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**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:** 2/25/2019 2:19:28 PM  
**Subject:** DCM - More from L Freeman 2/25/2019 0915  
**Attachments:** Acana lamb and apple dry: Lisa Freeman - EON-380747; Wellness Core grain-free ocean fish dry-Wellness core grain free turkey: Lisa Freeman - EON-380742; Wellness CORE Grain-Free Ocean Whitefish dry-Wellness Core grain free turkey: Lisa Freeman - EON-380743

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  
240-506-6763 (BB)



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**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 2/25/2019 1:45:06 PM  
**Subject:** Acana lamb and apple dry: Lisa Freeman - EON-380747  
**Attachments:** 2063136-report.pdf; 2063136-attachments.zip

A PFR Report has been received and PFR Event [EON-380747] has been created in the EON System.

A "PDF" report by name "2063136-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 "2063136-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380747

**ICSR #:** 2063136

**EON Title:** PFR Event created for Acana lamb and apple dry; 2063136

<b>AE Date</b>	01/22/2019	<b>Number Fed/Exposed</b>	1
<b>Best By Date</b>		<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Spaniel - Cocker English		
<b>Age</b>	5 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2063136

**Product Group:** Pet Food

**Product Name:** Acana lamb and apple dry

**Description:** At ortho recheck 1/22/19, new murmur was noted to cardio consult performed. DCM identified. Dog eating BEG diet. Recommended diet change but owner has major concerns about dietary components triggering seizures. Enrolled in our DCM study and dog completed baseline measurements but then owner elected to withdraw from study. Unclear what she will do in terms of diet change. I have not provided owner contact information. If you wish to contact owner, please let me know and I can ask if ok to do so.

**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
Acana lamb and apple 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-380747>

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=397756>

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Report Details - EON-380747							
ICSR:	2063136						
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:	2019-02-25 08:34:16 EST						
Reported Problem:	<b>Problem Description:</b> At ortho recheck 1/22/19, new murmur was noted to cardio consult performed. DCM identified. Dog eating BEG diet. Recommended diet change but owner has major concerns about dietary components triggering seizures. Enrolled in our DCM study and dog completed baseline measurements but then owner elected to withdraw from study. Unclear what she will do in terms of diet change. I have not provided owner contact information. If you wish to contact owner, please let me know and I can ask if ok to do so.						
	<b>Date Problem Started:</b> 01/22/2019						
	<b>Concurrent Medical Problem:</b> Yes						
	<b>Pre Existing Conditions:</b> <span style="border: 1px dashed black; padding: 5px; display: inline-block;">B6</span>						
	<b>Outcome to Date:</b> Stable						
Product Information:	<b>Product Name:</b> Acana lamb and apple dry						
	<b>Product Type:</b> Pet Food						
	<b>Lot Number:</b>						
	<b>Product Use Information:</b> <b>Description:</b> Please see diet history						
	<b>Manufacturer /Distributor Information:</b>						
	<b>Purchase Location Information:</b>						
Animal Information:	<b>Name:</b> <span style="border: 1px dashed black; padding: 2px;">B6</span>						
	<b>Type Of Species:</b> Dog						
	<b>Type Of Breed:</b> Spaniel - Cocker English						
	<b>Gender:</b> Male						
	<b>Reproductive Status:</b> Neutered						
	<b>Weight:</b> 15.8 Kilogram						
	<b>Age:</b> 5 Years						
	<b>Assessment of Prior Health:</b> Good						
	<b>Number of Animals Given the Product:</b> 1						
	<b>Number of Animals Reacted:</b> 1						
	<b>Owner Information:</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>Owner Information provided:</b></td> <td>No</td> </tr> </table>	<b>Owner Information provided:</b>	No				
	<b>Owner Information provided:</b>	No					
	<b>Healthcare Professional Information:</b>	<b>Practice Name:</b> Tufts Cummings School of Veterinary Medicine					
		<b>Contact:</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>Name:</b></td> <td>Lisa Freeman</td> </tr> <tr> <td><b>Phone:</b></td> <td>(508) 887-4523</td> </tr> <tr> <td><b>Email:</b></td> <td>lisa.freeman@tufts.edu</td> </tr> </table>	<b>Name:</b>	Lisa Freeman	<b>Phone:</b>	(508) 887-4523	<b>Email:</b>
<b>Name:</b>		Lisa Freeman					
<b>Phone:</b>		(508) 887-4523					
<b>Email:</b>	lisa.freeman@tufts.edu						
<b>Address:</b> 200 Westboro Rd North Grafton Massachusetts 01536 United States							

<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			

<b>Additional Documents:</b>	<b>Attachment:</b>	rpt_medical_record_preview.pdf	
	<b>Description:</b>	Records	
	<b>Type:</b>	Medical Records	
	<b>Attachment:</b>	discharge 1-22-19.pdf	
	<b>Description:</b>	Discharge	
	<b>Type:</b>	Other	
	<b>Attachment:</b>	cardio report 1-22-19.pdf	
	<b>Description:</b>	Cardio report 1/22/19	
	<b>Type:</b>	Echocardiogram	

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY  
Cardiology Liaison: 508-887-4696

B6

Patient ID: B6

B6 Canine

B6 Years Old Male (Neutered) English  
Cocker Spaniel

Red/White BW: Weight (kg) 15.80

## Cardiology Consultation ENROLLED IN DCM STUDY

Date: 1/22/2019

Weight: Weight (kg) 15.80

Requesting Clinician: B6 DVM, MS, DACVS LA, DACVS SA

### 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 (from B6)

No

Patient location: B ward

### Presenting complaint and important concurrent diseases:

B6

B6

### Current medications and doses:

B6

At-home diet: (name, form, amount, frequency)

Key indication for consultation: Murmur, left apex, 2-3/6

### Questions to be answered:

New heart murmur heard on physical exam today. Safe to sedate for radiographs?

Is your consult time-sensitive? (e.g., anesthesia today, owner waiting, trying to get biopsy today)

- Yes (explain): radiographs today
- 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:** Left apical/mid cardiac 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

**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**

**Assessment and recommendations:**

DCM (primary vs. diet related vs. toxin) with no LA enlargement. Given that the patient is on a lamb/grain free diet, we would recommend changing to a regular commercial diet. No medications are indicated at this time. The patient is enrolled in the DCM diet study. Recheck echocardiogram in 3 months per study schedule.

B6

**B6**

**Final Diagnosis:**

Asymptomatic DCM

**Heart Failure Classification Score:**

ISACHC Classification:

- Ia
- Ib
- II
- IIIa
- IIIb

ACVIM CHF Classification:

- A
- B1
- B2
- C
- D



M-Mode

IVSd	<b>B6</b>	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
EPSS	cm	

M-Mode Normalized

IVSdN	<b>B6</b>	{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	<b>B6</b>	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 LAX		cm
LVAd LAX		cm
LVEDV A-L LAX		ml
LVEDV MOD LAX		ml
LVLs LAX		cm

LVA<sub>6</sub> 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  
ml  
ml  
BPM  
%  
%  
ml  
ml  
l/min  
l/min

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

m/s  
ms  
m/s  
m/s  
  
m/s  
  
m/s  
m/s  
m/s  
mmHg  
m/s  
mmHg

**Patient**

**Name:**

B6

**Signalment:**

B6 Years Old Red/White Male  
(Neutered) English Cocker  
Spaniel

**Owner**

**Name:**

B6

**Address:**

**Patient ID:**

B6

**Contact Clinician:**

B6 DVM, MS, DACVS  
IA, DACVISA

**Alternate Clinician:**

**Student:**

B6 V19

**RE-EXAMINATION FORM**

**Date:** 1/22/2019

**Problem:**

B6 recheck, B6 xrays

**History:**

Thank you for bringing B6 to the Tufts Orthopedic Surgery Service for recheck radiographs (x-rays) B6  
B6 presented to the Tufts ER on B6 Pelvic  
radiographs showed B6  
B6 B6 underwent surgery on B6 to repair his B6

You report that he is doing well at home, and is standing up and walking well. B6 also has a history of B6 which is managed by B6

**Physical Examination:**

B6

**Procedures Performed & Future Plans:**

Today B6 had a consult with our Cardiology department to evaluate his heart murmur prior to being sedated for radiographs. Cardiology found that B6 has 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. This disease can be attributed to several factors; one potential cause of DCM is diet, especially diets that are grain-free or contain exotic ingredients. Based on B6 current diet and the findings of his cardiology evaluation, we recommend switching B6 diet; some recommendations are listed below. At this time B6 does not require any medications for his heart disease; however we recommend rechecking an echocardiogram (ultrasound of the heart) in 3 months. We also recommend starting B6 on a Taurine supplement, which may help the heart muscle. You have elected to enroll B6 in a study relating diet and dilated cardiomyopathy in dogs.

B6

The radiology report on B6 x-rays is still pending. Based off of a preliminary examination of the radiographs, B6 appears to be healing well from surgery. We will contact you with the results of the radiographs when we receive them.

Today we also drew blood to check B6 B6 level. His level today was B6 which is higher than his previous level, but is within the reference range.

#### Medications:

1. Taurine supplement 500mg capsules: Give 1 capsule by mouth every 12 hours.

#### Home Instructions:

1. **Activity Restriction:** Since B6 radiographs look good we can begin to loosen his exercise restrictions. Since B6 has had decreased activity for the past few weeks, we want to gradually build up his exercise tolerance. You can gradually increase the length of his walks by 5 minutes every two weeks, until his next recheck.

2. **Diet:** The FDA is currently investigating an apparent association between diet and 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 B6 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 Petfoodology 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:

- Royal Canin Early Cardiac (veterinary diet)
- Royal Canin Bboxer
- 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 Barley Entree
- Hill's Science Diet Adult 1-6 Healthy Cuisine Roasted Chicken, Carrot, and Spinach Stew
- Royal Canin Mature 8+

If your dog has special nutritional needs or requires a homecooked diet, we recommend you schedule an appointment with our nutritionists (508-887-4696).

We would like to see B6 back for a surgery recheck in 6 weeks. Please contact the Surgery Liaison at (508) 887-4794 to arrange your next appointment. If you have any problems or questions, please contact B6 DVM, MS, DACVS IA, DACVS SA as soon as possible. If it is an emergency, contact the emergency service at (508) 887-4623.

We have scheduled a recheck for B6 with our Cardiology service on Tuesday, 4/23/19 at 11:30am. Please contact our Cardiology liaison at (508)-887-4696 or email us at [cardiovet@tufts.edu](mailto:cardiovet@tufts.edu) if you need to reschedule this appointment, or if you have any non-emergent questions or concerns.

You can schedule an appointment with our Nutrition service by calling 508-887-4696.

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#### 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](http://vet.tufts.edu/cvmc/clinical-studies)*

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Case: B6

Owner: B6

Discharge Instructions

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**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification B6  
**Sent:** 2/25/2019 12:52:56 PM  
**Subject:** Wellness Core grain-free ocean fish dry-Wellness core grain free turkey: Lisa Freeman - EON-380742  
**Attachments:** 2063133-report.pdf; 2063133-attachments.zip

A PFR Report has been received and PFR Event [EON-380742] has been created in the EON System.

A "PDF" report by name "2063133-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 "2063133-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380742

**ICSR #:** 2063133

**EON Title:** PFR Event created for Wellness Core grain-free ocean fish dry Wellness core grain free turkey chicken liver & turkey liver canned Wellness Hearty Cuts grain-free in gravy chicken and turkey recipe; 2063133

<b>AE Date</b>	01/15/2019	<b>Number Fed/Exposed</b>	6
<b>Best By Date</b>		<b>Number Reacted</b>	3
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Bulldog		
<b>Age</b>	8.5 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2063133

**Product Group:** Pet Food

**Product Name:** Wellness Core grain-free ocean fish dry Wellness core grain free turkey, chicken liver & turkey liver canned Wellness Hearty Cuts grain-free in gravy chicken and turkey recipe

**Description:** DCM and CHF diagnosed 1/15/19 Eating BEG diet. 6 dogs being fed this diet - so far, 3 have been diagnosed with DCM/ARVC. One other had a normal NT-proBNP and 2 others will be tested Diet has been changed to Royal Canin Early Cardiac and we will recheck in 3 months. I have sample of dry and canned food

**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:** 6

**Number of Animals Reacted With Product:** 3

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
Wellness Core grain-free ocean fish dry Wellness core grain free turkey, chicken liver & turkey liver canned Wellness Hearty Cuts grain-free in gravy chicken and turkey recipe		

**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-380742>

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=397751>

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**Report Details - EON-380742**

ICSR: 2063133  
 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: 2019-02-25 07:43:42 EST

**Reported Problem:**  
**Problem Description:** DCM and CHF diagnosed 1/15/19 Eating BEG diet. 6 dogs being fed this diet - so far. 3 have been diagnosed with DCM/ARVC. One other had a normal NT-proBNP and 2 others will be tested Diet has been changed to Royal Canin Early Cardiac and we will recheck in 3 months. I have sample of dry and canned food  
**Date Problem Started:** 01/15/2019  
**Concurrent Medical Problem:** Yes  
**Pre Existing Conditions:** B6  
**Outcome to Date:** Stable

**Product Information:**  
**Product Name:** Wellness Core grain-free ocean fish dry Wellness core grain free turkey, chicken liver & turkey liver canned Wellness Hearty Cuts grain-free in gravy chicken and turkey recipe  
**Product Type:** Pet Food  
**Lot Number:**  
**Product Use Information:** Description: Please see diet history  
**Manufacturer /Distributor Information:**  
**Purchase Location Information:**

**Animal Information:**  
**Name:** B6  
**Type Of Species:** Dog  
**Type Of Breed:** Bulldog  
**Gender:** Female  
**Reproductive Status:** Neutered  
**Weight:** 19.8 Kilogram  
**Age:** 8.5 Years  
**Number of Animals Given the Product:** 6  
**Number of Animals Reacted:** 3  
**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

		<b>Address:</b> 200 Westboro Rd North Grafton Massachusetts 01536 United States
--	--	---

<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			

<b>Additional Documents:</b>	<b>Attachment:</b>	rpt_medical_record_preview.pdf	
	<b>Description:</b>	Med records	
	<b>Type:</b>	Medical Records	

All Medical Records

Client: [B6]  
Address: [B6]

Patient: [B6]  
Breed: English Bulldog  
DOB: [B6]

Species: Canine  
Sex: Female  
(Spayed)

Home Phone: [B6]  
Work Phone: ( ) -  
Cell Phone: [B6]

Referring Information

[B6]  
Client: [B6]  
Patient: [B6]

Initial Complaint:

Emergency

SOAP Text [B6] 9:31PM [B6]

Subjective

NEW VISIT (ER)

Doctor: [B6]

Student: ---

Presenting complaint: [B6]

Referral visit? Yes

Diagnostics completed prior to visit: [B6]

HISTORY:

Signalment: 8 yo SF English Bulldog

Current history:

Earlier this afternoon, found her laying and trembling with shallow and rapid breathing. Owner also noticed that she had a hacking non productive cough. Has not appreciated it before today. Went to rDVM where radiographs were performed. No history of heart or pulmonary disease. No recent vomiting or diarrhea. Has recently been doing well at home with no concerns.

Prior medical history: [B6] otherwise healthy

Current medications: [B6] once daily in PM, had tonight

Diet: Core Wellness, mix of wet and dry, grain free diet

Client: **B6**  
Patient:

**B6**

C/V: no murmur or arrhythmia auscultated, difficult to appreciate over increased lung sounds, femoral pulses strong and synchronous

**B6**

ASSESSMENT:

A1: Dyspnea-- open for pneumonia vs CHF vs non cardiogenic pulmonary edema vs other

PLAN:

**B6**

Treatments:

**B6**

Diagnostics completed:

**B6**

Client: **B6**  
Patient: **B6**

Chemistry

**B6**

Client communication:

Confirmed history with owner. Discussed that no apparent murmur and significant structural changes on TFAST, but cannot rule out heart as underlying process. Also concern for pneumonia at this time. Recommended hospitalization for supportive care, O2, diagnostics, cardio consultation and repeat imaging as indicated. O ok with plan.

Deposit & estimate status: **B6**

Resuscitation code (if admitting to ICU) **B6**

SOAP approved (DVM to sign): **B6** DVM

SOAP Text Jan 16 2019 8:38AM - **B6**

SIGNALMENT: 8yo FS English Bulldog

PRESENTING COMPLAINT: dyspnea

HISTORY:

Presented on **B6** after O found her laying and trembling with shallow and rapid breathing. Owner also noticed that she had a hacking non productive cough. Has not appreciated it before today. Went to rDVM where radiographs were performed. No history of heart or pulmonary disease. No recent vomiting or diarrhea. Has recently been doing well at home with no concerns.

Prior medical history: **B6** otherwise healthy

Current medications: **B6** once daily in PM, had tonight

Diet: Core Wellness, mix of wet and dry, grain free diet

On presentation, P was dyspneic and tachycardic. rDVM rads unable to be assessed as CHF vs. pneumonia, so placed in O2 on Unasyn overnight with bloodwork pulled for CBC/Chem and nt-proBNP. Minimal improvement overnight with persistent tachycardia, but excellent appetite and good spirits.

SUBJECTIVE:

**B6**

C/V: tachycardic with no murmurs or arrhythmias on auscultation. fair pulse quality with pink injected mm and CRT  
1sec

**B6**

Client: **B6**  
Patient: **B6**

---

RECTAL: NP

**ASSESSMENT:**

A1: Dyspnea-- open for pneumonia vs CHF vs non cardiogenic pulmonary edema vs other

**PLAN:**

**B6**

**Diagnostics completed:**

**B6**

CXR: - Diffuse bronchial and interstitial pulmonary pattern may indicate concurrent chronic lower airway disease (allergic, infectious, or parasitic) and interstitial lung disease. Airway sampling can be considered.

- Mild cardiomegaly and left atrial enlargement without evidence of decompensation. Echocardiography can be considered (to evaluate mitral valve and to evaluate for pulmonary hypertension).

- Multifocal intervertebral disk disease and breed-associated vertebral anomalies.

- Moderate bilateral elbow and right stifle degenerative joint disease.

Cardio Consult: DCM, suspect early CHF - add pimobendan and **B6** q8

**Diagnostics pending:**

**B6**

Deposit & estimate status: **B6**

Resuscitation code (if admitting to ICU): **B6**

**B6** DVM (ECC Resident)

**SOAP Text Jan 17 2019 7:43AM - Clinician, Unassigned FHSA**

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**HISTORY:**

**B6** is an 8.5 yo FS English Bulldog that presented on **B6** for sudden onset dyspnea. O found her laying and trembling with shallow and rapid breathing. Owner also noticed that she had a hacking non productive cough. Has not appreciated it before. Went to rDVM where radiographs were performed. No history of heart or pulmonary disease. No recent vomiting or diarrhea, has been doing well at home with no concerns. Was on Core Wellness dry and wet grain

Client: **B6**  
Patient: **B6**

free diet.

On presentation to ER, P was dyspneic and tachycardic. rDVM rads unable to be assessed as CHF vs. pneumonia, so placed in O2 on **B6** overnight with bloodwork pulled for CBC/Chem and nt-proBNP. Minimal improvement overnight on **B6** with persistent tachycardia, but excellent appetite and good spirits. Cardio consult was difficult to assess due to dyspnea and conformation, but showed DCM and suspect CHF.

Overnight, P had normal vitals, with RR 24-36 with no to mild effort in O2 cage. Walked well outside of O2 cage, but at 3:45am after a walk was trembling and anxious in the cage, was given trazodone and calmed after. Excellent appetite this morning. Has received 3 doses of **B6** so far since **B6**

**Subjective**

BAR, euhydrated, MM pink moist, CRT <2

**Objective**

**B6**

H/L: No murmur ausculted although very difficult auscultation due to the constant panting. No obvious arrhythmia either. Jugular pulse bottom 1/3 of the neck. Femoral pulses strong and synchronized with heart beat. Normal BVS bilateral

**B6**

**Diagnostics completed:**

**B6**

CXR: - Diffuse bronchial and interstitial pulmonary pattern may indicate concurrent chronic lower airway disease (allergic, infectious, or parasitic) and interstitial lung disease. Airway sampling can be considered.

- Mild cardiomegaly and left atrial enlargement without evidence of decompensation. Echocardiography can be considered (to evaluate mitral valve and to evaluate for pulmonary hypertension).

- Multifocal intervertebral disk disease and breed-associated vertebral anomalies.

- Moderate bilateral elbow and right stifle degenerative joint disease.

Cardio Consult: DCM, suspect early CHF - add pimobendan and Lasix q8

**Diagnostics pending:**

BNP

Client: **B6**  
Patient: **B6**

Troponin  
Taurine

**Assessment (A)**

A1: Dyspnea- suspect DCM and early CHF vs less likely pneumonia vs neoplasia

**Plan (P)**

**B6**

SOAP completed by: **B6** V19  
SOAP reviewed by: **B6** DVM

**Addendum:**

**B6**

SOAP Text Jan 18 2019 7:28AM - **B6**

**HISTORY:**

**B6** is an 8.5 yo FS English Bulldog that presented of **B6** for sudden onset dyspnea. O found her laying and trembling with shallow and rapid breathing. Owner also noticed that she had a hacking non productive cough. Has not appreciated it before. Went to rDVM where radiographs were performed. No history of heart or pulmonary disease. No recent vomiting or diarrhea, has been doing well at home with no concerns. Was on Core Wellness dry and wet grain free diet.

On presentation to ER, P was dyspneic and tachycardic. rDVM rads unable to be assessed as CHF vs. pneumonia, so placed in O2 on Unasyn overnight with bloodwork pulled for CBC/Chem and nt-proBNP. Minimal improvement overnight on 1/16 with persistent tachycardia, but excellent appetite and good spirits. Cardio consult was difficult to assess due to dyspnea and conformation, but showed DCM and suspect CHF.

Since yesterday P has been out of oxygen, increased **B6** to TID, and restarted **B6** Overnight, P had normal vitals, with RR 28-32 with no effort, but panting earlier in the night. Walks well outside, and still has excellent appetite.

**Subjective**

**B6**



Client: **B6**  
Patient:

**B6**

H/L: No murmur ausculted although very difficult auscultation due to the constant panting. No obvious arrhythmia either. Jugular pulse bottom 1/3 of the neck. Femoral pulses strong and synchronized with heart beat. Normal BVS bilateral

**B6**

CXR: - Diffuse bronchial and interstitial pulmonary pattern may indicate concurrent chronic lower airway disease (allergic, infectious, or parasitic) and interstitial lung disease. Airway sampling can be considered.  
- Mild cardiomegaly and left atrial enlargement without evidence of decompensation. Echocardiography can be considered (to evaluate mitral valve and to evaluate for pulmonary hypertension).  
- Multifocal intervertebral disk disease and breed-associated vertebral anomalies.  
- Moderate bilateral elbow and right stifle degenerative joint disease.

Cardio Consult: DCM, suspect early CHF - add **B6** q8

1/17

**B6**

**Diagnostics pending:**

Troponin  
Taurine

**Assessment (A)**

A1: DCM and suspect early CHF vs less likely pneumonia

**Plan (P)**

**B6**

Client: **B6**  
Patient:

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SOAP completed by: **B6** M19  
SOAP reviewed by: **B6** DVM

Addendum:

**B6**  
**Disposition/Recommendations**

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Client:  
Patient:

**B6**

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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:	<b>B6</b>
Species:	Canine
Breed:	English Bulldog
Sex:	Female (Spayed)
Age:	<b>B6</b> Years Old

**Lab Results Report**

**CBC, Comprehensive, Sm Animal** **B6** 11:21:12 PM **Accession ID: B6**

Test	Results	Reference Range	Units
WBC (ADVIA)	<b>B6</b>	4.4 - 15.1	K/uL
RBC(ADVIA)		5.8 - 8.5	M/uL
HGB(ADVIA)		13.3 - 20.5	g/dL
HCT(ADVIA)		39 - 55	%
MCV(ADVIA)		64.5 - 77.5	fL
MCH(ADVIA)		21.3 - 25.9	pg
MCHC(ADVIA)		31.9 - 34.3	g/dL
RDW (ADVIA)		11.9 - 15.2	
PLT(ADVIA)		173 - 486	K/uL
MPV (ADVIA)		8.29 - 13.2	fl
PLTCRT		0.129 - 0.403	%
RETIC(ADVIA)		0.2 - 1.6	%
RETICS (ABS) ADVIA		14.7 - 113.7	K/uL

**CBC, Comprehensive, Sm Animal** **B6** 11:21:26 PM **Accession ID: B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	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
MAGNESIUM 2+		1.8 - 3	mEq/L



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**B6**

Printed Monday, February 25, 2019

Client: **B6**  
 Patient: **B6**

T. PROTEIN	<b>B6</b>	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
tCO2 (BICARB)		14 - 28	mEq/L
AGAP		8 - 19	
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
ALK PHOS		12 - 127	U/L
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		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)	0 - 0		

**CBC, Comprehensive, Sm Animal**    **B6**    11:21:08 PM    Accession ID: **B6**

Test	Results	Reference Range	Units
SEGS%	<b>B6</b>	43 - 86	%
LYMPHS%		7 - 47	%
MONOS%		1 - 15	%
SEGS (AB)ADVIA		2.8 - 11.5	K/uL
LYMPHS (ABS)ADVIA		1 - 4.8	K/uL
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
WBC MORPHOLOGY		0 - 0	
Occasional reactive lymphocytes			
RBC MORPHOLOGY		0 - 0	
POIKILOCYTOSIS		0 - 0	

**CBC, Comprehensive, Sm Animal**    **B6**    11:22:25 PM    Accession ID: **B6**

Test	Results	Reference Range	Units
SO2%	<b>B6</b>	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



Client: **B6**  
 Patient: **B6**

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
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE		0 - 0	
FiO2		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

**B6**

**CBC, Comprehensive, Sm Animal**    **B6**    1:28:40 PM    Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)		0 - 0	g/dl
PCV **	<b>B6</b>	0 - 0	%
TS (FHSA)		0 - 0	g/dl

**CBC, Comprehensive, Sm Animal**    **B6**    1:43:18 PM    Accession ID: **B6**

Test	Results	Reference Range	Units
GLUCOSE		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

**B6**



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**B6**

Printed Monday, February 25, 2019

Client: **B6**  
 Patient: **B6**

CHLORIDE	<b>B6</b>	106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	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

**CBC, Comprehensive, Sm Animal**    **B6**    3:44:46 PM    Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)	<b>B6</b>	0 - 0	g/dl
PCV **		0 - 0	%
TS (FHSA)		0 - 0	g/dl

**CBC, Comprehensive, Sm Animal**    **B6**    9:46:19 AM    Accession ID: **B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	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
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	

**CBC, Comprehensive, Sm Animal**    **B6**    10:20:57 AM    Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)	<b>B6</b>	0 - 0	g/dl
PCV **		0 - 0	%



Client: **B6**  
Patient:

TS (FHSA) **B6** 0 - 0 g/dl



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**B6**

Printed Monday, February 25, 2019

**Vitals Results**

5:41:14 PM	Heart Rate (/min)	<b>B6</b>
5:41:15 PM	Respiratory Rate	
5:41:16 PM	Temperature (F)	
5:41:17 PM	Weight (kg)	
6:17:43 PM	Heart Rate (/min)	
6:17:51 PM	Respiratory Rate	
6:22:41 PM	Notes	
6:26:08 PM	FiO2 (%)	
6:03:01 AM	Respiratory Rate	
6:54:19 AM	Catheter Assessment	
6:56:22 AM	Heart Rate (/min)	
6:56:33 AM	FiO2 (%)	
6:57:15 AM	Respiratory Rate	
6:07:52 AM	Respiratory Rate	
6:34:37 AM	Eliminations	
6:35:59 AM	FiO2 (%)	
6:37:34 AM	Temperature (F)	
6:37:44 AM	Amount eaten	
6:46:29 AM	Respiratory Rate	
6:46:58 AM	Heart Rate (/min)	
6:47:06 AM	Catheter Assessment	
6:13:53 AM	Weight (kg)	
6:14:50 AM	Respiratory Rate	
6:10:38 AM	FiO2 (%)	
6:10:33 AM	Catheter Assessment	
6:10:43 AM	Heart Rate (/min)	
6:10:52 AM	Respiratory Rate	
6:12:50:07 PM	Lasix treatment note	
6:10:13 PM	Respiratory Rate	
6:10:22 PM	Eliminations	
6:18:03 PM	Catheter Assessment	
6:18:20 PM	FiO2 (%)	
6:18:55 PM	Respiratory Rate	



Client: **B6**  
Patient: **B6**

**Vitals Results**

3:20:08 PM	Heart Rate (/min)
4:46:44 PM	Amount eaten
5:41:52 PM	Respiratory Rate
7:04:34 PM	FiO2 (%)
7:04:58 PM	Catheter Assessment
7:06:54 PM	Heart Rate (/min)
7:07:03 PM	Temperature (F)
7:34:10 PM	Weight (kg)
7:34:17 PM	Eliminations
7:45:53 PM	Lasix treatment note
7:46:17 PM	Respiratory Rate
8:55:18 PM	Nursing note
8:55:56 PM	Eliminations
9:53:33 PM	Respiratory Rate
11:31:43 PM	Catheter Assessment
11:32:37 PM	Catheter Assessment
11:34:10 PM	Heart Rate (/min)
11:34:31 PM	Amount eaten
11:49:45 PM	FiO2 (%)
11:49:58 PM	Respiratory Rate
1:55:25 AM	Respiratory Rate
3:35:30 AM	Lasix treatment note
3:37:10 AM	Catheter Assessment
3:45:10 AM	Heart Rate (/min)
3:45:19 AM	Eliminations
3:53:42 AM	FiO2 (%)
3:53:53 AM	Respiratory Rate
4:55:04 AM	Nursing note
5:55:31 AM	Respiratory Rate
6:11:40 AM	Nursing note
7:19:26 AM	Respiratory Rate
7:19:52 AM	FiO2 (%)
7:20:14 AM	Temperature (F)
7:20:30 AM	Heart Rate (/min)
7:20:46 AM	Amount eaten
7:33:19 AM	Weight (kg)
7:33:27 AM	Eliminations
8:01:36 AM	Catheter Assessment
9:32:45 AM	Respiratory Rate

**B6**

**B6**

Client: **B6**  
Patient:

**Vitals Results**

11:16:45 AM	FiO2 (%)
12:41:34 PM	Catheter Assessment
12:41:43 PM	Respiratory Rate
12:42:33 PM	Heart Rate (/min)
12:42:50 PM	Lasix treatment note
1:52:56 PM	Heart Rate (/min)
3:03:09 PM	FiO2 (%)
3:03:22 PM	Respiratory Rate
3:40:13 PM	Respiratory Rate
3:55:45 PM	Eliminations
5:04:09 PM	Respiratory Rate
5:40:13 PM	Amount eaten
5:52:28 PM	Eliminations
5:54:07 PM	Respiratory Rate
5:54:57 PM	Heart Rate (/min)
5:55:05 PM	Catheter Assessment
6:52:18 PM	Respiratory Rate
7:17:27 PM	Eliminations
7:45:11 PM	Respiratory Rate
8:01:23 PM	Lasix treatment note
8:17:14 PM	Eliminations
8:54:56 PM	Respiratory Rate
9:32:19 PM	Heart Rate (/min)
9:32:26 PM	Catheter Assessment
9:32:35 PM	Eliminations
9:43:25 PM	Respiratory Rate
10:41:18 PM	Respiratory Rate
11:18:27 PM	Eliminations
11:18:49 PM	Weight (kg)
11:42:42 PM	Eliminations
11:53:16 PM	Respiratory Rate
12:52:00 AM	Respiratory Rate
1:22:40 AM	Heart Rate (/min)
1:22:46 AM	Catheter Assessment
1:45:25 AM	Respiratory Rate
2:53:51 AM	Respiratory Rate
3:34:16 AM	Lasix treatment note
3:34:45 AM	Respiratory Rate
3:43:47 AM	Eliminations
4:50:44 AM	Respiratory Rate
4:52:32 AM	Nursing note

**B6**

**B6**

Client: **B6**  
Patient:

**Vitals Results**

<b>B6</b>	5:25:32 AM	Catheter Assessment	<b>B6</b>
	5:27:43 AM	Heart Rate (/min)	
	5:27:50 AM	Respiratory Rate	
	5:28:01 AM	Amount eaten	
	6:42:00 AM	Respiratory Rate	
	7:25:45 AM	Respiratory Rate	
	7:26:00 AM	Weight (kg)	
	7:26:12 AM	Eliminations	
	8:56:03 AM	Respiratory Rate	
	9:47:19 AM	Respiratory Rate	
	9:50:04 AM	Catheter Assessment	
	9:50:22 AM	Heart Rate (/min)	
	11:05:09 AM	Respiratory Rate	
	12:00:28 PM	Respiratory Rate	
	12:00:44 PM	Eliminations	
	12:05:36 PM	Lasix treatment note	
	12:55:52 PM	Respiratory Rate	
	1:55:49 PM	Respiratory Rate	
	3:12:43 PM	Respiratory Rate	
	3:17:41 PM	Eliminations	
4:02:34 PM	Respiratory Rate		

**Patient History**

<b>B6</b>	06:41 PM	Vitals	<b>B6</b>
	06:41 PM	Vitals	
	06:41 PM	Vitals	
	06:41 PM	Vitals	
	07:50 PM	UserForm	
	09:52 PM	UserForm	
	11:17 PM	Treatment	
	11:17 PM	Vitals	
	11:17 PM	Treatment	
	11:17 PM	Vitals	
	11:19 PM	Treatment	
	11:21 PM	Purchase	
	11:21 PM	Purchase	
	11:21 PM	Purchase	
	11:21 PM	Purchase	
	11:21 PM	Purchase	
	11:21 PM	Purchase	
	11:22 PM	Purchase	
	11:22 PM	Purchase	
	11:22 PM	Vitals	

Client:  
Patient:

**B6**

**Patient History**

11:22 PM	Purchase
11:22 PM	Purchase
11:25 PM	Treatment
11:26 PM	Treatment
11:26 PM	Vitals
11:26 PM	Treatment
11:28 PM	Labwork
12:50 AM	Treatment
12:53 AM	Treatment
01:03 AM	Treatment
01:03 AM	Vitals
02:54 AM	Treatment
02:54 AM	Treatment
02:54 AM	Vitals
02:56 AM	Treatment
02:56 AM	Vitals
02:56 AM	Treatment
02:56 AM	Vitals
02:57 AM	Treatment
02:57 AM	Vitals
05:07 AM	Treatment
05:07 AM	Vitals
07:34 AM	Treatment
07:34 AM	Treatment
07:34 AM	Vitals
07:35 AM	Treatment
07:35 AM	Vitals
07:37 AM	Treatment
07:37 AM	Vitals
07:37 AM	Treatment
07:37 AM	Vitals
07:46 AM	Treatment
07:46 AM	Vitals
07:46 AM	Treatment
07:46 AM	Vitals
07:47 AM	Treatment
07:47 AM	Vitals
08:13 AM	UserForm
08:19 AM	Purchase
08:32 AM	UserForm
08:39 AM	Treatment

**B6**

**B6**

Client: **B6**  
Patient:

**Patient History**

08:45 AM	Prescription
08:48 AM	Prescription
09:13 AM	Treatment
09:13 AM	Vitals
09:14 AM	Treatment
09:14 AM	Vitals
09:34 AM	Purchase
09:35 AM	Treatment
11:03 AM	Treatment
11:03 AM	Vitals
11:03 AM	Treatment
11:03 AM	Treatment
11:03 AM	Vitals
11:03 AM	Treatment
11:03 AM	Vitals
11:03 AM	Treatment
11:03 AM	Vitals
11:03 AM	Treatment
11:03 AM	Vitals
11:05 AM	Purchase
11:39 AM	Treatment
11:41 AM	Treatment
12:50 PM	Vitals
<b>B6</b> 12:52 PM	Treatment
12:54 PM	Prescription
01:01 PM	Deleted Reason
01:10 PM	Treatment
01:10 PM	Vitals
01:10 PM	Treatment
01:10 PM	Vitals
01:10 PM	Treatment
03:14 PM	Treatment
03:17 PM	Treatment
03:18 PM	Treatment
03:18 PM	Vitals
03:18 PM	Treatment
03:18 PM	Vitals
03:18 PM	Treatment
03:18 PM	Vitals
03:20 PM	Treatment
03:20 PM	Vitals
04:14 PM	UserForm
04:46 PM	Treatment

**B6**

Client:  
Patient:

**B6**

**Patient History**

04:46 PM	Vitals
05:14 PM	Deleted Reason
05:14 PM	Deleted Reason
05:15 PM	Purchase
05:15 PM	Purchase
05:41 PM	Treatment
05:41 PM	Vitals
07:04 PM	Treatment
07:04 PM	Vitals
07:04 PM	Treatment
07:04 PM	Treatment
07:04 PM	Vitals
07:06 PM	Treatment
07:06 PM	Vitals
07:07 PM	Treatment
07:07 PM	Vitals
07:34 PM	Treatment
07:34 PM	Vitals
07:34 PM	Treatment
07:34 PM	Vitals
07:45 PM	Vitals
07:46 PM	Treatment
07:46 PM	Treatment
07:46 PM	Vitals
08:31 PM	Treatment
08:55 PM	Vitals
08:55 PM	Vitals
09:53 PM	Treatment
09:53 PM	Vitals
11:07 PM	Purchase
11:07 PM	Purchase
11:21 PM	Treatment
11:31 PM	Treatment
11:31 PM	Vitals
11:32 PM	Treatment
11:32 PM	Vitals
11:34 PM	Treatment
11:34 PM	Treatment
11:34 PM	Vitals
11:34 PM	Treatment
11:49 PM	Treatment
11:49 PM	Treatment

**B6**

**B6**

Client: **B6**  
Patient:

**Patient History**

	11:49 PM	Vitals	
	11:49 PM	Treatment	
	11:49 PM	Vitals	
	01:55 AM	Treatment	
	01:55 AM	Vitals	
	03:05 AM	Treatment	
	03:35 AM	Vitals	
	03:37 AM	Treatment	
	03:37 AM	Treatment	
	03:37 AM	Vitals	
	03:45 AM	Treatment	
	03:45 AM	Vitals	
	03:45 AM	Treatment	
	03:45 AM	Vitals	
	03:45 AM	Vitals	
	03:45 AM	Vitals	
	03:53 AM	Treatment	
	03:53 AM	Vitals	
	03:53 AM	Treatment	
	03:53 AM	Vitals	
	04:50 AM	Treatment	
	04:55 AM	Treatment	
<b>B6</b>	04:55 AM	Vitals	
	05:55 AM	Treatment	
	05:55 AM	Vitals	
	06:03 AM	Treatment	
	06:11 AM	Vitals	
	07:19 AM	Treatment	
	07:19 AM	Vitals	
	07:19 AM	Treatment	
	07:19 AM	Vitals	
	07:20 AM	Treatment	
	07:20 AM	Treatment	
	07:20 AM	Vitals	
	07:20 AM	Treatment	
	07:20 AM	Vitals	
	07:20 AM	Treatment	
	07:20 AM	Vitals	
	07:33 AM	Treatment	
	07:33 AM	Vitals	
	07:33 AM	Treatment	
	07:33 AM	Vitals	
	08:01 AM	Treatment	
	08:01 AM	Vitals	
	08:01 AM	Treatment	

**B6**

Client: **B6**  
Patient:

**Patient History**

	08:46 AM	Purchase	
	09:32 AM	Treatment	
	09:32 AM	Vitals	
	09:46 AM	Purchase	
	10:50 AM	Purchase	
	10:51 AM	Treatment	
	11:05 AM	Purchase	
	11:16 AM	Treatment	
	11:16 AM	Vitals	
	12:41 PM	Treatment	
	12:41 PM	Vitals	
	12:41 PM	Treatment	
	12:41 PM	Vitals	
	12:42 PM	Treatment	
	12:42 PM	Vitals	
	12:42 PM	Vitals	
	12:43 PM	Treatment	
	12:46 PM	Treatment	
	01:43 PM	Purchase	
	01:52 PM	Treatment	
	01:52 PM	Vitals	
	03:03 PM	Treatment	
<b>B6</b>	03:03 PM	Vitals	
	03:03 PM	Treatment	
	03:03 PM	Vitals	
	03:40 PM	Vitals	
	03:46 PM	Labwork	
	03:50 PM	Treatment	
	03:53 PM	Prescription	
	03:55 PM	Treatment	
	03:55 PM	Vitals	
	05:04 PM	Treatment	
	05:04 PM	Vitals	
	05:09 PM	Treatment	
	05:09 PM	Treatment	
	05:40 PM	Treatment	
	05:40 PM	Vitals	
	05:52 PM	Vitals	
	05:54 PM	Treatment	
	05:54 PM	Vitals	
	05:54 PM	Treatment	
	05:54 PM	Vitals	
	05:55 PM	Treatment	
	05:55 PM	Vitals	
	06:48 PM	Prescription	

**B6**



Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	06:52 PM	Treatment
	06:52 PM	Vitals
	06:52 PM	Treatment
	07:17 PM	Vitals
	07:27 PM	Treatment
	07:45 PM	Treatment
	07:45 PM	Vitals
	08:01 PM	Vitals
	08:01 PM	Treatment
	08:17 PM	Vitals
	08:27 PM	Treatment
	08:54 PM	Treatment
	08:54 PM	Vitals
	09:13 PM	Treatment
	09:32 PM	Treatment
	09:32 PM	Vitals
	09:32 PM	Treatment
	09:32 PM	Vitals
	09:32 PM	Vitals
	09:43 PM	Treatment
	09:43 PM	Vitals
	10:41 PM	Treatment
	10:41 PM	Vitals
	11:07 PM	Purchase
	11:07 PM	Purchase
	11:18 PM	Treatment
	11:18 PM	Vitals
	11:18 PM	Vitals
	11:42 PM	Vitals
	11:53 PM	Treatment
	11:53 PM	Vitals
	12:52 AM	Treatment
	12:52 AM	Vitals
	01:21 AM	Treatment
	01:22 AM	Treatment
	01:22 AM	Vitals
	01:22 AM	Treatment
	01:22 AM	Vitals
	01:45 AM	Treatment
	01:45 AM	Vitals
02:53 AM	Treatment	
02:53 AM	Vitals	
03:34 AM	Vitals	
03:34 AM	Treatment	
03:34 AM	Treatment	
03:34 AM	Vitals	
03:34 AM	Treatment	

**B6**

Client:  
Patient:

**B6**

**Patient History**

03:35 AM	Treatment
03:43 AM	Treatment
03:43 AM	Vitals
04:50 AM	Treatment
04:50 AM	Vitals
04:52 AM	Vitals
05:25 AM	Treatment
05:25 AM	Vitals
05:25 AM	Treatment
05:27 AM	Treatment
05:27 AM	Vitals
05:27 AM	Treatment
05:27 AM	Vitals
05:28 AM	Treatment
05:28 AM	Vitals
06:41 AM	Treatment
06:42 AM	Vitals
07:25 AM	Treatment
07:25 AM	Vitals
07:26 AM	Treatment
07:26 AM	Vitals
07:26 AM	Treatment
07:26 AM	Vitals
07:26 AM	Vitals
08:56 AM	Treatment
08:56 AM	Vitals
09:31 AM	UserForm
09:39 AM	Purchase
09:47 AM	Treatment
09:47 AM	Vitals
09:50 AM	Treatment
09:50 AM	Vitals
09:50 AM	Treatment
09:50 AM	Vitals
09:50 AM	Treatment
10:21 AM	Labwork
11:05 AM	Purchase
11:05 AM	Treatment
11:05 AM	Vitals
11:25 AM	Treatment
11:25 AM	Treatment
11:48 AM	Purchase
11:48 AM	Treatment
12:00 PM	Treatment
12:00 PM	Vitals

**B6**

**B6**

Client:  
Patient:

**B6**

**Patient History**

**B6**

2:00 PM	Treatment
2:00 PM	Vitals
2:05 PM	Vitals
2:05 PM	Treatment
2:55 PM	Treatment
2:55 PM	Vitals
3:01 PM	Treatment
3:05 PM	Treatment
3:05 PM	Vitals
3:12 PM	Treatment
3:12 PM	Vitals
3:17 PM	Treatment
3:17 PM	Treatment
3:17 PM	Vitals
3:55 PM	Prescription
3:56 PM	Prescription
4:02 PM	Treatment
4:02 PM	Vitals
4:02 PM	Prescription
4:03 PM	Prescription
4:20 PM	Purchase
2:52 PM	Appointment

**B6**





**B6**

**B6**

Female (Spayed)

Canine English Bulldog Brown/White

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 Grantees) 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 Grantee'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 Grantee deems appropriate (provided that such photographs and images may not be used in for-profit commercials, unless such commercials are publicizing educational programs at Cummings School). As medical and surgical treatment necessitates the removal of tissue, cells, fluids or body parts of my animal, I authorize the Grantees 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 \$50.

I do further agree that should any payment, or the full amount of the sum stated above, become overdue more than 20 days from the above-agreed 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:

Date:

Owner's address:

Date: *[Signature]*

**If the individual admitting the animal is someone other than the legal owner, please complete the portion below:**

The owner of the animal,  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

**Treatment Plan**

Estimated Charges

**B6**

**B6**

*This estimate is based upon our preliminary examination. This is an estimate and is not the final bill. Every effort will be made to keep you informed of the current status of your bill throughout your animal's hospitalization. The final fee may vary considerably from this estimated cost.*

Patient	Description	Low Qty	Low Extended	High Qty	High Extended
<b>B6</b>	Estimate to include hospitalization, supportive care, bloodwork, imaging, cardiology consultation as indicated, medications, and other treatments or diagnostics as warranted	1.00	<b>B6</b>	1.00	<b>B6</b>

**B6**

Doctor of Record: **B6**

I understand that no guarantee of successful treatment is made. I certify that I have read and fully understand the authorization for medical and/or surgical treatment, the reason for why such medical and/or surgical treatment is considered necessary, as well as its advantages and possible complications, if any. I also assume financial responsibility for all charges incurred to this patient(s). I agree to pay 75% of the estimated cost at the time of admission. Additional deposits will be required if additional care or procedures are required. I further agree to pay the balance of the charges when this patient(s) is released.

Procedural billing is inclusive up to and including the estimated duration of hospitalization. There will be additional expenses if hospitalization extends beyond the specified duration.

I have read, understand, and agree to accept the conditions of this treatment plan.

Thank you for entrusting us with your pet's care.

High Total	<b>B6</b>
Low Total	
75% Deposit	

**B6**



### Radiology Request & Report

**Patient**

Name: B6  
Species: Canine  
Brown/White Female (Spayed)  
English Bulldog  
Birthdate: B6

**Owner**

Name: B6  
Address: B6  
B6

Patient ID: B6  
Date of request: B6

Attending Clinician: B6 DVM (Emergency & Critical Care Resident)

Student:

Date of exam: B6

Patient Location: Ward/Cage: ICU 02

Weight (kg) 19.80

**Sedation**

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

- BAG
- OBAG
- 1/2 dose OBAG
- Butorphanol
- Anesthesia to sedate/anesthetize

Examination Desired: 3-view thorax (prioritize VD/DV and L lat)

Presenting Complaint and Clinical Questions you wish to answer:  
Emergency

Pertinent History:  
acute onset dyspnea, no known hx - pneumonia vs CHF

**Findings:**

THORAX, THREE VIEWS:

The cardiac silhouette is mildly enlarged, characterized by increased height on the lateral view, with mild dorsal displacement of the carina. There is mild left atrial enlargement. The pulmonary vessels are normal. There is a patchy interstitial pattern throughout the pulmonary parenchyma with corresponding blurring of vessel margins. There is multifocally increased conspicuity of the bronchi, most apparent in the right cranial and middle lung lobes. The pleural space is normal. The mediastinum is widened and fat-filled consistent with breed. The included abdomen is unremarkable. There is multifocal intervertebral disk space narrowing with endplate sclerosis, multifocal vertebral anomalies, ventral spondylosis deformans. There is moderate bilateral elbow and right stifle degenerative joint disease.

**Conclusions:**

- Diffuse bronchial and interstitial pulmonary pattern may indicate concurrent chronic lower airway disease (allergic, infectious, or parasitic) and interstitial lung disease. Airway sampling can be considered.
- Mild cardiomegaly and left atrial enlargement without evidence of decompensation. Echocardiography can be considered (to evaluate mitral valve and to evaluate for pulmonary hypertension).
- Multifocal intervertebral disk disease and breed-associated vertebral anomalies.
- Moderate bilateral elbow and right stifle degenerative joint disease.

**Radiologists**

Primary: [ B6 ] DVM

Reviewing:

**Dates**

Reported: [ B6 ]

Finalized:

### 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 V19

Admit Date: B6 7:49:24 PM

Discharge Date: B6

**Diagnoses:** Dilated cardiomyopathy (DCM) with congestive heart failure

**Diagnostic test results and findings:**

- o Chest radiograph (x-ray) findings: The heart is enlarged and there was suspected fluid in the lungs
- o Echocardiogram findings: All chambers of the heart are enlarged and there is decreased contractile function.
- o ECG findings: The ECG showed a normal sinus rhythm
- o Labwork findings: The kidney values are normal, but an indicator of heart damage was elevated (Nt-proBNP)

**Case summary:**

Thank you for bringing B6 to Tufts for evaluation of her heart disease. B6 originally presented to the Tufts ER on B6 for sudden onset of respiratory distress and a cough. B6 was stabilized with supplemental oxygen in the ICU and was given antibiotics and mild sedatives to keep her comfortable. X-rays of B6 chest showed a diffuse increased opacity in her lungs that was suspected to be fluid secondary to heart disease, but pneumonia could not be ruled out. A cardiology workup showed that B6 had enlargement of her heart chambers, and a blood test showed that one of the indicators of heart stretch was elevated, thus supporting the presence of heart disease.

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 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 her breathing easier.

**B6** has been breathing well outside of the oxygen cage, and her recheck examinations, echocardiograms, and chest x-rays have been stable. At this time we are happy with her condition, and are comfortable to send her home.

#### 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. The doses of drugs will be adjusted based on the breathing rate and effort.
- In general, most dogs with heart failure that is well controlled 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 if heart failure is controlled.
- An increase in breathing rate or effort will usually mean that you should give an extra dose of **B6** if difficulty breathing is not improved by within 30-60 minutes after giving extra **B6**, then we recommend that a recheck exam be scheduled and/or that your dog be evaluated by an emergency clinic.
- There are instructions for monitoring breathing, and a form to help keep track of breathing rate and drug doses, on the Tufts HeartSmart web site (<http://vet.tufts.edu/heartsmart/at-home-monitoring/>).
- 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.

#### Recommended Medications:

**B6**

NEXT DOSE DUE: Tonight with dinner

**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 her to continue to eat her normal diet for the first 7 to 14 days so we can make sure she 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.

The FDA is currently investigating an apparent association between diet and DCM. 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 B6 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/ucm613305.htm>) and a recent article published by Dr. Lisa Freeman on the Cummings School's Petfoodology 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:**

Royal Canin Early Cardiac (veterinary diet)

Royal Canin Boxer

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 Barley Entree

Hill's Science Diet Adult 1-6 Healthy Cuisine Roasted Chicken, Carrot, and Spinach Stew

Royal Canin Mature 8+

If your dog has special nutritional needs or requires a homecooked diet, we recommend you schedule an appointment with our nutritionists (508-887-4696).

### **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 values, and probably recheck a blood pressure. A recheck echocardiogram is recommended in 3-4 months.

Thank you for entrusting us with B6 care, she is such a spirited girl! Please contact our Cardiology liaison at (508)-887-4696 or email us at [cardiovet@tufts.edu](mailto: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/>

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**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](http://vet.tufts.edu/cvmc/clinical-studies)*

---

Case: B6

Owner: B6

Discharge Instructions

**Radiology Request & Report**

**Patient**

Name: B6  
Species: Canine  
Brown/White Female (Spayed)  
English Bulldog  
Birthdate: B6

**Owner**

Name: B6  
Address: B6  
B6

Patient ID: B6  
Date of request: 1/18/2019

Attending Clinician: B6 DVM (Resident, Cardiology) Student: B6

Date of exam: 1/18/19

Patient Location: Ward/Cage: Cardio, ICU

Weight (kg) 19.60

**Sedation**

- Inpatient
- Outpatient Time:
- Waiting
- Emergency
- BAG
- OBAG
- 1/2 dose OBAG
- DexDomitor/Butorphanol
- Anesthesia to sedate/anesthetize

Examination Desired: 2 view CXR- DV and R lateral

**\*\*TECHS TO HANDLE ONLY\*\*-** be careful due to dyspnea, do not stress further if dyspneic

Presenting Complaint and Clinical Questions you wish to answer:

Recheck rads for CHF before discharge

Pertinent History:

DCM, suspected CHF on rads B6

**Findings:**

THORAX, THREE VIEWS: in comparison to previous exam dated B6

The cardiac silhouette is similarly mildly enlarged, characterized by increased height on the lateral view, with mild dorsal displacement of the carina. There is similar to mildly improved left atrial enlargement. The pulmonary vessels remain normal. The previously described diffuse patchy interstitial pattern is improved but not completely resolved and the bronchial component of the pulmonary pattern is no longer appreciated.

The pleural space is again normal. The mediastinum is widened and fat-filled consistent with breed. The included abdomen is unremarkable. There is multifocal intervertebral disk space narrowing with endplate

sclerosis, multifocal vertebral anomalies, ventral spondylosis deformans. There is unchanged moderate bilateral elbow and right stifle degenerative joint disease.

**Conclusions:**

- Improving interstitial pulmonary pattern is consistent with response to medical management.
- Unchanged mild cardiomegaly and similar to mildly improved left atrial enlargement.
- Unchanged multifocal intervertebral disk disease and breed-associated vertebral anomalies.
- Unchanged moderate bilateral elbow degenerative joint disease.

**Radiologists**

Primary: [ B6 ], VMD

Reviewing:

**Dates**

Reported: 1/18/19

Finalized:



# 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 BW: Weight (kg) 19.80

## Cardiology Inpatient ENROLLED IN DCM STUDY

Date: B6

Weight: Weight (kg) 19.80

### 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

### Patient location:

ICU 02 5/6

### Presenting complaint and important concurrent diseases:

Presenting for new onset dyspnea, radiographs unintelligible between pneumonia and CHF. Persistent sinus tachycardia overnight

### Current medications and doses:

Unasyn

### At-home diet (name, form, amount, frequency)

Core Wellness grain-free wet + dry

### Key indication for consultation: (murmur, arrhythmia, needs fluids, etc.)

dyspnea, contiguous B-lines

### Questions to be answered:

fluid vs. lasix

### 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**

**B6**

**Muscle condition:**

- |   |   |
|---|---|
| <input type="checkbox"/> Normal           | <input checked="" type="checkbox"/> Moderate cachexia |
| <input type="checkbox"/> Mild muscle loss | <input type="checkbox"/> Marked cachexia              |

**Cardiovascular Physical Exam**

**Murmur Grade: Very hard to listen due to the marked dyspnea and referred upper airway.**

- |  |                                |
|--|--------------------------------|
| <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          |                                |

**Murmur location/description:**

**Jugular vein:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Bottom 1/3 of the neck | <input type="checkbox"/> Top 2/3 of the neck |
| <input type="checkbox"/> Middle 1/3 of the neck            | <input type="checkbox"/> 1/2 way up the neck |

**Arterial pulses: n/a**

- |                                 |  |
|---------------------------------|--|
| <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 type="checkbox"/> Other (describe): |

**Arrhythmia:**

- |   |                                      |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> None  | <input type="checkbox"/> Bradycardia |
| <input 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:**

- |  |   |
|--|---|
| <input type="checkbox"/> Eupneic                   | <input type="checkbox"/> Pulmonary Crackles           |
| <input type="checkbox"/> Mild dyspnea              | <input type="checkbox"/> Wheezes                      |
| <input checked="" type="checkbox"/> Marked dyspnea | <input type="checkbox"/> Upper airway stridor         |
| <input type="checkbox"/> Normal BV sounds          | <input type="checkbox"/> Other auscultatory findings: |

**Abdominal exam: n/a**

- Normal
- Hepatomegaly

- Abdominal distension
- Mild ascites

# B6

**Assessment and recommendations:**

Despite the poor quality of the echocardiogram pictures obtained today, we suspect the patient to have DCM with moderate to marked LA enlargement. The radiographs are very hard to interpret, typical for bulldog radiographs, but we suspect CHF to be one of the main differential despite the atypical pattern visualized. Treatment for HF should be initiated and improvement of the clinical condition would be a vote in favor for CHF. Antibiotic treatment should be continued since pneumonia cannot be completely rule out.  mg IV was given during the echocardiogram and we would recommend continuing with at least 2 mg/kg IV TID overnight.  mg PO BID should be started as well. The patient was enrolled in Dr. Freeman's study due to its current grain free diet and blood was pulled today for the study. The patient, once more stable, should be started on taurine at home as well. An NT-proBNP was pulled and will be very interesting in order to better assess the cardiovascular status of the patient since there is still some suspicions that the changes seen on radiographs are not all secondary to CHF. An  should be started long term as well. Chest radiographs could be repeated tomorrow after the

patient has received some **B6** An improvement of the interstitial pattern would confirm the suspected diagnosis of CHF versus no changes of the interstitial pattern would be more in favor of another disease process. A recheck echocardiogram should be repeated as well tomorrow once the patient is more stable in order to confirm today's findings. Bloodwork should be repeated tomorrow as well as 10-14 days after the start of the cardiac medications. Full recheck echocardiogram is recommended in 3 months or sooner if the patient develops clinical signs consistent with worsening heart disease.

**Addendum:**

Patient's NT-proBNP was **B6** A good improvement was noted with CHF treatment and recheck radiographs revealed improvement of the previously diagnosed interstitial pattern. The patient is scheduled to go home today with a recheck in 7-10 days.

**Final Diagnosis:**

- Suspected DCM with moderate to marked LA enlargement and suspected CHF

**Heart Failure Classification Score:**

**ISACHC Classification:**

- Ia
- Ib
- II
- IIIa
- IIIb

**ACVIM CHF Classification:**

- A
- B1
- B2
- C
- D

**M-Mode**

IVSd	<b>B6</b>	cm
LVIDd		cm
LVPWd		cm
IVSs		cm
LVIDs		cm
LVPWs		cm
EDV(Teich)		ml
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml

**M-Mode Normalized**

IVSdN	<b>B6</b>	(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	<b>B6</b>	cm
-------	-----------	----

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

B6

cm  
cm  
cm  
ml  
cm  
cm  
cm  
ml  
cm  
ml  
%  
%  
ml  
cm  
cm  
ml  
cm

**Notice of Patient Admit**

Date: B6 7:49:24 PM  
Referring Doctor: B6  
Client Name:  
Patient Name: B6

Case No: 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: Dyspnea (pneumonia > CHF)

If you have any questions regarding this particular case, please call 508-887-4988 to reach the ICU 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/Chloe>

**B6**

**B6** Female (Spayed)  
Canine English Bulldog  
Brown/White  
**B6**

**Daily Update From the Cardiology Service**

Today's date: **B6**  
Dear Drs at **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 today

Today's treatments include:

- bloodwork planned/pending
- echocardiography - DCM and L-CHF
- cardiac catheter procedure planned
- ongoing treatment for CHF
- ongoing treatment for thrombosis
- ongoing treatment for arrhythmia

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](mailto:cardiovet@tufts.edu) if you have any questions.  
Thank you!

Attending Clinician: **B6** DVM (Resident, Cardiology)  
Faculty Clinician: John Rush DVM, DACVIM, DACVECC  
Senior student:





**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** Female (Spayed)  
Canine English Bulldog  
Brown/White  
**B6**

1/21/2019

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 (Resident, Cardiology)

---

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 2/25/2019 1:05:02 PM  
**Subject:** Wellness CORE Grain-Free Ocean Whitefish dry-Wellness Core grain free turkey: Lisa Freeman - EON-380743  
**Attachments:** 2063134-report.pdf; 2063134-attachments.zip

A PFR Report has been received and PFR Event [EON-380743] has been created in the EON System.

