

Fax: Admin  
Fax: Referral

**B4, B6**

**B4, B6**

Small Animal **B6**  
Large Animal **B6**

Discharge Comments

<b>Client</b> <b>B6</b>	<b>Patient</b> <b>B6</b> MIXED BREED DOG FS BLACK & TAN CANINE	Case # <b>B6</b>  15.9kg	Attending DVM <b>B6</b> Student Discharging DVM <b>B6</b> Referring DVM <b>B6</b>
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Admission Date/Time: **B6** 08:41 AM Discharge Date/Time: **B6** 01:35 PM Discharge Status: UNDETERM NED

CASE SUMMARY

DIAGNOSIS:

1. Dilated cardiomyopathy (DCM): rule out diet induced vs hypothyroidism vs primary (idiopathic)

HISTORY:

**B6** is an approximately 4 year old female spayed mixed breed dog who was presented to **B6** Cardiology on **B6** for evaluation of a new heart murmur and suspected dilated cardiomyopathy.

**B6** was presented to **B6** on 10/2/18 for a wellness exam and annual bloodwork, and a new II/VI left apical systolic murmur was noted on physical exam. **B6** CBC showed mild thrombocytopenia (121k on automated count), and no abnormalities on serum chemistry. **B6** was then presented to **B6** on 10/13/18 for a reevaluation of her murmur. Chest radiographs revealed generalized moderate to severe cardiomegaly with normal pulmonary vasculature and lung fields. A limited ultrasound of the heart reportedly revealed dilation of all four heart chambers with poor myocardial contractility. **B6** was then referred to **B6** Cardiology for suspected grain-free diet related DCM. Her diet was switched to Purina ProPlan dry kibble and she was started on taurine (500 mg PO BID) and L-carnitine supplementation (1g PO BID). For the last 3 months, **B6** has had an occasional single dry, non-productive cough once weekly when playing with her puppy housemate. **B6** has not experienced any lethargy, decreased appetite, exercise intolerance, respiratory distress or fainting. **B6** resting respiratory rate has been between 13 to 24 breaths per minute since 10/13/18.

**B6** was adopted from a shelter in **B6** three years ago and was estimated to be one year old at that time. **B6** experienced diarrhea and vomiting in the first 2 months after adoption and was started on a grain-free, chicken-free diet. **B6** diarrhea and vomiting resolved after the diet switch. Her diet history is as follows: Nature's Variety Instinct Limited Ingredient Lamb (11/2015 - 11/2017); Blue Buffalo Turkey + Potato or Lamb + Potato (11/2017 - 8/2018); American Journey Lamb + Sweet Potato Limited Ingredient Grain-Free (8/2018 - 10/2018). **B6** has had no other significant medical history since adoption and is not on any prescription medications. She is eating, drinking, urinating and defecating normally and has had no episodes of vomiting. **B6** is on Heartgard and Nexgard parasite prevention and up to date on all vaccines.

Current Diet: Purina Pro Plan Adult Lamb and Rice - dry kibble

Current Medications: None

Current Supplements: Taurine 500mg q12hr (GMC brand tablets), L-carnitine 1000mg q12hr (GMC brand tablets)

PHYSICAL EXAM FINDINGS:

**B6**

RESULTS OF DIAGNOSTIC TESTS:

**B6**

**B6**

PENDING DIAGNOSTIC TESTS:

**B6**

ASSESSMENT:

Thank you for entrusting us with **B6** care today. Today, **B6** was diagnosed with dilated cardiomyopathy (DCM). DCM is a disease that affects the muscle of the heart and causes a decrease in the contractility (pumping ability) of the heart. Because the heart is unable to pump with enough force to move blood adequately forward into circulation, a volume overload occurs and the heart dilates to accommodate it. Subsequently, the chambers of the heart become enlarged and the mitral valve leaflets are pulled slightly apart, resulting in back-flow of blood (mitral regurgitation) and the heart murmur ausculted on **B6** physical exam. **B6** echocardiogram today showed mild to moderate dilation of her heart chambers, mild mitral valve regurgitation, and mild to moderately diminished pumping ability of her heart.

While the exact mechanism of DCM is currently unknown, dietary deficiencies in the amino acids taurine and carnitine, genetics, infectious and inflammatory conditions, and toxins have all been linked to DCM. Since **B6** is an atypical breed to develop primary (hereditary) DCM and has been on a grain-free diet for the last 3 years, we are concerned for a possible diet associated DCM. This is a diagnosis of exclusion, so to rule out other causes, blood was drawn today for a troponin level and for thyroid testing. Troponin is a biomarker for damage to the muscle of the heart and is elevated in cases of myocarditis, which can be caused by many things including infectious or inflammatory disease. **B6** troponin level was normal, so an infectious or inflammatory cause of her DCM is unlikely. Thyroid testing was also submitted today, as hypothyroidism can be another cause of DCM.

There has been recent unpublished data suggesting a link between some grain-free diets and cardiomyopathy. Although some of these cases seem related to taurine/carnitine deficiency, others do not, and the reason for this link is not yet clear. Although the mechanism has not been confirmed, one hypothesis is that phytic acid, produced by legumes and lentils (common ingredients in grain-free diets) decreases the absorption of taurine and other essential nutrients from the intestines into the bloodstream. Some animals will show reversibility of their heart disease with supplementation of taurine and carnitine and initiation of a grain-containing diet.

**B6**

INSTRUCTIONS FOR CARE

**B6**

# B4, B6

Owner/Agent

**B4, B6**

**B6**

Clinicians:

Clinical Technicians:

Client Services:

**B4, B6**

**B4, B6**

**B4, B6**

Research Technician:

**B4, B6**

In order to help expedite medication refills, please visit us online at [B4, B6](#) and select Pet Owners, Pharmacy Refills.

# B6

MIXED BREE

**B4, B6**

**B4, B6**

23, **B6** CANINE **B6** MIXED BREED DOG **B6** BLACK & TA MIXED BREED  
FS 113791

**B6**

**B6**

**CARDIOLOGY SERVICE**  
**Patient Discharge Instructions**

Admission date: **Wednesday, October 17, 2018**

**Reason for visit:** Murmur evaluation, suspect dilated cardiomyopathy (DCM)

**Diagnosis/Problem:** Dilated cardiomyopathy, suspect diet related

**Treatments and diagnostic tests performed:** Troponin level (pending), taurine level (pending), T4/TSH (pending), platelet count, echocardiogram

**Medications:**

**B6**

**Instructions for care:** Continue to monitor **B6** for increased respiratory rate and effort, exercise intolerance, fainting, lethargy, decreased appetite, coughing, and abdominal distension. If you note any of these signs **B6** should be evaluated by a veterinarian immediately. Continue to monitor **B6** resting respiratory rate by counting her number of breaths per minute while she is laying down or sleeping. A normal resting respiratory rate for a dog is less than 30-40 breaths per minute.

**Plan for next evaluation:** Please schedule an appointment with **B4, B6** Cardiology in 3 months by calling **B4, B6**

**B4, B6**

**B4, B6**

**B4, B6**

Thank you for allowing us to care for you and your pet. If you have any questions or concerns, please do not hesitate to call the **B4, B6** Cardiology Service at **B4, B6**. For prescription refills: **B6**

Owner requests full report (Full Summary Automatically Sent To Primary DVM)  
This is the full report to be sent to the primary DVM

Faculty:

**B4, B6**

Residents:

**B4, B6**

Research Technician:

**B4, B6**

Clinical Technicians

**B4, B6**

Client Services

**B4, B6**

**B4, B6**

**B4, B6**

REPORT OF LABORATORY EXAMINATION

Client:

**B6**

Owner:

**B6**

Rcvd Date: 10/18/2018 4:31:00 PM  
Admitted By: Not Provided  
Ordered By: N/A  
Encounter: 02540503  
CR#: AP

Animal: **B6**  
Species: Canine  
Age: 3 years  
Tag/Reg ID:  
Other ID:

MRN: **B6**  
Breed: Dog Mixed Breed  
Gender: Female, Spayed

*Endocrinology*

Endocrine Results

Collected Date/Time: 10/17/2018  
(If Provided) 16:39:00

Procedure

**B6**

Ref Range	Units
[11-59]	nmol/L
[0.8-2.1]	pmol/L
[9-39]	pmol/L
[0-20]	%
[0-10]	%
[0.00-0.58]	ng/mL
[0-35]	%

Endocrinology Interpretation

See Below

**B6**

L = Low Result, H = High Result, @ = Critical Result, ^ = Corrected Result, \* = Interpretive Data, # = Result Footnote

**B4, B6**

**Cardiology Pet Diet History**

231020  
CANINE  
FS

**B6**

MIXED BREED DOG  
12/24/14 BLACK & TA  
113791

MIXED BREE

Date: 10/16/18

**B6**

**B6**

**Current diet:**

Brand American Journey Lamb & Sweet Potato

Variety Limited Ingredient Grain-Free

Is this diet Grain-free? Yes

How long has your pet eaten this food? 3 months (Aug 18 - Oct 18)

Are there other pets in your house eating this food? Yes, puppy version for 5 mo. Goldendoodle, **B6**

**Other diets eaten in the last 3 years and dates:**

(Nov 17 - Aug 18) Blue Buffalo - different versions of basic, lifesource & freedom (mostly basics) <sup>Turkey + Potato  
Lamb + Potato</sup>

(Nov 15 - Nov 17) Nature's Variety Instinct Limited Ingredient Lamb

- First 2 months after adoption tried 2 or 3 foods that caused major diarrhea & vomiting so claimed allergic to chicken and started on grain-free, chicken-free diet. No more D or V.

**Other food (treats, rawhides, table food):**

No rawhides. Not too many treats. Occasional table food (rare).

Have given Better Belly chews, dental chews (milkbone, pentastix, Nylabone NutriDent)

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

↳ all very few and far between.

None -

**B4, B6**

**B4, B6**

10/17 @ 9:00

#123919

**Cardiology-Consult**

1 message

**RADSINEMAIL**

**B4, B6** Consult Request < **B6** >  
To: **B4, B6** **B4, B6**

**B4, B6**

Sat, Oct 13, 2018 at 2:29 PM

\*\*\*Automated message. Do not reply to sender, see below for clinic/client e-mail.\*\*\*

What is your preferred contact method?:

By Phone

Best hours to contact:

M T W F 8a-6p

Veterinarian to contact:

**B6**

Clinic/Hospital:

**B6**

Clinic Phone Number:

**B6**

Clinic Email:

**B6**

Name of the owner (First/Last):

**B6**

Owner Phone:

**B6**

Owner Email:

**B6**

Has this patient ever been seen by any service at NC State Veterinary Hospital?: No

Patient/Pet Name:

**B6**

Species:

canine

Date of Birth or Age:

**B6**

Breed:

mixed breed

Weight:

35.7lbs

Color:

black/tan

Gender:

FS

Pertinent medical history:

Would like referral for echocardiogram at **B6** ASAP- suspect grain-free diet related DCM. Client amenable to referral. On grain free diet past 3-4 years. New heart murmur first noted last week at a different veterinary office. Seen today by our hospital first time for second opinion. Grade 2-3/6 L systolic murmur, NSR. Respiratory: WNL, no crackles/wheezes. Eupnic. Does not appear to be in CHF. Not currently on any medications aside from Nexguard and Heartguard. Advised Taurine 500mg PO BID and L carnitine- 1gram PO BID and change to diet containing grains while awaiting echo. Discussed monitoring for signs of impending CHF and when to seek emergency care.

Questions you would like addressed:

Chest rads- Generalized moderate to severe cardiomegaly. Lungs appear WNL. Brief cardiac US (by me)- All 4 chambers appear subjectively enlarged/dilated. Myocardium appears subjectively thin with POOR contractility. No pericardial effusion detected. Suspect DCM.

*Red slot  
11/14  
10/17 9AM  
~~11 AM~~*

*16.2 kgf*

*3 brands - of late.  
Am. Journey Salm + SwPot*

Patient History Report **B6** 10/15/2018

Clinic:

**B6**

**B6**

Client:

**B6**

Home Phone: **B6**

Work Phone: **B6** xcell

ID: **B6** File # 386

Patient: **B6**

ID: **B6**

Tag:

Species: Canine, Mixed breed

Sex: female/spayed

Age: 4 yrs. DOB: **B6**

Weight: 35.7 Lbs

Color: Black/tan markings

Last visit: 10/13/2018

Referred By:

Tel: /Fax:

Medical Record Entries:

10/15/2018

Referral - SW **B6** fit into redslot- 1 month

-save diet and bring it in to appointment - Change diet to one with grain in it

Taurine- 40mg/kg 640mg/day (256 and 500ok too)

L-carnitine- ???

does O need to call (**B6**)

10/15/2018

See Attachments - Blood Work Downtown **B6** Animal Hospital (**B6**)

10/13/2018

Consultation with specialist - Sent to **B6** Cardiology:

Would like referral for echocardiogram at **B6** ASAP- suspect grain-free diet related DCM. Client amenable to referral. On grain free diet past 3-4 years. New heart murmur first noted last week at a different veterinary office. Seen today by our hospital first time for second opinion. Grade 2-3/6 L systolic murmur, NSR. Respiratory: WNL, no crackles/wheezes. Eupneic. Does not appear to be in CHF. Not currently on any medications aside from Nexguard and Heartguard. Advised Taurine 500mg PO BID and L-carnitine 1gram PO BID and change to diet containing grains while awaiting echo. Discussed monitoring for signs of impending CHF and when to seek emergency care.

Chest rads- Generalized moderate to severe cardiomegaly. Lungs appear WNL

Brief cardiac US (by me)- All 4 chambers appear subjectively enlarged/dilated.

Myocardium appears subjectively thin with POOR contractility. No pericardial effusion detected. Suspect DCM

Bloodwork performed recently by another vet hospital- WNL, per owner (Copies unavailable today- Saturday).

- Earliest appointment client can be seen?

- Additional medications or changes in dosages of supplements to prevent CHF while awaiting referral?

-Rads and video of cardiac US will be sent by email on Monday (when support staff available).

**B6**

10/13/2018

Ultrasound Consult Fee - Cardiac LS- All 4 chambers appear subjectively



enlarged/dilated. Myocardium appears subjectively thin with poor contractility. No pericardial effusion detected. Suspect DCM [B6]

10/13/2018

**Radiographs Two Views** - 3 view thorax- Generalized moderate to severe cardiomegaly Lungs appear WNL. Suspect DCM [B6]

10/13/2018

**Weight in lbs.** - (35.7) [B6]

10/13/2018

**Examination/Office Call** - [B6]

Chief Complaint: second opinion, heart murmur

History: 2nd opinion- heart murmur. Adopted approx 3 years ago, think she was around 9 months at time of adoption. Pretty healthy past few months- had diarrhea occasionally in first year, improved once she eliminated chicken and grains from the diet. 1 week ago- diagnosed with a heart murmur for the first time at [B6]. Prior to that, has been to multiple vets and they have never mentioned a heart murmur. Occasionally coughs, mostly when excited (when pulling on the leash/collar, but also sometimes when playing off leash).

Diet- American Journey Salmon and sweet potato (grain free). Has always been on a grain-free diet.

On Heartguard and Nexguard, O gives every month, regularly.

**B6**

**B6**

*MIXED BRED*

From

B4, B6

B4, B6

SCANNED

B6

B6

Acct Number:  
Address.....:

B6

Medical Alert:

Sex.....: FS

Weight: 35.6lbs.

DOB.....: B6

Breed....: Lab Mix

Phone.....:

ext:

Species...: Canine

Cell Phone.....

( ) ext: Outstanding Balance. \$\$

<u>Problem (s)</u>	<u>Date</u>	<u>Diagnoses</u>	<u>Date</u>	<u>Vaccine Name</u>	<u>Date Due</u>
<p>B6</p>					

10/03/2018

Note

Records transferred to

B6

Provider:

B6

10/02/2018

Service

CET HEXtra Premium Chews Med. QTY: 1  
Dog 30-Ct

Provider: Hospital Personnel

10/02/2018

LINK

New Client Form

10/02/2018

Service

Junior Wellness - Comprehensive QTY: 1  
Profile

Provider:

B6

10/02/2018

Service

CBC (Complete Blood Count) QTY: 1

Provider:

B6

B6

MIXED BREED

B6

B6

10/02/2018

SOAP

Wellness Visit

Provider: B6

S: Presenting Complaint: B6 is here for a wellness exam. Current on vaccines, no concerns, E/D ok, no V/D

Medications received: None

Preventatives received: Nexgard and Heartgard

Diet: American Journey

O: Weight- 35.6 lbs

PHYSICAL EXAM

B6

B6

MIXED BREED

DIAGNOSTICS  
CBC/Chem: NSF

A: healthy pet, murmur very mild and not a concern at this time

P: dental cleaning will be important for maintaining heart health

10/02/2018

Lab Value

Temperature: = 101.20

10/02/2018

Service

Exam - Pet Wellness

QTY 1

Provider: B6

Comprehensive Diagnostic

10/02/2018 02:51 PM

ALB  
ALP  
ALT  
AMY

B6

2.5-4.4 g/dL  
20-150 U/L  
10-118 U/L  
200-1200 U/L

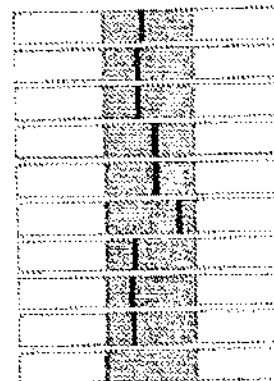

**B6**

**B6**

TBIL  
BUN  
CA  
PHOS  
CRE  
GLU  
NA+  
K+  
TP  
GLOB

**B6**

0.1-0.6 mg/dL  
7-25 mg/dL  
8.6-11.8 mg/dL  
2.9-6.6 mg/dL  
0.3-1.4 mg/dL  
60-110 mg/dL  
138-160 mmol/L  
3.7-5.8 mmol/L  
5.4-8.2 g/dL  
2.3-5.2 g/dL

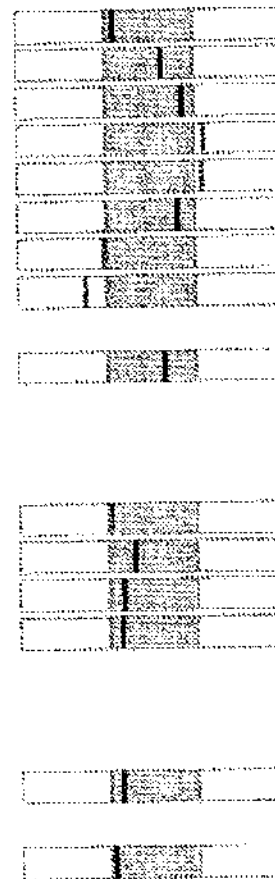


**Abaxis VetScan HM5**  
10/02/2018 02:45 PM

WBC  
RBC  
HGB  
HCT  
MCV  
MCH  
MCHC  
PLT  
PCT  
MPV  
PDWs  
PDWc  
RDWs  
RDWc  
LYM  
MON  
NEU  
LY%  
MO%  
NE%  
EOS  
EO%  
BAS  
BA%

**B6**

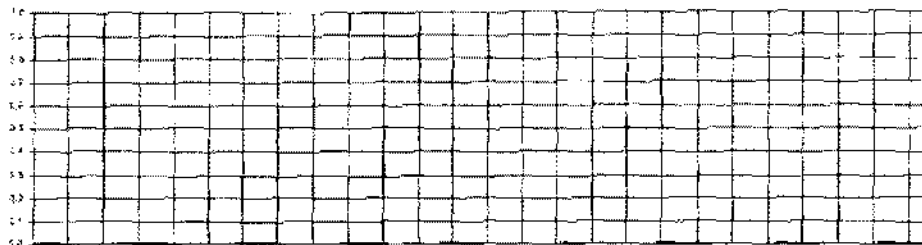
6.00-17.00 10<sup>9</sup>/l  
5.50-8.50 10<sup>12</sup>/l  
12.0-18.0 g/dl  
37.00-55.00 %  
60- 77 fl  
19.5-24.5 pg  
31.0-39.0 g/dl  
165- 500 10<sup>9</sup>/l  
%  
3.9-11.1 fl  
fl  
%  
fl  
14.0-20.0 %  
1.00-4.80 10<sup>9</sup>/l  
0.20-1.50 10<sup>9</sup>/l  
3.00-12.00 10<sup>9</sup>/l  
%  
%  
%  
0.00-0.80 10<sup>9</sup>/l  
%  
0.00-0.40 10<sup>9</sup>/l  
%



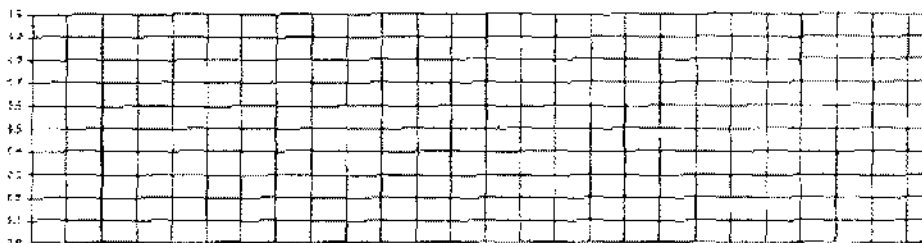
**B6**

**B6**

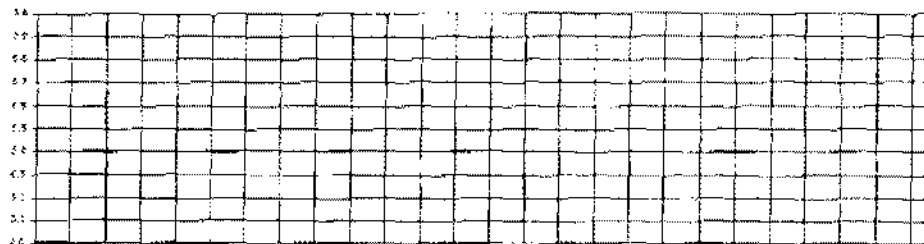
WBC Hist



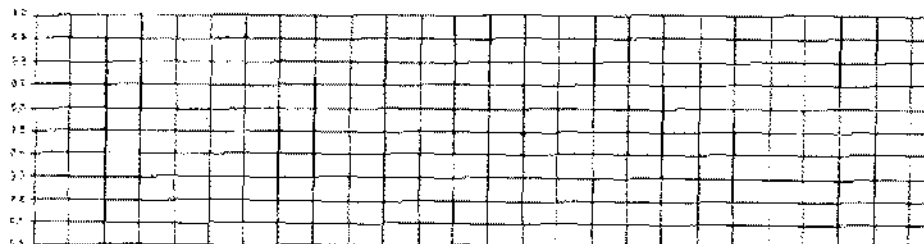
RBC Hist



EOS Hist



\*PLT Hist



09/25/2018 [LINK](#) Records Cont.

09/25/2018 [LINK](#) Records

B6
B6
B6

CANINE MIXED BREED DOG MIXED BREED  
 FS BLACK & TA

**B6**

**B6**

**B6**

For any questions on [redacted] B6 health, please call [redacted] B6

**B6**

AMVED/BRCC

B6

B6

B6

Acct Number:

Address:

B6

Phone:

Cell Phone:

( ) ext:

ext:

Outstanding Balance: \$\$

B6

Medical Alert:

Sex: FS

DOB: B6

Species: Canine

Weight: 35.6lbs.

Breed: Lab Mix

Problem (a)	Date	Diagnoses	Date	Vaccine Name	Date Due
	0.00				
<p>B6</p>					

10/02/2018 Service CET HEXtra Premium Chews Med. QTY: 1 Dog 30-Ct Provider: Hospital Personnel

10/02/2018 LINK New Client Form

10/02/2018 Service Junior Wellness - Comprehensive Profile QTY: 1 Provider: B6

10/02/2018 Service CBC (Complete Blood Count) QTY: 1 Provider: B6

SCANNED  
B6  
10/4/18

B6  
CANINE  
FS

B6  
MIXED BREED DOG  
BLACK & TA  
B6

MIXED BREED

B6

B6

B6

10/02/2018

SOAP

Wellness Visit

Provider:

B6

**S:** Presenting Complaint: B6 is here for a wellness exam.  
Current on vaccines, no concerns, E/D ok, no V/D

Medications received: None

Preventatives received: Nexgard and Heartgard

Diet: American Journey

**O:** Weight- 35.6 lbs

**PHYSICAL EXAM**

B6

MIXED BREED  
B6

**DIAGNOSTICS**

CBC/Chem: NSF

**A:** healthy pet, murmur very mild and not a concern at this time

**P:** dental cleaning will be important for maintaining heart health

10/02/2018

Lab Value

Temperature: = 101.20

10/02/2018

Service

Exam - Pet Wellness

QTY: 1

Provider:

B6

09/25/2018

LINK

Records Cont.

09/25/2018

LINK

Records

For any questions on B6 health, please call B6

Prescriptions for Lactis 100.pdf

Page 2 of 2



### Patient History Report

Client: Phone: Address:	<b>B6</b>	Patient: <b>B6</b> Species: Canine Age: 3 Yrs. 8 Mos. Color: Black/Tan	Breed: Mixed Sex: Spayed Female
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Date	Type	Staff	History
------	------	-------	---------

8/4/2018 I **B6**

8/4/2018 CK **B6**

8/4/2018 V **B6**

8/4/2018 L **B6**

# B6

8/4/2018 L **B6**

8/4/2018 B  
8/4/2018 B  
8/4/2018 B  
8/4/2018 B  
8/4/2018 B  
7/30/2018 P

**B6**

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to History, E: Exam, F: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: Problem, R: Correspondence, T: Images, TC: Tentative med note, V: Vital signs

MIXED BREED

MIXED BREED DOG  
BLACK & TAN

6:37 PM

**B6**

**B6**

CANINE

**B6**

**B6**

**B6**

# B6

### Patient History Report

Client:  
Phone:  
Address:

**B6**

Patient: **B6**  
Species: Canine  
Age: 3 Yrs. 8 Mos  
Color: Black/Tan

Breed: Mixed  
Sex: Spayed Female

Date Type Staff History

7/30/2018 P

**B6**

7/27/2018 P

**B6**

7/27/2018 P

**B6**

**B6**

7/23/2018 TC

**B6**

Signed Consents - TENTATIVE

7/23/2018 TC

**B6**

Signed Estimate/Drop Off - TENTATIVE

7/20/2018 TC

**B6**

PDVM - TENTATIVE -

**B6**

**CANINE VACCINES & LAB- \*\* Please type below when vaccines or tests were actually Given at **B6** - Not when they are due \*\***

**\*\*\* RECEPTION FULL NAME (NOT YOUR INITIALS) OF WHO PUT IN PDVM OF DATES VACCINES GIVEN : **B6****

B: Billing, G: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, F: Filing, I: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Acc, R: Correspondence, T: Images, TC: Tentative

**B6**

**B6**  
CANINE

**B6**  
MIXED BREED DOG  
BLACK & TA

MIXED BREED

37 PM

**B6**

### Patient History Report

<b>Client:</b>	<b>B6</b>	<b>Patient:</b>	B6	<b>Breed:</b>	Mixed
<b>Phone:</b>		<b>Species:</b>	Canine	<b>Sex:</b>	Spayed Female
<b>Address:</b>		<b>Age:</b>	3 Yrs. 8 Mos.	<b>Color:</b>	Black/Tan

Date	Type	Staff	History
------	------	-------	---------

<input checked="" type="checkbox"/> <b>CANINE RABIES</b> Date Given: 09/09/16 -	Manufacturer: 1 or 3 year: 3
<input type="checkbox"/> <b>CANINE RABIES</b> Date Given: -	Manufacturer: 1 or 3 year:
<input type="checkbox"/> <b>CANINE RABIES</b> Date Given: -	Manufacturer: 1 or 3 year:
<input type="checkbox"/> <b>CANINE RABIES</b> Date Given: -	Manufacturer: 1 or 3 year:

<input checked="" type="checkbox"/> <b>DHPP</b> Date Given: 09/09/16 -	Manufacturer: 1 or 3 year: 3
<input type="checkbox"/> <b>DHPP</b> Date Given: -	Manufacturer: 1 or 3 year:
<input type="checkbox"/> <b>DHPP</b> Date Given: -	Manufacturer: 1 or 3 year:
<input type="checkbox"/> <b>DHPP</b> Date Given: -	Manufacturer: 1 or 3 year:

<input type="checkbox"/> <b>LEPTO</b> Date Given: -
<input type="checkbox"/> <b>LEPTO</b> Date Given: -

<input checked="" type="checkbox"/> <b>BORDETELLA</b> Date Given: 4/17/2017 -	<input checked="" type="checkbox"/> Intranasal	<input type="checkbox"/> Oral	<input type="checkbox"/> Injectable
<input type="checkbox"/> <b>BORDETELLA</b> Date Given: -	<input type="checkbox"/> Intranasal	<input type="checkbox"/> Oral	<input type="checkbox"/> Injectable

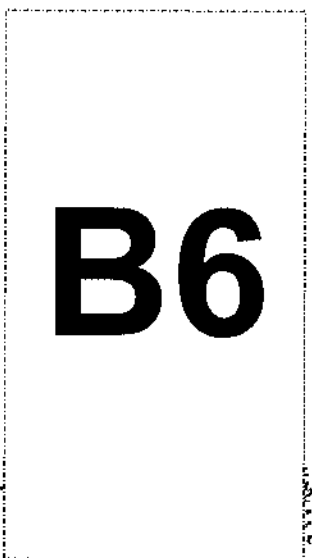
<input type="checkbox"/> <b>CIV</b> Date Given: -
<input type="checkbox"/> <b>CIV</b> Date Given: -
<input type="checkbox"/> <b>CIV</b> Date Given: -

<input checked="" type="checkbox"/> <b>HEARTWORM TEST</b> Date Given: 09/08/17 -	<input checked="" type="checkbox"/> Negative	<input type="checkbox"/> Positive
<input type="checkbox"/> <b>HEARTWORM TEST</b> Date Given: -	<input type="checkbox"/> Negative	<input type="checkbox"/> Positive

<input checked="" type="checkbox"/> <b>FECAL</b> Date Given: 12/21/2017 -	<input checked="" type="checkbox"/> Negative	<input type="checkbox"/> Positive
<input type="checkbox"/> <b>FECAL</b> Date Given: -	<input type="checkbox"/> Negative	<input type="checkbox"/> Positive
<input type="checkbox"/> <b>FECAL</b> Date Given: -	<input type="checkbox"/> Negative	<input type="checkbox"/> Positive

<input type="checkbox"/> <b>DEWORMING</b> Date Given: -	Type: -
<input type="checkbox"/> <b>DEWORMING</b> Date Given: -	Type: -
<input type="checkbox"/> <b>DEWORMING</b> Date Given: -	Type: -

MIXED BREED



7/19/2018 C DZZ Canine/Feline Exam - CLOSED 08/02/2018  
**B6** OVM

Wt: 35.2  
 Reason for visit: O lacerated L cranial flank fold while grooming

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DM: Declined to history, E: Examination, ES: Estimates, I: Departing Inst, LL: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative med note, V: Vital signs

**B6**

### Patient History Report

Client:	<b>B6</b>	Patient:	B6	Breed:	Mixed
Phone:		Species:	Canine	Sex:	Spayed Female
Address:		Age:	3 Yrs. 8 Mos.		
		Color:	Black/Tan		

Date	Type	Staff	History
------	------	-------	---------

Temp/Pulse/Resp: 101.8 / 130 / 40

# B6

B6	B6	MIXED BREED DOG	MIXED BREED
CANINE			
<div style="border: 1px dashed black; padding: 20px; display: inline-block;"> <h1>B6</h1> </div>			

7/19/2018 P	B6	<h1>B6</h1>
-------------	----	-------------

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimates, ED: Exporting info, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: images, TC: Tentative med note, V: Vital signs

### Patient History Report

Client: Phone: Address:	<b>B6</b>	Patient: <b>B6</b> Species: Canine Age: 3 Yrs. 8 Mos. Color: Black/Tan	Breed: Mixed Sex: Spayed Female
-------------------------------	-----------	---	------------------------------------

Date	Type	Staff	History
------	------	-------	---------

7/19/2018 P **B6**

7/19/2018 P **B6**

7/19/2018 CK **B6**

7/19/2018 V **B6**

7/19/2018 B  
7/19/2018 B  
7/19/2018 B  
7/19/2018 B  
7/19/2018 B  
7/19/2018 B  
7/19/2018 B  
7/19/2018 B  
7/19/2018 B

**B6**

**B6**

8/4/2017 TC **B6** OVERDUE REMINDER CALL - TENTATIVE  
overdue reminder call LMOM for O to schedule apt

9/19/2016 TC **B6** Overdue reminder call - TENTATIVE  
LMOM about cranial CT findings

9/7/2016 TC **B6** faxed records - TENTATIVE  
Faxed records to **B6** 5:15p

**B6**

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimates, I: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: Problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondance, T: Images, TC: Tentative med note, V: Vital signs

**B6**

### Patient History Report

<b>Client:</b>	<b>B6</b>	<b>Patient:</b>	B6	<b>Breed:</b>	Mixed
<b>Phone:</b>		<b>Species:</b>	Canine	<b>Sex:</b>	Spayed Female
<b>Address:</b>		<b>Age:</b>	3 Yrs. 8 Mos.	<b>Color:</b>	Black/Tan

Date	Type	Statf	History
8/1/2018	C	B6	RR - FINAL 08/01/2018

7/30/2016 C B6 Canine Exam - CLOSED 08/29/2016

**Canine Exam**

Date: 7/30/2016

Patient Name: B6 B6 Mixed 37 pounds Spayed Female

B6 DVM Technician B6

#### To be completed by Technician

**Reason for visit: to establish relationship for Bravecto**

**History (Subjective):**

Is your pet having any problems?	All things are good. O wants Bravecto for P. O will do vx towards end of Sept 2016. Current on Tri-heart. Nature's Variety lamb/pea dry food.
----------------------------------	---

#### To be completed by DVM

**Exam (Objective):**

<b>Nose and Throat</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Exam <input type="checkbox"/> Abnormal Remarks: ___	<b>Mouth/Teeth/Gum</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Exam <input type="checkbox"/> Abnormal Remarks: ___
<b>Eyes and Ears</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Exam <input type="checkbox"/> Abnormal Remarks: ___	<b>Coat and Skin</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Exam <input type="checkbox"/> Abnormal Remarks: ___
<b>Lymph Nodes</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Examine <input type="checkbox"/> Enlarged Remarks: ___ <input type="checkbox"/> Abnormal Remarks: ___	<b>Musculoskeletal</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Exam <input type="checkbox"/> Nail Trim <input type="checkbox"/> Abnormal Remarks: ___

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Disinfect to history, E: Examination, ES: Estimates, FD: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative medl note, V: Vital signs

B6

### Patient History Report

Client: Phone: Address:	<b>B6</b>	Patient: <b>B6</b> Species: Canine Age: <b>B6</b> Color: Black/Tan	Breed: Mixed Sex: Spayed Female
-------------------------------	-----------	---	------------------------------------

Date	Type	Staff	History
------	------	-------	---------

<b>Nervous System</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Examine <input type="checkbox"/> Abnormal Remarks: _____	<b>Heart and Lungs</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Examine Heart Murmur Grade ___/VI Murmur Comments: _____ <input type="checkbox"/> Abnormal Remarks: _____
<b>GI Tract/Abdomen</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Examine <input type="checkbox"/> Expressed Anal Glands <input type="checkbox"/> Abnormal Remarks: _____	<b>Urinary and Genitals</b> <input type="checkbox"/> Normal <input type="checkbox"/> Did Not Examine <input type="checkbox"/> Abnormal Remarks: _____
Additional Notes:	

#### To be Completed by DVM (Unless they are really backed up)

Vital Signs:  
Add Vital Signs

#### To be completed by Technician

Wellness Services:

Rabies: 1yr  3yr  Retag #  UTD  Declined   
 DHPP: 1yr  3yr  #  Titers  UTD  Declined   
 Lepto: #  Annual  UTD  Declined   
 Bordetella: #  1yr  UTD  Declined

Fecal: Accepted  Declined   
 Heartworm Test: Accepted  Declined   
 Wellness BW: 0-6 yrs  Accepted  Declined   
 > 6 yrs

Note: Don't forget the Accept or declined boxes!

#### To be completed by DVM:

Assessment: Add Diagnosis Description  
healthy pet

Plan: examination for Bravecto, will have vx as a tech appt in a couple months.  
NT today.

