to be answered: any changes to medications/treatment plan moving forward

Is your consult time-sensitive? (e.g., anesthesia today, owner waiting, trying to get biopsy today)

- Yes (explain):
- No

STOP - remainder of form to be filled out by Cardiology

Physical Examination

Heart rate: 184
MM Color and CRT: Pink, <2sec

Respiratory rate: Panting
BCS (1-9): 7-8

Muscle condition:

- Normal
- Mild muscle loss
- Moderate cachexia
- Marked cachexia

Cardiovascular Physical Exam

Murmur Grade:

- None
- I/VI
- II/VI
- III/VI
- IV/VI
- V/VI
- VI/VI

Murmur location/description: Left apical systolic

Jugular vein:

- Bottom 1/3 of the neck
- Middle 1/3 of the neck
- Top 2/3 of the neck
- 1/2 way up the neck

Arterial pulses:

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other (describe):

Arrhythmia: Irregularly Irregular

- None
- Sinus arrhythmia
- Premature beats
- Bradycardia
- Tachycardia

Gallop:

- Yes
- No
- Intermittent
- Pronounced
- Other:

Pulmonary assessments:

- Tupneic
- Mild dyspnea (for a Dobie)
- Marked dyspnea
- Normal BV sounds
- Pulmonary Crackles
- Wheezes
- Upper airway stridor
- Other auscultatory findings

Abdominal exam:

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites

B6

Mitral inflow: Atrial fibrillation

- Summated
- Normal
- Delayed relaxation
- Pseudonormal
- Restrictive

B6

Assessment and recommendations:

Echocardiogram reveals DCM with marked LA enlargement, active CHF, and atrial fibrillation with fast ventricular rate. Since the patient is a Doberman we are more inclined to believe that the origin of the DCM is genetic although the patient is on a grain free diet which could potentially contribute to the markedly decreased systolic function. The patient was officially enrolled in Dr. Freeman's study today and blood was pulled for all of the required test. Chest radiographs revealed persistence of the previously diagnosed CHF and the ventricular rate is still relatively fast. Recommend making the

B6

Recheck BW including a digoxin level (especially since the current dose is still on the higher end) and ECG is recommended in 7-10 days. Recheck echocardiogram in 3 months or sooner if the patient develops clinical signs consistent with worsening heart disease such as increased RR/RI, cough, exercise intolerance, or syncope.

Final Diagnosis:

- DCM with marked reduced contractile function and acute CHF r/o genetic vs. diet related
- Atrial fibrillation with fast ventricular rate

Heart Failure Classification Score:

TSACH Classification:

- | | |
|-----------------------------|--|
| <input type="checkbox"/> Ia | <input checked="" type="checkbox"/> IIIa |
| <input type="checkbox"/> Ib | <input type="checkbox"/> IIIb |
| <input type="checkbox"/> II | |

ACC/AHA CHF Classification:

- | | |
|-----------------------------|---------------------------------------|
| <input type="checkbox"/> A | <input checked="" type="checkbox"/> C |
| <input type="checkbox"/> B1 | <input type="checkbox"/> D |
| <input type="checkbox"/> B2 | |

Discharge Instructions

Patient:

Name: B6

Species: Canine

Breed: Black/Tan Male Doberman Pinscher

Birthdate: B6

Owner:

Name: B6

Address: B6

Patient ID: B6

Admit Date: 12/31/2018 11:21:39 AM

Discharge Date: 1/1/2019

Diagnosis: Dilated cardiomyopathy (DCM) with congestive heart failure

Case summary:

B6 has been diagnosed with a primary heart muscle disease called dilated cardiomyopathy (DCM). This disease is more common in large and giant breed dogs and is characterized by thinning of the walls of the heart, reduced cardiac pump function, and enlargement of the upper chambers of the heart. Many dogs with DCM will also have significant arrhythmias which can be life-threatening and also require medical management. The heart enlargement has now progressed to the point of congestive heart failure, meaning that fluid is backing up into the lungs. Unfortunately this is a progressive disease and we cannot reverse the changes to the heart muscle, however we can use cardiac medications and some changes to the diet to make your dog comfortable and have him breathing easier.

Monitoring at home:

B6

Medications:

B6

B6

B6

Dry Food Options:

Royal Canin Early Cardiac (veterinary diet)

Royal Canin Buser

Purina Pro Plan Adult Weight Management

Purina Pro Plan Bright Mind Adult Small Breed Formula

Canned Food Options:

Hill's Science Diet Adult Beef and Turkey Entree

Hill's Science Diet Adult 1-6 Healthy Cuisine Riced Chicken, Carrot, and Spinach Stew

Royal Canin Mature B+

We have also sent you home with Taurine for oral supplementation. Please give 1000mg by mouth twice daily.

Carrier Recommendations:

For the first 7 to 10 days after starting medications for heart failure we recommend very limited activity. Leash walking only is ideal, and short walks to start. Once the heart failure is better controlled, then slightly longer walks are acceptable. However, if you find that **B6** is lagging behind or needs to stop on a walk then this was too long a walk and shorter walks are advised in the future. Rapid rise or strenuous high energy activities (pup play ball chasing, running fast off leash, etc.) are generally not advised at this stage of heart failure.

Recheck Visits:

A recheck visit is recommended in 7-10 days for recheck bloodwork and electrocardiogram. At this visit we will check your dog's breathing effort and heart function, do a blood test to recheck kidney values, and probably recheck a blood pressure. A recheck echocardiogram is recommended in 3-4 months.

Thank you for entrusting us with **B6** care. Please contact our Cardiology liaison at (408) 887-4626 or email us at cardiology@tufts.edu for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information:

<http://vet.tufts.edu/heart-smart/>

Prescription Refill Disclaimer:

For the safety and well-being of our patients, your pet must have had an examination by one of our veterinarians within the past year in order to obtain prescription medications.

Ordering Food:

Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (408-887-4626) to ensure the food is in stock. Alternatively, veterinary diets can be ordered from online retailers with a prescription/veterinary approval.

Clinical Trials:

Clinical trials are studies in which our veterinary doctors work with you and your pet to investigate a specific disease process or a promising new test or treatment. Please see our website: vet.tufts.edu/press/clinical-trials

Case: **B6**

Owner: **B6**

Discharge Instructions:



Cummings School of
Veterinary Medicine

Healing Animals, Helping Humans, Transforming Global Health

Forster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01526
Telephone (508) 829-5295
Fax (508) 829-8739
<http://vetmed.tufts.edu/>

B6

B6

Male

B6

Doberman Pinscher

Black/Tan

B6

B6

Dear **B6**

B6 presented for possible right-sided neck pain. **B6** was inconsistent on ER and Neurology examinations. No significant limb neurological problems were identified, NOVA was normal. D/c carprofen, diclofenac tromadol, continue gabapen, recheck approx 2 weeks.

If you have any questions, or concerns, please contact us at 508-827-4988.

Thank you,

B6 (Emergency and Critical Care Resident)

Cummings
Veterinary Medical Center
AT TUFTS UNIVERSITY

Forster Hospital for Small Animals
55 Willard Street
North Grafton, MA 01526
Telephone (NOR) 829-5295
Fax (NOR) 829-7951
<http://vetmed.tufts.edu/>

B6

B6 Main
B6 Deborah Fincher
Black/Tan
B6

1/1/2019

Dear **B6**

Thank you for referring **B6** with their pet **B6**. Please see attached client discharge instructions.

If you have any questions, or concerns, please contact us at 508-827-1981.

Thank you,

B6 VMD (Intern - **B6**)