A "PDF" report by name "2063134-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 "2063134-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380743

**ICSR #:** 2063134

**EON Title:** 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; 2063134

<b>AE Date</b>	02/01/2019	<b>Number Fed/Exposed</b>	6
<b>Best By Date</b>		<b>Number Reacted</b>	3
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Bulldog		
<b>Age</b>	8 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2063134

**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)

**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:** 6

**Number of Animals Reacted With Product:** 3

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
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		

**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-380743>

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=397752>

=====

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**Report Details - EON-380743**

ICSR: 2063134  
 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: 2019-02-25 07:58:43 EST

**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)  
**Date Problem Started:** 02/01/2019  
**Concurrent Medical Problem:** Yes  
**Pre Existing Conditions:** **B6** as puppy  
**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 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:** 3  
**Owner Information:** **Owner Information provided:** Yes  
**Contact:** **Name:** **B6**  
**Phone:**  
**Email:**  
**Address:** **B6**  
 United States  
**Healthcare Professional Practice Name:** Tufts Cummings School of Veterinary Medicine

	<b>Information:</b>	<b>Contact:</b>	<b>Name:</b> Lisa Freeman	
			<b>Phone:</b> (508) 887-4523	
			<b>Email:</b> lisa.freeman@tufts.edu	
		<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States	
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			
<b>Additional Documents:</b>	<b>Attachment:</b>	rpt_medical_record_preview.pdf		
	<b>Description:</b>	Medical record		
	<b>Type:</b>	Medical Records		

Client:

Address:

**B6**

**All Medical Records**

Patient:

**B6**

Breed: English Bulldog

DOB:

**B6**

Species: Canine

Sex: Male  
(Neutered)

Home Phone:

**B6**

Work Phone: ( ) -

Cell Phone:

**B6**

**Referring Information**

---

**B6**

Client:

Patient:

**B6**

**Initial Complaint:**

---

**Initial Complaint:**

---

**Initial Complaint:**

---

**Initial Complaint:**

---

Client:  
Patient:

**B6**

---

**Initial Complaint:**

Scanned Record

---

**Initial Complaint:**

Cardiology DCM study - will come fasted - u/f samples

**SOAP Text Feb 1 2019 11:50AM - Rush, John**

---

**Disposition/Recommendations**

---



Client:  
Patient:

**B6**

---

---

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:  
Visit ID:

Patient:	<b>B6</b>
Species:	Canine
Breed:	English Bulldog
Sex:	Male (Neutered)
Age:	<b>B6</b> Years Old

**Lab Results Report**

Accession ID:			
Test	Results	Reference Range	Units



Client:  
Patient:

**B6**

**IDEXX Hematology 1/24/19**



**B6**

PET OWNER: **B6**  
SPECIES: Canine  
BREED:  
GENDER: Male  
AGE: 8 Years  
PATIENT ID: **B6**

**B6**

ACCOUNT #:  
ATTENDING VET: **B6**

LAB ID: 2302815220  
ORDER ID: 38459535  
COLLECTION DATE: 1/23/19  
DATE OF RECEIPT: 1/24/19  
DATE OF RESULT: 1/24/19

IDEXX Services: Senior Profile with Fecal Dx™ Profile, Giardia, Lab 4Dx® Plus and Reflex Quant C6® and UPC Select, SAMPLE/TEST INFO NEEDED, Cardiopet® proBNP-Canine Add-on\*

**Hematology**



1/24/19 (Order Received)  
1/24/19 11:05 AM (Last Updated)

3/2/17

TEST	RESULT	REFERENCE VALUE
RBC		5.39 - 8.7 M/μL
Hematocrit		38.3 - 56.5 %
Hemoglobin		13.4 - 20.7 g/dL
MCV		59 - 76 fL
MCH		21.9 - 26.1 pg
MCHC		32.6 - 39.2 g/dL
% Reticulocyte		%
Reticulocytes		10 - 110 K/μL
Reticulocyte Hemoglobin		22.3 - 29.6 pg
WBC		4.9 - 17.6 K/μL
% Neutrophils		%
% Lymphocytes		%
% Monocytes		%
% Eosinophils		%
% Basophils		%
Neutrophils		2.94 - 12.67 K/μL
Lymphocytes		1.06 - 4.95 K/μL
Monocytes		0.13 - 1.15 K/μL
Eosinophils		0.07 - 1.49 K/μL
Basophils		0 - 0.1 K/μL
Platelets		143 - 448 K/μL
Remarks		

**B6**

**B6**

**B6**

SLIDE REV...

Client: **B6**  
Patient: **B6**

**IDEXX Hematology 1/24/19**



**B6**

PET OWNER:

**B6**

DATE OF RESULT: **1/24/19**

LAB ID: 2302815220

**Chemistry**



1/24/19 (Order Received)  
1/24/19 11:05 AM (Last Updated)

3/2/17

TEST	RESULT	REFERENCE VALUE
Glucose	<b>B6</b>	63 - 114 mg/dL
IDEXX SDMA		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
Albumin: Globulin Ratio		0.7 - 1.5
ALT		18 - 121 U/L
AST		16 - 55 U/L
ALP		5 - 160 U/L
GGT		0 - 13 U/L
Bilirubin - Total		0.0 - 0.3 mg/dL
Bilirubin - Unconjugated		0.0 - 0.2 mg/dL
Bilirubin - Conjugated		0.0 - 0.1 mg/dL
Cholesterol		131 - 345 mg/dL
Amylase		337 - 1,469 U/L
Lipase		138 - 755 U/L
Creatine Kinase		10 - 200 U/L

**B6**

Client:  
Patient:

**B6**

**IDEXX Hematology 1/24/19**



**B6** PET OWNER **B6** DATE OF RESULT: **1/24/19** LAB ID: 2302815220

**Chemistry (continued)**

TEST	RESULT	REFERENCE VALUE
Hemolysis Index	<b>B6</b>	
Lipemia Index		<b>B6</b>
Cardiopet proBNP - Canine		0 - 900 pmol/L <b>B6</b>

- 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.
  - d Cardiopet proBNP >1800pmol/L Abnormal. NT-proBNP concentration is compatible with increased stretch and stress on the myocardium. Clinically significant heart disease is likely at this time. For dogs (<20kg) with mitral valve disease (MVD), there is increased risk of heart failure within the next 12 months. If clinical signs (i.e. respiratory and/or exercise intolerance) are present, they are likely due to heart failure. Additional diagnostics including thoracic radiographs, electrocardiogram and echocardiogram are strongly recommended to diagnose and assess severity of cardiac disease.
- 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.

**Endocrinology**

1/24/19 (Order Received)  
1/24/19 11:05 AM (Last Updated)

3/2/17

TEST	RESULT	REFERENCE VALUE
Total T4	<b>B6</b>	1 - 4 µg/dL <b>B6</b>

- a Dogs with no clinical signs of hypothyroidism and results within the reference interval are likely euthyroid. For dogs on thyroid supplement, recommended therapeutic levels are 2.1-5.4 ug/dL.

**Serology**

1/24/19 (Order Received)  
1/24/19 11:05 AM (Last Updated)

TEST	RESULT
Heartworm Antigen	<b>B6</b>

Client:  
Patient:

**B6**

**IDEXX Hematology 1/24/19**



**B6**      PET OWNER: **B6**      DATE OF RESULT: **1/24/19**      LAB ID: 2302815220

**Serology (continued)**

TEST	RESULT
Ehrlichia canis / ewingii	<b>a</b> <b>B6</b>
Lyme (Borrelia burgdorferi)	<b>B6</b>
Anaplasma phagocytophilum / platys	<b>b</b> <b>B6</b>

- a** If tick-borne disease is still suspected based on clinical signs, the Tick/Vector Comprehensive RealPCR Panel Add-on (test code 28701) may be useful for detection of early infection prior to seroconversion.
- b** A positive result indicates the presence of antibodies against Anaplasma phagocytophilum or A. platys, but does not confirm the presence of disease. Submission of a fresh whole blood sample for an IDEXX CBC Select, test code 300, is recommended to identify abnormalities consistent with infection. The Tick/Vector Comprehensive RealPCR Panel Add-on (preferred, test code 28701) or Anaplasma spp RealPCR Test (test code 2824), may be useful to confirm infection and evaluate for co-infections, especially in clinically sick animals. For more information on the diagnosis and management of Tick/Vector-borne diseases, see [www.idexx.com/4DxGuide](http://www.idexx.com/4DxGuide).

**Other**



**1/24/19** (Order Received)  
**1/24/19 11:05 AM** (Last Updated)

TEST  
More Information  
Needed

**B6**

Client: **B6**  
 Patient: **B6**

**cbc and profile 2/1/19**

**Cummings School of Veterinary Medicine**

Clinical Pathology Laboratory  
 200 Westboro Road  
 North Grafton, MA 01536

Name/DOB: **B6**      Sex: CM      Provider: Dr. John Rush  
 Patient ID: **B6**      Age: 8      Order Location: V320559: Investigation into  
 Phone number:      Species: Canine      Sample ID: 1902010102  
 Collection Date: 2/1/2019 11:52 AM      Breed:  
 Approval date: 2/1/2019 12:57 PM

TEST NAME	RESULT	RANGE	UNITS	REFERENCE RANGE
	IN RANGE	OUT OF RANGE		

**CBC, Comprehensive, Sm Animal (Research) CSTCYR**

WBC (ADVIA)	<b>B6</b>		[ * ]	K/uL	4.40-15.10
RB C (Advia)	<b>B6</b>		[ * ]	M/uL	5.80-8.50
Hemoglobin (ADVIA)	<b>B6</b>		[ * ]	g/dL	13.3-20.5
Hematocrit (Advia)	<b>B6</b>		[ * ]	%	39-55
MCV (ADVIA)	<b>B6</b>		[ * ]	fL	64.5-77.5
MCH (ADVIA)	<b>B6</b>		[ * ]	pg	21.3-25.9
CHCM	<b>B6</b>			g/dl	
MCHC (ADVIA)	<b>B6</b>		[ * ]	g/dL	31.9-34.3
RDW (ADVIA)	<b>B6</b>		[ * ]		11.9-15.2
Platelet Count (Advia)	<b>B6</b>	<b>B6</b>	[ * ]*	K/uL	173-486
Mean Platelet Volume (Advia)	<b>B6</b>		[ * ]	fl	8.29-13.20
02/01/19 12:12 PM		Platelet clumps (if present) and sample age (greater than 4 hours) can result in a falsely increased MPV.			
Platelet Crit	<b>B6</b>		[ * ]*	%	0.129-0.403
02/01/19 12:12 PM		Platelet Crit is invalid when clumped platelets are present. Interpretation of PltCt is unclear in species other than canines.			
PDW	<b>B6</b>			%	
Reticulocyte Count (Advia)	<b>B6</b>	<b>B6</b>	[ * ]*	%	0.20-1.60
Absolute Reticulocyte Count (Advia)	<b>B6</b>		[ * ]*	K/uL	14.7-113.7
CHr	<b>B6</b>			pg	
MCVr	<b>B6</b>			fl	
Comments (Hematology)	<b>B6</b>				

**Microscopic Exam of Blood Smear (Advia) CSTCYR**

Seg Neuts (%)	<b>B6</b>		[ * ]	%	43-86
Lymphocytes (%)	<b>B6</b>		[ * ]	%	7-47
Monocytes (%)	<b>B6</b>		[ * ]	%	1-15
Eosinophils (%)	<b>B6</b>		[ * ]	%	0-16
Seg Neutrophils (Abs) Advia	<b>B6</b>		[ * ]	K/uL	2.800-11.500
Lymphs (Abs) Advia	<b>B6</b>		[ * ]	K/uL	1.00-4.80
Mono (Abs) Advia	<b>B6</b>		[ * ]	K/uL	0.10-1.50
Eosinophils (Abs)	<b>B6</b>		[ * ]	K/uL	0.00-1.40

Sample ID: 1902010102/1  
 This report continues... (Final)

Reviewed by: \_\_\_\_\_

Client:  
Patient:

**B6**

cbc and profile 2/1/19

**Cummings School of Veterinary Medicine**

Clinical Pathology Laboratory  
200 Westboro Road  
North Grafton, MA 01536

Name/DOB: Patient ID:	<b>B6</b>	Sex: CM Age: 8	Provider: Dr. John Rush Order Location: V320559: Investigation into Sample ID: 1902010102
Phone number:		Species: Canine Breed:	
Collection Date:	2/1/2019 11:52 AM		
Approval date:	2/1/2019 12:57 PM		

TEST NAME	RESULT	RANGE	UNITS	REFERENCE RANGE
	IN RANGE	OUT OF RANGE		

**Microscopic Exam of Blood Smear (Advia) (cont'd)**

CSTCYR

Advia  
WBC Morphology No Morphologic Abnormalities  
RBC Morphology No morphologic abnormalities

**Research Chemistry Profile - Small Animal (Cobas)**

SMACHUNSKI

Glucose		[ * ]	mg/dL	67-135
Urea		[ * ]	mg/dL	8-30
Creatinine		[ * ]	mg/dL	0.6-2.0
Phosphorus		[ * ]	mg/dL	2.6-7.2
Calcium 2		[ * ]	mg/dL	9.4-11.3
Magnesium 2+		[ * ]	mEq/L	1.8-3.0
Total Protein		[ * ]	g/dL	5.5-7.8
Albumin		[ * ]	g/dL	2.8-4.0
Globulins		[ * ]	g/dL	2.3-4.2
A/G Ratio		[ * ]		0.7-1.6
Sodium		[ * ]	mEq/L	140-150
Chloride		[ * ]	mEq/L	106-116
Potassium		[ * ]	mEq/L	3.7-5.4
tCO2(Bicarb)		[ * ]	mEq/L	14-28
AGAP		[ * ]		8.0-19.0
NA/K		[ * ]		29-40
Total Bilirubin		[ * ]	mg/dL	0.10-0.30
Alkaline Phosphatase		[ * ]	U/L	12-127
GGT		[ * ]	U/L	0-10
ALT		[ * ]	U/L	14-86
AST		[ * ]	U/L	9-54
Creatine Kinase		[ * ]	U/L	22-422
Cholesterol		[ * ]	mg/dL	82-355
Triglycerides		[ * ]	mg/dl	30-338
Amylase		[ * ]	U/L	409-1250
Osmolality (calculated)		[ * ]	mmol/L	291-315

**B6**

**B6**

**B6**

Sample ID: 1902010102/2  
END OF REPORT (Final)

Reviewed by: \_\_\_\_\_  
Page 2



Client: **B6**  
Patient: **B6**

**NT-proBNP 2/1/19**

IDEXX Reference Laboratories

Client: **B6** Patient: **B6**

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: ENGLISH\_BULLDOG  
Gender: MALE NEUTERED  
Age: 8Y

Date: 02/01/2019  
Requisition #: 438225  
Accession: **B6**  
Ordered by: RUSH

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	<b>B6</b>	0 - 900 pmol/L	HIGH		<b>B6</b>

**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**

**CBC/CHEM**



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
 North Grafton, MA 01536

**DUPLICATE**

Name/DOB: <b>B6</b>	Sex: CM	Provider: Dr. John Rush
Patient ID: <b>B6</b>	Age: 8	Order Location: V320559: Investigation into
Phone number:	Species: Canine	Sample ID: 1902010102
Collection Date: 2/1/2019 11:52 AM	Breed:	
Approval date: 2/1/2019 12:57 PM		

**CBC, Comprehensive, Sm Animal (Research)**

CSTCYR		Ref. Range/Males
WBC (ADVIA)		4.40-15.10 K/uL
RBC (Advia)		5.80-8.50 M/uL
Hemoglobin (ADVIA)		13.3-20.5 g/dL
Hematocrit (Advia)		39-55 %
MCV (ADVIA)		64.5-77.5 fL
MCH (ADVIA)		21.3-25.9 pg
CHCM		
MCHC (ADVIA)		31.9-34.3 g/dL
RDW (ADVIA)		11.9-15.2
Platelet Count (Advia)	H	173-486 K/uL
Mean Platelet Volume (Advia)		8.29-13.20 fl
02/01/19 12:12 PM	<b>B6</b>	
Platelet Crit	H	0.129-0.403 %
02/01/19 12:12 PM	<b>B6</b>	
PDW		
Reticulocyte Count (Advia)	H	0.20-1.60 %
Absolute Reticulocyte Count (Advia)	H	14.7-113.7 K/uL
CHr		
MCVr		
Comments (Hematology)	<b>B6</b>	

**Microscopic Exam of Blood Smear (Advia)**

CSTCYR		Ref. Range/Males
Seg Neuts (%)		43-86 %
Lymphocytes (%)		7-47 %
Monocytes (%)		1-15 %
Eosinophils (%)		0-16 %
Seg Neutrophils (Abs) Advia		2.800-11.500 K/uL
Lymphs (Abs) Advia		1.00-4.80 K/uL
Mono (Abs) Advia		0.10-1.50 K/uL
Eosinophils (Abs) Advia		0.00-1.40 K/uL
WBC Morphology	No Morphologic Abnormalities	
RBC Morphology	No morphologic abnormalities	

**Research Chemistry Profile - Small Animal (Cobas)**

Sample ID: 1902010102/1  
 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 Patient ID: <b>B6</b>	Sex: CM	Provider: Dr. John Rush
Phone number:	Age: 8	Order Location: V320559: Investigation into
Collection Date: 2/1/2019 11:52 AM	Species: Canine	Sample ID: 1902010102
Approval date: 2/1/2019 12:57 PM	Breed:	

**Research Chemistry Profile - Small Animal (Cobas) (cont'd)**

		Ref. Range/Males
SMACHUNSKI		
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	L	5.5-7.8 g/dL
Albumin		2.8-4.0 g/dL
Globulins	L	2.3-4.2 g/dL
A/G Ratio	H	0.7-1.6
Sodium		140-150 mEq/L
Chloride		106-116 mEq/L
Potassium	<b>B6</b>	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)	L	291-315 mmol/L

Sample ID: 19020101022  
REPRINT: Orig. printing on 2/1/2019 (Final)

Reviewed by: \_\_\_\_\_  
Page 2

Client:  
Patient:

**B6**

**Taurine level**

27291 PLD  
WB (B)

**B6**

**Amino Acid Laboratory Sample Submission Form**

Amino Acid Laboratory, 1089 Veterinary Medicine Drive, Davis, Ca 95616

Telephone: 530-752-5058, Fax: 530-752-4698

Email: [ucd.aminoacid.lab@ucdavis.edu](mailto:ucd.aminoacid.lab@ucdavis.edu)

[www.vetmed.ucdavis.edu/labs/amino-acid-laboratory](http://www.vetmed.ucdavis.edu/labs/amino-acid-laboratory)

2/1/2019 pat Race  
SHIP w ICE PACKS, TAURINE  
PANEL  
Lithium Heparin  
RUSH

Veterinarian Contact: **B6**

Clinic/Company Name: Tufts Cummings School of Vet. Med. - Clinical Pathology Laboratory

Address: 200 Westboro Road, North Grafton, MA, 015369

Email: Clinpath@tufts.edu cardiovet@tufts.edu

Telephone: 508-887-4669 Fax: 508-839-7936

Billing Contact: **B6** Email: **B6**

Billing Contact Phone: 508-887-4267 Tax ID: \_\_\_\_\_

Patient Name: **B6** Species: CANINE

Breed: English Bulldog Owner's Name: **B6**

Current Diet: Wellness Core

Sample type:  Plasma  Whole Blood  Urine  Food  Other \_\_\_\_\_

Test:  Taurine  Complete Amino Acids  Other: \_\_\_\_\_

**Taurine Results (lab use only)**

Plasma: **B6** Whole Blood: **B6** Urine: \_\_\_\_\_ Food: \_\_\_\_\_

	Plasma (nMol/ml)		Whole Blood (nMol/ml)	
	Normal Range	No known risk for deficiency	Normal Range	No known risk for deficiency
Cat	<b>80-120</b>	<b>&gt;40</b>	<b>300-600</b>	<b>&gt;200</b>
Dog	<b>60-120</b>	<b>&gt;40</b>	<b>200-350</b>	<b>&gt;150</b>

\* Please note with the recent increase in the number of dogs screened for taurine deficiency, we are seeing dogs with values within the reference ranges (or above the "no known risk for deficiency range") yet are still exhibiting signs of cardiac disease. Veterinarians are welcome to contact our laboratory for assistance in evaluating your patient's results.

Client: **B6**  
 Patient: **B6**

**Diet history 2/1/19**

**CARDIOLOGY DIET HISTORY FORM**  
 Please answer the following questions about your pet.

Pet's name: **B6** Owner's name: **B6** Today's date: 02-01-19

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

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
Wellness Core Canned chicken	wet	4 oz	2x/day	Dec 2015
Wellness Core fish	dry	1/4 cup	2x/day	Dec 2015
Wellness Core	treat	3 pcs	1x/day	11
(See <b>B6</b> copy for extra brands formulas)				

\*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): \_\_\_\_\_

CHANGING DIET TO ROYAL CANIN EARLY CARDIAC

Client:  
Patient:

**B6**

**Troponin 2/1/19**



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

Dr. Freeman  
Tufts University Clinical Pathology Lab  
Attn: **B6**  
200 Westboro Road  
North Grafton, MA 01536  
USA

Phone:  
Fax:  
Animal Name:  
Owner Name:  
Species:  
Date Received:

508 887 4669  
9 508 839 7936

**B6**

Canine

Feb 12, 2019

GI Lab Accession: 6969

Test	Result	Control Range	Assay Date
Ultra-Sensitive Troponin I Fasting	<b>B6</b> ng/mL	≤0.06	02/12/19

**B6**

Comments:

Client:  
Patient:

**B6**

---

**Troponin 2/1/19**

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**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](mailto: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](mailto:slim@cvm.tamu.edu) or Dr. Sina Marsilio at [smarsilio@cvm.tamu.edu](mailto: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](mailto: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](mailto: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](mailto: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](mailto:gilab@cvm.tamu.edu)

[vetmed.tamu.edu/gilab](http://vetmed.tamu.edu/gilab)

Client: **B6**  
Patient:

**Vitals Results**

**B6** 11:00:04 AM Weight (kg) **B6**

**Patient History**

<b>B6</b>	03:52 PM	Appointment	<b>B6</b>
	08:05 AM	UserForm	
	08:05 AM	UserForm	
	10:37 AM	UserForm	
	10:38 AM	UserForm	
	10:44 AM	Purchase	
	11:00 AM	Vitals	
	12:03 PM	UserForm	
	12:50 PM	Appointment	
	12:58 PM	Prescription	
	12:08 PM	Patient Merge	
	04:32 PM	Purchase	
	04:32 PM	Purchase	





**B6**

**B6**

Male (Neutered)

Canine English Bulldog Brown/White

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 Grantees) 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 Grantee'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 Grantee deems appropriate (provided that such photographs and images may not be used in for-profit commercials, unless such commercials are publicizing educational programs at Cummings School). As medical and surgical treatment necessitates the removal of tissue, cells, fluids or body parts of my animal, I authorize the Grantees 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 \$50.

I do further agree that should any payment, or the full amount of the sum stated above, become overdue more than 20 days from the above-agreed 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: 2/1/2019

Owner's address B6

# B6

Date 01-02-19

**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

**B6**

Patient ID: B6  
B6 Canine  
B6 Years Old Male (Neutered) English  
Bulldog  
Body Weight: Weight (kg) 0.00

## **Brachycephalic Consent Form**

### ***Anesthesia, Sedation and Hospitalization***

Brachycephalic is a term for "short-nosed". Several dog breeds may experience difficulty breathing due to the shape of their head, muzzle and throat. Shorter nosed dogs include English Bulldogs, French Bulldogs, Pugs, Boston Terriers and many other breeds. The shorter than average nose and face in proportion to their body size can cause problems for these breeds at times. Owners with brachycephalic breeds must pay extra attention to their animals during exercise, heat and while obtaining veterinary care.

#### ***Overview***

The purpose of this form is to inform you of the risks associated with anesthesia/sedation and occasionally hospitalization, which are inherent for dogs with shorter noses (brachycephalic). Not all of these problems may apply to your dog, but these are part of the brachycephalic syndrome. Please discuss any specific concerns with your attending veterinarian.

#### ***Respiratory problems***

Brachycephalic dogs have a shortened skull, resulting in a compressed nasal passage and abnormal throat anatomy. The abnormal upper airway anatomy causes increased negative pressure while taking a breath, leading to inflammation, deformation of throat tissues, and obstruction of breathing. We encourage corrective surgery in moderate to severely affected dogs.

#### ***Cooling problems***

As dogs cool by panting, dogs with narrowed airways may have difficulty cooling themselves. This may be made worse by anxiety or stress.

#### ***Stomach and intestinal problems***

Brachycephalic dogs may swallow a lot of air which can lead to increased vomiting or regurgitation, and this could lead to pneumonia. If possible, we pre-treat brachycephalic dogs with medications to reduce stomach acids, and to promote stomach emptying.

#### ***Restraint challenges***

Due to their airway, and in some bulldogs, their intrinsic personality as "tough" dogs, it may be difficult to restrain them safely. This is a particularly significant problem with more aggressive dogs. We

occasionally need to sedate them, or ask family members to help with some routine procedures to avoid unnecessary stress on the patient.

### *Sedation and anesthesia*

While sedation and anesthesia are commonly performed in brachycephalic breeds, especially bulldogs, recovery from anesthesia may be more difficult for these patients due to a narrowed airway. We have our anesthesia team very closely involved in sedation and anesthesia of brachycephalic breeds especially bulldogs. They have found that careful monitoring is essential to a good outcome. In fact, many dog owners travel some distance in order to ensure that a Tufts board-certified anesthesiologist is present during anesthesia or sedation to minimize the risk of complications.

**We consider brachycephalic dogs a high risk population. Please be sure you talk with your doctor about the following:**

1. Any medical and/or surgical treatment alternatives for your pet
2. Sufficient details of this consent form and how they apply to your dog
3. How fully your pet might respond or recover and how long it could take
4. The most common complications and how serious they might be

I grant permission for my pet to undergo general anesthesia/sedation/hospitalization at Tufts Foster Hospital for Small Animals at the Cummings School of Veterinary Medicine.

I am aware that my pet has physical characteristics that make anesthesia and sedation more challenging and possibly more risky than for the average dog with a longer nose.

I am aware that brachycephalic breeds, such as the English and French bulldog, Boston Terrier, Pug, and Pekingese have a shortened skull, resulting in a compressed nasal passage and abnormal throat anatomy. The abnormal upper airway anatomy causes increased negative pressure while taking a breath, leading to inflammation, deformation of throat tissues, and obstruction of breathing.

I am aware that if my brachycephalic pet undergoes sedation or general anesthesia the potential complications include partial or complete airway obstruction during recovery and regurgitation/vomiting which could lead to aspiration pneumonia/respiratory distress. With airway surgery, death has been reported as a rare complication in <3% of cases.

I am aware that anesthetizing or sedating a brachycephalic animal for any reason can lead to the development of significant complications as described in this document.

**Please answer YES or NO to the following questions:**

**My pet has demonstrated difficulty breathing, exercise intolerance, and/or collapse episodes.**

YES       NO

**My pet has demonstrated difficulty eating, such as gagging, vomiting, and regurgitation.**

YES       NO

**My pet is receiving or has recently received a non-steroidal anti-inflammatory drug (e.g., Rimadyl)**

YES       NO

**Your signature indicates that you have read and understand the above information and give your consent for treatment.**

Owner signature \_\_\_\_\_

Date: 2/1/2019

**B6**

Cardiology Liaison: 508-887-4696

## Discharge Instructions

### Patient

Name: B6

Species: Canine

Brown/White Male (Neutered) 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

### Veterinary Nutritionist : Dr. Lisa Freeman

Student: B6 V19

Admit Date: 2/1/2019 10:36:11 AM

Discharge Date: 2/1/2019

**Diagnoses:** Arrhythmogenic right ventricular cardiomyopathy (ARVC) with marked right heart enlargement, ventricular premature depolarizations, and left ventricular dysfunction; possible component of diet-related cardiomyopathy

**Clinical findings:** B6 has been diagnosed with a primary heart muscle disease called arrhythmogenic right ventricular cardiomyopathy (ARVC). This disease is common in bulldogs and is characterized by replacement of the normal heart muscle by fat and/or scar tissue which may result in serious ventricular arrhythmias (abnormal heart rhythms originating from the lower chamber of the heart), cardiac enlargement and congestive heart failure, or both. Dogs with ARVC may experience syncope (fainting) or sudden death as the result of ventricular arrhythmia. Though we cannot reverse the changes in the heart muscle, we can control the heart disease with medical management.

The following diagnostic test results were obtained today:

**ECG findings:** The ECG shows a number of premature ventricular contractions (VPCS) originating from the right ventricle.

**Echocardiogram findings:** The right ventricle is moderate to markedly enlarged. The left ventricle is mildly dilated with the left ventricular free wall thinned. There is reduced vigor of contraction of the left ventricle. The left atrium is mildly to moderately enlarged. The right atrium is moderately to markedly enlarged. There is some mitral and tricuspid valve regurgitation. The hepatic veins are markedly distended.

**Monitoring at home:** Please monitor for any signs of lethargy, weakness, pale gums, cough, shortness of breath, inappetence, or collapse. If a collapsing episode is noted, please check your dog's gum color and try to get a sense of whether the heart rate is slow or fast. If you have an iPhone or Android smartphone device, you may want to explore the

option of purchasing the Kardia Mobile device which will allow you to monitor the heart rate and rhythm at home ([www.alivetec.com](http://www.alivetec.com)). If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

**B6** may also benefit from wearing a Holter EKG, which is a harnessed EKG that he would wear for 24 hours. We can place that here, and send him home for the 24-hour duration. He would then return here the next day where we can remove the Holter and analyze his heart rhythm to fully assess his arrhythmia. Call if you decide to do this test.

#### Recommended Medications:

# B6

**Diet suggestions:** Dogs with ARVC may benefit from the addition of omega-3 fatty acids (fish oil) to the diet. Diets such as the Royal Canin Boxer or Early Cardiac diet, or Hill's j/d have ample fish oil and may not require much (or any) additional supplementation. Additional information on supplements such as fish oil or other supplements that you might have questions about may be found on the Tufts HeartSmart web site: (<http://vet.tufts.edu/heartsmart/diet/>).

- 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 ingredients or are grain-free. Therefore, we are currently recommending that dogs do not eat these types of diets.
- We recommend switching **B6** 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:

Royal Canin Early Cardiac (veterinary diet)

Royal Canin Boxer

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 Barley Entree

Hill's Science Diet Adult 1-6 Healthy Cuisine Roasted Chicken, Carrot, and Spinach Stew

Royal Canin Mature 8+

We recommend slowly introducing one of the diets on the above list as follows: 25% of the new diet mixed with 75% old diet for 2-3 days, then 50:50, etc.

Hopefully you can find a diet on the list that **B6** will enjoy!

If your dog has special nutritional needs or requires a homecooked diet, we recommend you schedule an appointment with our nutritionists (508-887-4696).

**Exercise recommendations:** Generally we recommend limited activity for dogs with heart disease – Leash walk only is ideal. Repetitive or strenuous high energy activities (repetitive ball chasing, running fast off-leash, etc.) are not recommended as these activities may result in worsened arrhythmia or even sudden death.

**Recheck visits:** We would like to recheck **B6** in 3 months, at which point we can discuss additional medications and



treatments as needed (such as antiarrhythmics). We will likely recommend recheck ECGs every 3 months, or you can purchase the AliveCor and send us an ECG about once a month.

Thank you for entrusting us with [ B6 ] care. Please contact our Cardiology liaison at (508)-887-4696 or email us at [cardiovet@tufts.edu](mailto:cardiovet@tufts.edu) for scheduling and non-emergent questions or concerns. Please visit our HeartSmart website for more information

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

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**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](http://vet.tufts.edu/cvmc/clinical-studies)*

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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 Male (Neutered) English Bulldog  
Brown/White

## Cardiology Appointment Report Enrolled in DCM Study

Date: 2/1/2019

### Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

**B6**

### Cardiology Resident:

B6

### Cardiology Technician:

**B6**

Student: B6 v19

**Presenting Complaint:** Here for possible entry to DCM study. Half-sister B6 came in last month for CHF. B6 had high proBNP on bloodwork B6.

### Concurrent Diseases:

**B6**

### General Medical History:

Had B6 as puppy, had a fall and needed some B6 O says seen at Tufts.

Sedentary lifestyle, but healthy. Half-sister B6 here last month in CHF, which is what started concerns for DCM.

Fasted today.

Had reason for concern of DCM based on diet and sister, came in based on NTproBNP level.

### Diet and Supplements:

Grain free diet- Wellness Core. Chicken and Turkey wet food 4oz BID. Fish dry food 1/4 cup BID.

No supplements or treats.

### Cardiovascular History:

Prior CHF diagnosis? N

Prior heart murmur? N

Prior ATE? N

Prior arrhythmia? N

Monitoring respiratory rate and effort at home? N, but taking notice more after sister's CHF. O thinks 20-30 at rest .

Cough? N

Shortness of breath or difficulty breathing? Sounds raspy when anxious.

Syncope or collapse? N

Sudden onset lameness? N

Exercise intolerance? N- Normally low energy.

**Current Medications Pertinent to CV System:**

Medication:

Formulation/Tab Size: 500 mg tablet

Administration Frequency: PO BID 1 tablets

Need refills? N

**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 - obese and difficult to palpate
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

**Arrhythmia:**

- None
- Sinus arrhythmia
- Premature beats infrequent
- 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 mostly adipose tissue?
- Mild ascites
- Marked ascites

**Problems:**

Related dog with DCM  
Has a high NT-proBNP

**Differential Diagnoses:** DCM vs other

**Diagnostic plan:**

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

**Echocardiogram Findings:**

**B6**

**Assessment and recommendations:**

Findings are consistent with ARVC with concurrent LV dysfunction which is either related to ARVC or could have a component of diet-related cardiomyopathy. There was not enough arrhythmia seen today to clearly trigger antiarrhythmic therapy, but a 24 hour Holter monitor could be performed for a better assessment of arrhythmia burden, or Alivecor tracings could be evaluated serially. Recommend starting B6 5mg PO BID. Recommend switching the diet. Dog was enrolled in the DCM study, and troponin, NTproBNP, taurine levels, CBC/Chem were submitted via the study. Recheck echo, ECG, and blood work in

3, 6, and 9 months for the study. Discussed pros and cons of starting antiarrhythmic treatment today, or ACEi - owner leaning toward fewer drugs at this stage.

**Final Diagnosis:**

ARVC with LV dysfunction (possible component of diet associated 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	<b>B6</b>	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

M-Mode Normalized

IVSdN	<b>B6</b>	(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

SALA	cm
Ao Diam	cm
SALA / 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
LVA d LAX	cm
LVEDV A-L LAX	ml
LVEDV MOD LAX	ml
LVLs LAX	cm
LVA s 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

B6

<u>Doppler</u>	
MR Vmax	m/s
MR maxPG	mmHg
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

B6

TR maxPG

B6

mmHg

**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**

Male (Neutered)

Canine English Bulldog

Brown/White

**B6**

2/12/2019

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,

John Rush DVM, DACVIM (Cardiology), DACMECC



---

**From:** [REDACTED] <[REDACTED]@cvcavets.com>  
**To:** Jones, Jennifer L  
**Sent:** 5/18/2018 5:25:41 PM  
**Subject:** DCM and Diet spreadsheet  
**Attachments:** Diet Breakdown by Brand.xlsx

**DOCUMENT  
PRODUCED IN NATIVE**

---

**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:** 2/26/2019 12:01:05 PM  
**Subject:** DCM cases 2/26/2019 0700  
**Attachments:** Instinct Original Grain Free Recipe (unkown protein source): [B6] EON-380789; Merrick Classic Real Beef + Green Peas Recipe with Ancient Grains Adult Dry Dog Food: [B6] - EON-380855; Taste of The Wild - Salmon grain free: [B6] EON-380783; Taste of The Wild PREY (unknown formula): [B6] - EON-380774; Wellness Complete Health Fish and Sweet Potato dry: Lisa Freeman - EON-380848

David Rotstein, DVM, MPVM, Dipl. ACVP  
CVM Vet-LIRN Liaison  
CVM OSC/DC/CERT  
7519 Standish Place  
240-506-6763 (BB)



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---

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 2/26/2019 12:21:16 AM  
**Subject:** Wellness Complete Health Fish and Sweet Potato dry: Lisa Freeman - EON-380848  
**Attachments:** 2063189-report.pdf; 2063189-attachments.zip

A PFR Report has been received and PFR Event [EON-380848] has been created in the EON System.

A "PDF" report by name "2063189-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 "2063189-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380848

**ICSR #:** 2063189

**EON Title:** PFR Event created for Wellness Complete Health Fish and Sweet Potato dry; 2063189

<b>AE Date</b>	02/22/2019	<b>Number Fed/Exposed</b>	2
<b>Best By Date</b>		<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Boxer (German Boxer)		
<b>Age</b>	10.5 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2063189

**Product Group:** Pet Food

**Product Name:** Wellness Complete Health Fish and Sweet Potato dry

**Description:** Arrhythmia dx at RDVM July 2018 (had been "wheezing") Started wheezing again 1 week before admission. Diagnosed with DCM, CHF, and ventricular tachycardia 2/22/19 Was fed Wellness diet until 6/2018 then changed to Royal Canin Boxer (current diet). Taurine and troponin pending. Owner has another Boxer eating same diets - has not been screened Enrolled in DCM study. Changing to different diet (although Boxer diet is probably fine) and will recheck in 7 days and 3 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:** 2

**Number of Animals Reacted With Product:** 1

Product Name	Lot Number or ID	Best By Date
Wellness Complete Health Fish and Sweet Potato 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-380848>

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=397857>

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you received this email in error, please send an email to [FDAREportableFoods@fda.hhs.gov](mailto:FDAREportableFoods@fda.hhs.gov) immediately.

**Report Details - EON-380848**

ICSR: 2063189  
 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: 2019-02-25 19:07:14 EST

**Reported Problem:**  
**Problem Description:** Arrhythmia dx at RDVM July 2018 (had been "wheezing") Started wheezing again 1 week before admission. Diagnosed with DCM, CHF, and ventricular tachycardia 2/22/19 Was fed Wellness diet until 6/2018 then changed to Royal Canin Boxer (current diet). Taurine and troponin pending. Owner has another Boxer eating same diets - has not been screened Enrolled in DCM study. Changing to different diet (although Boxer diet is probably fine) and will recheck in 7 days and 3 months.  
**Date Problem Started:** 02/22/2019  
**Concurrent Medical Problem:** No  
**Outcome to Date:** Stable

**Product Information:**  
**Product Name:** Wellness Complete Health Fish and Sweet Potato dry  
**Product Type:** Pet Food  
**Lot Number:**  
**Product Use Information:** **Description:** Fed this diet 2012 - June, 2018 Currently, fed Royal Canin Boxer See diet history  
**Manufacturer /Distributor Information:**  
**Purchase Location Information:**

**Animal Information:**  
**Name:** B6  
**Type Of Species:** Dog  
**Type Of Breed:** Boxer (German Boxer)  
**Gender:** Male  
**Reproductive Status:** Neutered  
**Weight:** 23.3 Kilogram  
**Age:** 10.5 Years  
**Number of Animals Given the Product:** 2  
**Number of Animals Reacted:** 1  
**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	
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			
<b>Additional Documents:</b>	<b>Attachment:</b>	rpt_medical_record_preview_small.pdf		
	<b>Description:</b>	Med records		
	<b>Type:</b>	Medical Records		



Client:  
Address:

B6

All Medical Records

Patient: B6  
Breed: Boxer  
DOB: B6

Species: Canine  
Sex: Male  
(Neutered)

Referring Information

B6

Initial Complaint:

ARVC vs. DCM with active CHF and uncontrolled Vtach.

SOAP Text B6 9:34AM - Clinician, Unassigned FHSA

Subjective

NEW VISIT (ER)

B6

Presenting complaint: wheezing

Referral visit? B6 AH

Diagnostics completed prior to visit - saw this morning but referred straight here  
rDVM records in email

HISTORY:

Signalment: 10.5 y/o MN Boxer

Current history:

In July primary vet noticed heart arrythmia during appointment, was seen then due to symptom of wheezing. rDVM Started on B6, owners gave that for a couple of weeks and wheezing resolved, owners then stopped B6 1 week ago started wheezing again (sporadic), became clingy and lethargic. Owner had been out of town for a week, B6 was at home with husband and owner is unsure what other symptoms B6 has. Owner's husband did restart B6 on Tuesday. No vomiting/heaving. Owner reports that he is drinking water normally, but didn't finish his food this morning which is abnormal for him. Unknown diarrhea, appetite status while owner was gone.

Prior medical history: none, known B6

Client: **B6**  
Patient:

**Current medications:** 1/2 tablet BID (owner unsure strength), did start it on Tuesday. Took months long break of **B6** due to symptoms resolving.

**Diet:** royal canin boxer, dry , unknown length of time (last 1.5-2 yrs)

**Vaccination status/flea & tick preventative use:** UTD

**Travel history:** none

**EXAM:**

**B6**

C/V: II-III/VI left apical systolic murmur, arrhythmia (premature beats, intermittent gallop), fair arterial pulses

**B6**

**ASSESSMENT:**

A1: Severe cardiomegaly with poor contractile function - r/o primary DCM, diet-induced cardiomyopathy, ARVC, tachycardiac induced cardiomyopathy.

A2: Malignant ventricular arrhythmia - non-sustained VTach and frequent polymorphic VPCs

A3: Left sided congestive heart failure.

**PLAN:**

**B6**

**Treatments:**

**B6**

**Diagnostics completed:**

- Thoracic radiographs:

- Cardiopulmonary changes are consistent with left-sided congestive heart failure. Given moderate generalized cardiomegaly and moderate left atrial enlargement, consider DCM given breed. Echocardiography is

**B6**

recommended and repeat thoracic radiographs to monitor response to therapy.

- Impression of faint rounded soft tissue opacities mixed in with the intersitial pattern may represent peribronchial cuffing and end on vessels, pulmonary nodules are thought less likely. Follow-up radiographs to reassess the lungs are recommended after resolution of cardiogenic pulmonary edema.

- Concurrent mild diffuse bronchial pattern likely represents a component of lower airway disease.

- Echocardiogram:

Findings consistent with DCM with active CHF and frequent ventricular arrhythmia. Patient has enough malignant arrhythmia that hospitalization and **B6** and telemetry monitoring is recommended.

**B6** 2mg/kg q 4-6h is recommended for the day and depending how well he responds, maybe we can decrease to q6-8h overnight. Patient has historically been on grain free diet for years before been switched to current diet. It is unclear whether this is a primary DCM, ARVC with DCM phenotype, or diet-induced cardiomyopathy, but **B6** 7.5mg BID and Taurine 500mg are also recommended. Apparently patient tolerated well **B6** in the past, but at this point this medication should ideally be avoided at this point due to potential beta-blocker effects that may worsen systolic function. Thus, recommend bloodwork and if liver values are normal **B6** 200mg BID (decreasing to SID after 5 days) should be started. Fish oil may also be effective helping decrease ventricular arrhythmia density. Recommend addition of an **B6** when patient is eating and not azotemic. Recommend repeat echocardiogram in 3 months or sooner in case patient develops clinical signs consistent with progression of the disease (shortness breath, collapse, syncope, exercise intolerance, pale mucous membrane). Client can be instructed on how to use AliveCor and assess heart rate and rhythm from home if patient at rest and calm at home.

**PLAN** (cardio consult):

**B6**

Client communication:

Discussed hospitalizing for supportive care, diagnosis (cardio consult, echo) and start treatment for CHF and underlying condition. O ok with plan. New doctor to give call in am. P enrolled in DCM study.

Deposit & estimate status: **B6** (O understand estimate may increase if longer hospitalization is needed)

Resuscitation code (if admitting to ICU) **B6**

SOAP approved (DVM to sign): **B6**

SOAP Text **B6** 8:27AM **B6**

**Day 2 Hospitalization**

**B6** 10.5 yo MN Boxer

**HISTORY:**

**B6**

Current history:

In July primary vet noticed heart arrythmia during appointment, when he was seen then due to symptom of wheezing. rDVM started **B6** and owners gave that for a couple of weeks and wheezing resolved, owners then stopped sotalol (they didn't know they were supposed to continue). About 1 week ago started wheezing again (sporadic), becoming more clingy and lethargic. Owner had been out of town for a week, **B6** was at home with husband and owner is unsure what other symptoms **B6** has. Owner's husband did restart **B6** on Tuesday. No vomiting/heaving. Owner reports that he is drinking water normally, but didn't finish his food this morning which is abnormal for him. Unknown diarrhea, appetite status while owner was gone.

Prior medical history: none, **B6**

Current medications: **B6** (owner unsure strength), did start it on Tuesday. Took months long break of **B6** due to symptoms resolving.

Diet: royal canin boxer, dry, unknown length of time (last 1.5-2 yrs); was on grain free diet before this

Vaccination status/flea & tick preventative use: UTD on vaccines

Travel history: none

Overnight update: AIVR and occasional VPCs. Not interested in food. Nauseaus last night, was given one dose of cerenia that helped a little bit. Also had 2 episodes of vtach around 7am, resolved on own.

**EXAM:**

**B6**

C/V: II-III/VI left apical systolic murmur, arrhythmia (premature beats, intermittent gallop), fair arterial pulses

**B6**

**ASSESSMENT:**

A1: Severe cardiomegaly with poor contractile function - r/o primary DCM, diet-induced cardiomyopathy, ARVC, tachycardiac induced cardiomyopathy

A2: Malignant ventricular arrhythmia - non-sustained VTach and frequent polymorphic VPCs

A3: Left sided congestive heart failure

**PLAN:**

Treatment Plan **B6**

**B6** (overnight)

**B6**

**B6**

**Diagnosics completed:**

- Thoracic radiographs **B6**

- Cardiopulmonary changes are consistent with left-sided congestive heart failure. Given moderate generalized cardiomegaly and moderate left atrial enlargement, consider DCM given breed. Echocardiography is recommended and repeat thoracic radiographs to monitor response to therapy.
- Impression of faint rounded soft tissue opacities mixed in with the intersitital pattern may represent peribronchial cuffing and end on vessels, pulmonary nodules are thought less likely. Follow-up radiographs to reassess the lungs are recommended after resolution of cardiogenic pulmonary edema.
- Concurrent mild diffuse bronchial pattern likely represents a component of lower airway disease.

- Echocardiogram/ Cardio recommendations **B6**

Findings consistent with DCM with active CHF and frequent ventricular arrhythmia. Patient has enough malignant arrhythmia that hospitalization and **B6** and telemetry monitoring is recommended. **B6** 2mg/kg q 4-6h is recommended for the day and depending how well he responds, maybe we can decrease to q6-8h overnight. Patient has historically been on grain free diet for years before been switched to current diet. It is unclear whether this is a primary DCM, ARVC with DCM phenotype, or diet-induced cardiomyopathy, but **B6** 5mg BID and Taurine 500mg are also recommended. Apparently patient tolerated well Sotalol in the past, but at this point this medication should ideally be avoided at this point due to potential beta-blocker effects that may worsen systolic function. Thus, recommend bloodwork and if liver values are normal, **B6** 200mg BID (decreasing to SID after 5 days) should be started. Fish oil may also be effective helping decrease ventricular arrhythmia density. Recommend addition of an **B6** when patient is eating and not azotemic. Recommend repeat echocardiogram in 3 months or sooner in case patient develops clinical signs consistent with progression of the disease (shortness breath, collapse, syncope, exercise intolerance, pale mucous membrane). Client can be instructed on how to use AliveCor and assess heart rate and rhythm from home if patient at rest and calm at home.

**PLAN:**

**B6**

- NOVA
- PCV/T
- CBC (
- Chem
- Chem

**B6**

**Plan** **B6**

- Re-check chemistry

**B6**

**B6**

**B6**

SOAP Text **B6** 9:19AM - Clinician, Unassigned FHSA

**Day 3 Hospitalization**

**B6** 10.5 yo MN Boxer

**HISTORY:**

Current history:

In July primary vet noticed heart arrhythmia during appointment, when he was seen then due to symptom of wheezing. rDVM started **B6** and owners gave that for a couple of weeks and wheezing resolved, owners then stopped sotalol (they didn't know they were supposed to continue). About 1 week ago started wheezing again (sporadic), becoming more clingy and lethargic. Owner had been out of town for a week, **B6** was at home with husband and owner is unsure what other symptoms **B6** has. Owner's husband did restart **B6** on Tuesday. No vomiting/heaving. Owner reports that he is drinking water normally, but didn't finish his food this morning which is abnormal for him. Unknown diarrhea, appetite status while owner was gone.

Prior medical history: none, **B6**

Current medications: **B6** (owner unsure strength), did start it on Tuesday. Took months long break of **B6** due to symptoms resolving.

Diet: royal canin boxer, dry, unknown length of time (last 1.5-2 yrs); was on grain free diet before this

Vaccination status/flea & tick preventative use: UTD on vaccines

Travel history: none

**Overnight update:**

Patient starting to be a little interested in food. Arrhythmia still not well under control -- HR ~ 170-180 with intermittent R on T, pauses and AIVR, multiforme VPCs.

**EXAM:**

**B6**

C/V: II-III/VI left apical systolic murmur, arrhythmia (premature beats), ssfp

**B6**

**B6**

**B6**

**ASSESSMENT:**

A1: Severe cardiomegaly with poor contractile function - r/o primary DCM, diet-induced cardiomyopathy, ARVC, tachycardiac induced cardiomyopathy

A2: Malignant ventricular arrhythmia - non-sustained VTach and frequent polymorphic VPCs

A3: Left sided congestive heart failure

**PLAN:**

**Diagnosics completed:**

- Thoracic radiographs **B6**

- Cardiopulmonary changes are consistent with left-sided congestive heart failure. Given moderate generalized cardiomegaly and moderate left atrial enlargement, consider DCM given breed. Echocardiography is recommended and repeat thoracic radiographs to monitor response to therapy.

- Impression of faint rounded soft tissue opacities mixed in with the intersitital pattern may represent peribronchial cuffing and end on vessels, pulmonary nodules are thought less likely. Follow-up radiographs to reassess the lungs are recommended after resolution of cardiogenic pulmonary edema.

- Concurrent mild diffuse bronchial pattern likely represents a component of lower airway disease.

- Echocardiogram/ Cardio recommendations **B6**

Findings consistent with DCM with active CHF and frequent ventricular arrhythmia. Patient has enough malignant arrhythmia that hospitalization and **B6** and telemetry monitoring is recommended.

**B6** 2mg/kg q 4-6h is recommended for the day and depending how well he responds, maybe we can decrease to q6-8h overnight. Patient has historically been on grain free diet for years before been switched to current diet. It is unclear whether this is a primary DCM, ARVC with DCM phenotype, or diet-induced cardiomyopathy, but **B6** 7.5mg BID and Taurine 500mg are also recommended. Apparently patient tolerated well **B6** in the past, but at this point this medication should ideally be avoided at this point due to potential beta-blocker effects that may worsen systolic function. Thus, recommend bloodwork and if liver values are normal, **B6** 200mg BID (decreasing to SID after 5 days) should be started. Fish oil may also be effective helping decrease ventricular arrhythmia density. Recommend addition of an **B6** when patient is eating and not azotemic. Recommend repeat echocardiogram in 3 months or sooner in case patient develops clinical signs consistent with progression of the disease (shortness breath, collapse, syncope, exercise intolerance, pale mucous membrane). Client can be instructed on how to use AliveCor and assess heart rate and rhythm from home if patient at rest and calm at home.

**B6**

	BUN	creat	Na	K	Cl	ALT
<b>B6</b>				<b>B6</b>		

B6

B6

B6

Treatment Plan B6

B6

Plan B6

B6

Plan B6

B6

B6

SOAP Text Feb 25 2019 7:17AM - Clinician, Unassigned FHSA

**History:**

10.5 y.o MN Boxer presented to rDVM [B6] for wheezing and decreased appetite at home for 1 week. rDVM referred to Tufts ER. O were on vacation and are unclear on exact symptoms and duration. Pt was previously seen at rDVM for wheezing in July where arrhythmia was noted and pt was started on [B6] (O unclear on dose). O discontinued [B6] when wheezing resolved. Was on grain-free diet until ~1.5 years ago.

**Subjective:**

B6



**B6**

Overall impression since arrival or since last exam: Improved since admission to ER on **B6**. The RR are back to normal and his has no RE. Ate for us a small amount this morning which is good. Seems slightly brighter. Telemetry revealed persistent multiform ventricular tachycardia with fast rate with no obvious improvement compared to previously.

Appetite: No immediate interest in food, ate when stimulated and hand fed.

**Objective:**

**B6**

Heart: Grade II-II/VI left apical systolic murmur. Multiple premature beats with short runs of sustained tachycardia. Jugular veins bottom 1/3 of the neck. Femoral pulses fair with pulses deficits.

**B6**

**Treatments in hospital**

**B6**

**Diagnostics**

- Thoracic rads **B6** Moderate generalized cardiomegaly and moderate left atrial enlargement consistent with left-sided congestive heart failure/DCM. Cardiogenic pulmonary edema. Concurrent mild diffuse bronchial pattern likely represents a component of lower airway disease.
- Echo (Abridged due to dyspnea, **B6**) Findings consistent with DCM with active CHF and frequent ventricular arrhythmia. Severe cardiomegaly with poor contractile function.

**B6**

**Assessments**

- A1: DCM vs. ARVC with DCM phenotype with history of active LCHF
- A2: Malignant ventricular arrhythmia - non-sustained VTach and frequent polymorphic VPCs

**Plan**

**B6**

**B6**

**B6**

**B6**

**Disposition/Recommendations**

---

**B6**

---

---

**B6**

**Cummings**  
Veterinary Medical Center  
AT TUFTS UNIVERSITY

**B6**

<b>B6</b>	
Veterinarian:	
Patient ID:	<b>B6</b>
Visit ID:	

<b>B6</b>	
Species:	Canine
Breed:	Boxer
Sex:	Male (Neutered)
Age:	<b>B6</b> Years Old

**Lab Results Report**

**Nova Full Panel-ICU**      **B6** 9:30:25 AM      Accession ID: **B6**

Test	Results	Reference Range	Units
SO2%		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	

**B6**



12/85

**B6**

Printed Monday, February 25, 2019

**B6**

FiO2	<b>B6</b>	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**      **B6** 9:36:12 AM      **Accession ID:** **B6**

Test	Results	Reference Range	Units
TS (FHSA)	<b>B6</b>	0 - 0	g/dl
PCV **		0 - 0	%
TS (FHSA)		0 - 0	g/dl

**Nova Full Panel-ICU**      **B6** 9:56:25 AM      **Accession ID:** **B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	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
MAGNESIUM 2+		1.8 - 3	mEq/L
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
tCO2 (BICARB)		14 - 28	mEq/L
AGAP		8 - 19	
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
ALK PHOS		12 - 127	U/L
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		22 - 422	U/L
CHOLESTEROL		82 - 355	mg/dL
TRIGLYCERIDES	30 - 338	mg/dl	
AMYLASE	409 - 1250	U/L	

1930 Result(s) verified



**B6**

OSMOLALITY (CALCULATED) **B6** 291 - 315 mmol/L

**Nova Full Panel-ICU** **B6** 12:18:25 PM Accession ID: **B6**

Test	Results	Reference Range	Units	
GLUCOSE	<b>B6</b>	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	
MAGNESIUM 2+		1.8 - 3	mEq/L	
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	
tCO2 (BICARB)		14 - 28	mEq/L	
AGAP		8 - 19		
NA/K		29 - 40		
T BILIRUBIN		0.1 - 0.3	mg/dL	
ALK PHOS		12 - 127	U/L	
GGT		0 - 10	U/L	
ALT		14 - 86	U/L	
AST		9 - 54	U/L	
CK		22 - 422	U/L	
CHOLESTEROL		82 - 355	mg/dL	
TRIGLYCERIDES		30 - 338	mg/dl	
AMYLASE		409 - 1250	U/L	
2888 Result(s) verified				
OSMOLALITY (CALCULATED)			291 - 315	mmol/L



**B6**

B6

medical records 7/17/16

B6

**B6**

Date: **B6**

To: TJAS ER

Comments:

**B6**

Pages: \_\_\_\_\_

If you have received this fax in error, please contact

The **B6**

Thank you, and have a nice day!