B6

7/30/2016 P

B6

1.00 pack of Bravecto Chews > 22.0 - 44.0 lbs (1534)  
 Rx #: 31558 0 Of 0 Refills Filled by: B6  
 Give 1 chew by mouth every 12 weeks for prevention of fleas and ticks. GIVE WITH FOOD. FOR VETERINARY USE ONLY. KEEP OUT OF REACH OF CHILDREN

B: Ring, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimates, F: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative med note, V: Vital signs

B6

From B6

### Patient History Report

Client:	<b>B6</b>	Patient:	B6
Phone:		Species:	Canine
Address:		Age:	3 Yrs, 8 Mos.
		Breed:	Mixed
		Sex:	Spayed Female
		Color:	Black/Tan

Date	Type	Staff	History
------	------	-------	---------

7/30/2016 C B6 B6 FINAL 07/30/2016 - B6 Animal Care Shelter

NO VAX HX IN B6

#### CANINE VACCINES

DHPP Date Given: 09/24/2015 -  Booster  1 Year  3 Year  W/Lepto

DHPP Date Given: -  Booster  1 Year  3 Year  W/Lepto

DHPP Date Given: -  Booster  1 Year  3 Year  W/Lepto

DHPP Date Given: -  Booster  1 Year  3 Year  W/Lepto

CANINE RABIES Date Given: 09/24/2015 -  1 Year  3 Year

Mfr: Boehringer Ingelheim

CANINE RABIES Date Given: -  1 Year  3 Year

Mfr: \_\_\_\_\_

LEPTO Date Given: \_\_\_\_\_

LEPTO Date Given: \_\_\_\_\_

BORDETELLA Date Given: 09/24/2015 -  Intranasal  Oral  Injectable

BORDETELLA Date Given: -  Intranasal  Oral  Injectable

#### LAB/HYGIENE

DEWORMING Date Given: 09/24/2015 - Type: Pyrantel Pamoate

DEWORMING Date Given: - Type: \_\_\_\_\_

DEWORMING Date Given: - Type: \_\_\_\_\_

FECAL Date Given: -  Negative  Positive: \_\_\_\_\_

FECAL Date Given: -  Negative  Positive: \_\_\_\_\_

CANINE HEARTWORM TEST Date Given: 09/24/2015 -  Negative  Positive

CANINE HEARTWORM TEST Date Given: -  Negative  Positive

7/30/2016 CK B6

7/30/2016 V B6

7/30/2016 B B6

7/30/2016 B B6

# B6

B: Billing, C: Med note, CB: Call back, CK: Check-in, CW: Communication, D: Diagnosis, DH: Declined to history, E: Examination, CS: Estimate, I: Departing Inst, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative med note, V: Vital signs

B6



### Patient History Report

Client:  
Phone:  
Address:

**B6**

Patient: B6  
Species: Canine  
Age: 3 Yrs. 8 Mos.  
Color: Black/Tan

Breed: Mixed  
Sex: Spayed Female

Date	Type	Staff	History
7/30/2016	B	B6	<b>B6</b>
7/30/2016	B		
7/30/2016	B		
7/18/2016	V		

Weight : 35.00 pounds

B: Bring, C: Med note, CB: Call back, CK: Check in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimates,  
 ID: Departing Instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended,  
 R: Correspondence, T: Images, TC: Tentative med note, V: Vital signs

B6

### Reminder Letter Report Sorted by Client ID

1 of 1

Client ID	Client Name	Patient ID	Patient Name	Rem ID/Description	Type	Date
5278	B6	B6				2/21/2018
5278						8/4/2017
						6/4/2017
						6/4/2015
						2/6/2016
						8/4/2015

**B6**

B6

Page 1 of 1

Print: 8/29/2018

**B4, B6**

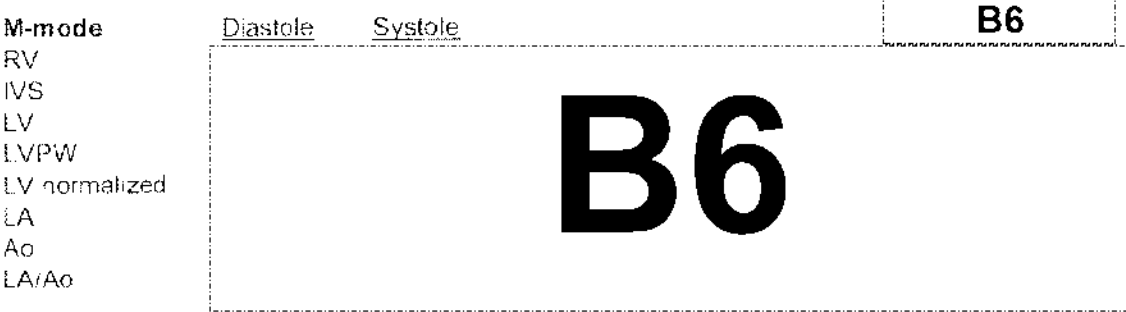
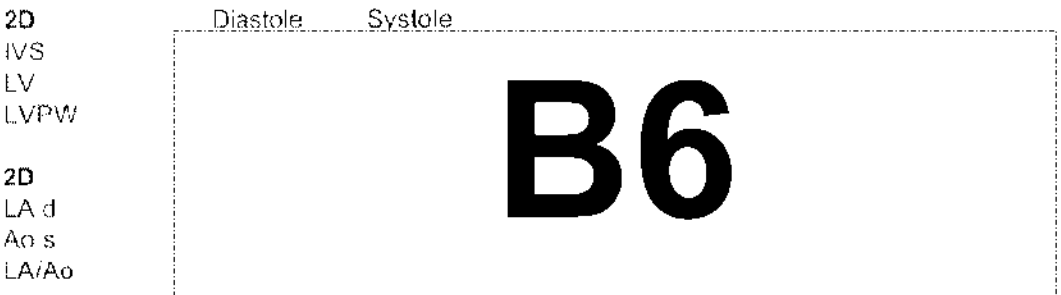
**B4, B6**

### Canine Echocardiography Report

Patient Name:	<b>B6</b>	Date of Exam:	<b>B6</b>
Medical Rec #:	231020	Breed:	Mixed breed
DOB:	<b>B6</b>	Weight:	16 kg
Age:	3 years	BSA:	0.64 m <sup>2</sup>
Sex:	Fs	HR:	
Sonographer:	<b>B4, B6</b> (CA), DACVECC	DVM, DACVIM	BP-sys:

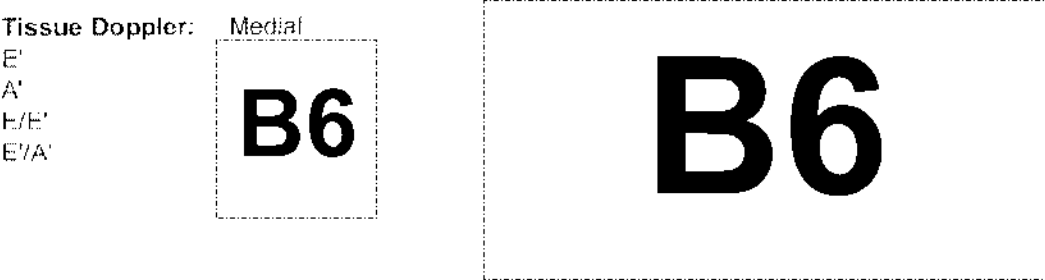
Report Status: READ  
 Diagnosis: Suspect Grain Free Diet Associated DCM, Decreased left ventricular systolic function; Left ventricular dilation  
 Study Details: 2D Echo/Doppler/Color Doppler. The images were of adequate diagnostic quality. The patient was awake.

**Additional Comments:**  
 Dog presents for asymptomatic heart murmur.



Normal Canine M-mode values (in cm) for 15 kg dogs.

**B6**



Final

B6

B6

B6

**Aortic Valve:**

VMax  
Pk Grad

AoV  
B6

B6  
CANINE  
FS

B6  
MIXED BREED DOG  
B6  
BLACK & TA

MIXED BR

**Mitral Valve:**

Mn Grad  
P1/2T  
MV Area

B6

B6

**Tricuspid valve:**

TV E Max  
TV Mn Grad  
P 1/2 T  
TV VTI

B6

**Pulmonic valve:**

Vmax  
Pk Grad  
PV AT  
PV ET  
PV AT/ET

B6

**CLINICIAN INTERPRETATION:**

B6

**ECHO SUMMARY:**

B6

**CV Exam:**

Cardiac auscultation revealed a systolic murmur of grade II-III/VI intensity loudest at the left apex.

**Radiographs:**

RDVM radiographs. No evidence of pulmonary edema. Left sided cardiomegaly.

**Recommendations:** Cause of dog's murmur is Mitral valve insufficiency due to MV annular stretch. MV anatomy is normal.

B6

B6

B6

**B6**

Since **B6** is an atypical breed for DCM and has been on grain free diet for last 3 years, we are concerned for possible diet associated DCM. Other causes are possible such as idiopathic, infectious/inflammatory, ischemic or hypothyroidism. Cardiac troponin and thyroid testing are pending. Blood for infectious disease has been banked if troponin is markedly elevated. Taurine concentrations are also pending but dog has been on new diet and taurine for last 4-5 days.

Recommend continuing with taurine 40 mg/kg per day and carnitine. Suggest adding pimobendan 5 mg am, 2.5 mg pm and recheck echo in 3 months. If changes are reversible then diet associated DCM is likely cause

**B4, B6** DVM, DACVIM (CA), DACVECC  
Electronically signed on **B6** on 2:07:37 PM

**B6**

**B6**  
CANINE  
FS

**B6**  
MIXED BREED DOG  
**B6** BLACK LAB

MIXED BR

**B6**

Final

B6

B6

B6

**B6**

**B6**

MG/ED/DR

**B6**

**B6**

**All Medical Records**

**B6**

Breed: Golden Retriever

**B6**

Species: Canine  
Sex: Male  
(Neutered)

**Referring Information**

**B6**

**Initial Complaint:**

Scanned Record

**Initial Complaint:**

New **B6** DCM study

SOAP Text **B6** 12:08PM **B6**

**Disposition/Recommendations**

**B6**

---

---



**B6**

Cummings  
Veterinary Medical Center  
AT TUFTS UNIVERSITY

**B6**

**B6**

Veterinarian:

**B6**

Visit ID:

**B6**

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

**Lab Results Report**

Test	Results	Reference Range	Units
Troponin I Research - FHSA	<b>B6</b>	0 - 0.08	mg/dl

**B6**

1:29:30 PM

**B6**

**B4, B6**

3/22

**B6**

Printed Friday

**B6**

**B6**

**Best Available Copy**

records



**B6**

**B6**

**B6**

records

**B6**

**B6**

records

**B6**

**B6**

**Best Available Copy**

records

**B6**

**B6**

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**B6**

Page 8 of 8

**B6**

records

**B6**

**B6**

records

**B6**



**B6**

**Best Available Copy**

records

FECAL ANALYSIS: (In House)

**B6**

**B6**

records

FECAL ANALYSIS: (In House)

**B6**

**B6**

Best Available Copy

records

**B6**

Page 13 of 18

**B6**

records

FECAL ANALYSIS: (in House)

**B6**

**B6**

**Best Available Copy**

**B4, B6**

11/8/2018

**B6**

**B6**

**Best Available Copy**

CBC/Chem **B6**



Tufts Cummings School Of Veterinary Medicine  
100 Woburn Road  
North Grafton, MA 01133

DUPLICATE

**B6**

**B6**



Tufts Cummings School Of Veterinary Medicine  
100 Woburn Road  
South Grafton, MA 01116

DUPLICATE

**B6**

**B6**

---

**Vitals Results**

---

**B6**

11:32:13 AM

**B6**



**B6**

ECG from cardio

---

**B6**

**B6**

ECG from cardio

---

**B6**

**B6**

ECG from cardio

---

**B6**

**B6**

**Patient History**

**B6**

10:46 AM

12:36 PM

10:07 AM

10:48 AM

10:53 AM

11:32 AM

12:08 PM

12:18 PM

01:29 PM

01:30 PM

01:30 PM

01:30 PM

**B6**

B6

Client:

Address:

B6

All Medical Records

Patient: B6

Breed: Boxer

DOB: B6

Species: Canine

Sex: Male  
(Neutered)

Referring Information

B6

Client:

Patient:

B6

Initial Complaint:

Scanned Record

SOAP Text Nov 20 2018 12:22PM

B6

Initial Complaint:

DCM Study

SOAP Text Nov 20 2018 1:10PM

B6

Disposition/Recommendations

Client:  
Patient:

**B6**

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Client:  
Patient:

**B6**

**B6**

Client: **B6**  
Veterinarian:  
Patient ID: 433149  
Visit ID:

Patient: **B6**  
Species: Canine  
Breed: Boxer  
Sex: Male (Neutered)  
Age: **B6** Years Old

**Lab Results Report**

11/20/2018 5:45:23 PM      Accession ID: **B6**

Test	Results	Reference Range	Units
Troponin I Research - FHSA	<b>B6</b>	0 - 0.08	ng/dl



3/13

**B6**

Printed Tuesday, December 04, 2018

Client:  
Patient:

**B6**

**B6**



Client:  
Patient:

**B6**

CARDIAC TROPONIN

**B6**

**B6**

Client:  
Patient:

**B6**

CARDIAC TROPONIN

**B6**

**B6**

Client:  
Patient:

**B6**

Diet hx

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

Pet's name:

**B6**

Today's date: 20 NOV 2018

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
<b>EARTHORNBORN - MEADOWFEAST</b>	<b>dry</b>	<b>~ 1 1/2c +</b>	<b>2x DAY</b>	<b>FEB 2016</b>

\*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	<b>Nature's Bounty</b>	<b>500 mg tablets - 1 per day</b>
<b>SUPPLEMENT</b>	<b>NUTRO - DOG SUPPLEMENT</b>	<b>1 SCOP (~ 1 TBSP) 1-2x DAY</b>

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): Bologna or CHEESE

Client:  
Patient:

**B6**

---

Client:  
Patient:

**B6**

**ECG from Cardio**

---

**B6**

**B6**

Client:  
Patient:

**B6**

**ECG from Cardio**

---

**B6**

**B6**

Client:  
Patient:

**B6**

**ECG from Cardio**

---

**B6**

Client:  
Patient:

**B6**

---

**Patient History**

**B6**



**B4, B6**

**B6**

Patient: **B6**  
**B6** Male (Neutered)  
Canine Doberman Pinscher  
Patient ID: 320320

**SURGERY REPORT**

Date of report: 12/30/2018

Attending Clinician

**B6**

Date of procedure: **B6**

Date of procedure: **B6** BVSc

Secondary Surgeon: **B6** DVM DACVS

Procedure(s) performed: Right caudal maxillary mass excision

Report:

**B6**

Specimens obtained:

Right maxillary mass for histopathology

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY  
Oncology Liaison: 508-887-4682

**B6**

**Patient**

**Name:**

B6

**Signalment:**

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

**Owner**

**Name:**

**Address:**

**B6**

**Patient ID:**

320320

**Contact Clinician:**

**B6**

**Alternate Clinician:**

**Student:**

**B6**

## Discharge Instructions

**Appointment Date: 1/2/2019**

**Diagnosis:**

1. Right maxillary soft tissue sarcoma-fibrosarcoma

**Procedures:**

1. Physical examination
2. Complete blood count
3. Blood chemistry profile
4. Urinalysis

**Medications:**

**Dispense:**

**B6**

**Continue:**

1. Continue all cardiac medications as prescribed by the Cardiology Service.

**Diet:**

Please continue feeding from the diet you have discussed with the Cardiology department.

**B6**

**B6**

# B6

*\*Cummings Veterinary Medical Center offers a free support group for caregivers of companion animals with cancer. For more information please visit our website <http://vetmed.tufts.edu/oncology>*

**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.*

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Case:

Owner:

Discharge Instructions

**B6**

B6  
B6 Male (Neutered)  
Canine Doberman Pinscher Black/Tan  
Patient ID: 320320

**Outside Prescription Log**

1. Date: 1/2/19

Clinician: B6

Prescription: B6 caps #30: 1 cap PO q24h, 1 refill

Pharmacy sent to: B6 fill online

Completed by:

Origin of request:

2. Date: 1/9/19

Clinician: B6

Prescription: B6 Give 1 cap PO Q12hrs with food; 3 refills

Pharmacy sent to: B6

Completed by: B6

Origin of request:

3. Date:

Clinician:

Prescription:

Pharmacy sent to:

Completed by:

Origin of request:

4. Date:

Clinician:

Prescription:

Pharmacy sent to:

Completed by:

Origin of request:

5. Date:

Clinician:

Prescription:

Pharmacy sent to:

Completed by:

Origin of request:

6. Date:

Clinician:

Prescription:

Pharmacy sent to:

Completed by:

Origin of request:

7. Date:

**Clinician:**  
**Prescription:**  
**Pharmacy sent to:**  
**Completed by:**  
**Origin of request:**

**8. Date:**  
**Clinician:**  
**Prescription:**  
**Pharmacy sent to:**  
**Completed by:**  
**Origin of request:**

**9. Date:**  
**Clinician:**  
**Prescription:**  
**Pharmacy sent to:**  
**Completed by:**  
**Origin of request:**

**10. Date:**  
**Clinician:**  
**Prescription:**  
**Pharmacy sent to:**  
**Completed by:**  
**Origin of request:**

B6

**Patient**

Name:

B6

Signalment:

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

**Owner**

Name:

Address:

B6

Patient ID:

320320

Contact Clinician:

B6

DVM, DACVS

Student:

B6

V19

### Discharge Instructions

Appointment date: 1/30/2019 10:04:21 AM

Medications: Continue all of B6 medications as previously prescribed by our cardiology and oncology departments.

History: B6 presented today for a consultation regarding his maxillary mass (fibrosarcoma). It was debulked with our department and sent for histopathology on B6 based on its composition, B6 was evaluated by our oncology department and metronomic chemotherapy (Cyclophosphamide) was initiated on 1/2/19. Since the surgery, you report that the mass has returned and growing larger.

Follow Up: Please email Dr. B6 when you are ready to schedule B6 surgery.  
B6@tufts.edu

Please contact the Surgery Liaison @ (508) 887-4794 to arrange your next appointment.

If you have any problems or questions, please contact Dr. B6 DVM, DACVS as soon as possible. If it is an emergency, contact the emergency service @ (508) 887-4623.

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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: 320320  
Canine  
**B6** Years Old Male (Neutered)  
Doberman Pinscher  
Black/Tan BW: Weight (kg) 40.00

**Cancelled**

**B6**

**Patient**

**Name:**

B6

**Signalment:**

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

**Owner**

**Name:**

**Address:**

**B6**

**Patient ID:** 320320

**Contact Clinician:** B6 DVM, DACVS

**Alternate Clinician:** B6 DVM

**Student:** B6, V19

---

**Discharge Instructions**

**Admit Date:** B6 7:46:58 AM

**Discharge Date:** B6

**Diagnosis:**

1. Right maxillary oral fibrosarcoma

**Procedures:**

1. Tumor excision
2. von Willebrand's factor testing
3. Baseline bloodwork
4. Chest radiographs (x-rays)
5. Cardiology Consult

**Medications:**

Continue B6 can continue to receive his medications as prescribed by the cardiology service. You may give them to him tonight with a small amount of soft food.

**Diet:** Please feed Brom soft food.

**B6**

# B6

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Case: B6

Owner: B6

Discharge Instructions

B6

Radiology Request & Report

**Patient**

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

**Owner**

Name: B6  
Address: B6

Patient ID: 320320

Date of request: B6

Attending Clinician: B6 DVM, DACVS

Student: B6 V19

Date of exam: B6

Patient Location: Ward/Cage: B ward Run 4

Weight (kg) 40.00

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

**Sedation**

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

Examination Desired: Met check under pre-med before surgery

Presenting Complaint and Clinical Questions you wish to answer:

Admit to B Ward, Collect Deposit

**Pertinent History:**

Oral fibrosarcoma debulked on B6 second debulking surgery today  
History of DCM and Atrial fibrillation

**Findings:**

B6

# B6

## Conclusions:

- Faint right middle lung lobe interstitial to alveolar pattern. This may represent a focus of pneumonia. Correlate to thoracic auscultation. Follow-up radiographs are recommended to monitor.
- Mild generalized cardiomegaly with moderate left-sided enlargement without evidence of cardiac decompensation. This is consistent with reported DCM. Echocardiography can be considered for further evaluation as clinically indicated prior to anesthesia.
- Mild diffuse bronchial pattern may represent chronic lower airway disease (allergic, infectious or parasitic etiologies) or age related changes. Correlate with clinical history.
- No evidence of thoracic neoplasia.

## Radiologists

Primary: B6, DVM

Reviewing B6 BVSc, DACVR

## Dates

Reported: 2/20/2019

Finalized: 2/28/2019

**B6**

Patient: B6  
B6 Male (Neutered)  
Canine Doberman Pinscher  
Patient ID: 320320

**SURGERY REPORT**

Date of report: B6

Attending Clinician: B6

Date of procedure: B6

Primary Surgeon: Dr. B6

Student: B6 V19

Procedure(s) performed: Right caudal maxillary mass debulking

Report:

**B6**

Specimens obtained:

Right maxillary mass for histopathology

Concerns:

-aspiration

B6

Discharge Instructions

Patient

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

Owner

Name: B6  
Address: B6

Patient ID: 320320

Attending Cardiologist:

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

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

(Cardiology)

Student: B6 V19

Date: 3/7/2019

Diagnoses:

Dilated cardiomyopathy (DCM), asymptomatic  
Atrial and ventricular arrhythmia  
Oral fibrosarcoma

Case summary:

Thank you for bringing B6 to Tufts for evaluation of his heart. Upon echocardiogram (ultrasound of the heart) today, his DCM is stable. There were no significant differences in comparison to findings from B6 previous echocardiogram. Electrocardiogram was also similar but showed slightly less frequent arrhythmia (abnormal heart rhythm), more specifically some atrial and fewer ventricular premature contractions, and slower heart rate so we will continue his B6 medication. Since B6 is enrolled in the study on DCM, and we submitted some blood work for that study which will give us other markers of heart health. We will plan to call you with those results.

We are sorry to hear that his mouth is causing him discomfort and decreased appetite. We are sending you home with an appetite stimulant and some anti-diarrheal medication to help improve his comfort at home. It is ok to dissolve his medication to give in a liquid slurry if that works better for him. We recommend avoiding putting his pills in his food.

Monitoring at home:

- We would like you to occasionally 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. Given that B6 is a large breed dog, his respiratory rate should be no more than 35 breaths

per minute at rest, and it may be much lower. 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 a dose of furosemide (Lasix). If difficulty breathing is not improved by within 30-60 minutes after giving extra furosemide 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:**

We discussed tips for getting medications into **B6**. You can crush or dissolve his tablets right before you give the medications if you find it easier to give them this way. You can use small amounts of appetizing foods like low-sodium peanut butter, cream cheese, cake frosting, and marshmallows to hide pills in. *If you are unable to get all of his oral medications in to him, we want you to prioritize his Pimobendan and Amiodarone medications.*

# B6

#### **Diet Suggestions**

##### **Diet and supplement 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/>)

- 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/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+

#### Exercise Recommendations

Limited activity is recommended, but **B6** can still be allowed to play. Short leash walks are ideal. If you find that **B6** 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 disease. Please be aware that dog's with significant arrhythmia, as is **B6** case, are at risk of sudden death as a result of fatal arrhythmia, and we worry that high intensity activity can increase this risk.

**Recheck Visits:** A recheck visit is scheduled for Monday June 10th at 4PM. At this visit we will want to check breathing effort and heart function with an echocardiogram, ECG and a blood test as part of the DCM study.

Thank you for entrusting us with **B6** care. He is such a good boy and we hope that the entyce helps his appetite. 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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Case: **B6**

Owner: **B6**

Discharge Instructions

**Nutritional Tips for Pets with Heart Disease**

**Low sodium, high quality pet treats**

Notes:

1. Most other dog treats are high in sodium.
2. If your pet has other medical conditions, these treats may not be appropriate. Talk to your veterinarian if you have questions or make an appointment with the Nutrition Service.

Product	Calories per treat
<b>Dogs</b>	
Hill's Science Diet Baked Light Biscuits with Real Chicken Small Dog Treat	8
Hill's Science Diet Baked Light Biscuits with Real Chicken Medium Dog Treat	34
Hill's Science Diet Soft Savories Peanut Butter & Banana, Beef & Cheddar, or Chicken & Yogurt Dog Treat	25-27, depending on flavor
Hill's Ideal Balance Soft-Baked Naturals with Chicken & Carrots, Duck & Pumpkin, or Beef & Sweet Potato Dog Treat	12-13, depending on flavor
Purina Beyond Natural Salmon Dog Biscuit Treat with Oats or Chicken & Barley	27-29, depending on flavor
Purina Alpo Variety Snaps Little Bites (beef, chicken, liver, lamb or beef, bacon, cheese, peanut butter)	16
Purina Alpo Variety Snaps Big Bites (beef, chicken, liver, lamb)	58
Royal Canin Original Canine treat	5
<b>Cats</b>	
Royal Canin Original Feline treat	2
Fancy Feast Duos Natural Rotisserie Chicken Cat treat	2
Fancy Feast Duos Tuna with Accents of Parsley Cat treat	2

**Taste enhancers to can make your pet's food tastier to increase food intake**

Safe and effective appetite stimulants are now available for dogs and cats. Please talk to your veterinarian if your pet is not eating well, not eating ideal foods, or is losing weight.

Notes:

1. All foods in this list should be prepared without salt
2. These taste enhancers should be added in small amounts. If your pet eats too much of them, they will unbalance the diet and increase your pet's risk for nutritional deficiencies

**Dogs**

- ♥ Honey or maple syrup
- ♥ Homemade chicken, beef, or fish broth (made without salt; avoid all deli meats and rotisserie chicken). Avoid store bought broths because even the low sodium brands are too high in sodium.
- ♥ Sugar (brown or white) – Domino pourable light brown sugar is a good option
- ♥ Vanilla or fruit yogurt – One option that dogs seem to like is Yoplait Custard Yogurt (caramel or vanilla flavors). If you try other brands, just be sure the sodium is less than 100 mg per 100 calories (the Yoplait is 95 mg per 170 calories which comes out to 56 mg sodium per 100 calories). Also avoid yogurts with artificial sweeteners.
- ♥ Maple syrup. Low salt brands include Log Cabin All Natural, Maple Grove Farm 100% pure maple syrup, or Stop and Shop Original Syrup
- ♥ Applesauce (be sure they have less than 50 mg sodium per serving)
- ♥ Ketchup (no salt added). Examples include Hunts or Heinz no salt added
- ♥ Pasta sauce (no salt added). Examples: Francesco Rinaldi no salt added or Enrico's no salt added)
- ♥ Frosted Mini Wheats Original – these can be crumbled on his food
- ♥ Lean meats, cooked (chicken, turkey, beef, or fish) – not deli/sandwich meats/cold cuts, rotisserie chicken, and any canned fish or meat
- ♥ Eggs, cooked



### **Dogs (continued)**

- ♥ Homemade chicken, beef, or fish broth (even low sodium store-bought broths are too high in sodium). Avoid all canned soups unless labeled as no salt added
- ♥ Low-salt breakfast cereal - the label should read, "very low sodium food" or contain less than 20 mg sodium per serving. A good option is Frosted Mini Wheats Original or Little Bites Original
- ♥ Fresh vegetables/fruit. Examples include carrots, green beans, apple, orange, banana (avoid grapes, raisins, onions, garlic)
- ♥ Low sodium canned dog foods

### **Cats**

- ♥ Lean meats, cooked (chicken, turkey, beef, or fish) – not sandwich meats/cold cuts, canned tuna, or rotisserie chicken
- ♥ Eggs, cooked
- ♥ Homemade chicken, beef, or fish broth (even low sodium store-bought broths are too high in sodium)
- ♥ Low sodium canned cat foods



### **Foods to avoid**

- ♥ Fatty foods (meat trimmings, cream, ice cream)
- ♥ Baby food
- ♥ Pickled foods
- ♥ Bread
- ♥ Pizza
- ♥ Condiments (ketchup, soy sauce, barbecue sauce, etc – unless they are unsalted or no salt added)
- ♥ Sandwich meats/cold cuts (ham, corned beef, salami, sausages, bacon, hot dogs)
- ♥ Rotisserie chicken
- ♥ Most cheeses, including "squirtable" cheeses
- ♥ Processed foods (such as, potato mixes, rice mixes, macaroni and cheese)
- ♥ Canned vegetables (unless "no salt added")
- ♥ Potato chips, packaged popcorn, crackers, and other snack foods
- ♥ Soups (unless homemade without salt)
- ♥ Most commercial pet treats

### **Tips for administering medications**

Foods commonly used to administer your pet's pills can provide a large amount of additional salt to your pet's diet. Preferable ways to give medications include:

- ♥ Have one of our staff show you how to give medications without using food
- ♥ Insert medications into one of the following foods:

#### ***Dogs or cats***

- Low-sodium canned pet food
- Home-cooked meat such as chicken or hamburger (made without salt); not lunch meats
- Whipped cream (Reddi Wip)
- Marshmallows
- Greenies Pill Pockets
  - Dog chicken, hickory smoke, or peanut butter flavors; cat chicken or salmon flavor
  - Avoid grain-free duck and pea which is high in sodium
  - Try to use the smallest size possible (ideally, the cat sized Pill Pockets, even for dogs) and as few as possible to avoid excessive salt.
    - Caution: Not all similar products from other companies are low in sodium

#### ***Dogs***

- Soft fruit, such as banana, orange, melon, or strawberries (avoid grapes)
- Peanut butter (only if labeled as "no salt added") – examples include Smucker's Natural Creamy Peanut Butter with No Salt Added or Teddie All Natural Smooth Unsalted Butter
- Frosting (should be less than 75 mg/serving and contain no artificial sweeteners or xylitol). Examples include Duncan Hines whipped vanilla frosting, Betty Crocker whipped vanilla frosting)

You may find our Petfoodology post called, "Pill-popping pets" helpful for additional ideas:

[http://vetnutrition.tufts.edu/2018/09/foods\\_for\\_giving\\_pills/](http://vetnutrition.tufts.edu/2018/09/foods_for_giving_pills/)

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Cardiology Liaison: 508-887-4696

**B6**

Patient ID: 320320

**B6**

Canine

Years Old Male (Neutered) Doberman

Pinscher

Black/Tan

## Cardiology Appointment Report

**Date:** 3/7/2019

### Attending Cardiologist:

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

**B6**

M (Cardiology)  
ology)  
y) (PRIMARY)

### Cardiology Resident:

B6

### Cardiology Technician:

**B6**

, VTS (Cardiology)

CVT

**Student:** B6 /19

**Presenting Complaint:** Recheck DCM/arrhythmia; DCM study

### Concurrent Diseases:

Hx of oral fibrosarcoma incompletely removed 2/2019 after failing to respond to metronomic chemotherapy.

History of Anaplasma

History of von Willebrand disease

History of skin allergies

History of elevated ALT

### General Medical History:

Has been doing okay on and off; owner thinks that he is painful and has been picking out pills. Owner is getting tramadol liquid from vet. Owner has not been able to get heart medication in for 2 days except 1 enalapril yesterday. Owner wants to know if possible to do compounding into a liquid for medications. Still wants to go for walks twice a day. Appetite has decreased but owner suspects it is because of pain related to oral mass. Diarrhea/soft stool for the past week and seems to be improving. Owner thinks the oral mass is infected based on smell. Owner asks about compounding liquid metronidazole. Couple weeks ago vomited a couple of times right after eating but resolved on its own. Owner wants to know about appetite stimulants.

### Diet and Supplements:

Only willing to eat pure beef/lamb, not interested in vegetables. Owner is trying to incorporate regular

dog food (one of the recommend low sodium diets we recommend but can't remember which one).  
No supplements

**Cardiovascular History:**

Prior CHF diagnosis? No

Prior heart murmur? No

Prior ATE? no

Prior arrhythmia? Yes

Monitoring respiratory rate and effort at home? Not daily, always below 17/min

Cough? 2 coughs yesterday for the first time but none since then

Shortness of breath or difficulty breathing? No

Syncope or collapse? No

Sudden onset lameness? No

Exercise intolerance? No

**Current Medications Pertinent to CV System:**

**B6**

**Cardiac Physical Examination:**

General PE: generalized shaking,  
painful swelling on R side of mouth (did  
not fully evaluate mouth due to pain),  
increased R submandibular and  
prescapular LN, multiple cutaneous  
masses

MM Color and CRT: pink, CRT=2

BCS (1-9): 6

BW (kg): 38.1 kg

Heart rate: 72

Respiratory rate: 20

Temp (if possible): NP

Muscle condition:

Normal

Moderate cachexia

Mild muscle loss

Marked cachexia

**Cardiovascular Physical Exam:**

**Murmur Grade:**

- None
- I/VI
- II/VI
- III/VI

- IV/VI
- V/VI
- VI/VI

**Jugular vein:**

- Bottom 1/3 of the neck
- Middle 1/3 of the neck

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

**Arterial pulses:**

- Weak
- Fair
- Good
- Strong

- Bounding
- Pulse deficits
- Pulsus paradoxus
- Other:

**Arrhythmia:**

- None
- Sinus arrhythmia
- Premature beats

- Bradycardia
- Tachycardia

**Gallop:**

- Yes
- No
- Intermittent

- Pronounced
- Other:

**Pulmonary assessments:**

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

- Pulmonary crackles
- Wheezes
- Upper airway stridor

**Abdominal exam:**

- Normal
- Hepatomegaly
- Abdominal distension

- Mild ascites
- Marked ascites

**Problems & Differential Diagnoses:**

History of DCM and APCs/VPCs

Painful R mouth- R/O infection vs. regrowth tumor

Diarrhea- R/O- medication side effects vs. stress colitis vs. neoplasia

**Diagnostic plan:**

- Echocardiogram
- Chemistry profile
- ECG- during echo
- Renal profile
- Blood pressure

- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests: DCM study

**Echocardiogram Findings:**

**General/2-D findings:**

# B6

## Doppler findings:

Trace MR and TR

## Mitral inflow:

- |  |                                       |
|--|---------------------------------------|
| <input type="checkbox"/> Summated                      | <input type="checkbox"/> Pseudonormal |
| <input type="checkbox"/> Normal                        | <input type="checkbox"/> Restrictive  |
| <input checked="" type="checkbox"/> Delayed relaxation |                                       |

## ECG findings:

NSR with frequent APCs and occasional isolated VPCs

## Assessment and recommendations:

Echocardiogram reveals similar advanced DCM compared to previous exam. Patient is not eating well lately; suspect related to oral mass, but chemistry panel submitted to assess renal and liver values. Recommend prioritizing pimobendan and amiodarone until taking meds better. Sent home with a sample of Entyce. If appetite improves, strongly recommend feeding one of the recommended dog food diets rather than home cooked, just in case this could be playing a role in his heart disease. Continue to have furosemide on hand in case of increased RR/RE. BNP and troponin submitted for study. Recheck echo and blood work in another 3 months for the study.

## Final Diagnosis:

DCM  
Ventricular and supraventricular ectopy  
Oral fibrosarcoma

## 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  
LVIDd  
LVPWd  
IVSs  
LVIDs  
LVPWs  
EDV(Teich)  
ESV(Teich)

B6

cm  
cm  
cm  
cm  
cm  
ml  
ml

EF(Teich)  
%FS  
SV(Teich)  
Ao Diam  
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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

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Sphericity Index  
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LVEDV A-L LAX  
LVEDV MOD LAX  
LVls LAX  
LVAs LAX  
LVESV A-L LAX  
LVESV MOD LAX

B6

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

B6

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mmHg

**B6**

**Client and Pet Registration Form**

Client Name: **B6**

Spouse/Partner:  
Address:  
City, State, Zip:

**B6**

Home Phone:  
Work Phone:  
Cell Phone:  
Email:  
Pager:

**B6**

Pet Name: **B6**  
Patient ID: 320320  
Date of Birth: **B6**  
Age: **B6** years Old  
Species: Canine  
Breed: Doberman Pinscher  
Color: Black/Tan  
Sex: Male (Neutered)  
Weight: Weight (kg) 38.10 kg  
Rabies Date:

Referring Veterinarian:

**B6**

**B6**

**Agreement and Consent:**

- I agree to pay for all services rendered to my pet at the end of today's examination.
- I understand that payment is required at the time of service.
- I understand that the cost of the initial exam does not cover any further diagnostics, treatments, or medications that may be necessary for my pet.
- I understand that if further diagnostics or treatments are recommended by the doctor I may request an estimate of those charges first.
- I understand that I have the right to refuse any treatments, diagnostics, or medications that have been recommended to me by the doctor.

Signature: \_\_\_\_\_ Date: 3/18/2019

You and your doctor will be provided with a report from the doctor for every examination performed on your pet at **B6**. Thank you for trusting us to care for your pet!

# B6

## Patient Discharge Summary

Client Name:

B6

Referring Veterinarian:

B6

Patient Name:

B6

Patient ID:

320320

Species:

Canine

Breed:

Doberman Pinscher

Age:

B6 Years Old

Weight:

Weight (kg) 38.10 kg

Check in date:

3/18/2019 1:49:45 PM

Veterinary Medical Team:

B6

DVM, DACVAA

Diagnosis: Cancer pain

### Case Summary:

You brought B6 to see me for advice about his pain. You are mainly concerned because his appetite declined (which has been helped by the B6) and it was difficult to get pills into him, but also because he seemed to have paroxysms of pain, where he exhibited shaking and it interrupts his sleep (and yours). He had not been anything for pain since you discontinued the metronomic therapy for his cancer - there was B6 (tablet) once a day in that protocol. Then Dr. B6 suggested you try a compounded dose of B6 and it has made a major difference. She also recommended a hemp supplement oil, which you have not started yet. He does not do well on gabapentin. You are afraid to give too much of the B6. Currently he is eating mainly salmon filets and dog cookies. You are doing an amazing job trying to separate his medication administration from his feeding times / locations.

He likes to go for walks several times a day. His other quality of life indicators are his engagement with you, and his sleep patterns.

He has reluctance to go up the stairs and you help him, but on the B6 one day he did it on his own.

I discussed methods to treat his pain, and how to monitor him for how he is feeling.

Patient Care Instructions:

B6

**B6**

**Medications:**

**Dispense:**

**B6**

**Continue:**

**Follow-up Instructions:**

**I can make additional recommendations going forward. I will send you the comfort diary to use if you choose.**

**Please do not hesitate to email me with questions or concerns and we can set up a time to talk by phone.**

**B6**

**You are truly honoring his well being above all and it was a pleasure to meet both of you.**

**B6**

**DVM, DACVAA**

**Discharge Date: 3/18/2019**



# Treatment Plan

Estimated Charges  
03/19/2019

**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.*

	Description	Low Qty	Low Extended	High Qty	High Extended
<b>B6</b>	Tumor Removal (Simple)	1.00			
	Anesthesia Work-Up	1.00			
	PCVTS/BG/AZO - FHSA	1.00			
	Daily Professional Care: General Ward	.50			
	Anesthesia Disposables/agents	1.00			
	Medication (General Estimate) - FHSA	.50			
	Hospitalization: Day Board (Dog)	1.00			
	Von Willebrand's Factor Antigen (Clinical Sciences Lab) - FHSA	1.00			
	General Supplies: Surgery	2.00			
	Ligasure - FHSA	1.00			
	NOVA (Full Panel) - FHSA	1.00			
	Anesthesia 1 Hr/30 M	1.00			

**B6**

Doctor of Record: **B6**

Client Signature \_\_\_\_\_

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	

Client:  
Patient:

**B6**

Archived RDVM-

**B6**

10/01/2013 15:23  
OCT-30-2006 22:13

**B6**

SWITCH BOARD

**B6**

**B6**

PAGE 01  
P. 01/02



**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  
508-839-5395

5227632

**FD**

Service to Which Referred: \_\_\_\_\_ Appointment Date: \_\_\_\_\_ Time: \_\_\_\_\_

**OWNER INFORMATION:**

Name: **B6** Daytime Phone: **B6** Evening Phone( ) \_\_\_\_\_  
Address: **B6** City: **B6** State: **B6** Zip Code: **B6**

**PATIENT INFORMATION:**

Registered Name/ID: **B6**  
Species: Canine Breed: Boxer Sex: NM Age: **B6**

**CASE HISTORY**

Chief Concern/Provisional Diagnosis: **B6**

*\* Chem supports Diatom Leasing enteropathy \**

Vaccination History: Attached

Other History: Did have mass removed from chest 3/29/13 (Histopath attached)

Diagnostic Test Results (if possible, please attach results): Bloodwork attached

Are Radiographs enclosed? \_\_\_\_\_

Current Therapy & Medication (include dosages): \_\_\_\_\_

Special Comments/Requests: Was scheduled for U/S here for all suggested to go directly to Tufts **B6**

**REFERRING VETERINARIAN INFORMATION**

Name: **B6** Clinic/Hospital: **B6**  
Phone: \_\_\_\_\_ Fax: **B6**  
Address: **B6** City: **B6** State: **B6** Zip Code: **B6**

If an animal is being referred which has had lab work done at **B6** please include copies of the lab results or the **B6** accession number. If you are faxing us information about a clinical case which has been referred, please use fax number **B6**

*\* on the way to you \*  
\* Nau \**

Client: **B6**  
Patient:

Archived **B6**

10/01/2013 15:23

**B6**

**B6**

PAGE 02

### MEDICAL NOTE TEMPLATE INFORMATION

Patient: **B6**

Species: Canine

Breed: Boxer

Age: **B6**

Sex: Neutered Male

Weight: 57.5 pounds

Date: 10/01/2013

Staff: **B6**

Status: TENTATIVE

a SOAP

Enter Office Visit:

History: Last month o changed food, changed back to original food, stool was formed for first time in a long time today. Having some trouble eating, not interested at first, o has started by hand feeding to get him to eat the rest. Gagging like he wants to vomit or have hairball, nothing produces. Loosing weight, breathing irregularly, heart seems to beat out of chest. Was bit by o's aunt's dog two weeks ago. cp

S: BAR BCS=5/10

O: Temp: 98.5

Pulse: 55

Resp-32

Eyes: Normal conjunctiva, sclera, corneas, palpebrae

Ears: NSF

Nose/Throat: NSF

Mouth/Teeth: No tartar, No gingivitis.

M/M: Pink, crt <2, moist

Cardiovascular: No murmur, strong synchronous pulses.

Respiratory: Lungs clear bilaterally.

Abdomen: Soft, non-painful

PLN: NSF

Urogenital: NSF

Musculoskeletal: No lameness, no crepitous or pain in stifles, hocks, elbows, or carpi.

Nervous System: Normal CP, PLR, menace, palpebral reflex. No ataxia.

Skin/Hair Coat: No fleas or flea dirt, no lesions

A:DDX: Open, cardiac or electrolyte.

P: Start with CBC/ Chem, Bicavity US. Owner took dog home against medical advice. Chem supports protein loosing enteropathy. Electrolytes normal.

GI: NSF

**B6**

Page 1 of 1

Date: 10/01/2013 13:51



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

Archived RDVM- **B6**

10/01/2013 15:23

**B6**

PAGE 03

### Detailed Lab Results

Patient: **B6** Patient: **B6** Sex: Neutered Male Age: **B6**  
Client: **B6** Species: Canine Breed: Boxer Weight: 57.5 pounds

Lab ID: INCLINIC IDEXX VetLab In-clinic Laboratory  
Template: Chemistry  
Staff: **B6**  
Status: Posted  
Req ID: 7373 - Tuesday 10/1/2013 08:38:59

Test	Results	Reference Range	Low	Normal	High
ALB	<b>B6</b>	2.3 - 4	[ ]	<b>B6</b>	[ ]
ALKP		23 - 212			
ALT		H 10 - 100			
AMYL		500 - 1500			
BUN/UREA		7 - 27			
Ca		7.9 - 12			
Chloride		109 - 122			
CHOL		110 - 320			
CREA		0.5 - 1.8			
GGT		0 - 7			
GLU		74 - 143			
LIPA		200 - 1800			
PHOS		2.5 - 6.8			
Potassium		3.5 - 5.8			
Sodium		144 - 160			
TBIL		0 - 0.9			
TP		L 5.2 - 8.2			
GLOB		L 2.5 - 4.5			
ALB/GLOB					
BUN/CREA					
Na/K					
OSM calc					

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

Archived RDVM: **B6**

10/01/2013 15:23

**B6**

PAGE 04

### Detailed Lab Results

Patient: **B6** Patient: **B6** Sex: Neutered Male Age: **B6**  
Client: **B6** Species: Canine Breed: Boxer Weight: 57.5 pounds

Lab ID: INCLINIC IDEXX VetLab In-clinic Laboratory  
Template: Hematology  
Staff: **B6**  
Status: Posted  
Req ID: 7373 - Tuesday 10/1/2013 08:22:40

Test	Results	Reference Range	Low	Normal	High
WBC	<b>B6</b>	5.5 - 16.9		<b>B6</b>	
HCT		37 - 55			
MCV		60 - 77			
RBC		5.5 - 8.5			
HGB		12 - 18			
MCH		18.5 - 30			
MCHC		30 - 37.5			
MPV					
PLT		175 - 500			
LYMPHS		0.5 - 4.9			
%LYMPHS					
MONOS		0.3 - 2			
%MONOS					
NEUT		2 - 12			
%NEUT					
EOS		0.1 - 1.49			
%EOS					
BASO		0 - 0.1			
%BASO					
Retics		10 - 110			
%Retics					
RDW	14.7 - 17.9				
PDW					
PCT					

Client: **B6**  
Patient:

Archived RDVM- **B6**

10/01/2013 15:23

**B6**

PAGE 05

### Detailed Lab Results

Patient: **B6** Patient: **B6** Sex: Neutered Male Age: 2 Yrs. 10 Mos  
Client: **B6** Species: Canine Breed: Boxer Weight: 57.5 pounds

Lab ID: INCLINIC IDEXX VetLab In-clinic Laboratory

Template: Immunoassay

Staff: **B6**

Status: Posted

Req ID: 7373 - Tuesday 10/1/2013 08:42:40

Test	Results	Reference Range	Low	Normal	High
TT4	= 0.8 µg/dL				

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

Archived RDVM: **B6**

10/01/2013 15:23

**B6**

PAGE 05

### MEDICAL NOTE TEMPLATE INFORMATION

Patient: **B6**  
Species: Canine      Breed: Boxer  
Age: **B6**      Sex: Neutered Male      Weight: 57.5 pounds  
Date:      Staff: **B6**  
Status:

a SOAP

Enter Office Visit:

History: Exam] **B6**

**B6**

**B6**

**B6**

Page 1 of 1

Date: 10/01/2013 14:08

Client:  
Patient:

**B6**

Archived RDVM: **B6**

10/01/2013 15:23

**B6**

PAGE 07

**B6** **B6**  
Canine Boxer **B6** Neutered Male 69.5 pounds (3/29/2013)

**B6**

**B6**

3/29/2013 **B6** Comment  
**B6** - Closed - 4/1/2013

**B6**

1 of 1

10/1/13 2:13 PM

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

Archived RDVM- **B6**

10/01/2013 15:23

**B6**

PAGE 08

### Detailed Lab Results

Patient: **B6** Patient: **B6** Sex: Neutered Male Age: **B6**  
Client: **B6** Species: Canine Breed: Boxer Weight: 57.5 pounds

Lab ID: INCLINIC IDEXX VetLab In-clinic Laboratory  
Template: Hematology  
Staff: **B6**  
Status: Posted  
Req ID: 6222 - Friday 3/29/2013 08:27:59

Test	Results	Reference Range	Low	Normal	High
WBC	<b>B6</b>	5.5 - 16.9		<b>B6</b>	
HCT		37 - 55			
MCV		60 - 77			
RBC		5.5 - 8.5			
HGB		12 - 18			
MCH		18.5 - 30			
MCHC		30 - 37.5			
MPV					
PLT		175 - 500			
LYMPHS		0.5 - 4.9			
%LYMPHS					
MONOS		0.3 - 2			
%MONOS					
NEUT		2 - 12			
%NEUT					
EOS		0.1 - 1.49			
%EOS					
BASO		0 - 0.1			
%BASO					
Retics		10 - 110			
%Retics					
RDW	14.7 - 17.9				
PDW					
PCT					

Lab Comments: WBC Abnormal Distribution

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

Archived RDVM- **B6**

10/01/2013 15:2

**B6**

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### Detailed Lab Results

Patient: **B6** Patient: **B6** Sex: Neutered Male Age: **B6**  
Client: **B6** Species: Canine Breed: Boxer Weight: 57.5 pounds

Lab ID: INCLINIC IDEXX VetLab In-clinic Laboratory  
Template: Chemistry  
Staff: **B6**  
Status: Posted  
Req ID: 6222 - Friday 3/29/2013 08:35:19

Test	Results	Reference Range	Low	Normal	High
ALB	<b>B6</b>	2.3 - 4			
ALKP		23 - 212			
ALT		10 - 100			
BUN/UREA		7 - 27			
Chloride		H 109 - 122			
CREA		0.5 - 1.8			
GLU		74 - 143			
Potassium		3.5 - 5.8			
Sodium		144 - 180			
TP		5.2 - 8.2			
GLOB		2.5 - 4.5			
ALB/GLOB					
BUN/CREA					
Na/K					
OSM calc					

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

Archived RDVM- **B6**

10/01/2013 15:24 **B6**

PAGE 10

### Detailed Lab Results

Patient: **B6**      Patient: **B6**      Sex: Neutered Male      Age: **B6**  
Client: **B6**      Species: Canine      Breed: Boxer      Weight: 57.5 pounds

Lab ID: IDEXX      IDEXX Reference Laboratory

Template: Miscellaneous

Staff: **B6**

Status: Posted

Req ID: 8188 - Friday

3/29/2013 12:22:00

Test	Results	Reference Range	Low	Normal	High
COMMENTS					
<b>B6</b>					

RE: 2007 PATHOLOGIST  
PATHOLOGIST

**B6**



Client: **B6**  
Patient:

Archived RDVM- **B6**

10/01/2013 15:23

**B6**

PAGE 11

### Detailed Lab Results

Patient:	<b>B6</b>	Patient:	<b>B6</b>	Sex: Neutered Male	Age:	<b>B6</b>
Client:	<b>B6</b>	Species: Canine	Breed: Boxer	Weight: 57.5 pounds		

Lab ID: IDEXX IDEXX Reference Laboratory

Template: Miscellaneous

Staff: **B6**

Status: Posted

Req ID: 8188 - Friday

3/29/2013 12:22:00

Test	Results	Reference Range	Low	Normal	High
COMMENTS: COMMENTS					

**B6**

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

Archived RDVM- **B6**

10/01/2013 15:23

**B6**

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### Reminder Letter Report Sorted by Client ID

Client ID	Client Name	Patient ID	Patient Name	Item ID/Description	Type	Date
-----------	-------------	------------	--------------	---------------------	------	------

**B6**

**B6**

Phone:

**B6**

**B6**

**B6**


**B6**

Page 1 of 1

Date: 10/1/2013

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

 <b>TUFTS UNIVERSITY</b> Foster Hospital for Small Animals 200 Westboro Road North Grafton, MA 01536-1895 1-508-839-5395	<b>Document</b> Case Summary <b>Copy To:</b> MedRec <b>Status:</b> FINAL <b>Finalized:</b> by <b>B6</b> on 2/7/2014
<b>Client Information</b> <b>Client#:</b> <b>Name:</b> <b>Address:</b> <b>City:</b> <b>Zip:</b> <b>Home#:</b> <b>Work#:</b>	<b>Patient Information</b> <b>Case#:</b> <b>Name:</b> <b>Species:</b> CANINE <b>Breed:</b> BOXER <b>Sex:</b> CM <b>DOB:</b> <b>RVet:</b> Harbor Animal Hospital 286 Maple Ave Barrington, RI 02806 (401) 245-9090

**Dates**

Description	Date
Admission	2/7/2014
Discharge	2/7/2014

**Veterinary Medical Team**

Name	Title
John E. Rush, DVM, MS, DACVIM (Cardiology), DACVECC	Attending (Faculty) Clinician
<b>B6</b>	Senior Student

**To the Referring Veterinarian**  
Dear **B6**

**Diagnoses**  
Final diagnoses : 3rd degree AV block with pacemaker implantation 10/13  
Procedures : pacemaker interigation, ECG  
Recommendations : Recheck in 3 months for echocardiogram and resetting of pacemaker

**Professional Report**  
Thank you for referring **B6** to Tufts Cardiology service. **B6** had his 3 month post pacemaker implantation recheck examination today. The owners report he is doing very well at home. The pacemaker is capturing well, but the battery life appears to be only about 5- 5 1/2 years, so we turned down the output slightly to try to prolong this. We will recheck this in 3 months, at which point we will also do a recheck echocardiogram to assess heart size, and hopefully turn down the output a bit more to prolong battery life further.

**Client Report**  
Thank you for bringing **B6** to Tufts Cardiology service for his 3 month post pacemaker implantation recheck. We are glad to hear that **B6** has been doing very well at home. Today, we checked the output on his pacemaker, and found that it is working the way we would like it to, and that his heart is nearly 100% reliant on the pacemaker. While it is controlling his heart rate well, the projected battery life is about 5-5 1/2 years on his current settings. We lowered the output slightly to try to prolong the battery life. We would like to see **B6** back for a recheck exam to revisit the battery life as well as an echocardiogram (ultrasound of the heart) in 3 months. It is safe to use flea/tick preventative and heartworm preventative on **B6**. At this time, you can begin to slowly increase his level of exercise. Leashed runs and hikes are safe activities, but we recommend that you avoid excessive exercise and avoid jumping or fetching activities.  
  
It was great to see **B6** again, he is such a good patient! If you have any further questions or concerns, please feel free to give us a call!

**Patient Care Instructions**  
2/7/2014 3:49:20 PM S227632/Case Summary/MedRec Copy John E. Rush, DVM, MS,

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

S227632/Case Summary/MedRec Copy/LTURNE03

Page 2 of 2

Please continue to monitor **B6** for any signs of decreased heart rate including counting heart beats (we would like his heart rate to be at or a bit greater than 60 beats/min), weakness, collapse, or difficulty breathing. If you note any of these changes, please contact us immediately.

**Follow Up Instructions**

Please schedule a recheck appointment for a cardiac exam, pacemaker check and echocardiogram in 3 months.

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

2/7/2014 3:49:20 PM

S227632/Case Summary/MedRec Copy

John E. Rush, DVM, MS,

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



**TUFTS UNIVERSITY  
FOSTER HOSPITAL FOR SMALL ANIMALS**  
200 Westboro Rd.  
N. Grafton, MA 01536  
508-839-5395

**B6**

**B6**

Date: 2/7/14 Problem: lev Clinician: Rush

Home Instructions:

Follow-up visits  TUFTS-SAH  Ref. Vet.  Date \_\_\_\_\_ Reason \_\_\_\_\_  
Owner to call Clinician: \_\_\_\_\_ Date \_\_\_\_\_ Reason \_\_\_\_\_

Medication Dispensed	Amount	Size	Instructions

History: fish oil, benadryl, melatonin  
flex/tick + tick preventative OK to give?  
doing well at home, great appetite & energy level  
only short leashed walks, no extensive running  
does stairs  
kept activity low, free range around the house ->  
doing well w/ this level of exercise - no weakness,  
collapse, difficulty breathing

Physical Exam: Temp \_\_\_\_\_ Pulse 60 Resp. fast Weight 60.2 lbs Body condition score (1-9) 5/9

ENT: no ocular discharge  
PLN: WNL grade II left systolic murmur  
H/L: ~~WNL~~ N/R, pulses fair, no vascular distension, no  
arrhythmias, lungs clear bilaterally, HR=84, MM pink  
GI: soft, non-painful, no masses/organomegaly CRT<2  
US: OK normal  
MS: ambulatory x4, no side looks good  
neuro: mentally appropriate

Procedures Performed and Future Plan:

Client:  
Patient:

**B6**


Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

**B6**



Client: **B6**  
 Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

 <b>TUFTS UNIVERSITY</b> Foster Hospital for Small Animals 200 Westboro Road North Grafton, MA 01536-1895 1-508-839-5395		<b>Document</b> Cardiology Report <b>Copy To:</b> MedRec <b>Status:</b> FINAL <b>Finalized:</b> by JRUSH01 on 2/8/2014	
<b>Client Information</b>		<b>Patient Information</b>	
<b>Client#:</b> <b>Name:</b> <b>Address:</b> <b>City:</b> <b>Zip:</b> <b>Home#:</b> <b>Work#:</b>	<b>B6</b>		
		<b>Case#:</b> <b>Name:</b> <b>Species:</b> CANINE <b>Sex:</b> CM <b>RVet:</b>	<b>Breed:</b> BOXER <b>DOB:</b> <b>B6</b> <b>B6</b>

**Dates**

Description	Date
Appointment	2/7/2014

**Personnel**

Name	Title
John E. Rush, DVM, MS, DACVIM (Cardiology), DACVECC	Attending (Faculty) Cardiologist
<b>B6</b>	Cardiology Technician

**Case Abstract**

3rd degree AV block. Permanent pacemaker implanted October 2013.

**Cardiology Findings**

Type	Findings
Heart murmur	I-II/VI over mitral valve - intermittent
Transient heart sounds	Bruit de canon
Other auscultatory findings	Clear
Pulses	Good
Jugular veins	Okay
Mucous membranes	Pink
Abdomen	NSF
Echocardiogram	Not performed
ECG / rhythm	3rd degree AV block with paced rhythm
Miscellaneous	Captured down to 0.25 V. Changed output from 3.5 to 3.0V. Minimal evidence of rate responsive feature, tried to adjust.
Body condition score (9)	6
Heart rate (/min)	60 bpm

**Assessment and Recommendations**

Third degree AV block and pacemaker implantation - Good pacemaker function with battery life of 5 to 5.5 years.

2/8/2014 9:51:52 AM

S227632/Cardiology Report/MedRec Copy

John E. Rush, DVM, MS,

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client:  
Patient:

**B6**

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Page 2 of 2

Recommend recheck in 3 months to evaluate pacemaker function, battery life and rate responsiveness; likely also recheck echo then as heart was originally dilated.

**Cardiology Conclusions**

Type	Conclusion
Final diagnoses	Pacemaker implantation for 3rd degree AV block

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

2/8/2014 9:51:52 AM

S227632/Cardiology Report/MedRec Copy

John E. Rush, DVM, MS,

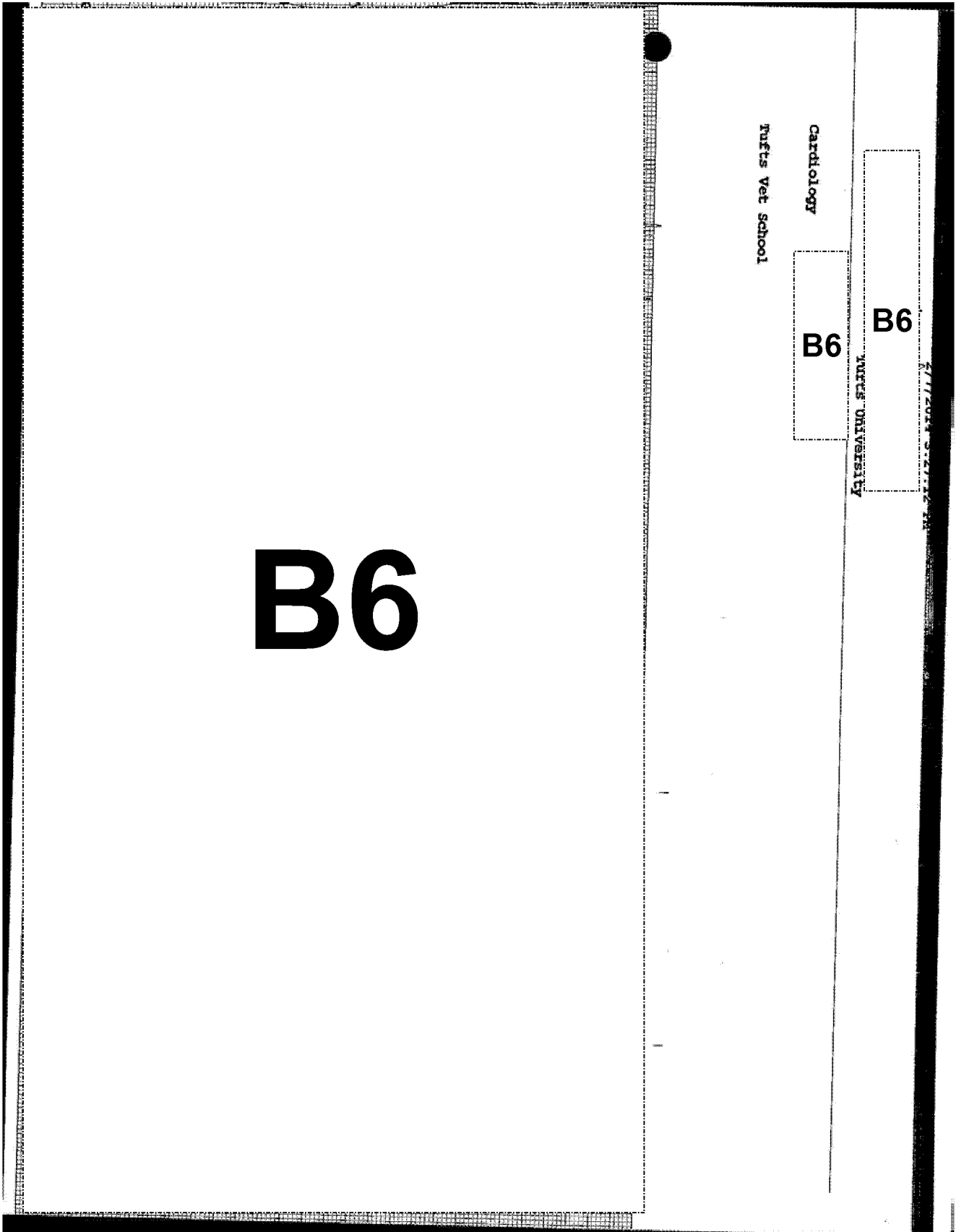
Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client: **B6**  
Patient:

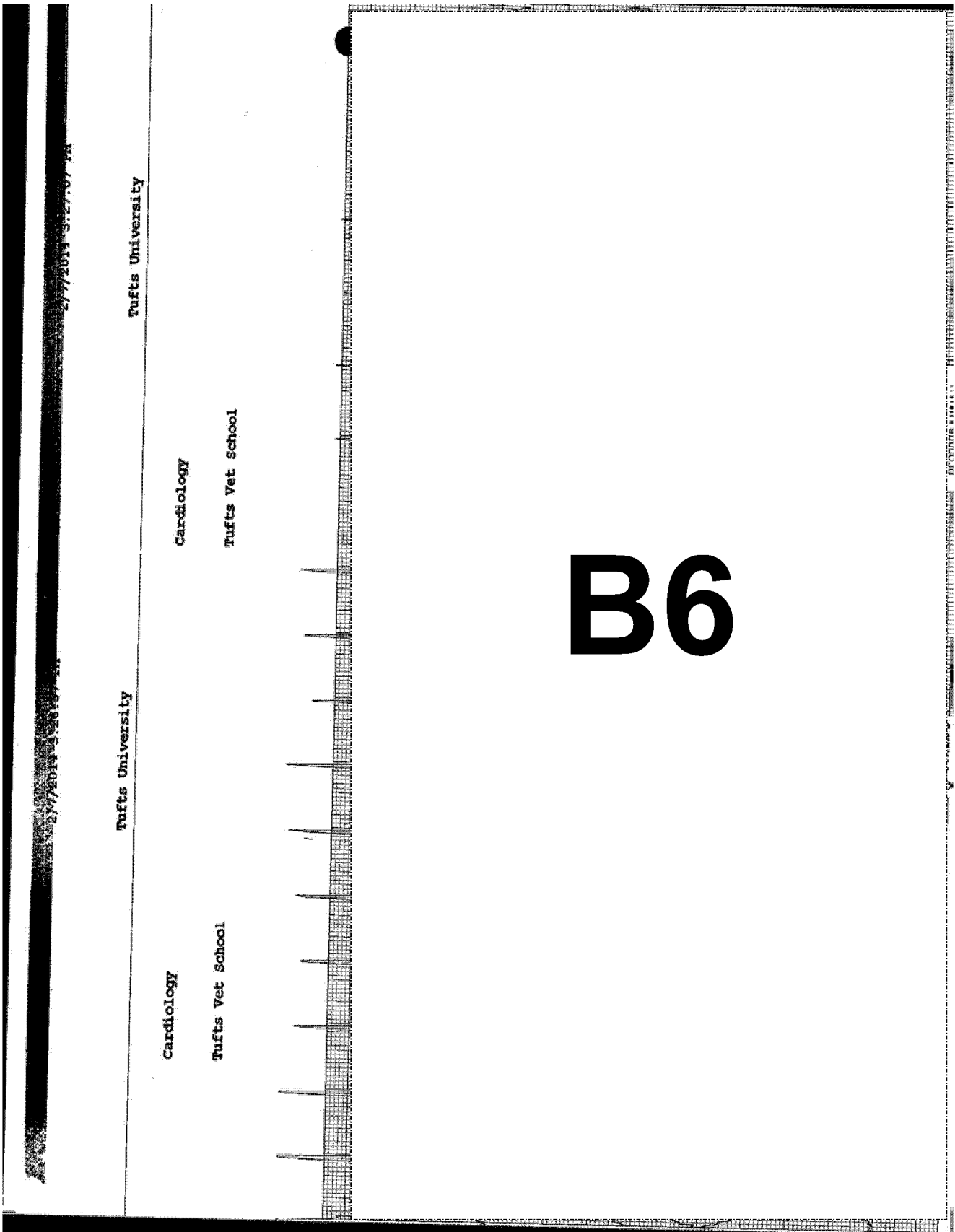
Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



Client:  
Patient:

**B6**

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2/7/2014 3:26:47 PM

Tufts University

Cardiology

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**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

### Initial Parameters

Diagnostics Read Feb 7, 2014 3:18 pm

#### Basic Operation

Mode

Magnet Response

#### Rates

Base Rate  
Rest Rate  
Max Sensor Rate

#### Refractories & Blar

Ventricular Refractory  
Rate Resp. V. Refr.  
Shortest Ventricular Refractory

**Zephyr® SR 5620**

Merlin® PCS (#19916, 3330 v

#### Capture & Sense

AutoCapture  
Pulse Amplitude  
Pulse Width  
Amplitude Monitoring  
Sensitivity

#### Leads

Lead Type  
Pulse Config  
Sense Config  
Lead Monitoring  
Lower Limit  
Upper Limit

#### Patient Data

Patient Name  
Patient ID  
Implant Date  
A LEAD: MODEL S:  
MANUFACT: DATE  
V LEAD: MODEL S:  
MANUFACT: DATE  
ADAPTOR:  
OTHER:

# B6

# B6

**FastPath® Summary** page 1 of 2  
Feb 7, 2014 3:23 pm

**Zephyr® SR 5620** (#7203154 pr9.7)

TUFTS VET SCHOOL - Cardiology  
**FastPath® Summary**

page 2 of 2  
Feb 7, 2014 3:23 pm

#### Heart Rate Histogram

■ Paced (VP)  
□ Sensed (VS)  
○ Sensor-Indicated Rate\*

#### Events

VP Counts 100%

# B6

0d 0h 3m 22s Sampled since Today (3:15 pm)

\*Sensor Parameters changed since last cleared

0% 100%  
0d 0h 3m 22s Sampled since Today (3:15 pm)

Merlin® PCS (#19916, 3330 v17.1\_rev\_i)

# B6

**FastPath® Summary** page 2 of 2

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

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Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

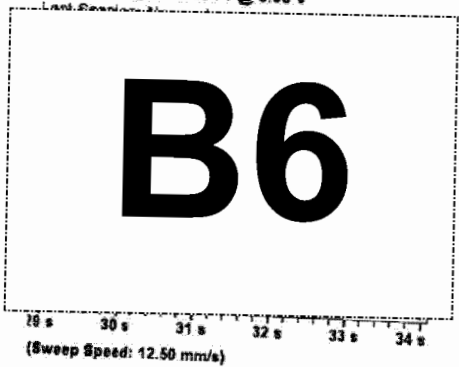
Zephyr® SR 5620 (#7203154 pr9.7)

TUFTS VET SCHOOL - Cardiology

### Ventricular Capture Test

page 1 of 1  
Feb 7, 2014 3:23 pm

This Session: **<0.25** V @ 0.4 ms(Bi)  
Safety Margin: >12.0 : 1 @ 3.00 V



Merlin® PCS (#19916, 3330 v17.1\_rev\_1)

**B6**

Test Results page 1 of 1

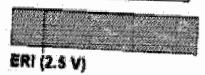
Zephyr® SR 5620 (#7203154 pr9.7)

TUFTS VET SCHOOL - Cardiology

### Battery

page 1 of 1  
Feb 7, 2014 3:23 pm

Voltage: **2.78** V

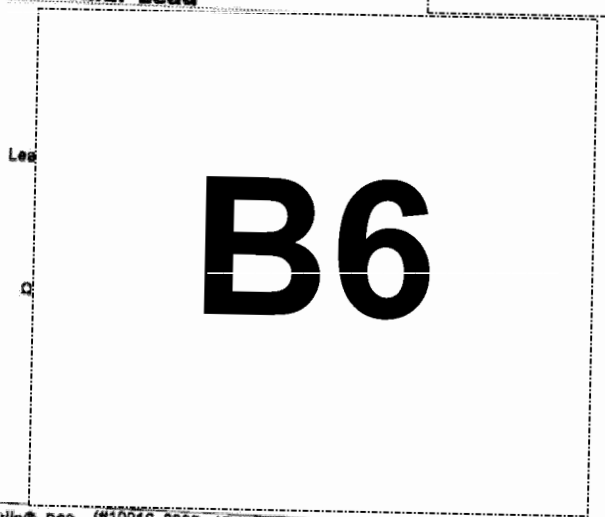


ERI (2.5 V)

Remaining Longevity  
Magnet Rate  
Current  
Impedance

**B6**

### Ventricular Lead



Merlin® PCS (#19916, 3330 v17.1\_rev\_1)

**B6**

Test Results page 1 of 1

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

NO. 1. SUBSCRIBING BY JOHN DESEF

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Zephyr® SR 5620 (#7203154 pr9.7)

TUFTS VET SCHOOL - Cardiology  
**FastPath® Summary**

page 2 of 2  
Feb 7, 2014 3:18 pm

**Heart Rate Histogram**

**Events**

Paced (VP)

VP Counts

100%

**B6**

0d 0h 0m 26s Sampled since Today (3:15 pm)

0% 100%  
0d 0h 0m 28s Sampled since Today (3:15 pm)

Merlin® PCS (#19916, 3330 v17.1\_rev\_1)

**B6**

FastPath® Summary page 2 of 2

Zephyr® SR 5620 (#7203154 pr9.7)

TUFTS VET SCHOOL - Cardiology  
**Ventricular Capture Test**

page 1 of 1  
Feb 7, 2014 3:19 pm

This Session: **<0.25 V** @ 0.4 ms(Bi)

Safety Margin: >14.0 : 1 @ 3.50 V

Last Session: No previous results

Feb 7, 2014 3:19 pm (Sweep Speed: 25 mm/s)

**B6**

Merlin® PCS (#19916, 3330 v17.1\_rev\_1)

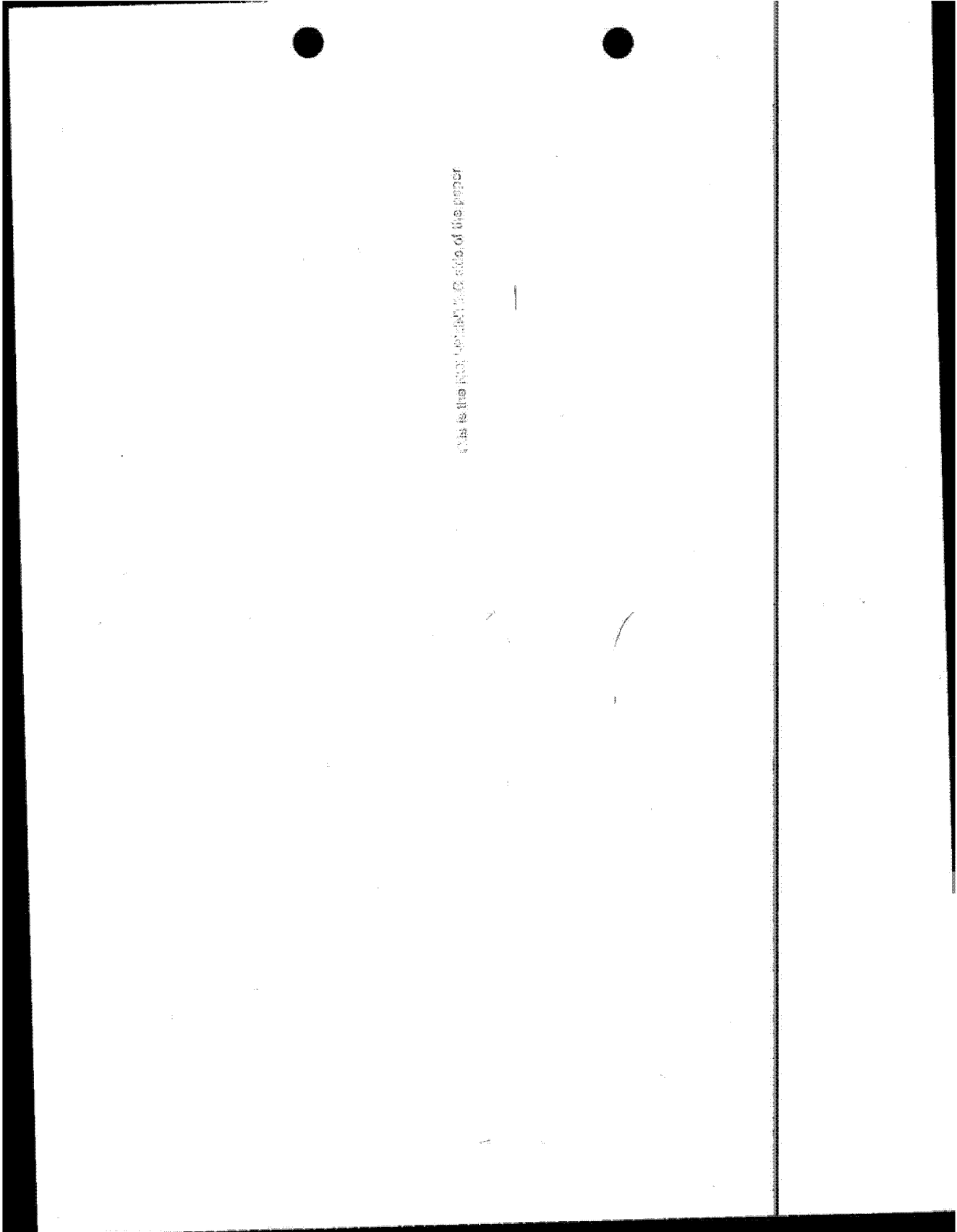
**B6**

Ventricular Capture Test page 1 of 1

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14





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

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

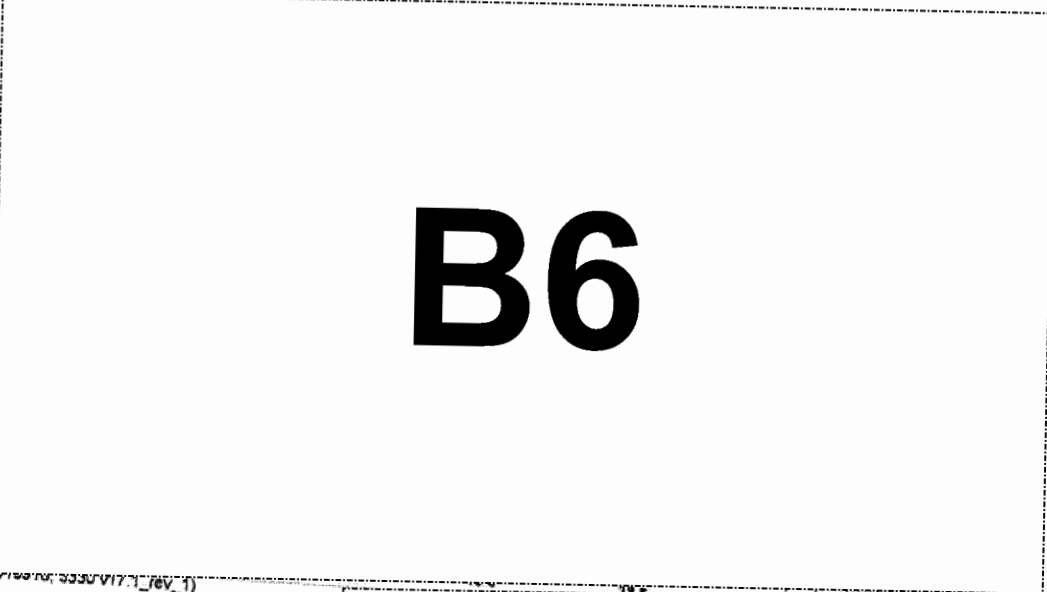
Zephyr® SR 5620 (#7203154 pr9.7)

TUFTS VET SCHOOL - Cardiology  
**Ventricular Capture Test**

page 1 of -  
Feb 7, 2014 3:20 pm

This Session: **<0.25** V @ 0.4ms(Bi)  
Safety Margin: >14.0 : 1 @ 3.50 V  
Last Session: No previous results

Feb 7, 2014 3:19 pm



Merlin® PCS (V17.1)\_REV\_1) **B6** 19 s 20 s 21 s  
Ventricular Capture Test page 1 of 1

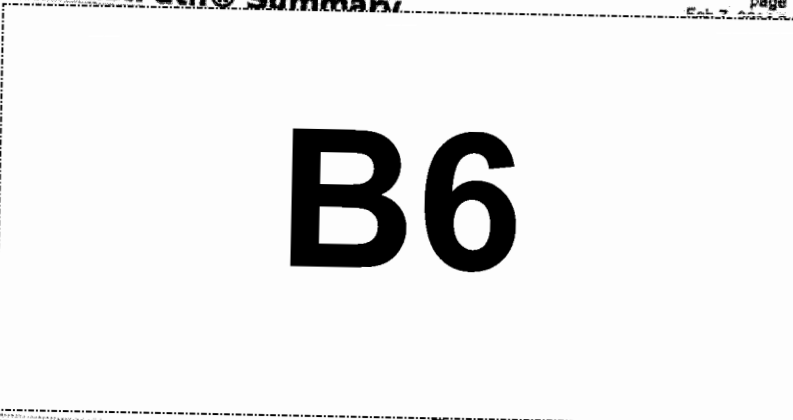
Zephyr® SR 5620 (#7203154 pr9.7)

TUFTS VET SCHOOL - Cardiology  
**FastPath® Summary**

page 1 of 2  
Feb 7, 2014 3:20 pm

Note:

No Alerts



Test Results (Last Session: Oct 2, 2013)

Capture  
Sense  
Lead Impedance

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

This is a copy of a document that has been scanned.

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

**Basic Operation**

Mode  
Magnet Response  
Sensor  
Threshold  
Measured Avg  
Slope  
Max Sensor Rate  
Reaction Time  
Recovery Time

**Rates**

Base Rate  
Rest Rate  
Max Sensor Rate  
Hysteresis Rate

**Refractories & Blanki**

Ventricular Refractory  
Rate Resp. V. Refr.  
Shortest Ventricular Refractory

**B6**

Zephyr® SR 5620 (#7203154 pr9.7)  
Merlin® PCS (#19916, 3330 v17.1\_rev\_1)

**B6**

Wrap-up™ Overview page 1 of 2  
Feb 7, 2014 3:23 pm

Zephyr® SR 5620 (#7203154 pr9.7)

TUFTS VET SCHOOL - Cardiology  
Wrap-up™ Overview

page 2 of 2  
Feb 7, 2014 3:23 pm

**Stored EGM Configuration**

Sampling Option  
Number of Stored Episodes  
Channel  
EGM Configuration  
EGM Recording Range

**Episode Triggers**

High Ventricular Rate Trigger  
Magnet Placement Trigger

**B6**

Client:  
Patient:

**B6**


Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

This is a NON-PRINTING side of the page.