01 / 1 #

**B6**

09:58AM, FROM:

**B6**

**B6**

**B6**

medical records 7/17/16

**B6**

Patient Chart

**B6**

Printed: **B6** at 8:51a

**B6**

PATIENT INFORMATION

**B6**

Sex Male, Neutered  
 Birthday **B6**  
 ID **B6**  
 Color Brown  
 Reminded 02-18-19

Species Canine  
 Breed Boxer  
 Age 10y  
 Rabies 1959-16  
 Weight 57.40 Lbs  
 Codes

Reminders for **B6**

Last done

**B6**

**B6** weight history

**B6**

MEDICAL HISTORY - S.Q.A.P. View

Date	By	Code	Description	Qty (Variance)	Photo
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**B6**

SUBJECTIVE SECTION

01 / 2 / 10 #

**B6**

9:58AM From:

**B6**



B6

B6

medical records 7/17/16

B6

B6

B6

Date: B6 time: 8:51a

Page: 2

Date	By	Code	Description	Qty (Variance)	Photo
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B6 brought B6 in today... she just got home from a business trip and her husband told her that B6 has been coughing at night and generally not doing well. There are notes of collapsing episodes in 2014 in our records (owner doesn't remember these) and we have auscultated an arrhythmia at visits since 2015. ARVC and cardiologist intervention has been discussed on numerous occasions but has always been declined. B6 started B6 on B6 in July 2018 due to a profound arrhythmia, but the owners were unaware that this was something they should have continued long-term and stopped it a long time ago because B6 had been doing well at home. His condition at home has declined in the last week or two and now they are seeing:

- a light wheeze-like outward coughing/chuffing intermittently throughout the day, but mostly at night
- generalized lethargy and exercise intolerance on walks
- appetite is decreased

OBJECTIVE SECTION

Quiet, nervous

Examination Results:

Heart

irregular cardiac arrhythmia with variable pulse quality and dropped beats, grade I-II murmur, slightly pale mm for a nervous dog

B6

ASSESSMENT SECTION

NOTES

10yo CM Boxer

- hx cardiac arrhythmia (not worked up): suspect ARVC
- new heart murmur, pulmonary crackles: suspect CHF... r/o primary pulmonary pathology

PLAN SECTION

NOTES

Discussed with B6; certainly has ARVC which has never been worked up with a cardiologist and I fear that he is currently in heart failure. He needs to be evaluated by a cardiologist ASAP to get him started on medication which may help improve heart function and lessen frequency of arrhythmia. Things are now an emergency. B6 will bring him to Tufts. Discussed that if he seems "stable" (understanding dogs with ARVC are ALWAYS at risk of sudden death) and/or owner has financial constraints he may be able to be evaluated as a day-case (admit through the ER for the day to facilitate

01 / 3 #

B6

58AM:FROM

B6

**B6**

**B6**

medical records 7/17/16-

**B6**

**B6**

**B6**

Page: 3

Date	By	Code	Description	Qty (Variance)	Photo
07-24-18	<b>B6</b>	WELL	cardiac workup and home on oral meds). If he seems unstable they may recommend admission for monitoring overnight. Did not take CXR or perform diagnostics since Tufts will repeat these anyway. Wellness Annual Medical Record		

Age: 9y

**B6**

# 4 / 10

**B6**

FORM

**B6**

**B6**

**B6**

medical records 7/17/16

**B6**

**B6**

**B6**

Page: 4

Date	By	Code	Description	Qty (Variance)	Photo
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**B6**

# 5 / 10

**B6**

58AM:FROM:

**B6**

**B6**

**B6**

medical records 7/17/16-

**B6**

**B6**

**B6**

Page: 5

Date	By	Code	Description	Qty (Variance)	Photo
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**B6**

# 6 / 10

**B6**

09:58AM, From:

**B6**

**B6**

**B6**

medical records 7/17/16

**B6**

**B6**

**B6**

Page: 6

Date	By	Code	Description	Qty (Variance)	Photo
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**B6**

# 7 / 10

**B6**

09:58AM, From:

**B6**

**B6**

**B6**

medical records 7/17/16

**B6**

**B6**

**B6**

Page: 7

Date	By	Code	Description	Qty (Variance)	Photo
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**B6**

PLAN SECTION

NOTES

01 / 8 #

**B6**

8/10/16 9:58AM From:

**B6**

**B6**

**B6**

medical records 7/17/16

**B6**

**B6**

**B6**

Page: 8

Date By Code Description Qty (Variance) Photo

**B6**

ASSESSMENT SECTION

01 / 8 #

**B6**

9:58AM From:

**B6**

**B6**

**B6**

medical records 7/17/16

**B6**

**B6**

**B6**

Page: 9

Date	By	Code	Description	Qty (Variance)	Photo
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**B6**

01 / 01 #

**B6**

09:58AM:From:

**B6**



**B6**

CBC/Chem

**B6**



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

DUPLICATE

Patient ID: <b>B6</b>	Sex: CM	<b>B6</b>
Phone number:	Age: 10	Sample ID: 1902220072
Collection Date: <b>B6</b> 19 12:37 PM	Species: Canine	
Approval date: <b>B6</b> 19 1:35 PM	Breed: Boxer	

**CBC, Comprehensive, Sm Animal (Research)**

SMACHUNSKI		Ref. Range/Males
WBC (ADVIA)		4.40-15.10 K/uL
RBC (Advia)		5.80-8.50 M/uL
Hemoglobin (ADVIA)		13.3-20.5 g/dL
Hematocrit (Advia)		39-55 %
MCV (ADVIA)		64.5-77.5 fL
MCH (ADVIA)		21.3-25.9 pg
CHCM		
MCHC (ADVIA)		31.9-34.3 g/dL
RDW (ADVIA)		11.9-15.2
Platelet Count (Advia)		173-486 K/uL
02/22/19 1:35 PM		
	<b>B6</b>	
Mean Platelet Volume (Advia)		8.29-13.20 fl
02/22/19 1:13 PM		
Platelet Crit		0.129-0.403 %
02/22/19 1:13 PM		
PDW		
Reticulocyte Count (Advia)		0.20-1.60 %
Absolute Reticulocyte Count (Advia)		14.7-113.7 K/uL
CHr		
MCVr		

**Microscopic Exam of Blood Smear (Advia)**

SMACHUNSKI		Ref. Range/Males
Seg Neuts (%)		43-86 %
Lymphocytes (%)		7-47 %
Monocytes (%)		1-15 %
Nucleated RBC		0-1 /100 WBC
02/22/19 1:13 PM		
	<b>B6</b>	
Seg Neutrophils (Abs) Advia		2.800-11.500 K/uL
Lymphs (Abs) Advia		1.00-4.80 K/uL
Mono (Abs) Advia		0.10-1.50 K/uL
WBC Morphology		

Sample ID: 1902220072/1  
This report continues... (Final)

Reviewed by: \_\_\_\_\_

**B6**

CBC/Chem **B6**



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

DUPLICATE

Patient ID: <b>B6</b>		Sex: CM	<b>B6</b> Sample ID: 1902220072
Phone number:		Age: 10	
Collection Date:	<b>B6</b> 12:37 PM	Species: Canine	
Approval date:	1:35 PM	Breed: Boxer	

**Microscopic Exam of Blood Smear (Advia) (cont'd)**

SMACHUNSKI **B6** Ref. Range/Males  
Echinocytes

**Research Chemistry Profile - Small Animal (Cobas)**

		Ref. Range/Males
CSTCYR		
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	H	2.8-4.0 g/dL
Globulins		2.3-4.2 g/dL
A/G Ratio		0.7-1.6
Sodium	H	140-150 mEq/L
Chloride	L	106-116 mEq/L
Potassium		3.7-5.4 mEq/L
tCO2(Bicarb)	<b>B6</b>	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	H	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: 19022200722  
REPRINT: Orig. printing of **B6** (Final)

Reviewed by: \_\_\_\_\_  
Page 2

**B6**

IDEXX BNP **B6**

**B6**

Client **B6** Patient **B6**

IDEXX VetConnect 1-888-433-9967

**B6**  
Species: CANINE  
Breed: BOXER  
Gender: MALE NEUTERED  
Age: 11Y

Date: **B6**  
Requisition #: 439993  
**B6**  
**B6**

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	<b>B6</b>	0 - 900 pmol/L	HIGH		<b>B6</b>

Comments:

**B6**

B6

Diet history

B6

CARDIOLOGY DIET HISTORY FORM

Please answer the following questions about your pet

OTHER B6  
WILL LOOK UP PER WHETHER  
TO INCLUDE B6

Pet's name:

B6

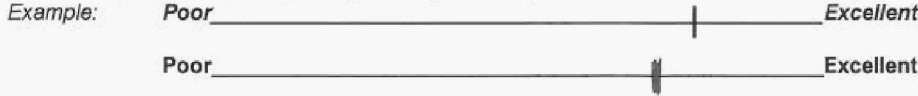
Owner's name:

B6

Today's date:

B6

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
Wellness Complete Health - Sweet Potato & Fish	dry	1 cup	2x/day	2012-2018
Mother Hubbard's Grain-free	dry	1 cup	2x/day	2018-2012
Milkbone brushing chews	treat		1/day	2018-2019
Milkbone treat	Treats		2-3x/day	longtime
Royal Canine Boxer	Dry	1 cup	2x/day	6/2018-present
Wellness Soft Bites Lamb/Salmon grain-free	Treats		1x/day	longtime

\*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): Cheese, Pepperoni
- WILL SWITCH TO RC CARNITINE

**B6**

**Vitals Results**

10:25:01 AM	Lasix treatment note
10:36:48 AM	Weight (kg)
10:58:00 AM	Lasix treatment note
12:43:21 PM	Eliminations
12:43:37 PM	Nursing note
12:44:22 PM	Quantify IV Fluids (CRI) in mls
12:50:46 PM	Cardiac rhythm
12:50:47 PM	Heart Rate (/min)
12:52:26 PM	Respiratory Rate
1:00:33 PM	Eliminations
1:10:19 PM	Quantify IV Fluids (CRI) in mls
1:10:20 PM	Catheter Assessment
2:03:55 PM	Cardiac rhythm
2:03:56 PM	Heart Rate (/min)
2:04:50 PM	Respiratory Rate
2:25:32 PM	Lasix treatment note
2:40:57 PM	Eliminations
3:00:23 PM	Cardiac rhythm
3:00:24 PM	Heart Rate (/min)
3:01:00 PM	Respiratory Rate
3:49:48 PM	Cardiac rhythm
3:49:49 PM	Heart Rate (/min)
3:50:33 PM	Respiratory Rate
4:05:52 PM	Eliminations
4:07:29 PM	Eliminations
4:07:44 PM	Nursing note
4:31:46 PM	Nursing note
5:00:16 PM	Cardiac rhythm
5:00:17 PM	Heart Rate (/min)
5:05:10 PM	Respiratory Rate
5:38:29 PM	Eliminations
5:38:44 PM	Amount eaten
5:55:28 PM	Nursing note
6:03:19 PM	Cardiac rhythm
6:03:20 PM	Heart Rate (/min)
6:04:06 PM	Respiratory Rate
6:24:06 PM	Quantify IV Fluids (CRI) in mls

**B6**

**B6**

**B6**

**Vitals Results**

6:24:07 PM	Catheter Assessment
6:51:37 PM	Cardiac rhythm
6:51:38 PM	Heart Rate (/min)
6:51:49 PM	Respiratory Rate
7:51:32 PM	Respiratory Rate
7:52:03 PM	Cardiac rhythm
7:52:04 PM	Heart Rate (/min)
7:53:44 PM	Lasix treatment note
8:45:01 PM	Eliminations
8:52:50 PM	Cardiac rhythm
8:52:51 PM	Heart Rate (/min)
8:59:02 PM	Respiratory Rate
9:25:37 PM	Quantify IV Fluids (CRI) in mls
9:25:38 PM	Catheter Assessment
9:49:17 PM	Cardiac rhythm
9:49:18 PM	Heart Rate (/min)
9:56:13 PM	Respiratory Rate
10:51:19 PM	Cardiac rhythm
10:51:20 PM	Heart Rate (/min)
10:52:28 PM	Respiratory Rate
11:34:01 PM	Amount eaten
11:55:25 PM	Respiratory Rate
11:55:36 PM	Eliminations
11:55:46 PM	Cardiac rhythm
11:55:47 PM	Heart Rate (/min)
1:00:00 AM	Cardiac rhythm
1:00:01 AM	Heart Rate (/min)
1:00:21 AM	Respiratory Rate
1:52:25 AM	Lasix treatment note
1:52:38 AM	Eliminations
1:53:31 AM	Respiratory Rate
1:53:43 AM	Quantify IV Fluids (CRI) in mls
1:53:44 AM	Catheter Assessment
1:54:09 AM	Cardiac rhythm
1:54:10 AM	Heart Rate (/min)
2:16:55 AM	Eliminations
2:33:32 AM	Eliminations
2:39:52 AM	Cardiac rhythm
2:39:53 AM	Heart Rate (/min)
3:36:15 AM	Cardiac rhythm
3:36:16 AM	Heart Rate (/min)

**B6**

**B6**

**B6**

**Vitals Results**

3:41:17 AM	Respiratory Rate
3:41:27 AM	Eliminations
4:49:07 AM	Cardiac rhythm
4:49:08 AM	Heart Rate (/min)
4:49:51 AM	Respiratory Rate
5:28:53 AM	Respiratory Rate
5:29:07 AM	Quantify IV Fluids (CRI) in mls
5:29:08 AM	Catheter Assessment
5:36:36 AM	Temperature (F)
5:56:48 AM	Cardiac rhythm
5:56:49 AM	Heart Rate (/min)
6:56:08 AM	Cardiac rhythm
6:56:09 AM	Heart Rate (/min)
6:56:56 AM	Respiratory Rate
7:37:07 AM	Weight (kg)
7:37:52 AM	Eliminations
7:58:21 AM	Cardiac rhythm
7:58:22 AM	Heart Rate (/min)
7:59:12 AM	Respiratory Rate
9:09:20 AM	Cardiac rhythm
9:09:21 AM	Heart Rate (/min)
9:33:45 AM	Respiratory Rate
10:02:14 AM	Cardiac rhythm
10:02:15 AM	Heart Rate (/min)
10:05:31 AM	Respiratory Rate
10:05:43 AM	Catheter Assessment
10:05:50 AM	Lasix treatment note
11:06:13 AM	Cardiac rhythm
11:06:14 AM	Heart Rate (/min)
11:07:32 AM	Respiratory Rate
11:27:21 AM	Eliminations
11:27:43 AM	Amount eaten
12:23:03 PM	Cardiac rhythm
12:23:04 PM	Heart Rate (/min)
12:26:12 PM	Respiratory Rate
1:04:31 PM	Cardiac rhythm
1:04:32 PM	Heart Rate (/min)
1:05:24 PM	Respiratory Rate
1:20:37 PM	Catheter Assessment

**B6**

**B6**

**B6**

**Vitals Results**

1:55:09 PM	Cardiac rhythm
1:55:10 PM	Heart Rate (/min)
1:55:50 PM	Respiratory Rate
2:52:23 PM	Cardiac rhythm
2:52:24 PM	Heart Rate (/min)
2:53:23 PM	Respiratory Rate
3:12:08 PM	Eliminations
3:50:24 PM	Respiratory Rate
3:50:40 PM	Cardiac rhythm
3:50:41 PM	Heart Rate (/min)
4:49:31 PM	Respiratory Rate
4:54:01 PM	Cardiac rhythm
4:54:02 PM	Heart Rate (/min)
5:22:43 PM	Catheter Assessment
5:33:09 PM	Amount eaten
5:46:40 PM	Respiratory Rate
5:46:52 PM	Cardiac rhythm
5:46:53 PM	Heart Rate (/min)
6:00:15 PM	Amount eaten
6:20:32 PM	Lasix treatment note
6:30:51 PM	Eliminations
7:00:21 PM	Cardiac rhythm
7:00:22 PM	Heart Rate (/min)
7:08:36 PM	Respiratory Rate
8:00:49 PM	Eliminations
8:07:32 PM	Cardiac rhythm
8:07:33 PM	Heart Rate (/min)
8:08:32 PM	Respiratory Rate
9:00:28 PM	Cardiac rhythm
9:00:29 PM	Heart Rate (/min)
9:06:37 PM	Respiratory Rate
9:17:59 PM	Catheter Assessment
9:36:52 PM	Eliminations
9:40:20 PM	Respiratory Rate
9:41:25 PM	Cardiac rhythm
9:41:26 PM	Heart Rate (/min)
11:21:33 PM	Cardiac rhythm
11:21:34 PM	Heart Rate (/min)
11:22:05 PM	Respiratory Rate
11:24:38 PM	Amount eaten
11:27:39 PM	Weight (kg)

**B6**

**B6**



**B6**

**Vitals Results**

12:10:14 AM	Cardiac rhythm
12:10:15 AM	Heart Rate (/min)
12:10:41 AM	Respiratory Rate
1:02:51 AM	Catheter Assessment
1:03:53 AM	Cardiac rhythm
1:03:54 AM	Heart Rate (/min)
1:04:19 AM	Respiratory Rate
1:05:57 AM	Eliminations
1:22:13 AM	Respiratory Rate
1:22:23 AM	Eliminations
1:22:32 AM	Nursing note
1:57:47 AM	Lasix treatment note
2:00:09 AM	Cardiac rhythm
2:00:10 AM	Heart Rate (/min)
2:59:53 AM	Cardiac rhythm
2:59:54 AM	Heart Rate (/min)
3:03:46 AM	Respiratory Rate
3:04:41 AM	Eliminations
3:51:27 AM	Respiratory Rate
3:58:14 AM	Cardiac rhythm
3:58:15 AM	Heart Rate (/min)
4:58:50 AM	Catheter Assessment
5:06:40 AM	Weight (kg)
5:06:48 AM	Eliminations
5:06:59 AM	Temperature (F)
5:08:17 AM	Cardiac rhythm
5:08:18 AM	Heart Rate (/min)
5:08:31 AM	Respiratory Rate
5:14:08 AM	Amount eaten
5:48:40 AM	Cardiac rhythm
5:48:41 AM	Heart Rate (/min)
5:48:58 AM	Respiratory Rate
6:48:56 AM	Cardiac rhythm
6:48:57 AM	Heart Rate (/min)
6:49:50 AM	Respiratory Rate
7:40:17 AM	Eliminations
8:00:06 AM	Cardiac rhythm
8:00:07 AM	Heart Rate (/min)
8:01:08 AM	Respiratory Rate
9:04:42 AM	Respiratory Rate
9:10:17 AM	Cardiac rhythm

**B6**

**B6**

**B6**

**Vitals Results**

9:10:18 AM	Heart Rate (/min)
9:53:51 AM	Cardiac rhythm
9:53:52 AM	Heart Rate (/min)
10:00:19 AM	Respiratory Rate
10:01:02 AM	Lasix treatment note
10:01:17 AM	Catheter Assessment
10:02:17 AM	Eliminations
11:05:02 AM	Respiratory Rate
11:06:36 AM	Cardiac rhythm
11:06:37 AM	Heart Rate (/min)
11:31:26 AM	Amount eaten
12:11:21 PM	Cardiac rhythm
12:11:22 PM	Heart Rate (/min)
12:13:06 PM	Respiratory Rate
12:55:17 PM	Respiratory Rate
12:55:33 PM	Cardiac rhythm
12:55:34 PM	Heart Rate (/min)
12:59:07 PM	Eliminations
12:59:18 PM	Catheter Assessment
1:49:53 PM	Respiratory Rate
1:50:09 PM	Cardiac rhythm
1:50:10 PM	Heart Rate (/min)
3:10:31 PM	Respiratory Rate
3:11:24 PM	Cardiac rhythm
3:11:25 PM	Heart Rate (/min)
4:04:23 PM	Cardiac rhythm
4:04:24 PM	Heart Rate (/min)
4:04:40 PM	Respiratory Rate
5:04:41 PM	Cardiac rhythm
5:04:42 PM	Heart Rate (/min)
5:04:55 PM	Respiratory Rate
5:11:38 PM	Eliminations
5:19:41 PM	Amount eaten
5:31:53 PM	Amount eaten
5:35:31 PM	Catheter Assessment
5:57:20 PM	Cardiac rhythm
5:57:21 PM	Heart Rate (/min)
5:57:37 PM	Respiratory Rate

**B6**

**B6**

**B6**

**Vitals Results**

7:23:42 PM	Cardiac rhythm
7:23:43 PM	Heart Rate (/min)
7:24:28 PM	Respiratory Rate
7:56:19 PM	Cardiac rhythm
7:56:20 PM	Heart Rate (/min)
7:56:35 PM	Respiratory Rate
8:11:41 PM	Eliminations
8:11:50 PM	Weight (kg)
8:46:12 PM	Cardiac rhythm
9:17:13 PM	Catheter Assessment
9:17:21 PM	Lasix treatment note
9:18:03 PM	Cardiac rhythm
9:18:04 PM	Heart Rate (/min)
9:19:25 PM	Respiratory Rate
9:23:52 PM	Weight (kg)
9:24:05 PM	Eliminations
9:53:36 PM	Cardiac rhythm
9:53:37 PM	Heart Rate (/min)
9:53:49 PM	Respiratory Rate
11:08:13 PM	Cardiac rhythm
11:08:14 PM	Heart Rate (/min)
11:08:51 PM	Respiratory Rate
11:09:13 PM	Amount eaten
12:11:22 AM	Cardiac rhythm
12:11:23 AM	Heart Rate (/min)
12:12:14 AM	Respiratory Rate
12:50:11 AM	Cardiac rhythm
12:50:12 AM	Heart Rate (/min)
12:50:28 AM	Respiratory Rate
12:50:56 AM	Catheter Assessment
2:11:35 AM	Cardiac rhythm
2:11:36 AM	Heart Rate (/min)
2:12:04 AM	Eliminations
2:15:50 AM	Respiratory Rate
3:09:06 AM	Cardiac rhythm
3:09:07 AM	Heart Rate (/min)
3:09:21 AM	Respiratory Rate
4:42:38 AM	Cardiac rhythm
4:42:39 AM	Heart Rate (/min)
4:42:59 AM	Respiratory Rate
5:32:29 AM	Catheter Assessment

**B6**

**B6**

**B6**

**Vitals Results**

5:32:40 AM	Respiratory Rate
5:32:49 AM	Cardiac rhythm
5:32:50 AM	Heart Rate (/min)
5:41:15 AM	Eliminations
5:41:26 AM	Weight (kg)
5:45:16 AM	Temperature (F)
5:45:27 AM	Amount eaten
5:58:53 AM	Cardiac rhythm
5:58:54 AM	Heart Rate (/min)
5:59:10 AM	Respiratory Rate
7:26:07 AM	Respiratory Rate
7:28:28 AM	Cardiac rhythm
7:28:29 AM	Heart Rate (/min)
7:52:07 AM	Cardiac rhythm
7:52:08 AM	Heart Rate (/min)
7:54:41 AM	Respiratory Rate
9:01:52 AM	Cardiac rhythm
9:01:53 AM	Heart Rate (/min)
9:09:06 AM	Respiratory Rate
9:22:41 AM	Eliminations
10:03:30 AM	Cardiac rhythm
10:03:31 AM	Heart Rate (/min)
10:21:53 AM	Catheter Assessment
10:22:05 AM	Respiratory Rate
10:25:31 AM	Lasix treatment note
10:51:49 AM	Cardiac rhythm
10:51:50 AM	Heart Rate (/min)
10:57:46 AM	Respiratory Rate
12:03:00 PM	Cardiac rhythm
12:03:01 PM	Heart Rate (/min)
12:03:41 PM	Respiratory Rate
12:59:10 PM	Cardiac rhythm
12:59:11 PM	Heart Rate (/min)
1:00:11 PM	Respiratory Rate
1:06:35 PM	Eliminations
1:07:04 PM	Catheter Assessment
1:58:26 PM	Cardiac rhythm
1:58:27 PM	Heart Rate (/min)
1:59:52 PM	Respiratory Rate
2:49:26 PM	Cardiac rhythm

**B6**

**B6**

**B6**

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**Vitals Results**

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**B6**

2:49:27 PM  
2:49:40 PM  
3:47:30 PM  
3:47:31 PM  
3:47:42 PM

Heart Rate (/min)  
Respiratory Rate  
Cardiac rhythm  
Heart Rate (/min)  
Respiratory Rate

**B6**

**B6**

ECG from Cardio

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**B6**

**B6**

11:43:38 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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32 Lead Standard Placement

**B6**

**B6**

ECG from Cardio

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**B6**

**B6**

11:45:45 AM

Page 1 of 2

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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**B6**

**B6**

ECG from Cardio

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**B6**

**B6**

11:45:45 AM

Page 2 of 2

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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**B6**



**B6**

ECG from Cardio

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**B6**

**B6**

46:06 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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**B6**

**B6**

ECG from Cardio

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**B6**

**B6**

11:46:06 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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12 Lead: Standard Placement

**B6**

**B6**

ECG from Cardio

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**B6**

**B6**

11:48:08 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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12 Lead Standard Placement

**B6**

**B6**

ECG from Cardio

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**B6**

**B6**

:50:34 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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12 Lead Standard Placement

**B6**

**B6**

**Patient History**

09:15 AM	UserForm
09:30 AM	Purchase
09:36 AM	Labwork
09:36 AM	Purchase
10:10 AM	UserForm
10:16 AM	Purchase
10:16 AM	Treatment
10:25 AM	Vitals
10:34 AM	UserForm
10:36 AM	Vitals
10:46 AM	UserForm
10:52 AM	Deleted Reason
10:52 AM	Deleted Reason
10:52 AM	Treatment
10:58 AM	Vitals
11:36 AM	Treatment
11:47 AM	Purchase
12:01 PM	Prescription
12:02 PM	Prescription
12:43 PM	Vitals
12:43 PM	Vitals
12:44 PM	Vitals
12:50 PM	Purchase
12:50 PM	Purchase
12:50 PM	Treatment
12:50 PM	Vitals
12:50 PM	Vitals
12:52 PM	Treatment
12:52 PM	Vitals
01:00 PM	Treatment
01:00 PM	Vitals
01:00 PM	Treatment
01:10 PM	Treatment
01:10 PM	Vitals

**B6**

**B6**

**B6**

**Patient History**

01:10 PM	Vitals
01:26 PM	Purchase
01:26 PM	Purchase
01:26 PM	Purchase
01:42 PM	Purchase
01:42 PM	Purchase
02:03 PM	Treatment
02:03 PM	Vitals
02:03 PM	Vitals
02:04 PM	Treatment
02:04 PM	Vitals
02:11 PM	Purchase
02:11 PM	Purchase
02:25 PM	Vitals
02:40 PM	Treatment
02:40 PM	Vitals
03:00 PM	Treatment
03:00 PM	Vitals
03:00 PM	Vitals
03:01 PM	Treatment
03:01 PM	Vitals
03:49 PM	Treatment
03:49 PM	Vitals
03:49 PM	Vitals
03:50 PM	Treatment
03:50 PM	Vitals
04:05 PM	Vitals
04:07 PM	Vitals
04:07 PM	Vitals
04:24 PM	Deleted Reason
04:30 PM	Deleted Reason
04:31 PM	Vitals
04:32 PM	Prescription
05:00 PM	Treatment
05:00 PM	Vitals
05:00 PM	Vitals
05:05 PM	Treatment
05:05 PM	Vitals

**B6**

**B6**

**B6**

**Patient History**

05:16 PM	Treatment
05:38 PM	Treatment
05:38 PM	Vitals
05:38 PM	Treatment
05:38 PM	Vitals
05:39 PM	Treatment
05:55 PM	Vitals
06:03 PM	Treatment
06:03 PM	Vitals
06:03 PM	Vitals
06:04 PM	Treatment
06:04 PM	Vitals
06:24 PM	Treatment
06:24 PM	Vitals
06:24 PM	Vitals
06:49 PM	Prescription
06:51 PM	Treatment
06:51 PM	Vitals
06:51 PM	Vitals
06:51 PM	Treatment
06:51 PM	Vitals
07:51 PM	Treatment
07:51 PM	Treatment
07:51 PM	Vitals
07:52 PM	Treatment
07:52 PM	Vitals
07:52 PM	Vitals
07:53 PM	Vitals
07:53 PM	Treatment
08:45 PM	Vitals
08:52 PM	Treatment
08:52 PM	Treatment
08:52 PM	Vitals
08:52 PM	Vitals
08:59 PM	Treatment
08:59 PM	Vitals
09:09 PM	Treatment
09:09 PM	Treatment
09:25 PM	Treatment
09:25 PM	Vitals
09:25 PM	Vitals

**B6**

**B6**

**B6**

**Patient History**

09:49 PM	Treatment
09:49 PM	Vitals
09:49 PM	Vitals
09:56 PM	Treatment
09:56 PM	Vitals
10:51 PM	Treatment
10:51 PM	Vitals
10:51 PM	Vitals
10:52 PM	Treatment
10:52 PM	Vitals
11:34 PM	Treatment
11:34 PM	Vitals
11:55 PM	Treatment
11:55 PM	Vitals
11:55 PM	Treatment
11:55 PM	Vitals
11:55 PM	Treatment
11:55 PM	Vitals
11:55 PM	Vitals
12:00 AM	Purchase
01:00 AM	Treatment
01:00 AM	Vitals
01:00 AM	Vitals
01:00 AM	Treatment
01:00 AM	Vitals
01:00 AM	Treatment
01:52 AM	Vitals
01:52 AM	Treatment
01:52 AM	Vitals
01:53 AM	Treatment
01:53 AM	Vitals
01:53 AM	Treatment
01:53 AM	Vitals
01:53 AM	Vitals
01:54 AM	Treatment
01:54 AM	Vitals
01:54 AM	Vitals
02:16 AM	Vitals
02:33 AM	Vitals
02:39 AM	Treatment
02:39 AM	Vitals

**B6**

**B6**



**B6**

**Patient History**

02:39 AM	Vitals
03:36 AM	Treatment
03:36 AM	Vitals
03:36 AM	Vitals
03:41 AM	Treatment
03:41 AM	Vitals
03:41 AM	Treatment
03:41 AM	Vitals
04:49 AM	Treatment
04:49 AM	Vitals
04:49 AM	Vitals
04:49 AM	Treatment
04:49 AM	Vitals
05:25 AM	Treatment
05:28 AM	Treatment
05:28 AM	Vitals
05:29 AM	Treatment
05:29 AM	Vitals
05:29 AM	Vitals
05:29 AM	Treatment
05:36 AM	Treatment
05:36 AM	Vitals
05:36 AM	Treatment
05:56 AM	Treatment
05:56 AM	Vitals
05:56 AM	Vitals
06:56 AM	Treatment
06:56 AM	Vitals
06:56 AM	Vitals
06:56 AM	Treatment
06:56 AM	Vitals
07:37 AM	Treatment
07:37 AM	Vitals
07:37 AM	Treatment
07:37 AM	Vitals
07:38 AM	Treatment
07:58 AM	Treatment
07:58 AM	Vitals
07:58 AM	Vitals
07:59 AM	Treatment

**B6**

**B6**

**B6**

**Patient History**

07:59 AM	Vitals
09:02 AM	Treatment
09:05 AM	Prescription
09:09 AM	Treatment
09:09 AM	Vitals
09:09 AM	Vitals
09:12 AM	Treatment
09:27 AM	Deleted Reason
09:29 AM	Purchase
09:29 AM	Treatment
09:33 AM	Treatment
09:33 AM	Vitals
09:46 AM	Treatment
09:56 AM	Purchase
10:02 AM	Treatment
10:02 AM	Vitals
10:02 AM	Vitals
10:05 AM	Treatment
10:05 AM	Vitals
10:05 AM	Treatment
10:05 AM	Vitals
10:05 AM	Vitals
10:06 AM	Treatment
11:06 AM	Treatment
11:06 AM	Vitals
11:06 AM	Vitals
11:07 AM	Treatment
11:07 AM	Vitals
11:27 AM	Treatment
11:27 AM	Vitals
11:27 AM	Treatment
11:27 AM	Vitals
11:53 AM	UserForm
12:02 PM	Purchase
12:02 PM	Purchase
12:23 PM	Treatment
12:23 PM	Vitals
12:23 PM	Vitals
12:26 PM	Treatment

**B6**

**B6**

**B6**

**Patient History**

12:26 PM	Vitals
01:04 PM	Treatment
01:04 PM	Vitals
01:04 PM	Vitals
01:05 PM	Treatment
01:05 PM	Vitals
01:05 PM	Treatment
01:20 PM	Treatment
01:20 PM	Vitals
01:55 PM	Treatment
01:55 PM	Vitals
01:55 PM	Vitals
01:55 PM	Vitals
01:55 PM	Treatment
01:55 PM	Vitals
02:52 PM	Treatment
02:52 PM	Vitals
02:52 PM	Vitals
02:53 PM	Treatment
02:53 PM	Vitals
03:12 PM	Treatment
03:12 PM	Vitals
03:50 PM	Treatment
03:50 PM	Vitals
03:50 PM	Treatment
03:50 PM	Vitals
03:50 PM	Vitals
04:49 PM	Treatment
04:49 PM	Vitals
04:54 PM	Treatment
04:54 PM	Vitals
04:54 PM	Vitals
05:16 PM	Treatment
05:22 PM	Treatment
05:22 PM	Treatment
05:22 PM	Vitals
05:28 PM	Treatment
05:29 PM	Treatment
05:33 PM	Treatment
05:33 PM	Vitals
05:46 PM	Treatment

**B6**

**B6**

**B6**

**Patient History**

05:46 PM	Vitals
05:46 PM	Treatment
05:46 PM	Vitals
05:46 PM	Vitals
06:00 PM	Vitals
06:20 PM	Vitals
06:21 PM	Treatment
06:21 PM	Treatment
06:30 PM	Vitals
06:45 PM	Treatment
06:51 PM	Treatment
07:00 PM	Vitals
07:00 PM	Vitals
07:08 PM	Treatment
07:08 PM	Treatment
07:08 PM	Vitals
08:00 PM	Vitals
08:07 PM	Treatment
08:07 PM	Vitals
08:07 PM	Vitals
08:08 PM	Treatment
08:08 PM	Vitals
09:00 PM	Vitals
09:00 PM	Vitals
09:06 PM	Treatment
09:06 PM	Vitals
09:14 PM	Treatment
09:17 PM	Treatment
09:17 PM	Vitals
09:18 PM	Treatment
09:36 PM	Treatment
09:36 PM	Treatment
09:36 PM	Vitals
09:40 PM	Treatment
09:40 PM	Vitals
09:41 PM	Treatment
09:41 PM	Vitals
09:41 PM	Vitals
11:21 PM	Treatment
11:21 PM	Vitals
11:21 PM	Vitals

**B6**

**B6**

**B6**

2

**Patient History**

1:22 PM	Treatment
1:22 PM	Vitals
1:24 PM	Treatment
1:24 PM	Vitals
1:27 PM	Vitals
2:00 AM	Purchase
2:10 AM	Treatment
2:10 AM	Vitals
2:10 AM	Vitals
2:10 AM	Treatment
2:10 AM	Vitals
01:02 AM	Treatment
01:02 AM	Treatment
01:02 AM	Vitals
01:03 AM	Treatment
01:03 AM	Vitals
01:03 AM	Vitals
01:04 AM	Treatment
01:04 AM	Vitals
01:05 AM	Vitals
01:22 AM	Treatment
01:22 AM	Vitals
01:22 AM	Treatment
01:22 AM	Vitals
01:22 AM	Vitals
01:57 AM	Vitals
01:58 AM	Treatment
02:00 AM	Treatment
02:00 AM	Vitals
02:00 AM	Vitals
02:59 AM	Treatment
02:59 AM	Vitals
02:59 AM	Vitals
03:03 AM	Treatment
03:03 AM	Vitals
03:04 AM	Vitals
03:51 AM	Treatment
03:51 AM	Vitals
03:58 AM	Treatment
03:58 AM	Vitals
03:58 AM	Vitals
03:58 AM	Vitals
04:58 AM	Treatment

**B6**

**B6**

**B6**

**Patient History**

04:58 AM	Treatment
04:58 AM	Treatment
04:58 AM	Vitals
04:59 AM	Treatment
04:59 AM	Treatment
05:06 AM	Treatment
05:06 AM	Vitals
05:06 AM	Treatment
05:06 AM	Vitals
05:06 AM	Treatment
05:06 AM	Vitals
05:08 AM	Treatment
05:08 AM	Vitals
05:08 AM	Vitals
05:08 AM	Treatment
05:08 AM	Vitals
05:14 AM	Treatment
05:14 AM	Vitals
05:48 AM	Treatment
05:48 AM	Vitals
05:48 AM	Vitals
05:48 AM	Treatment
05:48 AM	Vitals
06:48 AM	Treatment
06:48 AM	Vitals
06:48 AM	Vitals
06:49 AM	Treatment
06:49 AM	Vitals
07:40 AM	Vitals
08:00 AM	Treatment
08:00 AM	Vitals
08:00 AM	Vitals
08:01 AM	Treatment
08:01 AM	Vitals
09:04 AM	Treatment
09:04 AM	Vitals
09:05 AM	Treatment
09:10 AM	Treatment
09:10 AM	Vitals
09:10 AM	Vitals
09:53 AM	Treatment

**B6**

**B6**

**B6**

**Patient History**

09:53 AM	Vitals
09:53 AM	Vitals
10:00 AM	Treatment
10:00 AM	Vitals
10:00 AM	Treatment
10:01 AM	Vitals
10:01 AM	Treatment
10:01 AM	Treatment
10:01 AM	Vitals
10:02 AM	Vitals
10:24 AM	Purchase
11:05 AM	Treatment
11:05 AM	Vitals
11:06 AM	Treatment
11:06 AM	Vitals
11:06 AM	Vitals
11:31 AM	Treatment
11:31 AM	Vitals
12:02 PM	Purchase
12:02 PM	Purchase
12:11 PM	Treatment
12:11 PM	Vitals
12:11 PM	Vitals
12:13 PM	Treatment
12:13 PM	Vitals
12:17 PM	Treatment
12:18 PM	Purchase
12:54 PM	Treatment
12:55 PM	Treatment
12:55 PM	Vitals
12:55 PM	Treatment
12:55 PM	Vitals
12:55 PM	Vitals
12:59 PM	Treatment
12:59 PM	Vitals
12:59 PM	Treatment
12:59 PM	Vitals
01:49 PM	Treatment
01:49 PM	Vitals
01:50 PM	Treatment
01:50 PM	Vitals

**B6**

**B6**

**B6**

**Patient History**

01:50 PM	Vitals
03:10 PM	Treatment
03:10 PM	Vitals
03:11 PM	Treatment
03:11 PM	Vitals
03:11 PM	Vitals
04:04 PM	Treatment
04:04 PM	Vitals
04:04 PM	Vitals
04:04 PM	Treatment
04:04 PM	Vitals
05:04 PM	Treatment
05:04 PM	Vitals
05:04 PM	Vitals
05:04 PM	Treatment
05:04 PM	Vitals
05:07 PM	Treatment
05:11 PM	Treatment
05:11 PM	Vitals
05:19 PM	Treatment
05:19 PM	Vitals
05:24 PM	Prescription
05:24 PM	Prescription
05:31 PM	Treatment
05:31 PM	Treatment
05:31 PM	Vitals
05:35 PM	Treatment
05:35 PM	Vitals
05:57 PM	Treatment
05:57 PM	Vitals
05:57 PM	Vitals
05:57 PM	Treatment
05:57 PM	Vitals
07:23 PM	Treatment
07:23 PM	Vitals
07:23 PM	Vitals
07:24 PM	Treatment
07:24 PM	Vitals
07:56 PM	Treatment
07:56 PM	Vitals

**B6**

**B6**



**B6**

**Patient History**

07:56 PM	Vitals
07:56 PM	Treatment
07:56 PM	Vitals
08:11 PM	Vitals
08:11 PM	Vitals
08:46 PM	Treatment
08:46 PM	Vitals
09:17 PM	Treatment
09:17 PM	Treatment
09:17 PM	Vitals
09:17 PM	Vitals
09:17 PM	Treatment
09:18 PM	Treatment
09:18 PM	Vitals
09:18 PM	Vitals
09:19 PM	Treatment
09:19 PM	Vitals
09:23 PM	Vitals
09:24 PM	Treatment
09:24 PM	Vitals
09:53 PM	Treatment
09:53 PM	Vitals
09:53 PM	Vitals
09:53 PM	Treatment
09:53 PM	Vitals
11:08 PM	Treatment
11:08 PM	Vitals
11:08 PM	Vitals
11:08 PM	Treatment
11:08 PM	Vitals
11:09 PM	Treatment
11:09 PM	Vitals
12:00 AM	Purchase
12:11 AM	Treatment
12:11 AM	Vitals
12:11 AM	Vitals
12:12 AM	Treatment
12:12 AM	Vitals
12:50 AM	Treatment
12:50 AM	Vitals
12:50 AM	Vitals
12:50 AM	Treatment
12:50 AM	Vitals

**B6**

**B6**

**B6**

**Patient History**

12:50 AM	Treatment
12:50 AM	Treatment
12:50 AM	Vitals
02:11 AM	Treatment
02:11 AM	Vitals
02:11 AM	Vitals
02:12 AM	Treatment
02:12 AM	Vitals
02:15 AM	Treatment
02:15 AM	Vitals
03:09 AM	Treatment
03:09 AM	Vitals
03:09 AM	Vitals
03:09 AM	Treatment
03:09 AM	Vitals
04:42 AM	Treatment
04:42 AM	Vitals
04:42 AM	Vitals
04:42 AM	Treatment
04:42 AM	Vitals
05:32 AM	Treatment
05:32 AM	Vitals
05:32 AM	Treatment
05:32 AM	Vitals
05:32 AM	Treatment
05:32 AM	Vitals
05:32 AM	Vitals
05:33 AM	Treatment
05:35 AM	Treatment
05:35 AM	Treatment
05:41 AM	Treatment
05:41 AM	Vitals
05:41 AM	Treatment
05:41 AM	Vitals
05:45 AM	Treatment
05:45 AM	Vitals
05:45 AM	Treatment
05:45 AM	Vitals
05:58 AM	Treatment
05:58 AM	Vitals
05:58 AM	Vitals
05:59 AM	Treatment

**B6**

**B6**

**B6**

**Patient History**

05:59 AM	Vitals
07:26 AM	Treatment
07:26 AM	Vitals
07:28 AM	Treatment
07:28 AM	Vitals
07:28 AM	Vitals
07:52 AM	Treatment
07:52 AM	Vitals
07:52 AM	Vitals
07:54 AM	Treatment
07:54 AM	Vitals
08:32 AM	Deleted Reason
08:33 AM	Purchase
09:01 AM	Treatment
09:01 AM	Vitals
09:01 AM	Vitals
09:09 AM	Treatment
09:09 AM	Vitals
09:22 AM	Treatment
09:22 AM	Vitals
09:43 AM	Treatment
10:03 AM	Treatment
10:03 AM	Vitals
10:03 AM	Vitals
10:21 AM	Treatment
10:21 AM	Vitals
10:22 AM	Treatment
10:22 AM	Vitals
10:22 AM	Treatment
10:25 AM	Vitals
10:26 AM	Treatment
10:51 AM	Treatment
10:51 AM	Vitals
10:51 AM	Vitals
10:57 AM	Treatment
10:57 AM	Vitals
12:02 PM	Purchase
12:02 PM	Purchase
12:02 PM	Treatment
12:03 PM	Vitals
12:03 PM	Vitals

**B6**

**B6**

**B6**

**Patient History**

12:03 PM	Treatment
12:03 PM	Vitals
12:59 PM	Treatment
12:59 PM	Vitals
12:59 PM	Vitals
12:59 PM	Treatment
01:00 PM	Treatment
01:00 PM	Vitals
01:06 PM	Treatment
01:06 PM	Vitals
01:07 PM	Treatment
01:07 PM	Vitals
01:19 PM	Prescription
01:33 PM	Purchase
01:33 PM	Treatment
01:58 PM	Treatment
01:58 PM	Vitals
01:58 PM	Vitals
01:59 PM	Treatment
01:59 PM	Vitals
02:49 PM	Treatment
02:49 PM	Vitals
02:49 PM	Vitals
02:49 PM	Treatment
02:49 PM	Vitals
03:40 PM	Prescription
03:40 PM	Prescription
03:41 PM	Prescription
03:41 PM	Prescription
03:47 PM	Treatment
03:47 PM	Vitals
03:47 PM	Vitals
03:47 PM	Treatment
03:47 PM	Vitals
03:53 PM	Purchase
04:34 PM	UserForm

**B6**

**B6**







**B6**

B6

B6

Male (Neutered)

Canine Boxer Brindle

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 Grantees) 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 Grantee'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 Grantee deems appropriate (provided that such photographs and images may not be used in for-profit commercials, unless such commercials are publicizing educational programs at Cummings School). As medical and surgical treatment necessitates the removal of tissue, cells, fluids or body parts of my animal, I authorize the Grantees 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 \$50.

I do further agree that should any payment, or the full amount of the sum stated above, become overdue more than 20 days from the above-agreed 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:

Date:

Owner's address:

**If the individual admitting the animal is someone other than the legal owner,  
please complete the portion below:**

The owner of the animal, , 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

# Treatment Plan

Estimated Charges

**B6**

**B6**

*This estimate is based upon our preliminary examination. This is an estimate and is not the final bill. Every effort will be made to keep you informed of the current status of your bill throughout your animal's hospitalization. The final fee may vary considerably from this estimated cost.*

Patient	Description	Low Qty	Low Extended	High Qty	High Extended
<b>B6</b>	Hospitalization for a few days of supportive care (EKG monitoring, medications) and diagnostic tests (bloodwork, x-rays, cardiology consultation, echocardiogram, EKG)	1.00	<b>B6</b>	1.00	<b>B6</b>

**B6**

Doctor of Record: **B6**

I understand that no guarantee of successful treatment is made. I certify that I have read and fully understand the authorization for medical and/or surgical treatment, the reason for why such medical and/or surgical treatment is considered necessary, as well as its advantages and possible complications, if any. I also assume financial responsibility for all charges incurred to this patient(s). I agree to pay 75% of the estimated cost at the time of admission. Additional deposits will be required if additional care or procedures are required. I further agree to pay the balance of the charges when this patient(s) is released.

Procedural billing is inclusive up to and including the estimated duration of hospitalization. There will be additional expenses if hospitalization extends beyond the specified duration. I have read, understand, and agree to accept the conditions of this treatment plan.

Thank you for entrusting us with your pet's care.

High Total	<b>B6</b>
Low Total	
75% Deposit	

**Radiology Request & Report**

**B6**  
Species: Canine  
Breed: Male (Neutered) Boxer  
Birthdate: **B6**  
Owner Name: **B6**  
Address: **B6**  
Patient ID: **B6**  
Date of request: **B6**  
Attending Clinician: **B6** Student:

Date of exam: **B6**

Patient Location: Ward/Cage: Weight(lbs) 0.00

- Sedation**
- Inpatient
  - Outpatient Time:
  - Waiting
  - Emergency
  - BAG
  - OBAG
  - 1/2 dose OBAG
  - DexDomitor/Butorphanol
  - Anesthesia to sedate/anesthetize

**Examination Desired:**  
3 view chest

**Presenting Complaint and Clinical Questions you wish to answer:**  
Emergency

**Pertinent History:**  
Arrhythmia  
FROM SOAP: "owner has been gone for a week **B6** was at home with husband. In July primary vet noticed heart arrhythmia due to symptom of wheezing. rDMM Started on **B6** owners gave that for a couple weeks and wheezing resolved, stopped **B6** 1 week ago started wheezing again (sporadic), became clingy and lethargic. No vomiting/heaving, drinking water, didn't finish food this morning which is abnormal, unknown diarrhea, appetite status while owner was gone. Did restart sotalol on Tuesday."

**Findings:**  
THORAX, THREE VIEWS.

There is increased interstitial opacity within the caudodorsal lung fields that also extends into the caudoventral lung field and cranial lung lobes. Additionally within this interstitial opacity there is a mild bronchial pattern and the impression of faint rounded soft tissue opacities. This interstitial pattern

overall is causing decreased conspicuity of the caudal lobar vessels and blurring of the caudodorsal cardiac silhouette. There is moderate left atrial enlargement and a small bulge in the 1-2 o'clock range on the DV projection consistent with mild left auricular appendage enlargement. The right heart is rounded on the DV and right lateral projection with the impression of increased sternal contact. The cranial lobar vein on the left lateral projection and the right caudal pulmonary veins are mildly distended compared to the arteries. The mediastinum and pleural space are normal.

The included abdomen is within normal limits. There is incidental ventral spondylosis deformans of T12-13.

**Conclusions:**

- Cardiopulmonary changes are consistent with left-sided congestive heart failure. Given moderate generalized cardiomegaly and moderate left atrial enlargement, consider DCM given breed. Echocardiography is recommended and repeat thoracic radiographs to monitor response to therapy.
- Impression of faint rounded soft tissue opacities mixed in with the interstitial pattern may represent peribronchial cuffing and end on vessels, pulmonary nodules are thought less likely. Follow-up radiographs to reassess the lungs are recommended after resolution of cardiogenic pulmonary edema.
- Concurrent mild diffuse bronchial pattern likely represents a component of lower airway disease.

**Radiologists**

Reviewing:

**Dates**

Reported:

Finalized:

**Discharge Instructions**

**Patient**

**Name:** B6  
**Signalment:** B6 Years Old Brindle Male (Neutered) Boxer

**Owner**

**Name:**  
**Address:**

B6

**Patient ID:** B6  
**Emergency Clinician:**  
**Consulting Clinician:** B6

**ER Supervisor:**

B6

**Admit Date:** B6 9:12:55 AM  
**Check Out Date:** B6

**Diagnosis:**

1. Dilated cardiomyopathy (DCM) with congestive heart failure
2. Malignant ventricular arrhythmia

**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 B6 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.

**Diagnostic test results and findings:**

- o **Chest radiograph (x-ray) findings:** The heart is enlarged and there is fluid in the lungs
- o **Echocardiogram findings:** All chambers of the heart are enlarged and there is fluid in the lungs
- o **ECG findings:** The ECG showed irregular heart rhythm
- o **Labwork findings:** The kidney values are mildly elevated; Liver values (ALT) slightly elevated

**History:**

B6 presented to Tufts ER on B6 for further evaluation of a one week history of wheezing. You report that your family vet noted a heart arrhythmia in July (was evaluated for wheezing) and B6 was started on B6. The wheezing resolved and the medication was discontinued. B6 didn't finish his breakfast the morning before presentation to ER, and this is abnormal for him.

**Physical exam:**

On presentation, B6 was bright and alert and his vital were normal except an elevated heart rate (160). He was noted to have a grade 2-3/6 heart murmur and an arrhythmia. He had moderate respiratory difficulty, and some wheezing and

coughing was noted intermittently. The rest of his physical exam was unremarkable.

**Diagnostic/Treatment plan:**

B6 had x-rays of his chest that showed evidence of left sided congestive heart failure and a moderate cardiomegaly (enlarged heart). He also had an echocardiogram which showed findings consistent with dilated cardiomyopathy (poor contractile function of the heart), active congestive heart failure, and frequent ventricular arrhythmia. B6 also had bloodwork which showed mild elevations in one of his liver values (ALT). On re-check bloodwork the next day, the liver value (ALT) was improved by still elevated. His kidney values also increased slightly, suspect due to the B6

While in the hospital, B6 was closely monitored with a continuous EKG, and he was given several medications to treat his conditions, including B6 (first night), B6 (urine), B6 after stopping B6

**Monitoring at home:**

1. Please monitor for any signs of lethargy, weakness, pale gums, cough, shortness of breath, inappetence, or collapse. If a collapsing episode is noted, please check your dog's gum color and try to get a sense of whether the heart rate is slow or fast. If you have an iPhone or Android smartphone device, you may want to explore the option of purchasing the Kardia device ([www.alivacor.com](http://www.alivacor.com) or search 'Kardia' on [www.amazon.com](http://www.amazon.com)). If you have an iPhone, download the 'Veterinary Alive' app. If you have an Android device, download the 'Kardia' app. Both are free to download. This will allow you to monitor the heart rate and rhythm at home. If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

2. We would like you to monitor your dog's breathing rate and effort at home, ideally during sleep or at a time of rest. The doses of drugs will be adjusted based on the breathing rate and effort. In general, most dogs with heart failure that is well controlled 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 if heart failure is controlled. An increase in breathing rate or effort will usually mean that you should give an extra dose of B6, if difficulty breathing is not improved by within 30-60 minutes after giving extra B6 then we recommend that a recheck exam be scheduled and/or that your dog be evaluated by an emergency clinic. There are instructions for monitoring breathing, and a form to help keep track of breathing rate and drug doses, on the Tufts HeartSmart web site (<http://vet.tufts.edu/heartsmart/at-home-monitoring/>).

**Recommended Medications:**

**B6**

**Diet suggestions:**

Dogs with arrhythmia may benefit from the addition of omega-3 fatty acids (fish oil) to the diet. Diets such as the Royal Canin Boxer or Early Cardiac diet or Hill's j/d have ample fish oil and may not require much (or any) additional supplementation.

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/>). You can also find additional information on supplements such as fish oil or other supplements that you might have questions about may be found on the Tufts HeartSmart web site: (<http://vet.tufts.edu/heartsmart/diet/>).

- 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  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/ucm613305.htm>) and a recent article published by Dr. Lisa Freeman on the Cummings School's PetFoodology 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:

Royal Canin Early Cardiac (veterinary diet)

Royal Canin Boxer

Purina Pro Plan Adult Weight Management

Purina Pro Plan Bright Mind Adult Small Breed Formula

#### Canned Food Options:

Hill's ScienceDiet Adult Beef and Barley Entree

Hill's Science Diet Adult 1-6 Healthy Cuisine Roasted Chicken, Carrot, and Spinach Stew

Royal Canin Mature 8+

We recommend slowly introducing one of the diets on the above list as follows: 25% of the new diet mixed with 75% old diet for 2-3 days, then 50:50, etc.

Hopefully you can find a diet on the list that  will enjoy!

If your dog has special nutritional needs or requires a homecooked diet, we recommend you schedule an appointment with our nutritionists (508-887-4696).

#### Exercise recommendations:

For the first 7 to 10 days after starting anti-arrhythmic medications and medications for heart failure, and until we know that the medications are effectively controlling arrhythmia, we recommend very **limited activity**. Leash walk only is ideal, and short walks to start. Once the arrhythmia and heart failure has been well controlled then slightly longer walks are acceptable. However, repetitive or strenuous high-energy activities (repetitive ball chasing, running fast off-leash, etc.) are not recommended as these activities may result in worsened arrhythmia or even sudden death.

#### Recheck/Follow-up:

A recheck exam is usually recommended in 7 to 14 days to check and see if the arrhythmia and heart failure is well controlled. If you wish to have the Cardiology service at Tufts assist with ongoing care of your pet's heart disease, please contact the Cardiology service by sending an email to [cardiovet@tufts.edu](mailto:cardiovet@tufts.edu) within 24-48 hours after your pet has been discharged to set up an appointment. After you have made an appointment with the Cardiology service, the Cardiology service will then be able to answer questions regarding the care of your pet. If instead you would like to continue care with

your primary care veterinarian, then please have your veterinarian contact us with any questions regarding the treatment of your pet. As always, if your pet again encounters an emergency, the Emergency Service is available to see you 24 hours a day, 365 days a year.

Thank you for entrusting us with [B6] care. Please contact our Cardiology liaison at (508)-887-4696 or email us at [cardiovet@tufts.edu](mailto:cardiovet@tufts.edu) for scheduling and non-emergent questions or concerns. Our emergency clinic is also open 24 hours/day.

Thank you for entrusting us with [B6] care. He is such a sweet boy!



# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY  
Cardiology Liaison: 508-887-4696

B6

Patient ID: B6

B6

Canine

Years Old Male (Neutered) Boxer

Brindle BW: Weight(lbs) 0.00

## Cardiology Inpatient ENROLLED IN DCM DIET STUDY

Date: B6

Weight: Weight(lbs) 25kg

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

Patient location:

ER

Presenting complaint and important concurrent diseases:

Previously diagnosed arrhythmia at rDVM in July, was started on B6 but discontinued after a few weeks due to resolution of symptoms (wheezing). Owner reports that while she was away last week his wheezing returned. Owner started B6 again last Tuesday. Now lethargic, decreased appetite. No other significant history.

Current medications and doses:

B6 (unknown concentration): 1/2 tab BID

At-home diet: (name, form, amount, frequency)

Royal canin boxer dry

Key indication for consultation: (murmur, arrhythmia, needs fluids, etc.)

Historical arrhythmia

Questions to be answered:

Does he have current heart disease/heart failure? degree of arrhythmia?

Is your consult time-sensitive? (e.g., anesthesia today, owner waiting, trying to get biopsy today)

- Yes (explain):
- No, owner waiting in lobby

**\*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 to
- 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

**Gallop:**

- Yes
- No
- Intermittent
- Pronounced
- Other:

**Pulmonary assessments:**

- Eupneic
- Moderate dyspnea
- Marked dyspnea
- Normal BV sounds
- Pulmonary Crackles
- Wheezes
- Upper airway stridor
- Other auscultatory findings: Cough

**Abdominal exam:**

- Normal
- Abdominal distension

Hepatomegaly

Mild ascites

**Echocardiogram Findings:**

**B6**

**Assessment and recommendations:**

Findings consistent with DCM with active CHF and frequent ventricular arrhythmia. Patient has enough malignant arrhythmia that hospitalization and Lidocaine CRI and telemetry monitoring is recommended. Furosemide 2mg/kg q 4-6h is recommended for the day and depending how well he responds, maybe we can decrease to q6-8h overnight. Patient has historically been on grain free diet for years before been switched to current diet. It is unclear whether this is a primary DCM, ARVC with DCM phenotype, or diet-induced cardiomyopathy, but  7.5mg BID and Taurine 500mg are also recommended. Apparently patient tolerated well  in the past, but we generally avoid it at this point due to potential beta-blocker effects that may worsen systolic function. Thus, recommend bloodwork and if liver values are normal  200mg BID (decreasing to SID after 5 days) should be started. However since he tolerated it in the past, otalol could be considered once CHF is resolved if liver values are elevated. Fish oil may also be effective helping decrease ventricular arrhythmia density. Recommend addition of a  when patient is eating and not azotemic. Recommend repeat echocardiogram in 3 months or sooner in case patient develops clinical signs consistent with progression of the disease (shortness breath, collapse, syncope, exercise intolerance, pale mucous membrane). Client can be instructed on how to use AliveCor and assess heart rate and rhythm from home if patient at rest and calm at home.

**Addendum 02/25/2019:**

The patient continues to have persistent ventricular tachycardia despite being on the **B6** for almost 3 days. It was elected to add **B6** 30 mg PO BID. The owner elected to take the patient home today despite poor arrhythmia controlled. Recheck ECG is recommended in 7-10 days.

**Treatment Plan:**

**B6**

**Final Diagnosis:**

Severe cardiomegaly with poor contractile function - r/o primary DCM, diet-induced cardiomyopathy, ARVC, tachycardiac induced cardiomyopathy.

Malignant ventricular arrhythmia - non-sustained VTach and frequent polymorphic VPCs;

Left sided congestive heart failure.

**Heart Failure Classification Score:**

**ISACHC Classification:**

- Ia
- Ib
- II
- IIIa
- IIIb

**ACVIM CHF Classification:**

- A
- B1
- B2
- C
- D

**M-Mode**

IVSd

LVIDd

LVPWd

IVSs

LVIDs

LVPWs

EDV(Teich)

ESV(Teich)

EF(Teich)

%FS

SV(Teich)

**B6**

cm  
cm  
cm  
cm  
cm  
cm  
ml  
ml  
%  
%  
ml

**M-Mode Normalized**

IVSdN

LVIDdN

LVPWdN

**B6**

{0.290 - 0.520}  
{1.350 - 1.730} !  
{0.330 - 0.530}

IVSsN  
LVIDsN  
LVPWsN

B6

{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)  
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

B6

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ml  
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ml  
BPM  
%  
%  
ml  
ml  
l/min  
l/min

Doppler

MR Vmax  
MR maxPG  
PV Vmax  
PV maxPG

B6

m/s  
mmHg  
m/s  
mmHg

Cardiology Liaison: 508-887-4696

### Discharge Instructions

**Patient**

Name: B6

Species: Canine

Brindle Male (Neutered) Boxer

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:**

Admit Date: B6 9:12:55 AM

Discharge Date: B6

**Diagnoses:**

- Suspected Arrhythmogenic right ventricular cardiomyopathy (ARVC) versus Dilated cardiomyopathy
- Active Congestive heart failure
- Ventricular arrhythmia - Not currently controlled -

**Clinical findings:**

Thank you for bringing B6 to Tufts University.

He presented to our ER last Friday after it was noticed that he had a decreased appetite and overall was not feeling like his normal self. He was previously diagnosed with an arrhythmia (irregular heart rate) back in July by your primary care veterinarian but had never been seen by a cardiologist.

Upon presentation to the ER, B6 was noticed to have increased respiratory effort and rate in addition to a non-productive cough. Also, his heart rate was faster than normal and he had very frequent irregular premature beats. Chest radiographs were then performed and were suspicious for accumulation of fluid within the lungs, a condition consistent with active congestive heart failure.

B6 was then seen by the Cardiology department where an echocardiogram (ultrasound of the heart) was performed. B6 has been diagnosed with a primary heart muscle disease called arrhythmogenic right ventricular cardiomyopathy (ARVC). This disease is common in Boxers and bulldogs and is also sometimes referred to as "Boxer Cardiomyopathy". The condition is characterized by replacement of the normal heart muscle by fat and/or scar tissue which may result in serious ventricular arrhythmias (abnormal heart rhythms originating from the lower chamber of the heart), cardiac enlargement

and congestive heart failure, or both. Dogs with ARVC may experience syncope (fainting) or sudden death as the result of ventricular arrhythmia.

As we discussed over the phone, another possibility to explain the changes within [B6] heart is a type of heart 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.

[B6] was then admitted to the hospital for further monitoring and management of his cardiac disease. Over the course of his stay in the hospital, it was noted that [B6] respiratory rate and effort progressively improved to the point of being back to normal today. However, his arrhythmia is fairly resistant to our current treatment. However, as we discussed every dog is different and require a different antiarrhythmic management at home. At this point of time, we are trying a new combination of medications with the hope that this will decrease the frequency of his arrhythmia.

Though we cannot reverse the changes in the heart muscle, we can control the arrhythmias with medical management and dogs without serious cardiac dilation can do well for months to even years after diagnosis with appropriate therapy and careful monitoring.

#### 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. The doses of drugs will be adjusted based on the breathing rate and effort.
- In general, most dogs with heart failure that is well controlled 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 if heart failure is controlled.
- An increase in breathing rate or effort will usually mean that you should give an extra dose of [B6] if difficulty breathing is not improved by within 30-60 minutes after giving extra [B6] then we recommend that a recheck exam be scheduled and/or that your dog be evaluated by an emergency clinic.
- There are instructions for monitoring breathing, and a form to help keep track of breathing rate and drug doses, on the Tufts HeartSmart web site (<http://vet.tufts.edu/heartsmart/at-home-monitoring/>).
- 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 an iPhone or Android smartphone device, you may want to explore the option of purchasing the Kardia Mobile device which will allow you to monitor the heart rate and rhythm at home ([www.alivecor.com](http://www.alivecor.com)). If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

#### Recommended Medications:

**B6**

# B6

**Diet suggestions:** Dogs with ARVC may benefit from the addition of omega-3 fatty acids (fish oil) to the diet. Diets such as the Royal Canin Boxer or Early Cardiac diet, or Hill's j/d have ample fish oil and may not require much (or any) additional supplementation. Additional information on supplements such as fish oil or other supplements that you might have questions about may be found on the Tufts HeartSmart web site: (<http://vet.tufts.edu/heartsmart/diet/>).

- 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 B6 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:

Royal Canin Early Cardiac (veterinary diet)

Royal Canin Boxer

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 Barley Entree

Hill's Science Diet Adult 1-6 Healthy Cuisine Roasted Chicken, Carrot, and Spinach Stew

Royal Canin Mature 8+

We recommend slowly introducing one of the diets on the above list as follows: 25% of the new diet mixed with 75% old diet for 2-3 days, then 50:50, etc.

Hopefully you can find a diet on the list that B6 will enjoy!

If your dog has special nutritional needs or requires a homecooked diet, we recommend you schedule an appointment with our nutritionists (508-887-4696).