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

 <b>TUFTS UNIVERSITY</b> Foster Hospital for Small Animals 200 Westboro Road North Grafton, MA 01536-1895 1-508-839-5395		<b>Document</b> Case Summary <b>Copy To:</b> MedRec <b>Status:</b> FINAL <b>Finalized:</b> by: <b>B6</b> on 10/11/2013	
<b>Client Information</b>		<b>Patient Information</b>	
<b>Client#:</b> <b>Name:</b> <b>Address:</b> <b>City:</b> <b>Zip:</b> <b>Home#:</b> <b>Work#:</b>	<b>B6</b>		
		<b>Case#:</b> <b>B6</b> <b>Name:</b> <b>Species:</b> CANINE <b>Sex:</b> CM <b>RVet:</b>	<b>Breed:</b> BOXER <b>DOB:</b> <b>B6</b> <b>B6</b>

**Dates**

Description	Date
Technician Appointment	10/11/2013

**Veterinary Medical Team**

Name	Title
<b>B6</b>	
<b>B6</b>	

**Diagnoses**

Procedures : recheck ECG, suture removal
Recommendations : recheck in 2-3 months

**Client Report**

**B6** came in today for a recheck ECG and to have his sutures taken out. The incision looks good, although slightly red around the area, we applied another neck bandage to keep on him for a couple days. His ECG showed that his pacemaker is working well.

Thank you for bringing **B6** today. He is such a love!

Kind Regards  
**B6**

**Patient Care Instructions**

You are allowed to leash walk only, for about 10-15 minutes. Please continue to restrict other activity, such as chasing toys, running, jumping up on furniture, etc.

**Follow Up Instructions**

Please come back in 2-3 months for a pacemaker computer check and an ECG.

**B6**

10/11/2013 3:31:18 PM

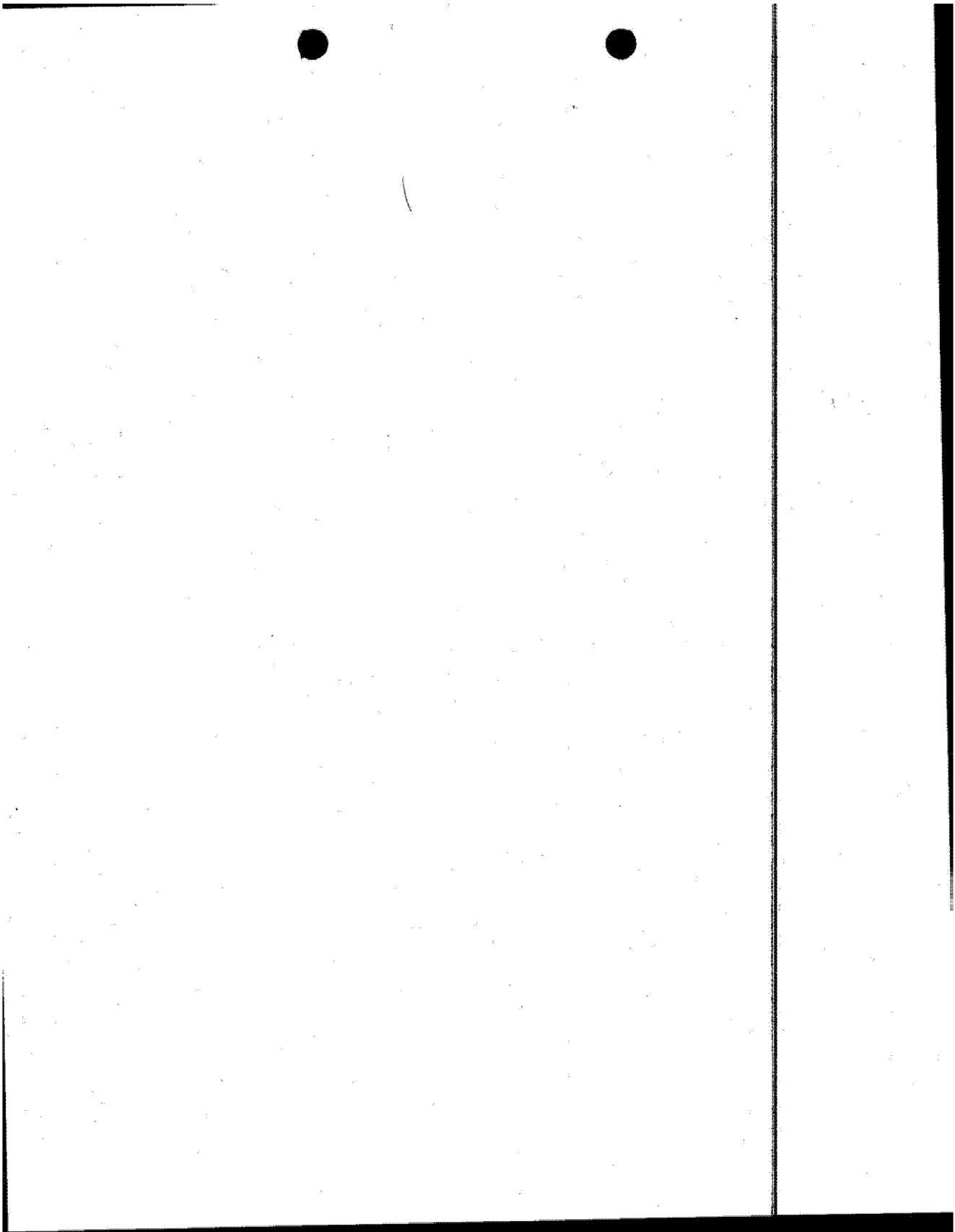
S227632/Case Summary/MedRec Copy

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



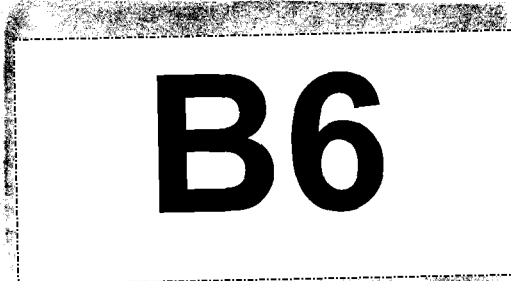
Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



TUFTS UNIVERSITY  
FOSTER HOSPITAL FOR SMALL ANIMALS  
200 Westboro Rd.  
N. Grafton, MA 01536  
508-839-5395



Service Cardio

Date: 10/11/13 Problem: recheck Clinician: \_\_\_\_\_

Home Instructions: \_\_\_\_\_

Follow-up visits  TUFTS-SAH  Ref. Vet.  Date \_\_\_\_\_ Reason \_\_\_\_\_  
Owner to call Clinician: \_\_\_\_\_ Date \_\_\_\_\_ Reason \_\_\_\_\_

Medication Dispensed	Amount	Size	Instructions

History: antibiotics gone  
on bandage to stay calm  
bandage not staying on well

Physical Exam: Temp \_\_\_\_\_ Pulse \_\_\_\_\_ Resp. \_\_\_\_\_ Weight 24.8kg Body condition score (1-9) \_\_\_\_\_

Procedures Performed and Future Plan: \_\_\_\_\_  
suture removal  
EKG

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

**B6**



Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

10/11/2013 3:09:27 PM  
Tufts University  
Tufts Vet School  
Cardiology

**B6**

12 Lead; Standard Placement

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

10/11/2013 3:10:27 PM

Tufts University

Cardiology

Tufts Vet School

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

10/11/2013 3:10:38 PM

Tufts University

Cardiology Cardiology

Tufts Vet' Tufts Vet School

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Cardiology  
Tufts Vet School

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

10/11/2013 3:11:10 PM

Tufts University

Cardiology

Tufts Vet School

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

**B6**

Cardiology  
Hufsch Vet Sch

Client:  
Patient:

**B6**


Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



 <b>TUFTS UNIVERSITY</b> Foster Hospital for Small Animals 200 Westboro Road North Grafton, MA 01536-1895 1-508-839-5395	<b>Document</b> Case Summary <b>Copy To:</b> MedRec <b>Status:</b> FINAL <b>Finalized:</b> by <b>B6</b> on 10/4/2013			
	<table border="1"> <tr> <th>Client Information</th> <th>Patient Information</th> </tr> <tr> <td> <b>Client#:</b>  <b>Name:</b>  <b>Address:</b>  <b>City:</b>  <b>Zip:</b>  <b>Home#:</b>  <b>Work#:</b> </td> <td> <b>Case#:</b>  <b>Name:</b>  <b>Species:</b> CANINE      <b>Breed:</b> BOXER  <b>Sex:</b> CM      <b>DOB:</b>  <b>RVet:</b> </td> </tr> </table>	Client Information	Patient Information	<b>Client#:</b> <b>Name:</b> <b>Address:</b> <b>City:</b> <b>Zip:</b> <b>Home#:</b> <b>Work#:</b>
Client Information	Patient Information			
<b>Client#:</b> <b>Name:</b> <b>Address:</b> <b>City:</b> <b>Zip:</b> <b>Home#:</b> <b>Work#:</b>	<b>Case#:</b> <b>Name:</b> <b>Species:</b> CANINE <b>Breed:</b> BOXER <b>Sex:</b> CM <b>DOB:</b> <b>RVet:</b>			

Dates	
Description	Date
Discharge	<b>B6</b>
Admission	

Veterinary Medical Team	
Name	Title
<b>B6</b>	Emergency Clinician
<b>B6</b>	Senior Student
<b>B6</b>	Primary Clinician
John E. Rush, DVM, MS, DACVIM (Cardiology), DACVECC	Attending (Faculty) Surgeon
<b>B6</b>	Senior Student
<b>B6</b>	Attending (Faculty) Clinician

**To the Referring Veterinarian**

Dear **B6**

**Diagnoses**

Final diagnoses : 3rd degree AV block

Procedures : echocardiogram, ECG, pacemaker implantation

Recommendations : suture removal and EKG in 7-10 days

**Case Progress Notes (ICU Transfer Sheet)**

Time and Date Admitted: 01Oct13 4:15pm  
 Transfer Date: 02Oct13  
 Admitting Clinician: **B6**  
 Transferred to (Clinician): **B6**  
 Patient Location: ICU R5  
 Estimate and Financial Notes: **B6**

History and Physical Exam Summary: **B6** is a **B6** CM boxer who presented to Tufts from his rDVM for a slow heart rate. **B6** went to his rDVM last week mild lethargy. **B6** No signs of heart disease were reported during this visit. Over the next week his signs continued so he went back to his rDVM today who found a heart slow heart rate and sent him to Tufts for a cardiology consult. The owner reports that Warren has otherwise been healthy aside from chronic allergies. He has not had any syncopal episodes or fainting spells.

Patient Condition:  
 S-OAR, T-102.8, P- 50, R-pant, CRT <2, MMs pale pink and tacky

10/4/2013 1:58:44 PM

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**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client: **B6**  
Patient:

S227632/Case Summary/MedRec Copy **B6**

EENT: Clear eyes, mild dental tarter, clear nose, mild debris AU  
PLNs: No peripheral lymphadenopathy appreciated  
Heart/Circulatory: III/VI systolic murmur, gallop rhythm, hyperdynamic apical beat and femoral pulses  
Lungs: clear  
Abd: soft, non painful  
UG: externally unremarkable CM  
MSI: Ambulatory x4  
INTEG: small skin focal areas of alopecia on the muzzle, alopecia behind the ears bilaterally  
Neuro: QAR, mentally appropriate, full exam not performed  
RECTAL: NP

- A1) III/VI systolic murmur
- A2) Gallop rhythm
- A3) Hyperdynamic apical beat and femoral pulses
- A4) 3rd degree AV block (R/O: idiopathic vs myocarditis)
- A5) **B6**
- A6)
- A7)
- A8)

Initial and Current Therapy:

- 1) Telemetry
- 2) **B6**

Diagnostic tests completed and pending:

- 1) Cardiology consult: 3rd degree AV block, dilated cardiac chambers, start treatment with minocycline while awaiting 4DX results
- 2) 4DX: Pending
- 3) CBC: Pending
- 4) CHEM: Pending

Prognosis Given Owner: Stable.

Client and Referring Veterinarian Communication Status: Will admit overnight for telemetry monitoring and transfer to our cardiology service in the morning.

\*Not sure what else you talked to them about\*

Oct 2, 2013

**B6**

**B6**

CV: HR = 64, 3rd degree AV block, III/VI systolic murmur and gallop heard on left side, snappy femoral pulses (synchronous), jugular vein distended to 3/4 of the neck

Lungs: RR=36, no respiratory effort, normal RV, considerable

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



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

S227632/Case Summary/MedRec Copy **B6**

Recent diagnostic tests:  
4dx - all negative  
CBC - no abnormal findings  
Chem - slight hypoproteinemia (5.4 g/dl), hypoglobulinemia (1.9 g/dl), elevated ALT (99)

- A1: 3rd degree AV block - r/o myocarditis vs. fibrosis
- A2: alopecia - r/o allergic skin disease vs. endocrine
- A3: hypoglobulinemia - hepatic insufficiency vs. PLE vs. hemorrhage
- A4: elevated ALT - decreased cardiac output vs. artifact (hemolysis) vs. liver disease vs. endocrine vs. drug-induced

P:  
Pacemaker placement today  
discontinue minocycline?

Oct 3, 2013 **B6**

**B6**

On exam, no pacer, no systolic murmur heard on left side, slight hyperdynamic femoral pulses (synchronous), no jugular vein distention observed

**B6**

Recent diagnostic tests:

- A1: 3rd degree AV block - resolved
- A2: alopecia - r/o allergic skin disease vs. endocrine
- A3: short runs of v-tach - r/o irritation to ventricle from pacemaker placement vs.
- A4: seroma formation under chin

P:

**B6**

Oct 4, 2013 **B6**

Recent History: On telemetry overnight, pacemaker placed 10/2/13, no evidence of ventricular tachycardia overnight, eating well

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

S227632/Case Summary/MedRec Copy **B6**

**B6**

CV: HR = 112, paced, II/VI systolic murmur heard on left side, strong synchronous femoral pulses, no jugular vein distension observed.

**B6**

A1: 3rd degree AV block - resolved  
A2: alopecia - r/o allergic skin disease vs. endocrine  
A3: short runs of v-tach - resolved  
A4: seroma formation under chin

P:

**B6**

**Professional Report**

**B6** came to Tufts **B6** after you noticed that his heart rate was too slow. We confirmed 3rd degree AV block, and echocardiogram showed typical changes to dogs with bradycardia. A pacemaker was placed the next day, and **B6** has been doing well. He was tested negative for tick-borne diseases, and UA was unremarkable. **B6** seems to be younger than a typical dog with 3rd degree AV block, so we're still suspicious that some infection started this off. So there is a chance in the future that his rhythm may recover.

Thank you for your referral. Please contact us with any questions or concerns. A copy of the cardiology report will be faxed to you.

Sincerely,

**B6**  
cardiology resident

**To Our Client**

Dear **B6** Family,

**Client Report**

**B6** presented to the Tufts in third degree AV block. AV block is a condition of the heart where the electrical impulses that are responsible for contraction of the heart fail to be conducted from the atria to the ventricles. In a normal heart, the atria and ventricles would contract the same number of times, allowing blood to move through the heart in a forward direction. In **B6** case, his atria contract multiple times for every one contraction of the ventricles. This results in a significantly slower heart rate and lower volume of blood that gets pumped to the body. An echocardiogram showed that **B6** heart still has good contractile function. The best treatment for **B6** AV block is a pacemaker. Following placement of a pacemaker the prognosis is good. **B6** will require more frequent rechecks initially, but can later be spaced further out.

A pacemaker was placed in **B6** heart on Wednesday 10/2. The surgery went very well. Thursday morning **B6** color and pulses were much better. **B6** was tested for tick borne diseases as they can often be a cause for AV block. He

10/4/2013 1:58:44 PM

S227632/Case Summary/MedRec Copy

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

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

S227632/Case Summary/MedRec Copy **B6**

was negative for the tests. Spontaneous AV block in a young Boxer is uncommon and there is often an infectious cause whether or not we can identify it.

We are sending **B6** home with a course of antibiotics to reduce the chance that his incisions get infected. **B6** suture should be removed in 7-10 days, this can be done with your primary care veterinarian. At that time, a EKG should be checked just to make sure everything's working properly. In 3 months we want to see him here sat Tufts to check his pacemaker function and maybe make adjustments to the pacemaker.

**B6** will be going home with a neck bandage. Because he tends to scratch at his neck, we will need you to rewrap his neck several times so the bandage stays in place until the sutures come out. Please only use a harness to leash walk him and do not put a collar on while the sutures are still in place.

If you have any questions or concerns between now and your recheck appointment, please do not hesitate to call.

**Patient Care Instructions**

**B6**

**Medications and Treatments**

**B6**

**Itemized Medications**

medication	strength	units	qty	formulation	instructions	refill	nextdose	status
<b>B6</b>	<b>B6</b>	<b>B6</b>	<b>B6</b>	<b>B6</b>	<b>B6</b>	None	tomorrow afternoon	Dispense

**Follow Up Instructions**

1. Please have **B6** suture removal in 7-10 days, and recheck an EKG. This can be done with your primary care veterinarian's. If you would like it done here, you can make an appointment can by made by calling 508-887-4696.
3. We want **B6** to return here to see us for programming of the computer/pacemaker in 2-3 months.

**B6** (Resident in cardiology)

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



**Tufts University**  
**Foster Hospital for Small Animals**  
200 Westboro Road, N. Grafton, MA 01536  
508-839-5395

**B6**

B6

APPT. DATE	APPT. TIME	CLINICIAN	SERVICE	WARD	CAGE
OWNER/LAST NAME		FIRST NAME	MIDDLE INITIAL	HOME PHONE ( ) ( )	WORK PHONE ( ) ( )
STREET		TOWN	STATE	ZIP	
REFERRING CLINIC NAME		TOWN	STATE	PHONE	
REFERRING VET NAME					
PET'S NAME	BREED	COLOR	SEX: <input type="checkbox"/> MALE <input type="checkbox"/> FEMALE <input type="checkbox"/> NEUTERED <input type="checkbox"/> SPAYED	BIRTH DATE MO YR	
Length of time you have owned your pet:	Has your pet ever traveled or resided outside of New England? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, where/when: _____		Obtained from: <input type="checkbox"/> Bred <input type="checkbox"/> Breeder <input type="checkbox"/> Friend <input type="checkbox"/> Other <input type="checkbox"/> Pet Shop <input type="checkbox"/> Humane Society <input type="checkbox"/> Stray		
<b>Pets Environment:</b> <input type="checkbox"/> House <input type="checkbox"/> Apartment <input type="checkbox"/> Urban <input type="checkbox"/> Suburban <input type="checkbox"/> Rural	<b>Confined to:</b> <input type="checkbox"/> House <input type="checkbox"/> Fenced yard/chain <input type="checkbox"/> Roams <input type="checkbox"/> Other _____	<b>Other Pets:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, animal type: _____	<b>Diet:</b> Brand _____ <input type="checkbox"/> Canned <input type="checkbox"/> Dry <input type="checkbox"/> Both <input type="checkbox"/> Other _____	<b>Feeding:</b> Number of feedings per day: _____ Amount given each feeding: _____	
<b>Date of last Fecal Test:</b> <input type="checkbox"/> Tested - Date: _____ <input type="checkbox"/> Not Tested	<b>Feline Leukemia Test (FELV)</b> <input type="checkbox"/> Tested - Date: _____ <input type="checkbox"/> Not Tested		<b>Date of last Heartworm Test:</b> <input type="checkbox"/> Tested - Date: _____ <input type="checkbox"/> Not Tested		
<b>Vaccination History:</b> Type: Rabies Date: _____ Type: _____ Date: _____ Type: _____ Date: _____	<b>Feline Immunodeficiency Test (FIV)</b> <input type="checkbox"/> Tested - Date: _____ <input type="checkbox"/> Not Tested		<b>Heartworm Prevention:</b> <input type="checkbox"/> Daily <input type="checkbox"/> Monthly <input type="checkbox"/> Not Given		

Presenting Complaint:

(DO NOT WRITE BELOW THIS LINE)

History: last week allergies brought to rDVM - thought labored breathing, not eating as ~~fast~~ much. having diarrhea brought to rDVM this morning. no fainting or weakness - a little less active.

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



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

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



**Tufts University**  
 Foster Hospital for Small Animals  
 200 Westboro Road, N. Grafton, MA 01536

**B6**  
 FAWN CH STD  
 BAYER CANINE  
 HOSPITAL  
**B6**

Date: <u>01 Oct 13</u>		Time: <u>4:15 pm</u>			
Body Condition (1-9)	Body Weight	Temperament	Temperature	Pulse	Respiratory
1= emaciated 5= ideal 9= obese	<u>419</u>	<u>SPAR</u>		<u>50</u>	<u>quiet</u>
General Appearance (1)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>	Integumentary (2)	N.A.F. <input type="checkbox"/> Abnorm. <input checked="" type="checkbox"/> Not Ex. <input type="checkbox"/>	Musculo-Skeletal (3)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>
Respiratory (4)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>	Digestive (5)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>	Genito-Urinary (6)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>
Circulatory (7)	N.A.F. <input type="checkbox"/> Abnorm. <input checked="" type="checkbox"/> Not Ex. <input type="checkbox"/>	Lymph Nodes (8)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>	Nervous (9)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>
Eyes (10)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>	Ears (11)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>	Mucous Membranes (12)	N.A.F. <input type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>
Describe abnormal, using code numbers as above, for systems				Pain Assessment (13)	N.A.F. <input checked="" type="checkbox"/> Abnorm. <input type="checkbox"/> Not Ex. <input type="checkbox"/>
<u>1) alopecia on muzzle, behind ears</u> <u>2) III/VI systolic murmur, gallop rhythm, hyperdynamic pulses + apex beat, 3rd degree AV block on ECG</u> <u>12) tacky pale pink, CRT 2</u> <span style="float: right;"><u>bradycardia</u></span>					
<u>A1) murmur, bradycardia, gallop</u> <u>A2) ECG: 3rd degree AV block</u>					
<u>P1) cardio consult</u> <u>P2) pericardium</u>					

FORM #040 (REV. 6/06)

PHYSICAL EXAMINATION

(OVER)

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

The table consists of approximately 35 horizontal rows and a single vertical column on the right side. All cells are empty.

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

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14

Cummings Veterinary School  
Tufts University  
Foster Hospital for Small Animals

PATIENT DISCHARGE CHECKLIST

Date of Discharge 10/4/13

Time of Discharge A.M. 5:30 P.M.

Discharged by (please print) B6

Circle One: STUDENT WARD ATTENDANT ICU/MED TECH CLINICIAN

<b>Check List:</b>	Animal is Clean	<u>YES</u>	N/A
	Showed incision/wound to owner	<u>YES</u>	N/A
	Removed ECG pads	<u>YES</u>	N/A
	Catheter has been removed	<u>YES</u>	N/A
	Instructed owner to remove Pressure Wrap	<u>YES</u>	N/A
	Reviewed Discharge/Medication Orders	<u>YES</u>	N/A
	Returned owners' medication (brought from home)	<u>YES</u>	N/A

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FRONT DESK DISCHARGE

Discharged by (full name) \_\_\_\_\_ Clinician \_\_\_\_\_

DISCHARGE ORDERS COMPLETE YES NO Client Wait Time \_\_\_\_\_

ORDERS IN RECORD YES NO

RECORD IN DISCHARGE YES NO

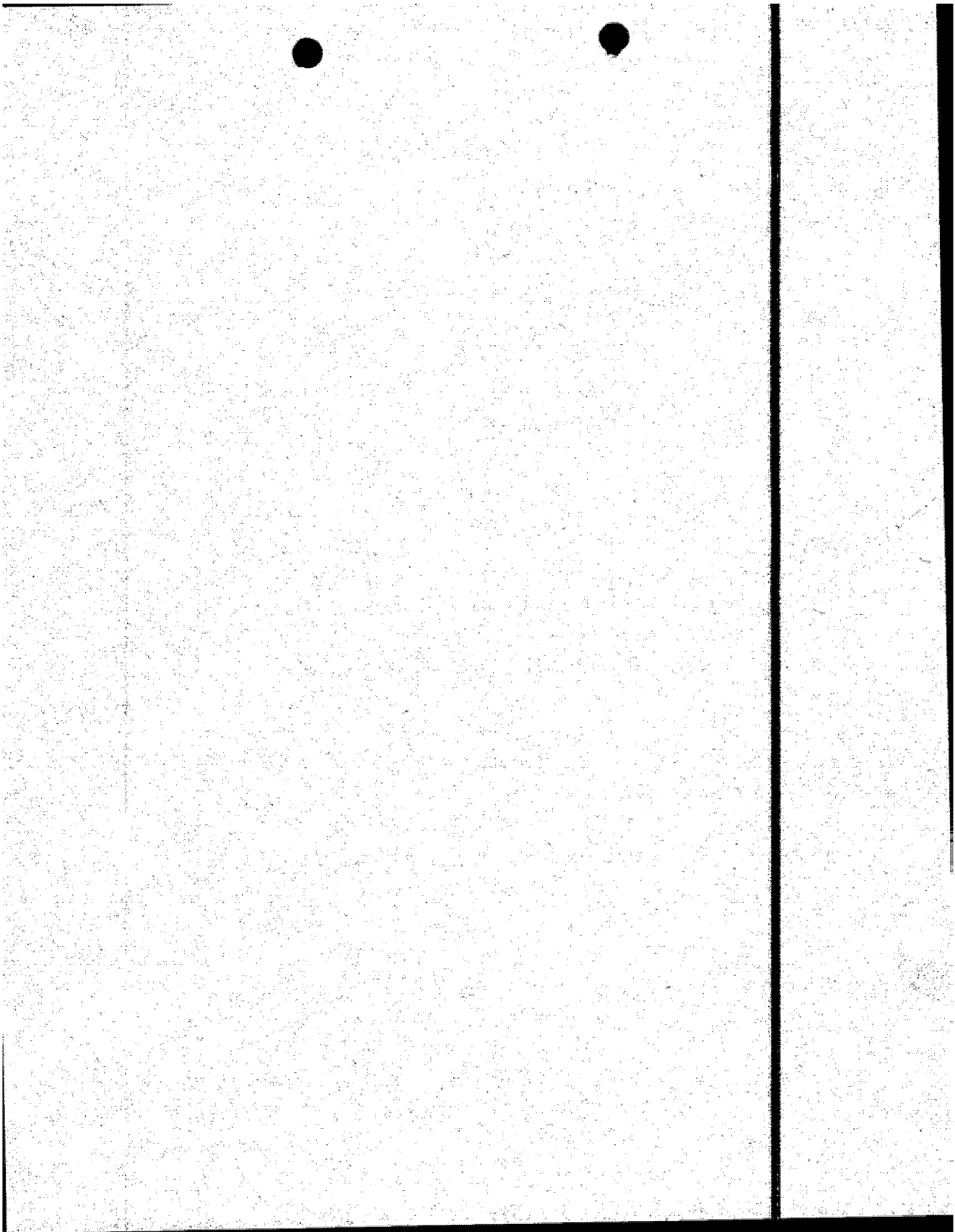
BILLING FOLDER IN RECORD YES NO N/A (day case)

PHARMACY COPY PULLED YES NO N/A

MEDICATION DISPENSED FROM PHARMACY YES NO GIVEN TO OWNER  
(Do not dispense left-over medication from Ward)

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



*LN*  
**TUFTS UNIVERSITY**  
**FOSTER HOSPITAL FOR SMALL ANIMALS**  
200 Westboro Road, N. Grafton, MA 01536

<b>B6</b>		
<b>B6</b>	FAWN	<b>B6</b>
	ROYAL	STO
<b>B6</b>		CANINE

IV CATHETER SITE(S): 18last plus cut DATE PLACED: 10-1-13 INITIALS: Pr  
CLINICAL SUMMARY: 3rd Degree AV-Block  
DATE: 10/1/13 CAGE # 40025 DIET: 6/4/1ald WATER: ad lib

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14


**B6**

OTHER VOMIT STOOL URINATION TIME

OBSERVATIONS (Describe characteristics of event)

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



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*1/2  
cat*

**B6**

**B6** FAWN CM STO  
BOXER CANINE

IV CATHETER SITE(S): ① cephalic DATE PLACED: 10/1/13 INITIALS: \_\_\_\_\_

CLINICAL SUMMARY: 3rd degree AV block

*\* NO NECK LEADS \**

DATE: 10/2/13 CAGE #: 110 P5 DIET: W/D FOOD WATER: FL WEIGHT: 20.3 LBS

**B6**

STUDENT: \_\_\_\_\_ **B6** CLINICIAN: \_\_\_\_\_ **B6** Rush  
HOME PHONE NO.: \_\_\_\_\_

FORM #322 (REV. 6/05)

DAILY RECORD

PAGE 1 OF 2

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14


**B6**

OTHER	VOMIT	STOOL	URINATION	
OBSERVATIONS (Describe characteristics of event)				



Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



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**B6**

**B6** FAWN CH STU  
BOXER CANINE  
**B6**

IV CATHETER SITE(S): \_\_\_\_\_ DATE PLACED: \_\_\_\_\_ INITIALS: \_\_\_\_\_

CLINICAL SUMMARY: \_\_\_\_\_

Page 2

\*NO NEW LEADS\*

DATE: 10/2/13 CAGE #: 10V R5 DIET: canine maintenance WATER: F/C WEIGHT: 25.7 kg

TREATMENT PLAN  
RECORD OBSERVATIONS

MONITORING

**B6**

STUDENT: **B6** CLINICIAN: **B6** *Rush*

HOME PHONE NO.: \_\_\_\_\_

FORM #322 (REV. 6/05)

DAILY RECORD

PAGE 2 OF 2



Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



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22

**B6**  
B6 FAWN CH STD  
BOXER CAMELINE  
**B6**

IV CATHETER SITE(S): ② cephalic DATE PLACED: 10/1/13 INITIALS: \_\_\_\_\_

CLINICAL SUMMARY: pacemaker placed 10/2/13 d/t AV block (complete)  
\*NO NECK LEADS\*

DATE: 10/3/13 CAGE #: ICU R5 DIET: \_\_\_\_\_ WATER: F/C WEIGHT: 25.1 kg (w) kline

TREATMENT PLAN  
RECORD OBSERVATIONS

MONITORING

**B6**

DAILY RECORD

PAGE 1 OF 1

Client: **B6**  
Patient:

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14


**B6**

OTHER	VOMIT	STOOL	URINATION	TIME
OBSERVATIONS (Describe characteristics of event)				

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14



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**FOSTER HOSPITAL FOR SMALL ANIMALS**  
200 Westboro Road, N. Grafton, MA 01536

U

**B6**

<b>B6</b>	PAWN	CN	STD
	BOXER	CANINE	
<b>B6</b>			

IV CATHETER SITE(S): @ cephalic DATE PLACED: 10/1/13 INITIALS: \_\_\_\_\_

CLINICAL SUMMARY: pacemaker placed 10/2/13 - complete AV block

DATE: 10/4/13 CAGE #: 10U #5 DIET: WATER: F/c WEIGHT: 24.8 KG

TREATMENT PLAN  
RECORD OBSERVATIONS

MONITORING

**B6**

Client:  
Patient:

**B6**

Archived Records 10/1/13-10/4/13 (PART ONE) & 10/11/13-2/7/14


**B6**

TIME	URINATION	STOOL	VOMIT	OTHER
------	-----------	-------	-------	-------

OBSERVATIONS  
(Describe characteristics of event)

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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:** 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  
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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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<sup>d</sup> Department of Cell and Molecular Pharmacology and Experimental Therapeutics, Medical University of South Carolina, 173 Ashley Avenue, MSC-505, Charleston, SC 29425, USA

<sup>e</sup> Georgia Aquarium, 225 Baker Street, Atlanta, GA 30313, USA

### 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

#### Article history:

Received 16 September 2011

Received in revised form 20 January 2012

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Available online 15 June 2012

#### Keywords:

Mercury

Selenium

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**

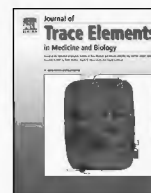
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# Journal of Trace Elements in Medicine and Biology

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Pathobiochemistry

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



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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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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**

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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.

# 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
- Mild muscle loss
- Moderate cachexia
- Marked cachexia

#### Cardiovascular Physical Exam

##### Murmur Grade:

- None
- I/VI
- IV/VI
- V/VI

- II/VI
- III/VI

- V/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

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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 Bowner;
- Purina ProPlan Adult Weight Management.

**Medications:**

**B6**

**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/>

---

**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



---

**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, snacks, 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 cups	2x/day	Jan 2015
85% lean hamburger	microwave	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> (Bison)	dry	3 cups	1x/day	2012
Framm Classic, mature	dry	4 cups	1x/day	2018 Sep
baby carrots	treat	3-4	day	2010 <sup>14</sup>
green pepper + other veggies + fruit	treat	1-2	week	2010
K9 Granddaddy 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	started 09/09/18	250mg 4x/day x2
Carnitine		
Antioxidants		
Multivitamin		
Fish oil		
Coenzyme Q10		
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™  
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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.

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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)

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

# 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.





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**

**B6**

**Initial Complaint:**

**Initial Complaint:**

**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

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:

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:

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**

Diet Hx 5/3/2019

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

**B6**

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
Nutra 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 chews &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: **B6**

**Idexx NT-proBNP 5/3/2019**

IDEXX Reference Laboratories

Client: RODRIGUES Patient: CHLDE

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: LABRADOR RETRIE  
Gender: FEMALE SPAYED  
Age: 5Y

Date: 05/03/2019  
Requisition #: 1A  
Accession #: **B6**  
Ordered by: **B6**

IDEXX VetConnect 1-888-433-9967  
**TUFTS UNIVERSITY**  
200 WES TBORO RD  
NORTH GRAFTON, Massachusetts 01536  
508-839-5395  
Account: **B6**

**CARDIOPET proBNP- CANINE**

Test	Result	Reference Range	Unit	Method	Upr
CARDIOPET proBNP-CANINE	<b>B6</b>	0-900 pmol/L			<b>B6</b>

**Comments**

1 **B6**

Please refer complete interpretive comments for all concentrations of Cardiotopet 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: glab@cvm.tamu.edu  
vetmed.tamu.edu/gilab

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
<u>Purina Pro Plan</u>	<u>dry</u>	<u>1 1/2</u>	<u>2x/day</u>	<u>Jan 2016-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 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	Unit	Method	Unit
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 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:

**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: glab@cvm.tamu.edu  
vetmed.tamu.edu/glab

**From:** Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>  
**To:** Carey, Lauren; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L; Rotstein, David  
**Sent:** 6/10/2019 2:53:18 PM  
**Subject:** FW: Solid Gold Mighty Mini Beef: Lisa Freeman - EON-380716  
**Attachments:** 2063119-report.pdf; Solid Gold Mighty Mini Beef: Lisa Freeman - EON-390030; 2063119-attachments.zip

This is a Dr. Freeman report (follow-up)-not sure if this is one that you were working on.

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>  
**Sent:** Sunday, February 24, 2019 6:57 PM  
**To:** Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; **B6**  
**Subject:** Solid Gold Mighty Mini Beef: Lisa Freeman - EON-380716

A PFR Report has been received and PFR Event [EON-380716] has been created in the EON System.

A "PDF" report by name "2063119-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 "2063119-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380716

**ICSR #:** 2063119

**EON Title:** PFR Event created for Solid Gold Mighty Mini Beef Sweet Potato and Apple grain free dry; 2063119

<b>AE Date</b>	01/02/2019	<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>	Chihuahua		
<b>Age</b>	9 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2063119

**Product Group:** Pet Food

**Product Name:** Solid Gold Mighty Mini Beef, Sweet Potato, and Apple grain free dry

**Description:** Has been regularly rechecked after B6 Progressive reduction in left ventricular contractile function noted on most recent echo. Eating BEG diet. Owner changed to Royal Canin Early Cardiac diet and we will recheck in April

**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
Solid Gold Mighty Mini Beef, Sweet Potato, and Apple grain free 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-380716>

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=397725>

=====

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---

**From:** Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>  
**To:** Carey, Lauren; Cleary, Michael \*; HQ Pet Food Report Notification; [B6]  
**Sent:** 6/10/2019 2:48:46 PM  
**Subject:** Solid Gold Mighty Mini Beef: Lisa Freeman - EON-390030  
**Attachments:** 2067990-report.pdf; 2067990-attachments.zip

A PFR Report has been received and Related PFR Event [EON-390030] has been created in the EON System.

A "PDF" report by name "2067990-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 "2067990-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-390030

**ICSR #:** 2067990

**EON Title:** Related PFR Event created for Solid Gold Mighty Mini Beef Sweet Potato and Apple grain free dry; 2067990

<b>AE Date</b>	01/02/2019	<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>	Better/Improved/Recovering
<b>Breed</b>	Chihuahua		
<b>Age</b>	9 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2067990

**Product Group:** Pet Food

**Product Name:** Solid Gold Mighty Mini Beef, Sweet Potato, and Apple grain free dry

**Description:** Has been regularly rechecked after [B6] Progressive reduction in left ventricular contractile function noted on most recent echo. Eating BEG diet. Owner changed to Royal Canin Early Cardiac diet and we will recheck in April April cardiology recheck - echo measurements improved overall - eating Royal Canin Cardiac diet, no additional medications prescribed. [B6] remains occluded. Patient has purposefully lost

weight.

**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:** 1

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

Product Name	Lot Number or ID	Best By Date
Solid Gold Mighty Mini Beef, Sweet Potato, and Apple grain free dry		

This report is linked to:

**Initial EON Event Key:** EON-380716

**Initial ICSR:** 2063119

**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-390030>

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=407302&parentIssueTypeId=12>

=====

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.

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

Diet Hx 4/5/19

# 338315

CARDIOLOGY DIET HISTORY FORM

Please answer the following questions about your pet  
Pet's name: **B6** Owner's name: **B6** Today's date: 4/5/19

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
rice cake - salt free (1/4 case)	treat		1x day	
Solid Gold Mighty Mini - Sweet Potato "Apple recipe"	dry	1/4 cup	split 2x 1x daily	prior to 1-2-19
Royal Canin - Early Careo	dry	1/4 cup	split 2x daily	Jan 19 - 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 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 (liquid)
- 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**

NT-proBNP 4/5/19

IDEXX Reference Laboratories

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

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: CHIHUAHUA  
Gender:  
Age: 9Y

Date: 04/05/2019  
Requisition #: 330315  
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 Interval	Unit	Method	Flag
CARDIOPET proBNP - CANINE	<b>B6</b>	0 - 988 pmol/L			<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.