**Exercise recommendations:** For the first 7 to 10 days after starting anti-arrhythmic medications, and until we know that the medications are effectively controlling arrhythmia, we recommend very limited activity. Leash walk only is ideal, and



short walks to start. Once the arrhythmia has been well-controlled then slightly longer walks are acceptable. However, repetitive or strenuous high energy activities (repetitive ball chasing, running fast off-leash, etc.) are not recommended as these activities may result in worsened arrhythmia or even sudden death.

**Recheck visits:**

A recheck ECG is recommended 1-2 weeks after any antiarrhythmic medication adjustments are made.

Sincere [ B6 ] was enrolled in the DCM study, we will need to see him back in 3, 6, and 9 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](mailto: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/>

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**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](http://vet.tufts.edu/cvmc/clinical-studies)*

---

Case: [ B6 ]

Owner: [ B6 ]

Discharge Instructions

### Notice of Patient Admit

Date: B6 9:12:55 AM  
Referring Doctor: B6  
Client Name:  
Patient Name: B6

Case No: B6

---

Dear Colleague,

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: ARVC, poor systolic function, L-CHF

If you have any questions regarding this particular case, please call 508-887-4988 to reach the ECC Service. Information is updated daily, by noon.

Thank you for your referral to our Emergency Service.

**Notice of Patient Admit**

Date:  9:12:55 AM

Case No:

Referring Doctor:

Client Name:

Patient Name:

---

Your patient presented to our Emergency service. Please make note of the following information to facilitate communication with our team.

The attending doctor is:

The reason for admission to the FHSA is: ARVC, L CHF

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/Charlie>

**B6**

**B6** Male (Neutered)  
Canine Boxer Brindle  
**B6**

**Daily Update From the Cardiology Service**

Today's date: 2/25/2019

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 today

Today's treatments include:

- bloodwork planned/pending
- echocardiography -  
Severe cardiomegaly with poor contractile function - r/o primary DCM, diet-induced cardiomyopathy, ARVC, tachycardiac induced cardiomyopathy. Left sided congestive heart failure.
- cardiac catheter procedure planned
- ongoing treatment for CHF secondary to DCM
- ongoing treatment for thrombosis
- ongoing treatment for arrhythmia - Malignant ventricular arrhythmia - non-sustained VTach and frequent polymorphic VPCs

Additional plans:

Please allow 3-5 business days for reports to be finalized upon patient discharge.

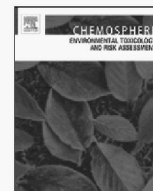
Please call (508) 887-4696 before 5pm or email us at [cardiovet@tufts.edu](mailto:cardiovet@tufts.edu) if you have any questions.  
Thank you!

Attending Clinician: [redacted] B6 DVM (Resident, Cardiology)  
Faculty Clinician: [redacted] B6 DVM, DACVIM  
Senior student:



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## Influence of mercury and selenium chemistries on the progression of cardiomyopathy in pygmy sperm whales, *Kogia breviceps*

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### HIGHLIGHTS

- ▶ More than half of stranded pygmy sperm whales exhibit signs of cardiomyopathy.
- ▶ Hg and Se balance and oxidative stress may influence progression of cardiomyopathy.
- ▶ Adults have significantly greater Hg:Se liver molar ratios than younger age classes.
- ▶ Hg:Se molar ratios were greater in males and increased with heart disease progression.
- ▶ Protein oxidation was greater in males and increased with heart disease progression.

### ARTICLE INFO

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Protein oxidation

Cardiomyopathy

Pygmy sperm whale

### ABSTRACT

More than half of pygmy sperm whales (*Kogia breviceps*) that strand exhibit signs of cardiomyopathy (CMP). Many factors may contribute to the development of idiopathic CMP in *K. breviceps*, including genetics, infectious agents, contaminants, biotoxins, and dietary intake (e.g. selenium, mercury, and pro-oxidants). This study assessed trace elements in *K. breviceps* at various stages of CMP progression using fresh frozen liver and heart samples collected from individuals that stranded along US Atlantic and Gulf coasts between 1993 and 2007. Standard addition calibration and collision cell inductively coupled plasma mass spectrometry (ICP-MS) were employed for total Se analysis and pyrolysis atomic absorption (AA) was utilized for total Hg analysis to examine if the Se/Hg detoxification pathway inhibits the bioavailability of Se. Double spike speciated isotope dilution gas chromatography ICP-MS was utilized to measure methyl Hg and inorganic Hg. Immunoblot detection and colorimetric assays were used to assess protein oxidation status. Data collected on trace elements, selenoproteins, and oxidative status were evaluated in the context of animal life history and other complementary histological information to gain insight into the biochemical pathways contributing to the development of CMP in *K. breviceps*. Cardiomyopathy was only observed in adult pygmy sperm whales, predominantly in male animals. Both Hg:Se molar ratios and overall protein oxidation were greater in males than females and increased with progression of CMP.

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# B4

**B4**

**B4**



**B4**

**B4**

**B4**

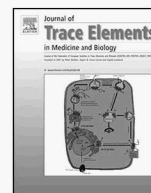
- Baker, M.A., Cerniglia, G.J., Zaman, A., 1990. Microtiter plate assay for the measurement of glutathione and glutathione disulfide in large numbers of biological samples. *Analytical Biochemistry* 190, 360–365.
- Bartfay, W.J., Hou, D., Brittenham, G.M., Bartfay, E., Sole, M.J., Lehotay, D., Liu, P.P., 1998. The synergistic effects of vitamin E and selenium in iron-overloaded mouse hearts. *Canadian Journal of Cardiology* 14, 937–941.
- Becker, P.R., 2000. Concentration of chlorinated hydrocarbons and heavy metals in Alaska Arctic marine mammals. *Marine Pollution Bulletin* 40, 819–829.
- Becker, P.R., Porter, B.J., Mackey, E.A., Schantz, M.M., Demiralp, R., Wise, S.A., 1999. National Marine Mammal Tissue Bank and Quality Assurance Program: protocols, inventory, and analytical results. NISTIR6279. USDOC, National Institute of Standards and Technology, Gaithersburg, MD.
- Berini, C., 2009. Pygmy sperm whale (*Kogia breviceps*, De Blainville 1838) strandings along the Atlantic coast of the southeastern United States: analysis of correlation with environmental factors. Grice Marine Biology Program. College of Charleston, Charleston, pp. 97.
- Booth, S., Zeller, D., 2005. Mercury, food webs, and marine mammals: implications of diet and climate change for human health. *Environmental Health Perspectives* 113, 521–526.
- Bossart, G.D., 2006. Marine mammals as sentinel species for oceans and human health. *Oceanography* 19, 134–137.
- Bossart, G.D., Hensley, G., Goldstein, J.D., Kroell, K., Manire, C.A., Defran, R.H., Reif, J.S., 2007. Cardiomyopathy and Myocardial Degeneration in Stranded Pygmy (*Kogia breviceps*) and Dwarf (*Kogia sima*) Sperm Whales. *Aquatic Mammals* 33, 214–222.
- Bossart, G.D., Odell, D.K., Altman, N.H., 1985. Cardiomyopathy in Stranded Pygmy and Dwarf Sperm Whales. *Journal of the American Veterinary Medical Association* 187, 1137–1140.
- Bradford, M.M., 1976. A rapid and sensitive method for the quantification of microgram quantities of protein using the principle of protein dye binding. *Annals of Biochemistry* 72, 248–254.
- Bryan, C.E., Christopher, S.J., Balmer, B.C., Wells, R.S., 2007. Establishing baseline levels of trace elements in blood and skin of bottlenose dolphins in Sarasota Bay, Florida: implications for non-invasive monitoring. *Science of the Total Environment* 388, 325–342.
- Bryan, C.E., Christopher, S.J., Davis, W.C., Day, R.D., Hohn, A.A., Wells, R.S., 2005. Establishing baseline trace element and methylmercury concentrations for bottlenose dolphins in Sarasota Bay, Florida as an indicator of health status. In: 16th Biennial Conference on the Biology of Marine Mammals, San Diego, CA.
- Bustamante, P., Garrigue, C., Breau, L., Caurant, F., Dabin, W., Greaves, J., Dodemont, R., 2003. Trace elements in two odontocete species (*Kogia breviceps* and *Globicephala macrorhynchus*) stranded in New Caledonia (South Pacific). *Environmental Pollution* 124, 263–271.
- Bustamante, P., Lahaye, V., Durnez, C., Churlaud, C., Caurant, F., 2006. Total and organic Hg concentrations in cephalopods from the North Eastern Atlantic waters: influence of geographical origin and feeding ecology. *Science of the Total Environment* 368, 585–596.
- Caurant, F., Navarro, M., Amiard, J.-C., 1996. Mercury in pilot whales: possible limits to the detoxification process. *Science of the Total Environment* 186, 95–104.
- Christopher, S.J., Day, R.D., Bryan, C.E., Turk, G.C., 2005. Improved calibration strategy for measurement of trace elements in biological and clinical whole blood reference materials via collision-cell inductively coupled plasma mass spectrometry. *Journal of Analytical Atomic Spectrometry* 20, 1035–1043.
- Czuczajko, J., Zachara, B.A., Staubach-Topczewska, E., Halota, W., Kedziora, J., 2003. Selenium, glutathione and glutathione peroxidases in blood of patients with chronic liver diseases. *Acta Biochimica Polonica* 50, 1147–1154.
- Davis, W.C., Christopher, S.J., Pugh, R.S., Donard, O.F.X., Krupp, E.A., Point, D., Horvat, M., Gibicar, D., Kljakovic-Gaspic, Z., Porter, B.J., Schantz, M.M., 2007. Certification of methylmercury content in two fresh-frozen reference materials: SRM 1947 Lake Michigan fish tissue and SRM 1974b organics in mussel tissue (*Mytilus edulis*). *Analytical and Bioanalytical Chemistry* 387, 2335–2341.
- Drasch, G., Mailander, S., Schlosser, C., 2000. Content of non-mercury-associated selenium in human tissues. *Biological Trace Element Research* 77, 219–230.
- Endo, T., Haraguchi, K., Hotta, Y., Hisamichi, Y., Lavery, S., Dalebout, M.L., Baker, C.S., 2005. Total mercury, methyl mercury, and selenium levels in the red meat of small cetaceans sold for human consumption in Japan. *Environmental Science and Technology* 39, 5703–5708.
- Eyer, P., Podhradský, D., 1986. Evaluation of the micromethod for determination of glutathione using enzymatic cycling and Ellman's reagent. *Analytical Biochemistry* 153, 57–66.
- Falnoga, I., Tusek-Znidaric, M., Stegnar, P., 2006. The influence of long-term mercury exposure on selenium availability in tissues: an evaluation of data. *Biometals* 19, 283–294.
- Freeman, L.M., Brown, D.J., Rush, J.E., 1998. Antioxidant status in dogs with idiopathic dilated cardiomyopathy. *Journal of Nutrition* 128, 2768S–2770S.
- Ganther, H.E., 1980. Interactions of vitamin E and selenium with mercury and silver. *Annals of the New York Academy of Sciences* 355, 212–226.
- Ichihara, S., Yamada, Y., Ichihara, G., Kanazawa, H., Hashimoto, K., Kato, Y., Matsushita, A., Oikawa, S., Yokota, M., Iwase, M., 2006. Attenuation of oxidative stress and cardiac dysfunction by bisoprolol in an animal model of dilated cardiomyopathy. *Biochemical and Biophysical Research Communications* 350, 105–113.
- Iverson, S.J., Frost, K.J., Lang, S.L.C., 2002. Fat content and fatty acid composition of forage fish and invertebrates in Prince William Sound, Alaska: factors contributing to among and within species variability. *Marine Ecology-Progress Series* 241, 161–181.
- Kannan, M., Wang, L., Kang, Y.J., 2004. Myocardial oxidative stress and toxicity induced by acute ethanol exposure in mice. *Experimental Biology and Medicine* 229, 553–559.
- Kasamatsu, M., Tsunokawa, M., Taki, M., Higuchi, H., Nagahata, H., 2001. Serum lipid peroxide and alpha-tocopherol concentrations and superoxide dismutase activity in captive bottle-nosed dolphins. *American Journal of Veterinary Research* 62, 1952–1956.
- Kennedy, S., Rice, D., Davidson, W., 1987. Experimental myopathy in vitamin E- and selenium-depleted calves with and without added dietary polyunsaturated fatty acids as a model for nutritional degenerative myopathy in ruminant cattle. *Research Veterinary Science* 43, 384–394.
- Kirsch, P.E., Iverson, S.J., Bowen, W.D., Kerr, S.R., Ackman, R.G., 1998. Dietary effects on the fatty acid signature of whole Atlantic cod (*Gadus morhua*). *Canadian Journal of Fisheries and Aquatic Sciences* 55, 1378–1386.
- Koeman, J.H., Peeters, W.H.M., Koudstaal, Ch, Tjioe, P.S., Goeij, J., 1973. Mercury–Selenium correlations in marine mammals. *Nature* 245, 385–386.
- Law, R.J., Bennett, M.E., Blake, S.J., Allchin, C.R., Jones, B.R., Spurrier, C.J.H., 2001. Metals and organochlorines in pelagic cetaceans stranded on the coasts of England and Wales. *Marine Pollution Bulletin* 42, 522–526.
- Meador, J.P., Ernest, D., Hohn, A.A., Tilbury, K., Gorzelany, J., Worthy, G., Stein, J.E., 1999. Comparison of elements in bottlenose dolphins stranded on the beaches of Texas and Florida in the Gulf of Mexico over a one-year period. *Archives of Environmental Contamination and Toxicology* 36, 87–98.
- Myers, G.J., Davidson, P.W., 1998. Prenatal methylmercury exposure and children: neurologic, developmental, and behavioral research. *Environmental Health Perspectives* 106, 841–847.
- Palmisano, F., Cardellicchio, N., Zamboni, P.G., 1995. Speciation of mercury in dolphin liver: a two-stage mechanism for the demethylation accumulation process and role of selenium. *Marine Environmental Research* 40, 109–121.
- Pugh, R.S., Ellisor, M.B., Moors, A.J., Porter, B.J., Becker, P.R., 2007. Marine environmental specimen bank: clean room and specimen bank protocols. NISTIR7389. USDOC, National Institute of Standards and Technology, Gaithersburg, MD.
- Rajasekaran, N.S., Connell, P., Christians, E.S., Yan, L.J., Taylor, R.P., Orosz, A., Zhang, X.Q., Stevenson, T.J., Peshock, R.M., Leopold, J.A., Barry, W.H., Loscalzo, J., Odelberg, S.J., Benjamin, I.J., 2007. Human alpha B-crystallin mutation causes oxidative stress and protein aggregation cardiomyopathy in mice. *Cell* 130, 427–439.
- Recks, M.A., Seaborn, G.T., 2008. Variation in fatty acid composition among nine forage species from a southeastern US estuarine and nearshore coastal ecosystem. *Fish Physiology and Biochemistry* 34, 275–287.
- Reed, D.J., 1990. Glutathione – toxicological implications. *Annual Review of Pharmacology and Toxicology* 30, 603–631.
- Rissanen, T., Voutilainen, S., Nyyssonen, K., Lakka, T.A., Salonen, J.T., 2000. Fish oil-derived fatty acids, docosahexaenoic acid and docosapentaenoic acid, and the risk of acute coronary events: the Kuopio Ischaemic Heart Disease Risk Factor Study. *Circulation* 102, 2677–2679.
- Santos, M.B., Pierce, G.J., Lopez, A., Reid, R.J., Ridoux, V., Mente, E., 2006. Pygmy sperm whales *Kogia breviceps* in the Northeast Atlantic: New Information on Stomach Contents and Strandings. *Marine Mammal Science* 22, 600–616.
- Scheuhammer, A.M., Basu, N., Burgess, N.M., Elliott, J.E., Campbell, G.D., Wayland, M., Champoux, L., Rodrigue, J., 2008. Relationships among mercury, selenium, and neurochemical parameters in common loons (*Gavia immer*) and bald eagles (*Haliaeetus leucocephalus*). *Ecotoxicology* 17, 93–101.
- Tietze, F., 1969. Enzymic method for quantitative determination of nanogram amounts of total and oxidized glutathione: Applications to mammalian blood and other tissues. *Analytical Biochemistry* 27, 502–522.
- USEPA, 1999. Integrated risk information system (IRIS) on elemental mercury. Washington, DC: National Center for Environment Assessment, Office of Research and Development.
- Virmani, R., 2004. Pathology of Cardiomyopathies in Man. In: ACVP, ASVCP (Eds.), 55th Annual Meeting of the American College of Veterinary Pathologists (ACVP) & 39th Annual Meeting of the American Society of Clinical Pathology (ASVCP). International Veterinary Information Service, Middleton, WI.
- Wagemann, R., Trebacz, E., Boila, G., Lockhart, W.L., 1998. Methylmercury and total mercury in tissues of arctic marine mammals. *The Science of the Total Environment* 218, 19–31.
- Wells, R.S., Rhinehart, H.L., Hansen, L.J., Sweeney, J.C., Townsend, F.I., Stone, R., Casper, D.R., Scott, M.D., Hohn, A.A., Rowles, T.K., 2004. Bottlenose dolphins as marine ecosystem sentinels: developing a health monitoring system. *EcoHealth* 1, 246–254.
- Yang, Y., Kunito, T., Tanabe, S., Amano, M., Miyazaki, N., 2002. Trace elements in skin of Dall's porpoises (*Phocoenoides dalli*) from the northern waters of Japan: an evaluation for utilization as non-lethal tracers. *Marine Pollution Bulletin* 45, 230–236.
- Zeisler, R., Langland, J.K., Harrison, S.H., 1983. Cryogenic homogenization of biological tissues. *Analytical Chemistry* 55, 2431–2434.



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Pathobiochemistry

## Selenium protein identification and profiling by mass spectrometry: A tool to assess progression of cardiomyopathy in a whale model

Colleen E. Bryan<sup>a,\*</sup>, Gregory D. Bossart<sup>b</sup>, Steven J. Christopher<sup>a</sup>, W. Clay Davis<sup>a</sup>, Lisa E. Kilpatrick<sup>c</sup>, Wayne E. McFee<sup>d</sup>, Terrence X. O'Brien<sup>c</sup><sup>a</sup> Chemical Sciences Division, National Institute of Standards and Technology, Hollings Marine Laboratory, 331 Fort Johnson Road, Charleston, SC 29412, USA<sup>b</sup> Georgia Aquarium, 225 Baker Street NW, Atlanta, GA 30313, USA<sup>c</sup> Biomolecular Measurement Division, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899, USA<sup>d</sup> Center for Coastal Environmental Health and Biomolecular Research, National Ocean Service, National Oceanic and Atmospheric Administration, 219 Fort Johnson Road, Charleston, SC 29412, USA<sup>e</sup> Department of Medicine, Division of Cardiology, Medical University of South Carolina, Carolina 25 Courtenay Dr. ART 7063 and the Office of Research and Development, Ralph H. Johnson Veterans Administration Medical Center, Charleston, SC 29425, USA

## ARTICLE INFO

## Keywords:

Selenium  
Selenoprotein  
Cardiomyopathy  
*Kogia breviceps*  
ICP-MS  
LC-ESI-MS/MS

## ABSTRACT

Non-ischemic cardiomyopathy is a leading cause of congestive heart failure and sudden cardiac death in humans and in some cases the etiology of cardiomyopathy can include the downstream effects of an essential element deficiency. Of all mammal species, pygmy sperm whales (*Kogia breviceps*) present the greatest known prevalence of cardiomyopathy with more than half of examined individuals indicating the presence of cardiomyopathy from gross and histo-pathology. Several factors such as genetics, infectious agents, contaminants, biotoxins, and inappropriate dietary intake (vitamins, selenium, mercury, and pro-oxidants), may contribute to the development of idiopathic cardiomyopathy in *K. breviceps*. Due to the important role Se can play in antioxidant biochemistry and protein formation, Se protein presence and relative abundance were explored in cardiomyopathy related cases. Selenium proteins were separated and detected by multi-dimension liquid chromatography inductively coupled plasma mass spectrometry (LC-ICP-MS), Se protein identification was performed by liquid chromatography electrospray tandem mass spectrometry (LC-ESI-MS/MS), and Se protein profiles were examined in liver (n = 30) and heart tissue (n = 5) by SEC/UV/ICP-MS detection. Data collected on selenium proteins was evaluated in the context of individual animal trace element concentration, life history, and histological information. Selenium containing protein peak profiles varied in presence and intensity between animals with no pathological findings of cardiomyopathy and animals exhibiting evidence of cardiomyopathy. In particular, one class of proteins, metallothioneins, was found to be associated with Se and was in greater abundance in animals with cardiomyopathy than those with no pathological findings. Profiling Se species with SEC/ICP-MS proved to be a useful tool to identify Se protein pattern differences between heart disease stages in *K. breviceps* and an approach similar to this may be applied to other species to study Se protein associations with cardiomyopathy.

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- [12] L.H. Foster, S. Sumar, Selenium in health and disease: a review, *Crit. Rev. Food Sci. Nutr.* 37 (3) (1997) 211–228.
- [13] Y. Xia, K.E. Hill, R.F. Burk, Biochemical studies of a selenium-deficient population in China: measurement of selenium, glutathione peroxidase and other oxidant defense indices in blood, *J. Nutr.* 119 (9) (1989) 1318–1326.
- [14] M.A. Baker, G.J. Cerniglia, A. Zaman, Microtiter plate assay for the measurement of glutathione and glutathione disulfide in large numbers of biological samples, *Anal. Biochem.* 190 (2) (1990) 360–365.
- [15] S. Kennedy, D. Rice, Selective morphologic alterations of the cardiac conduction system in calves deficient in vitamin E and selenium, *Am. J. Pathol.* 130 (2) (1988) 315–325.
- [16] S. Kennedy, D. Rice, W. Davidson, Experimental myopathy in vitamin E- and selenium-depleted calves with and without added dietary polyunsaturated fatty acids as a model for nutritional degenerative myopathy in ruminant cattle, *Res. Vet. Sci.* 43 (1987) 384–394.
- [17] F. Caurant, M. Navarro, J.-C. Amiard, Mercury in pilot whales: possible limits to the detoxification process, *Sci. Total Environ.* 186 (1–2) (1996) 95–104.
- [18] J.H. Koeman, W.H.M. Peeters, A. Ch. Koudsta, P.S. Tjioe, J. Goelij, Mercury-selenium correlations in marine mammals, *Nature* 245 (5425) (1973) 385–386.
- [19] A. Wang, D. Barber, C.J. Pfeiffer, Protective effects of selenium against mercury toxicity in cultured Atlantic spotted dolphin (*Stenella plagiodon*) renal cells, *Arch. Environ. Contam. Toxicol.* 41 (4) (2001) 403–409.
- [20] P.R. Becker, B.J. Porter, E.A. Mackey, M.M. Schantz, R. Demiralp, S.A. Wise, National Marine Mammal Tissue Bank and Quality Assurance Program: Protocols, Inventory, and Analytical Results. NISTIR6279, USDOC, National Institute of Standards and Technology, Gaithersburg, MD, 1999.
- [21] H.T. Aretz, Myocarditis – the Dallas criteria, *Hum. Pathol.* 18 (6) (1987) 619–624.
- [22] R.S. Pugh, M.B. Ellis, A.J. Moors, B.J. Porter, P.R. Becker, Marine Environmental Specimen Bank: Clean Room and Specimen Bank Protocols. NISTIR7389, USDOC, National Institute of Standards and Technology, Gaithersburg, MD, 2007.
- [23] R. Zeisler, J.K. Langland, S.H. Harrison, Cryogenic homogenization of biological tissues, *Anal. Chem.* 55 (1983) 2431–2434.
- [24] M.M. Bradford, A rapid and sensitive method for the quantification of microgram quantities of protein using the principle of protein dye binding, *Ann. Biochem.* 72 (1976) 248–254.
- [25] C.E. Bryan, W.C. Davis, W.E. McFee, C.A. Neumann, J. Schulte, G.D. Bossart, S.J. Christopher, Influence of mercury and selenium chemistries on the progression of cardiomyopathy in pygmy sperm whales, *Kogia breviceps*, *Chemosphere* 89 (5) (2012) 556–562.
- [26] K.T. Suzuki, Metabolomics of selenium: Se metabolites based on speciation studies, *J. Health Sci.* 51 (2) (2005) 107–114.
- [27] S. Booth, D. Zeller, Mercury, food webs, and marine mammals: implications of diet and climate change for human health, *Environ. Health Perspect.* 113 (5) (2005) 521–526.
- [28] J. Czuzejko, B.A. Zachara, E. Staubach-Topczewska, W. Halota, J. Kedziora, Selenium, glutathione and glutathione peroxidases in blood of patients with chronic liver diseases, *Acta Biochim. Pol.* 50 (4) (2003) 1147–1154.
- [29] M.D. Pine, K. Greer, D. Busbee, Comparison of reactive oxygen scavenging systems between a cetacean (DKN1) and a porcine renal epithelial cell line (LLC-PK1), *Comp. Biochem. Physiol. A-Mol. Integr. Physiol.* 147 (2) (2007) 550–555.
- [30] V. Woshner, K. Knott, R. Wells, C. Willetto, R. Swor, T. O'Hara, Mercury and selenium in blood and epidermis of bottlenose dolphins (*Tursiops truncatus*) from Sarasota Bay, FL: interaction and relevance to life history and hematologic parameters, *Ecohealth* 5 (3) (2008) 360–370.
- [31] J.P. Vazquez-Medina, T. Zenteno-Savín, R. Elsner, Antioxidant enzymes in ringed seal tissues: potential protection against dive-associated ischemia/reperfusion, *Comp. Biochem. Physiol. C-Toxicol. Pharmacol.* 142 (3–4) (2006) 198–204.
- [32] Y. Ishii, M. Hatsumura, T. Ishida, N. Ariyoshi, K. Oguri, Significant induction of a 54-kDa protein in rat liver with homologous alignment to mouse selenium binding protein by a coplanar polychlorinated biphenyl, 3,4,5,3',4'-pentachlorobiphenyl and 3-methylcholanthrene, *Toxicol. Lett.* 87 (1) (1996) 1–9.
- [33] P.R. Becker, E.A. Mackey, R. Demiralp, M.M. Schantz, B.J. Koster, S.A. Wise, Concentrations of chlorinated hydrocarbons and trace elements in marine mammal tissues archived in the U.S. national biomonitoring specimen bank, *Chemosphere* 34 (9–10) (1997) 2067–2098.
- [34] C.S. Giometti, X.L. Liang, S.L. Tollaksen, D.B. Wall, D.M. Lubman, V. Subbarao, M.S. Rao, Mouse liver selenium-binding protein decreased in abundance by peroxisome proliferators, *Electrophoresis* 21 (11) (2000) 2162–2169.
- [35] A. Porat, Y. Sagiv, Z. Elazar, A 56-kDa selenium-binding protein participates in intra-golgi protein transport, *J. Biol. Chem.* 275 (19) (2000) 14457–14465.
- [36] Y.J. Kang, Metallothionein redox cycle and function, *Exp. Biol. Med.* 231 (9) (2006) 1459–1467.
- [37] A. Sarkar, D. Ray, A.N. Shrivastava, S. Sarker, Molecular biomarkers: their significance and application in marine pollution monitoring, *Ecotoxicology* 15 (4) (2006) 333–340.
- [38] Y.T. Kwohn, A. Okubo, H. Hirano, H. Kagawa, S. Yamazaki, S. Toda, Primary structure of striped dolphin renal metallothionein-II, *Agric. Biol. Chem.* 52 (3) (1988) 837–841.
- [39] Y.T. Kwohn, S. Yamazaki, A. Okubo, E. Yoshimura, R. Tatsukawa, S. Toda, Isolation and characterization of metallothionein from kidney of striped dolphin, *Stenella coeruleoalba*, *Agric. Biol. Chem.* 50 (11) (1986) 2881–2885.
- [40] A. Decataldo, A. Di Leo, S. Giandomenico, N. Cardellicchio, Association of metals (mercury, cadmium and zinc) with metallothionein-like proteins in storage organs of stranded dolphins from the Mediterranean sea (Southern Italy), *J. Environ. Monit.* 6 (4) (2004) 361–367.
- [41] K. Das, V. Debacker, J.M. Bouquegneau, Metallothioneins in marine mammals, *Cell. Mol. Biol.* 46 (2) (2000) 283–294.
- [42] R. Wagemann, R. Hunt, J.F. Klaverkamp, Subcellular distribution of heavy metals in liver and kidney of a narwhal whale (*Monodon monoceros*): an evaluation for the presence of metallothionein, *Comp. Biochem. Physiol. Part C: Comp. Pharmacol.* 78 (2) (1984) 301–307.
- [43] T. Ikemoto, T. Kunito, Y. Anan, H. Tanaka, N. Baba, N. Miyazaki, S. Tanabe, Association of heavy metals with metallothionein and other proteins in hepatic cytosol of marine mammals and seabirds, *Environ. Toxicol. Chem.* 23 (8) (2004) 2008–2016.
- [44] A.F. Ceylan-Isik, P. Zhao, B.F. Zhang, X.Y. Mao, G.H. Su, J. Ren, Cardiac over-expression of metallothionein rescues cardiac contractile dysfunction and endoplasmic reticulum stress but not autophagy in sepsis, *J. Mol. Cell. Cardiol.* 48 (2) (2016) 367–378.
- [45] Q.J. Liu, G.J. Wang, G.H. Zhou, Y. Tan, X.L. Wang, W. Wei, L.C. Liu, W.L. Xue, W.K. Feng, L. Cai, Angiotensin II-induced p53-dependent cardiac apoptotic cell death: its prevention by metallothionein, *Toxicol. Lett.* 191 (2–3) (2009) 314–320.
- [46] G. Ye, N.S. Metreveli, J. Ren, P.N. Epstein, Metallothionein prevents diabetes-induced deficits in cardiomyocytes by inhibiting reactive oxygen species production, *Diabetes* 52 (3) (2003) 777–783.
- [47] R. Giacconi, S. Kanoni, P. Mecocci, M. Malavolta, D. Richter, S. Pierpaoli, L. Costarelli, C. Cipriano, E. Muti, F. Mangialasche, F. Piacenza, S. Tesi, R. Galeazzi, E.V. Theodoraki, F. Lattanzio, G. Dedoussis, E. Mocchegiani, Association of MTTA haplotype with cardiovascular disease and antioxidant enzyme defense in elderly Greek population: comparison with an Italian cohort, *J. Nutr. Biochem.* 21 (10) (2010) 1008–1014.
- [48] I. Fálnoga, M. Tusek-Znidaric, P. Stegnar, The influence of long-term mercury exposure on selenium availability in tissues: an evaluation of data, *Biometals* 19 (3) (2006) 283–294.
- [49] D. Behne, H. Hilmert, S. Scheid, H. Gessner, W. Elger, Evidence for specific selenium target tissues and new biologically important selenoproteins, *Biochim. Biophys. Acta* 966 (1) (1988) 12–21.
- [50] D. Behne, S. Scheid, A. Kyriakopoulos, H. Hilmert, Subcellular-distribution of selenoproteins in the liver of the rat, *Biochim. Biophys. Acta* 1033 (3) (1990) 219–225.
- [51] M. de Lorgeril, P. Salen, Selenium and antioxidant defenses as major mediators in the development of chronic heart failure, *Heart Fail. Rev.* 11 (1) (2006) 13–17.
- [52] N.A. McKeag, M.C. McKinley, J.V. Woodside, M.T. Harbinson, P.P. McKeown, The role of micronutrients in heart failure, *J. Acad. Nutr. Diet.* 112 (6) (2012) 870–886.
- [53] K.Y. Ge, G.Q. Yang, The epidemiology of selenium deficiency in the etiologic study of endemic diseases in China, *Am. J. Clin. Nutr.* 57 (2) (1993) 259–263.

**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

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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

<b>AE Date</b>	08/20/2018	<b>Number Fed/Exposed</b>	2
<b>Best By Date</b>		<b>Number Reacted</b>	2
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Doberman Pinscher		
<b>Age</b>	10 Years		
<b>District Involved</b>	PFR-New England 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

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
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-374786>

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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:	<b>Problem Description:</b> Housemate was diagnosed with DCM ( <b>B6</b> ) - previously reported). <b>B6</b> 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. <b>B6</b>	
	<b>Date Problem Started:</b> 08/20/2018	
	<b>Concurrent Medical Problem:</b> Yes	
	<b>Pre Existing Conditions:</b> <b>B6</b>	
	<b>Outcome to Date:</b> Stable	
Product Information:	<b>Product Name:</b> Acana Free Run Poultry dry	
	<b>Product Type:</b> Pet Food	
	<b>Lot Number:</b>	
	<b>Package Type:</b> BAG	
	<b>Product Use Information:</b> <b>Description:</b> Fed since approximately 9/2016 (see diet history form) Changed to Pro Plan Weight Management Aug 2018	
	<b>Manufacturer /Distributor Information:</b>	
<b>Purchase Location Information:</b>		
Animal Information:	<b>Name:</b> <b>B6</b>	
	<b>Type Of Species:</b> Dog	
	<b>Type Of Breed:</b> Doberman Pinscher	
	<b>Gender:</b> Female	
	<b>Reproductive Status:</b> Neutered	
	<b>Weight:</b> 38.1 Kilogram	
	<b>Age:</b> 10 Years	
	<b>Assessment of Prior Health:</b> Excellent	
	<b>Number of Animals Given the Product:</b> 2	
	<b>Number of Animals Reacted:</b> 2	
	<b>Owner Information:</b>	<b>Owner Information provided:</b> Yes
		<b>Contact:</b> <b>Name:</b> <b>B6</b>
		<b>Phone:</b> <b>B6</b>
		<b>Email:</b> <b>B6</b>
	<b>Address:</b>	<b>B6</b>
United States		
<b>Healthcare Professional Information:</b>	<b>Practice Name:</b> Tufts Cummings School of Veterinary Medicine	
	<b>Contact:</b> <b>Name:</b> Lisa Freeman	

			<b>Phone:</b> (508) 887-4523
			<b>Email:</b> lisa.freeman@tufts.edu
		<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman	
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States	
	<b>Contact:</b>	<b>Phone:</b>	5088874523
		<b>Email:</b>	lisa.freeman@tufts.edu
	<b>Permission To Contact Sender:</b>	Yes	
<b>Preferred Method Of Contact:</b>	Email		
<b>Additional Documents:</b>	<b>Attachment:</b>	<b>B6</b>	medical records.pdf
	<b>Description:</b>	Medical records	
	<b>Type:</b>	Medical Records	

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**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 9/22/2018 10:40:31 PM  
**Subject:** Taste of the Wild-Last 1-2 bags (for 2 dogs) before diagnosis were Southwest Canyon flavor-Before that: Lisa Freeman - EON-366516  
**Attachments:** 2055229-report.pdf; 2055229-attachments.zip

A PFR Report has been received and PFR Event [EON-366516] has been created in the EON System.

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Below is the summary of the report:

**EON Key:** EON-366516

**ICSR #:** 2055229

**EON Title:** PFR Event created for Taste of the Wild Last 1-2 bags (for 2 dogs) before diagnosis were Southwest Canyon flavor Before that fed 3-4 bags of Pine Forest Before that had been feeding Pacific Stream for several years; 2055229

<b>AE Date</b>	09/08/2018	<b>Number Fed/Exposed</b>	2
<b>Best By Date</b>		<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Doberman Pinscher		
<b>Age</b>	<span style="border: 1px dashed black; padding: 2px;">B6</span> Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2055229

**Product Group:** Pet Food

**Product Name:** Taste of the Wild Last 1-2 bags (for 2 dogs) before diagnosis were Southwest Canyon flavor Before that, fed 3-4 bags of Pine Forest Before that, had been feeding Pacific Stream for several years

**Description:** DCM and CHF Probably primary DCM in predisposed breed but given diet history, some possibility of diet-associated DCM Taurine WNL

**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

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
Taste of the Wild Last 1-2 bags (for 2 dogs) before diagnosis were Southwest Canyon flavor Before that, fed 3-4 bags of Pine Forest Before that, had been feeding Pacific Stream for several years		

**Sender information**

Lisa Freeman  
200 Westboro Rd  
North Grafton, MA 01536  
USA

**Owner information**

**B6**

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<https://eon.fda.gov/eon//browse/EON-366516>

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**Report Details - EON-366516**

ICSR: 2055229  
 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: 2018-09-22 18:33:37 EDT

**Reported Problem:**  
**Problem Description:** DCM and CHF Probably primary DCM in predisposed breed but given diet history, some possibility of diet-associated DCM Taurine WNL  
**Date Problem Started:** 09/08/2018  
**Concurrent Medical Problem:** No  
**Outcome to Date:** Stable

**Product Information:**  
**Product Name:** Taste of the Wild Last 1-2 bags (for 2 dogs) before diagnosis were Southwest Canyon flavor Before that, fed 3-4 bags of Pine Forest Before that, had been feeding Pacific Stream for several years  
**Product Type:** Pet Food  
**Lot Number:**  
**Package Type:** BAG  
**Product Use Information:** **Description:** Owner has given consent to have FDA contact her for any additional questions  
**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:** 34.2 Kilogram  
**Age:** B6 Years  
**Assessment of Prior Health:** Excellent  
**Number of Animals Given the Product:** 2  
**Number of Animals Reacted:** 1  
**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

			<b>Email:</b> lisa.freeman@tufts.edu
		<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman	
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States	
	<b>Contact:</b>	<b>Phone:</b>	5088874523
		<b>Email:</b>	lisa.freeman@tufts.edu
	<b>Permission To Contact Sender:</b>	Yes	
	<b>Preferred Method Of Contact:</b>	Email	
<b>Additional Documents:</b>	<b>Attachment:</b>	discharge 9-20-18.pdf	
	<b>Description:</b>	Discharge 9-20-18	
	<b>Type:</b>	Medical Records	
	<b>Attachment:</b>	bnp.pdf	
	<b>Description:</b>	BNP	
	<b>Type:</b>	Laboratory Report	
	<b>Attachment:</b>	cardio appointment 9-20-18.pdf	
	<b>Description:</b>	Cardio appt 9-20-18	
	<b>Type:</b>	Echocardiogram	
	<b>Attachment:</b>	cardio consult 9-8-18.pdf	
	<b>Description:</b>	cardio consult 9-8-18	
	<b>Type:</b>	Echocardiogram	
	<b>Attachment:</b>	discharge 9-9-18.pdf	
	<b>Description:</b>	Discharge 9-9-18	
	<b>Type:</b>	Medical Records	

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: DOBERMAN\_PINSCH  
Gender: MALE NEUTERED  
Age: 8Y

Date: 09/10/2018  
Requisition #: 426657  
Accession #: **B6**  
Ordered by: **B6**

IDEXX VetConnect 1-888-433-9967  
TUFTS UNIVERSITY  
200 WESTBORO RD  
NORTH GRAFTON, Massachusetts 01536-1828  
508-839-5395  
Account #80735

CARDIOPET proBNP - CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP - CANINE	<b>B6</b>	0 - 900 pmol/L			<b>B6</b>

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.



# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY  
Cardiology Liaison: 508-887-4696

B6

Patient ID: S200408

B6 Canine

B6 Years Old Male (Neutered)

Doberman Pinscher

Black/Tan BW: Weight (kg) 32.00

## Cardiology Consultation

Date: B6

Weight: Weight (kg) 32.00

Requesting Clinician: B6 DVM (Resident - Emergency & Critical Care)

### 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

Patient location: ER

**Presenting complaint and important concurrent diseases:** 8 y.o doberman presenting for acute onset soft cough after exercise and at rest, worse at night. Owners report coughing episodes have been getting more frequent over the past 3 days. Grade IV/VI right sided systolic murmur ausculted on exam. Had scheduled appointment to be seen with cardiology 9/20/18 based on arrhythmia heard at rDVM.

**\*STOP - remainder of form to be filled out by Cardiology\***

### Physical Examination

B6

#### Muscle condition:

- Normal  Moderate cachexia  
 Mild muscle loss  Marked cachexia

#### Cardiovascular Physical Exam

##### Murmur Grade:

- None  IV/VI  
 I/VI  V/VI

- II/VI
- III/VI

- VI/VI

Murmur location/description: systolic right apical

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

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**

Mitral inflow:

- Summated
- Normal
- Delayed relaxation
- Pseudonormal
- Restrictive

**ECG findings:**

B6

**Radiographic findings:** Lung parenchyma with interstitial pattern in perihilar area. Cardiomegaly with pronounced LV and LA enlargement. Pulmonary vessels mildly dilated.

**Assessment and recommendations:** Findings consistent with DCM and active congestive heart failure. Simpson and sphericity index revealed advanced LV dilation and enlarged LA are consistent with advanced DCML. Recommend B6 in order to improve systolic function, cardiac output and decrease LA pressure. TR revealed mild PHT, for which we expect that treating CHF will help to improve pulmonary circulation. B6 Radiographs revealed interstitial pattern consistent with incipient pulmonary edema B6; TID is recommended in the first 24 hours of hospitalization (if kidney values are normal) and decrease to BID tomorrow. CBC/chem, NTproBNP and Taurine levels are recommended. Telemetry monitoring during hospitalization as patient had many isolated ventricular ectopies during the exam. In case of couplets, triplets, NSVT or R/T, recommend B6 mcg/kg/min. Low sodium diet (ideally a main stream brand) should be started and explain to owners that grain free diet is contra-indicated at this point. Kidney levels should be evaluated in daily basis during hospitalization and recheck ECG tomorrow in case arrhythmias are still frequent.

**Treatment plan:**

B6

**Final Diagnosis:**

L-CHF secondary to DCM

**Addendum:**

B6 Patient did well overnight, rare episodes of cough and respiratory rate stayed stable  
B6

**Heart Failure Classification Score:**

**ISACHC Classification:**

- Ia
- Ib
- II
- IIIa
- IIIb

**ACVIM CHF Classification:**

- A
- B1
- B2
- C
- D

# 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/>

Emergency & Critical Care Liaison: (508) 887-4745

**Patient**

**Name:**

B6

**Signalment:**

B6 Years Old Black/Tan Male  
(Neutered) Doberman Pinscher

**Owner**

**Name:**

**Address:**

B6

**Patient ID:**

S200403

**Emergency Clinician:**

B6

DVM (Intern)

**Consulting Clinician:**

**ER Supervisor:**

B6

### Discharge Instructions

**Admit Date:** B6 10:52:58 AM

**Check Out Date:** B6

**Case Summary**

**Diagnosis:**

1. Dilated cardiomyopathy with active congestive heart failure.

**Case Summary:**

Thank you for bringing B6 to Tufts ER for evaluation of his persistent cough. You reported that he suddenly developed a cough three days ago and that it is worse after exercise or when he is resting at night. On presentation he was bright and alert. His vital signs (heart rate, respiratory rate, and temperature) were all within normal limits. He had an audible bilateral heart murmur. He coughed when his trachea was palpated lightly.

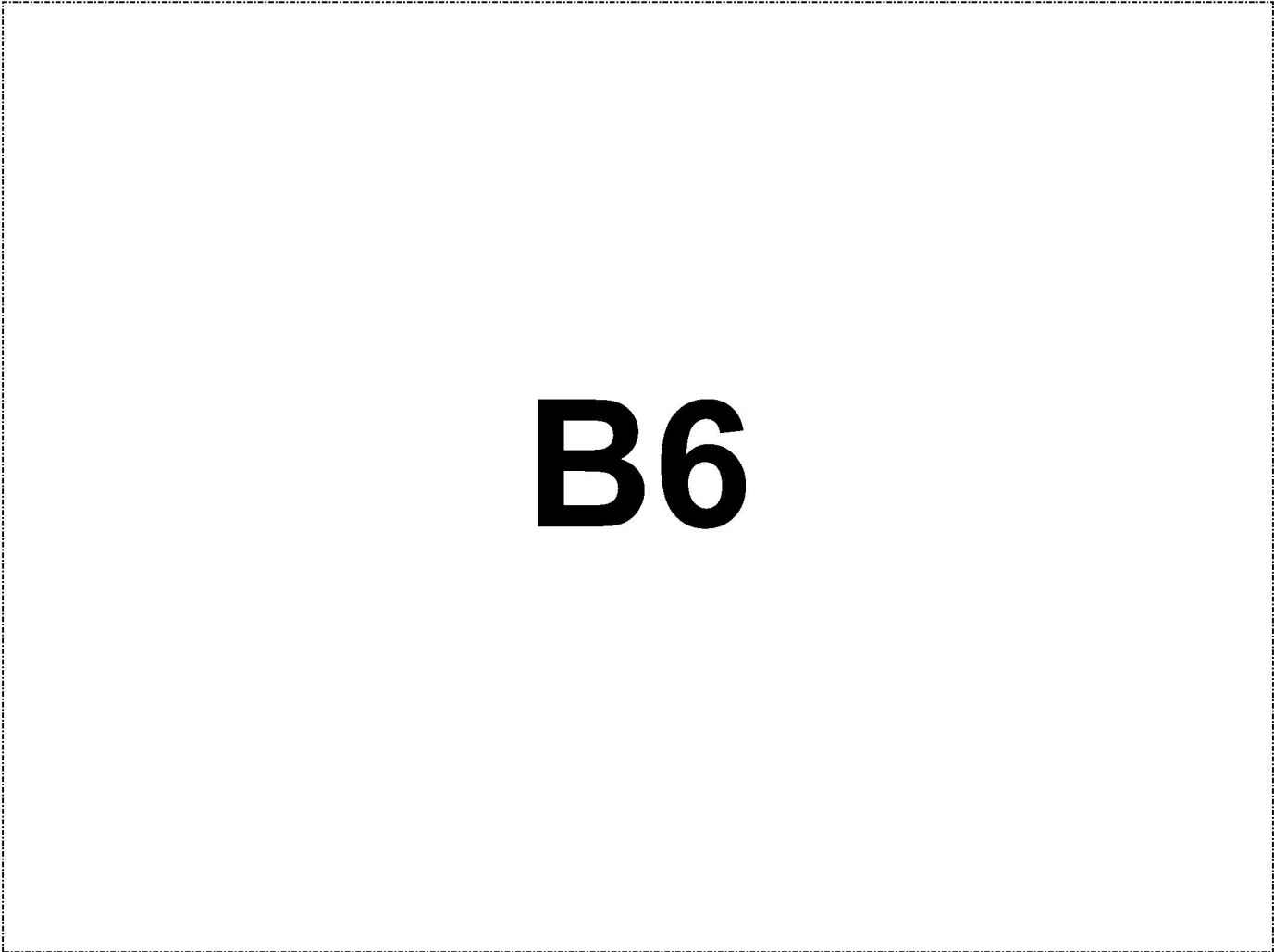
Based on his breed and clinical presentation, we opted to do radiographs and have an emergency consult with the cardiology department because of concerns of dilated cardiomyopathy (DCM). This is a common condition for this breed. Also, grain-free diets may predispose animals to developing dilated cardiomyopathy or make a pre-existing disease to get worse.

On his cardiology consult, ultrasound showed significantly decreased contraction of the heart, confirming dilated cardiomyopathy. EKG showed occasional abnormal heartbeats originating from the ventricle. Based on the results of his radiographs and cardiology consult B6 was started on diuretics to relieve some of the fluid building up in his lungs. He was also started on B6, which increases the strength of heart contractions. As grain free diet can affect absorption of some nutrients, Taurine supplementation was started. He was placed on an EKG overnight to determine if any arrhythmias are present.

**Patient Care Instructions:**

1. **Exercise restrictions:** Do not allow B6 to overexert himself. He may still go for short walks and play with his sister but avoid strenuous activity like hiking or chasing squirrels which may overexert his heart.
2. **Diet:** We recommend to discontinue the grain free diet - a sheet that has suggestions for diet and low sodium treats can be found on the HeartSmart web site (<http://vet.tufts.edu/heartsmart/diet/>). We recommend as dry options:
  - Royal Canin Early Cardiac;
  - Royal Canin Boker;
  - Purina ProPlan Adult Weight Management.

**Medications:**



**Recheck Visits:** Please come in for your scheduled cardiology appointment on September 20th at 1PM as a re-check appointment.

Thank you for entrusting us with B6 care. Please contact our Cardiology liaison at (508)-887-4696 or email us at [cardiovet@tufts.edu](mailto: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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**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](http://vet.tufts.edu/cvmc/clinical-studies)*

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Case: B6

Owner: B6

Discharge Instructions

## Discharge Instructions

### Patient

Name: B6  
Species: Canine  
Black/Tan Male (Neutered) Doberman  
Pinscher  
Birthdate: B6

### Owner

Name: B6  
Address: B6

Patient ID: S200403

### Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

### Cardiology Resident:

B6

### Cardiology Technician:

B6

Student: B6 V19

Admit Date: 9/20/2018 1:05:31 PM

Discharge Date: 9/20/2018

### Diagnoses:

1. Dilated cardiomyopathy (DCM)— stable
2. Congestive heart failure— resolved

### Case summary:

Thank you for bringing B6 for his recheck appointment with us today. He is such a sweet boy! We are so happy to hear he has been doing so well on his medications and has not had any coughing, difficulty breathing, or exercise intolerance. We are so glad B6 is responding so well to his medications and is feeling so comfortable.

Today we performed a recheck quick ultrasound of his heart, an ECG to recheck his ventricular arrhythmias, and took some blood to recheck his kidney values since being on the B6 10 days. His heart seems to be contracting a little stronger than it was previously. His left ventricle was still dilated, but his left atrium was smaller today since his last visit, which means he is improving on his current medications. He did not have any arrhythmias when we performed his ECG today. The blood work results are normal and we would like to continue him on his current medication doses (see list below), and also continue exercise restricting him to only leash walks.

### Monitoring at home:

- We would like you to monitor B6's breathing rate and effort at home, ideally during sleep or at a time of rest. The doses of drugs will be adjusted based on the breathing rate and effort.
- In general, most dogs with heart failure that is well controlled have a breathing rate at rest of less than 35 breaths per minute. In addition, the breathing effort, noted by the amount of belly wall motion used for each breath, is

fairly minimal if heart failure is controlled.

- o An increase in breathing rate or effort will usually mean that you should give an extra dose of **B6** if difficulty breathing is not improved by within 60-90 minutes after giving extra **B6**; then we recommend that a recheck exam be scheduled and/or that your dog be evaluated by an emergency clinic.
- o There are instructions for monitoring breathing, and a form to help keep track of breathing rate and drug doses, on the Tufts HeartSmart web site (<http://vet.tufts.edu/heartsmart/at-home-monitoring/>).
- o 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.
- o If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

#### Recommended Medications:

**B6**

#### Diet suggestions:

We suggest **B6** to be in one of the diets we recommended (see list). 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/>)

#### Exercise Recommendations:

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 echocardiogram for **B6** is recommended in 3-4 months.  
**B6** (as an appointment with us on October 2nd at 4 pm.)

Thank you for entrusting us with **B6** care. Please contact our Cardiology liaison at (508) 887-4696 or email us at [cardiovet@tufts.edu](mailto:cardiovet@tufts.edu) for scheduling and non-emergent questions or concerns.

Please visit our HeartSmart website for more information

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*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](http://vet.tufts.edu/cvmc/clinical-studies)*

Case: **B6**

Owner: **B6**

Discharge Instructions



---

**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Jones, Jennifer L  
**Sent:** 9/22/2018 10:36:35 PM  
**Subject:** FW: Safety Report ID 243513 Submission Confirmation  
**Attachments:** B6 18092218480.pdf

Sorry - 1 more document (diet history)  
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](http://www.petfoodology.org)

-----Original Message-----

From: noreply.safetyreporting@hhs.gov <noreply.safetyreporting@hhs.gov>  
Sent: Saturday, September 22, 2018 6:34 PM  
To: Freeman, Lisa <lisa.freeman@tufts.edu>  
Subject: Safety Report ID 243513 Submission Confirmation

Your initial Pet Food Safety Report , Submitted by: Lisa Freeman, ID 243513, was successfully submitted on 9/22/2018 6:33:37 PM EST to the FDA, and it was issued an Individual Case Safety Report Number (ICSR) of 2055229.

Thank you for using the Safety Reporting Portal.

Please do not reply to this message. Replies to this message are routed to an unmonitored mailbox. If you have questions please refer to the Portal's Contact Us page for further instructions.

**CARDIOLOGY DIET HISTORY FORM**  
Please answer the following questions about your pet.

Pet's name: **B6** Owner's name: **B6** Today's date: 9/20/18

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 your 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
Taste of the Wild, <del>Bison</del> <sup>SOUTHWEST CANYON</sup> (BONE)	dry	3 cups	1x day	2012
Fromm Classic, mature	dry	4 cups	1x day	2018, Sep
baby carrots	treat	3-4	day	2010, 14
green pepper + other veggies + fruit	treat	1-2	week	2010
K9 Granola Factory, various	treat	8-10	week	2013

\*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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No    started 09/09/18	250mg 4 tabs x 2
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

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): \_\_\_\_\_

BEFORE DIAGNOSIS (ALL TASTE OF THE WILD)  
LIST 1-2 BAGS WERE TOTW SOUTHWEST CANYON  
BEFORE THAT, FED 3-4 BAGS OF PINE FOREST  
BEFORE THAT, PACIFIC STREAM

BEFORE PINE-PACIFIC STREAM

---

**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Jones, Jennifer L  
**Sent:** 10/11/2018 8:29:31 PM  
**Subject:** FW: WB Taurine result for B6  
**Attachments:** T\_22857.pdf

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](http://www.petfoodology.org)

**From:** Tufts Veterinary Cardiology Service  
**Sent:** Thursday, October 11, 2018 4:26 PM  
**To:** Freeman, Lisa <lisa.freeman@tufts.edu>  
**Subject:** FW: Taurine result

**Veterinary Cardiology Service**  
**Tufts University Cummings School of Veterinary Medicine**

**Please note:** This account is not monitored on weekends, holidays, or evenings (after 5pm). Please allow 24 - 48 business hours for a reply. For immediate service during business hours, please call the liaison office at 508-887-4696. If you need to speak with the Emergency Service, please call 508-839-5395.

Foster Hospital for Small Animals  
200 Westboro Road  
North Grafton, MA 01536  
<http://www.tufts.edu/vet/>  
508.887.4696 phone  
508.887.4363 fax

**From:** Amino Acid Lab <[ucd.aminoacid.lab@ucdavis.edu](mailto:ucd.aminoacid.lab@ucdavis.edu)>  
**Sent:** Thursday, October 11, 2018 4:23 PM  
**To:** Clinical Pathology Lab <[clinpath@tufts.edu](mailto:clinpath@tufts.edu)>; Tufts Veterinary Cardiology Service <[cardiovet@tufts.edu](mailto:cardiovet@tufts.edu)>  
**Subject:** Taurine result

Hello -

Thank you for using the Amino Acid Laboratory at UC Davis, School of Veterinary Medicine.

Please find attached the results for your patient. You will note that we are now using a new submission form. The new form requests some additional information that may be useful in interpreting your results. Please note, with the recent increase in the number of dogs screened for taurine deficiency, we are seeing some dogs with values within the lower reference ranges (or above the “no known risk for deficiency range”) yet are still exhibiting changes in cardiac function.

In addition to our new submission form, we have also attached 2 handouts developed by our cardiology service at UC Davis for your information. The first is a general handout on dilated cardiomyopathy in dogs. The second is a handout specifically focused on Golden Retrievers, a breed that has been over-represented in the association between grain-free diet consumption and dilated cardiomyopathy.

We hope your clinic finds this information helpful. Veterinarians are always welcome to contact our laboratory for assistance in evaluating your patient’s results.

Thank you -

The Amino Acid Laboratory  
Department of Molecular Biosciences  
School of Veterinary Medicine  
University of California, Davis

Phone: 530-752-5058

Email: [ucd.aminoacid.lab@ucdavis.edu](mailto:ucd.aminoacid.lab@ucdavis.edu)

---

**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** 'Freeman, Lisa'  
**Sent:** 9/24/2018 12:07:50 PM  
**Subject:** RE: Safety Report ID 243513 Submission Confirmation

Thanks, Lisa.

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

-----Original Message-----

From: Freeman, Lisa <Lisa.Freeman@tufts.edu>  
Sent: Saturday, September 22, 2018 6:37 PM  
To: Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
Subject: FW: Safety Report ID 243513 Submission Confirmation

Sorry - 1 more document (diet history)  
Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
Board Certified Veterinary Nutritionist™  
Professor  
Cummings School of Veterinary Medicine  
Friedman School of Nutrition Science and Policy  
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Tufts University  
[www.petfoodology.org](http://www.petfoodology.org)

-----Original Message-----

From: noreply.safetyreporting@hhs.gov <noreply.safetyreporting@hhs.gov>  
Sent: Saturday, September 22, 2018 6:34 PM  
To: Freeman, Lisa <lisa.freeman@tufts.edu>  
Subject: Safety Report ID 243513 Submission Confirmation

Your initial Pet Food Safety Report , Submitted by: Lisa Freeman, ID 243513, was successfully submitted on 9/22/2018 6:33:37 PM EST to the FDA, and it was issued an Individual Case Safety Report Number (ICSR) of 2055229.

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---

**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Jones, Jennifer L  
**Sent:** 9/22/2018 10:34:45 PM  
**Subject:** additional records for [REDACTED] B6  
**Attachments:** labwork.pdf; taurine results.pdf

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](http://www.petfoodology.org)

Lab Work  
for: **B6**

Date/Time	Patient Description	Type	Results	it/Meas	her Res	High	Low	Notes	eterinari	echnicia	ospital	essor	file N	ase I	ag Numb
Accession ID:	<b>B6</b>														

**B6**

Accession ID: **B6**

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**B6**

Lab Work  
for: **B6**

Date/Time	Patient Description	Type	Results	it/Meas	her Res	High	Low	Notes	eterinari	echnicia	ospital	essor	file N	ase I	ag Numb
Accession ID:	<b>B6</b>														

**B6**

Accession ID: **B6**

**B6**



Lab Work  
for: **B6**

Date/Time	Patient Description	Type	Results/Meas	Res	High	Low	Notes	Terinary	Technician	Hospital	Accession	File Name	Case	Tag	Number
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**B6**

Accession ID: **B6**

**B6**

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**B6**

Accession ID: **B6**

**B6**

Date/Time	Patient Description	Type	Results	it/Meas	her Res	High	Low	Notes	eterinari	echnicia	ospita	essor	file N	ase I	ag Numb
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**B6**

Accession ID: **B6**

**B6**

Lab Work  
for: **B6**

Date/Time	Patient Description	Type	Results (it/Meas)	Res	High	Low	Notes	sterinari	echnicia	ospita	essor	file	Case	Tag	Numb
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**B6**

Accession ID: **B6**

**B6**

Accession ID: **B6**

**B6**

Lab Work  
for **B6**

Date/Time	Patient	Description	Type	Results	it/Meas	her Res	High	Low	Notes	sterinari	echnicia	ospit	essorifile	N	ase I	ag Numb
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**B6**

Lab Work  
for: **B6**

Date/Time	Patient Description	Type	Results	Unit/Meas	Res	High	Low	Notes	veterinarian	technician	hospital	processor	file No	case Id	tag Num
-----------	---------------------	------	---------	-----------	-----	------	-----	-------	--------------	------------	----------	-----------	---------	---------	---------

**B6**

21457

**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: \_\_\_\_\_

**B6**

9/8/2018 1:22 PM  
SHIP w ICE PACKS, TAURINE  
(WHOLE BLOOD)  
Lithium Heparin

<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; cardiovvet@tufts.edu

Tel: 508-887-4669 Fax: 508-839-7936

Billing Contact: **B6** TAX ID: \_\_\_\_\_

Email: **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

**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:** 4/25/2019 3:31:53 PM  
**Subject:** follow-up (not sure if a VL cases)-FW: Homecooked diet - see diet history in medical record: Lisa Freeman - EON-385937  
**Attachments:** 2066219-report.pdf; Homecooked diet - see diet history in medical record: Lisa Freeman - EON-374789; 2066219-attachments.zip

**From:** Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>  
**Sent:** Thursday, April 25, 2019 11:29 AM  
**To:** Carey, Lauren <Lauren.Carey@fda.hhs.gov>; Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; **B6**  
**Subject:** Homecooked diet - see diet history in medical record: Lisa Freeman - EON-385937

A PFR Report has been received and Related PFR Event [EON-385937] has been created in the EON System.