Gastrointestinal Laboratory  
 Dr. J.M. Steiner  
 Department of Small Animal Clinical Sciences  
 Texas A&M University  
 4474 TAMU  
 College Station, TX 77843-4474



Website User ID: **B6**

GI Lab Assigned Clinic ID: 23523

<b>B6</b>	Phone:	508 887 4696
Tufts Cummings School of Vet Med - Cardiology/Nutrition	Fax:	
200 Westboro Road	Animal Name:	<b>B6</b>
North Grafton, MA 01536	Owner Name:	<b>B6</b>
USA	Species:	Canine
	Date Received:	May 30, 2019

Tufts Cummings School of Vet Med - Cardiology/Nutrition Tracking Number: 338315  
 GI Lab Accession: **B6**

<u>Test</u>	<u>Result</u>	<u>Reference Interval</u>	<u>Assay Date</u>
Ultra-Sensitive Troponin I Fasting	<b>B6</b> ng/mL	≤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

26346

# 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)



**B6**

338315 - Canine  
1/2/2019 10:35 AM  
TAURINE (WHOLE BLOOD)  
Lithium Heparin

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 / cardiuvet@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: Chihuahua

Owner's Name: **B6**

Current Diet: Solid Gold Weebites

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

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

## Taurine Results (lab use only)

Plasma: \_\_\_\_\_ 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.



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: 508 887 4669  
 Fax: 9 508 839 7936  
 Animal Name: **B6**  
 Owner Name:  
 Species: Canine  
 Date Received: Mar 06, 2019

Tufts University-Clinical Pathology Lab  
 Tracking Number: 337144

GI Lab Accession: **B6**

<u>Test</u>	<u>Result</u>	<u>Reference Interval</u>	<u>Assay Date</u>
Ultra-Sensitive Troponin I Fasting	<b>B6</b>	≤0.06	03/06/19

**B6**

Comments:

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Tufts University-Clinical Pathology Lab  
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**B6**

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Website User ID: Cardiovet@tufts.edu OR clinpath@tufts.edu

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College Station, TX 77843-4474



**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 >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  
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Email: [gilab@cvm.tamu.edu](mailto:gilab@cvm.tamu.edu)  
[vetmed.tamu.edu/gilab](http://vetmed.tamu.edu/gilab)

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 11/10/2018 6:44:26 PM  
**Subject:** Wellness Simple Limited Ingredient Diet Grain-Free Healthy Weight Salmon & Peas Formula Dry Dog Food B6 EON-370755  
**Attachments:** 2058695-report.pdf; 2058695-attachments.zip

A PFR Report has been received and PFR Event [EON-370755] has been created in the EON System.

A "PDF" report by name "2058695-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 "2058695-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-370755

**ICSR #:** 2058695

**EON Title:** PFR Event created for Wellness Simple Limited Ingredient Diet Grain-Free Healthy Weight Salmon & Peas Formula Dry Dog Food; 2058695

<b>AE Date</b>	08/06/2018	<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>	Unknown
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	<span style="border: 1px dashed black; padding: 2px;">B6</span> Years		
<b>District Involved</b>	PFR <span style="border: 1px dashed black; padding: 2px;">B6</span> DO		

**Product information**

**Individual Case Safety Report Number:** 2058695

**Product Group:** Pet Food

**Product Name:** Wellness Simple Limited Ingredient Diet Grain-Free Healthy Weight Salmon & Peas Formula Dry Dog Food

**Description:** Low taurine level, eating Wellness Simple grain free for 3 months prior to testing and Wellness Core Low fat Grain Free food for 3 years before that. Taurine level wa B6 Echo showed NO DCM

**Submission Type:** Initial

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

**Outcome of reaction/event at the time of last observation:** Unknown

**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>
Wellness Simple Limited Ingredient Diet Grain-Free Healthy Weight Salmon & Peas Formula Dry Dog Food		

**Sender information**

**B6**

USA

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

<https://eon.fda.gov/eon//browse/EON-370755>

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=387724>

=====

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**B6**

**Cardiology Report**

Dr. **B6**

**B6** is a 6-year-old FS golden retriever belonging to **B6** who presented to the **B6** **B6** for a cardiac evaluation.

Cardiac Diagnosis: Normal echocardiogram.

Chief Concerns/Major History: **B6** presented for an initial cardiac examination. He is part of a Golden Retriever lifetime study. Recent bloodwork showed a low normal taurine level of under 250 **B6** so it was suggested that he receive an echocardiogram. **B6** is doing well at home and not showing any clinical signs of heart disease. He is eating a low fat grain free diet. **B6** is currently receiving eye medication for **B6**

Cardiology Exam:

**B6**

CV: I/VI left apical systolic heart murmur. Regular rhythm. Strong and synchronous pulses.

**B6**

Echocardiogram Subjective Findings: **B6**

**B6**

Echocardiogram Objective Findings: **B6**

**B6**

Assessment/Recommendations: There is no evidence of significant cardiomyopathy seen on this exam. There are trace insufficiencies of the mitral and tricuspid valves, which are hemodynamically insignificant at this time. No cardiac medications are warranted at this time. Consider switching to a non-grain-free diet due to low normal contractile function.

Medications: No cardiac medications warranted at this time.

Follow-up: No recheck necessary unless signs of a heart murmur is ausculted or an arrhythmia is seen or ausculted.

Thank you very much for allowing me to be of service to you and your clients. Please feel free to contact me with any questions or concerns.

**B6** DVM, DACVIM (Cardiology)



STERN CARDIAC GENETICS LABORATORY  
 JOSHUA A. STERN, DVM, PHD, DACVIM (CARDIOLOGY)  
[sterngenetics@ucdavis.edu](mailto:sterngenetics@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 clinical reference ranges be used for Golden Retrievers and be considered for other known taurine-sensitive breeds such as Newfoundlands 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.

- Normal whole blood taurine: >250nmol/mL
- Normal plasma taurine: >70nmol/mL
- Marginal whole blood taurine: 200-250nmol/mL
- Marginal plasma taurine: 60-70nmol/mL
- Low whole Blood taurine: <200nmol/mL
- Low plasma taurine: <60nmol/mL

#### References:

- Kramer GA, Kittleson MD, Fox PR, Lewis J, Pion PD. Plasma taurine concentrations with normal dogs and in dogs with heart disease. *J Vet Intern Med* 1995;9:253-258.
- Belanger MC, Ouellet M, Queney G, Moreau M. Taurine-deficient dilated cardiomyopathy in a family of golden retrievers. *J Am Anim Hosp Assoc* 2005;41:284-291.
- Kittleson MD, Keene B, Pion PD, Loyer CG, MUST Study Investigators. Results of the multicenter spaniel trial (MUST): taurine- and carnitine-responsive dilated cardiomyopathy in American Cocker Spaniels with decreased plasma taurine concentration. *J Vet Intern Med* 1197;11:204-211.
- Backus RC, Choen G, Pion PD, Good KL, Rogers QR, Fascetti AJ. Taurine deficiency in Newfoundlands fed commercially available complete and balanced diets. *J Am Vet Med Assoc* 2003;223:1130-1136.
- Fascetti AJ, Reed JR, Rogers QR, Backus RC. Taurine deficiency in dogs with dilated cardiomyopathy: 12 cases (1997-2001). *J Am Vet Med Assoc* 2003;223:1137-1141.
- Freeman LM, Michel KE, Brown DJ, Kaplan PM, Stamoulis ME, Rosenthal SL, Keene BW, Rush JE. Idiopathic dilated cardiomyopathy in Dalmatians: nine cases (1990-1995). *J Am Vet Med Assoc* 1996;209:1592-1596.
- Delaney SJ, Kass PH, Rogers QR, Fascetti AJ. Plasma and whole blood taurine in normal dogs of varying size fed commercially prepared food. *J Anim Physiol a Anim Nutr* 2003;87:236-244.

#### 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 DCM, 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 utilized for our reference ranges was generated. <https://www.vetmed.ucdavis.edu/labs/amino-acid-laboratory>. 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.

## **Clinical Recommendations for Golden Retrievers based on taurine levels:**

### If taurine levels test <200nmol/mL in whole blood or <60nmol/mL in plasma

- An echocardiogram by a board-certified veterinary cardiologist is indicated
- After echocardiogram has been completed, a diet change is recommended.
  - If DCM is diagnosed, this patient may need a variety of cardiac medications that would be prescribed by the attending cardiologist.
  - If DCM 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 taurine-deficient DCM in our study showed slow and steady improvement over a period of 6-12 months.

### If taurine levels test 200 – 250nmol/mL in whole blood or 60-70nmol/mL 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 thus the value of screening should be carefully considered. If the dog is eating a diet that falls within the FDA warning or shares features with the diets 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 on the new diet should be considered.
- If DCM is diagnosed, this patient may need a variety of cardiac medications that would be prescribed by the attending cardiologist.
  - If DCM 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 taurine-deficient DCM in our study showed slow and steady improvement over a period of 6-12 months.

### If taurine levels test >250nmol/mL in whole blood or >70nmol/mL in plasma

- Diet change is recommended if you are feeding a diet that falls within the FDA warning or shares features with the diets identified in our study (see diets of concern section below)
- If your pet shows any signs of cardiac disease (trouble breathing, exercise intolerance, fainting/collapse, coughing) we recommend your veterinarian evaluate your pet.

## **Diets of Concern & Choosing 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 legumes like peas and lentils, white or sweet potatoes). These findings were largely recapitulated in our current study of Golden Retrievers with low taurine levels and DCM. 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 Guidelines published as consensus by veterinary nutritionists from around the world:
  - <https://www.wsava.org/WSAVA/media/Arpita-and-Emma-editorial/Selecting-the-Best-Food-for-your-Pet.pdf>
- FDA alert found here:
  - <https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm613305.htm>

## **Choosing a taurine or l-carnitine supplement:**

Selecting supplements should be performed based upon those that match their stated contents and are readily available for absorption. Luckily a previous publication tested multiple taurine and l-carnitine supplements. Based upon this publication our laboratory recommends the following supplements as those meeting our quality criteria. (Bragg et al. 2009 J Am Vet Med Assoc; 234(2))

### Tested taurine supplements that test within 5% of stated contents and if applicable disintegrated within 30 minutes

- Mega taurine caps by Twinlab (1000 capsule)
- Taurine by Swanson Health Products (500mg capsule)
- Taurine by NOW foods (500mg capsule)
- Taurine 500 by GNC (500mg tablet)

### Tested L-carnitine supplements that test within 5% of stated contents and if applicable disintegrated within 30 minutes

- L-carnitine 500 by Jarrow Formulas (500mg capsule)
- L-carnitine caps by Country Life (500mg capsule)
- Maxi L-carnitine by Solgar Vitamin and Herb (500mg tablet)
- L-carnitine by Puritan's Pride (500mg tablet)

The Stern lab does not recommend the empirical supplementation of taurine or l-carnitine to dogs without evidence of DCM and/or significant deficiency. If DCM is diagnosed we typically recommend dogs over 50lbs receive 1000mg of taurine every 12hrs and dogs under 50lbs receive 500mg of taurine every 12hours. 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 prescribing the best dose for your dog.

## **Reporting to the FDA:**

Understanding the basis of this condition requires a great deal of research and investigation. Clients 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/animalveterinary/safetyhealth/reportaproblem/ucm182403.htm>

Additional questions or comments:

[sterngenetics@ucdavis.edu](mailto:sterngenetics@ucdavis.edu)

This document last updated: Aug. 20, 2018

Page 3 of 3

---

**From:** Palmer, Lee Anne </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=CF7C8BD53B6C45A39318A596ACEA7C53-LPALMER>  
**To:** Reimschuessel, Renate; Ceric, Olgica; Nemser, Sarah; Jones, Jennifer L; Peloquin, Sarah  
**CC:** Rotstein, David; Carey, Lauren; Hartogensis, Martine  
**Sent:** 8/1/2018 12:11:35 PM  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] EON-359970

Thanks – I have been following a FB page from my home computer (without commenting in any way, of course). I wonder if it's the same – many had been working with Josh Stern at UC Davis. Hopefully some will report to us as well.

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**Sent:** Wednesday, August 1, 2018 8:01 AM  
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I'm sharing the file for your additional information.

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*Phone 1-240-402-5404*

*Fax 301-210-4685*

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

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**Sent:** Tuesday, July 31, 2018 10:57 PM  
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**To:** Palmer, Lee Anne; Hartogensis, Martine; Ceric, Olgica; Nemser, Sarah; Jones, Jennifer L; Peloquin, Sarah  
**CC:** Rotstein, David; Carey, Lauren  
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**To:** Reimschuessel, Renate; Palmer, Lee Anne; Hartogensis, Martine; Ceric, Olgica; Nemser, Sarah; Peloquin, Sarah  
**CC:** Rotstein, David; Carey, Lauren  
**Sent:** 8/1/2018 12:25:18 PM  
**Subject:** RE: 800.267-FDA Case Investigation for [REDACTED] EON-359970

Yes-Josh was in a group we spoke with. He mentioned his cases all involved Acana. After speaking w/ Andrea Fascetti at Davis, [REDACTED] B5

[REDACTED] B5

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



**From:** Reimschuessel, Renate  
**Sent:** Wednesday, August 01, 2018 8:20 AM  
**To:** Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Hartogensis, Martine <Martine.Hartogensis@fda.hhs.gov>; Ceric, Olgica <Olgica.Ceric@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>; Peloquin, Sarah <Sarah.Peloquin@fda.hhs.gov>  
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**From:** Palmer, Lee Anne  
**Sent:** Wednesday, August 1, 2018 8:16 AM  
**To:** Hartogensis, Martine <Martine.Hartogensis@fda.hhs.gov>; Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>; Ceric, Olgica <Olgica.Ceric@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>; Peloquin, Sarah <Sarah.Peloquin@fda.hhs.gov>  
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**To:** [REDACTED] B6  
**CC:** 'Reimschuessel, Renate (Renate.Reimschuessel@fda.hhs.gov)'; Peloquin, Sarah  
**Sent:** [REDACTED] B6 5:40:43 PM  
**Subject:** 800.267-cc-295-RE: Necropsy authorization  
**Attachments:** 02-Vet-LIRN-NetworkProceduresVets-12.22.2015.pdf; 03-Vet-LIRN-NetworkProceduresOwners-12.22.2015.pdf

Good afternoon [REDACTED] B6

Thank you for contacting us about your case. As we discussed on the phone, for me to send you a box to collect the samples, I'll need an official report. You can mention in the report, that I recommended you submit a complaint. Can you please submit a consumer complaint here?

<https://www.safetyreporting.hhs.gov/>

- Please send me the ICSR number (confirmation code) from the report.

We will send you 2 boxes with the materials to collect the fixed and frozen samples, including jars with formalin. You will reuse the boxes we send and package the samples per the instructions in the box.

- Please send me an estimate for the necropsy. After the necropsy is complete, we will call back with our VISA information to reimburse your hospital.
- After the necropsy is complete, please send me the approximate weight of the following individual groups:
  - Fixed tissues in the jars
  - Frozen tissues

We will use this information to make prepaid shipping labels for you. You'll affix the prepaid shipping label to the box and call UPS for a pick-up on Monday-Wednesday.

I attached a copy of our network procedures. They explain how Vet-LIRN operates and how veterinarians help with our case investigations. An owner friendly version is also attached.

For more information, please also visit our open access article in JAVMA that explains the FDA Animal Food Concern Reporting process. It's free and located here: <https://avmajournals.avma.org/doi/pdf/10.2460/javma.253.5.550>

Thank you again,  
Jen

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



**From:** [REDACTED] B6  
**Sent:** Tuesday, [REDACTED] B6 12:33 PM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** Necropsy authorization

Dear Dr. Jones,

I left a message on your number this morning but figured I would also follow up with an email. Dr. Josh Stern gave us your contact information – I reached out to both Renate and Sarah but both appear out of the office today. We have a nutrition mediated DCM case, diagnosed at UC Davis that will be euthanized [REDACTED] B6 [REDACTED] B6 is in CHF and isn't responding to treatment. She is a 3.5yroid, FS, Golden Retriever. The owner is willing to submit the body/tissues towards research on this condition. Please give me a call at your earliest convenience

to discuss next steps

**B6**

Sincerely,

**B6**

**B6**

**B6**

Tel:

**B6**

Fax:

**B6**

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Facebook

Find us on Yelp 



**From:** Nemser, Sarah </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5FC1EB8D2F5944ECAA02F40E225C2054-SNEMSER>  
**To:** Jones, Jennifer L  
**Sent:** [B6] 11:44:34 PM  
**Subject:** FW: Necropsy authorization

Forwarding this one on - DCM

**Sarah Nemser M.S.**

**Vet-LIRN Network Coordinator**

**tel: 240-402-0892**

**fax: 301-210-4685**

**sarah.nemser@fda.hhs.gov**

**From:** [B6]  
**Sent:** [B6] 12:01 PM  
**To:** Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>  
**Subject:** Necropsy authorization

Hi Sarah,

I left a message on your number this morning but figured I would also follow up with an email. Dr. Josh Stern gave us your contact information. We have a nutrition mediated DCM case, diagnosed at UC Davis that will be euthanized this afternoon. [B6] is in CHF and isn't responding to treatment. She is a 3.5yold, FS, Golden Retriever. The owner is willing to submit the body/tissues towards research on this condition. [B6] is out of the office today. Please give me a call at your earliest convenience to discuss next steps [B6]

Sincerely,

[B6]

**B6**

**B6**





STERN CARDIAC GENETICS LABORATORY  
 JOSHUA A. STERN, DVM, PHD, DACVIM (CARDIOLOGY)  
[sterngenetics@ucdavis.edu](mailto:sterngenetics@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 clinical reference ranges be used for Golden Retrievers and be considered for other known taurine-sensitive breeds such as Newfoundlands 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.

- Normal whole blood taurine: >250nmol/mL
- Normal plasma taurine: >70nmol/mL
- Marginal whole blood taurine: 200-250nmol/mL
- Marginal plasma taurine: 60-70nmol/mL
- Low whole Blood taurine: <200nmol/mL
- Low plasma taurine: <60nmol/mL

#### References:

- Kramer GA, Kittleson MD, Fox PR, Lewis J, Pion PD. Plasma taurine concentrations with normal dogs and in dogs with heart disease. *J Vet Intern Med* 1995;9:253-258.
- Belanger MC, Ouellet M, Queney G, Moreau M. Taurine-deficient dilated cardiomyopathy in a family of golden retrievers. *J Am Anim Hosp Assoc* 2005;41:284-291.
- Kittleson MD, Keene B, Pion PD, Loyer CG, MUST Study Investigators. Results of the multicenter spaniel trial (MUST): taurine- and carnitine-responsive dilated cardiomyopathy in American Cocker Spaniels with decreased plasma taurine concentration. *J Vet Intern Med* 1197;11:204-211.
- Backus RC, Choen G, Pion PD, Good KL, Rogers QR, Fascetti AJ. Taurine deficiency in Newfoundlands fed commercially available complete and balanced diets. *J Am Vet Med Assoc* 2003;223:1130-1136.
- Fascetti AJ, Reed JR, Rogers QR, Backus RC. Taurine deficiency in dogs with dilated cardiomyopathy: 12 cases (1997-2001). *J Am Vet Med Assoc* 2003;223:1137-1141.
- Freeman LM, Michel KE, Brown DJ, Kaplan PM, Stamoulis ME, Rosenthal SL, Keene BW, Rush JE. Idiopathic dilated cardiomyopathy in Dalmatians: nine cases (1990-1995). *J Am Vet Med Assoc* 1996;209:1592-1596.
- Delaney SJ, Kass PH, Rogers QR, Fascetti AJ. Plasma and whole blood taurine in normal dogs of varying size fed commercially prepared food. *J Anim Physiol a Anim Nutr* 2003;87:236-244.

#### 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 DCM, 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 utilized for our reference ranges was generated. <https://www.vetmed.ucdavis.edu/labs/amino-acid-laboratory>. 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.

## **Clinical Recommendations for Golden Retrievers based on taurine levels:**

### If taurine levels test <200nmol/mL in whole blood or <60nmol/mL in plasma

- An echocardiogram by a board-certified veterinary cardiologist is indicated
- After echocardiogram has been completed, a diet change is recommended.
  - If DCM is diagnosed, this patient may need a variety of cardiac medications that would be prescribed by the attending cardiologist.
  - If DCM 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 taurine-deficient DCM in our study showed slow and steady improvement over a period of 6-12 months.

### If taurine levels test 200 – 250nmol/mL in whole blood or 60-70nmol/mL 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 thus the value of screening should be carefully considered. If the dog is eating a diet that falls within the FDA warning or shares features with the diets 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 on the new diet should be considered.
- If DCM is diagnosed, this patient may need a variety of cardiac medications that would be prescribed by the attending cardiologist.
  - If DCM 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 taurine-deficient DCM in our study showed slow and steady improvement over a period of 6-12 months.

### If taurine levels test >250nmol/mL in whole blood or >70nmol/mL in plasma

- Diet change is recommended if you are feeding a diet that falls within the FDA warning or shares features with the diets identified in our study (see diets of concern section below)
- If your pet shows any signs of cardiac disease (trouble breathing, exercise intolerance, fainting/collapse, coughing) we recommend your veterinarian evaluate your pet.

## **Diets of Concern & Choosing 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 legumes like peas and lentils, white or sweet potatoes). These findings were largely recapitulated in our current study of Golden Retrievers with low taurine levels and DCM. 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 Guidelines published as consensus by veterinary nutritionists from around the world:
  - <https://www.wsava.org/WSAVA/media/Arpita-and-Emma-editorial/Selecting-the-Best-Food-for-your-Pet.pdf>
- FDA alert found here:
  - <https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm613305.htm>

## **Choosing a taurine or l-carnitine supplement:**

Selecting supplements should be performed based upon those that match their stated contents and are readily available for absorption. Luckily a previous publication tested multiple taurine and l-carnitine supplements. Based upon this publication our laboratory recommends the following supplements as those meeting our quality criteria. (Bragg et al. 2009 J Am Vet Med Assoc; 234(2))

### Tested taurine supplements that test within 5% of stated contents and if applicable disintegrated within 30 minutes

- Mega taurine caps by Twinlab (1000 capsule)
- Taurine by Swanson Health Products (500mg capsule)
- Taurine by NOW foods (500mg capsule)
- Taurine 500 by GNC (500mg tablet)

### Tested L-carnitine supplements that test within 5% of stated contents and if applicable disintegrated within 30 minutes

- L-carnitine 500 by Jarrow Formulas (500mg capsule)
- L-carnitine caps by Country Life (500mg capsule)
- Maxi L-carnitine by Solgar Vitamin and Herb (500mg tablet)
- L-carnitine by Puritan's Pride (500mg tablet)

The Stern lab does not recommend the empirical supplementation of taurine or l-carnitine to dogs without evidence of DCM and/or significant deficiency. If DCM is diagnosed we typically recommend dogs over 50lbs receive 1000mg of taurine every 12hrs and dogs under 50lbs receive 500mg of taurine every 12hours. 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 prescribing the best dose for your dog.

## **Reporting to the FDA:**

Understanding the basis of this condition requires a great deal of research and investigation. Clients 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/animalveterinary/safetyhealth/reportaproblem/ucm182403.htm>

Additional questions or comments:

[sterngenetics@ucdavis.edu](mailto:sterngenetics@ucdavis.edu)

This document last updated: Aug. 20, 2018

Page 3 of 3

27754 @PL (need rr)  
@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 015369

Email: Clinpath@tufts.edu **cardiovet@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: English Bulldog Owner's Name: **B6**

Current Diet: Core Wellness GRAIN Free

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.

---

**From:** Jones, Jennifer L </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0F6CA12EAA9348959A4CBB1E829AF244-JENNIFER.JO>  
**To:** Freeman, Lisa  
**CC:** Peloquin, Sarah  
**Sent:** [REDACTED] 11:05:51 AM  
**Subject:** RE: [REDACTED] time sensitive (cc-297)

Thank you, Lisa. I see Jake sent you the necropsy procedures. Yes, we can work on a prioritized list for veterinarians collecting limited tissue sets. We can also have veterinarians freeze the bodies until we send them supplies (esp. if large intact hearts).

Please have [REDACTED] veterinarian contact me directly to coordinate the sample collection and reimbursement. I'll be at my desk until 3 pm.

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



**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**Sent:** [REDACTED] 2:30 PM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** [REDACTED] - time sensitive  
**Importance:** High

Hi Jen  
I also left you a voice message but I just heard that [REDACTED] died suddenly. [REDACTED] This is one of at least 3 dogs in the household affected by DCM eating the same diet. We're actually scheduled to see the 3 dogs tomorrow and to evaluate a 4<sup>th</sup> dog in the household that has an elevated BNP. So, this is a particularly interesting household.

The referring vet contacted me and said the owner is bringing [REDACTED] in for cremation. He will ask if he can get samples for you but we'd need to know what tissues to get, how to store them, etc.

Please let me know next steps  
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)  
508-887-4523

**From:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Sent:** Tuesday, March 26, 2019 1:50 PM  
**To:** Freeman, Lisa <Lisa.Freeman@tufts.edu>

**Subject:** RE: Cobalt

Hi Lisa,

We based this on the 25 mg/kg diet for chicks, rats, and sheep per Mineral Tolerances of Animals 2<sup>nd</sup> Ed, 2005 (NRC). The cobalt in the products we tested was below 1 ppm.

Hope you're well,

Jen

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



**From:** Freeman, Lisa <[Lisa.Freeman@tufts.edu](mailto:Lisa.Freeman@tufts.edu)>  
**Sent:** Saturday, March 23, 2019 11:43 AM  
**To:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>  
**Subject:** Cobalt

Hi Jen,

In the Feb, 2019 Vet-LIRN report, it states that cobalt was tested in the diets and was within normal nutrient ranges recommended by AAFCO. Since Co is not an essential nutrient listed in the AAFCO profiles, are you using the max of 10 ppm that is for all species from AAFCO (ie, the level that "will not impair animal performance and should not produce unsafe residues in human food derived from that animal"?)

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)

---

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 12/4/2018 11:04:49 PM  
**Subject:** Earthborn Meadow Feast dry: Lisa Freeman - EON-372828  
**Attachments:** 2059621-report.pdf; 2059621-attachments.zip

A PFR Report has been received and PFR Event [EON-372828] has been created in the EON System.

A "PDF" report by name "2059621-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 "2059621-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-372828

**ICSR #:** 2059621

**EON Title:** PFR Event created for Earthborn Meadow Feast dry; 2059621

<b>AE Date</b>	11/20/2018	<b>Number Fed/Exposed</b>	5
<b>Best By Date</b>		<b>Number Reacted</b>	4
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Boxer (German Boxer)		
<b>Age</b>	3 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2059621

**Product Group:** Pet Food

**Product Name:** Earthborn Meadow Feast dry

**Description:** Eating BEG diet (Earthborn) Echo had subjectively reduced contractility; elevated NT-proBNP and cardiac troponin I Taurine pending Owner changing diet 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:** 5



**Number of Animals Reacted With Product: 4**

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
Earthborn Meadow Feast dry		

**Sender information**

Lisa Freeman  
200 Westboro Rd  
North Grafton, MA 01536  
USA

**Owner information**

B6  
B6  
USA

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

<https://eon.fda.gov/eon//browse/EON-372828>

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

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**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 12/4/2018 11:21:28 PM  
**Subject:** Earthborn Meadow Feast dry: Lisa Freeman - EON-372834  
**Attachments:** 2059624-report.pdf; 2059624-attachments.zip

A PFR Report has been received and PFR Event [EON-372834] has been created in the EON System.

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Below is the summary of the report:

**EON Key:** EON-372834

**ICSR #:** 2059624

**EON Title:** PFR Event created for Earthborn Meadow Feast dry; 2059624

<b>AE Date</b>	11/20/2018	<b>Number Fed/Exposed</b>	5
<b>Best By Date</b>		<b>Number Reacted</b>	4
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Boxer (German Boxer)		
<b>Age</b>	3 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2059624

**Product Group:** Pet Food

**Product Name:** Earthborn Meadow Feast dry

**Description:** Littermate diagnosed with reduced cardiac contractility Eating BEG diet (Earthborn) so screened all housemates Subjectively reduced contractility on echo and elevated NT-proBNP and cardiac troponin I Taurine pending Owner changing diet 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: 5**

**Number of Animals Reacted With Product: 4**

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
Earthborn Meadow Feast dry		

**Sender information**

Lisa Freeman  
200 Westboro Rd  
North Grafton, MA 01536  
USA

**Owner information**

**B6**  
**B6** USA

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

<https://eon.fda.gov/eon//browse/EON-372834>

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

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**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 2/24/2019 9:40:39 PM  
**Subject:** Purina One Smart Blend Lamb and Rice dry: Lisa Freeman - EON-380707  
**Attachments:** 2063114-report.pdf; 2063114-attachments.zip

A PFR Report has been received and PFR Event [EON-380707] has been created in the EON System.

A "PDF" report by name "2063114-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 "2063114-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380707

**ICSR #:** 2063114

**EON Title:** PFR Event created for Purina One Smart Blend Lamb and Rice dry; 2063114

<b>AE Date</b>	08/01/2018	<b>Number Fed/Exposed</b>	3
<b>Best By Date</b>		<b>Number Reacted</b>	1
<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:** 2063114

**Product Group:** Pet Food

**Product Name:** Purina One Smart Blend Lamb and Rice dry

**Description:** DCM and CHF diagnosed Aug 2018 We saw 1/11/19 - CHF still not well controlled Eating Purina Lamb and Rice - unlikely to be associated with DCM but reporting just in case Owner is now changing to different diet and will recheck in 3 months 2 other dogs eating same diet - we have not screened them yet. BNP = B6 troponin B6 but taurine normal (B6 plasma, B6 whole blood)

**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:** 1

Product Name	Lot Number or ID	Best By Date
Purina One Smart Blend Lamb and Rice dry		

**Sender information**

Lisa Freeman  
200 Westboro Rd  
North Grafton, MA 01536  
USA

**Owner information**

**B6**  
B6 USA

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

<https://eon.fda.gov/eon//browse/EON-380707>

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

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**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 2/24/2019 10:36:57 PM  
**Subject:** Fromm Large Breed Adult dry: Lisa Freeman - EON-380709  
**Attachments:** 2063117-report.pdf; 2063117-attachments.zip

A PFR Report has been received and PFR Event [EON-380709] has been created in the EON System.

A "PDF" report by name "2063117-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 "2063117-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380709

**ICSR #:** 2063117

**EON Title:** PFR Event created for Fromm Large Breed Adult dry; 2063117

<b>AE Date</b>	01/29/2019	<b>Number Fed/Exposed</b>	3
<b>Best By Date</b>		<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Poodle - Standard		
<b>Age</b>	16 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2063117

**Product Group:** Pet Food

**Product Name:** Fromm Large Breed Adult dry

**Description:** Murmur and arrhythmia ausculted by RDVM. Echoed by another cardiologist who referred to us for study. Eating Fromm Lg Breed Adult (not grain free) so unclear if diet related. Screened other 2 standard poodles in household eating same diet and their hearts were fine. Owners have changed diet for all 3 dogs to Iams MiniChunks and we 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:** 3

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

Product Name	Lot Number or ID	Best By Date
Fromm Large Breed Adult dry		

**Sender information**

Lisa Freeman  
200 Westboro Rd  
North Grafton, MA 01536  
USA

**Owner information**

<b>B6</b>
B6 USA

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

<https://eon.fda.gov/eon//browse/EON-380709>

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=397718>

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**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 2/25/2019 12:17:08 AM  
**Subject:** Earthborn Coastal Catch dry: Lisa Freeman - EON-380720  
**Attachments:** 2063120-report.pdf; 2063120-attachments.zip

A PFR Report has been received and PFR Event [EON-380720] has been created in the EON System.

A "PDF" report by name "2063120-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 "2063120-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-380720

**ICSR #:** 2063120

**EON Title:** PFR Event created for Earthborn Coastal Catch dry; 2063120

<b>AE Date</b>	02/01/2019	<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>	Retriever - Golden		
<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:** 2063120

**Product Group:** Pet Food

**Product Name:** Earthborn Coastal Catch dry

**Description:** Annual RDVM visit identified murmur. Echo done by mobile ultrasonographer showed DCM. We evaluated as part of study 2/1/19 - has DCM Eating BEG diet Changed to Pro Plan Weight management dry and we 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: 1**

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

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
Earthborn Coastal Catch 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-380720>

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=397729>

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Client:  
Patient:

**B6**

**Vitals Results**

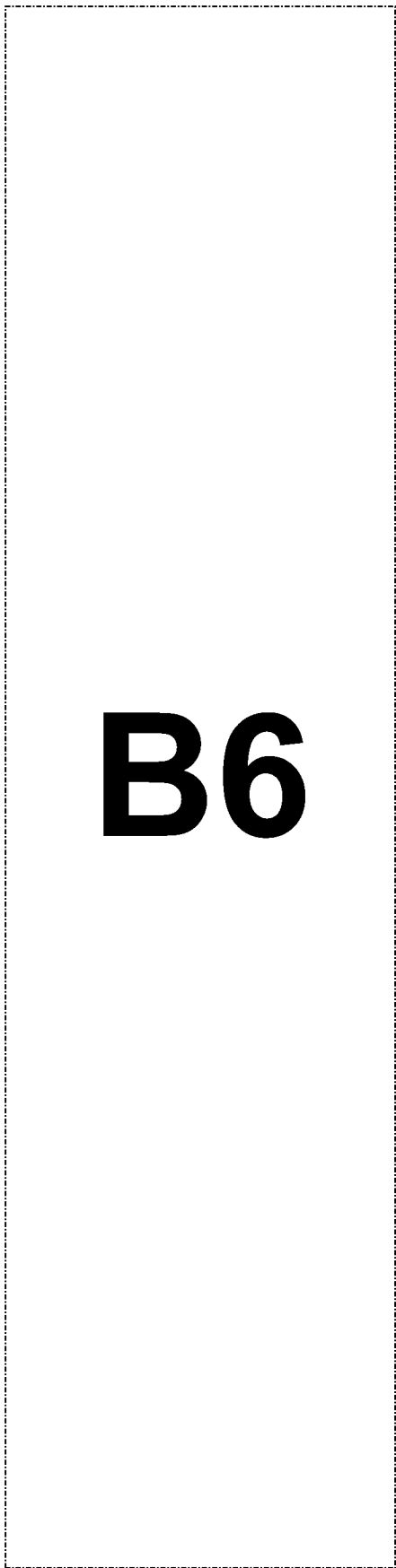
6/21/2017 8:42:45 AM	Eliminations
6/21/2017 9:05:55 AM	Respiratory Rate
6/21/2017 9:56:24 AM	Respiratory Rate
6/21/2017 10:20:08 AM	Heart Rate (/min)
6/21/2017 10:20:17 AM	Temperature (F)
6/21/2017 11:20:32 AM	Respiratory Rate
6/21/2017 11:28:48 AM	Quantify IV fluids (mls)
6/21/2017 11:29:15 AM	Nursing note
6/21/2017 11:57:30 AM	Heart Rate (/min)
6/21/2017 11:57:41 AM	Respiratory Rate
6/21/2017 1:34:24 PM	Respiratory Rate
6/21/2017 1:42:09 PM	Heart Rate (/min)
6/21/2017 1:42:15 PM	Respiratory Rate
6/21/2017 2:52:19 PM	Respiratory Rate
6/21/2017 3:47:24 PM	Quantify IV fluids (mls)
6/21/2017 3:49:14 PM	Heart Rate (/min)
6/21/2017 3:50:21 PM	Nursing note
6/21/2017 3:54:12 PM	Respiratory Rate
6/21/2017 4:25:03 PM	Respiratory Rate
6/21/2017 4:51:03 PM	Nursing note
6/21/2017 5:26:32 PM	Temperature (F)
6/21/2017 5:26:51 PM	Heart Rate (/min)
6/21/2017 5:53:46 PM	Respiratory Rate
6/21/2017 6:53:35 PM	Respiratory Rate
6/21/2017 7:02:31 PM	Quantify IV fluids (mls)
6/21/2017 7:13:37 PM	Heart Rate (/min)
6/21/2017 7:16:53 PM	Amount eaten
6/21/2017 7:23:54 PM	Eliminations
6/21/2017 7:30:08 PM	Notes
6/21/2017 7:59:23 PM	Respiratory Rate
6/21/2017 8:58:25 PM	Respiratory Rate
6/21/2017 9:18:22 PM	Eliminations
6/21/2017 9:30:08 PM	Heart Rate (/min)
6/21/2017 9:48:38 PM	Respiratory Rate
6/21/2017 10:49:14 PM	Respiratory Rate
6/21/2017 11:02:12 PM	Quantify IV fluids (mls)
6/21/2017 11:46:39 PM	Heart Rate (/min)
6/21/2017 11:46:47 PM	Respiratory Rate

**B6**

Client: **B6**  
Patient:

**Vitals Results**

6/22/2017 12:14:17 AM Nursing note  
6/22/2017 12:54:08 AM Respiratory Rate  
6/22/2017 1:04:11 AM Heart Rate (/min)  
6/22/2017 1:04:28 AM Temperature (F)  
6/22/2017 1:26:28 AM Respiratory Rate  
6/22/2017 2:53:02 AM Respiratory Rate  
6/22/2017 3:09:30 AM Quantify IV fluids (mls)  
6/22/2017 3:09:56 AM Heart Rate (/min)  
6/22/2017 3:10:07 AM Urine Output (mls)  
6/22/2017 3:35:40 AM Respiratory Rate  
6/22/2017 4:52:22 AM Respiratory Rate  
6/22/2017 4:54:33 AM Heart Rate (/min)  
6/22/2017 5:53:00 AM Respiratory Rate  
6/22/2017 5:53:58 AM Notes  
6/22/2017 6:34:23 AM Respiratory Rate  
6/22/2017 7:46:42 AM Quantify IV fluids (mls)  
6/22/2017 7:47:07 AM Respiratory Rate  
6/22/2017 7:54:10 AM Heart Rate (/min)  
6/22/2017 7:54:39 AM Nursing note  
  
6/22/2017 9:53:59 AM Nursing note  
  
6/22/2017 10:52:03 AM Respiratory Rate  
6/22/2017 10:52:31 AM Temperature (F)  
6/22/2017 10:52:39 AM Heart Rate (/min)  
6/22/2017 10:53:42 AM Eliminations  
  
6/22/2017 10:55:51 AM Anesthesia Notes  
  
6/22/2017 11:23:11 AM Quantify IV fluids (mls)  
6/22/2017 11:26:32 AM Heart Rate (/min)  
6/22/2017 11:28:14 AM Respiratory Rate  
6/22/2017 11:57:04 AM Temperature (F)  
6/22/2017 12:47:32 PM Respiratory Rate  
6/22/2017 1:03:39 PM Eliminations  
6/22/2017 1:46:43 PM Heart Rate (/min)  
6/22/2017 1:46:49 PM Respiratory Rate  
6/22/2017 2:51:18 PM Respiratory Rate  
6/22/2017 3:23:43 PM Quantify IV fluids (mls)  
6/22/2017 3:29:26 PM Amount eaten



Client:  
Patient:

**B6**

**Vitals Results**

6/22/2017 3:32:42 PM	Eliminations
6/22/2017 3:34:45 PM	Heart Rate (/min)
6/22/2017 3:54:20 PM	Respiratory Rate
6/22/2017 3:54:36 PM	Notes
6/22/2017 4:00:16 PM	Eliminations
6/22/2017 4:32:14 PM	Respiratory Rate
6/22/2017 4:53:11 PM	Respiratory Rate
6/22/2017 5:31:23 PM	Eliminations
6/22/2017 6:02:43 PM	Respiratory Rate
6/22/2017 6:03:03 PM	Temperature (F)
6/22/2017 6:14:36 PM	Heart Rate (/min)
6/22/2017 7:00:35 PM	Respiratory Rate
6/22/2017 7:19:26 PM	Eliminations
6/22/2017 7:44:00 PM	Eliminations
6/22/2017 7:54:57 PM	Respiratory Rate
6/22/2017 7:55:15 PM	Heart Rate (/min)
6/22/2017 7:56:11 PM	Quantify IV fluids (mls)
6/22/2017 8:18:55 PM	Nursing note
6/22/2017 9:13:49 PM	Respiratory Rate
6/22/2017 10:13:58 PM	Eliminations
6/22/2017 10:14:01 PM	Eliminations
6/22/2017 10:17:22 PM	Heart Rate (/min)
6/22/2017 10:17:29 PM	Respiratory Rate
6/22/2017 10:18:11 PM	Amount eaten
6/22/2017 10:49:12 PM	Respiratory Rate
6/23/2017 12:15:03 AM	Notes
6/23/2017 12:16:25 AM	Quantify IV fluids (mls)
6/23/2017 12:16:38 AM	Respiratory Rate
6/23/2017 12:16:47 AM	Heart Rate (/min)
6/23/2017 12:17:44 AM	Notes
6/23/2017 12:18:01 AM	Eliminations
6/23/2017 12:45:54 AM	Respiratory Rate
6/23/2017 1:12:07 AM	Heart Rate (/min)
6/23/2017 1:12:20 AM	Temperature (F)
6/23/2017 2:07:00 AM	Respiratory Rate
6/23/2017 2:57:34 AM	Respiratory Rate
6/23/2017 3:08:59 AM	Quantify IV fluids (mls)
6/23/2017 3:09:27 AM	Eliminations
6/23/2017 3:09:36 AM	Amount eaten

**B6**

Client: **B6**  
Patient:

**Vitals Results**

6/23/2017 3:16:35 AM	Notes
6/23/2017 4:00:25 AM	Heart Rate (/min)
6/23/2017 4:00:43 AM	Respiratory Rate
6/23/2017 4:16:11 AM	Nursing note
6/23/2017 4:57:44 AM	Respiratory Rate
6/23/2017 6:02:26 AM	Respiratory Rate
6/23/2017 6:02:45 AM	Heart Rate (/min)
6/23/2017 6:52:28 AM	Respiratory Rate
6/23/2017 6:52:51 AM	Eliminations
6/23/2017 6:53:07 AM	Weight (kg)
6/23/2017 6:53:22 AM	Heart Rate (/min)
6/23/2017 6:54:04 AM	Quantify IV fluids (mls)
6/23/2017 7:53:45 AM	Respiratory Rate
6/23/2017 9:12:45 AM	Respiratory Rate
6/23/2017 9:33:36 AM	Heart Rate (/min)
6/23/2017 9:33:44 AM	Respiratory Rate
6/23/2017 9:33:52 AM	Temperature (F)
6/23/2017 9:33:57 AM	Amount eaten
6/23/2017 10:50:22 AM	Quantify IV fluids (mls)
6/23/2017 10:54:22 AM	Nursing note
6/23/2017 11:02:57 AM	Respiratory Rate
6/23/2017 11:13:16 AM	Eliminations
6/23/2017 11:21:24 AM	Heart Rate (/min)
6/23/2017 11:22:18 AM	Respiratory Rate
6/23/2017 1:22:19 PM	Respiratory Rate
6/23/2017 1:23:48 PM	Heart Rate (/min)
6/23/2017 1:58:45 PM	Respiratory Rate
6/23/2017 2:16:37 PM	Eliminations
6/23/2017 2:17:02 PM	Nursing note
6/23/2017 2:49:43 PM	Respiratory Rate
6/23/2017 3:55:36 PM	Quantify IV fluids (mls)
6/23/2017 3:56:08 PM	Notes
6/23/2017 3:56:46 PM	Eliminations
6/23/2017 4:14:11 PM	Respiratory Rate
6/23/2017 4:16:57 PM	Heart Rate (/min)
6/23/2017 4:27:58 PM	Eliminations
6/23/2017 4:57:57 PM	Respiratory Rate
6/23/2017 5:10:34 PM	Eliminations

**B6**

Client:  
Patient:

**B6**

**Vitals Results**

6/23/2017 5:14:04 PM	Amount eaten
6/23/2017 5:29:03 PM	Heart Rate (/min)
6/23/2017 5:29:10 PM	Temperature (F)
6/23/2017 5:56:42 PM	Respiratory Rate
6/23/2017 6:37:55 PM	Respiratory Rate
6/23/2017 7:15:13 PM	Eliminations
6/23/2017 7:39:44 PM	Quantify IV fluids (mls)
6/23/2017 7:41:47 PM	Heart Rate (/min)
6/23/2017 7:43:21 PM	Respiratory Rate
6/23/2017 8:23:36 PM	Eliminations
6/23/2017 9:23:31 PM	Respiratory Rate
6/23/2017 9:28:01 PM	Heart Rate (/min)
6/23/2017 9:28:07 PM	Amount eaten
6/23/2017 10:10:29 PM	Respiratory Rate
6/23/2017 11:20:09 PM	Respiratory Rate
6/23/2017 11:38:19 PM	Quantify IV fluids (mls)
6/23/2017 11:42:07 PM	Eliminations
6/24/2017 12:12:58 AM	Heart Rate (/min)
6/24/2017 12:13:10 AM	Respiratory Rate
6/24/2017 1:07:14 AM	Respiratory Rate
6/24/2017 1:48:11 AM	Heart Rate (/min)
6/24/2017 1:48:20 AM	Temperature (F)
6/24/2017 2:07:07 AM	Respiratory Rate
6/24/2017 3:07:13 AM	Quantify IV fluids (mls)
6/24/2017 3:08:02 AM	Eliminations
6/24/2017 3:10:45 AM	Amount eaten
6/24/2017 3:12:36 AM	Respiratory Rate
6/24/2017 3:55:43 AM	Heart Rate (/min)
6/24/2017 3:55:51 AM	Respiratory Rate
6/24/2017 4:50:14 AM	Notes
6/24/2017 5:05:09 AM	Respiratory Rate
6/24/2017 5:30:06 AM	Nursing note
6/24/2017 5:30:35 AM	Respiratory Rate
6/24/2017 5:30:49 AM	Heart Rate (/min)
6/24/2017 8:52:54 AM	Respiratory Rate
6/24/2017 8:53:42 AM	Quantify IV fluids (mls)
6/24/2017 8:53:50 AM	Heart Rate (/min)
6/24/2017 8:58:15 AM	Eliminations
6/24/2017 8:59:48 AM	Eliminations
6/24/2017 9:08:05 AM	Respiratory Rate

**B6**

Client:  
Patient:

**B6**

**Vitals Results**

6/24/2017 9:46:34 AM	Amount eaten
6/24/2017 11:15:30 AM	Quantify IV fluids (mls)
6/24/2017 12:31:06 PM	Eliminations
6/24/2017 3:13:56 PM	Quantify IV fluids (mls)
6/24/2017 3:14:17 PM	Eliminations
6/24/2017 3:17:16 PM	Amount eaten
6/24/2017 7:29:57 PM	Eliminations
6/24/2017 7:31:31 PM	Quantify IV fluids (mls)
6/24/2017 9:15:51 PM	Amount eaten
6/24/2017 9:35:42 PM	Amount eaten
6/24/2017 11:11:15 PM	Quantify IV fluids (mls)
6/24/2017 11:11:24 PM	Eliminations
6/25/2017 2:01:40 AM	Nursing note
6/25/2017 3:30:46 AM	Amount eaten
6/25/2017 3:32:36 AM	Quantify IV fluids (mls)
6/25/2017 3:39:55 AM	Eliminations
6/25/2017 7:39:55 AM	Weight (kg)
6/25/2017 7:40:12 AM	Eliminations
6/25/2017 7:41:25 AM	Quantify IV fluids (mls)
6/25/2017 9:43:47 AM	Weight (kg)
6/25/2017 9:43:57 AM	Eliminations
6/25/2017 9:47:09 AM	Amount eaten
6/25/2017 9:50:24 AM	Quantify IV fluids (mls)
6/25/2017 10:42:19 AM	Temperature (F)
6/25/2017 10:42:31 AM	Notes
6/25/2017 11:59:42 AM	Eliminations
6/25/2017 12:51:44 PM	Heart Rate (/min)
6/25/2017 12:51:45 PM	Respiratory Rate
6/25/2017 1:44:04 PM	Eliminations
6/25/2017 1:44:18 PM	Quantify IV fluids (mls)
6/25/2017 1:55:23 PM	Notes
6/25/2017 1:56:59 PM	Eliminations
6/25/2017 2:02:20 PM	Quantify IV fluids (mls)
6/25/2017 3:28:10 PM	Eliminations
6/25/2017 3:28:25 PM	Heart Rate (/min)
6/25/2017 3:28:26 PM	Respiratory Rate
6/25/2017 3:30:41 PM	Amount eaten

**B6**

Client: **B6**  
Patient:

**Vitals Results**

6/25/2017 5:18:47 PM	Quantify IV fluids (mls)
6/25/2017 5:18:55 PM	Eliminations
6/25/2017 5:44:04 PM	Notes
6/25/2017 7:45:05 PM	Heart Rate (/min)
6/25/2017 7:45:06 PM	Respiratory Rate
6/25/2017 7:46:46 PM	Eliminations
6/25/2017 9:29:34 PM	Notes
6/25/2017 10:19:35 PM	Eliminations
6/25/2017 10:19:48 PM	Quantify IV fluids (mls)
6/25/2017 10:24:30 PM	Amount eaten
6/25/2017 10:24:48 PM	Temperature (F)
6/25/2017 10:29:29 PM	Nursing note
6/25/2017 11:16:25 PM	Temperature (F)
6/25/2017 11:44:31 PM	Heart Rate (/min)
6/25/2017 11:44:32 PM	Respiratory Rate
6/26/2017 12:23:56 AM	Eliminations
6/26/2017 1:19:56 AM	Notes
6/26/2017 1:20:25 AM	Eliminations
6/26/2017 1:20:38 AM	Quantify IV fluids (mls)
6/26/2017 3:18:28 AM	Heart Rate (/min)
6/26/2017 3:18:29 AM	Respiratory Rate
6/26/2017 3:24:36 AM	Eliminations
6/26/2017 5:19:54 AM	Eliminations
6/26/2017 5:20:05 AM	Notes
6/26/2017 5:20:44 AM	Quantify IV fluids (mls)
6/26/2017 8:03:25 AM	Weight (kg)
6/26/2017 8:03:31 AM	Eliminations
6/26/2017 8:36:52 AM	Temperature (F)
6/26/2017 8:37:03 AM	Heart Rate (/min)
6/26/2017 8:37:04 AM	Respiratory Rate
6/26/2017 9:15:52 AM	Eliminations
6/26/2017 10:03:31 AM	Notes
6/26/2017 11:20:02 AM	Temperature (F)
6/26/2017 11:21:40 AM	Heart Rate (/min)
6/26/2017 11:21:41 AM	Respiratory Rate
6/26/2017 11:28:12 AM	Eliminations
6/26/2017 11:39:28 AM	Amount eaten

**B6**



Client: **B6**  
Patient:

**Vitals Results**

6/26/2017 1:26:31 PM Eliminations  
6/26/2017 1:27:02 PM Notes  
  
6/26/2017 4:02:49 PM Heart Rate (/min)  
6/26/2017 4:02:50 PM Respiratory Rate  
2/1/2019 1:48:14 PM Weight (kg)

**B6**

**Patient History**

06/20/2017 10:57 PM UserForm  
06/20/2017 10:57 PM UserForm  
06/20/2017 10:57 PM Email  
  
06/20/2017 11:15 PM Treatment  
06/20/2017 11:58 PM Purchase  
06/21/2017 12:08 AM Vitals  
06/21/2017 12:08 AM Purchase  
06/21/2017 12:08 AM Purchase  
06/21/2017 12:09 AM Purchase  
06/21/2017 12:09 AM Purchase  
06/21/2017 12:09 AM Purchase  
06/21/2017 12:15 AM Labwork  
06/21/2017 12:21 AM UserForm  
  
06/21/2017 01:11 AM Treatment  
06/21/2017 01:11 AM Vitals  
06/21/2017 01:14 AM Treatment  
06/21/2017 01:14 AM Vitals  
06/21/2017 01:15 AM Treatment  
06/21/2017 01:15 AM Vitals  
06/21/2017 01:15 AM Treatment  
06/21/2017 01:15 AM Vitals  
06/21/2017 01:16 AM Treatment  
06/21/2017 01:18 AM Treatment  
  
06/21/2017 01:51 AM Vitals  
06/21/2017 01:57 AM Treatment  
06/21/2017 02:09 AM Vitals  
06/21/2017 02:13 AM Purchase  
06/21/2017 02:13 AM Purchase  
06/21/2017 03:06 AM Treatment  
06/21/2017 03:06 AM Vitals  
06/21/2017 03:13 AM Treatment  
06/21/2017 04:08 AM Treatment  
06/21/2017 04:08 AM Vitals  
06/21/2017 04:09 AM Treatment  
06/21/2017 04:12 AM Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

06/21/2017 04:15 AM	Treatment
06/21/2017 04:15 AM	Treatment
06/21/2017 04:15 AM	Vitals
06/21/2017 04:15 AM	Treatment
06/21/2017 04:15 AM	Vitals
06/21/2017 04:15 AM	Treatment
06/21/2017 04:15 AM	Vitals
06/21/2017 04:17 AM	Treatment
06/21/2017 04:23 AM	Treatment
06/21/2017 04:52 AM	UserForm
06/21/2017 04:56 AM	Treatment
06/21/2017 04:56 AM	Vitals
06/21/2017 05:29 AM	Treatment
06/21/2017 05:29 AM	Vitals
06/21/2017 05:29 AM	Treatment
06/21/2017 05:29 AM	Vitals
06/21/2017 08:00 AM	Treatment
06/21/2017 08:00 AM	Vitals
06/21/2017 08:05 AM	Treatment
06/21/2017 08:05 AM	Vitals
06/21/2017 08:05 AM	UserForm
06/21/2017 08:05 AM	Treatment
06/21/2017 08:05 AM	Vitals
06/21/2017 08:10 AM	Purchase
06/21/2017 08:15 AM	Treatment
06/21/2017 08:15 AM	Vitals
06/21/2017 08:15 AM	Vitals
06/21/2017 08:42 AM	Vitals
06/21/2017 08:48 AM	Purchase
06/21/2017 08:48 AM	Treatment
06/21/2017 09:05 AM	Vitals
06/21/2017 09:07 AM	Purchase
06/21/2017 09:55 AM	Treatment
06/21/2017 09:56 AM	Treatment
06/21/2017 09:56 AM	Vitals
06/21/2017 10:20 AM	Vitals
06/21/2017 10:20 AM	Vitals
06/21/2017 11:08 AM	Treatment
06/21/2017 11:20 AM	Treatment
06/21/2017 11:20 AM	Treatment
06/21/2017 11:20 AM	Treatment
06/21/2017 11:20 AM	Vitals
06/21/2017 11:24 AM	Treatment
06/21/2017 11:28 AM	Treatment
06/21/2017 11:28 AM	Treatment
06/21/2017 11:28 AM	Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

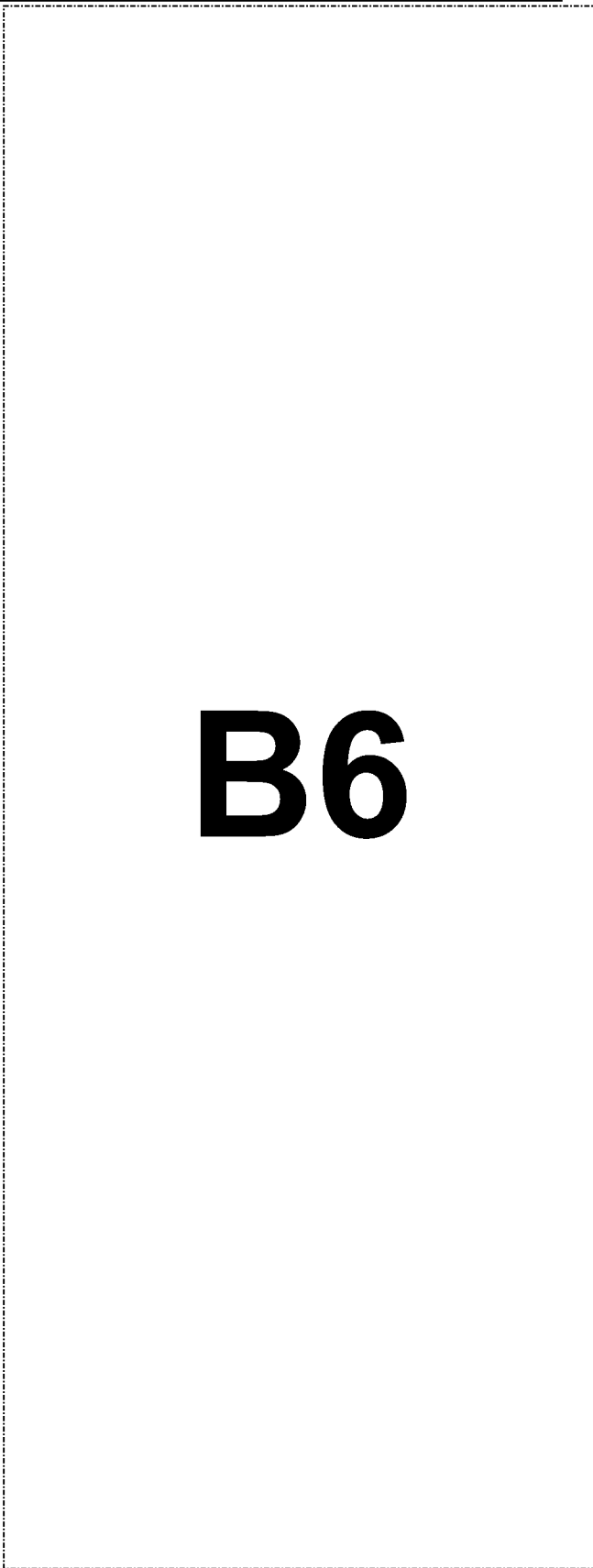
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06/21/2017 11:57 AM	Treatment
06/21/2017 11:57 AM	Vitals
06/21/2017 11:57 AM	Treatment
06/21/2017 11:57 AM	Vitals
06/21/2017 12:02 PM	Purchase
06/21/2017 12:19 PM	Treatment
06/21/2017 12:33 PM	Purchase
06/21/2017 12:35 PM	Purchase
06/21/2017 01:34 PM	Treatment
06/21/2017 01:34 PM	Vitals
06/21/2017 01:35 PM	Treatment
06/21/2017 01:38 PM	Treatment
06/21/2017 01:42 PM	Treatment
06/21/2017 01:42 PM	Vitals
06/21/2017 01:42 PM	Treatment
06/21/2017 01:42 PM	Vitals
06/21/2017 02:52 PM	Treatment
06/21/2017 02:52 PM	Vitals
06/21/2017 03:47 PM	Treatment
06/21/2017 03:47 PM	Vitals
06/21/2017 03:49 PM	Treatment
06/21/2017 03:49 PM	Vitals
06/21/2017 03:49 PM	UserForm
06/21/2017 03:50 PM	Vitals
06/21/2017 03:54 PM	Treatment
06/21/2017 03:54 PM	Vitals
06/21/2017 04:25 PM	Treatment
06/21/2017 04:25 PM	Vitals
06/21/2017 04:49 PM	Treatment
06/21/2017 04:51 PM	Vitals
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06/21/2017 05:15 PM	Task
06/21/2017 05:17 PM	Prescription
06/21/2017 05:26 PM	Treatment
06/21/2017 05:26 PM	Vitals
06/21/2017 05:26 PM	Treatment
06/21/2017 05:26 PM	Vitals
06/21/2017 05:50 PM	Treatment
06/21/2017 05:53 PM	Treatment
06/21/2017 05:53 PM	Vitals
06/21/2017 06:19 PM	UserForm
06/21/2017 06:32 PM	UserForm
06/21/2017 06:53 PM	Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

06/21/2017 06:53 PM Vitals  
06/21/2017 07:02 PM Treatment  
06/21/2017 07:02 PM Vitals  
06/21/2017 07:12 PM Treatment  
  
06/21/2017 07:13 PM Treatment  
06/21/2017 07:13 PM Vitals  
06/21/2017 07:16 PM Treatment  
06/21/2017 07:16 PM Vitals  
  
06/21/2017 07:23 PM Vitals  
06/21/2017 07:30 PM Treatment  
06/21/2017 07:30 PM Vitals  
06/21/2017 07:59 PM Treatment  
06/21/2017 07:59 PM Vitals  
06/21/2017 08:58 PM Treatment  
06/21/2017 08:58 PM Vitals  
06/21/2017 09:18 PM Vitals  
06/21/2017 09:30 PM Treatment  
06/21/2017 09:30 PM Vitals  
06/21/2017 09:48 PM Treatment  
06/21/2017 09:48 PM Vitals  
06/21/2017 10:49 PM Treatment  
06/21/2017 10:49 PM Vitals  
06/21/2017 11:01 PM Treatment  
06/21/2017 11:02 PM Treatment  
06/21/2017 11:02 PM Vitals  
06/21/2017 11:46 PM Treatment  
06/21/2017 11:46 PM Vitals  
06/21/2017 11:46 PM Treatment  
06/21/2017 11:46 PM Vitals  
06/22/2017 12:00 AM Purchase  
06/22/2017 12:00 AM Purchase  
06/22/2017 12:14 AM Vitals  
06/22/2017 12:54 AM Treatment  
06/22/2017 12:54 AM Vitals  
06/22/2017 12:57 AM Treatment  
06/22/2017 01:04 AM Treatment  
  
06/22/2017 01:04 AM Treatment  
06/22/2017 01:04 AM Vitals  
06/22/2017 01:04 AM Treatment  
06/22/2017 01:04 AM Vitals  
06/22/2017 01:26 AM Treatment  
06/22/2017 01:26 AM Vitals  
06/22/2017 02:53 AM Treatment  
06/22/2017 02:53 AM Vitals  
06/22/2017 02:55 AM Treatment  
06/22/2017 03:09 AM Treatment



Client: **B6**  
Patient:

**Patient History**

06/22/2017 03:09 AM Treatment  
06/22/2017 03:09 AM Vitals  
06/22/2017 03:09 AM Treatment  
06/22/2017 03:09 AM Vitals  
06/22/2017 03:10 AM Vitals  
06/22/2017 03:35 AM Treatment  
06/22/2017 03:35 AM Vitals  
06/22/2017 04:52 AM Treatment  
06/22/2017 04:52 AM Vitals  
06/22/2017 04:54 AM Treatment  
06/22/2017 04:54 AM Vitals  
06/22/2017 05:53 AM Treatment  
06/22/2017 05:53 AM Vitals  
06/22/2017 05:53 AM Treatment  
06/22/2017 05:53 AM Vitals  
06/22/2017 06:34 AM Treatment  
06/22/2017 06:34 AM Vitals  
06/22/2017 07:46 AM Treatment  
06/22/2017 07:46 AM Vitals  
06/22/2017 07:47 AM Treatment  
06/22/2017 07:47 AM Vitals  
06/22/2017 07:54 AM Treatment  
06/22/2017 07:54 AM Vitals  
06/22/2017 07:54 AM Vitals  
  
06/22/2017 07:54 AM Vitals  
  
06/22/2017 09:53 AM Vitals  
  
06/22/2017 09:55 AM Purchase  
06/22/2017 09:55 AM Purchase  
06/22/2017 09:55 AM Treatment  
06/22/2017 10:20 AM Purchase  
  
06/22/2017 10:52 AM Treatment  
06/22/2017 10:52 AM Vitals  
06/22/2017 10:52 AM Treatment  
06/22/2017 10:52 AM Vitals  
06/22/2017 10:52 AM Treatment  
06/22/2017 10:52 AM Vitals  
06/22/2017 10:53 AM Vitals  
  
06/22/2017 10:55 AM Vitals  
  
06/22/2017 10:58 AM Purchase  
06/22/2017 10:58 AM Purchase  
06/22/2017 10:58 AM Purchase  
06/22/2017 11:17 AM Treatment  
06/22/2017 11:21 AM Purchase

**B6**

Client: **B6**  
Patient:

**Patient History**

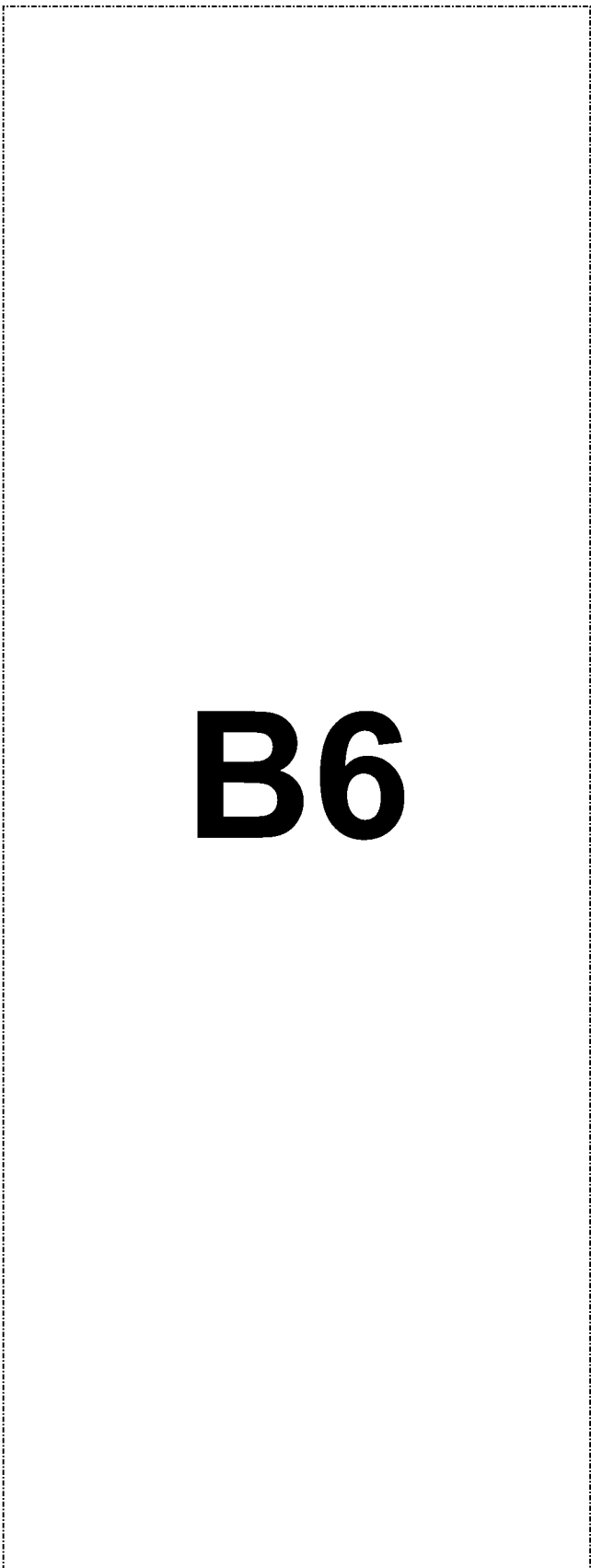
06/22/2017 11:21 AM	Treatment
06/22/2017 11:23 AM	Treatment
06/22/2017 11:23 AM	Vitals
06/22/2017 11:26 AM	Treatment
06/22/2017 11:26 AM	Vitals
06/22/2017 11:28 AM	Treatment
06/22/2017 11:28 AM	Vitals
06/22/2017 11:29 AM	Prescription
06/22/2017 11:33 AM	Purchase
06/22/2017 11:33 AM	Prescription
06/22/2017 11:55 AM	Treatment
06/22/2017 11:57 AM	Treatment
06/22/2017 11:57 AM	Vitals
06/22/2017 12:02 PM	Purchase
06/22/2017 12:47 PM	Treatment
06/22/2017 12:47 PM	Vitals
06/22/2017 12:47 PM	Vitals
06/22/2017 01:03 PM	Vitals
06/22/2017 01:46 PM	Treatment
06/22/2017 01:46 PM	Vitals
06/22/2017 01:46 PM	Treatment
06/22/2017 01:46 PM	Vitals
06/22/2017 02:51 PM	Treatment
06/22/2017 02:51 PM	Vitals
06/22/2017 03:23 PM	Treatment
06/22/2017 03:23 PM	Vitals
06/22/2017 03:29 PM	Treatment
06/22/2017 03:29 PM	Vitals
06/22/2017 03:32 PM	Treatment
06/22/2017 03:32 PM	Vitals
06/22/2017 03:34 PM	Treatment
06/22/2017 03:34 PM	Vitals
06/22/2017 03:54 PM	Treatment
06/22/2017 03:54 PM	Vitals
06/22/2017 03:54 PM	Treatment
06/22/2017 03:54 PM	Vitals
06/22/2017 04:00 PM	Vitals
06/22/2017 04:32 PM	Vitals
06/22/2017 04:32 PM	Vitals
06/22/2017 04:53 PM	Treatment
06/22/2017 04:53 PM	Vitals
06/22/2017 05:31 PM	Vitals
06/22/2017 06:02 PM	Treatment
06/22/2017 06:02 PM	Vitals
06/22/2017 06:03 PM	Treatment
06/22/2017 06:03 PM	Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

06/22/2017 06:14 PM Treatment  
06/22/2017 06:14 PM Vitals  
06/22/2017 06:40 PM Treatment  
  
06/22/2017 07:00 PM Treatment  
06/22/2017 07:00 PM Vitals  
06/22/2017 07:19 PM Vitals  
06/22/2017 07:19 PM Vitals  
06/22/2017 07:44 PM Vitals  
06/22/2017 07:51 PM Treatment  
  
06/22/2017 07:54 PM Treatment  
06/22/2017 07:54 PM Vitals  
06/22/2017 07:55 PM Treatment  
06/22/2017 07:55 PM Vitals  
06/22/2017 07:56 PM Treatment  
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06/22/2017 09:13 PM Treatment  
06/22/2017 09:13 PM Vitals  
06/22/2017 10:13 PM Vitals  
06/22/2017 10:14 PM Treatment  
06/22/2017 10:14 PM Vitals  
06/22/2017 10:17 PM Treatment  
06/22/2017 10:17 PM Vitals  
06/22/2017 10:17 PM Treatment  
06/22/2017 10:17 PM Vitals  
06/22/2017 10:18 PM Treatment  
06/22/2017 10:18 PM Vitals  
  
06/22/2017 10:49 PM Treatment  
06/22/2017 10:49 PM Vitals  
06/23/2017 12:00 AM Purchase  
06/23/2017 12:00 AM Purchase  
06/23/2017 12:15 AM Treatment  
06/23/2017 12:15 AM Vitals  
06/23/2017 12:16 AM Treatment  
06/23/2017 12:16 AM Vitals  
06/23/2017 12:16 AM Treatment  
06/23/2017 12:16 AM Vitals  
06/23/2017 12:16 AM Treatment  
06/23/2017 12:16 AM Vitals  
06/23/2017 12:16 AM Treatment  
06/23/2017 12:16 AM Vitals  
06/23/2017 12:17 AM Treatment  
  
06/23/2017 12:17 AM Treatment  
06/23/2017 12:17 AM Vitals  
06/23/2017 12:18 AM Treatment  
06/23/2017 12:18 AM Vitals  
06/23/2017 12:45 AM Treatment  
06/23/2017 12:45 AM Vitals

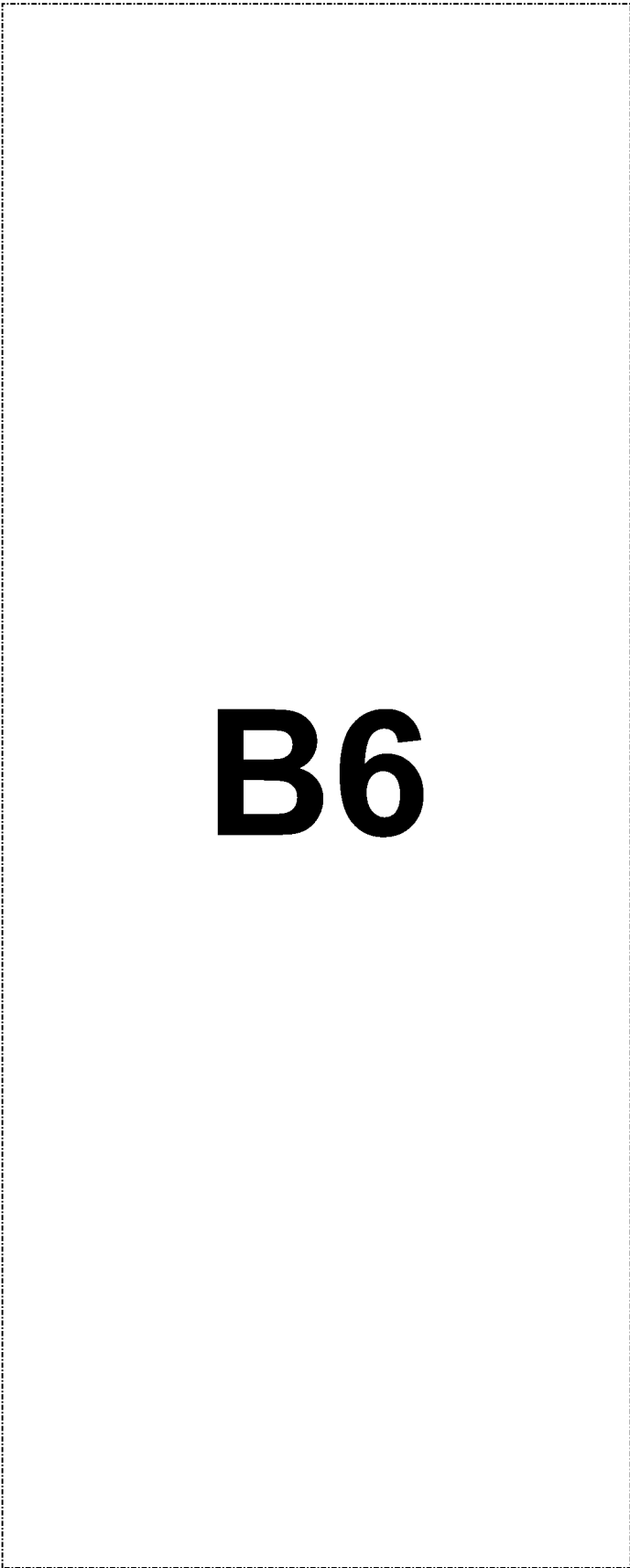


**B6**

Client: **B6**  
Patient:

**Patient History**

06/23/2017 01:12 AM Treatment  
06/23/2017 01:12 AM Vitals  
06/23/2017 01:12 AM Vitals  
06/23/2017 01:12 AM Treatment  
06/23/2017 01:12 AM Vitals  
06/23/2017 02:07 AM Treatment  
06/23/2017 02:07 AM Vitals  
06/23/2017 02:57 AM Treatment  
06/23/2017 02:57 AM Vitals  
06/23/2017 02:57 AM Vitals  
06/23/2017 03:08 AM Treatment  
06/23/2017 03:08 AM Vitals  
06/23/2017 03:09 AM Treatment  
06/23/2017 03:09 AM Vitals  
06/23/2017 03:09 AM Treatment  
06/23/2017 03:09 AM Vitals  
  
06/23/2017 03:09 AM Treatment  
  
06/23/2017 03:16 AM Treatment  
06/23/2017 03:16 AM Vitals  
06/23/2017 03:16 AM Vitals  
06/23/2017 04:00 AM Treatment  
06/23/2017 04:00 AM Vitals  
06/23/2017 04:00 AM Treatment  
06/23/2017 04:00 AM Vitals  
06/23/2017 04:16 AM Vitals  
06/23/2017 04:57 AM Treatment  
06/23/2017 04:57 AM Vitals  
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06/23/2017 06:52 AM Treatment  
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06/23/2017 06:53 AM Treatment  
06/23/2017 06:53 AM Vitals  
06/23/2017 06:53 AM Treatment  
06/23/2017 06:53 AM Vitals  
06/23/2017 06:54 AM Treatment  
06/23/2017 06:54 AM Vitals  
06/23/2017 07:53 AM Treatment  
06/23/2017 07:53 AM Vitals  
06/23/2017 08:45 AM Purchase  
06/23/2017 09:12 AM Vitals  
06/23/2017 09:22 AM Treatment  
06/23/2017 09:33 AM Treatment