A "PDF" report by name "2066219-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 "2066219-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-385937

**ICSR #:** 2066219

**EON Title:** Related PFR Event created for Homecooked diet - see diet history in medical record; 2066219

<b>AE Date</b>	11/15/2018	<b>Number Fed/Exposed</b>	1
<b>Best By Date</b>		<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Died Other
<b>Breed</b>	Doberman Pinscher		
<b>Age</b>	<b>B6</b> Years		
<b>District Involved</b>	PFR-New England DO		

#### Product information

**Individual Case Safety Report Number:** 2066219

**Product Group:** Other

**Product Name:** Homecooked diet - see diet history in medical record

**Description:** Arrhythmia identified at primary care vet on 11/15/18. Evaluated at Tufts **B6** and diagnosed DCM with VPCs and APCs. Eating unbalanced homecooked diet. WB taurine **B6** (plasma not measured because owner had started taurine supplementation). Owner was recommended to change diet and we will recheck in 3 months; **B6** - presented DOA, died at home - sudden death

**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:** 1

**Number of Animals Reacted With Product:** 1

Product Name	Lot Number or ID	Best By Date
Homecooked diet - see diet history in medical record		

This report is linked to:

**Initial EON Event Key:** EON-374789

**Initial ICSR:** 2060600

**Sender information**

Lisa Freeman  
200 Westboro Rd  
North Grafton, MA 01536  
USA

**Owner information**

**B6** USA

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

<https://eon.fda.gov/eon//browse/EON-385937>

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=403065&parentIssueTypeId=12>

=====  
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**Report Details - EON-385937**

ICSR:	2066219
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:	2019-04-25 11:20:40 EDT
Initial Report Date:	12/27/2018
Parent ICSR:	2060600
Follow-up Report to FDA Request:	Yes

Reported Problem:	Problem Description:	Arrhythmia identified at primary care vet on 11/15/18. Evaluated at Tufts and diagnosed DCM with VPCs and APCs. Eating unbalanced homecooked diet. WB taurine (plasma not measured because owner had started taurine supplementation). Owner was recommended to change diet and we will recheck in 3 months - presented DOA, died at home - sudden death	B6
	Date Problem Started:	11/15/2018	
	Concurrent Medical Problem:	Yes	
	Pre Existing Conditions:	<b>B6</b>	
	Outcome to Date:	Died Other	
	Date of Death:	B6	

Product Information:	Product Name:	Homecooked diet - see diet history in medical record
	Product Type:	Other
	Lot Number:	
	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:	40.9 Kilogram
	Age:	B6 Years
	Assessment of Prior Health:	Good
	Number of Animals Given the Product:	1
	Number of Animals Reacted:	1
	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

**Reported to Other Parties:**

None

**Additional Documents:**

**Attachment:**

**B6**

DCM genetic test results.pdf

**Description:**

Medical Records

**Type:**

Laboratory Report

**Attachment:**

Troponin 4-4-19.pdf

**Description:**

Medical Record

**Type:**

Laboratory Report

# 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: **Positive Heterozygous**

Dog's Name: **B6**

NCSU Doberman DCM2 Result: **Negative**

ID #: **320320**

Below is an explanation for each possible test result so you can better understand all the possible results and make informed breeding decisions:

<b>Negative Result for both DCM1 and DCM2:</b>	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.
<b>Positive result for NCSU DCM1 only :</b>	<b>About 40% of dogs with this mutation will develop DCM.</b> Dogs that are positive for only DCM1 will not necessarily develop significant heart disease.
<b>Breeding recommendations:</b>	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.
<b>Positive Result for NCSU DCM2 only :</b>	<b>About 50% of dogs with this mutation will develop DCM.</b> Dogs that are positive for only DCM2 will not necessarily develop significant heart disease.
<b>Breeding recommendations:</b>	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.
<b>Positive result for both NCSU DCM1 and NCSU DCM2 :</b>	<b>Dogs that positive for BOTH DCM1 &amp; DCM2 are at a very HIGH risk of developing DCM</b> 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.
<b>Breeding recommendations:</b>	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.





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: [Cardiovet@tufts.edu](mailto:Cardiovet@tufts.edu) OR [clinpath@tufts.edu](mailto: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: 508 887 4669  
 Fax: 9 508 839 7936  
 Animal Name: **B6**  
 Owner Name:  
 Species: Canine  
 Date Received: Apr 04, 2019

Clinical Pathology Tracking Number: 320320

GI Lab Accession: **B6**

<u>Test</u>	<u>Result</u>	<u>Control Range</u>	<u>Assay Date</u>
Ultra-Sensitive Troponin I Fasting	<b>B6</b>	≤0.06	<b>B6</b>

B6

Comments:

**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](mailto: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](mailto:slim@cvm.tamu.edu) or Dr. Sina Marsilio at [smarsilio@cvm.tamu.edu](mailto:smarsilio@cvm.tamu.edu)

**Dogs with Primary Hyperlipidemia-** Prescription diet naïve dogs newly diagnosed with primary hyperlipidemia are eligible to be enrolled in a dietary trial. Contact Dr. Lawrence at [ylawrence@cvm.tamu.edu](mailto:ylawrence@cvm.tamu.edu) for more information.

**Dogs with Chronic Pancreatitis-** Dogs with chronic pancreatitis (cPLi >400µg/L) and hypertriglyceridemia (>300 mg/dl) are eligible to be enrolled in a dietary trial. Contact Dr. Lawrence at [ylawrence@cvm.tamu.edu](mailto: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](mailto: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](mailto:gilab@cvm.tamu.edu)

[vetmed.tamu.edu/gilab](http://vetmed.tamu.edu/gilab)

**Report Details - EON-374789**

ICSR: 2060600  
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 10:47:28 EST

**Reported Problem:**  
**Problem Description:** Arrhythmia identified at primary care vet on 11/15/18. Evaluated at Tufts **B6** and diagnosed DCM with VPCs and APCs. Eating unbalanced homecooked diet WB taurine **B6** (plasma not measured because owner had started taurine supplementation). Owner was recommended to change diet and we will recheck in 3 months  
**Date Problem Started:** 11/15/2018  
**Concurrent Medical Problem:** Yes  
**Pre Existing Conditions:** **B6**  
**Outcome to Date:** Stable

**Product Information:**  
**Product Name:** Homecooked diet - see diet history in medical record  
**Product Type:** Other  
**Lot Number:**  
**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:** 40.9 Kilogram  
**Age:** **B6** Years  
**Assessment of Prior Health:** Good  
**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

			<b>Email:</b> lisa.freeman@tufts.edu	
		<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States	
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			
<b>Additional Documents:</b>	<b>Attachment:</b>	rpt_medical_record_preview.pdf		
	<b>Description:</b>	<b>B6</b>	medical records	
	<b>Type:</b>	Medical Records		

---

**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Jones, Jennifer L  
**Sent:** 1/14/2019 10:00:15 PM  
**Subject:** [REDACTED] B6 update

Hi Jen

[REDACTED] B6 taurine came back [REDACTED] B6 plasma [REDACTED] B6 whole blood

Still only 1 dog of all of our cases with low taurine

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](http://www.petfoodology.org)



**Report Details - EON-376360**

**ICSR:** 2061170  
**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:** 2019-01-14 16:46:57 EST

**Reported Problem:**  
**Problem Description:** 2 other dogs in household affected previously Eating various BEG diets Early DCM with infrequent ventricular ectopy Have been following - owner agreed to change diet at December 2018 appointment so will follow Taurine normal  
**Date Problem Started:** 12/21/2017  
**Concurrent Medical Problem:** No  
**Outcome to Date:** Worse/Declining/Deteriorating

**Product Information:**  
**Product Name:** Annamaet chicken and rice dry + Honest kitchen beef, chicken, or turkey  
**Product Type:** Pet Food  
**Lot Number:**  
**Package Type:** BAG  
**Product Use Information:** **Description:** See diet history  
**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:** 34.6 Kilogram  
**Age:** B6 years  
**Assessment of Prior Health:** Excellent  
**Number of Animals Given the Product:** 3  
**Number of Animals Reacted:** 3  
**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

		<b>Address:</b> 200 Westboro Rd North Grafton Massachusetts 01536 United States
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States
	<b>Contact:</b>	<b>Phone:</b> 5088874523 <b>Email:</b> lisa.freeman@tufts.edu
	<b>Permission To Contact Sender:</b>	Yes
	<b>Preferred Method Of Contact:</b>	Email
<b>Additional Documents:</b>	<b>Attachment:</b>	<b>B6</b> rpt_medical_record_preview.pdf
	<b>Description:</b>	Records
	<b>Type:</b>	Medical Records

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 1/14/2019 9:56:41 PM  
**Subject:** Annamaet chicken and rice dry + Honest kitchen beef: Lisa Freeman - EON; B6  
**Attachments:** 2061170-report.pdf; 2061170-attachments.zip

A PFR Report has been received and PFR Event [EON-376360] has been created in the EON System.

A "PDF" report by name "2061170-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 "2061170-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-376360

**ICSR #:** 2061170

**EON Title:** PFR Event created for Annamaet chicken and rice dry + Honest kitchen beef chicken or turkey; 2061170

<b>AE Date</b>	12/21/2017	<b>Number Fed/Exposed</b>	3
<b>Best By Date</b>		<b>Number Reacted</b>	3
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Worse/Declining/Deteriorating
<b>Breed</b>	Doberman Pinscher		
<b>Age</b>	<span style="border: 1px dashed black; padding: 2px;">B6</span> Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2061170

**Product Group:** Pet Food

**Product Name:** Annamaet chicken and rice dry + Honest kitchen beef, chicken, or turkey

**Description:** 2 other dogs in household affected previously Eating various BEG diets Early DCM with infrequent ventricular ectopy Have been following - owner agreed to change diet at December 2018 appointment so will follow Taurine normal

**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:** Worse/Declining/Deteriorating  
**Number of Animals Treated With Product:** 3  
**Number of Animals Reacted With Product:** 3

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
Annamaet chicken and rice dry + Honest kitchen beef, chicken, or turkey		

**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-376360>

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=393369>

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<b>Report Details - EON</b>		<b>B6</b>	
ICSR:	2061170		
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:	2019-01-14 16:46:57 EST		
Reported Problem:	<b>Problem Description:</b>	2 other dogs in household affected previously Eating various BEG diets Early DCM with infrequent ventricular ectopy Have been following - owner agreed to change diet at December 2018 appointment so will follow Taurine normal	
	<b>Date Problem Started:</b>	12/21/2017	
	<b>Concurrent Medical Problem:</b>	No	
	<b>Outcome to Date:</b>	Worse/Declining/Deteriorating	
Product Information:	<b>Product Name:</b>	Annamaet chicken and rice dry + Honest kitchen beef, chicken, or turkey	
	<b>Product Type:</b>	Pet Food	
	<b>Lot Number:</b>		
	<b>Package Type:</b>	BAG	
	<b>Product Use Information:</b>	<b>Description:</b> See diet history	
	<b>Manufacturer /Distributor Information:</b>		
	<b>Purchase Location Information:</b>		
Animal Information:	<b>Name:</b>	<b>B6</b>	
	<b>Type Of Species:</b>	Dog	
	<b>Type Of Breed:</b>	Doberman Pinscher	
	<b>Gender:</b>	Female	
	<b>Reproductive Status:</b>	Neutered	
	<b>Weight:</b>	34.6 Kilogram	
	<b>Age:</b>	<b>B6</b> years	
	<b>Assessment of Prior Health:</b>	Excellent	
	<b>Number of Animals Given the Product:</b>	3	
	<b>Number of Animals Reacted:</b>	3	
	<b>Owner Information:</b>	<b>Owner Information provided:</b>	Yes
		<b>Contact:</b>	<b>Name:</b> <b>B6</b>
			<b>Phone:</b> <b>B6</b>
			<b>Email:</b> <b>B6</b>
<b>Address:</b>	<b>B6</b> United States		
<b>Healthcare Professional Information:</b>	<b>Practice Name:</b>	Tufts Cummings School of Veterinary Medicine	
	<b>Contact:</b>	<b>Name:</b> Lisa Freeman	
		<b>Phone:</b> (508) 887-4523	
	<b>Email:</b> lisa.freeman@tufts.edu		

		<b>Address:</b> 200 Westboro Rd North Grafton Massachusetts 01536 United States
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States
	<b>Contact:</b>	<b>Phone:</b> 5088874523
		<b>Email:</b> lisa.freeman@tufts.edu
	<b>Permission To Contact Sender:</b>	Yes
<b>Preferred Method Of Contact:</b>	Email	
<b>Additional Documents:</b>	<b>Attachment:</b>	<b>B6</b> pt_medical_record_preview.pdf
	<b>Description:</b>	Records
	<b>Type:</b>	Medical Records

Client:

**B6**

Address:

Home Phone:  
Work Phone:  
Cell Phone:

**B6**

**All Medical Records**

Patient:

**B6**

Breed: Doberman Pinscher

DOB:

**B6**

Species: Canine

Sex: Female  
(Spayed)

**Referring Information**

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**B6**

**Initial Complaint:**

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**Initial Complaint:**

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**Initial Complaint:**



Client: **B6**  
Patient: **B6**

---

**Initial Complaint:**

Vomiting

SOAP Text **B6** 7:15PM - **B6**

---

**B6**

Exam:

Subjective (S): BAR

**B6**

Objective (O)

**B6**

H/L: No murmurs, arrhythmias or adventitious lung sounds

**B6**

Referral Diagnostics: Blood work (not available at ER visit)

Diagnostics Completed: **B6**

**B6**

Diagnostics Pending:

Requested feces be collected and put on hold for possible salmonella testing  
EDTA and serum on hold in ER fridge

Treatments Completed: **B6**

Client: **B6**  
Patient: **B6**

---

Assessment (A)

**B6**

Plan (P)

**B6**

Communication Summary:

**B6**

SOAP Text Feb 16 2015 3:34PM **B6**

---

2/16/2015 3:34:42 PM EXAM, GENERAL

Subjective (S)

No vomiting overnight, kept NPO. QAR and nervous this morning.

Additional history: **B6**

**B6**

H/L: NSR, NMA, fpss; eupneic, normal BV sounds bilaterally

**B6**

Assessment (A)

Client: **B6**  
Patient: **B6**

**B6**

**B6**

2/17/2015 7:35:35 AM

**B6**

SOAP Text Feb 17 2015 5:35PM - **B6**

2/17/2015 6:17:50 PM EXAM, GENERAL

Subjective (S)

Looks brighter this morning. No vomiting, but still having large bowel diarrhea. No interest in food. Owner says that **B6** is normally a picky eater.

Objective (O)

**B6**

H/L: NSR, NMA, fpss; normal BV sounds bilaterally

**B6**

Diagnostics:

**B6**

Assessment (A)

**B6**

Plan (P)

**B6**

Client: **B6**  
Patient: **B6**

SOAP Text Feb 18 2015 8:49AM - **B6**

2/18/2015 8:49:54 AM EXAM, GENERAL

Subjective (S)

BAR. Ate boiled hamburger and rice at owner visit last night continued to eat purina EN throughout the night. No vomiting noted. Still has some **B6** but stool is becoming more formed.

Objective (O)

**B6**

H/L: NSR, NMA, fpps; normal BV sounds bilaterally

**B6**

Assessment (A)

**B6**

Plan (P)

**B6**

2/18/2015 9:29:02 AM

Prescribed **B6**  
Instructions:

**Initial Complaint:**

Emergency

SOAP Text Feb 20 2015 8:41AM - **B6**

2/20/2015 12:51:27 PM NEW VISIT (ER)

Doctor **B6**  
Student **B6**  
Presenting complaint: **B6**

**B6**

Client: **B6**  
Patient: **B6**

On car ride here: vomited small amount of fluid/foam

Past pertinent medical history:

**B6**

Dietary history:

Type of food: Boiled hamburger and rice

Amount per feeding:

Feedings per day:

Visit is a referral: No

Bloodwork completed prior to arrival: None

Exam:

**B6**

Objective (O)

**B6**

H/L: HR: 120, NMA, NSR, PSS, RR: 36, eupenic, normal BV sounds

**B6**

Referral Diagnostics: None

Diagnostics Completed:

**B6**

Abdominal Radiographs: Normal abdomen

Abdominal US:

**B6**

Diagnostics Pending: None

Treatments Completed:

**B6**

Assessment (A)

**B6**

Plan (P)

Client: **B6**  
Patient:

**B6**

Additional requests submitted:

Estimate given: \$

Deposit collected: \$

**B6**

**Initial Complaint:**

Emergency

**SOAP Text Feb 28 2015 8:21PM** **B6**

2/28/2015 8:21:20 PM NEW VISIT (ER)

**B6**

Client: **B6**  
Patient:

Medications currently administered at home: **B6**

Dietary history:  
Type of food: Raw diet since weaning  
Amount per feeding:  
Feedings per day:

Visit is a referral: Yes No  
Bloodwork completed prior to arrival:

Exam:  
**B6**

Objective (O)  
**B6**

Treatments Completed:  
**B6**

Assessment (A)  
**B6**

Plan (P)  
**B6**

Communication Summary: **B6**  
**B6**

Additional requests submitted:

Estimate given: \$                      Deposit collected: \$

Prescribed Instructions: **B6**

Client: **B6**  
Patient: **B6**

**Initial Complaint:**

recheck

SOAP Text Mar 3 2015 3:27PM **B6**

**B6**

**Initial Complaint:**

Emergency

SOAP Text May 2 2015 11:05PM **B6**

5/2/2015 11:05:54 PM NEW VISIT (ER)

Doctor: **B6**  
Student: **B6**

Presenting complaint: **B6**

Past pertinent medical history:

**B6**

Medications currently administered at home:

**B6**



Client: **B6**  
Patient:

**B6**

Visit is a referral: No  
Bloodwork completed prior to arrival: No

Exam:

**B6**

Objective (O)

**B6**

H/L: HR 96, NMA, NSR, SSP, RR 28, normal effort, normal BV sounds bilaterally  
Abd: soft, non painful, gas filled loops  
UG: intact female, normal externally, no discharge  
MSI: ambulatory x 4, no ectoparasites, normal hair coat  
Neuro: mentally appropriate, full exam not performed  
Rectal: mucoid discharge, otherwise WNL

Referral Diagnostics:  
None

Diagnostics Completed:  
Ocular exam

Diagnostics Pending:  
None

Treatments Completed:  
None

Assessment (A)

**B6**

Plan (P)

**B6**

Communication Summary:

**B6**

Client: **B6**  
Patient: **B6**

Prescribed - **B6**  
Instructions

Prescribed - **B6**  
Instructions

**Initial Complaint:**

Emergency

SOAP Text **B6** 8:51AM - **B6**

**B6** 9:09:46 AM: TS (FHSA) 6.8  
9:09:46 AM: PCV \*\* 50  
11:19:13 AM NEW VISIT (ER)

Doctor: **B6**  
Student

Presenting complaint: ADR this morning  
Referral visit? No  
Diagnostics completed prior to visit: None

HISTORY: **B6** presented to Tufts ER for ADR this morning. Not really willing to get out of bed and hunched/shaky.

Signalment: **B6**  
Current history: **B6**  
Prior medical history: No concerns  
Current medications: None  
Diet:  
Vaccination status/flea & tick preventative use:  
Travel history: None

EXAM:  
**B6**

BCS: **B6**

Hydration: **B6**

EENT: **B6**  
**B6**

C/V: NSR, NMA, fpSS.

**B6**

ASSESSMENT:  
A1: ADR r/o dilated cardiomyopathy vs pyometra vs primary GI  
A2: DCM

**B6**

Client: **B6**  
Patient: **B6**

PLAN:

- Thoracic radiographs; mild cardiomegaly with mild right ventricular enlargement
- Cardiology consult

**B6**

Diagnostics completed:

**B6**

Diagnostics pending:

**B6**

Client communication:

Deposit & estimate status:

Resuscitation code (if admitting to ICU):

SOAP approved (DVM to sign):

**Initial Complaint:**

**B6**

SOAP Text Dec 21 2017 9:56AM

**B6**

**Initial Complaint:**

Chief New Soft Tissue, spay  
Referred by cardiology

SOAP Text Mar 7 2018 11:07AM

**B6**

**Subjective**

EXAM, GENERAL

**B6** 4 yo intact female presenting for spay. Referred from cardio- echocardiogram shows LV dilation, ECG-  
occasional VPCs, currently on **B6** Doing well at home.

Subjective (S)

**B6**

Objective (O)

**B6**

H/L: HR 100, NSR, NMA. fpps. Lung fields clear with normal BV sounds. No crackles/wheezes

**B6**

Client: **B6**  
Patient:

**B6**

Assessment (A)

A1: Healthy female presenting for spay

A2: LV dilation with occasional VPCS- r/o early DCM-- on carvediolol

Plan (P)

**B6**

SOAP completed by: **B6**

SOAP reviewed by:

Initial Complaint:

**B6**

SOAP Text Apr 20 2018 7:57AM **B6**

Subjective

EXAM, GENERAL

**B6** 4 yo intact female doberman presenting for **B6** Referred from cardio -  
echocardiogram shows LV dilation, ECG - occasional VPCs, currently on **B6** gave morning dose  
of carvediolol

Current medications:

**B6**

Subjective (S)

**B6**

Objective (O)

**B6**

Client: **B6**  
Patient: **B6**

H/L: Normal sinus rhythm, no murmur heard. Femoral pulses strong and synchronus. Lung fields clear with normal BV sounds. No crackles/wheezes

**B6**

Assessment (A)

A1: Intact female presenting for **B6**

A2: LV dilation with occasional VPCS- r/o early DCM-- of **B6**

Plan (P)

**B6**

SOAP completed by: **B6**  
SOAP reviewed by: **B6**

Addendum:

**B6**

SOAP Text Apr 21 2018 8:55AM - Clinician, Unassigned FHSA

Subjective

EXAM, GENERAL

**B6** now A 4 yo female spayed doberman who presented for **B6**

Referred from cardio - echocardiogram shows LV dilation, ECG- occasional VPCs, currently on **B6**

Overnight Update:

**B6**

Recent Diagnostics:

**B6**

Client: **B6**  
Patient:

**B6**

**Current medications:**

**B6**

**Subjective (S)**

**B6**

**Objective (O)**

**B6**

H/L: Normal sinus rhythm, no murmur heard. Femoral pulses strong and synchronous. Lung fields clear with normal BV sounds. No crackles/wheezes

**B6**

**Assessment (A)**

A1: 1 Day post- **B6**

A2: LV dilation with occasional VPCS- r/o early DCM-- of **B6**

**Plan (P)**

**B6**

SOAP completed by: **B6**

Client: **B6**  
Patient:

SOAP reviewed by: **B6**

**Initial Complaint:**

Chief Special--recheck **B6**

SOAP Text Apr 23 2018 2:32PM - **B6**

**Subjective**

**EXAM, GENERAL**

**B6**

**Recent Diagnostics:**

**B6**

**Current medications:**

**B6**

**Subjective (S)**

**B6**

Client: **B6**  
Patient:

**B6**

H/L: Normal sinus rhythm, no murmur appreciated. Femoral pulses strong and synchronous. Normal bronchovesicular sounds in all lung fields. Eupneic.

**B6**

Assessment (A)

A1: 3 Day post- **B6**

inappetent, quiet, intermittent trembling at home--r/o mild nausea vs discomfort vs other

A3: LV dilation with occasional VPCS- r/o early DCM-- stable. on **B6**

Plan (P)

**B6**

SOAP completed by: **B6**  
SOAP reviewed by:

Initial Complaint:

Tech - ECG

SOAP Text May 7 2018 10:58AM - Rush, John

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Initial Complaint:



Client:  
Patient:  
Recheck:

**B6**

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**Initial Complaint:**

Recheck - **B6**

SOAP Text Dec 11 2018 10:40AM - **B6**

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**Disposition/Recommendations**

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Client:  
Patient:

**B6**

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---

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:	<b>B6</b>
Species:	Canine
Breed:	Doberman Pinscher
Sex:	Female (Spayed)
Age:	<b>B6</b> Years Old

**Lab Results Report**

**Nova Full Panel-ICU**      **2/15/2015 8:33:00 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
TCO2 (POC)	<b>B6</b>	0 - 0	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
NA (POC)		140 - 154	mmol/L
nMG		0 - 0	mmol/L
nCA		0 - 0	mmol/L
FiO2		0 - 0	%
HB (POC)		12.6 - 16	g/dL
BEb		0 - 0	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
A		0 - 0	mmHg
CL(POC)		109 - 120	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
HCT (POC)		38 - 48	%
NOVA SAMPLE		0 - 0	
CA/MG		0 - 0	mol/mol
GAP		0 - 0	mmol/L
K (POC)		3.6 - 4.8	mmol/L
CREAT (POC)		0.2 - 2.1	mg/dL
BUN (POC)		12 - 28	mg/dL
BEecf	0 - 0	mmol/L	



20/153

**B6**

Printed Monday, January 14, 2019

Client: **B6**  
 Patient: **B6**

SO2%	<b>B6</b>	94 - 100	%
PO2		80 - 100	mmHg
PCO2		36 - 44	mmHg
PH		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

**Nova Full Panel-ICU**      **2/15/2015 9:45:12 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
Blood Glucose (Glucometer) - FHSA	<b>B6</b>	0 - 0	mg/dl

**Nova Full Panel-ICU**      **2/16/2015 1:33:00 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
WBC (ADVIA)	<b>B6</b>	4.4 - 15.1	K/uL
RBC(ADVIA)		5.8 - 8.5	M/uL
HCT(ADVIA)		39 - 55	%
MCV(ADVIA)		64.5 - 77.5	fL
MCHC(ADVIA)		31.9 - 34.3	g/dL
MCH(ADVIA)		21.3 - 25.9	pg
COMMENTS (HEMATOLOGY)		0 - 0	
HGB(ADVIA)		13.3 - 20.5	g/dL
PLT(ADVIA)		173 - 486	K/uL
RDW (ADVIA)		11.9 - 15.2	
MPV (ADVIA)		8.29 - 13.2	fl

**Nova Full Panel-ICU**      **2/16/2015 1:33:00 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
TRIGLYCERIDES	<b>B6</b>	30 - 338	mg/dl
GLUCOSE		67 - 135	mg/dL
ALT		14 - 86	U/L
T BILIRUBIN		0.1 - 0.3	mg/dL
I BILIRUBIN		0 - 0.2	mg/dL
T. PROTEIN		5.5 - 7.8	g/dL
GGT		0 - 10	U/L
D.BILIRUBIN		0 - 0.1	mg/dL
CREATININE		0.6 - 2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
AMYLASE		409 - 1250	U/L
POTASSIUM		3.7 - 5.4	mEq/L
A/G RATIO		0.7 - 1.6	
NA/K		29 - 40	
GLOBULINS		2.3 - 4.2	g/dL



Client: **B6**  
 Patient: **B6**

CHLORIDE	<b>B6</b>	106 - 116	mEq/L
OSMOLALITY (CALCULATED)		291 - 315	mmol/L
PHOSPHORUS		2.6 - 7.2	mg/dL
AGAP		8 - 19	
CHOLESTEROL		82 - 355	mg/dL
ALBUMIN		2.8 - 4	g/dL
CK		22 - 422	U/L
SODIUM		140 - 150	mEq/L
COMMENTS (CHEMISTRY)		0 - 0	
tCO2 (BICARB)		14 - 28	mEq/L
AST		9 - 54	U/L
UREA		8 - 30	mg/dL
MAGNESIUM 2+		1.8 - 3	mEq/L
ALK PHOS		12 - 127	U/L

**Nova Full Panel-ICU**      **2/16/2015 1:33:00 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
EOS (ABS)ADVIA	<b>B6</b>	0 - 1.4	K/uL
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
SEGS%		43 - 86	%
MONOS%		1 - 15	%
EOS%		0 - 16	%
LYPHYS%		7 - 47	%
L YMPHS (ABS)ADVIA		1 - 4.8	K/uL
WBC MORPHOLOGY		0 - 0	
No Morphologic Abnormalities			
SEGS (AB)ADVIA		2.8 - 11.5	K/ul
POIKILOCYTOSIS		0 - 0	

**Nova Full Panel-ICU**      **2/20/2015 8:41:00 AM**      **Accession ID: B6**

Test	Results	Reference Range	Units
K (POC)	<b>B6</b>	3.6 - 4.8	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
FiO2		0 - 0	%
nCA		0 - 0	mmol/L
HCT (POC)		38 - 48	%
NA (POC)		140 - 154	mmol/L
nMG		0 - 0	mmol/L
CL(POC)		109 - 120	mmol/L
CA/MG		0 - 0	mol/mol
SO2%		94 - 100	%
CREAT (POC)		0.2 - 2.1	mg/dL



Client: **B6**  
 Patient:

TCO2 (POC)		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE		0 - 0	
HB (POC)		12.6 - 16	g/dL
BUN (POC)		12 - 28	mg/dL
LACTATE		0 - 2	mmol/L
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
MG (POC)	<b>B6</b>	0.1 - 0.4	mmol/L
GAP		0 - 0	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PII		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

**Nova Full Panel-ICU**      2/20/2015 9:24:29 AM      Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)		0 - 0	g/dl
PCV **	<b>B6</b>	0 - 0	%
TS (FHSA)		0 - 0	g/dl

**Nova Full Panel-ICU**      9/28/2016 9:06:21 AM      Accession ID: **B6**

Test	Results	Reference Range	Units
Lactate (FHSA) *	<b>B6</b>	0 - 0	mmol/L

**Nova Full Panel-ICU**      9/28/2016 9:06:11 AM      Accession ID: **B6**

Test	Results	Reference Range	Units
WBC (ADVIA)		4.4 - 15.1	K/uL
RBC(ADVIA)		5.8 - 8.5	M/uL
HGB(ADVIA)		13.3 - 20.5	g/dL
HCT(ADVIA)		39 - 55	%
MCV(ADVIA)		64.5 - 77.5	fL
MCH(ADVIA)		21.3 - 25.9	pg
MCHC(ADVIA)	<b>B6</b>	31.9 - 34.3	g/dL
RDW (ADVIA)		11.9 - 15.2	
PLT(ADVIA)		173 - 486	K/uL
MPV (ADVIA)		8.29 - 13.2	fl
RETIC(ADVIA)		0.2 - 1.6	%
RETICS (ABS) ADVIA		14.7 - 113.7	K/uL

**Nova Full Panel-ICU**      9/28/2016 9:06:28 AM      Accession ID: **B6**



Client: **B6**  
 Patient: **B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	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
MAGNESIUM 2+		1.8 - 3	mEq/L
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
tCO2 (BICARB)		14 - 28	mEq/L
AGAP		8 - 19	
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
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		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)	0 - 0		

**Nova Full Panel-ICU**      **9/28/2016 9:06:09 AM**      **Accession ID: B6**

Test	Results	Reference Range	Units
SEGS%	<b>B6</b>	43 - 86	%
LYMPHS%		7 - 47	%
MONOS%		1 - 15	%
EOS%		0 - 16	%
SEGS (AB)ADVIA		2.8 - 11.5	K/uL
LYMPHS (ABS)ADVIA		1 - 4.8	K/uL
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
EOS (ABS)ADVIA		0 - 1.4	K/uL



Client: **B6**  
 Patient: **B6**

WBC MORPHOLOGY		0 - 0
No Morphologic Abnormalities	<b>B6</b>	
POIKILOCYTOSIS		0 - 0

**Nova Full Panel-ICU** 9/28/2016 9:09:47 AM Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)		0 - 0	g/dl
PCV **	<b>B6</b>	0 - 0	%
TS (FHSA)		0 - 0	g/dl

**Nova Full Panel-ICU** 12/21/2017 11:10:21 AM Accession ID: **B6**

Test	Results	Reference Range	Units
GLUCOSE		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	<b>B6</b>	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	
Moderate lipemia Slight hemolysis			

**Nova Full Panel-ICU** 4/20/2018 8:18:34 AM Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)		0 - 0	g/dL
AZO (FHSA)		0 - 0	
BG (FHSA)	<b>B6</b>	0 - 0	g/dL
TS (FHSA)		0 - 0	g/dL
PCV *		0 - 0	%





Client: **B6**  
 Patient:

**Nova Full Panel-ICU**      **4/20/2018 8:20:00 AM**      **Accession ID: B6**

Test	Results	Reference Range	Units
VWF:AG	<b>B6</b>	0 - 0	%

**Nova Full Panel-ICU**      **4/20/2018 4:10:35 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
TS (FHSA)		0 - 0	g/dl
PCV **	<b>B6</b>	0 - 0	%
TS (FHSA)		0 - 0	g/dl

**Nova Full Panel-ICU**      **4/20/2018 9:44:29 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
TS (FHSA)		0 - 0	g/dl
PCV **	<b>B6</b>	0 - 0	%
TS (FHSA)		0 - 0	g/dl

**Nova Full Panel-ICU**      **4/23/2018 2:13:08 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
WBC (ADVIA)	<b>B6</b>	4.4 - 15.1	K/uL
RBC(ADVIA)		5.8 - 8.5	M/uL
HGB(ADVIA)		13.3 - 20.5	g/dL
HCT(ADVIA)		39 - 55	%
MCV(ADVIA)		64.5 - 77.5	fL
MCH(ADVIA)		21.3 - 25.9	pg
MCHC(ADVIA)		31.9 - 34.3	g/dL
RDW (ADVIA)		11.9 - 15.2	
COMMENTS (HEMATOLOGY)		0 - 0	

Platelet estimate and/or platelet count may be affected by slight platelet clumping, 10-25 platelets/ 100x field (estimated count of 200,000-500,000/uL)

**Nova Full Panel-ICU**      **4/23/2018 2:13:27 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	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
MAGNESIUM 2+		1.8 - 3	mEq/L
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



Client: **B6**  
 Patient: **B6**

POTASSIUM	<b>B6</b>	3.7 - 5.4	mEq/L
tCO2 (BICARB)		14 - 28	mEq/L
AGAP		8 - 19	
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
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		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

**Nova Full Panel-ICU**      **4/23/2018 2:13:09 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
SEGS%	<b>B6</b>	43 - 86	%
LYMPHS%		7 - 47	%
MONOS%		1 - 15	%
EOS%		0 - 16	%
SEGS (AB)ADVIA		2.8 - 11.5	K/uL
LYMPHS (ABS)ADVIA		1 - 4.8	K/uL
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
EOS (ABS)ADVIA		0 - 1.4	K/uL
WBC MORPHOLOGY		0 - 0	
No Morphologic Abnormalities			
POIKILOCYTOSIS		0 - 0	

**Nova Full Panel-ICU**      **5/7/2018 10:59:13 AM**      **Accession ID: B6**

Test	Results	Reference Range	Units
WBC (ADVIA)	<b>B6</b>	4.4 - 15.1	K/uL
RBC(ADVIA)		5.8 - 8.5	M/uL
HGB(ADVIA)		13.3 - 20.5	g/dL
HCT(ADVIA)		39 - 55	%
MCV(ADVIA)		64.5 - 77.5	fL
MCH(ADVIA)		21.3 - 25.9	pg
MCHC(ADVIA)		31.9 - 34.3	g/dL
RDW (ADVIA)		11.9 - 15.2	
PLT(ADVIA)		173 - 486	K/uL

27/153      **B6**



Printed Monday, January 14, 2019

Client: **B6**  
 Patient: **B6**

MPV (ADVIA)	<b>B6</b>	8.29 - 13.2	fL
PLTCRT		0.129 - 0.403	%
RETIC(ADVIA)		0.2 - 1.6	%
RETICS (ABS) ADVIA		14.7 - 113.7	K/uL
COMMENTS (HEMATOLOGY)		0 - 0	

**Nova Full Panel-ICU**      **5/7/2018 10:59:28 AM**      **Accession ID: B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	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
MAGNESIUM 2+		1.8 - 3	mEq/L
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
tCO2 (BICARB)		14 - 28	mEq/L
AGAP		8 - 19	
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
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		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)		0 - 0	
Slight hemolysis; Moderate lipemia			

**Nova Full Panel-ICU**      **5/7/2018 10:59:10 AM**      **Accession ID: B6**

Test	Results	Reference Range	Units
SEGS%	<b>B6</b>	43 - 86	%



Client: **B6**  
Patient: **B6**

LYMPHS%	<b>B6</b>	7 - 47	%
MONOS%		1 - 15	%
EOS%		0 - 16	%
NRBC		0 - 1	/100 WBC
SEGS (AB)ADVIA		2.8 - 11.5	K/uL
LYMPHS (ABS)ADVIA		1 - 4.8	K/uL
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
EOS (ABS)ADVIA		0 - 1.4	K/uL
WBC MORPHOLOGY		0 - 0	
No Morphologic Abnormalities			
POIKILOCYTOSIS		0 - 0	

**Nova Full Panel-ICU**      **12/11/2018 12:15:00 PM**      **Accession ID: B6**

Test	Results	Reference Range	Units
T4/TOSOH	<b>B6</b>	1 - 4.1	ug/dl



29/153

**B6**

Printed Monday, January 14, 2019

Client:  
Patient:

**B6**

Archived RDVM

**B6**

ref and labs 4/2014-5/2014

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Archived RDVN **B6** ref and labs 4/2014-5/2014

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ref and labs 4/2014-5/2014

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Archived RDVN **B6** ref and labs 4/2014-5/2014

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Client:  
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Archived lab results notes 4/2014

**B6**

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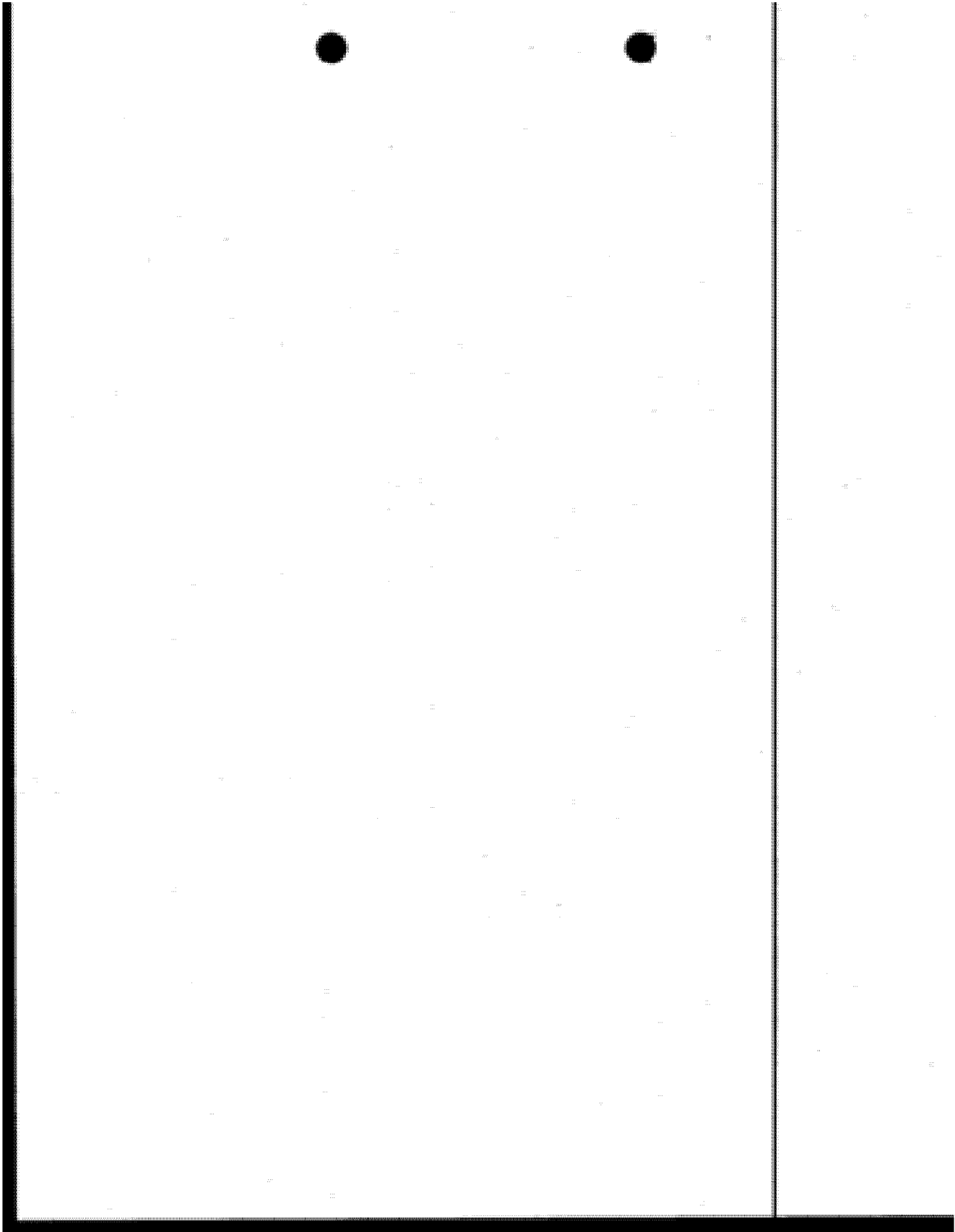
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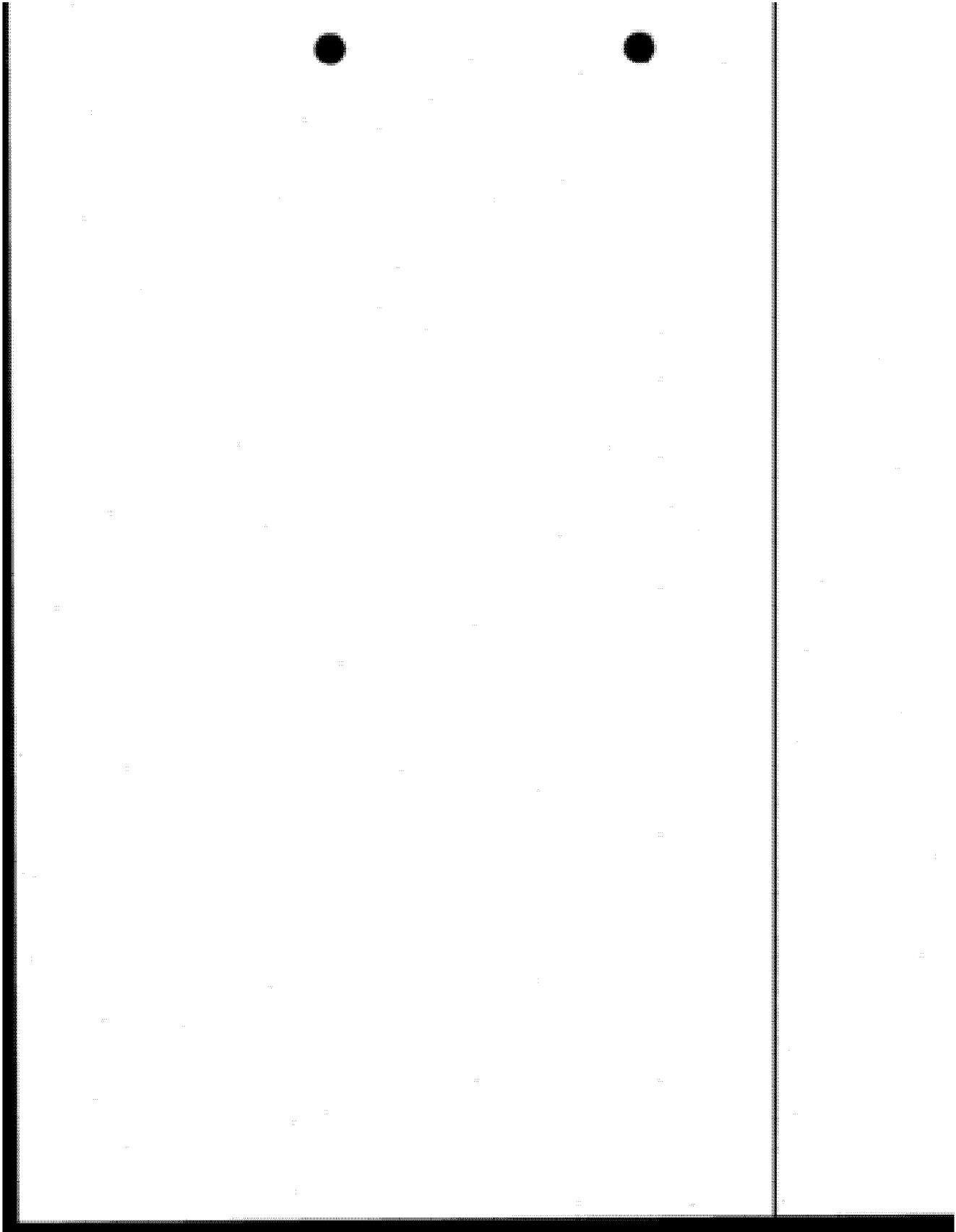
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Archived 1/20/2014-5/5/2014

The image shows a large, mostly empty table with a grid of horizontal and vertical lines. The table is framed by a thick black border. At the top of the page, there are two circular punch holes. The table contains very faint, illegible text within its cells, which appears to be a scan of a document with a grid. The overall appearance is that of a scanned page from a binder or folder, with the grid lines forming a series of rows and columns.

Client:  
Patient:

**B6**

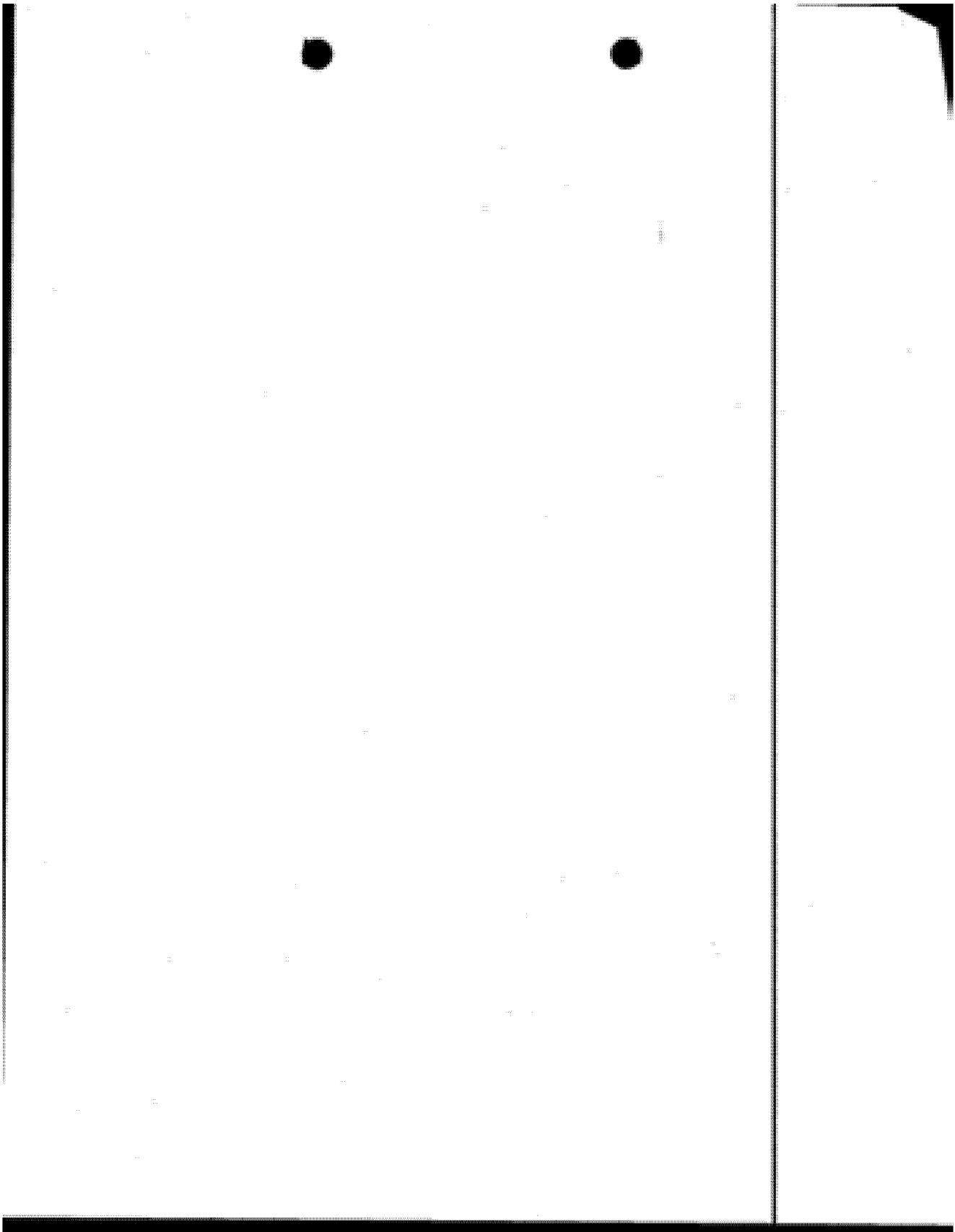
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Client:  
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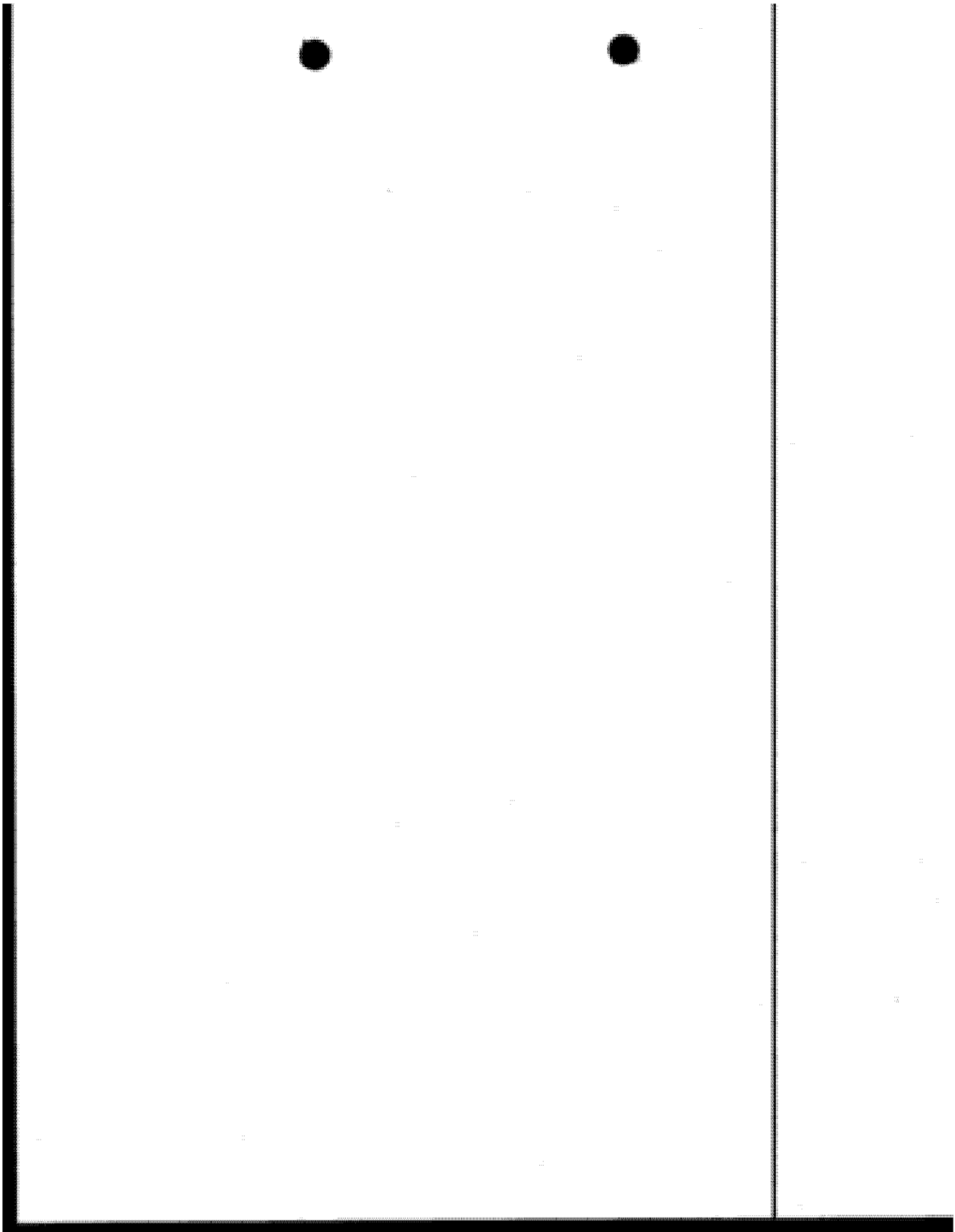
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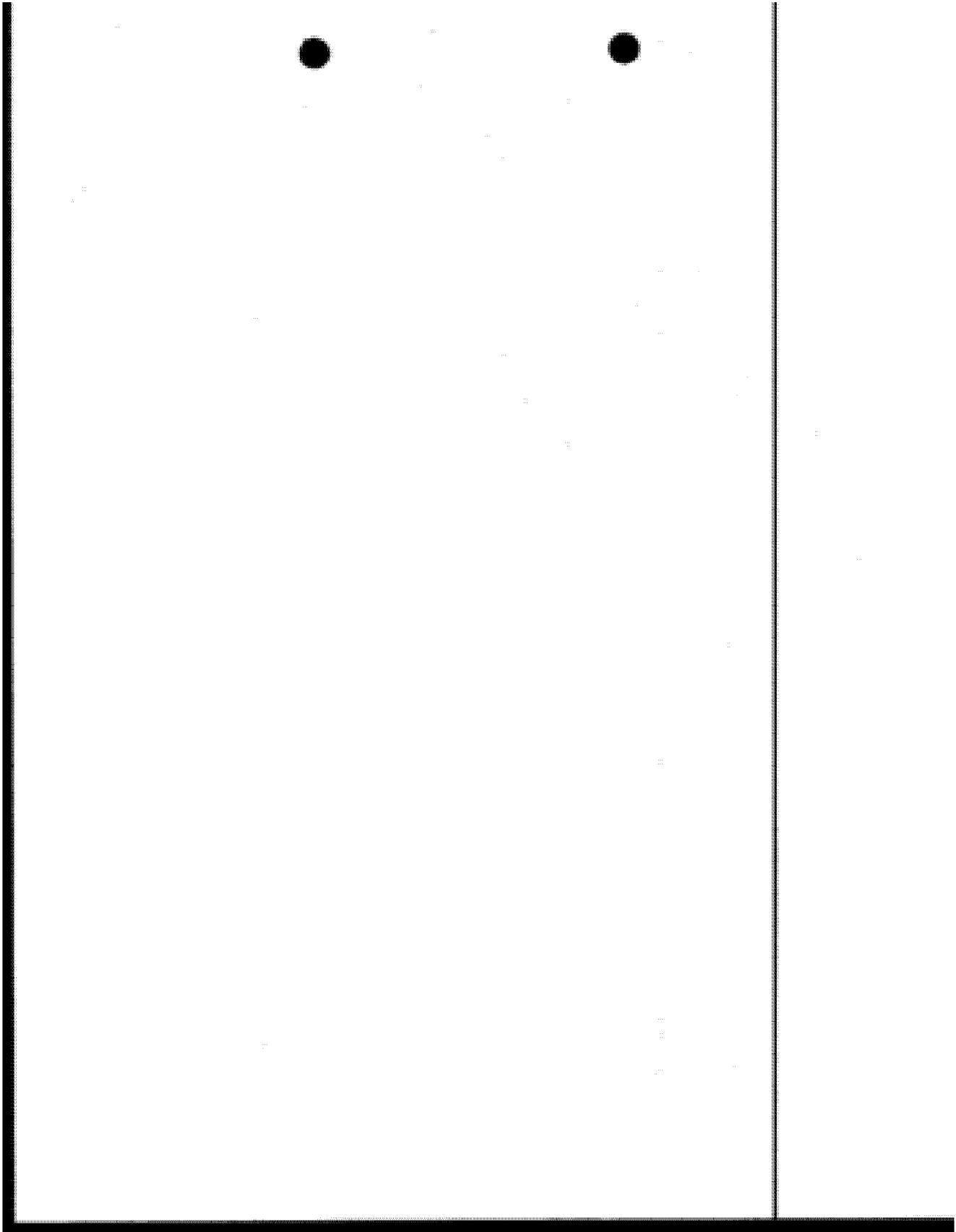
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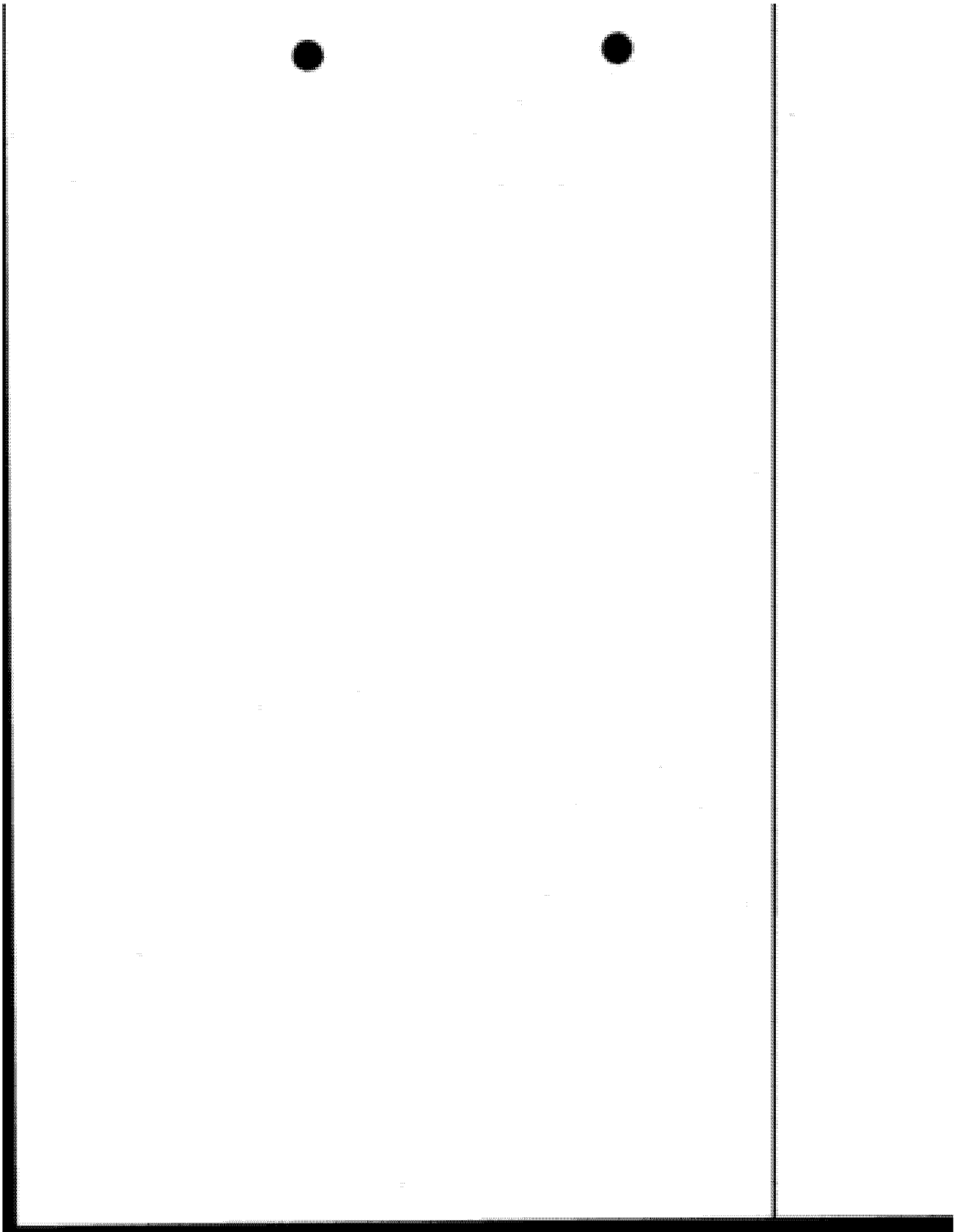
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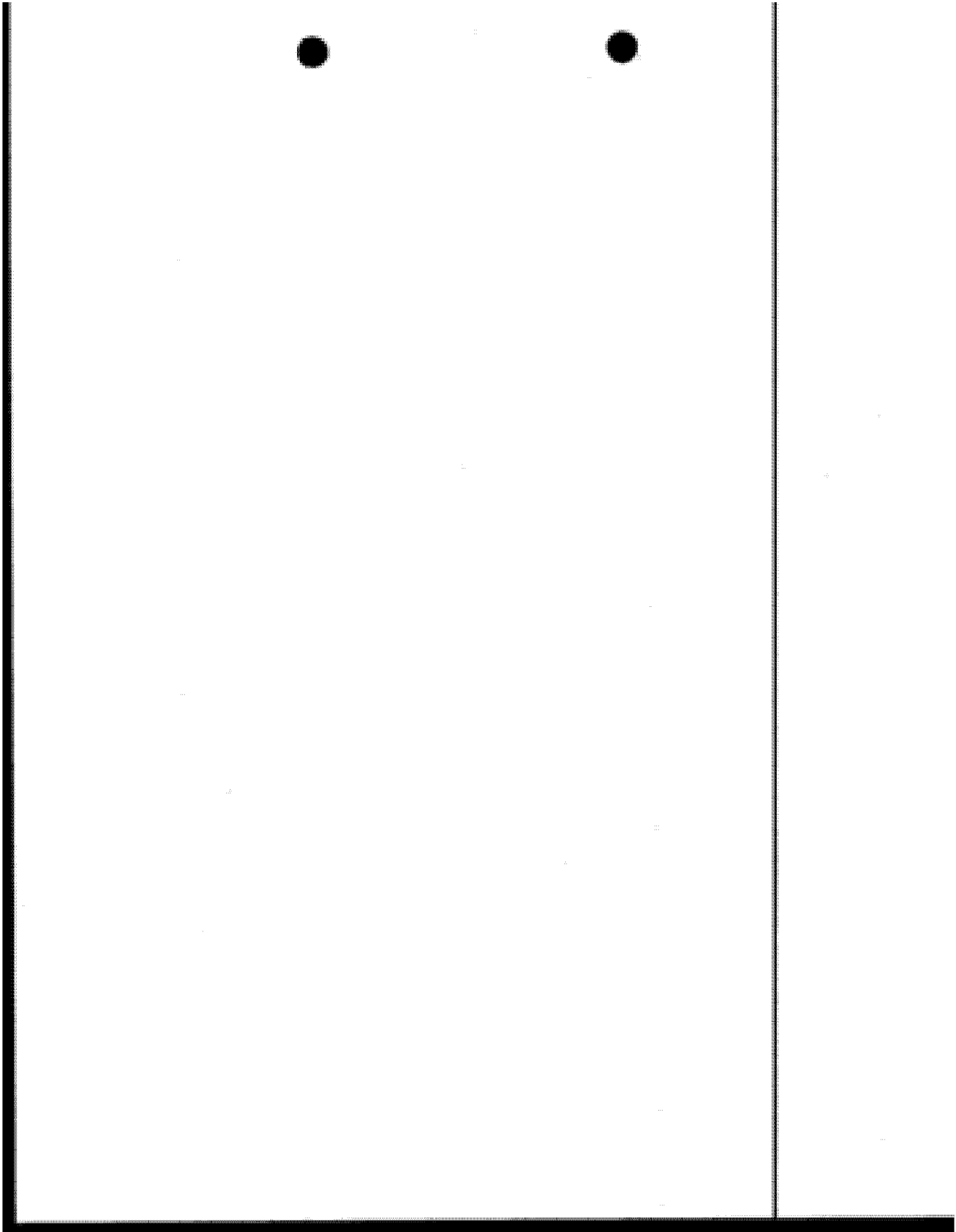
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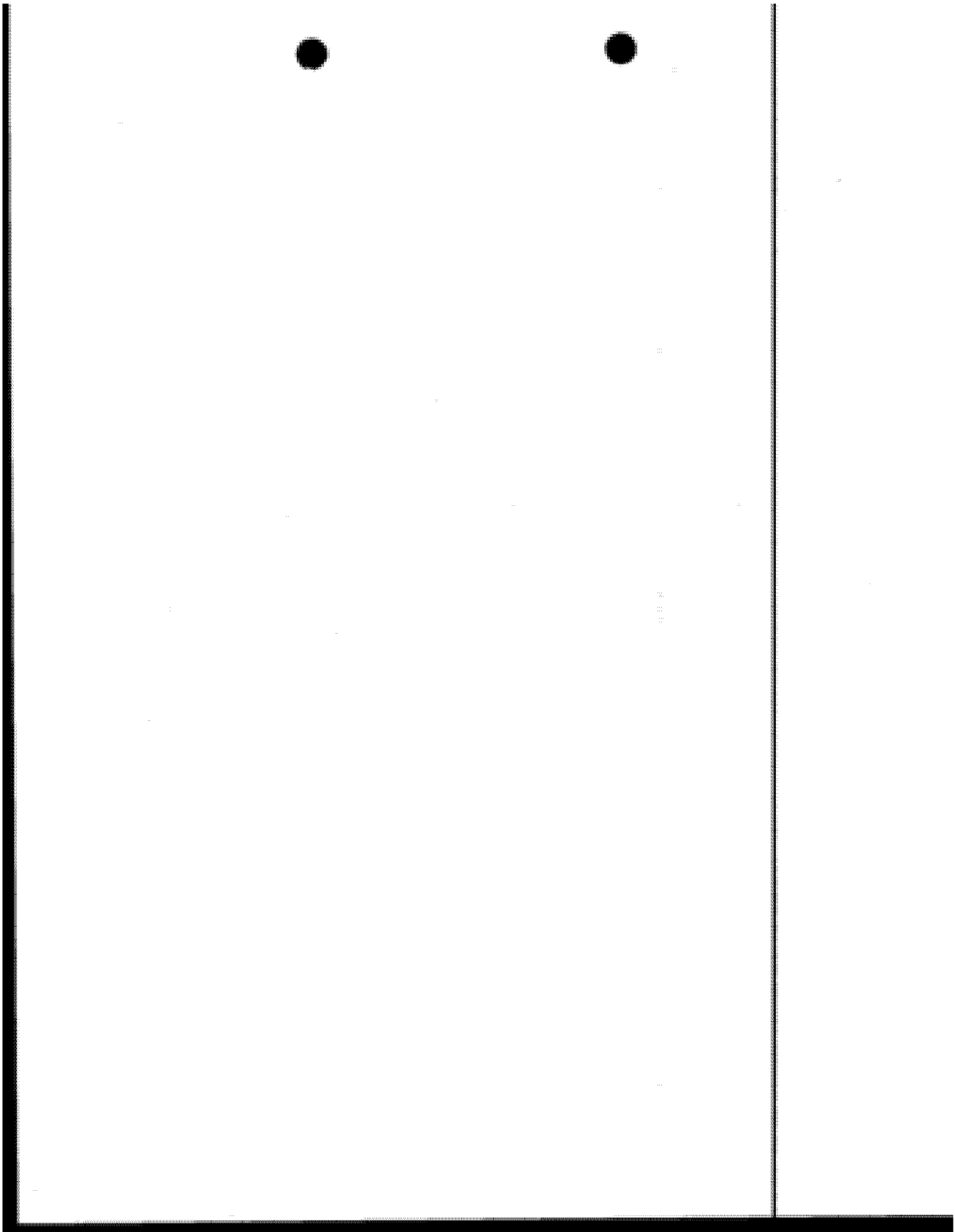
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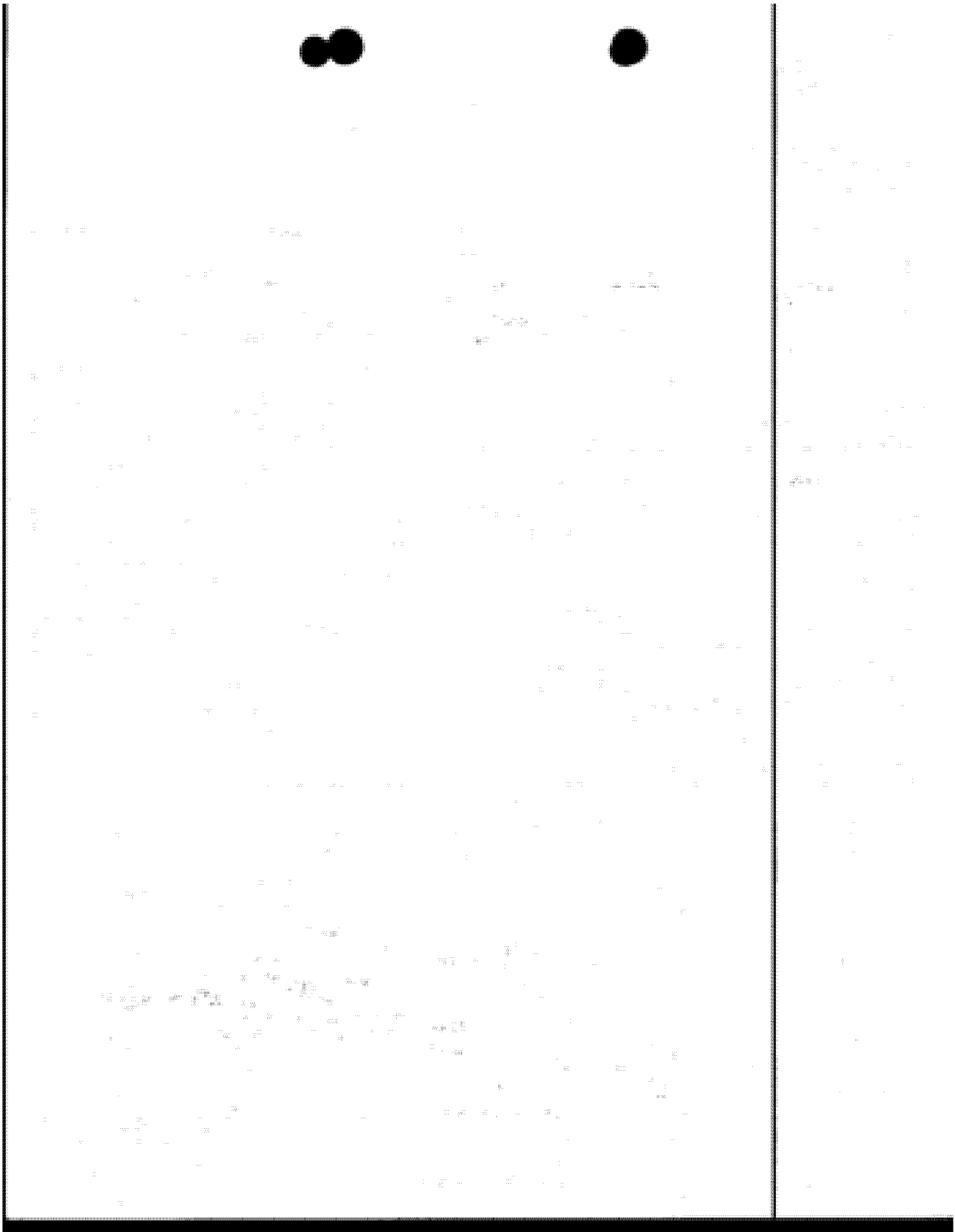
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The table consists of approximately 30 horizontal rows and a vertical column on the right side. The content is mostly blank, with some very faint, illegible markings scattered throughout, particularly in the lower half of the page.

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Patient:

**B6**

Archived 1/20/2014-5/5/2014

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Patient:

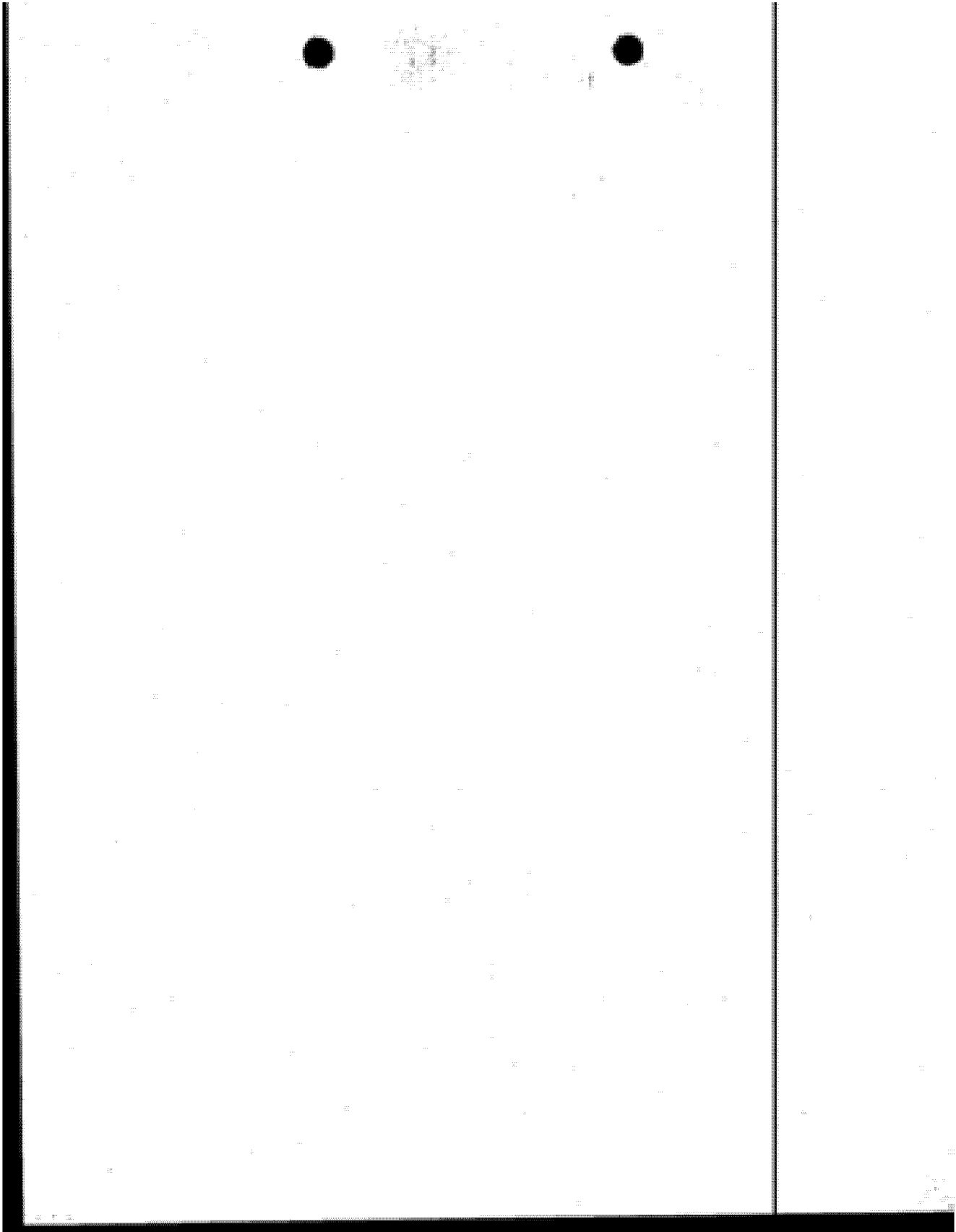
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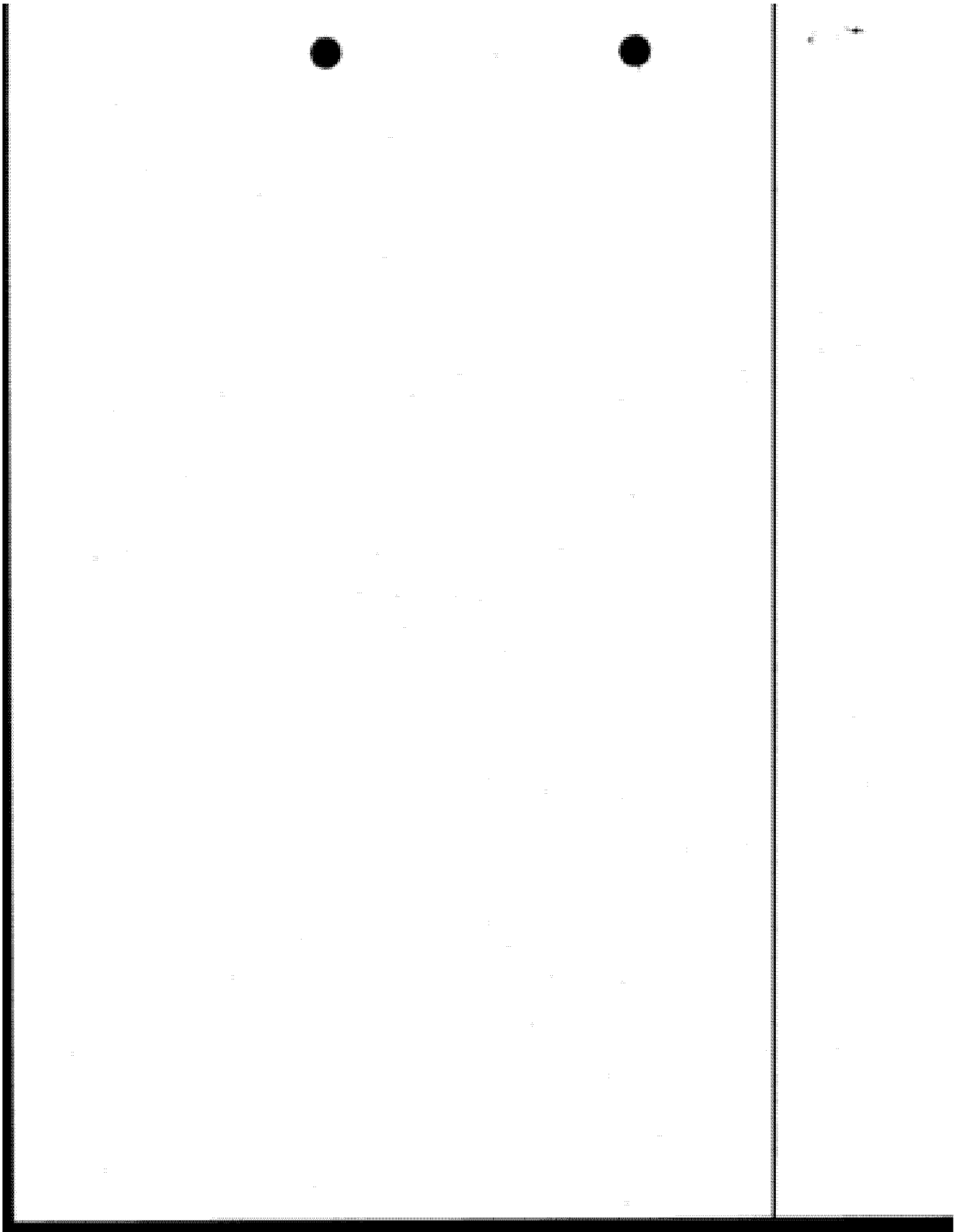
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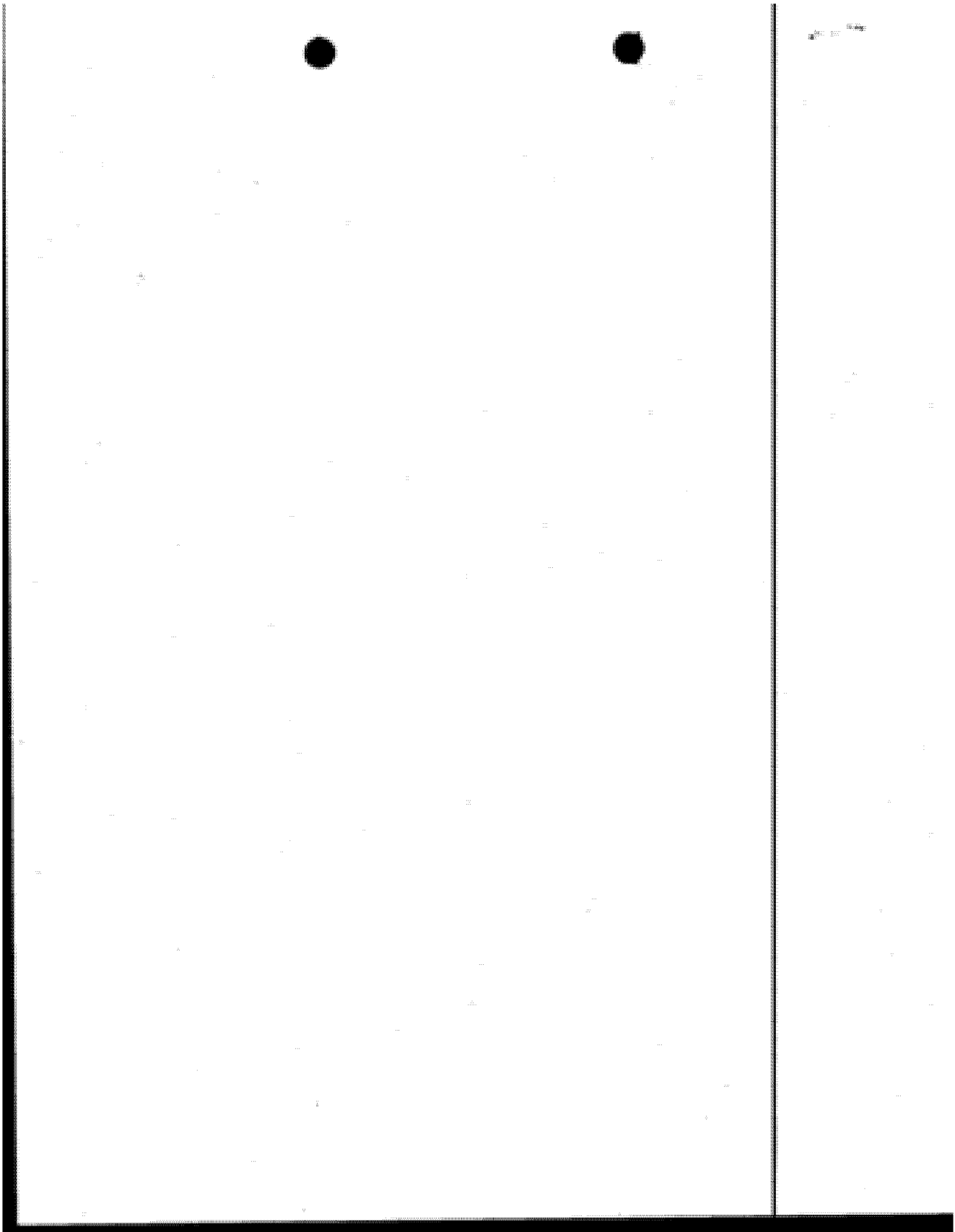
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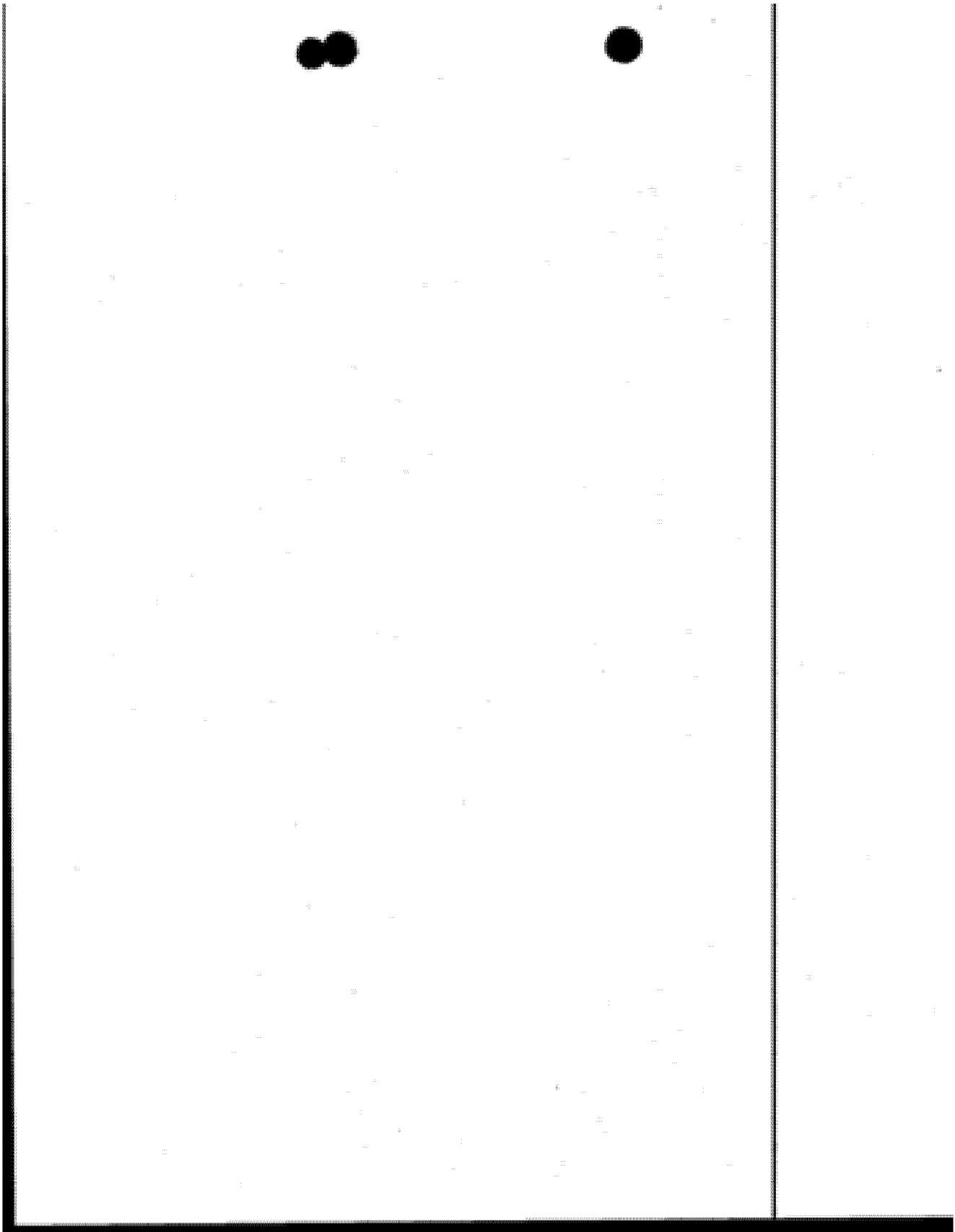
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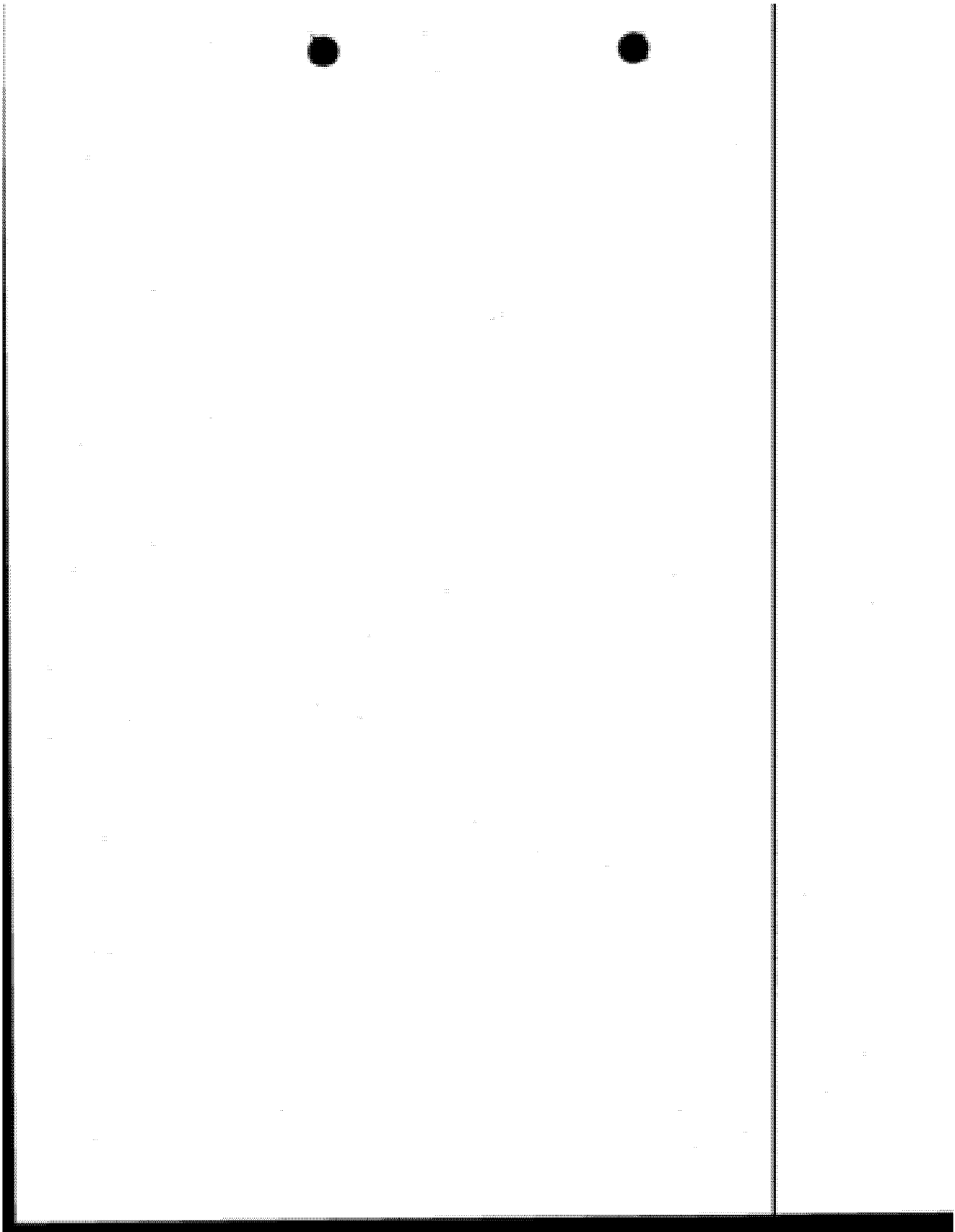
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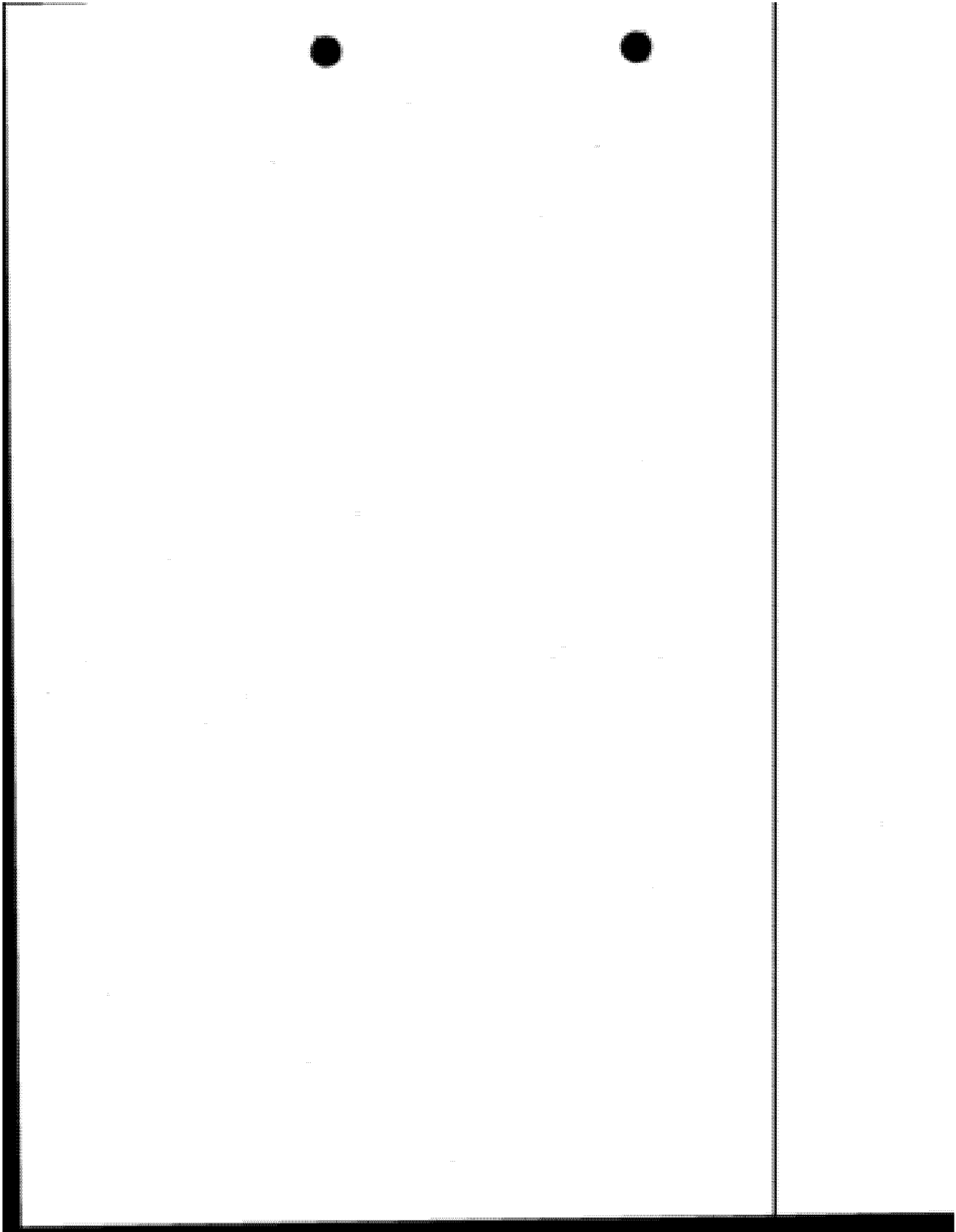
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Client:  
Patient:

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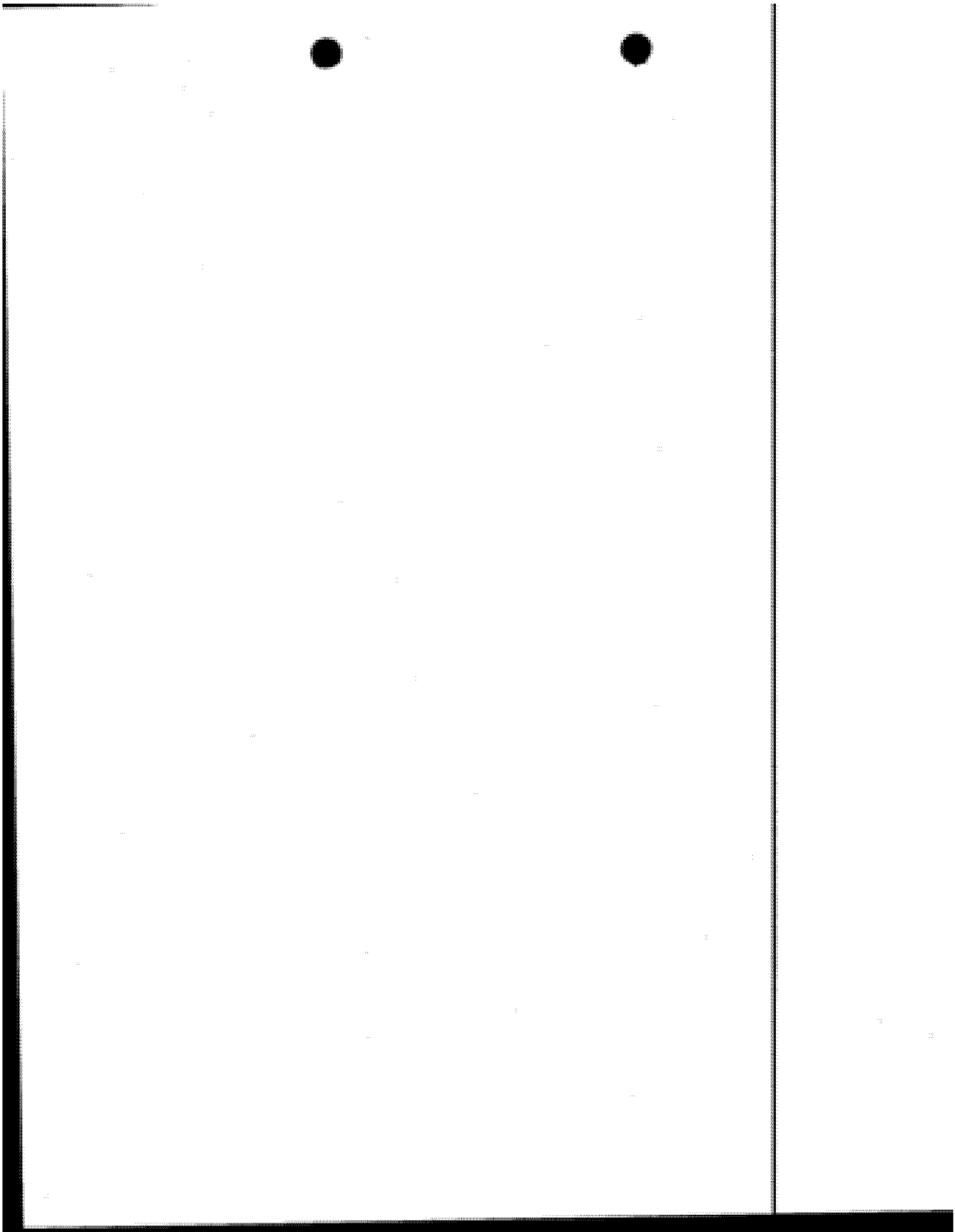
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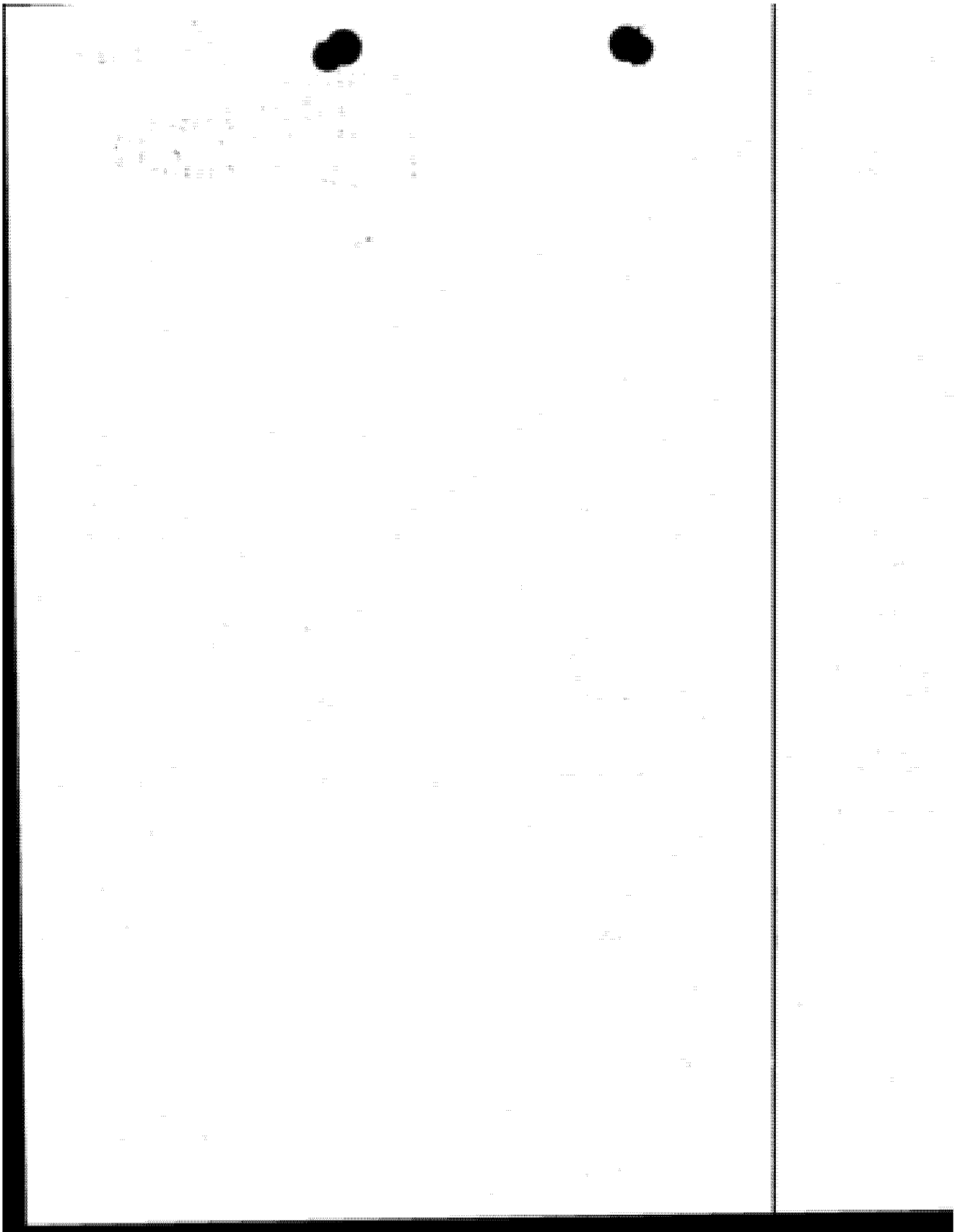


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Patient:

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Archived 1/20/2014-5/5/2014

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Patient:

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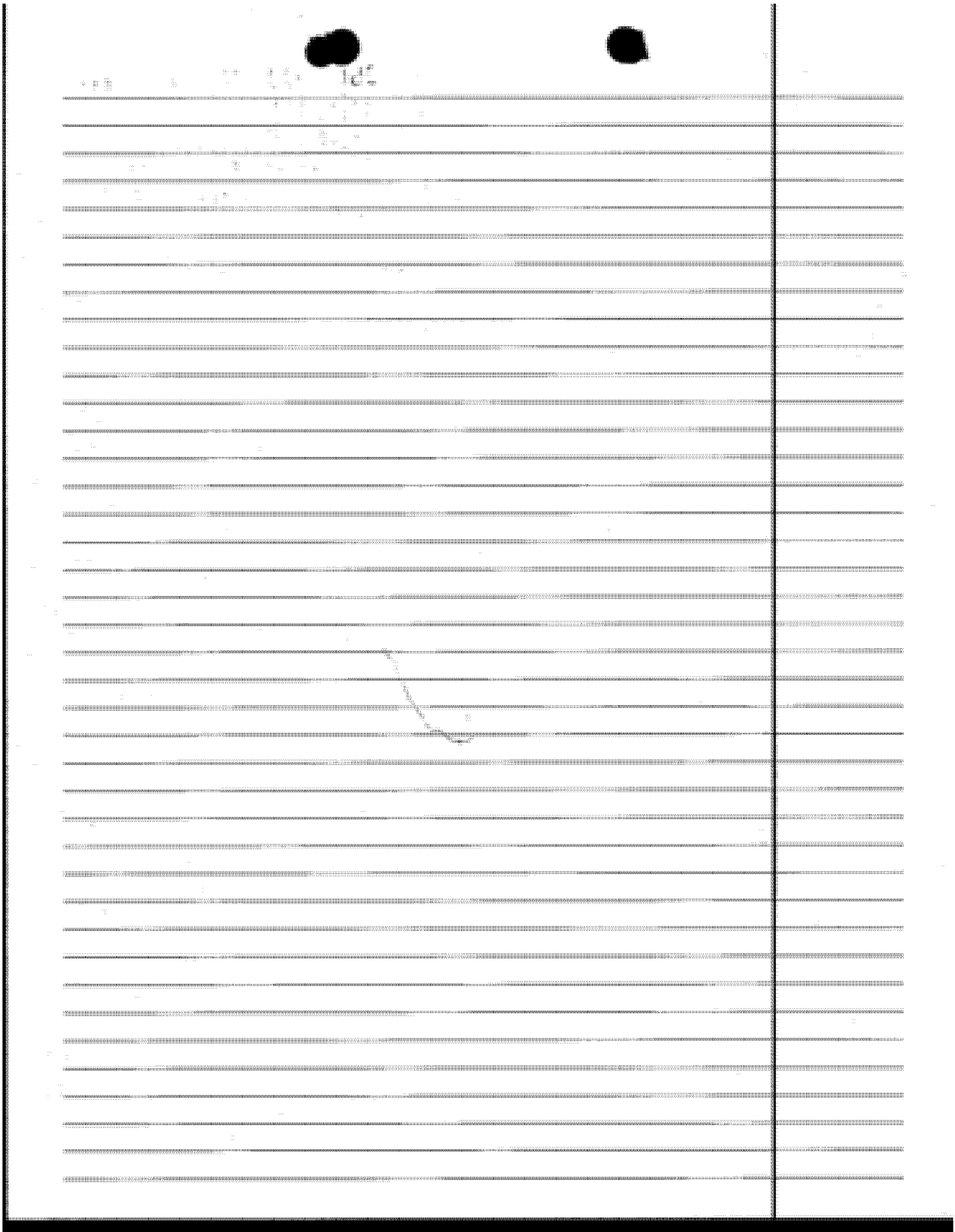
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Patient:

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Client: **B6**  
Patient:

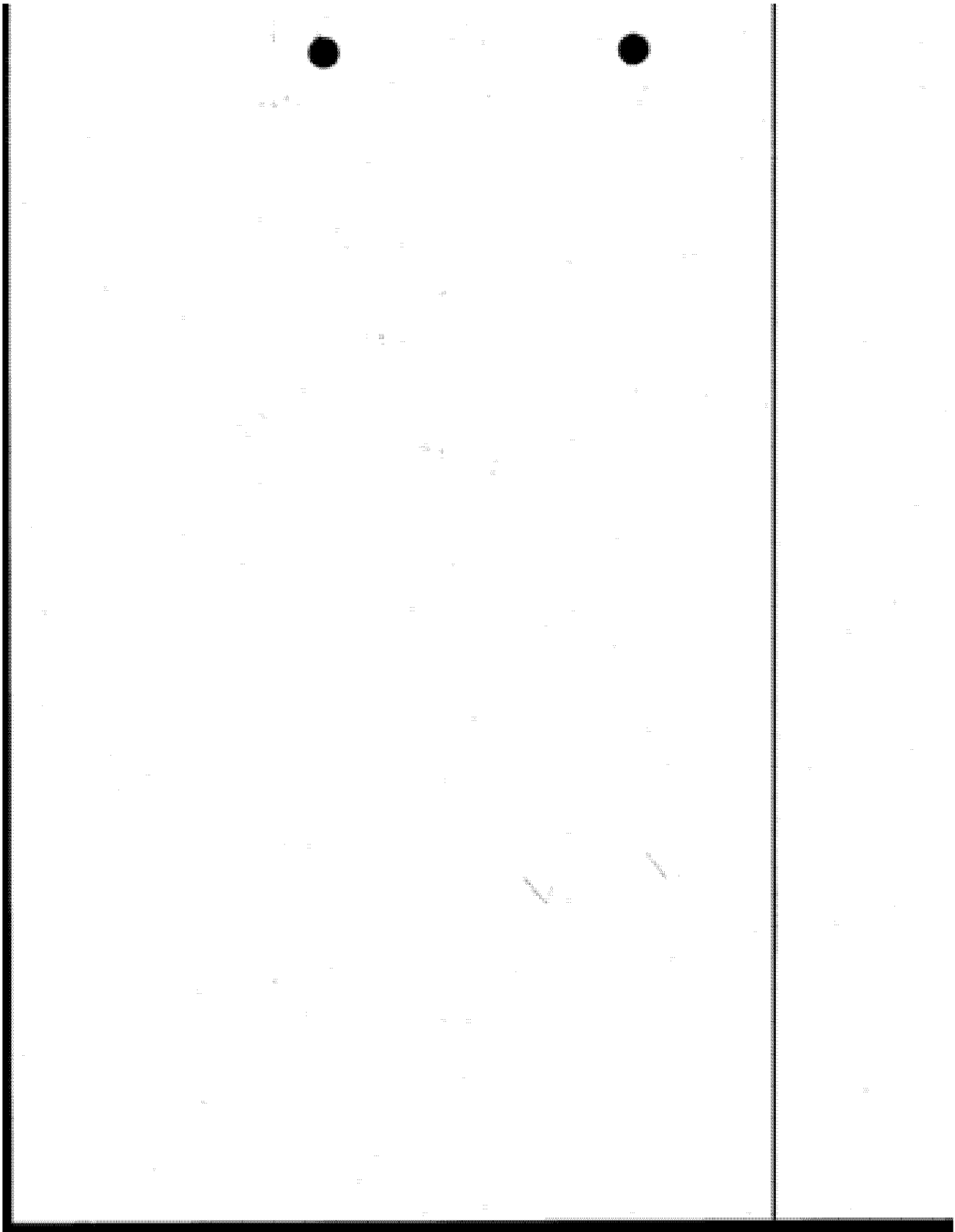
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Client:  
Patient:

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Archived 1/20/2014-5/5/2014

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Client:  
Patient:

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Archived 1/20/2014-5/5/2014

The table consists of a grid of approximately 20 columns and 25 rows. The grid is mostly empty, with some faint, illegible text visible in the cells. Two black circular marks are present at the top center of the page, above the grid.

**B6**

Client:  
Patient:

**B6**

Archived 1/20/2014-5/5/2014

**B6**

Client:  
Patient:

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Archived 1/20/2014-5/5/2014



**B6**



Client:  
Patient:

**B6**

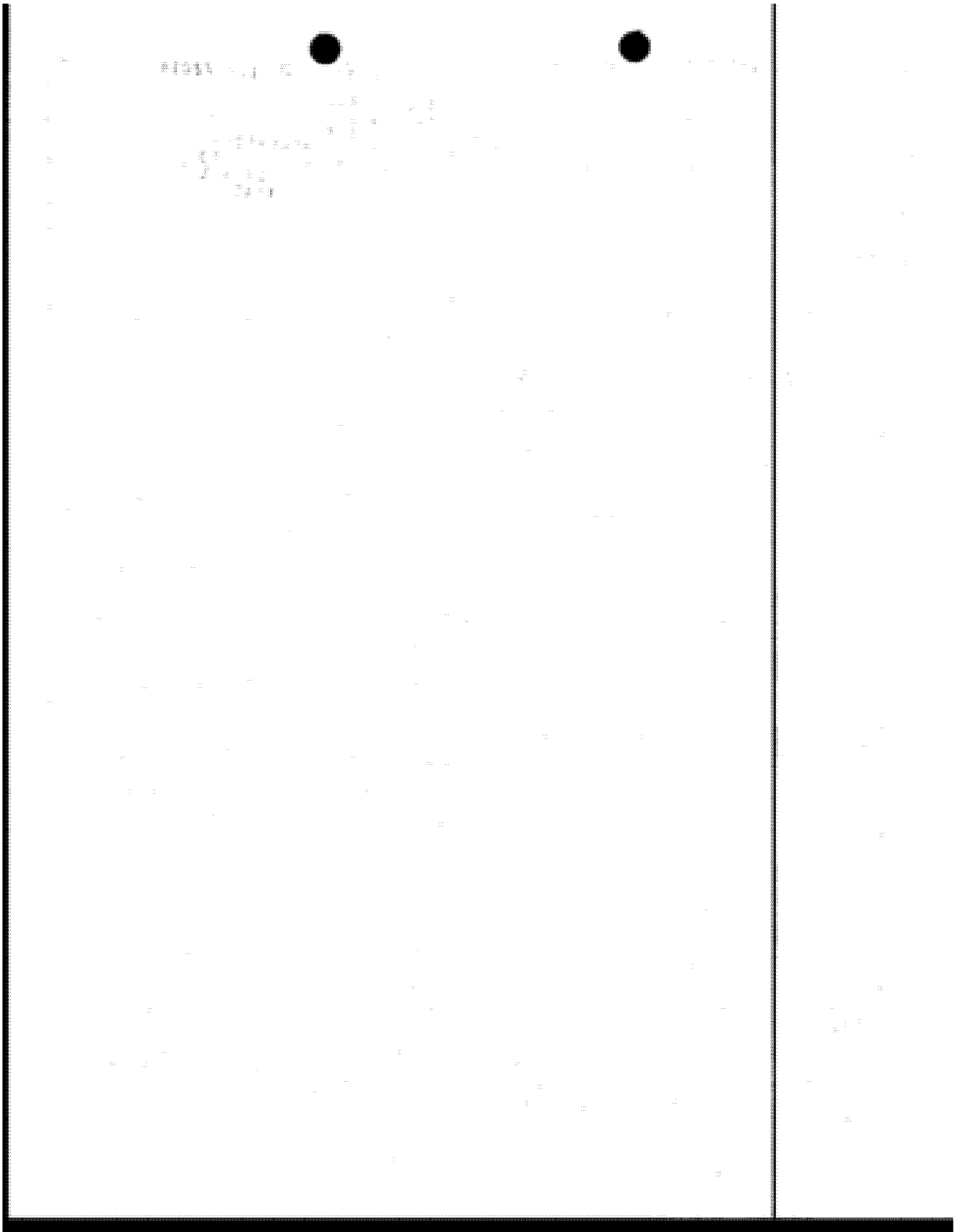
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Client:  
Patient:

**B6**

Archived 1/20/2014-5/5/2014



Client:  
Patient:

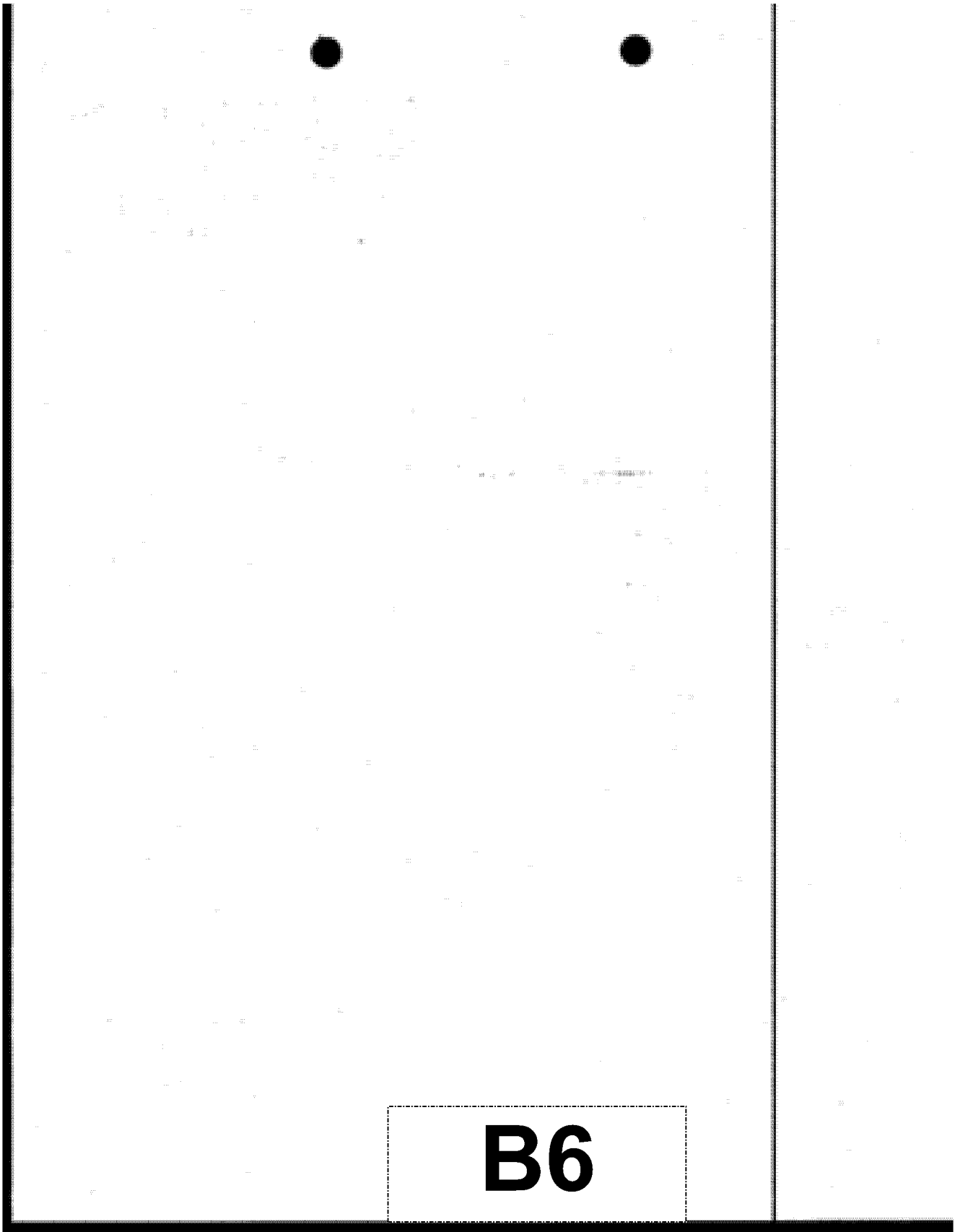
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Archived 1/20/2014-5/5/2014

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Patient:

Archived 1/20/2014-5/5/2014



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**B6**

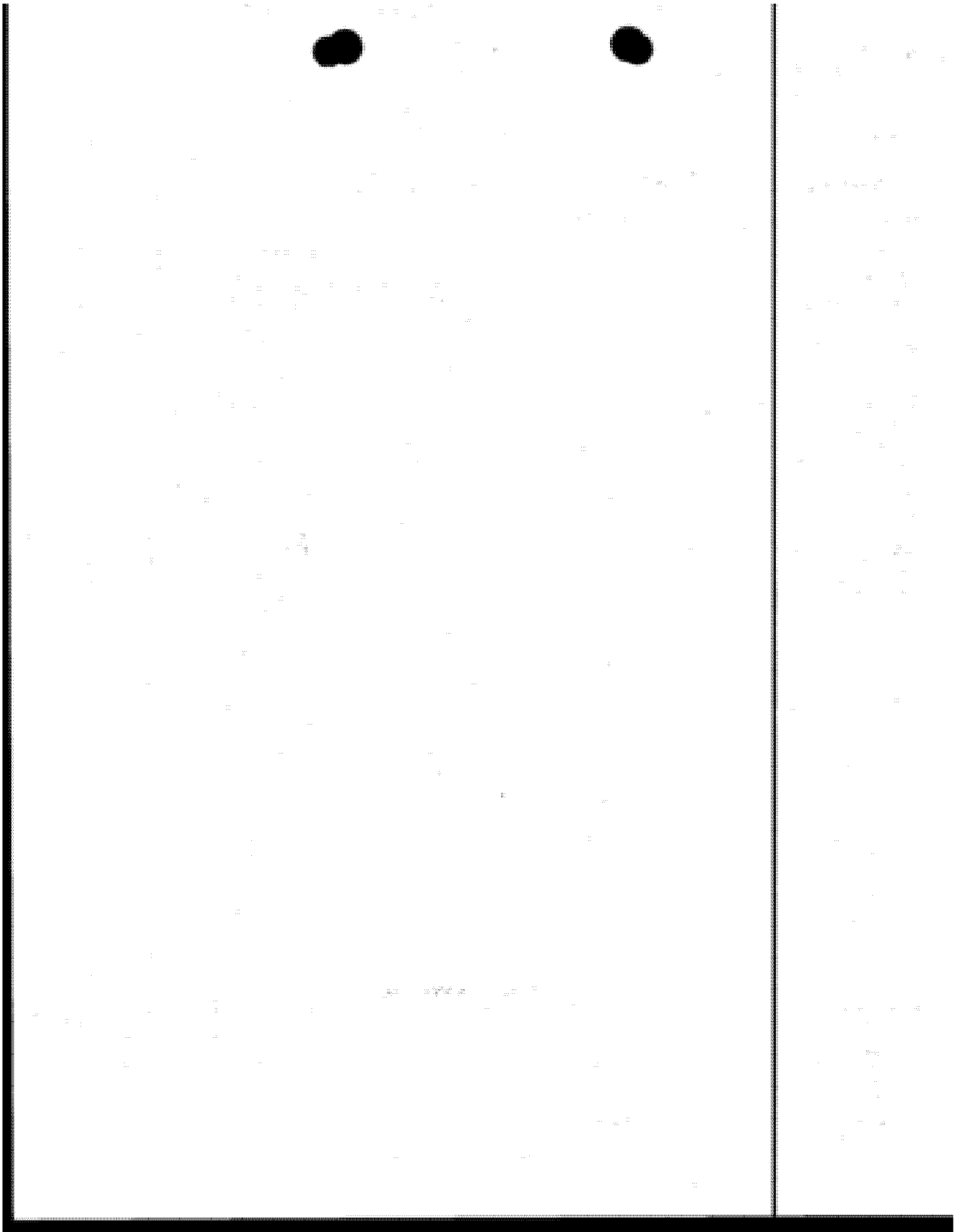
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**B6**

Client:  
Patient:

**B6**

Archived 1/20/2014-5/5/2014



Client:  
Patient:

**B6**

Archived 1/20/2014-5/5/2014

**B6**

Client: **B6**  
Patient:

Archived 1/20/2014-5/5/2014

**B6**



Client:  
Patient:

**B6**

**Inpatient notice**

**B6**

11/14/2019 10:11:11 AM

Client:  
Patient:

**B6**

Lab Results **B6** Vet Clinic 5/7/14 - 2/11/15

**B6**

Client:  
Patient:

**B6**

Lab Results **B6** Vet Clinic 5/7/14 - 2/11/15

**B6**

Client: **B6**  
Patient:

Lab Results **B6** Vet Clinic 5/7/14 - 2/11/15

**B6**

Client:  
Patient:

**B6**

**Cortisol 2/17/15**

**B6**

Client:  
Patient:

**B6**

**Salmonella SP 2/20/15**

**B6**

Client: **B6**  
Patient:

Administrative Adjustment Form **B6**

**B6**

Client:  
Patient:

**B6**

Administrative Adjustment Form **B6**

**B6**



Client: **B6**  
Patient:

Lab Image-IDEXX-CardioPet proBNP, 9/29/2016

**B6**

Client: **B6**  
Patient:

**B6** Request for Diagnosis (DOS: 9/28/16)

**B6**

Client: **B6**  
Patient:

**B6** Request for Diagnosis (DOS: **B6**)

**B6**

Client:  
Patient:

**B6**

Lab Image: NT pro BNP - IDEXX - 12/21/2017

**B6**

Client: **B6**  
Patient:

Insurance: **B6** Request for Diagnosis (DOS: 12/21/17)

**B6**

Client:  
Patient:

**B6**

Insurance

**B6**

Request for Diagnosis (DOS: 12/21/17)

**B6**

Client:  
Patient:

**B6**

Anesthesia Record and checklist

**B6**

**B6**

Client: **B6**  
Patient:

Anesthesia Record and checklist **B6**

**B6**



Client:  
Patient:

**B6**

**IDEXX BNP - 5/7/2018**

**B6**

Client:  
Patient:

**B6**

**IDEXX BNP - 12/11/2018**

**B6**

Client:  
Patient:

**B6**

**Lab Results; Gastrointestinal Lab, Texas A&M 12/11/18**

**B6**

Client: **B6**  
 Patient: **B6**

**Diet history 12/11/18**

**CARDIOLOGY DIET HISTORY FORM**

Please answer the following questions about your pet:

Pet's name: **B6** Owner's name: **B6** Today's date: **12/11/18**

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, rawcides, and any other food item that your pet currently eats. Please include the brand, specific product, and flavor so we know exactly what your pet is eating.