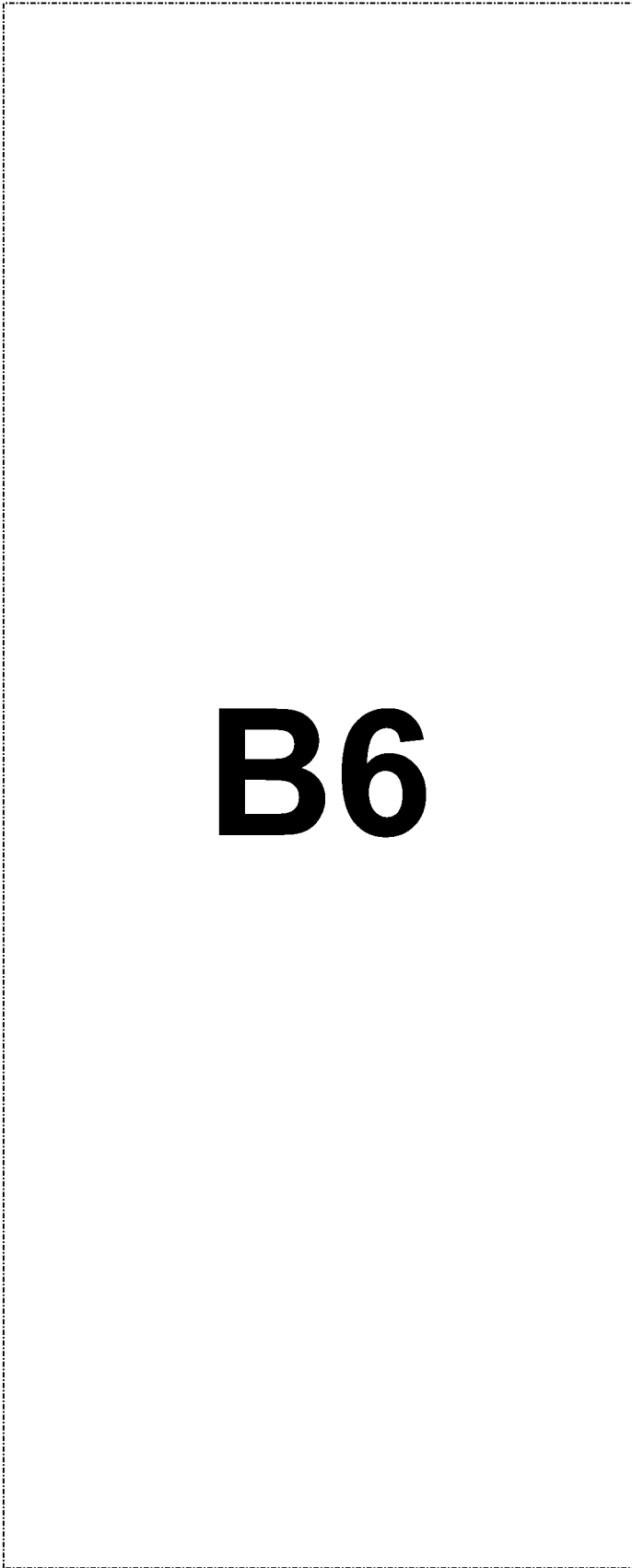




Client: **B6**  
Patient:

**Patient History**

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06/23/2017 09:33 AM Treatment  
06/23/2017 09:33 AM Vitals  
06/23/2017 09:33 AM Treatment  
06/23/2017 09:33 AM Vitals  
06/23/2017 09:33 AM Treatment  
06/23/2017 09:33 AM Vitals  
06/23/2017 09:36 AM Prescription  
  
06/23/2017 09:37 AM Purchase  
06/23/2017 09:45 AM Prescription  
06/23/2017 10:50 AM Treatment  
06/23/2017 10:50 AM Vitals  
06/23/2017 10:54 AM Vitals  
  
06/23/2017 11:02 AM Treatment  
06/23/2017 11:02 AM Vitals  
06/23/2017 11:13 AM Treatment  
06/23/2017 11:13 AM Vitals  
  
06/23/2017 11:18 AM Treatment  
  
06/23/2017 11:18 AM Treatment  
  
06/23/2017 11:21 AM Treatment  
06/23/2017 11:21 AM Vitals  
06/23/2017 11:22 AM Treatment  
06/23/2017 11:22 AM Vitals  
06/23/2017 12:02 PM Purchase  
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06/23/2017 01:23 PM Treatment  
06/23/2017 01:23 PM Vitals  
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06/23/2017 02:17 PM Vitals  
06/23/2017 02:49 PM Treatment  
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06/23/2017 03:55 PM Treatment  
06/23/2017 03:55 PM Treatment  
06/23/2017 03:55 PM Vitals  
06/23/2017 03:56 PM Treatment  
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06/23/2017 03:56 PM Treatment  
06/23/2017 03:56 PM Vitals  
06/23/2017 04:14 PM Treatment  
06/23/2017 04:14 PM Vitals  
06/23/2017 04:16 PM Treatment



Client: **B6**  
Patient:

**Patient History**

06/23/2017 04:16 PM Vitals  
06/23/2017 04:27 PM Vitals  
06/23/2017 04:57 PM Treatment  
06/23/2017 04:57 PM Vitals  
06/23/2017 05:06 PM Prescription  
06/23/2017 05:07 PM Prescription  
06/23/2017 05:09 PM Prescription  
06/23/2017 05:10 PM Vitals  
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06/23/2017 09:28 PM Vitals  
06/23/2017 10:10 PM Treatment  
06/23/2017 10:10 PM Vitals  
06/23/2017 11:20 PM Treatment  
06/23/2017 11:20 PM Vitals  
06/23/2017 11:38 PM Treatment  
06/23/2017 11:38 PM Vitals  
06/23/2017 11:38 PM Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

06/23/2017 11:42 PM Treatment  
06/23/2017 11:42 PM Vitals  
06/24/2017 12:00 AM Purchase  
06/24/2017 12:00 AM Purchase  
06/24/2017 12:12 AM Treatment  
06/24/2017 12:12 AM Vitals  
06/24/2017 12:13 AM Treatment  
06/24/2017 12:13 AM Vitals  
06/24/2017 01:07 AM Treatment  
06/24/2017 01:07 AM Vitals  
06/24/2017 01:48 AM Treatment  
06/24/2017 01:48 AM Vitals  
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06/24/2017 02:07 AM Vitals  
06/24/2017 03:07 AM Treatment  
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06/24/2017 03:12 AM Treatment  
06/24/2017 03:12 AM Vitals  
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06/24/2017 08:52 AM Vitals  
06/24/2017 08:53 AM Treatment  
  
06/24/2017 08:53 AM Treatment  
06/24/2017 08:53 AM Vitals  
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06/24/2017 08:53 AM Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

06/24/2017 08:58 AM	Treatment
06/24/2017 08:58 AM	Vitals
06/24/2017 08:59 AM	Vitals
06/24/2017 09:08 AM	Vitals
06/24/2017 09:39 AM	Purchase
06/24/2017 09:46 AM	Treatment
06/24/2017 09:46 AM	Treatment
06/24/2017 09:46 AM	Vitals
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06/24/2017 11:15 AM	Treatment
06/24/2017 11:15 AM	Vitals
06/24/2017 11:48 AM	Prescription
06/24/2017 12:02 PM	Purchase
06/24/2017 12:30 PM	Treatment
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06/24/2017 12:30 PM	Vitals
06/24/2017 12:30 PM	Vitals
06/24/2017 12:30 PM	Vitals
06/24/2017 12:30 PM	Vitals
06/24/2017 12:30 PM	Vitals
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06/24/2017 12:30 PM	Vitals
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06/24/2017 12:31 PM	Vitals
06/24/2017 03:13 PM	Treatment
06/24/2017 03:13 PM	Vitals
06/24/2017 03:14 PM	Treatment
06/24/2017 03:14 PM	Vitals
06/24/2017 03:17 PM	Treatment
06/24/2017 03:17 PM	Vitals
06/24/2017 05:42 PM	Prescription
06/24/2017 06:20 PM	Prescription
06/24/2017 06:25 PM	Treatment
06/24/2017 07:29 PM	Treatment
06/24/2017 07:29 PM	Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

06/24/2017 07:29 PM Treatment  
06/24/2017 07:29 PM Vitals  
06/24/2017 07:31 PM Treatment  
06/24/2017 07:31 PM Vitals  
06/24/2017 07:31 PM Treatment  
  
06/24/2017 09:15 PM Treatment  
06/24/2017 09:15 PM Vitals  
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06/24/2017 11:11 PM Vitals  
06/24/2017 11:11 PM Treatment  
06/24/2017 11:11 PM Vitals  
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06/25/2017 07:41 AM Treatment  
06/25/2017 07:41 AM Vitals  
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06/25/2017 10:42 AM Treatment  
06/25/2017 10:42 AM Vitals  
06/25/2017 10:42 AM Treatment  
06/25/2017 10:42 AM Vitals  
  
06/25/2017 11:41 AM Prescription  
06/25/2017 11:59 AM Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

06/25/2017 11:59 AM	Vitals
06/25/2017 12:02 PM	Purchase
06/25/2017 12:10 PM	Purchase
06/25/2017 12:51 PM	Treatment
06/25/2017 12:51 PM	Treatment
06/25/2017 12:51 PM	Vitals
06/25/2017 12:51 PM	Vitals
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06/25/2017 01:44 PM	Vitals
06/25/2017 01:44 PM	Treatment
06/25/2017 01:44 PM	Vitals
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06/25/2017 01:56 PM	Vitals
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06/25/2017 02:02 PM	Vitals
06/25/2017 02:08 PM	Treatment
06/25/2017 03:28 PM	Treatment
06/25/2017 03:28 PM	Vitals
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06/25/2017 05:18 PM	Vitals
06/25/2017 05:44 PM	Treatment
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06/25/2017 05:44 PM	Treatment
06/25/2017 07:44 PM	Treatment
06/25/2017 07:45 PM	Treatment
06/25/2017 07:45 PM	Treatment
06/25/2017 07:45 PM	Vitals
06/25/2017 07:45 PM	Vitals
06/25/2017 07:46 PM	Treatment
06/25/2017 07:46 PM	Vitals
06/25/2017 09:29 PM	Treatment
06/25/2017 09:29 PM	Vitals

**B6**

Client:  
Patient:

**B6**

**Patient History**

06/25/2017 10:19 PM	Treatment
06/25/2017 10:19 PM	Vitals
06/25/2017 10:19 PM	Treatment
06/25/2017 10:19 PM	Vitals
06/25/2017 10:24 PM	Treatment
06/25/2017 10:24 PM	Treatment
06/25/2017 10:24 PM	Vitals
06/25/2017 10:24 PM	Treatment
06/25/2017 10:24 PM	Vitals
06/25/2017 10:29 PM	Vitals
06/25/2017 10:29 PM	Vitals
06/25/2017 11:16 PM	Vitals
06/25/2017 11:44 PM	Treatment
06/25/2017 11:44 PM	Vitals
06/25/2017 11:44 PM	Vitals
06/25/2017 11:45 PM	Treatment
06/26/2017 12:00 AM	Purchase
06/26/2017 12:00 AM	Purchase
06/26/2017 12:20 AM	Treatment
06/26/2017 12:23 AM	Treatment
06/26/2017 12:23 AM	Vitals
06/26/2017 01:19 AM	Treatment
06/26/2017 01:19 AM	Vitals
06/26/2017 01:20 AM	Treatment
06/26/2017 01:20 AM	Vitals
06/26/2017 01:20 AM	Treatment
06/26/2017 01:20 AM	Vitals
06/26/2017 03:18 AM	Treatment
06/26/2017 03:18 AM	Vitals
06/26/2017 03:18 AM	Vitals
06/26/2017 03:24 AM	Treatment
06/26/2017 03:24 AM	Vitals
06/26/2017 05:19 AM	Treatment
06/26/2017 05:19 AM	Vitals
06/26/2017 05:20 AM	Treatment
06/26/2017 05:20 AM	Vitals
06/26/2017 05:20 AM	Treatment
06/26/2017 05:20 AM	Vitals
06/26/2017 08:03 AM	Treatment
06/26/2017 08:03 AM	Vitals
06/26/2017 08:03 AM	Treatment
06/26/2017 08:03 AM	Vitals
06/26/2017 08:36 AM	Treatment
06/26/2017 08:36 AM	Vitals

**B6**

**B6**

**Patient History**

06/26/2017 08:37 AM	Treatment
06/26/2017 08:37 AM	Vitals
06/26/2017 08:37 AM	Vitals
06/26/2017 08:40 AM	Treatment
06/26/2017 08:40 AM	Treatment
06/26/2017 09:15 AM	Treatment
06/26/2017 09:15 AM	Vitals
06/26/2017 09:17 AM	Treatment
06/26/2017 10:03 AM	Treatment
06/26/2017 10:03 AM	Treatment
06/26/2017 10:03 AM	Vitals
06/26/2017 11:20 AM	Treatment
06/26/2017 11:20 AM	Vitals
06/26/2017 11:21 AM	Treatment
06/26/2017 11:21 AM	Vitals
06/26/2017 11:21 AM	Vitals
06/26/2017 11:28 AM	Treatment
06/26/2017 11:28 AM	Vitals
06/26/2017 11:34 AM	Purchase
06/26/2017 11:35 AM	Treatment
06/26/2017 11:39 AM	Treatment
06/26/2017 11:39 AM	Vitals
06/26/2017 11:54 AM	Purchase
06/26/2017 12:02 PM	Purchase
06/26/2017 01:26 PM	Treatment
06/26/2017 01:26 PM	Vitals
06/26/2017 01:27 PM	Treatment
06/26/2017 01:27 PM	Vitals
06/26/2017 02:23 PM	UserForm
06/26/2017 03:40 PM	Prescription
06/26/2017 03:40 PM	Prescription
06/26/2017 03:41 PM	Prescription
06/26/2017 03:41 PM	Purchase
06/26/2017 04:02 PM	Treatment
06/26/2017 04:02 PM	Vitals
06/26/2017 04:02 PM	Vitals
06/26/2017 04:14 PM	Purchase
06/26/2017 04:15 PM	Treatment
07/02/2017 05:02 PM	Prescription
07/10/2017 05:37 PM	Task

**B6**



Client:  
Patient:

**B6**

**Patient History**

01/14/2019 12:25 PM	Purchase
01/14/2019 12:30 PM	Prescription
01/14/2019 01:23 PM	Email
01/14/2019 01:23 PM	UserForm
01/28/2019 03:57 PM	Appointment
01/28/2019 04:00 PM	Appointment
01/28/2019 04:01 PM	Appointment
02/01/2019 08:00 AM	UserForm
02/01/2019 08:01 AM	UserForm
02/01/2019 01:18 PM	Treatment
02/01/2019 01:31 PM	UserForm
02/01/2019 01:48 PM	Vitals
02/01/2019 01:50 PM	Purchase
02/01/2019 02:27 PM	UserForm
02/01/2019 02:57 PM	Appointment
02/01/2019 02:58 PM	Prescription
02/21/2019 04:34 PM	Purchase
02/21/2019 04:34 PM	Purchase

**B6**





**B6**

B6

B6

Male (Neutered)

Canine Golden Retriever Golden

Patient ID:394674

## 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: 6/21/2017

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

**B6**

Male (Neutered)

Canine Golden Retriever Golden

Patient ID:394674

## STANDARD CONSENT FORM

---

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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: 6/20/2017

Owner's address:

Owner's Name Signature

6/20/17  
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

**Treatment Plan**

Estimated Charges  
 06/20/2017

**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 pet throughout your animal's hospitalization. The final fee may vary considerably from this estimated cost.*

Account	Description	LowChg	Low Estimated	HighChg	High Estimated
B6	<b>B6</b>	1			

**B6**

Doctor of Record: **B6**

Client Signature

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 treatments 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 the patient(s) is released.

Procedure(s) is/are 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**

**Patient**

Name: B6

Species: Canine

Golden Male (Neutered) Golden Retriever

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: B6

Date of request: 6/21/2017

Attending Clinician: B6

Student:

DUPLICATE FORM

Date of exam: 6/21/2017

Patient Location: Ward/Cage: ICU R2

Weight (kg) 36.00

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

**Sedation**

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

**Examination Desired:**

three view thorax

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

Emergency - presented with upper airway obstruction, potential tieback today

**Pertinent History:**

**Findings:**

**Conclusions:**

**Radiologist:**

Primary: \_\_\_\_\_

Reviewing:

**Dates**

Reported:

Finalized:

# 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/>

B6

B6  
B6 Male (Neutered)  
Canine Golden Retriever Golden  
B6

## Biopsy Request

Doctor to serve as contact: B6

(if primary contact is not available during business hours, provide a secondary contact, as well)

Phone/pager: B6

Email: B6

Total # of anatomic sites sampled (each site will be charged separately): 1

Total # of separate containers submitted: 1

Images sent to [pathpics@tufts.edu](mailto:pathpics@tufts.edu)?

- Yes  
 No

**CASE SUMMARY** (CONCISE DESCRIPTION of time sequence, therapy, summary of abnormal clinical pathology and diagnostic imaging lesion size, margin labels/orientation if relevant):

mass at base of tongue on left side

acute onset gagging and nasal discharge at home followed by acute respiratory crisis and admitted here

FNA performed as well

**CLINICAL DIAGNOSES/DIFFERENTIALS:**

abscess vs. neoplasia

**CONTAINER 1.** (In addition to site specific history include number of tissue pieces):

**CONTAINER 2.** (In addition to site specific history include number of tissue pieces):

**CONTAINER 3.** (In addition to site specific history include number of tissue pieces):



### CT Request & Report

**Patient**

Name: B6

Species: Canine

Golden Male (Neutered) Golden Retriever

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: B6

Date of request: 6/21/2017

Attending Clinician: B6

Student:

Date of exam: 6/21/2017

Patient Location: Ward/Cage: ICU R2

Weight (kg) 36.00

Scheduling and Patient Notes: B6

Examination Desired: B6

**Sedation**

- Anesthesia to sedate/anesthetize
- DexDumitor/Butorphanol
- Autoanesthesia

Presenting Complaint and Clinical Questions you wish to answer: Emergency

B6

B6

Findings: B6

**B6**

**Procedures:**

Aspiration of the **B6** mass was performed with no immediate complications

**Radiologists**

Primary: **B6**

Reviewing: **B6**

**Dates**

Reported: 6.22.2017

Finalized: 6.22.2017

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

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

Foster Hospital for Small Animals  
55 Willard Street  
North Grafton, MA 01536  
Telephone (508) 839-5395  
Fax (508) 839-8739  
<http://vetmed.tufts.edu/>

**Patient**

Name: B6

Signalment: B6 Golden Male  
(Neutered) Golden Retriever

Patient ID: 394674

Clinician: B6 (Resident, Emergency & Critical Care)  
Clinician: (Resident, cardiology)

**Owner**

Name:

Address:

B6

**ER Supervisor:**

B6

### Discharge Instructions

Admit Date: 6/20/2017 10:55:12 PM

Check Out Date: 6/26/2017

**Case Summary**

Diagnosis:

B6

**General Summary:**

B6

# B6

**Patient Care Instructions:**

Please continue to monitor **B6** for any trouble breathing. We recommend keeping him calm and as quiet as possible, and avoiding the heat as much as possible. If you start to notice him making more noise please try to keep him calm and cool, and if it does not resolve then please bring him in for evaluation.

**Medications:**

# B6

**Recheck Visits:**

A recheck is recommended in about 10 days with **B6** or sooner if you have concerns. Please call 508 887 4745 to schedule this appointment. At this visit we would like to check his breathing and recheck his chest x-rays. We have sent home 2 weeks of antibiotic medications, but may want to continue for longer pending how he is doing and how his x-rays look.

Thank you for allowing us to participate in **B6** care. He is such a sweet boy and we hope that he feels good at home!

---

**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

Golden Male (Neutered) Golden

Retriever

Birthdate: B6

**OWNER**

Name: B6

Address: B6

Patient ID: 394674

Date of request: 6/26/2017

Attending Clinician: B6

Student:

Date of exam: 6/26

Patient Location: Ward/Cage: A run

Weight (kg) 36.00

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

**Sedation**

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

**Examination Desired:**

3 view chest- Tech only please, dog has upper airway mass and has trouble breathing with excitement

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

B6

**Pertinent History:**

**Findings:**

B6

**Conclusions:**

**B6**

**Radiologists**

Primary: B6

Reviewing: B6

**Dates**

Reported: 06/27/17

**Radiology Request & Report**

**Patient**

Name: B6  
Species: Canine  
Golden Male (Neutered) Golden  
Retriever  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6  
Date of request: 6/21/2017

Attending Clinician: B6

Student:

Date of exam: 6/21/17

Patient Location: Ward/Cage: icu

Weight (kg) 36.00

- Inpatient  
 Outpatient Time:  
 Waiting  
 Emergency

**Sedation**

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

Examination Desired: Thorax 3 view

Presenting Complaint and Clinical Questions you wish to answer:  
Emergency

Pertinent History: Acute inspiratory crisis (suspect larynx vs oral mass) overnight

**Findings:**

B6

**Conclusions:**

- Caudodorsal gas lucency may represent atypical duodenal gas on the DV, and gastric gas on the left lateral; however the possibility of pulmonary localization cannot be excluded. In the latter case, a

pulmonary abscess or mass with central necrosis could be considered, although no soft tissue component is identified. Thoracic CT or follow-up radiographs may be considered for further evaluation.

- Normal cardiovascular structures.

A cause for acute inspiratory dyspnea is not identified.

**Radiologists**

Primary: [redacted] B6  
Reviewing: [redacted] B6

**Dates**

Reported: 6/21/2017

Finalized: 7/6/2017

# 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 Gold Male  
(Neutered) Golden Retriever

**Owner**

**Name:**

**Address:**

B6

**Patient ID:**

394674

**Emergency Clinician:**

B6

**Consulting Clinician:**

**ER Supervisor:**

B6

### Discharge Instructions

**Admit Date:** 1/14/2019 11:22:13 AM

**Check Out Date:** 1/14/2019

**Case Summary**

**Diagnosis:**

1. Lethargy: open diagnosis

2. B6

3. New heart murmur: open diagnosis

**Case Summary:**

Thank you for bringing B6 to Tufts University Emergency Service for evaluation of lethargy and a hot spot on the tail base. On examination, B6 had normal vital parameters and a normal examination aside from a low grade heart murmur and a large hot spot on the tail base. We discussed that B6 lethargy is unlikely cardiac related and that further workup would start with repeat bloodwork (CBC/chemistry/urinalysis), which you elected to hold on for now.

B6 was discharged with antibiotics to treat his B6 infection and you should follow up with your primary care veterinarian if B6 remains lethargic.

**Patient Care Instructions:**

B6

**Medications:**

**New medications:**

B6

Start today

**Recheck Visits:** No recheck in the ER is necessary unless  is not doing well at home.

---

**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:

Owner:

Discharge Instructions

### Discharge Instructions

**Patient**

Name: B6

Species: Canine

Gold Male (Neutered) Golden Retriever

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: 394674

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

**Veterinary Nutritionist: Dr. Lisa Freeman**

Student: B6

Admit Date: 2/1/2019 1:06:44 PM

Discharge Date: 2/1/2019

**Diagnoses:** Dilated cardiomyopathy (DCM), Suspect mild concurrent Degenerative Mitral Valve Disease

**Case Summary:**

Thank you for bringing B6 to Tufts Cardiology Service for evaluation of his newly found heart murmur. On echocardiogram, we found that he does have Dilated Cardiomyopathy or 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. Thankfully, we did not see any arrhythmias on his ECG today. Additionally, we saw a moderate amount of regurgitation coming from the mitral valve. This is a common heart disease in dogs, where the heart valve thickens with age, resulting in a leak. As the leak continues, we may see worsening of the heart enlargement in the future. Signs for congestive heart failure (fluid in the lungs) will be difficulty breathing, coughing, increased breathing rate. If you notice that B6 breathing rate is faster than normal at home we will want to have chest xrays taken. We would like to adjust Dexter's diet and we provided some dietary recommendations below.

**Diagnostic test results and findings:**

- **Echocardiogram findings:** The walls of the chambers of his heart are thinner than normal and he has reduced contractile function. The left ventricle and left atrium are dilated. The mitral valve has a moderate amount of regurgitation.
- **ECG findings:** The ECG was unremarkable - no arrhythmias
- **Labwork findings:** We will call you when we have the results of his bloodwork. Most of it should come back

tomorrow, but some of it will take a week or so to return.

#### 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 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.
- 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

#### Diet suggestions:

Dogs with heart failure accumulate more fluid in their body if they eat large amounts of sodium (salt). Sodium can be found in all foods, but some foods are lower in sodium than others. Many pet treats, people foods, and supplements used to give pills often have more sodium than is desirable - a sheet that has suggestions for low sodium treats can be found on the HeartSmart web site (<http://vet.tufts.edu/heartsmart/diet/>)

Your dog's usual diet may also have more sodium than recommended - we want him/her to continue to eat his/her normal diet for the first 7 to 14 days so we can make sure he is tolerating medications well, but after that time we would recommend slowly introducing one of the lower sodium diets on the HeartSmart list (25% of the new diet and 75% old diet for 2-3 days, then 50:50, etc.). Hopefully you can find a diet on the list that your dog likes to eat. Alternatively, if you are attached to the current diet you can research the amount of sodium in the diet to ensure that the sodium content is similar to those on the list.

- 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)

Purina Pro Plan Adult Weight Management

Purina Pro Plan Bright Mind Adult Small Breed Formula



lams Chunks

**Canned Food Options:**

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:**

We recommend limited activity. Leash walking only is ideal, and short walks to start. Repetitive or strenuous high energy activities (repetitive ball chasing, running fast off-leash, etc.) are generally not advised.

**Recheck Visits:**

Thank you for enrolling B6 in our clinical study.

B6 is supposed to have an appointment here at Tufts in about 3 months - We have an appointment for him scheduled on May 9th at 10AM. We will perform an echo, ECG and bloodwork at this time.

Thank you for entrusting us with B6! It was a pleasure to meet you all today and he was a very good boy. 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: 394674

B6

Canine

B6 Years Old Male (Neutered) Golden Retriever  
Gold

duplicate

# 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/>

### Discharge Instructions

**Patient**

Name: B6

Species: Canine

Gold Male (Neutered) Golden Retriever

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: 394674

Duplicate

**B6**

Patient ID: **B6**  
**B6** Canine  
**B6** Years Old Male (Neutered) Golden Retriever  
Gold

**Cardiology Appointment Report**

**Date:** 2/1/2019

**Attending Cardiologist:**

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

**B6**

**Cardiology Resident:**

**B6**

**Cardiology Technician:**

**B6**

**Subject:** **B6**

**Presenting Complaint:**

RDVM yearly revealed 2/6 heart murmur

**B6** echo- DCM with 2+ mitral regurgitation 1+ tricuspid regurgitation and mild pulmonic insufficiency

ER 1/14 for profound lethargy- declined diagnostics but wanted to see cardio sooner than scheduled appointment, diagnosed with **B6** but owner didn't read label right and has been giving 500mg PO BID instead

Whole life on grain free diet

Put on a lot of weight within 2018 (84lbs in December, 80lbs today), decreased activity (secondary to owner injury vs. **B6** less excited for fetching, still goes on 1-2\_Smile walk) - rdvm records low normal thyroid level

**Current Diseases:**

**B6**

**General Medical History:**

Attacked in face by other dog at agility class prior to adoption (1 yo)

**B6**

**Diet and Supplements:**

Earthborne grain free 3/4 cup BID, was 1cup BID before rdvm appt in 12/2018

B6

**Cardiovascular History:**

Prior CHF diagnosis? No

Prior heart murmur? II/VI diagnosed in December 2018

Prior ATE? No

Prior arrhythmia? No

Monitoring respiratory rate and effort at home? No

Cough? No

Shortness of breath or difficulty breathing? No

Syncope or collapse? No

Sudden onset lameness? No

Exercise intolerance? No

**Current Medications Pertinent to CV System:**

B6

**Cardiac Physical Examination:**

B6

**Muscle condition:**

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

**Cardiovascular Physical Exam:**

**Murmur Grade:**

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

Murmur location/description: Left heart apex

**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: Faint

**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:**

Murmur and prior dx of DCM  
Here for diet study

**Diagnostic plan:**

- Echocardiogram +/- other testing
- Chemistry profile
- ECG
- Renal profile
- Blood pressure

- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests:

**Echocardiogram Findings:**

**General/2-D findings:**

**B6**

**Mitral inflow:**

- Summated
- Normal
- Delayed relaxation

- Pseudonormal
- Restrictive

**ECG findings:**

B6

**Assessment and recommendations:**

Echocardiogram reveals DCM with significant MR (which could also indicate a component of DMVD).

Recommend starting B6

Recommend changing diet to RC Early Cardiac or similar diet on the list. NT-proBNP, troponin, CBC/chem were submitted. Patient was enrolled in DCM Study. Recheck echo and blood work for study in 3, 6, and 9 months.

**Final Diagnosis:**

DCM with a component of DMVD

**Heart Failure Classification Score:**

**ISACHC Classification:**

- Ia
- Ib
- II
- IIIa
- IIIb

**ACVM Classification:**

- A
- 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
- TAPSE
- EPSS

B6

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- cm
- cm
- cm

M-Mode Normalized

- IVSdN
- LVIDdN

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

LVPWdN  
IVSsN  
LVIDsN  
LVPWsN  
Ao Diam N  
LA Diam N

(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  
LVAd LAX  
LVEDV A-L LAX  
LVEDV MOD LAX  
LVLs LAX  
LVAs LAX  
LVESV A-L LAX  
LVESV MOD LAX  
HR  
EF A-L LAX  
LVEF MOD LAX  
SV A-L LAX  
SV MOD LAX  
CO A-L LAX  
CO MOD LAX  
R-R  
HR  
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l/min  
l/min

**B6**

Doppler

MR Vmax  
MR maxPG  
MVE Vel

m/s  
mmHg  
m/s



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  
TR Vmax  
TR maxPG

**B6**

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mmHg

# Cummings

## Veterinary Medical Center

AT TUFTS UNIVERSITY

Foster Hospital for Small Animals  
55 Willard Street  
North Grafton, MA 01956  
Telephone (508) 839-3395  
Fax (508) 839-8739  
<http://vetmed.tufts.edu/>  
Referring Vet Direct Line 508-887-4988

### Notice of Patient Admit

Date: 6/20/2017 10:55:12 PM

Case No: 394674

Referring Doctor: B6

Client Name: B6

Patient Name: B6

---

Dear B6,

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

The attending doctor is: B6

The reason for admission to the EHSA is: resp. distress, lmpar, possible B6

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.

**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/>

**B6**

**B6**

Male (Neutered)

Canine Golden Retriever Golden  
394674

6/25/2017

Dear **B6**

Thank you for referring **B6** with their pet **B6**. Please see attached discharges for further information.

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

**B6** (Resident, Emergency & Critical Care)

**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/>

**B6**

**B6**

Male (Neutered)

Canine Golden Retriever Golden  
394674

6/28/2017

Dear **B6**

Thank you for referring **B6** with their pet **B6**. He presented with respiratory distress and required intubation and a brief period of ventilation. A mass was noted **B6** which was further evaluated with CT, cytology, and biopsies. The findings were consistent with inflammation and possible infection, but no neoplastic cells were seen. The owners would not pursue chemotherapy or radiation regardless, so we are treating conservatively with antibiotics and antiinflammatories. The surgical team did not feel that the area of swelling was something that they could address surgically. **B6** did well with supportive care in the hospital. He left the hospital on Monday and has been reportedly breathing very well at home. If his trouble breathing recurs the owner may elect to repeat a CT or biopsies to see if we get a different result, but hopefully he will continue to do well.

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

**B6**

**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/>

**B6**

**B6**

Male (Neutered)

Canine Golden Retriever Gold  
394674

1/14/2019

Dear **B6**

**B6** was presented to the Tufts Emergency Service for evaluation of lethargy that started yesterday. Examination was normal aside from a low grade heart murmur (no arrhythmia, no concern for CHF) and **B6** base. The client wished for a cardiology consult on emergency today, which could not be accommodated. Recheck bloodwork was offered, given the change in clinical status, which the client declined. We elected to treat his hot spot with **B6** and he was discharged home to monitor and await his scheduled cardio consult.

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

**B6** (Emergency and Critical Care Resident)

**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/>

**B6**

**B6**

Male (Neutered)

Canine Golden Retriever Gold  
394674

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), DACVECC

**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** Palmer, Lee Anne  
**CC:** Rotstein, David; Carey, Lauren  
**Sent:** 3/27/2018 7:39:49 PM  
**Subject:** RE: Zignature Kangaroo Formula: [B6] EON-350158

Yes-let's take a look! I think we should check [B5] I'm curious if those aminoacid levels are normal if there is some underlying renal disease causing whole body taurine depletion.  
<https://academic.oup.com/alcalc/article/36/1/29/138000>

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



**From:** Palmer, Lee Anne  
**Sent:** Tuesday, March 27, 2018 3:25 PM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Cc:** Rotstein, David <David.Rotstein@fda.hhs.gov>; Carey, Lauren <Lauren.Carey@fda.hhs.gov>  
**Subject:** FW: Zignature Kangaroo Formula: [B6] - EON-350158

In case of interest – taurine level low?

**From:** PFR Event [mailto:pfpreventcreation@fda.hhs.gov]  
**Sent:** Tuesday, March 27, 2018 3:20 PM  
**To:** Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov> [B6]  
**Subject:** Zignature Kangaroo Formula: [B6] - EON-350158

A PFR Report has been received and PFR Event [EON-350158] has been created in the EON System.

A "PDF" report by name "2044632-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 "2044632-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-350158

**ICSR #:** 2044632

**EON Title:** PFR Event created for Zignature Kangaroo Formula; 2044632

<b>AE Date</b>	10/31/2017	<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>	Better/Improved/Recovering
<b>Breed</b>	Retriever - Labrador		

<b>Age</b>	13 Years		
<b>District Involved</b>	PFR- <b>B6</b> DO		

**Product information**

**Individual Case Safety Report Number:** 2044632

**Product Group:** Pet Food

**Product Name:** Zignature Kangaroo Formula

**Description:** At the time of diagnosis (10/31/17), **B6** was a 13 year old female spayed Labrador retriever who had been maintained on a Zignature Kangaroo formula. She presented with a history of a progressive cough which, prior to presentation, became productive and she coughed up a small volume of pink foam (possible pulmonary edema). On examination she had a 2/6 left apical systolic heart murmur and on echo diagnosed with advanced dilated cardiomyopathy with severe left ventricular dilation, moderate to severe left ventricular systolic dysfunction, and moderate to severe left atrial dilation. Thoracic radiographs were suspicious for early congestive heart failure. A whole blood taurine level was submitted and was low at **B6**. She was treatment with **B6** **B6** and her diet was changed to Royal Canin Early Cardiac. At her recheck in 2/26/18, **B6** heart had improved significantly with now mild dilated cardiomyopathy with normalized left atrial dimensions, mild left ventricular dilation and low normal left ventricular systolic function. The **B6** was able to be discontinued at this time.

**Submission Type:** Initial

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

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

**Number of Animals 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>
Zignature Kangaroo Formula		

**Sender information**

**B6**

USA

**Owner information**

**B6**

USA

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

<https://eon.fda.gov/eon//browse/EON-350158>



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=366527>

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---

**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** 'cvca [B6] @cvcavets.com'  
**Sent:** 3/28/2018 6:40:32 PM  
**Subject:** FDA Case investigation for [B6] (EON-350158)  
**Attachments:** 02-Vet-LIRN-NetworkProceduresVets-12.22.2015.pdf; 03-Vet-LIRN-NetworkProceduresOwners-12.22.2015.pdf

Good afternoon [B6]

Thank you for submitting your consumer complaint to FDA. I'm sorry to hear about [B6] illness. As part of our investigation, we'd like to request:

- **Full Medical Records**
  - Please email (preferred) or fax (301-210-4685) a copy of [B6] entire medical history (not just this event).
  - Do you have records from her referring veterinarian?
- **Potentially Test Remaining OPEN product**
  - Do you have any remaining product left?
  - Is there a lot number or best by date for the leftover food?
- **Hold any remaining UNOPENED product** for potential collection.

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

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

Thank you kindly,  
Dr. Jones

**Jennifer L. A. Jones, DVM**

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





# Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations

## Network Procedures for Veterinarians

### 1. Introduction

The purpose of this Network Procedure is to facilitate basic interactions between the Vet-LIRN Program Office (VPO) and veterinarians participating in Vet-LIRN case investigations. General procedures such as information flow, sample handling procedures, submission of reports and billing for services are discussed. The focus of most Vet-LIRN case investigations is on diagnostic samples, although occasionally animal food samples will also be submitted. Animal food testing conducted after receiving a consumer complaint is typically handled by FDA's Office of Regulatory Affairs (ORA) Laboratories or accredited laboratories.

- 1.1 In the case of Vet-LIRN investigations, the government is the client.
  - 1.1.1 The government is requesting assistance in its investigation, and is requesting tests or services to be performed by your clinic during this investigation.
  - 1.1.2 The government will pay for these services.
  - 1.1.3 The owner is helping with the government's investigation of a regulated product.
  - 1.1.4 The goal of the investigation is to determine if the product is at fault and why.
  - 1.1.5 The government's investigation may not provide a definitive diagnosis for the patient's illness.

### 2. Case Background – Consumer complaint

- 2.1 Vet-LIRN obtains information about the cases we investigate from 3 main sources,
  - 2.1.1 Consumer complaints (cc) - obtained by FDA Consumer Complaint Coordinators by phone
  - 2.1.2 Electronic consumer complaint submissions through FDA's Food Safety Reporting Portal, and
  - 2.1.3 Vet-LIRN partner laboratories.

*NOTE: Generally, the information received in a consumer complaint is **not** kept confidential. In most cases, only protected personal information (such as names and addresses) is withheld in an effort to prevent the complaint from being traced back to the individual who submitted it.*



## Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations

### 3. Communications

- 3.1 VPO will discuss the case with the referring veterinarian and or the owner.
- 3.2 VPO evaluates the case history and determines a need for follow up testing to determine if the food (or drug) is the cause of the illness or death.
- 3.3 VPO contacts the appropriate member laboratory(-ies) (chosen based on location and capabilities) and provides initial information
  - 3.3.1 In some cases only partial history is available
  - 3.3.2 Follow up information will be sent as it becomes available.
- 3.4 VPO proposes the tests to be conducted and prepares billing documents.
- 3.5 VPO makes arrangements with the veterinarian to obtain and ship samples.
  - 3.5.1 VPO receives test results and forwards the results to the veterinarian who will then communicate the results to the owner.

### 4. Case history

- 4.1 A complete medical history is essential,
  - 4.1.1 age, sex, breed, animal's ID/name,
  - 4.1.2 other animals affected,
  - 4.1.3 duration of problem, lesion distribution (diagrams or photos are welcome),
  - 4.1.4 treatment of problem (especially dose and duration of therapy) and response to treatment.
  - 4.1.5 concomitant drugs or dietary supplements administered (not used for treatment of the reaction, but administered for other reasons at the same time or within a short time of the problem occurrence).
- 4.2 Vet-LIRN Case Numbers:
  - 4.2.1 Include Vet-LIRN case number in all correspondence.
  - 4.2.2 E-mail: include the Vet-LIRN case number as the first part of the subject line. This will help archiving data for each case.
- 4.3 Electronic submission of medical records and laboratory results is preferred.
- 4.4 Histories can also be submitted by FAX to Vet-LIRN (301-210-4685).
- 4.5 Information about follow-up visits related to the investigation and additional laboratory reports should be provided as soon as possible. Phone calls are very useful for



## Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations

discussing cases in depth, but should be followed up with the medical records and lab reports.

- 4.5.1 Due to time difference around the country, email communication is often the best way to assure information is transferred in a timely manner.

### 5. Services Requested by VPO

5.1 Services typically tests will fall into 3 categories:

- 5.1.1 Office Examination
- 5.1.2 Clinical laboratory samples
- 5.1.3 Pathology

5.2 Office Examination:

- 5.2.1 To evaluate the current status of the patient.
- 5.2.2 To obtain samples from the patient for further analysis (blood, urine, feces).