Examples are given 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
Agria Green Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	daily	Jan 2018
85% lean hotdogger	microwaved	3 oz	1x/week	Jan 2018
Pupperoni doggie treat flavor	treat	8	daily	Aug 2018
Aspic	treat	1 each week	1x/week	May 2018
Don't see a product + 1/2 cup	dry	1 cup	1x/2w	2018
Other: 1/2 cup pet 1/2 cup 1/2 cup	dry	1/2 cup	1-2x/2w	

\*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 supplement)?  Yes  No. If yes, please list which ones and give brands and amounts.

	Brand/Concentration	Amount per day
Taurine	_____	1 g / 2x
Carboline	_____	1/2 / 2x
Anticoagulant	_____	_____
Multivitamin	_____	_____
Fish oil	_____	1 / 2x
Coenzyme Q10	_____	100 / 2x
Other (please list)	_____	_____
Example: Vitamin C	Nature's Bounty	200 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 food
- I put them in a Pill Pocket or similar product
- I put them in foods (not foods)

Client: **B6**  
Patient:

**Vitals Results**

8:33:03 PM	Appropriate treatments completed prior to transfer
8:33:04 PM	Cage card transferred to new ward, scanned to new cage
8:33:05 PM	Cage set up in wards (note which ward)
8:33:06 PM	Fluids transferred to new ward
8:33:07 PM	Meds transferred to new ward
8:33:08 PM	ICU tech has rounded with ward tech prior to transfer
8:33:09 PM	Patient cleaned, catheters clean and patent
8:33:10 PM	Patient ID band is in place
8:42:20 PM	Quantify IV fluids (mls)
9:45:54 PM	Eliminations
10:58:29 PM	Respiratory Rate
11:21:35 PM	Heart Rate (/min)
1:00:02 AM	Quantify IV fluids (mls)
1:00:10 AM	Eliminations
5:30:18 AM	Quantify IV fluids (mls)
5:30:24 AM	Eliminations
6:18:24 AM	Respiratory Rate
6:22:14 AM	Heart Rate (/min)
9:17:23 AM	Weight (kg)
9:17:30 AM	Eliminations
9:49:47 AM	Notes
11:11:25 AM	Respiratory Rate
11:11:35 AM	Notes
11:11:49 AM	Heart Rate (/min)
11:12:49 AM	Eliminations
11:55:50 AM	Eliminations
1:27:55 PM	Quantify IV fluids (mls)
1:28:14 PM	Eliminations
1:28:45 PM	Notes
2:54:51 PM	Eliminations
3:32:30 PM	Notes
3:35:23 PM	Respiratory Rate
3:35:46 PM	Heart Rate (/min)
3:57:16 PM	Eliminations
5:08:54 PM	Quantify IV fluids (mls)
5:09:04 PM	Notes

**B6**

**B6**

Client: **B6**  
Patient:

**Vitals Results**

09:22 PM	Eliminations
11:58 PM	Amount eaten
15:55 PM	Eliminations
12:14 PM	Eliminations
01:22 PM	Heart Rate (/min)
01:30 PM	Notes
03:29 PM	Temperature (F)
03:36 PM	Respiratory Rate
03:44 PM	Nursing note
03:21 PM	Eliminations
03:32 PM	Notes
03:59 PM	Quantify IV fluids (mls)
03:59 PM	Amount eaten
1:10:42 PM	Notes
1:12:46 PM	Respiratory Rate
1:13:05 PM	Heart Rate (/min)
07:37 AM	Quantify IV fluids (mls)
08:57 AM	Eliminations
11:21 AM	Eliminations
13:02 AM	Amount eaten
13:40 AM	Notes
01:57 AM	Notes
03:40 AM	Respiratory Rate
04:50 AM	Heart Rate (/min)
04:58 AM	Eliminations
08:53 AM	Weight (kg)
09:02 AM	Eliminations
09:46 AM	Quantify IV fluids (mls)
13:10 AM	Amount eaten
13:49 AM	Notes
15:52 AM	Temperature (F)
15:21 AM	Notes
15:27 AM	Respiratory Rate
15:34 AM	Heart Rate (/min)
15:05 AM	Eliminations
17:23 AM	Notes
18:45 AM	Quantify IV fluids (mls)

**B6**

**B6**

Client: **B6**  
Patient:

**Vitals Results**

9:26:43 AM	Weight (kg)
9:27:31 AM	Eliminations
9:31:32 AM	Amount eaten
10:51:45 AM	Eliminations
11:19:18 AM	Notes
11:21:18 AM	Heart Rate (/min)
11:21:26 AM	Respiratory Rate
12:02:10 PM	Eliminations
1:27:19 PM	Eliminations
1:28:17 PM	Quantify IV fluids (mls)
1:28:53 PM	Notes
1:32:35 PM	Amount eaten
1:50:51 PM	Nursing note
3:10:50 PM	Notes
3:24:37 PM	Heart Rate (/min)
3:24:43 PM	Respiratory Rate
3:54:26 PM	Eliminations
5:27:08 PM	Quantify IV fluids (mls)
5:29:21 PM	Notes
5:31:27 PM	Amount eaten
7:43:47 PM	Amount eaten
7:49:25 PM	Temperature (F)
7:49:34 PM	Notes
7:53:14 PM	Respiratory Rate
7:53:21 PM	Heart Rate (/min)
7:53:48 PM	Eliminations
7:54:21 PM	Quantify IV fluids (mls)
9:32:20 PM	Notes
10:14:06 PM	Amount eaten
10:22:46 PM	EKG: Note rate and rhythm.
10:54:24 PM	Respiratory Rate
11:07:06 PM	Eliminations
11:07:22 PM	Notes
11:07:34 PM	Heart Rate (/min)
11:10:14 PM	Quantify IV fluids (mls)
11:26:54 PM	Eliminations

**B6**

**B6**

Client: **B6**  
Patient:

**Vitals Results**

<b>B6</b>	1:31:45 AM	Notes	<b>B6</b>
	1:38:26 AM	Amount eaten	
	1:51:41 AM	Cage or Walk notes	
	3:48:25 AM	Weight (kg)	
	3:48:47 AM	Notes	
	3:50:37 AM	Quantify IV fluids (mls)	
	3:50:48 AM	Eliminations	
	3:56:41 AM	Respiratory Rate	
	3:57:01 AM	Heart Rate (/min)	
	5:08:13 AM	Notes	
	5:09:25 AM	Amount eaten	
	7:27:56 AM	Notes	
	7:33:58 AM	Eliminations	
	7:34:32 AM	Weight (kg)	
	7:50:20 AM	Heart Rate (/min)	
	7:50:28 AM	Respiratory Rate	
	7:50:38 AM	Temperature (F)	
	9:02:38 AM	Notes	
	9:10:44 AM	Amount eaten	
	9:44:23 AM	Nursing note	
	11:14:32 AM	Heart Rate (/min)	
	11:14:40 AM	Respiratory Rate	
	12:51:27 PM	Heart Rate (/min)	
	12:51:28 PM	Temperature (F)	
	12:51:29 PM	Respiratory Rate	
	12:51:30 PM	Weight (kg)	
	3:52:29 PM	Amount eaten	
	8:21:21 PM	Heart Rate (/min)	
	8:21:22 PM	Temperature (F)	
	8:21:23 PM	Respiratory Rate	
8:21:24 PM	Weight (kg)		
1:05:55 PM	Heart Rate (/min)		
1:05:56 PM	Temperature (F)		
1:05:57 PM	Respiratory Rate		
1:05:58 PM	Weight (kg)		
8:51:58 AM	Temperature (F)		
8:52:06 AM	Respiratory Rate		
8:52:13 AM	Heart Rate (/min)		
8:59:16 AM	Weight (kg)		



Client: **B6**  
Patient:

**Vitals Results**

11:19:14 AM	Heart Rate (/min)
11:19:15 AM	Temperature (F)
11:19:16 AM	Respiratory Rate
7 9:59:14 AM	Weight (kg)
1:10:48 AM	Weight (kg)
7:54:11 AM	Weight (kg)
7:57:36 AM	Interest in water
7:57:44 AM	Eliminations
8:19:19 AM	Temperature (F)
8:19:20 AM	Heart Rate (/min)
8:19:21 AM	Respiratory Rate
10:57:38 AM	Notes
11:12:14 AM	Cryoprecipitate (text)
11:12:15 AM	Donor ID (text)
11:12:16 AM	Dose and Time Frame Confirmed (boolean)
11:12:17 AM	Transfusion Form (boolean)
11:15:18 AM	Temperature (F)
11:15:25 AM	Heart Rate (/min)
11:15:31 AM	Respiratory Rate
11:15:39 AM	Mucous membranes
11:18:21 AM	Interest in water
12:13:20 PM	Temperature (F)
12:13:21 PM	Heart Rate (/min)
12:13:22 PM	Respiratory Rate
12:13:33 PM	Mucous membranes
1:58:37 PM	Cryoprecipitate (text)
1:58:37 PM	Cryoprecipitate (text)
1:58:38 PM	Donor ID (text)
1:58:38 PM	Donor ID (text)
3:19:48 PM	Temperature (F)
3:19:49 PM	Heart Rate (/min)
3:19:50 PM	Respiratory Rate
4:39:28 PM	Anesthesia Notes
5:21:35 PM	Catheter Assessment
5:35:40 PM	Bandage check
5:36:31 PM	Eliminations
5:37:03 PM	Pain assessment
5:56:06 PM	Temperature (F)
6:50:07 PM	Temperature (F)

**B6**

**B6**

Client: **B6**  
Patient:

**Vitals Results**

7:13:54 PM	Weight (kg)
7:14:04 PM	Temperature (F)
7:14:05 PM	Heart Rate (/min)
7:14:06 PM	Respiratory Rate
7:14:59 PM	Catheter Assessment
7:15:17 PM	Amount eaten
7:50:50 PM	Temperature (F)
9:35:37 PM	Bandage check
9:35:52 PM	Temperature (F)
9:36:08 PM	Pain assessment
9:37:01 PM	Eliminations
9:41:26 PM	Catheter Assessment
11:04:16 PM	Temperature (F)
11:04:17 PM	Heart Rate (/min)
11:04:18 PM	Respiratory Rate
11:48:31 PM	Eliminations
1:40:39 AM	Amount eaten
1:56:11 AM	Bandage check
1:56:35 AM	Catheter Assessment
1:56:46 AM	Temperature (F)
1:57:42 AM	Pain assessment
3:20:49 AM	Temperature (F)
3:20:50 AM	Heart Rate (/min)
3:20:51 AM	Respiratory Rate
3:27:51 AM	Eliminations
5:13:59 AM	Catheter Assessment
5:14:24 AM	Bandage check
5:14:52 AM	Pain assessment
7:20:19 AM	Eliminations
7:56:20 AM	Temperature (F)
7:56:21 AM	Heart Rate (/min)
7:56:22 AM	Respiratory Rate
8:02:40 AM	Catheter Assessment
8:02:57 AM	Amount eaten
8:48:54 AM	Bandage check
9:03:16 AM	Pain assessment
9:03:44 AM	Bandage check
9:04:01 AM	Catheter Assessment

**B6**

**B6**

Client: **B6**  
Patient:

**Vitals Results**

<b>B6</b>	9:13:32 AM	Weight (kg)	<b>B6</b>
	9:13:40 AM	Eliminations	
	10:07:21 AM	Nursing note	
	11:21:19 AM	Eliminations	
	11:25:23 AM	Temperature (F)	
	11:25:24 AM	Heart Rate (/min)	
	11:25:25 AM	Respiratory Rate	
	2:32:56 PM	Heart Rate (/min)	
	2:32:57 PM	Respiratory Rate	
	2:32:58 PM	Temperature (F)	
	2:32:59 PM	Weight (kg)	
	0:02:36 AM		
	8 10:40:25 AM	Weight (kg)	

**B6**

**B6**

**B6**

**B6**

**B6**



**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**

Female

Case# Doberman Pinscher  
Mark/Tan  
396332

12/29/2017

Dear

**B6**

Thank you for referring

**B6**

with their p

**B6**

If you have any questions, or concerns, please contact us at 508-827-1981.

Thank you,

**B6**

Cummings  
Veterinary Medical Center  
AT TUFTS UNIVERSITY

Forster Hospital for Small Animals  
25 Willard Street  
North Grafton, MA 01526  
Telephone (508) 829-5295  
Fax (508) 829-7951  
<http://vetmed.tufts.edu/>

**B6**

**B6**

Female  
Owner: Deborah Fischer  
Mark/Tan  
096332

**B6**

Dear Dr.

**B6**

Thank you for referring **B6** with their pet **B6**

**B6** presented to Tufts Chief Surgery Service for a laparoscopic spay. We tested her for vWF and it was 32% so we administered cryoprecipitate and desmopressin prior to surgery. She stayed in our ICU overnight and did well and is being discharged today on **B6**

If you have any questions, or concerns, please contact us at 508-827-4988.

Thank you,

**B6**

(SAM Rotating Intern)  
A, DACVS

**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** Female (Spayed)  
Case# Ocbreusian Pinner  
Mark/Tan  
396332

4/23/2018

Date **B6**

**B6**

If you have any questions or concerns, please contact us at 508-829-4988.

Thank you.

**B6**

Cummings  
Veterinary Medical Center  
AT TUFTS UNIVERSITY

**B6**

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**

Female (Spayed)

Case# Doberman Pinscher  
Black/Tan  
396332

4/24/2018

Dear

**B6**

**B6**

bloodwork is attached for your records.

If you have any questions or concerns, please contact us at 508-827-4000.

Thank you,

**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**

Female (Spayed)

Case# Doberman Pinscher  
Black/Tan  
396332

5/9/2018

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,

John Rich DVM, DACVIM (Cardiology), DACVCC

**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**

Female (Spayed)  
Cause: Unknown Predisposition  
Black/Tan  
396332

6/9/2018

Dear **B6**

Thank you for referring **B6** with their pet **B6**

If you have any questions, or concerns, please contact us at 508-857-1981.

Thank you,

**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**

Female (Spayed)

Case# Doberman Pinscher  
Black/Tan  
396332

12/19/2018

Dear **B6**

Thank you for referring **B6** with their pet **B6**

If you have any questions, or concerns, please contact us at 508-829-1981.

Thank you,

**B6**



**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 1/14/2019 10:08:36 PM  
**Subject:** Taste of the Wild Sierra Mountain dry: Lisa Freeman - EON-376361  
**Attachments:** 2061171-report.pdf; 2061171-attachments.zip

A PFR Report has been received and PFR Event [EON-376361] has been created in the EON System.

A "PDF" report by name "2061171-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 "2061171-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-376361

**ICSR #:** 2061171

**EON Title:** PFR Event created for Taste of the Wild Sierra Mountain dry; 2061171

<b>AE Date</b>	01/02/2019	<b>Number Fed/Exposed</b>	7
<b>Best By Date</b>		<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	3 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2061171

**Product Group:** Pet Food

**Product Name:** Taste of the Wild Sierra Mountain dry

**Description:** Eating Taste of the Wild Sierra Mountain since June 2018 (Acana Heritage Poultry before that). This diet was fed to multiple dogs - have not screened other dogs yet so unknown whether they are also affected. Echo showed reduced contractility and mild left atrial enlargement. BNP and troponin mildly elevated, troponin = B6 Taurine WNL B6 Changing to Pro Plan Sensitive Skin/Stomach dry and will recheck in 3 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:** 7

**Number of Animals Reacted With Product:** 1

Product Name	Lot Number or ID	Best By Date
Taste of the Wild Sierra Mountain 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-376361>

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=393370>

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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](mailto:FDAREportableFoods@fda.hhs.gov) immediately.

**Foster Hospital for Small Animals**

55 Willard Street  
North Grafton, MA 01536  
(508) 839-5395

**All Medical Records**

Client:

**B6**

Address:

Patient:

**B6**

Breed: Golden Retriever

DOB:

**B6**

Species: Canine

Sex: Female

Home Phone:  
Work Phone:  
Cell Phone:

**B6**

**Referring Information**

---

**B6**

Client:

**B6**

Patient:

**Initial Complaint:**

Scanned Record

---

**Initial Complaint:**

New - **B6** - DCM study

SOAP Text Jan 2 2019 11:10AM -

**B6**

---

**Initial Complaint:**

Drop Off Lab Sample

---

**Disposition/Recommendations**

---

Client:  
Patient:

**B6**

---

---

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:	<b>B6</b>
Veterinarian:	
Patient ID:	<b>B6</b>
Visit ID:	

Patient:	<b>B6</b>
Species:	Canine
Breed:	Golden Retriever
Sex:	Female
Age:	<b>B6</b> Years Old

**Lab Results Report**

Accession ID:			
Test	Results	Reference Range	Units



**B6**

Client: **B6**  
Patient: **B6**

RDVM **B6** records

**B6**

Clinical History for **B6**

Client **B6**  
Breed Golden Retriever  
Sex Female  
Colour white  
Age **B6**  
Desexed N  
Alive Y

13-Dec 2018 at 09:16 am

#55091 **B6**

Notes

Multiple emails with options for cardiology consults in area and pet food labels (feeding trials vs formulation to meet aaafco guidelines; all stage diets vs maintenance; taurine supplementation is not going to "fix" a grain free diet...)

Notified that I have heard confirmation from Dr. Freeman at Tufts that Leah qualifies for a new study there- O gave permission to send Tufts Nutrition office her contact info and they will reach out directly to her to set up a visit. Her other dogs may also qualify for study, based on **B6** results. Keep **B6** (and her other dogs) on original diet until **B6** is evaluated there, and they direct her to transition to new diet.

O states **B6** (and several of her other dogs) had normal echos when they were approx 1 1/2 yo, as she wanted to screen before considering breeding. O to bring all records with her in case Tufts would like to see baseline echo measurements; also collect all labels of food she has fed in past year or so, including dry/canned/treats and list of any people foods she feeds them even just as treats or snacks.

-GF

07-Dec 2018 at 02:49 pm

#55041 **B6**

Notes

See labwork results: CBC wnl; Chem wnl; HWT neg; proBNP elevated at 1,390.

Rec echo to r/o DCM

PCTC- disc results; o would like to pursue echo- can do here with IM specialist (not specific to cardiology) but would have to delay until next semester; can refer for outpatient echo (ocean state; westboro vca) or tufts/other cardiologist. O would like to go to tufts if not too pricey- will enquire about consult/echo fee. will also enquire about contacts for golden retriever study mentioned in Dr. Freeman's javma article from 12/1 edition.

-GF

04-Dec 2018 at 09:28 am

#54942 **B6**

Notes

**B6**

Examination Report Canine

Presenting For: recheck values from this summer

Vitals:	Diet:	Medical History:	Vaccines given:none	
Temp: 99.1 F	taste of the wild lamb:	Eating: yes	Duration	Location
HR: 72 bpm	grain-free	Drinking:yes	DHPP	
RR: 24 bpm	Amount? 2 cups bid	Coughing: no	Rabies	
MM: pink /moist	Dental Grade: 1 /4	Sneezing: no	Bordetella	
CRT: <2	CSU Pain Scale: 0 /4	Vomiting: no	Lepto	
weight: 68 lbs	Flea Comb: neg	Diarrhea: no	Lyme	
BCS: 5 /9		Other: ur/n wnl	CV	

4DX: not done today

History/Owners Concerns: Rechecking labwork as rec'd by RKS this summer. Doing well. Only concern is that she eats things she shouldn't- chews on carpet, was eating soil with all the other dogs recently (rabbit droppings?), coprophagic. Wears a basket muzzle to prevent ingestion. last heat cycle Sept? (o not sure) Would like to breed in future. 7 dogs at home. No further travel to Florida/back planned.

Current Meds & Supplements: one

Client: **B6**  
Patient:

RDVM **B6** records

Flea & Tick Prevention: k-9 advantix monthly year round  
Heartworm Prevention: Ivermectin monthly year round

Physical Exam: Attitude: BAR

Hydration Status: normal if Abnormal: %

Mouth:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Cardiovascular:  
 Normal/NMA MSP reg  
 Abnormal:  
 Did Not Examine:

Musculoskeletal:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Eyes:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Respiratory:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Integument:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Ears:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Abdomen:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Neurologic:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Nose/Throat:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Urogenital:  
 Normal: intact, no d/c, no mgt  
 Abnormal:  
 Did Not Examine:

Lymph Nodes:  
 Normal:  
 Abnormal:  
 Did Not Examine:

Other: verified microchip

Exam Notes:

DDx:: 3 yo FI Eng GRet- app healthy; grain free diet; hx labwork abnormalities improved in 8/18- but low K and pit values are being rechecked today

Recommendations/Plan:

**B6**

**B6**

Meds Dispensed: none

Tec: **B6**

Veterinarian: **B6** DVM

Qty	Product / Service	Provider	Staff	Date
1.00	Bio Hazard Waste Disposal Fee	<b>B6</b>		04-Dec 2018 10:12 AM
1.00	Canine Young w/ Cardipet proBNP (29249999) Standard CBC, Chem 10, HW AG			04-Dec 2018 10:12 AM
1.00	Physical Exam / Office Visit - Brief/Recheck			04-Dec 2018 10:13 AM

04-Dec 2018 at 08:51 am

#54940 - **B6**

Notes

Appointment reason: consult to discuss blood work performed in August and going forward

04-Sep 2018 at 01:14 pm

#52707 - **B6**

Notes

Date and Time: 1:10 pm 9/4/18

**B6**

Client:  
Patient:

**B6**

RDVM **B6** records

Initials: **B6**

04-Sep 2018 at 12:05 pm

#52697 - **B6**

Notes

Date and Time: 12:02 pm 9/4/18

Client Communication Notes:

**B6**

**B6**

Initials: **B6**

20-Aug 2018 at 09:51 am

#52446

Notes

Date and Time: 8/20/18 9:53 am

Client Communication Notes:

**B6**

**B6**

Initials: **B6**

14-Aug 2018 at 11:07 am

#52374 - **B6**

Notes

**B6**

Examination Report Canine

Presenting For: PE, 4DX, update vaccines

**B6**

Current Meds & Supplements:



Client: **B6**  
Patient: **B6**

RDVM **B6** records

Flea & Tick Prevention: Advantix II

Heartworm Prevention: monthly ivermectin product that owner gets from Brazil (owner travels there)

Physical Exam: Attitude: BAR

Hydration Status: Normal      If Abnormal: %

Mouth:

Normal:  
 Abnormal:  
 Did Not Examine:

Cardiovascular:

Normal:  
 Abnormal:  
 Did Not Examine:

Musculoskeletal:

Normal:  
 Abnormal:  
 Did Not Examine:

Eyes:

Normal:  
 Abnormal:  
 Did Not Examine:

Respiratory:

Normal:  
 Abnormal:  
 Did Not Examine:

Integument:

Normal:  
 Abnormal:  
 Did Not Examine:

Ears:

Normal:  
 Abnormal:  
 Did Not Examine:

Abdomen:

Normal:  
 Abnormal:  
 Did Not Examine:

Neurologic:

Normal:  
 Abnormal:  
 Did Not Examine:

Nose/Throat:

Normal:  
 Abnormal:  
 Did Not Examine:

Urogenital:

Normal:  
 Abnormal:  
 Did Not Examine:

Lymph Nodes:

Normal:  
 Abnormal:  
 Did Not Examine:

Other:

Exam Notes:

slight tartar

DDx: intact, appears healthy

Recommendations/Plan:

**B6**

**B6**

Meds Dispensed:

Tech: **B6**

Veterinarian: **B6**

Qty	Product / Service	Provider	Staff	Date
1.00	Physical Exam / Office Visit - (Annual w/reminder)	<b>B6</b>		14-Aug 2018 11:07 AM
1.00	*DHAPP Vaccination (1 yr) (Includes Fixed Fee: 3.00 Exc Tax) ■ Batch No: 9160313A	<b>B6</b>		14-Aug 2018 11:07 AM
1.00	*DHAPP vaccine/Duramune Max 5-Inv ■ Batch No: 9160313A	<b>B6</b>		14-Aug 2018 11:07 AM
1.00	Canine Standard CBC, Chem 25, 4DX (25049999)	<b>B6</b>		14-Aug 2018 11:07 AM

Client: **B6**  
Patient:

RDVM: **B6** records

Ordered	Updated	Status	Order
04-Dec 2018 10:12 am	05-Dec 2018 10:42 am	Final	Canine Young w/ Cardiotet proBNP (29249999) Standard CBC, Chem 10, HW AG

Source  
**IDEXX**  
Reference  
Laboratories

Final | Accession # **B6**

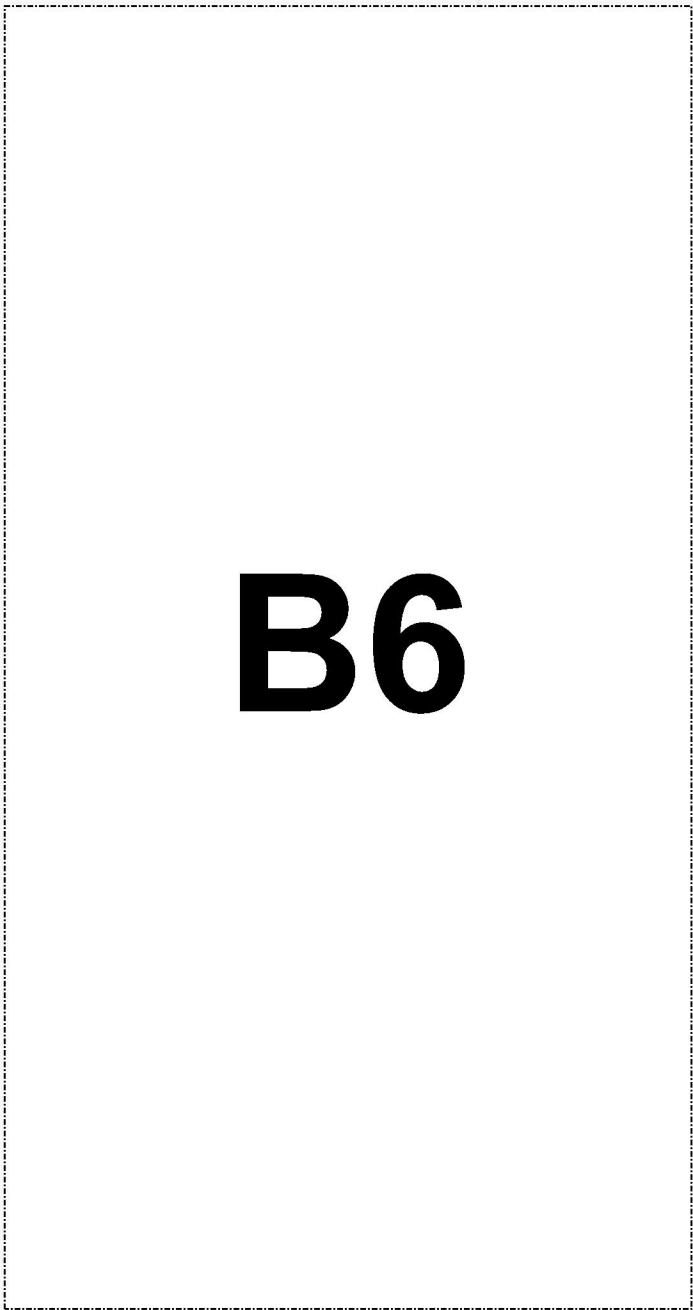
→ View in VetConnect PLUS

HEMATOLOGY

- RBC
- Hematocrit
- Hemoglobin
- MCV
- MCH
- MCHC
- % Reticulocyte
- Reticulocytes
- Reticulocyte Hemoglobin
- WBC
- % Neutrophils
- % Lymphocytes
- % Monocytes
- % Eosinophils
- % Basophils
- Neutrophils
- Lymphocytes
- Monocytes
- Eosinophils
- Basophils
- Platelets

CHEMISTRY

- Glucose
- IDEXX SDMA
- Creatinine
- BUN
- Potassium
- Total Protein
- Albumin
- Globulin
- Albumin: Globulin Ratio
- ALT
- ALP
- Hemolysis Index
- Lipemia Index
- Cardiotet proBNP - Canine



Client: **B6**  
Patient: **B6**

**RDVM** **B6** records

CHEMISTRY



SEROLOGY

Heartworm Antigen by ELISA

14-Aug 2018  
11:07 am

15-Aug 2018  
04:11 am

Final

Canine Standard CBC, Chem 25, 4DX (25049999)

[collapse result](#) ▲

**IDEXX**  
Reference  
Laboratories

Client: **B6**  
Patient:

RDVM: **B6** records

Ordered	Updated	Status	Order	Source
04-Dec 2018 10:12 am	05-Dec 2018 10:42 am	Final	Canine Young w/ Cardipet proBNP (29249999) Standard CBC, Chem 10, HW AG	IDEXX Reference Laboratories
14-Aug 2018 11:07 am	15-Aug 2018 04:11 am	Final	Canine Standard CBC, Chem 25, 4DX (25049999)	IDEXX Reference Laboratories

Final | Accession # **B6**

[View in VetConnect PLUS](#)

HEMATOLOGY

- RBC
- Hematocrit
- Hemoglobin
- MCV
- MCH
- MCHC
- % Reticulocyte
- Reticulocytes
- Reticulocyte Hemoglobin
- WBC
- % Neutrophils
- % Lymphocytes
- % Monocytes
- % Eosinophils
- % Basophils
- Neutrophils
- Lymphocytes
- Monocytes
- Eosinophils
- Basophils
- Platelets

Platelet Comments

PLATELET CLUMPS SEEN ON SLIDE. PLATELET COUNT AND BLOOD FILM ESTIMATE MAY BE FALSELY DECREASED.  
PLATELETS APPEAR SLIGHTLY DECREASED ON THE BLOOD FILM (100,000 PER MICROLITER TO ADEQUATE).  
Slide reviewed for platelet estimate. For a full slide review, including cell morphology, a slide evaluation add-on (code 3900) is available.

- a. AUTOMATED CBC
- b. SEE PLATELET COMMENT

CHEMISTRY

- Glucose
- IDEXX SDMA
- Creatinine
- BUN
- BUN: Creatinine Ratio
- Phosphorus
- Calcium
- Sodium

Client: **B6**  
Patient:

RDVM **B6** records

CHEMISTRY

Potassium  
Na: K Ratio  
Chloride  
TCO2 (Bicarbonate)  
Anion Gap  
Total Protein  
Albumin  
Globulin  
Albumin: Globulin Ratio  
ALT  
AST  
ALP  
GGT  
Bilirubin - Total  
Bilirubin - Unconjugated  
Bilirubin - Conjugated  
Cholesterol  
Creatine Kinase  
Hemolysis Index  
Lipemia Index

**B6**

0 N

0 N

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.

SEROLOGY

Heartworm Antigen  
Ehrlichia canis / ewingii  
Lyme (Borrelia burgdorferi)  
Anaplasma phagocytophilum / platys

**B6**

Client: **B6**  
Patient: **B6**

RDVM **B6** records

SEROLOGY

- The American Heartworm Society recommends that a confirmatory test be run on all positive antigen test results prior to therapy, especially when a positive test result is unexpected. For a positive heartworm result on a 4Dx Plus, we recommend test code 723, Heartworm Antigen by ELISA as a confirmatory test.

The Ehrlichia canis/Ehrlichia ewingii antibody portion of the test uses peptides from each organism that are sensitive and specific for detecting exposure to these pathogens. If positive, submission of a fresh whole blood sample with an air-dried smear for a comprehensive CBC, test code 300, is recommended to identify abnormalities consistent with infection, primarily thrombocytopenia and anemia. PCR testing is complementary to serology and may be useful for confirmation of infection and for detection of infection in patients early in infection prior to seroconversion, especially in patients with clinical signs. Consider test code 2854, Ehrlichia spp RealPCR Test, or test code 28701, Tick/Vector Comprehensive RealPCR Panel Add-on (preferred).

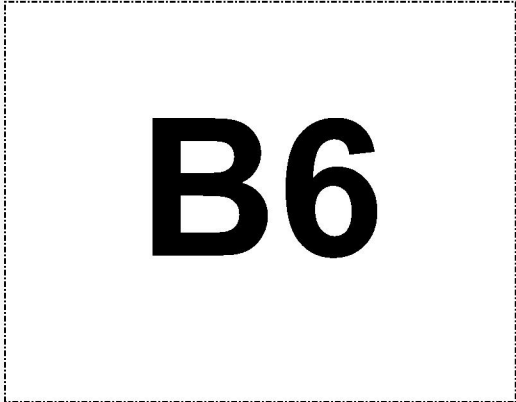
The Lyme (Borrelia burgdorferi) antibody portion of the test detects Lyme C6 antibodies. A positive Lyme C6 antibody response indicates infection in dogs, rather than exposure or vaccination. This test may detect antibodies before clinical signs of joint disease. The quantitative assay for Lyme C6 antibodies (Lyme Quant C6 Antibody by ELISA, test code 7246) is preferred for assessing response to treatment. A measurable decline in quantitative Lyme C6 antibody levels within 6 months correlates with effective treatment, whereas the 4Dx Plus test may remain positive. For more information on Lyme, please visit <https://www.idexx.com/smallanimal/facts-about-lyme.html>

The Anaplasma phagocytophilum/Anaplasma platys antibody portion of the test uses a peptide that is sensitive and specific for detecting exposure to these organisms. If positive, submission of a fresh whole blood sample with an air-dried smear is recommended to identify abnormalities consistent with infection, primarily thrombocytopenia. PCR testing is complementary to serology and may be useful for confirmation of infection and for detection of infection in patients early in infection prior to seroconversion, especially in patients with clinical signs. Consider test code 2824, Anaplasma spp RealPCR Test, or test code 28701, Tick/Vector Comprehensive RealPCR Panel Add-on (preferred).

collapse result ^

Client: **B6**  
Patient:

**RDVM**



**Client Information:**

**B6**

**Patient Information:**

**B6**  
Canine, golden retriever, Female, , Gold  
*Birthday:*  
*Neutered:* N

**Cardiovascular Examination Summary**

for **B6**  
8-Dec 2016

Dear **B6**

**B6** was evaluated at **B6** Cardiology on 8-Dec 2016 by **B6** in the **B6**. The results of that evaluation are found below.

Referred by: **B6**

**Presenting Complaint:** Congenital cardiac OFA certification

**History:** **B6** has no history of a murmur with no clinical signs of cardiac disease or heart failure.

**Cardiovascular Physical Examination:** BCS 2/5, BAR, MM pink, moist, CRT 2.0 sec, no jugular pulsations, RR 36 BPM, lung sounds slightly increased but no crackles or wheezes noted, HR 60-80 BPM with a regularly regular rhythm, no murmur is noted, femoral pulse is regular, symmetrical, and equal.

**Diagnostics Performed:**

Laboratory Findings: Not recommended or performed at this evaluation.

Imaging:

*Thoracic Radiographs:* Not recommended or performed at this evaluation.

*Echocardiogram:* Not recommended or performed at this evaluation.

Other:

*Electrocardiogram:* Not recommended or performed as part of this evaluation.

Client:  
Patient:

**B6**

**RDVM**

---

**In-Hospital Treatments:** None

**Diagnostics Pending:** None

**Cardiovascular Case Assessment:** Normal cardiovascular physical exam

**Medical Therapy/Treatment Recommendations:** None

**Diet Recommendations:** No change in diet is recommended at this time.

**Exercise Limitations:** No specific limitations are recommended based on this evaluation. Please allow **B6** to continue to set the pace and rest as needed.

**Follow-up:** No follow-up evaluation is indicated

If you have any questions or concerns, please feel free to call.  
Sincerely,

**B6**

**MEDICATIONS MAY HAVE PRICE CHANGES THAT ARE BEYOND OUR CONTROL. WE APOLOGIZE FOR ANY INCONVENIENCE.**

**MEDICATION REFILLS** (only for medications from **B6** with a refill option):  
\*Refill requests can be called into the Specialty Center during normal business hours: Mon-Fri 8am-5pm. We will not always be able to accommodate refill requests after hours or on weekends. You can pick the prescriptions up after hours only if you call before 5pm on Friday.

**WEEKEND OR AFTER HOURS MEDICATION REFILLS WILL HAVE A \$20 FEE IF CALLED IN AFTER 5PM ON FRIDAY\*\***  
**IF YOU CALL BEFORE 5PM ON FRIDAY, WE WILL HAVE IT READY FOR PICK UP ANYTIME, EVEN AFTER HOURS AND WEEKENDS**  
Thank you for your understanding!



Client: **B6**  
Patient: **B6**

**IDEXX BNP - 1/2/2019**

IDEXX Reference Laboratories

Client: **B6** Patient: **B6**

IDEXX VetConnect 1-888-433-9987

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: GOLDEN\_RETRIEVE  
Gender: FEMALE SPAYED  
Age: **B6**

Date: 01/02/2019  
Requisition #: 434853  
Accession #: **B6**  
Ordered by: **B6**

**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	<b>B6</b>	0 - 900 pmol/L	HIGH		<b>B6</b>

**Comments**

**B6**

Please note: complete interpretive comments for all concentrations of Cardiotest 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**

CBC/CHEM - 1/2/2019



### Tufts Cummings School Of Veterinary Medicine

200 Westboro Road  
North Grafton, MA 01536

#### DUPLICATE

Name/DOB:	<b>B6</b>	Sex:	F	Provider:	<b>B6</b>
Patient ID:	<b>B6</b>	Age:	66	Order Location:	<b>B6</b>
Phone number:		Species:	Canine	Sample ID:	1901020129
Collection Date:	1/2/2019 11:22 AM	Breed:	Golden Retriever		
Approval date:	1/2/2019 1:17 PM				

#### CBC, Comprehensive, Sm Animal (Research)

		Ref. Range/Females
SMACHUNSKI		
WBC (ADVIA)	<b>B6</b>	4.40-15.10 K/uL
RBC (Advia)	<b>B6</b>	5.80-8.50 M/uL
Hemoglobin (ADVIA)	<b>B6</b>	13.3-20.5 g/dL
Hematocrit (Advia)	<b>B6</b>	39-55 %
MCV (ADVIA)	<b>B6</b>	64.5-77.5 fL
MCH (ADVIA)	<b>B6</b>	21.3-25.9 pg
MCHC (ADVIA)	<b>B6</b>	31.9-34.3 g/dL
RDW (ADVIA)	<b>B6</b>	11.9-15.2
Platelet Count (Advia)	<b>B6</b>	173-486 K/uL
01/02/19 1:17 PM		
Mean Platelet Volume (Advia)	<b>B6</b>	8.29-13.20 fl
01/02/19 11:41 AM		
Platelet Crit	<b>B6</b>	0.129-0.403 %
01/02/19 11:41 AM		
Reticulocyte Count (Advia)	<b>B6</b>	0.20-1.60 %
Absolute Reticulocyte Count (Advia)	<b>B6</b>	14.7-113.7 K/uL

#### Microscopic Exam of Blood Smear (Advia)

		Ref. Range/Females
SMACHUNSKI		
Seg Neuts (%)	<b>B6</b>	43-86 %
Lymphocytes (%)	<b>B6</b>	7-47 %
Monocytes (%)	<b>B6</b>	1-15 %
Eosinophils (%)	<b>B6</b>	0-16 %
Nucleated RBC	<b>B6</b>	0-1 /100 WBC
01/02/19 11:41 AM		
Seg Neutrophils (Abs) Advia	<b>B6</b>	2.80-11.50 K/uL
Lymphs (Abs) Advia	<b>B6</b>	1.00-4.80 K/uL
Mono (Abs) Advia	<b>B6</b>	0.10-1.50 K/uL
Eosinophils (Abs) Advia	<b>B6</b>	0.00-1.40 K/uL
WBC Morphology Echinocytes	<b>B6</b>	

#### Research Chemistry Profile - Small Animal (Cobas)

Sample ID: 1901020129/1  
This report continues... (Final)

Reviewed by: \_\_\_\_\_

Client: **B6**  
Patient:

CBC/CHEM - 1/2/2019



Tufts Cummings School Of Veterinary Medicine

200 Westboro Road  
North Grafton, MA 01536

DUPLICATE

Name/DOB: **B6**      Sex: F      Provider: **B6**  
Patient ID:      Age: **66**      Order Location: **B6**  
Phone number:      Species: Canine      Sample ID: 1901020129  
Collection Date: 1/2/2019 11:22 AM      Breed: Golden Retriever  
Approval date: 1/2/2019 1:17 PM

Research Chemistry Profile - Small Animal (Cobas) (cont'd)

		Ref. Range/Females
DNOYES		
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

**B6**

Sample ID: 1901020129/2  
REPRINT: Orig. printing on 1/2/2019 (Final)

Reviewed by: \_\_\_\_\_  
Page 2

Client: **B6**  
 Patient: **B6**

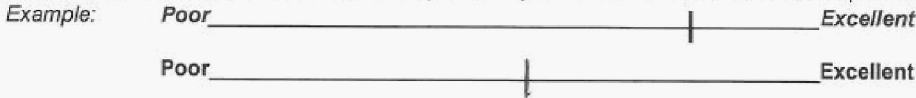
diet history 1/2/19

**CARDIOLOGY DIET HISTORY FORM**

Please answer the following questions about your pet

Pet's name: **B6** Owner's name: **B6** Today's date: 1/2/19

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
taste of the wild Sierra Mountain Dry		1 1/2 cup	2x/day	June 2018
Hills Science Adult Salmon Veggie	canned	2 spoons	2x/day	Sept 2018
Triumph Small Original Biscuits	treat	1 biscuit	10x/day	July 2018
Oravet Dental Hugelie Chews	treat	1	1/week	July 2018
American Tourmaline Salmon & Sweet Potato	Dry	1 1/2 cup	2x/day	April 2017 - May 18
Old Mother Hubbard Classic Biscuit	Treat	1 biscuit	10x/day	Jul 17 / May 18
Victor Hens Grain Free	Dry	1 1/2	2x/day	Feb 2018
Whole Earth Farm	Dry	1 1/2	2x/day	Jun 17 - Jul 17
Acana Heritage Free Run Poultry	Dry	1 1/2	2x/day	Jul 15 - Jun 17

\*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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	_____	5 spoon
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 after they eat regular 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): dry food

Client:  
Patient:

**B6**

diet history 1/2/19

Acana Wild Atlantic July 14 - June 2015

Blue Buffalo Wilderness,  
Feb 14 - July 2014

### Home Food

Bread  
Cheese  
Steak  
Ham  
Banana  
Squash  
Sweet Potato  
Liver  
Chicken Gizzards & Hearts  
Tripe  
Chicken Breast

### Supplement

American Journey Wild Alaskan  
Salmon Oil  
Nov 2018 - present

{ Fleo  
Advanix II  
Dewormer  
Ivermectin for large dogs

Client: **B6**  
Patient: **B6**

**UCDavis Taurine Level**

26344 PL  
26345 WB

**Amino Acid Laboratory Sample Submission Form**

Amino Acid Laboratory, 1089 Veterinary Medicine Drive, Davis, Ca 95616  
Telephone: 530-752-5058, Fax: 530-752-4698  
Email: [ucd.aminoacid.lab@ucdavis.edu](mailto:ucd.aminoacid.lab@ucdavis.edu)  
[www.vetmed.ucdavis.edu/labs/amino-acid-laboratory](http://www.vetmed.ucdavis.edu/labs/amino-acid-laboratory)



Veterinarian Contact: **B6**

Clinic/Company Name: Tufts Cummings School of Vet. Med. - Clinical Pathology Laboratory

Address: 200 Westboro Road, North Grafton MA 015389

Email: Clinpath@tufts.edu | cardivet@tufts.edu

Telephone: 508-887-4669 Fax: 508-839-7936

Billing Contact: **B6** Email: **B6**

Billing Contact Phone: **B6** Tax ID: \_\_\_\_\_

Patient Name: **B6** Species: Canine

Breed: Golden Owner's Name: **B6**

Current Diet: taste of the wild

Sample type: Plasma  Whole Blood  Urine  Food  Other

Test:  Taurine  Complete Amino Acids  Other: \_\_\_\_\_

**Taurine Results (lab use only)**

Plasma: **B6** Whole Blood: **B6** Urine: \_\_\_\_\_ Food: \_\_\_\_\_

	Plasma (nMol/ml)		Whole Blood (nMol/ml)	
	Normal Range	No known risk for deficiency	Normal Range	No known risk for deficiency
Cat	80-120	>40	300-600	>200
Dog	60-120	>40	200-350	>150

\* Please note with the recent increase in the number of dogs screened for taurine deficiency, we are seeing dogs with values within the reference ranges (or above the "no known risk for deficiency range") yet are still exhibiting signs of cardiac disease. Veterinarians are welcome to contact our laboratory for assistance in evaluating your patient's results.

Client: **B6**  
Patient:

---

**Vitals Results**

---

1/2/2019 10:17:06 AM                      Weight (kg)                      30.4000

---

**Patient History**

---

12/13/2018 10:44 AM                      Appointment

12/27/2018 12:24 PM                      Appointment

01/02/2019 10:00 AM                      UserForm

01/02/2019 10:17 AM                      Vitals

01/02/2019 10:21 AM                      Treatment

01/02/2019 11:06 AM                      Purchase

01/02/2019 11:06 AM                      Purchase

01/02/2019 11:42 AM                      UserForm

01/02/2019 11:45 AM                      Purchase

01/02/2019 11:45 AM                      Purchase

01/02/2019 12:14 PM                      Email

**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  
Canine Golden Retriever Cream  
434853

1/10/2019

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**



**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

Canine Golden Retriever Cream  
434853

1/10/2019

Dear None

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

---

**From:** Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>  
**To:** Carey, Lauren; Cleary, Michael \*; HQ Pet Food Report Notification;  
[B6]  
**Sent:** 6/11/2019 6:00:45 PM  
**Subject:** Taste of the Wild Sierra Mountain Dry: Lisa Freeman - EON-390196  
**Attachments:** 2068087-report.pdf; 2068087-attachments.zip

A PFR Report has been received and Related PFR Event [EON-390196] has been created in the EON System.

A "PDF" report by name "2068087-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 "2068087-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-390196

**ICSR #:** 2068087

**EON Title:** Related PFR Event created for Taste of the Wild Sierra Mountain Dry; 2068087

<b>AE Date</b>	01/14/2019	<b>Number Fed/Exposed</b>	7
<b>Best By Date</b>		<b>Number Reacted</b>	2
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Better/Improved/Recovering
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	5 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2068087

**Product Group:** Pet Food

**Product Name:** Taste of the Wild Sierra Mountain Dry

**Description:** BEG diet being fed to 7 dogs. We evaluated her other dog [B6] who had a murmur and elevated BNP, with reduced contractility and elevated troponin found on exam (see previous report - 2061171). Owner worried about this dog's breathing so we screened her and found reduced contractility, elevated troponin, but normal BNP. Changing diet on both dogs to Pro Plan Sensitive Skin/Stomach Salmon and will recheck in 3 months Other dogs we have not screened [B6] Labrador 5 years old [B6] Golden 3 1/2 years old [B6] Golden

3 years old [B6] Golden 3 years 5 months [B6] Golden 3 years 9 months

**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:** 7

**Number of Animals Reacted With Product:** 2

Product Name	Lot Number or ID	Best By Date
Taste of the Wild Sierra Mountain Dry		

This report is linked to:

**Initial EON Event Key:** EON-380714

**Initial ICSR:** 2063118

**Sender information**

Lisa Freeman  
200 Westboro Rd  
North Grafton, MA 01536  
USA

**Owner information**

<b>B6</b>	USA
-----------	-----

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

<https://eon.fda.gov/eon//browse/EON-390196>

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=407468&parentIssueTypeId=12>

=====

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**Report Details - EON-390196**

ICSR:	2068087
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 13:56:24 EDT
Initial Report Date:	02/24/2019
Parent ICSR:	2063118
Follow-up Report to FDA Request:	Yes

Reported Problem:	<b>Problem Description:</b>	BEG diet being fed to 7 dogs. We evaluated her other dog [B6] who had a murmur and elevated BNP, with reduced contractility and elevated troponin found on exam (see previous report - 2061171). Owner worried about this dog's breathing so we screened her and found reduced contractility, elevated troponin, but normal BNP. Changing diet on both dogs to Pro Plan Sensitive Skin/Stomach Salmon and will recheck in 3 months Other dogs we have not screened. [B6] Labrador 5 years old [B6] Golden 3 1/2 years old [B6] Golden 3 years old [B6] Golden 3 years 5 months [B6] Golden 3 years 9 months
	<b>Date Problem Started:</b>	01/14/2019
	<b>Concurrent Medical Problem:</b>	No
	<b>Outcome to Date:</b>	Better/Improved/Recovering

Product Information:	<b>Product Name:</b>	Taste of the Wild Sierra Mountain Dry
	<b>Product Type:</b>	Pet Food
	<b>Lot Number:</b>	
	<b>Package Type:</b>	BAG
	<b>Product Use Information:</b>	<b>Description:</b> Please see diet history for additional information
	<b>Manufacturer /Distributor Information:</b>	
	<b>Purchase Location Information:</b>	

Animal Information:	<b>Name:</b>	[B6]
	<b>Type Of Species:</b>	Dog
	<b>Type Of Breed:</b>	Retriever - Golden
	<b>Gender:</b>	Female
	<b>Reproductive Status:</b>	Neutered
	<b>Weight:</b>	25.8 Kilogram
	<b>Age:</b>	5 Years
	<b>Assessment of Prior Health:</b>	Excellent
	<b>Number of Animals Given the Product:</b>	7
	<b>Number of Animals Reacted:</b>	2
	<b>Owner Information:</b>	<b>Owner Information provided:</b> Yes
		<b>Contact:</b> <b>Name:</b> [B6] <b>Phone:</b> [B6] <b>Email:</b> [B6]
	<b>Address:</b> [B6]	

**B6**

<b>Healthcare Professional Information:</b>	<b>Practice Name:</b>	Tufts Cummings School of Veterinary Medicine	
	<b>Contact:</b>	<b>Name:</b>	Lisa Freeman
		<b>Phone:</b>	(508) 887-4523
		<b>Email:</b>	lisa.freeman@tufts.edu
<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		

<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			

<b>Additional Documents:</b>	<b>Attachment:</b>	Follow-up medical records pt 2.pdf	
	<b>Description:</b>	Med records	
	<b>Type:</b>	Medical Records	
	<b>Attachment:</b>	Follow-up medical records pt 1.pdf	
	<b>Description:</b>	Med records	
	<b>Type:</b>	Medical Records	

Client: **B6**  
 Patient: **B6**

Diet Hx 5/3/2019

**B6**

**CARDIOLOGY DIET HISTORY FORM**  
 Please answer the following questions about your pet

Pet's name: **B6** Owner's name: **B6** Today's date: 5/3/19

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>Purina Pro Plan</u>	<u>dry</u>	<u>1 1/2</u>	<u>2x/day</u>	<u>Jan 2019 - present</u>
<u>dental bones &amp; chews</u>	<u>treat</u>	<u>1</u>	<u>3x/week</u>	<u>Jan 2019 - present</u>
<u>Wholesome Dog Biscuit</u>	<u>treat</u>	<u>5 treats</u>	<u>daily</u>	<u>Jan 2019 - present</u>

\*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	<u>Nature's Bounty</u>	<u>500 mg tablets - 1 per day</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): \_\_\_\_\_

Client: **B6**  
Patient:

**Idexx NT-proBNP 5/3/2019**

IDEXX Reference Laboratories

Client: RODRIGUES Patient: CHLOE

Client: **B6**  
Patient:  
Species: CANINE  
Breed: LABRADOR\_RETRIE  
Gender: FEMALE SPAYED  
Age: 5Y

Date: 05/03/2019  
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: **B6**

**CARDIOPET proBNP- CANINE**

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP-CANINE	<b>B6</b>	0 - 900 pmol/L			<b>B6</b>

**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:

**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: lisa.freeman@tufts.edu Of **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: **B6**  
Owner Name:  
Species: Canine  
Date Received: May 30, 2019

Tufts Cummings School of Vet Med -  
Cardiology/Nutrition Tracking Number:

GI Lab Accession: **B6**

**B6**

Test	Result	Reference Interval	Assay Date
Ultra-Sensitive Troponin I Fasting	<b>B6</b>	≤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:

Canine

Female (Spayed) Labrador

Retriever

Yellow

## Cardiology Appointment Report DCM STUDY

Date: 5/3/2019

### Attending Cardiologist:

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

**B6**

### Cardiology Resident:

### Cardiology Technician:

**B6**

Student:

**Presenting Complaint:** 3 month recheck - DCM study

### General Medical History:

Initially presented in Jan. 2019 for heart screen; no murmur or arrhythmias ausculted, strong femoral pulses, no concerns at home but had been on BEG diet. Echo showed hypocontractility, VPCs, LAE, right heart enlargement. Marginally low taurine levels. Hx of

Doing well at home. Very active, no changes since last visit.

**Diet and Supplements:** Purina sensitive stomach

### Cardiovascular History:

Prior CHF diagnosis? N

Prior heart murmur? N

Prior ATE? N

Prior arrhythmia? Y

Monitoring respiratory rate and effort at home? N

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

**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:**

Hx of VPCs

Hypocontractility, LAE, right heart enlargement seen on previous echo

**Differential Diagnoses:**

Mildly reduced LV contractility - diet-associated vs. primary

**Diagnostic plan:**

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

**B6**

**Doppler findings:**

**B6**

**Mitral inflow:**

- |   |                                       |
|---|---------------------------------------|
| <input type="checkbox"/> Summated           | <input type="checkbox"/> Pseudonormal |
| <input checked="" type="checkbox"/> Normal  | <input type="checkbox"/> Restrictive  |
| <input type="checkbox"/> Delayed relaxation |                                       |

**ECG findings:**

**B6**

**Assessment and recommendations:**

Reduced contractile function and BNP levels are stable compared to last exam. Considering that LA is stable in size, recommend recheck echocardiogram in 3 months or sooner if patient develops clinical signs consistent with worsening of the disease.

**Final Diagnosis:**

Mildly reduced LV contractile function R/O diet related vs variation of normal.

**Heart Failure Classification Score:**

**ISACHC Classification:**

- |  |                               |
|--|-------------------------------|
| <input checked="" type="checkbox"/> Ia | <input type="checkbox"/> IIIa |
| <input 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
Ao Diam	cm
LA Diam	cm
LA/Ao	
Max LA	cm
Time	ms
HR	BPM
CO(Teich)	l/min
CI(Teich)	l/min/m
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

**B6**

LVPWs  
ESV(Teich)  
EF(Teich)  
%FS  
SV(Teich)  
LV Major  
LV Minor  
Sphericity Index  
LVld AIC  
LVEDV MOD AIC  
LVLS AIC  
LVESV MOD AIC  
LVEF MOD AIC  
SV MOD AIC

Doppler

MV E Vel  
MV DecT  
MV Dec Slope  
MV A Vel  
MV E/A Ratio  
E'  
E/E'  
A'  
IVRT  
AV Vmax  
AV maxPG  
PV Vmax  
PV maxPG  
PR Vmax  
PR maxPG  
PRend Vmax  
PRend PG  
TR Vmax  
TR maxPG

**B6**

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**From:** Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>  
**To:** Rotstein, David; Cleary, Michael \*; HQ Pet Food Report Notification;  
B6  
**Sent:** 6/11/2019 6:08:45 PM  
**Subject:** Taste of the Wild Sierra Mountain dry: Lisa Freeman - EON-390197  
**Attachments:** 2068089-report.pdf; 2068089-attachments.zip

A PFR Report has been received and Related PFR Event [EON-390197] has been created in the EON System.

A "PDF" report by name "2068089-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 "2068089-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-390197

**ICSR #:** 2068089

**EON Title:** Related PFR Event created for Taste of the Wild Sierra Mountain dry; 2068089

<b>AE Date</b>	01/02/2019	<b>Number Fed/Exposed</b>	7
<b>Best By Date</b>		<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	3 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2068089

**Product Group:** Pet Food

**Product Name:** Taste of the Wild Sierra Mountain dry

**Description:** Eating Taste of the Wild Sierra Mountain since June 2018 (Acana Heritage Poultry before that). This diet was fed to multiple dogs - have not screened other dogs yet so unknown whether they are also affected. Echo showed reduced contractility and mild left atrial enlargement. BNP and troponin mildly elevated, troponin = B6 Taurine WNL B6 Changing to Pro Plan Sensitive Skin/Stomach dry and will recheck in 3 months

**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:** 7

**Number of Animals Reacted With Product:** 1

Product Name	Lot Number or ID	Best By Date
Taste of the Wild Sierra Mountain dry		

This report is linked to:

**Initial EON Event Key:** EON-376361

**Initial ICSR:** 2061171

**Sender information**

Lisa Freeman  
200 Westboro Rd  
North Grafton, MA 01536  
USA

**Owner information**

**B6** USA

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

<https://eon.fda.gov/eon//browse/EON-390197>

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=407469&parentIssueTypeId=12>

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**Report Details - EON-390197**

ICSR:	2068089
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 14:02:24 EDT
Initial Report Date:	01/14/2019
Parent ICSR:	2061171
Follow-up Report to FDA Request:	Yes

<b>Reported Problem:</b>	<b>Problem Description:</b>	Eating Taste of the Wild Sierra Mountain since June 2018 (Acana Heritage Poultry before that). This diet was fed to multiple dogs - have not screened other dogs yet so unknown whether they are also affected. Echo showed reduced contractility and mild left atrial enlargement. BNP and troponin mildly elevated. troponin <b>B6</b> Taurine WNL <b>B6</b> Changing to Pro Plan Sensitive Skin /Stomach dry and will recheck in 3 months
	<b>Date Problem Started:</b>	01/02/2019
	<b>Concurrent Medical Problem:</b>	No
	<b>Outcome to Date:</b>	Stable

<b>Product Information:</b>	<b>Product Name:</b>	Taste of the Wild Sierra Mountain dry
	<b>Product Type:</b>	Pet Food
	<b>Lot Number:</b>	
	<b>Package Type:</b>	BAG
	<b>Product Use Information:</b>	<b>Description:</b> See diet history for more details. TOTW fed June, 2018 to present; Acana Heritage Free Run Poultry before that
	<b>Manufacturer /Distributor Information:</b>	
	<b>Purchase Location Information:</b>	

<b>Animal Information:</b>	<b>Name:</b>	<b>B6</b>
	<b>Type Of Species:</b>	Dog
	<b>Type Of Breed:</b>	Retriever - Golden
	<b>Gender:</b>	Female
	<b>Reproductive Status:</b>	Intact
	<b>Pregnancy Status:</b>	Not Pregnant
	<b>Lactation Status:</b>	Not lactating
	<b>Weight:</b>	30.4 Kilogram
	<b>Age:</b>	3 Years
	<b>Assessment of Prior Health:</b>	Excellent
	<b>Number of Animals Given the Product:</b>	7
	<b>Number of Animals Reacted:</b>	1
	<b>Owner Information:</b>	<b>Owner Information provided:</b> Yes
		<b>Contact:</b> Name: <b>B6</b> Phone: Email:

		<b>Address:</b>	<div style="border: 1px dashed black; padding: 5px; display: inline-block; font-size: 2em; font-weight: bold;">B6</div> United States	
<b>Healthcare Professional Information:</b>	<b>Practice Name:</b>	Tufts Cummings School of Veterinary Medicine		
	<b>Contact:</b>	<b>Name:</b>	Lisa Freeman	
		<b>Phone:</b>	(508) 887-4523	
	<b>Email:</b>	lisa.freeman@tufts.edu		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			
<b>Additional Documents:</b>	<b>Attachment:</b>	Follow-up medical records pt 2 pdf.pdf		
	<b>Description:</b>	Med records		
	<b>Type:</b>	Medical Records		
	<b>Attachment:</b>	Follow-up medical records pt 1.pdf		
	<b>Description:</b>	Med records		
	<b>Type:</b>	Medical Records		

Client: **B6**  
 Patient: **B6**

Diet Hx 5/3/2019

**CARDIOLOGY DIET HISTORY FORM**

**B6**

Please answer the following questions about your pet

Pet's name **B6** Owner's name **B6** Today's date: 5/3/19

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
Purina Pro Plan	dry	1 1/2	2x/day	Jan 2019-present
Dental Bones & Chews	treat	1	3x/week	Jan 2019-present
Wholesome Dog Biscuit	treat	5 treats	daily	Jan 2019-present

\*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 checked="" 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

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: **B6**

**Idexx NT-proBNP 5/3/2019**

IDEXX Reference Laboratories

Client: **B6** Patient: **B6**

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: GOLDEN\_RETRIEVE  
Gender: FEMALE SPAYED  
Age: **B6**

Date: 05/04/2019  
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	<b>B6</b>	0 - 900 pmol/L	HIGH		<b>B6</b>

**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:

**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: lisa.freeman@tufts.edu OR **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: **B6**  
Owner Name:  
Species: Canine  
Date Received: May 30, 2019

Tufts Cummings School of Vet Med -  
Cardiology/Nutrition Tracking Number:  
434853

GI Lab Accession: **B6**

Test	Result	Reference Interval	Assay Date
Ultra-Sensitive Troponin I Fasting	<b>B6</b>	≤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

B6

Patient ID: B6

B6 Canine

B6 Female Golden Retriever  
Cream

**Cardiology Appointment Report  
DCM STUDY**

Date: 5/3/2019

**Attending Cardiologist:**

John E. Rush DVM, MS, DACVIM (Cardiology), DACVECC

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6

**Presenting Complaint:** DCM study recheck; o reports doing well at home, good energy, no other concerns.

**Concurrent Diseases:** None

**General Medical History:** On 1/2/19 was referred here by rDVM for elevated BNP (B6), rDVM prompted to check b/c of grain-free diet. Echo in January showed mild systolic dysfunction w/mild LAE. Transitioned to new diet. CBC, chem, BNP WNL.

**Diet and Supplements:**

Purina sensitive stomach

**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? 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:**

Medication: Taurine

Formulation/Tab Size: 500mg capsules

Administration Frequency: 2 capsules PO BID

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
- Premature beats
- Bradycardia
- Tachycardia

**Gallop:**

- Yes
- No
- Intermittent
- Pronounced
- Other:

**Pulmonary assessments:**

- Eupneic
- Pulmonary crackles



- Mild dyspnea
- Marked dyspnea
- Normal BV sounds

- Wheezes
- Upper airway stridor

**Abdominal exam:**

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites
- Marked ascites

**Problems:**

Hx of asymptomatic heart disease

**Differential Diagnoses:**

Nutritional DCM

**Diagnostic plan:**

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

**B6**

**Doppler findings:**

**B6**

**Mitral inflow:**

- Summated
- Normal
- Delayed relaxation
- Pseudonormal
- Restrictive

**ECG findings:**

**B6**

**Assessment and recommendations:**

Stable systolic function compared to previous exams, despite mild increase in LV cavity size (r/o daily variation or interobserver variation). Recommend keeping current supplementation with Taurine and recheck echocardiogram in 3 months or sooner if patient develops clinical signs consistent with worsening heart disease such as increased RR/RE, cough, exercise intolerance, or syncope.

**Final Diagnosis:**

Mild systolic dysfunction with mild LA enlargement- r/o early stage DCM vs. diet induced systolic dysfunction.

**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
Max LA	cm
Time	ms
HR	BPM
CO(Teich)	l/min
CI(Teich)	l/min/m <sup>2</sup>
Ao Diam	cm
LA Diam	cm
LA/Ao	
TAPSE	cm
EPSS	cm

**B6**

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

IVSd	cm
LVIDd	cm
LVPWd	cm
EDV(Teich)	ml

IVSs  
LVIDs  
LVPWs  
ESV(Teich)  
EF(Teich)  
%FS  
SV(Teich)  
LV Major  
LV Minor  
Sphericity Index  
LV Ld A4C  
LV EDV MOD A4C  
LV Ls A4C  
LV ESV MOD A4C  
LV EF 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'  
IVRT  
AV Vmax  
AV maxPG  
PV Vmax  
PV maxPG  
E'  
A'

**B6**

cm  
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m/s

**Report Details - EON-390196**

ICSR:	2068087
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 13:56:24 EDT
Initial Report Date:	02/24/2019
Parent ICSR:	2063118
Follow-up Report to FDA Request:	Yes

Reported Problem:	<b>Problem Description:</b>	BEG diet being fed to 7 dogs. We evaluated her other dog, B6 who had a murmur and elevated BNP, with reduced contractility and elevated troponin found on exam (see previous report - 2061171). Owner worried about this dog's breathing so we screened her and found reduced contractility, elevated troponin, but normal BNP. Changing diet on both dogs to Pro Plan Sensitive Skin/Stomach Salmon and will recheck in 3 months. Other dogs we have not screened: B6 Labrador 5 years old, B6 Golden 3 1/2 years old, B6 Golden 3 years old, B6 Golden 3 years 5 months, B6 Golden 3 years 9 months
	<b>Date Problem Started:</b>	01/14/2019
	<b>Concurrent Medical Problem:</b>	No
	<b>Outcome to Date:</b>	Better/Improved/Recovering

Product Information:	<b>Product Name:</b>	Taste of the Wild Sierra Mountain Dry
	<b>Product Type:</b>	Pet Food
	<b>Lot Number:</b>	
	<b>Package Type:</b>	BAG
	<b>Product Use Information:</b>	<b>Description:</b> Please see diet history for additional information
	<b>Manufacturer /Distributor Information:</b>	
	<b>Purchase Location Information:</b>	

Animal Information:	<b>Name:</b>	B6
	<b>Type Of Species:</b>	Dog
	<b>Type Of Breed:</b>	Retriever - Golden
	<b>Gender:</b>	Female
	<b>Reproductive Status:</b>	Neutered
	<b>Weight:</b>	25.8 Kilogram
	<b>Age:</b>	5 Years
	<b>Assessment of Prior Health:</b>	Excellent
	<b>Number of Animals Given the Product:</b>	7
	<b>Number of Animals Reacted:</b>	2
	<b>Owner Information:</b>	<b>Owner Information provided:</b> Yes
		<b>Contact:</b> <b>Name:</b> B6
		<b>Phone:</b> B6
	<b>Email:</b>	
	<b>Address:</b> B6	

**B6**

United States

<b>Healthcare Professional Information:</b>	<b>Practice Name:</b>	Tufts Cummings School of Veterinary Medicine	
	<b>Contact:</b>	<b>Name:</b>	Lisa Freeman
		<b>Phone:</b>	(508) 887-4523
		<b>Email:</b>	lisa.freeman@tufts.edu
<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		

<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			

<b>Additional Documents:</b>	<b>Attachment:</b>	Follow-up medical records pt 2.pdf	
	<b>Description:</b>	Med records	
	<b>Type:</b>	Medical Records	
	<b>Attachment:</b>	Follow-up medical records pt 1.pdf	
	<b>Description:</b>	Med records	
	<b>Type:</b>	Medical Records	

**Report Details - EON-390197**

ICSR:	2068089
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 14:02:24 EDT
Initial Report Date:	01/14/2019
Parent ICSR:	2061171
Follow-up Report to FDA Request:	Yes

<b>Reported Problem:</b>	<b>Problem Description:</b>	Eating Taste of the Wild Sierra Mountain since June 2018 (Acana Heritage Poultry before that). This diet was fed to multiple dogs - have not screened other dogs yet so unknown whether they are also affected. Echo showed reduced contractility and mild left atrial enlargement. BNP and troponin mildly elevated. troponin = B6 Taurine WNL B6 Changing to Pro Plan Sensitive Skin /Stomach dry and will recheck in 3 months
	<b>Date Problem Started:</b>	01/02/2019
	<b>Concurrent Medical Problem:</b>	No
	<b>Outcome to Date:</b>	Stable

<b>Product Information:</b>	<b>Product Name:</b>	Taste of the Wild Sierra Mountain dry
	<b>Product Type:</b>	Pet Food
	<b>Lot Number:</b>	
	<b>Package Type:</b>	BAG
	<b>Product Use Information:</b>	<b>Description:</b> See diet history for more details. TOTW fed June, 2018 to present; Acana Heritage Free Run Poultry before that
	<b>Manufacturer /Distributor Information:</b>	
	<b>Purchase Location Information:</b>	

<b>Animal Information:</b>	<b>Name:</b>	B6
	<b>Type Of Species:</b>	Dog
	<b>Type Of Breed:</b>	Retriever - Golden
	<b>Gender:</b>	Female
	<b>Reproductive Status:</b>	Intact
	<b>Pregnancy Status:</b>	Not Pregnant
	<b>Lactation Status:</b>	Not lactating
	<b>Weight:</b>	30.4 Kilogram
	<b>Age:</b>	3 Years
	<b>Assessment of Prior Health:</b>	Excellent
	<b>Number of Animals Given the Product:</b>	7
	<b>Number of Animals Reacted:</b>	1
	<b>Owner Information:</b>	<b>Owner Information provided:</b> Yes
		<b>Contact:</b> Name: B6 Phone: Email:

		<b>Address:</b>	<b>B6</b> United States	
<b>Healthcare Professional Information:</b>	<b>Practice Name:</b>	Tufts Cummings School of Veterinary Medicine		
	<b>Contact:</b>	<b>Name:</b>	Lisa Freeman	
		<b>Phone:</b>	(508) 887-4523	
<b>Email:</b>		lisa.freeman@tufts.edu		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			
<b>Additional Documents:</b>	<b>Attachment:</b>	Follow-up medical records pt 2 pdf.pdf		
	<b>Description:</b>	Med records		
	<b>Type:</b>	Medical Records		
	<b>Attachment:</b>	Follow-up medical records pt 1.pdf		
	<b>Description:</b>	Med records		
	<b>Type:</b>	Medical Records		

---

**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Jones, Jennifer L  
**Sent:** 2/24/2019 11:19:19 PM  
**Subject:** B6  
**Attachments:** rpt\_medical\_record\_preview.pdf

Hi Jen

Sorry – only attached the dog's previous visit, not the current one. Here's the full record.

This is a housemate of a previously reported dog.

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](http://www.petfoodology.org)



Client:

B6

Address:

All Medical Records

Patient:

B6

Breed: Labrador Retriever

DOB:

B6

Species: Canine

Sex: Female  
(Spayed)

Home Phone:

Work Phone:

Cell Phone:

B6

Referring Information

B6

Client:

B6

Patient:

Initial Complaint:

Emergency

SOAP Text

B6

1:23PM

B6

B6

12:13 PM NEW VISIT (ER)

Doctor:

B6

Presenting complaint:

B6

Diagnostics completed prior to visit: Recent blood work at rDVM per owner, normal results before dental cleaning

HISTORY:

Signalment: 3 yo FS Labrador retriever

Current history:

B6

Prior medical history:

B6

Current medications: None

Diet: Acana, whole earth

Vaccination status/flea & tick preventative use: Ivermectin, Advantix II

B6

Client: **B6**  
Patient: **B6**

C/V: no murmurs or arrhythmias ausculted. femoral pulses strong and synchronous

**B6**

ASSESSMENT:

A1: **B6**

PLAN:

1) **B6**  
2) **B6**  
3) **B6**  
4) **B6**

**B6**

SOAP approved (DVM to sign): **B6** MD

**B6** :25:46 PM

Prescribed **B6**

Instructions - Give 1/2 tablet orally every 12 hours. Give with food. - Expires: 7/1/2018 No Refills

**Initial Complaint:**

Cardiology DCM study

**SOAP Text Jan 16 2019 3:09PM - Rush, John**

Subjective

Objective

Assessment

Plan

**Disposition/Recommendations**

Client:  
Patient:

**B6**

---

---

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:	<b>B6</b>
Species:	Canine
Breed:	Labrador Retriever
Sex:	Female (Spayed)
Age:	<b>B6</b> Years Old

### Lab Results Report

Accession ID:			
Test	Results	Reference Range	Units



4/20

**B6**

Printed Sunday, February 24, 2019

### Vitals Results

**B6**

### Patient History

<b>B6</b>	2:14 PM	UserForm
	2:15 PM	UserForm
	2:21 PM	Vitals
	2:21 PM	Vitals
	2:21 PM	Vitals
	2:21 PM	Vitals
	2:21 PM	Vitals
	01:37 PM	Prescription
	01:44 PM	UserForm
	01:48 PM	Purchase

**B6**

Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	02:06 AM	Vitals
	02:06 AM	Vitals
	02:06 AM	Vitals
	02:06 AM	Vitals
	02:06 AM	Vitals
	11:40 AM	Email
	01:27 PM	Appointment
	01:30 PM	UserForm
	02:03 PM	Treatment
	03:14 PM	UserForm

**B6**



**B6**

**B6**

Female (Spayed)

Canine Labrador Retriever Yellow

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 Grantees) 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 Grantee'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 Grantee deems appropriate (provided that such photographs and images may not be used in for-profit commercials, unless such commercials are publicizing educational programs at Cummings School). As medical and surgical treatment necessitates the removal of tissue, cells, fluids or body parts of my animal, I authorize the Grantees 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 \$50.

I do further agree that should any payment, or the full amount of the sum stated above, become overdue more than 20 days from the above-agreed 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:  Date:

Owner's address:

\_\_\_\_\_  
Owner's Name Signature

\_\_\_\_\_  
Date

**If the individual admitting the animal is someone other than the legal owner,  
please complete the portion below:**

The owner of the animal  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



**B6**

**B6**

Female (Spayed)

Canine Labrador Retriever Yellow

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.

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I have read, understand, and agree to accept the terms and conditions herein.

Owner's name:  Date:

Owner's address:

Owner's Name Signature

Date

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The owner of the animal,  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

## Veterinary Medical Center

AT TUFTS UNIVERSITY

Foster Hospital for Small Animals  
55 Willard Street  
North Grafton, MA 01536  
Telephone (508) 839-5395  
Fax (508) 839-8739  
<http://vetmed.tufts.edu/>

Emergency & Critical Care Liaison: (508) 887-4745

**Patient**

**Name:**

B6

**Signalment:**

B6 Years Old Yellow Female  
(Spayed) Labrador Retriever

**Owner**

**Name:**

**Address:**

B6

**Patient ID:**

B6

**Emergency Clinician:**

B6

VMD

**ER Supervisor:**

B6

### Discharge Instructions

**Admit Date:** B6 12:13:36 PM

**Check Out Date:** B6

**Case Summary**

**Diagnosis:**

1. B6

**General Summary:**

B6

**Patient Care Instructions:**

B6

**B6**

**Medications:**

**B6**

**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/cvm/clinical-studies](http://vet.tufts.edu/cvm/clinical-studies)*

Case

B6

Owner

B6

Discharge Instructions

### Discharge Instructions

**Patient**

Name: B6

Species: Canine

Yellow Female (Spayed) Labrador

Retriever

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 V19

Admit Date: 1/16/2019 1:29:08 PM

Discharge Date: 1/16/2019

Thank you for bringing B6 to Tufts to screen her for heart disease related to being on a "BEG" (Boutique, Exotic Ingredient, or Grain-Free) diet. On physical exam, she had no heart murmur. She had strong pulses and no arrhythmias were heard.

B6 echocardiogram showed that her heart was not contracting with normal vigor, and she had a few premature heart beats (arrhythmia - ventricular premature depolarizations). Her left atrium was also slightly enlarged, and her right heart was also slightly enlarged. These changes could perhaps be a variation of normal in athletic dogs, but we think it is more likely that she has mild heart disease, because of the premature heartbeats (arrhythmia).

We may be able to enroll B6 in our DCM study looking at heart disease associated with BEG diets today. We submitted blood tests and will contact you with the results when available. The taurine levels will take up to 2-3 weeks to come back and we would like to start taurine supplementation in the interim. If the taurine level comes back low, we'll give taurine supplementation. Either way, it's very important to change her diet, and we would have you continue with the Purina diet you are currently feeding. B6 does not require any other heart medications at this time, however if she does qualify for the study (based on an elevated NT-proBNP or an elevated troponin), we will want to follow up with another echo in 3 months, now that her diet has been changed.

If her NT-proBNP and troponin are normal then she does not qualify for the study, but we would recommend a repeat echo in 8 to 10 months, because of the changes we saw today with the heart and the premature heart beats.

**Medications and supplements:**

None at this time.

**Monitoring at Home:**

B6 does not appear to have any significant heart disease at this time. However, please monitor for any weakness or collapse, exercise intolerance, cough or distension of the belly. If you notice any abnormalities we would like to see her for a recheck exam.

**Diet Suggestions:**

Please continue the Purina diet that B6 is now eating.

**Recheck Visits and Follow Up:** The taurine levels will take 2-3 weeks so we'll let you know when we get these back. If she does qualify for the study (based on an elevated NT-proBNP or an elevated troponin), we will want to follow up with another echo in 3 months and in 6 months. If she does not qualify then a recheck cardiac exam is recommended in 8 to 10 months.

Thank you for entrusting us with B6 care - she is a sweet, beautiful girl and we loved meeting her today!

Please contact our Cardiology liaison at (508)-887-4696 or email us at [cardiovet@tufts.edu](mailto: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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**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](http://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  
Years Old Female (Spayed) Labrador Retriever  
Yellow

### Cardiology Appointment Report ENROLLED IN DCM STUDY

Date: 1/16/2019

**Attending Cardiologist:**

John E. Rush DVM, MS, DACVM (Cardiology), DACVECC (primary)

**B6**

**Cardiology Resident:**

**B6**

**Cardiology Technician:**

**B6**

Student: **B6**, V19

**Presenting Complaint:**

Possible exercise intolerance, eats grain free food

Exercise intolerance start at about one year - breathes loudly, more hard, will sometimes lay down; same all year, been at a stable state since noticing at one year old

**Concurrent Diseases:** **B6**

**General Medical History:**

Overall good at home, good appetite, no coughing

**Diet and Supplements:**

Taste of the wild, has had Acana in the past

On purina pro plan switched about 1 week ago

**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? no

Shortness of breath or difficulty breathing? yes but since a puppy

Syncope or collapse? no  
Sudden onset lameness? no  
Exercise intolerance? yes but since dog is a puppy

**Current Medications Pertinent to CV System:**

None

**Cardiac Physical Examination:**

**B6**

**Murmur location/description:**

None heard

**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:** Exercise intolerance

**Differential Diagnoses:**

DCM vs pain related (hx TPLO x2) vs congenital

**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:**

Overall the LV cavity has slightly reduced contractile function and the LA looks to be mildly enlarged.

**Final Diagnosis:**

Mildly reduced LV contractile function R/O diet related vs variation of normal.

**Heart Failure Classification Score:**

**ISACHC Classification:**

- Ia
- Ib
- II
- IIIa
- IIIb

**ACVIM Classification:**

- A vs
- B1
- B2
- C
- D

M-Mode

IVSd

LVIDd

LVPWd

IVSs

LVIDs

LVPWs

EDV(Teich)

ESV(Teich)

EF(Teich)

%FS

SV(Teich)

Ao Diam

LA Diam

LA/Ao

Max LA

EPSS

B6

cm  
cm  
cm  
cm  
cm  
ml  
ml  
%  
%  
ml  
cm  
cm  
cm  
cm

M-Mode Normalized

IVSdN

LVIDdN

LVPWdN

IVSsN

LVIDsN

LVPWsN

Ao Diam N

LA Diam N

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}  
{0.680 - 0.890}  
{0.640 - 0.900}

2D

SA LA

Ao Diam

SA LA / Ao Diam

IVSd

LVIDd

LVPWd

EDV(Teich)

IVSs

LVIDs

LVPWs

ESV(Teich)

EF(Teich)

%FS

SV(Teich)

LV Major

LV Minor

Sphericity Index

LVLd LAX

LVA d LAX

LVEDV A-L LAX

B6

cm  
cm  
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cm  
ml  
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ml  
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cm  
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LVEDV MOD LAX  
LVIs 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  
cm  
cm  
ml  
ml  
BPM  
%  
%  
ml  
ml  
l/min  
l/min  
ms  
BPM  
l/min  
l/min

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

m/s  
ms  
m/s  
m/s  
  
m/s  
  
m/s  
m/s  
m/s  
mmHg  
m/s  
mmHg

**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**

Female (Spayed)

Canine Labrador Retriever Yellow

**B6**

**B6**

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,

John Rush DVM, DACVIM (Cardiology), DACVECC

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 2/24/2019 11:24:38 PM  
**Subject:** Taste of the Wild Sierra Mountain Dry: Lisa Freeman - EON-380714  
**Attachments:** 2063118-report.pdf; 2063118-attachments.zip

A PFR Report has been received and PFR Event [EON-380714] has been created in the EON System.

A "PDF" report by name "2063118-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 "2063118-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380714

**ICSR #:** 2063118

**EON Title:** PFR Event created for Taste of the Wild Sierra Mountain Dry; 2063118

<b>AE Date</b>	01/14/2019	<b>Number Fed/Exposed</b>	7
<b>Best By Date</b>		<b>Number Reacted</b>	2
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	5 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2063118

**Product Group:** Pet Food

**Product Name:** Taste of the Wild Sierra Mountain Dry

**Description:** BEG diet being fed to 7 dogs. We evaluated her other dog, B6 who had a murmur and elevated BNP, with reduced contractility and elevated troponin found on exam (see previous report - 2061171). Owner worried about this dog's breathing so we screened her and found reduced contractility, elevated troponin, but normal BNP. Changing diet on both dogs to Pro Plan Sensitive Skin/Stomach Salmon and will recheck in 3 months Other dogs we have not screened: Max Labrador 5 years old B6 Golden 3 1/2 years old B6 Golden 3 years old B6 Golden 3 years 5 months B6 Golden 3 years 9 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:** 7

**Number of Animals Reacted With Product:** 2

Product Name	Lot Number or ID	Best By Date
Taste of the Wild Sierra Mountain 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-380714>

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=397723>

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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](mailto:FDAREportableFoods@fda.hhs.gov) immediately.

**Report Details - EON-380714**

ICSR: 2063118  
 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: 2019-02-24 18:16:40 EST

**Reported Problem:**  
**Problem Description:** BEG diet being fed to 7 dogs. We evaluated her other dog **B6** who had a murmur and elevated BNP, with reduced contractility and elevated troponin found on exam (see previous report - 2061171). Owner worried about this dog's breathing so we screened her and found reduced contractility, elevated troponin, but normal BNP. Changing diet on both dogs to Pro Plan Sensitive Skin/Stomach Salmon and will recheck in 3 months Other dogs we have not screened: **B6** Labrador 5 years old **B6** Golden 3 1/2 years old **B6** Golden 3 years old **B6** Golden 3 years 5 months **B6** Golden 3 years 9 months  
**Date Problem Started:** 01/14/2019  
**Concurrent Medical Problem:** No  
**Outcome to Date:** Stable

**Product Information:**  
**Product Name:** Taste of the Wild Sierra Mountain Dry  
**Product Type:** Pet Food  
**Lot Number:**  
**Package Type:** BAG  
**Product Use Information:** **Description:** Please see diet history for additional information  
**Manufacturer /Distributor Information:**  
**Purchase Location Information:**

**Animal Information:**  
**Name:** **B6**  
**Type Of Species:** Dog  
**Type Of Breed:** Retriever - Golden  
**Gender:** Female  
**Reproductive Status:** Neutered  
**Weight:** 25.8 Kilogram  
**Age:** 5 Years  
**Assessment of Prior Health:** Excellent  
**Number of Animals Given the Product:** 7  
**Number of Animals Reacted:** 2  
**Owner Information:** **Owner Information provided:** Yes  
**Contact:** **Name:** **B6**  
**Phone:** **B6**  
**Email:**  
**Address:** **B6**  
 United States  
**Healthcare Professional Practice Name:** Tufts Cummings School of Veterinary Medicine



	<b>Information:</b>	<b>Contact:</b>	<b>Name:</b> Lisa Freeman
			<b>Phone:</b> (508) 887-4523
			<b>Email:</b> lisa.freeman@tufts.edu
		<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman	
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States	
	<b>Contact:</b>	<b>Phone:</b>	5088874523
		<b>Email:</b>	lisa.freeman@tufts.edu
	<b>Permission To Contact Sender:</b>	Yes	
<b>Preferred Method Of Contact:</b>	Email		
<b>Additional Documents:</b>	<b>Attachment:</b>	rpt_medical_record_preview.pdf	
	<b>Description:</b>	Medical records	
	<b>Type:</b>	Medical Records	

**Report Details - EON-376363**

ICSR: 2061172  
 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: 2019-01-14 17:14:59 EST

**Reported Problem:**  
**Problem Description:** Eating BEG diet; developed DCM and CHF 4/11/18 Owner changed diet to Royal Canin Early Cardiac and dog has improved significantly. Will recheck again in 3 months. Have not gotten approval for you to contact owner but sent an email today  
**Date Problem Started:** 04/11/2018  
**Concurrent Medical Problem:** No  
**Outcome to Date:** Better/Improved/Recovering

**Product Information:**  
**Product Name:** Zignature kangaroo dry  
**Product Type:** Pet Food  
**Lot Number:**  
**Package Type:** BAG  
**Product Use Information:** **Description:** See diet history for more details. Zignature Sept 2017-April 2017 Acana Pork/Squash before that  
**Manufacturer /Distributor Information:**  
**Purchase Location Information:**

**Animal Information:**  
**Name:** B6  
**Type Of Species:** Dog  
**Type Of Breed:** Retriever - Golden  
**Gender:** Female  
**Reproductive Status:** Neutered  
**Weight:** 26.3 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

		<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman	
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States	
	<b>Contact:</b>	<b>Phone:</b>	5088874523
		<b>Email:</b>	lisa.freeman@tufts.edu
	<b>Permission To Contact Sender:</b>	Yes	
<b>Preferred Method Of Contact:</b>	Email		
<b>Additional Documents:</b>	<b>Attachment:</b>	rpt_medical_record_preview	<b>B6</b> pdf
	<b>Description:</b>	Records	
	<b>Type:</b>	Medical Records	

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification [B6]  
**Sent:** 10/8/2018 7:28:33 PM  
**Subject:** Pro Plan Savory dry - chicken: Lisa Freeman - EON-367850  
**Attachments:** 2055797-report.pdf; 2055797-attachments.zip

A PFR Report has been received and PFR Event [EON-367850] has been created in the EON System.

A "PDF" report by name "2055797-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 "2055797-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-367850  
**ICSR #:** 2055797  
**EON Title:** PFR Event created for Pro Plan Savory dry - chicken beef or lamb (1 cup TID); 2055797

<b>AE Date</b>	[B6]	<b>Number Fed/Exposed</b>	1
<b>Best By Date</b>		<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Retriever - Labrador		
<b>Age</b>	7 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2055797

**Product Group:** Pet Food

**Product Name:** Pro Plan Savory dry - chicken, beef, or lamb (1 cup TID)

**Description:** Presented to ER of [B6] for CHF and DCM (had rads at RDVM for cough). Full echo on 8/28/18. Unlikely to be associated with diet but reporting because he is sometimes fed the lamb formula Pro Plan. Taurine WNL

**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**

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
Pro Plan Savory dry - chicken, beef, or lamb (1 cup TID)		

**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-367850>

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=384772>

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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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**Report Details - EON-367850**

**ICSR:** 2055797  
**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:** 2018-10-08 15:17:24 EDT

**Reported Problem:**  
**Problem Description:** Presented to ER on [B6] for CHF and DCM (had rads at RDVM for cough). Full echo on 8/28/18. Unlikely to be associated with diet but reporting because he is sometimes fed the lamb formula Pro Plan. Taurine WNL  
**Date Problem Started:** [B6]  
**Concurrent Medical Problem:** Yes  
**Pre Existing Conditions:** [B6]  
**Outcome to Date:** Stable

**Product Information:**  
**Product Name:** Pro Plan Savory dry - chicken, beef, or lamb (1 cup TID)  
**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:** Retriever - Labrador  
**Gender:** Male  
**Reproductive Status:** Neutered  
**Weight:** 37.7 Kilogram  
**Age:** 7 Years  
**Assessment of Prior Health:** Good  
**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

			<b>Email:</b> lisa.freeman@tufts.edu	
		<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States	
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman		
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States		
	<b>Contact:</b>	<b>Phone:</b>	5088874523	
		<b>Email:</b>	lisa.freeman@tufts.edu	
	<b>Permission To Contact Sender:</b>	Yes		
<b>Preferred Method Of Contact:</b>	Email			
<b>Additional Documents:</b>	<b>Attachment:</b>	compiled medical records: [B6] pdf		
	<b>Description:</b>	Compiled medical records		
	<b>Type:</b>	Medical Records		

**All Medical Records**

Client: [B6]  
Address: [B6]

Patient: [B6]  
Breed: Labrador 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:**

Emergency

SOAP Text [B6] :54PM - Clinician, Unassigned FHSA

**NEW VISIT (ER)**

Doctor: [B6]

Presenting complaint: cardiomegaly

Referral visit? yes

Diagnostics completed prior to visit: CXR (on disk), cardiomegaly, [B6]

**HISTORY:**

Signalment: 7yo NM lab

Current history: Presented for cardiomegaly diagnosed at rDVM. Developed cough and went to rDVM on Tuesday, where was put on [B6] with presumptive diagnosis of kennel cough (was boarded last week). Better for about a day. However, last night was coughing a lot and seemed uncomfortable. Restless last night and this morning. Seems to have increased effort breathing. Productive cough this am. Took to rDVM this am where they took chest rads and saw cardiogenic pulmonary edema and cardiomegaly. Non-febrile at that time. Was coughing quite a bit previously at rDVM. No prior c/s/v/d/PU/PD. This past week had decreased appetite and lethargic.

Prior medical history: Hx of kennel cough last year. Was boarded again last week. Other dog doesnt show any signs. Hx of [B6] Takes [B6] from June throughout summer [B6]

Current medications: [B6] Got [B6] this morning.

Diet: Purina ProPlan.

Vaccination status/flea & tick preventative use: UTD. Flea/tick and heartworm preventative. Just had heartworm test



Client: **B6**  
Patient: **B6**

(negative)  
Travel history: None

EXAM:

**B6**

C/V: grade IV-V/VI L systolic heart murmur, thready pulse quality, no arrhythmia ausculted

**B6**

ASSESSMENT:

A1: Heart murmur, cardiomegaly, r/o DCM, CHF

A2: **B6**  
A3: **B6**

PLAN:

**B6**

Diagnostics completed: NOVA

Diagnostics pending: CBC/Chem, cardio consult

Client communication:

Told O that gave **B6**. Also told them that he had significant heart murmur today. On rads he has enlarged heart and pulmonary edema. Gave **B6** to draw fluid out of lungs. On triage US also has decreased contractility. This is seen with DCM, which can be seen with genetics and age. Gave diuretic because heart is being inefficient and have fluid back-up into lungs. Told O that should be admitted to hospital, get recheck rads tomorrow, and likely will need repeat of **B6**. Needs cardio consult and an echo-likely wont get until Monday. Also may need oxygen supplementation. O asked if common to see acute signs with DCM. Told O that likely had minor progressive changes culminating in breathing difficulty. O asked if fluid could be related to pneumonia. Told O that unlikely, but also why we do recheck rads (looking to see improvement with **B6** if it is CHF). O asked about treatment for DCM. Informed O that will be diuretic to make them urinate out his retained fluid. O asked if will drink more. Told will need free choice water while on diuretic. O asked what other drugs he might be on. Discussed **B6** which will help

Client: **B6**  
Patient: **B6**

with contractility. Also informed O that with DCM are at risk for arrhythmia, which we havent noticed yet but he may need medication for if he develops it. O asked if drugs might shrink his heart. Told it likely won't make a significant difference in heart size. However, may shrink heart enough to relieve any compression on trachea and may help with relieving cough. rDVM was worried that cardiomegaly was contributing to his coughing. Told O that coughing is likely related to pulmonary edema. O asked about prognosis and told them that the goal is 6 months without another episode of failure. Some dogs may live longer than that, but on average they generally come back in failure in 6 months. O asked when they might be able to take him home, told them likely Monday. O was very distressed about 6 month timeline, was very surprised and upset. Told O that we frequently have dogs live past the 6 months, but it is hard for us to tell beyond that. Told O that he will need to be on medications and have follow-up with Cardio. O asked if he can go back to his normal acitivity levels. Told O that he will need to have pretty strict exercise restriction and that Cardio will guide them further.

Deposit & estimate status: **B6**

Resuscitation code (if admitting to ICU) **B6**

SOAP approved (DVM to sign): **B6** DVM ECC Resident

SOAP Text **B6** 9:40AM - **B6**

7 yo MN LRT

- Presented **B6** for cardiomegally and suspected cardiogenic edema (rDVM rads)
- Coughing since start of the week, initially received doxy b/c boarded at week; not febrile at rDVM

Subjective:

- BAR, friendly, lovely dog

Objective:

**B6**  
CVS: 3-4/6 systolic left murmur, crt normal, pulses SS, mibr PM, peripheral limbs warm

**B6**

Assessment:

1. CHF, suspected secondary to DCM

Plan:

**B6**

Client:  
Patient:

**B6**

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**B6**

**Initial Complaint:**

New - **B6** - presumed DCM from ICU

**SOAP Text** Aug 28 2018 5:23PM - **B6**

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**Disposition/Recommendations**

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Client:  
Patient:

**B6**

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---

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:	<b>B6</b>
Species:	Canine
Breed:	Labrador Retriever
Sex:	Male (Neutered)
Age:	<b>B6</b> Years Old

**Lab Results Report**

**Nova Full Panel-ICU**      **B6** 9:58:25 PM      Accession ID: **B6**

Test	Results	Reference Range	Units
SO2%	<b>B6</b>	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		



6/27

**B6**

Printed Monday, October 08, 2018

Client: **B6**  
 Patient: **B6**

FiO2	<b>B6</b>	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**      **B6**      10:02:12 PM      Accession ID: **B6**

Test	Results	Reference Range	Units
WBC (ADVIA)	<b>B6</b>	4.4 - 15.1	K/uL
RBC(ADVIA)		5.8 - 8.5	M/uL
HGB(ADVIA)		13.3 - 20.5	g/dL
HCT(ADVIA)		39 - 55	%
MCV(ADVIA)		64.5 - 77.5	fL
MCH(ADVIA)		21.3 - 25.9	pg
MCHC(ADVIA)		31.9 - 34.3	g/dL
RDW (ADVIA)		11.9 - 15.2	
PLT(ADVIA)		173 - 486	K/uL
MPV (ADVIA)		8.29 - 13.2	fl
PLTCRT		0.129 - 0.403	%
RETIC(ADVIA)		0.2 - 1.6	%
RETICS (ABS) ADVIA		14.7 - 113.7	K/uL

**Nova Full Panel-ICU**      **B6**      10:02:28 PM      Accession ID: **B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	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
MAGNESIUM 2+		1.8 - 3	mEq/L
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
tCO2 (BICARB)		14 - 28	mEq/L
AGAP		8 - 19	
NA/K		29 - 40	



Client: **B6**  
 Patient: **B6**

T BILIRUBIN	<b>B6</b>	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
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		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)		0 - 0	

**Nova Full Panel-ICU**      **B6**      10:02:07 PM      Accession ID: **B6**

Test	Results	Reference Range	Units
SEGS%	<b>B6</b>	43 - 86	%
LYMPHS%		7 - 47	%
MONOS%		1 - 15	%
SEGS (AB)ADVIA		2.8 - 11.5	K/uL
LYMPHS (ABS)ADVIA		1 - 4.8	K/uL
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
WBC MORPHOLOGY		0 - 0	
No Morphologic Abnormalities			
RBC MORPHOLOGY		0 - 0	
No morphologic abnormalities			

**Nova Full Panel-ICU**      **B6**      10:49:36 PM      Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)	<b>B6</b>	0 - 0	g/dl
PCV **		0 - 0	%
TS (FHSA)		0 - 0	g/dl

**Nova Full Panel-ICU**      **B6**      11:42:25 AM      Accession ID: **B6**

Test	Results	Reference Range	Units
SO2%	<b>B6</b>	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



8/27

**B6**

Printed Monday, October 08, 2018

Client: **B6**  
 Patient: **B6**

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
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE		0 - 0	
FiO2		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

**B6**

**Nova Full Panel-ICU** **B6** 11:47:47 AM **Accession ID:** **B6**

Test	Results	Reference Range	Units
TS (FHSA)		0 - 0	g/dl
PCV **	<b>B6</b>	0 - 0	%
TS (FHSA)		0 - 0	g/dl

**Nova Full Panel-ICU** 8/28/2018 5:24:21 PM **Accession ID:** **B6**

Test	Results	Reference Range	Units
GLUCOSE		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	

**B6**



**B6**



Client: **B6**  
 Patient: **B6**

T BILIRUBIN	<b>B6</b>	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			

<b>Nova Full Panel-ICU</b>		<b>8/28/2018 5:27:40 PM</b>	<b>Accession ID: <b>B6</b></b>
Test	Results	Reference Range	Units
TS (FHSA)	<b>B6</b>	0 - 0	g/dl
PCV **		0 - 0	%
TS (FHSA)		0 - 0	g/dl



10/27

**B6**

Printed Monday, October 08, 2018

Client:  
Patient:

**B6**

RDVM

**B6**

referral

**B6**



REFERRAL FORM

TUFTS UNIVERSITY  
Cummings School of Veterinary Medicine  
Henry and Lois Foster Hospital for Small Animals  
Hospital for Large Animals  
200 Westboro Road, Route 30  
North Grafton, MA 01536  
508-852-8299

Service to Which Referred: Emergency Appointment Date: \_\_\_\_\_ Time: \_\_\_\_\_

OWNER INFORMATION:

**B6**

PATIENT INFORMATION:

Registered Name/ID: **B6**  
Species: Dog Breed: Labrador Retriever

CASE HISTORY:

Chief Complaint/Provisional Diagnosis: Non-productive cough  
intermittent, worse at night

Vaccination History: Current - rabies, distemper (AD)

Other History: Intermittent cough, worse at night  
No response to antibiotics and bronchodilators

Diagnostic Test Results (if possible, please attach results): Rx only

Are Radiographs enclosed? Yes

Current Therapy & Medication (include dosages): **B6**

Special Comments/Requests: Severe dry cough R/O asthma

REFERRING VETERINARIAN INFORMATION:

**B6**

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

If an animal is being referred which has had lab work done at TVDL, please include copies of the lab results or the TVDL accession number. If you are faxing us information about a clinical case which has been referred, please use fax number (508) 852-7851.

Client: **B6**  
Patient:

**Taurine Level**

20881

**Sample Submission Form**

Amino Acid Laboratory  
University of California, Davis  
1020 Vet Med Bldg  
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: Tufts Cummings School of Vet Med - Clinical Pathology Laboratory  
Address: 300 Westboro Road  
North Grafton, MA 01536  
Email: [clinpath@tufts.edu](mailto:clinpath@tufts.edu); [cardiovet@tufts.edu](mailto: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 **B6**  
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	200-600	>200
Dog	60-120	>40	200-350	>150

Client:  
Patient:

**B6**

**Amino Acid Labs Taurine results 8/28/18**

20881

**Sample Submission Form**

Amino Acid Laboratory  
University of California, Davis  
1020 Var Med Bldg  
1009 Veterinary Medicine Center  
Davis, CA 95618  
Tel: (530)752-8268 Fax: (530)752-8268

UC CUSTOMERS ONLY  
New Animal Account # (Account Number)  
AN#

<http://www.ucdavis.edu/vetmed/ucdavisvetmed.html>

Vet/Tech Contact: **B6**

Company Name: Tufts Cummings School of Vet Med - Clinical Pathology Laboratory

Address: 200 Western Road  
North Duxbury, MA 01928

Email: [uhs@ucdavis.edu](mailto:uhs@ucdavis.edu) / [aminoacids@ucdavis.edu](mailto:aminoacids@ucdavis.edu)

Tel: 530-833-4808 Fax: 530-833-7508

Billing Contact: **B6**

TAX ID:

Email: **B6**

Tel: **B6**

Patient Name: **B6**

Species: **B6**

Owner's Name: **B6**

Sample Type:  Plasma  Whole Blood  Urine  Food  Other \_\_\_\_\_  
Test Name:  Taurine  Complete Amino Acid  Other \_\_\_\_\_

Taurine Results (nmol/mol)

Plasma: \_\_\_\_\_ Whole Blood: **B6** Urine: \_\_\_\_\_ Food: \_\_\_\_\_

Reference Ranges (nmol/mol)

	Plasma		Whole Blood	
	Normal Range	No known risk for Taurine Deficiency	Normal Range	No known risk for Taurine Deficiency
Cat	80-120	>80	200-600	>200
Dog	80-120	>80	100-150	>150

**B6**

**B6**

CAUTION  
Taurine (nmol/mol) 81,000  
Citation: NRC (1981)

UNIVERSITY OF CALIFORNIA, DAVIS



STERN CARDIAC GENETICS LABORATORY  
JOSHUA A. STERN, DVM, PhD, DACVIM (CARDIOLOGY)  
jstern@ucdavis.edu August 9, 2018

FREQUENTLY REQUESTED INFORMATION REGARDING TAURINE & DILATED  
CARDIOMYOPATHY IN GOLDEN RETRIEVERS

**Taurine reference ranges for Golden Retrievers:** The Stern Lab suggests that the following (usual reference) ranges be used for Golden Retrievers and be considered for other known taurine-sensitive breeds such as Newfoundland or American Cocker Spaniels. This is primarily based on 3 observations:

1. Golden Retrievers with marginal taurine levels (defined below) have been diagnosed with dilated cardiomyopathy and have documented disease reversal after taurine supplementation and diet change.
2. Previously published work documents taurine sensitivity in Golden Retrievers.
3. The most recently published reference on normal blood taurine values shows higher levels than previously reported.

- a. Normal whole blood taurine: >250nmol/L
- a. Normal plasma taurine: >75nmol/L
  
- b. Marginal whole blood taurine: 100-250nmol/L
- b. Marginal plasma taurine: 40-75nmol/L
  
- c. Low whole blood taurine: <200nmol/L
- c. Low plasma taurine: <60nmol/L

**References:**

Albery CA, Williams MB, Fox PC, Lavelle J, Price PL. Packed serum concentrations with normal dogs and in dogs with heart disease. J Vet Intern Med 1991; 5:222-226

Brubaker MC, Mueller H, Santos J, Thomas W. Taurine deficiency disease (cardiomyopathy) in a family of golden retrievers. J Am Anim Hosp Assoc 1997; 33:394-397

Williams MB, Adams J, Fox PC, Lavelle J, Price PL. Investigation: Study of the prevalence of systolic (S2) murmur and echocardiographic dilated cardiomyopathy in American Cocker Spaniels with decreased plasma taurine concentrations. J Vet Intern Med 1997; 11:204-211

Barber PC, Olson E, Price PL, Lavelle J, Rogers QR, Foxwell B. Taurine deficiency in Newfoundland Retrievers: a genetically variable condition that occurred also in the New Zealand. J Am Vet Med Assoc 2003; 123:1156-1158

Thomas W, Fox PC, Rogers QR, Barber PC. Taurine deficiency in dogs with dilated cardiomyopathy. J Am Vet Med Assoc 1999; 165:1121-1124

Williams MB, Barber PC, Brown W, Rogers QR, Thomas W, Alexander S, Green RR, Fox PC. Dilated cardiomyopathy in German Shepherds. J Am Vet Med Assoc 1996; 160:2191-2194

Thomas W, Kent PL, Rogers QR, Foxwell B. Plasma and whole blood taurine in normal dogs of varying breeds: a preliminary report. J Am Vet Med Assoc 1994; 155:124-126

**Plasma vs. whole blood taurine testing:**

If at all possible, we recommend that paired (plasma and whole blood) taurine samples be submitted for analysis. A low value on either or both tests is clinically relevant. If your dog is diagnosed with HCM, submitting paired taurine samples (plasma and whole blood) is imperative. We recommend that the UC Davis Amino Acid Laboratory be used for taurine testing, as this is where the literature cited for our reference ranges was generated. <http://www.vetmed.ucdavis.edu/labs/aminoacid/>. If a single test is submitted the Stern Lab recommends that whole blood be submitted preferentially. This is due to the false elevation of taurine levels that is possible in plasma samples due to sample handling issues. This is an area of some debate between clinicians and conflicting information on preference for plasma vs. whole blood exists. This underscores the value of paired sampling.

**Amino Acid Labs Taurine results 8/28/18**

**Clinical Recommendations for Golden Retrievers based on taurine levels:**

**Taurine level less than 200 - 250nmol/L in whole blood or 200nmol/L in plasma**

- An echocardiogram by a board-certified veterinary cardiologist is recommended.
- After echocardiogram has been completed, a diet change is recommended.
- If an echocardiogram is not performed, a diet change is still recommended and a taurine level reevaluation after three months as the severity should be considered.
- If HCM is diagnosed, this patient may need a variety of cardiac medications that would be provided by the attending cardiologist.
- If HCM is diagnosed, prescribed supplementation with oral taurine and L-carnitine is recommended.
- Reevaluation of taurine levels is warranted after three months of diet change and supplementation.
- Cardiology reevaluation schedules will be recommended by the attending clinician pending echocardiographic findings.
- Many Golden Retrievers with cardiac-deficient HCM do not show clinical signs and steady improvement over a period of 6-12 months.

**Taurine level less than 200 - 250nmol/L in whole blood or 200nmol/L in plasma**

- An echocardiogram by a board-certified cardiologist is recommended.
- After echocardiogram has been completed, a diet change is recommended.
- We recognize that many dogs in this category may have normal echocardiograms, and that the value of screening should be carefully considered. If the dog is eating within the FDA warning or other literature with the diet identified in our study (see diets of concern section below), we encourage echocardiographic screening with greater enthusiasm.
- If an echocardiogram is not performed, a diet change is still recommended and a taurine level reevaluation after three months as the severity should be considered.
- If HCM is diagnosed, this patient may need a variety of cardiac medications that would be provided by the attending cardiologist.
- If HCM is diagnosed, prescribed supplementation with oral taurine and L-carnitine is recommended.
- Reevaluation of taurine levels is warranted after three months of diet change and supplementation.
- Cardiology reevaluation schedules will be recommended by the attending clinician pending echocardiographic findings.
- Many Golden Retrievers with cardiac-deficient HCM do not show clinical signs and steady improvement over a period of 6-12 months.

**Taurine level less than 200 - 250nmol/L in whole blood or 200nmol/L in plasma**

- Diet change is recommended if you are feeding a diet that falls within the FDA warning or other literature with the diet identified in our study (see diets of concern section below)
- If your pet shows any signs of cardiac disease (rattling breathing, extreme tiredness, fainting/collapse, coughing) we recommend your veterinarian evaluate your pet.

**Amino Acid Labs Taurine results 8/28/18**

**Effect of Corn and Changing a Diet**

The FDA alert called attention to several dietary ingredients that should be considered when evaluating whether your pet is at risk (for example, because the pet and family, city or street animals). These findings were largely recapitulated in our current study of Golden Retrievers with low taurine levels and HCM. Our lab considers these ingredients to be of greatest concern when present within the first 5 listed ingredients on the dog food bag. Additionally, we noted a high percent of diets in our study were using protein sources other than chicken or beef and labeled as grain free.

**Points to consider when making a diet change:**

- Choose a diet that does not contain the concerning components listed above.
- Choose a diet that meets the WSAVA (Global Nutrition Assessment Committee) published as minimum by veterinary nutritionists from around the world:  
<http://www.wsava.org/WSAVA/media/42/pdfs/and-Forum-abstracts/Choosing-the-Best-Food-for-your-Pet.pdf>
- FDA alert listed here:  
<https://www.fda.gov/animal/drugs/development/2018/08/28/ucm163446.htm>

**Choosing a source of L-taurine supplement:**

Selecting supplements should be performed based upon diets that match their stated contents and are readily available for absorption. Ideally, a previous publication called multiple taurine and L-carnitine supplements. Based upon this publication our laboratory recommends the following supplements as those meeting our quality criteria. (Bough et al. 2009) *Am J Vet Res* 70: 2342-7

**Taurine 500 mg supplements that test within 5% of stated contents and if applicable disintegrated within 30 minutes**

- Mega-Taurine 500 by Tetrad (100mg tablets)
- Taurine by Southern Health Products (100mg capsules)
- Taurine by NOW Foods (100mg capsules)
- Taurine 500 by GNC (100mg tablets)

**Taurine L-carnitine supplements that test within 5% of stated contents and if applicable disintegrated within 30 minutes**

- L-carnitine 500 by Jarrow Products (100mg capsules)
- L-carnitine 500 by Country Life (100mg capsules)
- Mega L-carnitine by Solgar Vitamins and Herbs (100mg tablets)
- L-carnitine by Pharmacia's Vitals (100mg tablets)

The above list does not recommend the empirical supplementation of taurine or L-carnitine to dogs without evidence of HCM and/or significant deficiency. If HCM is diagnosed we typically recommend dogs under 50lbs receive 1000mg of taurine every 12hrs and dogs under 50lbs receive 500mg of taurine every 12hrs. We recommend L-carnitine at a dose of ~50mg/kg orally with food every 8hrs. Your veterinary cardiologist or family veterinarian should be consulted for promoting the best dose for your dog.

**Reporting to the FDA:**

Understanding the basis of this condition requires a great deal of research and investigation. Owners with affected dogs can contribute their data to help propel this research forward. You can report cases of taurine deficiency, dilated cardiomyopathy, sudden cardiac death, or any combination of these events to the FDA by following the information found here:

<https://www.fda.gov/animal/animal-safety/safetyalerts/sa-2018-0266.htm>

Additional questions or comments:  
Dr. Katherine Johnson  
This document last updated Aug. 28, 2018





Client:  
Patient:

**B6**

**Vitals Results**

7:19:38 PM	Heart Rate (/min)
7:19:39 PM	Respiratory Rate
7:19:40 PM	Temperature (F)
7:19:41 PM	Lasix treatment note
8:01:18 PM	Nursing note
10:51:29 PM	Cardiac rhythm
10:51:30 PM	Heart Rate (/min)
10:52:15 PM	Respiratory Rate
10:55:36 PM	Lasix treatment note
11:11:46 PM	Respiratory Rate
11:15:36 PM	Eliminations
11:59:29 PM	Cardiac rhythm
11:59:30 PM	Heart Rate (/min)
1:06:28 AM	Respiratory Rate
1:06:38 AM	Cardiac rhythm
1:06:39 AM	Heart Rate (/min)
1:07:29 AM	Respiratory Rate
1:16:20 AM	Catheter Assessment
1:16:30 AM	Temperature (F)
1:16:40 AM	Amount eaten
1:24:55 AM	Eliminations
1:59:16 AM	Cardiac rhythm
1:59:17 AM	Heart Rate (/min)
2:00:45 AM	Nursing note
3:07:42 AM	Cardiac rhythm
3:07:43 AM	Heart Rate (/min)
3:08:14 AM	Respiratory Rate
3:51:34 AM	Respiratory Rate
3:51:49 AM	Cardiac rhythm
3:51:50 AM	Heart Rate (/min)
3:56:33 AM	Eliminations
4:53:31 AM	Respiratory Rate
4:53:41 AM	Cardiac rhythm
4:53:42 AM	Heart Rate (/min)
5:05:59 AM	Catheter Assessment
5:47:32 AM	Cardiac rhythm
5:47:33 AM	Heart Rate (/min)
5:47:43 AM	Respiratory Rate
6:58:01 AM	Cardiac rhythm
6:58:02 AM	Heart Rate (/min)

**B6**

**B6**

Client:  
Patient:

**B6**

**Vitals Results**

**B6**

6:58:10 AM	Respiratory Rate
7:36:37 AM	Weight (kg)
7:36:43 AM	Eliminations
7:36:58 AM	Respiratory Rate
7:40:41 AM	Amount eaten
7:40:57 AM	Cardiac rhythm
7:40:58 AM	Heart Rate (/min)
8:15:42 AM	Lasix treatment note
8:57:02 AM	Cardiac rhythm
8:57:03 AM	Heart Rate (/min)
8:57:12 AM	Respiratory Rate
9:02:45 AM	Catheter Assessment
9:02:59 AM	Eliminations
9:58:29 AM	Respiratory Rate
11:03:50 AM	Respiratory Rate
11:36:45 AM	Respiratory Rate
11:36:53 AM	Heart Rate (/min)
11:42:00 AM	Eliminations
12:53:35 PM	Respiratory Rate
1:51:27 PM	Amount eaten
2:11:08 PM	Respiratory Rate
2:32:31 PM	Lasix treatment note
2:32:41 PM	Catheter Assessment
2:46:00 PM	Respiratory Rate
2:50:43 PM	Eliminations
4:29:41 PM	Weight (kg)

**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

Rad

**B6**

**B6**

Study Date

**B6**

**B6**

Client: **B6**  
Patient: **B6**

RDVM **B6** Rads **B6**

ID **B6** Study Date **B6**

**B6**

Client: **B6**  
Patient:

RDVM **B6** Rads **B6**

**B6** **B6** **Study: 1001-1704-008134**

**B6**

Client:  
Patient:

**B6**

**Patient History**

06:37 PM	UserForm
07:19 PM	Vitals
07:19 PM	Vitals
07:19 PM	Vitals
07:19 PM	Vitals
07:19 PM	Vitals
08:01 PM	Vitals
08:13 PM	Prescription
09:00 PM	UserForm
09:24 PM	Purchase
09:24 PM	Purchase
09:25 PM	Purchase
09:25 PM	Purchase
09:25 PM	Purchase
09:58 PM	Purchase
10:02 PM	Purchase
10:02 PM	Purchase
10:06 PM	Purchase
10:06 PM	Purchase
10:49 PM	Labwork
10:51 PM	Treatment
10:51 PM	Vitals
10:51 PM	Vitals
10:52 PM	Treatment
10:52 PM	Vitals
10:55 PM	Vitals
10:55 PM	Treatment
11:11 PM	Treatment
11:11 PM	Vitals
11:11 PM	Treatment
11:15 PM	Treatment
11:15 PM	Vitals
11:59 PM	Treatment
11:59 PM	Vitals
11:59 PM	Vitals
01:06 AM	Treatment
01:06 AM	Vitals
01:06 AM	Treatment
01:06 AM	Vitals
01:06 AM	Vitals
01:07 AM	Treatment
01:07 AM	Vitals
01:16 AM	Treatment
01:16 AM	Vitals

**B6**

**B6**

Client:  
Patient:

**B6**

**Patient History**

01:16 AM	Treatment
01:16 AM	Vitals
01:16 AM	Treatment
01:16 AM	Vitals
01:24 AM	Treatment
01:24 AM	Vitals
01:59 AM	Treatment
01:59 AM	Vitals
01:59 AM	Vitals
02:00 AM	Vitals
03:07 AM	Treatment
03:07 AM	Vitals
03:07 AM	Vitals
03:08 AM	Treatment
03:08 AM	Vitals
03:51 AM	Treatment
03:51 AM	Vitals
03:51 AM	Treatment
03:51 AM	Vitals
03:51 AM	Vitals
03:56 AM	Treatment
03:56 AM	Vitals
04:53 AM	Treatment
04:53 AM	Vitals
04:53 AM	Treatment
04:53 AM	Vitals
04:53 AM	Vitals
05:05 AM	Treatment
05:05 AM	Vitals
05:06 AM	Treatment
05:47 AM	Treatment
05:47 AM	Vitals
05:47 AM	Vitals
05:47 AM	Treatment
05:47 AM	Vitals
06:58 AM	Treatment
06:58 AM	Vitals
06:58 AM	Vitals
06:58 AM	Treatment
06:58 AM	Vitals
07:36 AM	Treatment
07:36 AM	Vitals
07:36 AM	Treatment

**B6**

**B6**

Client:  
Patient:

**B6**

**Patient History**

07:36 AM	Vitals
07:36 AM	Treatment
07:36 AM	Vitals
07:40 AM	Treatment
07:40 AM	Treatment
07:40 AM	Vitals
07:40 AM	Treatment
07:40 AM	Vitals
07:40 AM	Vitals
08:15 AM	Vitals
08:16 AM	Treatment
08:57 AM	Treatment
08:57 AM	Vitals
08:57 AM	Vitals
08:57 AM	Treatment
08:57 AM	Vitals
09:02 AM	Treatment
09:02 AM	Vitals
09:02 AM	Treatment
09:02 AM	Vitals
09:11 AM	Purchase
09:22 AM	Purchase
09:52 AM	UserForm
09:58 AM	Treatment
09:58 AM	Treatment
09:58 AM	Vitals
10:04 AM	Deleted Reason
11:03 AM	Treatment
11:03 AM	Vitals
11:29 AM	Treatment
11:31 AM	Purchase
11:36 AM	Treatment
11:36 AM	Vitals
11:36 AM	Treatment
11:36 AM	Vitals
11:42 AM	Treatment
11:42 AM	Vitals
11:42 AM	Treatment
11:42 AM	Purchase
11:47 AM	Labwork
12:53 PM	Treatment

**B6**

**B6**



Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	12:53 PM	Vitals	<b>B6</b>
	01:51 PM	Treatment	
	01:51 PM	Treatment	
	01:51 PM	Vitals	
	02:11 PM	Treatment	
	02:11 PM	Vitals	
	02:30 PM	Prescription	
	02:31 PM	Prescription	
	02:32 PM	Vitals	
	02:32 PM	Treatment	
	02:32 PM	Treatment	
	02:32 PM	Vitals	
	02:34 PM	Purchase	
	02:46 PM	Treatment	
	02:46 PM	Vitals	
	02:50 PM	Treatment	
	02:50 PM	Vitals	
	03:05 PM	UserForm	
	12:25 PM	Appointment	
	04:00 PM	UserForm	
	04:00 PM	Purchase	
	04:04 PM	Treatment	
	04:29 PM	Vitals	
	04:49 PM	Purchase	
	05:24 PM	Purchase	
05:27 PM	Labwork		
06:02 PM	UserForm		
06:17 PM	Prescription		
06:19 PM	Purchase		
09:54 AM	Prescription		
09:54 AM	Purchase		

Cardio Discharge - DCM CHF Form Saved to Record

**B6**