5.3 Clinical Laboratory Samples:

- 5.3.1 VPO may ask for repeat analysis of new samples to be run either by the veterinary hospital, or by its usual testing laboratory.
- 5.3.2 Typical tests include clinical hematology, microbial cultures, urinalysis, and fecal examination.
- 5.3.3 Additional testing may be requested and the samples sent to a Vet-LIRN network laboratory.

5.4 Pathology:

- 5.4.1 Either submit the entire carcass or conduct a routine necropsy examination. Record your findings in detail and submit. Histopathology and microbiological cultures as appropriate.
  - 5.4.1.1 Describe all lesions – location, color, size, texture.
  - 5.4.1.2 Culture lesions or intestinal contents as deemed appropriate based on the history.
  - 5.4.1.3 Save tissues for histopathology- be sure to use 10:1 formalin to tissue mass.
- 5.4.2 Histopathology tissues (preserve in 10% neutral buffered formalin 10:1 ratio fixative to tissue):



## Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations

5.4.2.1 thyroid, thymus, lung, heart, liver, spleen, adrenal, kidney, pancreas, stomach, duodenum, jejunum, ileum, colon, urinary bladder, skeletal muscle, brain.

5.4.2.2 Request a duplicate set of H&E for submission to VPO for archiving.

### 5.5 Toxicology:

5.5.1 Freeze and hold tissues if there is any indication that a toxic substance may be involved:

5.5.1.1 brain (for organophosphates and carbamates),

5.5.1.2 eyes, liver, kidney, brain, stomach content, fat,

5.5.1.3 if available, serum, EDTA blood, urine.

5.5.2 Following a review of histopathology, VPO may select tissues to be analyzed and request that tissues be sent to a Vet-LIRN laboratory.

5.5.3 When the case is closed by VPO, samples can be disposed of. When in doubt, please ask.

5.5.3.1 The animal's remains can be disposed of following the laboratories' customary procedures.

## 6. Sample submissions

6.1 Normally, VPO prefers that the veterinarian, not the pet owner submit samples.

6.2 Arrangements for transport should be made with the VPO (see additional shipping instructions).

6.3 A Vet-LIRN Sample Submission Form, given by VPO to the veterinarian, should be provided to the veterinarian and should accompany all samples being sent to our Vet-LIRN laboratory, listing the recommended tests.

6.4 A Shipping Inventory Sheet, given by VPO to the veterinarian, should also be provided by VPO and should be submitted with all samples. This form will be filled out and faxed to the VPO (301-210-4685) by the receiving Vet-LIRN laboratory.

6.5 Vet-LIRN case numbers should be provided by the VPO and should be included on all samples and reports.

6.5.1 Rarely, an owner will deliver a specimen or an animal for necropsy directly to the participating laboratory. Vet-LIRN should notify the lab to expect the owner if this happens and will provide appropriate forms.



## **Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations**

### **7. Sample types that Vet-LIRN may request from the Veterinarian**

- 7.1 Entire bodies (fresh or frozen)
- 7.2 Organs from necropsy (fresh, frozen or formalin fixed)
- 7.3 Clinical samples (serum, blood, urine, feces, biopsy samples, cultures)
- 7.4 Food samples (open bag products from home)

### **8. Reporting**

- 8.1 All reports from Vet-LIRN testing labs are submitted to VPO
- 8.2 VPO will forward reports to the veterinarian, who should discuss the results with the owner.
- 8.3 If appropriate, VPO will forward reports to the owner.

### **9. Communications with Owners**

#### 9.1 General:

- 9.1.1 VPO usually will have contacted the owner to request permission and assistance in the investigation.
- 9.1.2 Vet-LIRN's investigation is focused on determining if a regulated product is the cause of the animal's illness. The testing requested by Vet-LIRN may not provide a definitive diagnosis
- 9.1.3 VPO will provide testing results to the veterinarian for communication to the owner. This ensures that:
  - 9.1.3.1 Owners can be counseled on the interpretation of the test results,
  - 9.1.3.2 Appropriate medical follow-up care based on test results can be recommended by the owner's veterinarian.



## Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations

### 10. Billing

- 10.1 Vet-LIRN VPO can only pay for services which were requested and approved by VPO. Vet-LIRN cannot pay for treatment, or for diagnostic testing outside of the scope of the investigation.
- 10.2 Procurement and Billing Process: The following process needs to be followed in order to adhere to government regulations.
  - 10.2.1 The veterinarian must provide estimates so a Purchase Request can be prepared. Estimates should include items such as office visit(s), in-house diagnostic test costs, biopsy or pathology costs and additional charges such as potential shipping charges.
  - 10.2.2 A billing contact must be provided: include name, address, telephone + fax numbers, and email.
  - 10.2.3 Approved Purchase Request is required prior to beginning service.
  - 10.2.4 Additional services may only be initiated after authorized by Vet-LIRN, but must first be approved by VPO with an additional Purchase Request.
  - 10.2.5 Hospitals must provide an invoice to Vet-LIRN upon the completion of work before they can be paid. VPO is tax exempt. Taxes should be removed from all charges. The invoice must include the Vet-LIRN case number.





## **Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations**

### **Network Procedures for Owners**

The purpose of this Network Procedure is to help you, the owner, understand how the Veterinary Laboratory Investigation and Response Network (Vet-LIRN) Program Office conducts case investigations (follow up to consumer complaints).

The following items are explained below:

- General Introduction
- Billing
- Step by Step Process
- Types of Services and Tests

#### **1. General Introduction:**

##### **1.1. What is the goal of the case investigation?**

The goal of the case investigation is to determine if the product is causing your pet's illness. Our case investigation **MAY NOT** provide a definitive diagnosis for your pet's illness, although we may rule out several other potential reasons for your pet's illness.

##### **1.2. What is the focus of a case investigation?**

Most case investigations focus on diagnostic samples (such as blood, urine or tissue from the pet), although we occasionally request and test pet food samples.

##### **1.3. What is my veterinarian's role during the case investigation?**

Your veterinarian helps our investigation into FDA- regulated products by providing information about your pet's medical history and by obtaining any diagnostic samples like blood, urine or tissue.

##### **1.4. What will Vet-LIRN ask of me during a case investigation?**

We may ask that your veterinarian perform certain tests or services or provide diagnostic samples to FDA or a Vet-LIRN cooperating laboratory.



## Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations

### **1.5. Will Vet-LIRN pay for tests or services requested?**

Yes, we will pay veterinarians or laboratories *for tests or services requested by Vet-LIRN* and approved through our government purchasing system. We cannot, however, reimburse owners for tests already performed or not specifically requested by Vet-LIRN. We recommend that you discuss with your veterinarian which tests and services will be billed to you and which will be covered by Vet-LIRN. For instance, Vet-LIRN may request that your veterinarian perform a urinalysis on your pet while he or she is hospitalized. Vet-LIRN will pay for the collection and testing of the sample, but would not cover the cost of your pet's stay in the hospital.

### **1.6. Is the information received in the consumer complaint confidential?**

Generally, the information received in the consumer complaint is not kept confidential. In most cases, only protected personal information (such as names and addresses) is withheld in an effort to prevent the complaint from being traced back to the individual who submitted it.

## **2. Billing:**

### **2.1. Will Vet-LIRN pay for bills related to the case investigation?**

Vet-LIRN will cover the cost of services and testing that we specifically request. You should understand that Vet-LIRN *CANNOT* reimburse owners for any veterinary bills. Services *MUST* be pre-authorized and paid directly to the veterinarian.

### **2.2. Will Vet-LIRN pay for testing that was not requested by Vet-LIRN?**

No, we will only pay for testing that we request and authorize.

### **2.3. Will Vet-LIRN pay for treatments or private cremation?**

No, we cannot pay for treatment or cremation.



## **Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations**

### **2.4. If I allow my veterinarian to submit my pet's body for testing, will I be able to have back his or her remains?**

Each Vet-LIRN member laboratory has its own procedures for handling remains. Some Vet-LIRN member laboratories offer private cremation services for a fee payable directly to the laboratory. We advise you to discuss directly with the member laboratory the possibilities and costs for obtaining your pet's remains after examination are complete.

### **3. Step by Step Process:**

#### **Vet-LIRN will do the following during a case investigation:**

- 3.1. Assign a case number which **MUST** be included in all correspondences
- 3.2. Discuss the case with you and your veterinarian
- 3.3. Request medical records from your veterinarian
- 3.4. Coordinate with your veterinarian and you to obtain and submit samples for testing
- 3.5. Provide results to your veterinarian who will discuss the results with you.

#### **Vet-LIRN requests that:**

- 3.6. Any follow-up veterinary visits related to the investigation are reported to Vet-LIRN
- 3.7. Additional laboratory reports are reported to Vet-LIRN by your veterinarian.

### **4. Types of Services and Tests:**

#### **4.1. What may a veterinary examination include once the case investigation is started?**

A veterinary examination may include:

- an office visit and physical examination to assess your animals current health
- collection of clinical samples from your animal (blood, urine, feces).

#### **4.2. Will your animal be tested more than once?**



## **Network Procedures for Veterinary Laboratory Investigation and Response Network Case Investigations**

It is possible that Vet-LIRN may request additional tests or examinations depending on results from initial testing.

### **4.3. Will Vet-LIRN need to conduct a necropsy in the event of an animal death?**

Yes, if you are willing, we may request that your veterinarian or another Vet-LIRN cooperating laboratory to conduct a necropsy to collect samples for testing. The samples collected may be tested right away or may be held for future testing or archiving. If the veterinarian completes the necropsy then the remains will be handled according to the veterinarian's normal procedures. If a Vet-LIRN cooperative laboratory completes the necropsy the remains are usually disposed of by that laboratory. Vet-LIRN cannot pay for private cremation. You are welcome to discuss normal procedures with the laboratory.

### **4.4. Will Vet-LIRN ask for a food sample?**

Our main focus is on testing diagnostic tissue or fluid samples from the animal, but we may need to test the food. Please hold all food samples once the consumer complaint is submitted. If needed, we will make arrangements to collect the food.

### **4.5. What are some general tests that Vet-LIRN may request?**

General tests that we may request include, but are not limited to:

- Hematology
- Microbial cultures
- Urinalysis
- Fecal examination
- Necropsy/Histology/Toxicology

### **4.6. Will I get results from Vet-LIRN requested tests?**

Results of testing on your animal's diagnostic tissue or fluid samples will be forwarded to your veterinarian who will be asked to share the results with you.

---

**From:** CVCA - Cardiac Care for Pets [B6]  
**To:** Jones, Jennifer L  
**Sent:** 3/28/2018 10:08:41 PM  
**Subject:** Re: FDA Case investigation for [B6] (EON-350158)

Dear Dr. Jones,

Thank you for following up on our patient, [B6]. We will be sending you our complete records for [B6] including the primary veterinarian history that we have and the history from her previous emergency room visit. Unfortunately, the diagnosis was made in October and the client has disposed of the diet. We will certainly keep this in mind for future patients with dilated cardiomyopathy which could potentially be diet-related and have those owners keep a sample and record the lot number for future testing/tracking. Thank you again for looking into this issue for our patients.

Sincerely,

[B6] VMD, DACVIM - Cardiology

On Wed, Mar 28, 2018 at 2:40 PM, Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)> wrote:

Good afternoon [B6]

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

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

- **Full Medical Records**
  - Please email (preferred) or fax (301-210-4685) a copy of [B6] **entire** medical history (not just this event).
  - Do you have records from her referring veterinarian?
- **Potentially Test Remaining OPEN product**
  - Do you have any remaining product left?
  - Is there a lot number or best by date for the leftover food?
- **Hold any remaining UNOPENED product** for potential collection.

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

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

Thank you kindly,

Dr. Jones

**Jennifer L. A. Jones, DVM**

Veterinary Medical Officer  
U.S. Food & Drug Administration  
Center for Veterinary Medicine

Office of Research  
Veterinary Laboratory Investigation and Response Network (Vet-LIRN)  
8401 Muirkirk Road, G704  
Laurel, Maryland 20708  
new tel: 240-402-5421

fax: 301-210-4685  
e-mail: [jennifer.jones@fda.hhs.gov](mailto:jennifer.jones@fda.hhs.gov)

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



--

### **CVCA - Cardiac Care for Pets**

**B6**

**Phone:** **B6**

**Fax:** **B6**

**Email:** **B6** [cvcavets.com](mailto:cvcavets.com)

Visit our website at: [www.cvcavets.com](http://www.cvcavets.com)

"Like" us on Facebook at: [www.facebook.com/CVCAVETS](http://www.facebook.com/CVCAVETS)

"Follow" us on Instagram at: [www.instagram.com/CVCAVETS](http://www.instagram.com/CVCAVETS)

***We want to hear from you! Access our online survey by clicking [here](#).***

If there is anything that we can do to improve our service for you, please do not hesitate to contact us directly. We would greatly appreciate your feedback and invite you to fill out a survey based on your experience with CVCA.

***Share your photos with us!***

If you have a photo that you would like to share, we would love to post it on our Facebook page. Like us on [Facebook](#) and post to our wall or you can email the image with a fun fact to [cvcainfo@cvcavets.com](mailto:cvcainfo@cvcavets.com) and we will forward it to our Facebook administrator.

***Please note -- Images are usually posted within 1 month of submission.***

---

**From:** CVCA - Cardiac Care for Pets [B6]  
**To:** Jones, Jennifer L  
**Sent:** 3/28/2018 10:27:10 PM  
**Subject:** Re: FDA Case investigation for [B6] (EON-350158)  
**Attachments:** [B6] BW.pdf; [B6] BW1.pdf; [B6] echo adata.pdf; [B6] hx.pdf; [B6] consult.pdf; [B6] echo 2.pdf; [B6] echo data.pdf; [B6] echo report 1.pdf; [B6] er.pdf; [B6] fecal.pdf; [B6] hx2.pdf; [B6] hx44.pdf; [B6] labs3.pdf; [B6] labs38.pdf; [B6] taurine.pdf

Attached is entire medical records for [B6]. Please let us know if you need anything else-  
Thank-

On Wed, Mar 28, 2018 at 6:08 PM, CVCA - Cardiac Care for Pets [B6] wrote:

Dear Dr. Jones,

Thank you for following up on our patient, [B6]. We will be sending you our complete records for [B6] including the primary veterinarian history that we have and the history from her previous emergency room visit. Unfortunately, the diagnosis was made in October and the client has disposed of the diet. We will certainly keep this in mind for future patients with dilated cardiomyopathy which could potentially be diet-related and have those owners keep a sample and record the lot number for future testing/tracking. Thank you again for looking into this issue for our patients.

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**Jennifer L. A. Jones, DVM**

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fax: 301-210-4685  
e-mail: [jennifer.jones@fda.hhs.gov](mailto:jennifer.jones@fda.hhs.gov)

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



--

**CVCA - Cardiac Care for Pets**

**B6**

**Phone:** **B6**

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**Email:** **B6** [@cvcavets.com](mailto:B6@cvcavets.com)

Visit our website at: [www.cvcavets.com](http://www.cvcavets.com)

"Like" us on Facebook at: [www.facebook.com/CVCAVETS](https://www.facebook.com/CVCAVETS)

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If you have a photo that you would like to share, we would love to post it on our Facebook page. Like us on [Facebook](#) and post to our wall or you can email the image with a fun fact to [cvcainfo@cvcavets.com](mailto:cvcainfo@cvcavets.com) and we will forward it to our Facebook administrator.

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--



**CVCA - Cardiac Care for Pets**

**B6**

**Phone:** **B6**

**Fax:** **B6**

**Email:** **B6**@cvcavets.com

Visit our website at: [www.cvcavets.com](http://www.cvcavets.com)

"Like" us on Facebook at: [www.facebook.com/CVCAVETS](http://www.facebook.com/CVCAVETS)

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***Please note -- Images are usually posted within 1 month of submission.***

121217 B

**B6**

**CVCA CONSULTATION REQUEST FORM**

Date: Tuesday, October 31, 2017

Client Id #: **B6** Client Name: **B6**

Address: **B6** City: **B6** State: **B6** Zip: **B6**

**Telephone:**

Cellular: : **B6**  
Cellular: : **B6**

Animal Name: **B6** Species: Canine Breed: Labrador Retriever

Color: Yellow Sex: spayed female Weight: 0Kg.

Date of Birth: **B6** Age: 13 Yrs. 0 Mos.

Referring Veterinary Hospital: No Vet

Doctor's Name: No Vet

Referring Veterinary Hospital Phone #: **B6**

**B6** Doctor Requesting Consult: **B6**

**Relevant History / Physical Findings:**

Cough started last Wednesday. Radiographs and blood work were performed. Radiographs revealed suspected cardiomegaly. Blood work showed mild ALP and GGT elevations. The owner made cardio-consultation on Friday however her cough got worse with pink tinged foam so **B6** was brought to **B6** for a cardiology consultation. **B6** has been a healthy dog with no current medications. She is up to date on vaccination and heartworm preventative.

**Current Medications:**

**B6** which was stopped because her coughing got worse with those medications.

---

**Radiographs performed at:**

RDVM

B6

**Consulting Cardiologist:**

10/31/2017 CVCA Consult 2013

**B6**

CVCA, Cardiac Care for Pets

**B6**



www.cvcavets.com

Client: **B6**  
Co-owner:  
Patient name: **B6**  
Species: Canine  
Breed: Labrador Retriever  
Sex: FS  
Age: **B6**  
Weight: 33.18kg / 73.15 lbs

Primary Care Veterinarian: **B6**  
Primary Care Hospital: **B6**  
Phone: **B6** ext:  
Fax: **B6**  
Email:

**Cardiac Evaluation Report**  
**Exam Date: 02/26/2018**

**Diagnosis**

- Mild, improved dilated cardiomyopathy - suspect taurine-responsive
- Mild, improved mitral and very mild tricuspid valve regurgitation as cause of heart murmur
- Normal, improved left atrial chamber dilation
- Mild, improved eccentric left ventricular chamber dilation
- Low normal, improved left ventricular contractility/heart muscle function
- Cough - suspect bronchial/primary respiratory disease

**Medications**

**B6**

- You may purchase the taurine and L-carnitine at any health food or nutrition store [www.puritanspride.com](http://www.puritanspride.com). You may also obtain the L-carnitine in bulk powder form from North Carolina State University by calling 919-513-6325.
- Continue with monthly heartworm and flea/tick control as prescribed by **B6**

**Please allow 24-48 hours for CVCA to process prescription refill requests.**

**Refill all medications indefinitely unless directed by CVCA or your primary care veterinarian.**

- **Please check all medications and dosages on your discharge report against the pharmacy labels.**

**Please Note**

- Please see our website [www.cvcavets.com](http://www.cvcavets.com) for more information about **B6** dilated cardiomyopathy.

Information for **B6**

CVCA **B6** 03/28/2018

**Nutrition Recommendations:**

- Continue the Royal Canin Early Cardiac diet.
- Consider fish oil supplements (omega-3 fatty acids). Her dose is approximately EPA 1220 mg and DHA 760 mg total per day. Please start at 1/2 the dose for one week, then increase to the full dose if tolerating well thereafter. Please avoid Cod liver oil and flax seed as well as products with Vit A and/or D.

For more information about fish oils, please visit --<http://vet.tufts.edu/heartsmart/diet/important-nutrients-for-pets-with-heart-disease/>

- In addition to the supplements approved by Tuft's Veterinary Nutrition Service, other reputable brands include Welactin and Nordic Naturals. Swan Creek Veterinary Clinic may have additional brand recommendations.

**Activity Recommendations:**

- Continue normal activity as she wants and is able to do. Please allow [B6] to take more breaks and rest during activity.
- Please avoid exercise in the hot/humid weather.

**At Home Monitoring:**

- In order to monitor for the development of early congestive heart failure in the out-patient setting, we recommend monitoring your pet's resting respiratory rate several times a week. Normal resting respiratory rates should be less than 30 breaths per minute. Consider using a respiratory rate monitoring application to track [B6] spiratory rate - Cardalis or BI Pharma have reliable phone applications. Please contact us if you note a persitent or progressive increase.

**Future Anesthesia/Fluid Recommendations**

**B6**

**Reevaluation**

- Recheck with [B6] the next 2-4 weeks and every 6 months for wellness care as directed, close auscultation, blood pressure and complete lab tests including blood and urine testing (CBC/Chemistry/Urinalysis/Thyroid evaluation). Please forward these results when available.
- Please recheck with CVCA in 6 months for a follow up consultation/examination, blood pressure, and echocardiogram. Please contact us or schedule an earlier appointment if [B6] has any problems or symptoms indicative of worsening heart disease or if recommended by [B6]

We thank you for trusting in CVCA to care for [B6] today. Please do not hesitate to call us with any questions or concerns.

Sincerely,

**B6**

**Visit Summary**

Heart Rate: [B6]

BP: [B6]

Cuff Size/Location: [B6]

**History:** Recheck DCM, suspected early CHF; doing well; RRR - [B6] increased; [B6] in January due to increased cough; cough seems to be intermittent and related to excitement; good appetite; 3 kg weight gain since 10/2017; walks 30-45 minutes per day - slow pace, at times winded but recovers very quickly.

B6 developed a cough last Wednesday (10/25/17). Radiographs and blood work were performed by B6. B6 The lab work (which is unavailable for review) reportedly showed an elevated ALP B6 and GGT B6 and mild lymphopenia. Thoracic radiographs were performed which revealed cardiomegaly. B6 was treated with B6. All medications were stopped on Monday as her cough had worsened and she was presented to the B6 for a cardiac evaluation as her coughing had worsened and she had brought up a small volume of pink-tinged foam after a coughing fit. During this time there has been no evidence of lethargy and she continues to eat and drink normally at home.

PPHx: None

Meds: None

Other: B6

Diet: changed from Zignature (Kangaroo) to Royal Canin Early Cardiac

**Physical Exam Findings:** 3/6 pansystolic murmur, PMI - mitral valve, regular rhythm with S3 gallop; LUNGS - clear all fields, panting, normal effort; SI. overweight body condition (BCS - B6) Pink mm; PP - SS; PLN - WNL; ABD - hepatomegaly; BAR

### Echocardiographic Findings

Mild left ventricular eccentric dilation - significant improvement compared to previous exam; mild, improved centrally located mitral regurgitant jet, normal, improved left atrial dimensions on 2D imaging and on M-mode imaging, mild, low velocity eccentric low velocity tricuspid regurgitation, subjectively normal right ventricular and right atrial dimensions, normal left and right ventricular outflow velocities, low normal, improved indices of systolic function (FS% and EF% by modified Simpson's, normal EPSS, normal transmitral inflow velocities and E:A wave ratio on spectral Doppler tracings, normal TDI E':A' ratio of the lateral mitral annulus, no masses, effusions or heartworms observed.

### Comments

Dear B6

Thank you for sending B6 to see us with B6 today. I am quite pleased with B6 exam today. She has had remarkable improvement in her echocardiogram with the cardiac medications, change in diet and supplementation with Taurine and L-carnitine. Her risk for congestive heart failure at this point is very low so we will be weaning B6 off the B6 while B6 monitors B6 respiratory rate. Her current cough is likely due to respiratory disease and if the cough progresses/worsens, we will consider adding in a B6 such as B6. Right now, with the marked improvement B6 long-term prognosis has improved considerably. I suspect we will be able to further discontinue cardiac medications if her heart remains stable. We will continue to closely monitor B6 heart disease via serial echocardiography and institute further therapy when progression is noted. While on this course of medication, it is important to monitor the chemistry profiles and blood pressures. Hopefully, B6 will continue to do so well - she's a sweetie!

We appreciate your continued referrals and the trust you place in CVCA to co-manage your cardiac patients. We look forward to working with you on this case and others. In an effort to continue to improve CVCA's service to both you and your clients, please visit our website at [www.cvcavets.com](http://www.cvcavets.com) and complete our online referring veterinarian survey.

Sincerely,

B6 DVM, DACVIM - Cardiology

## Patient Demographics

<b>B6</b>				<b>Study Date: 02/26/2018</b>	
Patient ID: 121217B02262018		Accession #:		Alt ID:	
DOB:	Age:	Gender:	Ht:	Wt: 73lb 0oz	BSA:
Institution:	<b>B6</b>				
Referring Physician:			Performed By: <b>B6</b>		
Physician of Record:					
Comments:					

## Adult Echo: Measurements and Calculations

### 2D

LVIDd (2D)		LVAd (A4C)		IVSd (2D)	
LVPWd (2D)		LVAAs (A4C)		RVIDd/LVIDd	
EDV (2D-Teich)		EDV (A4C)		RVIDd (2D)	
EDV (2D-Cubed)		ESV (A4C)		LA Area	<b>B6</b>
A4Cd	<b>B6</b>	LV Mass (Cubed)	<b>B6</b>	LA Dimen (2D)	
LV Vol					
LV Length					
LV Area		IVS/LVPW (2D)		LA/Ao (2D)	
A4Cs					
LV Vol					
LV Length					
LV Area					
LVLd (A4C)		SV (A4C)		AoR Diam (2D)	<b>B6</b>
LVLs (A4C)		EF (A4C)		HR - AV	

### MMode

IVSd (MM)		SV (MM-Teich)		LVPW % (MM)	
LVIDd (MM)		FS (MM-Teich)		RVIDd (MM)	
LVPWd (MM)		EF (MM-Teich)		LA Dimen (MM)	
IVSs (MM)	<b>B6</b>	EDV (MM-Cubed)	<b>B6</b>	AoR Diam (MM)	<b>B6</b>
LVIDs (MM)					
LVPWs (MM)					
IVS/LVPW (MM)		EF (MM-Cubed)		MV D-E Slope	
				MV E-F Slope	

**B6**

121217B02262018

02/26/2018

Created: 02:56PM 02/26/2018

1/3

EDV (MM-Teich)	<b>B6</b>	FS (MM-Cubed)	<b>B6</b>	MV EPSS	<b>B6</b>
ESV (MM-Teich)		IVS % (MM)			

**Doppler**

LVOT Vmax Max PG Vmax	<b>B6</b>	MV E/A	<b>B6</b>	E/A Medial	<b>B6</b>
RVOT Vmax Max PG Vmax		Med E Vel		TR Vmax Max PG Vmax	<b>B6</b>
MV Peak E Vel Vel PG		E/Med E			
MV Peak A Vel Vel PG		Med A Vel			

**Other Measurements**

Dimensions: Diameters

LVID/Ao (2D)	<b>B6</b>
EDVI	
ESVI	

EF & Volume: Simpson's

Sphericity Id	<b>B6</b>
---------------	-----------

Dimensions: Diameters

LVEDDN	<b>B6</b>
LVID/Ao (2D)	

**Images**





**B6**

**Signature**

Signature:  
Name(Print):

Date:

**B6**

121217B02262018

02/26/2018

Created: 02:56PM 02/26/2018

3/3

**B6**

www.cvcavets.com

Client: **B6**  
Co-owner:  
Patient name: **B6**  
Species: Canine  
Breed: Labrador Retriever  
Sex: FS  
Age: **B6**  
Weight: 33.18kg. / 73.15 lbs

Primary Care Veterinarian: **B6**  
Primary Care Hospital: **B6**  
Phone: **B6** ext:  
Fax: **B6**  
Email:

### Cardiac Evaluation Report Exam Date: 10/31/2017

#### Diagnosis

- Advanced dilated cardiomyopathy - ruleout idiopathic vs. taurine-responsive
- Mild to moderate mitral valve regurgitation as cause of heart murmur
- Trace tricuspid valve regurgitation
- Moderate to severe left atrial chamber dilation
- Severe eccentric left ventricular chamber dilation
- Moderate to severe decrease in contractility/heart muscle function
- Mild left ventricular wall thinning
- Mild right atrial and right ventricular chamber dilation
- Progressive cough - rule out: early left sided congestive heart failure vs. mainstem bronchial compression

#### Medications

**B6**

In 2 weeks, if **B6** is eating and feeling well:

**B6**

## B6

• You may purchase the taurine and L-carnitine at any health food or nutrition store [www.puritanspride.com](http://www.puritanspride.com). You may also obtain the L-carnitine in bulk powder form from North Carolina State University by calling 919-513-6325.

**Please allow 24-48 hours for CVCA to process prescription refill requests.**

**Refill all medications indefinitely unless directed by CVCA or your primary care veterinarian.**

• **Please check all medications and dosages on your discharge report against the pharmacy labels.**

### Please Note

• Please see our website [www.cvcavets.com](http://www.cvcavets.com) for more information about B6 dilated cardiomyopathy.

### Nutrition Recommendations

B6 is on a specialized diet which could be contributing to taurine deficiency. Please change her to a new diet, as her housemate is on a novel protein diet - consider prescription diets such as Royal Canin or Science Diet. Please discuss diet options with B6.

• In patients with early/mild heart failure, CVCA recommends feeding a diet with less than 80 mg of sodium per 100 kCal of food (50-80 mg/100 kCal). In patients with refractory heart failure signs, further sodium restriction may be beneficial.

• For more information about sodium content of various foods, please visit:

- Dog: [http://vet.tufts.edu/wp-content/uploads/reduced\\_sodium\\_diet\\_for\\_dogs.pdf](http://vet.tufts.edu/wp-content/uploads/reduced_sodium_diet_for_dogs.pdf)
- Treats: [http://vet.tufts.edu/wp-content/uploads/treats\\_for\\_dogs\\_with\\_heart\\_disease.pdf](http://vet.tufts.edu/wp-content/uploads/treats_for_dogs_with_heart_disease.pdf)

• CVCA recommends avoiding kidney diets unless B6 has kidney disease that warrants protein restriction.

• Diet changes should be done gradually (ie. over ~1 month) to avoid GI upset and avoided until Lucy is stable and eating well on the cardiac medications, usually about 2 weeks after starting or adjusting therapy.

• If you are interested in a consultation with a veterinary nutritionist, please visit <http://vetnutrition.tufts.edu/make-an-appointment/>

• CVCA recommends fish oil supplements (omega-3 fatty acids) in many dogs with cardiac disease. Her dose should be approximately EPA 1220 mg and DHA 760 mg total per day. Please start at 1/2 the dose for one week, then increase to the full dose if tolerating well thereafter. Please avoid Cod liver oil and flax seed as well as products with Vit A and/or D.

For more information about fish oils, please visit <http://vet.tufts.edu/heartsmart/diet/important-nutrients-for-pets-with-heart-disease/>

• In addition to the supplements approved by Tuft's Veterinary Nutrition Service, other reputable brands include Welactin and Nordic Naturals. B6 may have additional brand recommendations.

### Activity Recommendations

• Keep B6 very quiet for the next 3-4 days with only brief leash walks to eliminate.

• Once her coughing has resolved B6 may gradually resume activity as she wants and is able to do. Please allow B6 to take more breaks and rest during activity.

• Please try avoid burst type activity, as this increases the arrhythmia risk and avoid exercise in the hot/humid weather.

• Please try to warm B6 up for 5-10 minutes with walking prior to moderate activity and take more rests during more vigorous activity.

### At Home Monitoring

• Monitor for signs of cough, respiratory difficulty, exercise intolerance, abdominal swelling, weakness, lethargy, etc. If you note any of these symptoms, please notify CVCA or B6 as these symptoms may indicate recurrent congestive heart failure. If you note an increase in cough, respiratory rate or effort, please feel free to give an additional dose of B6 while contacting CVCA.

• In order to monitor for the development of early congestive heart failure in the out-patient setting, we recommend monitoring your pet's resting respiratory rate several times a week. Normal resting respiratory rates should be less than 30 breaths per minute. Consider using a respiratory rate monitoring application to track B6 respiratory rate - Cardalis or BI Pharma have reliable phone applications. Please contact us if you note a persistent or progressive increase.

• In addition B6 is sadly at increased risk for sudden cardiac death due to her cardiac disease. Dobermans are particularly at risk for development of severe, sudden malignant arrhythmias that sadly may result in sudden death. However, we hope to minimize these risks with our treatment plan.

**Future Anesthesia/Fluid Recommendations**

**B6**

**Reevaluation**

- Please recheck with **B6** in the next day or two to obtain taurine levels. Please forward these results when available.
- Please recheck with **B6** in 2 weeks for a follow up examination and blood chemistry profile with electrolytes and as recommended by **B6**. Please forward these results when available.
- Please recheck with **B6** every 4-6 months for a follow up examination and blood chemistry profile with electrolytes and as recommended by **B6**. Please forward these results when available.
- Please recheck with CVCA in 5 months for a follow up consultation/examination, blood pressure, and echocardiogram. Please contact us or schedule an earlier appointment if **B6** has any problems or symptoms indicative of worsening heart disease or if recommended by **B6**.

**Visit Summary**

Heart Rate: **B6**

BP: **B6** (based on MR gradient)

**History:**

**B6** developed a cough last Wednesday (10/25/17). Radiographs and blood work were performed by **B6** Veterinary Clinic. The lab work (which is unavailable for review) reportedly showed an elevated ALP **B6** and GGT **B6** and mild lymphopenia. Thoracic radiographs were performed which revealed cardiomegaly. **B6** was treated with **B6**. All medications were stopped on Monday as her cough had worsened and she was presented to the **B6** for a cardiac evaluation as her coughing had worsened and she had brought up a small volume of pink-tinged foam after a coughing fit. During this time there has been no evidence of lethargy and she continues to eat and drink normally at home.

PPHx: None

Meds: None

Other: **B6**

Diet: Zignature (Kangaroo)

**Physical Exam Findings:**

**B6**

H/L: Grade 2/6 left apical protosystolic heart murmur, regular rhythm, strong synchronous femoral pulses, RR: **B6** breaths/min, questionable mild increase in bronchovesicular sounds bilaterally, no crackles or wheezes ausculted, eupneic

**B6**

**Other Diagnostics:**

10/27/17 pDVM CXR: Generalized cardiomegaly characterized by widening of the cardiac silhouette and loss of the caudal cardiac waist consistent with left atrial enlargement. Slight left auricular bulge. Increased sternal contact and rounding of the right heart on the VD radiograph. Dorsal deviation of the trachea. Prominent pulmonary vasculature with a questionable mild increase in interstitial opacity in the caudodorsal lung fields which may suggest early congestive heart failure/pulmonary edema.

**Echocardiographic Findings**

Severe left ventricular eccentric hypertrophy with apical rounding and increased sphericity, mild-moderate centrally

located mitral regurgitant jet, moderate-severe secondary left atrial dilation on 2D imaging and moderately-severely increased LA:Ao ratio on M-mode imaging, mild eccentric low velocity tricuspid regurgitation with mildly elevated estimated right ventricular pressures consistent with mild pulmonary hypertension, mild right ventricular and right atrial dilation, normal left and right ventricular outflow velocities, moderately to severely depressed indices of systolic function (FS% and EF% by modified Simpson's - LVDI [B6], LVSI [B6]), increased EPSS, elevated transmitral inflow velocities and E:A wave ratio on spectral Doppler tracings, normal TDI E':A' ratio of the lateral mitral annulus, no masses, effusions or heartworms observed.  
ECG during echocardiogram: Normal sinus rhythm. No ventricular ectopy noted.

### Comments

Dear [B6]

Thank you for sending [B6] to see us with [B6] today. Sadly [B6] has dilated cardiomyopathy with moderate to severe systolic dysfunction and moderate to severe left atrial dilation. This places her at a high risk of developing congestive heart failure and with the progression in her cough I am concerned that we may be dealing with congestive heart failure at this time. We have begun therapy to control congestive heart failure, support cardiac function, slow down the progression of the heart disease and improve survival. We are now seeing more dogs on specialized diets that are developing taurine deficiency and we have discussed submission of taurine levels to evaluate whether this may be a contributing factor to [B6] condition. [B6] is interested in pursuing this test at your clinic, taurine levels should be drawn and placed in a heparinized tube (green top) and should be frozen and submitted to Idexx (who sends it to UC Davis). It will be interesting to see if this is a contributing factor to [B6] condition.

We will continue to closely monitor [B6] heart disease via serial echocardiography and institute further therapy when progression is noted. While on this course of medication, it is important to monitor the chemistry profiles and blood pressures. Dogs with dilated cardiomyopathy are at a higher risk of developing ventricular arrhythmias. None were noted today; however, it will be important to monitor for arrhythmias periodically in the future. Unfortunately, the prognosis is guarded after the onset of congestive heart failure, and we discussed with the [B6] family that the average survival is ~ 6-12 months.<sup>1,2</sup> Survival time is highly individually variable depending on response to therapy.

We appreciate your continued referrals and the trust you place in CVCA to co-manage your cardiac patients. We look forward to working with you on this case and others. In an effort to continue to improve CVCA's service to both you and your clients, please visit our website at [www.cvcavets.com](http://www.cvcavets.com) and complete our online referring veterinarian survey.

Sincerely,

[B6] VMD, DACVIM - Cardiology

**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** Rotstein, David; Palmer, Lee Anne; Carey, Lauren  
**CC:** Peloquin, Sarah  
**Sent:** 12/6/2018 5:56:09 PM  
**Subject:** RE: 800.267-cc-150-EON-369268- [B6] Fromm Four-Star Nutritionals Game Bird  
**Attachments:** MRx.zip

[B6] 1 yr FS Golden Retriever

[B6]

Presented 9/25/2018: discussed cardiomyopathy of GRTs; been on GF diet  
WB Tau- [B6] Davis)  
10/19/2018 cardio: screening echo b/c on GF diet and low Tau; asymptomatic  
PE-nsf  
Echo-occult DCM-sys dyxfxn, LV dil  
Tx: [B6] diet change, 0.5g Tau BID, OFAs, poss L-carn

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



**From:** PFR Event <ppreventcreation@fda.hhs.gov>  
**Sent:** Wednesday, October 24, 2018 4:35 PM  
**To:** Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; [B6]  
**Subject:** Fromm Four-Star Nutritionals Game Bird Recipe Dog Food: [B6] - EON-369265

A PFR Report has been received and PFR Event [EON-369265] has been created in the EON System.

A "PDF" report by name "2057000-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 "2057000-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-369265

**ICSR #:** 2057000

**EON Title:** PFR Event created for Fromm Four-Star Nutritionals Game Bird Recipe Dog Food; 2057000

<b>AE Date</b>	10/19/2018	<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>	Stable
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	1 Years		

District Involved	PFR <b>B6</b> DO		
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**Product information**

**Individual Case Safety Report Number:** 2057000

**Product Group:** Pet Food

**Product Name:** Fromm Four-Star Nutritionals Game Bird Recipe Dog Food

**Description:** **B6** was tested to have whole blood taurine of **B6** and was diagnosed with occult dilated cardiomyopathy by echo.

**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
Fromm Four-Star Nutritionals Game Bird Recipe Dog Food		

**Sender information**

**B6**

USA

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

<https://eon.fda.gov/eon//browse/EON-369265>

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=386187>

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**B6**

DATE	WEIGHT	TREATMENT AND PROGRESS	ANIMAL NAME HOME WORK
9-25-18	63	<p>PE. Dilated cardiomyopathy in Golden Ret. also food related issues + grain free diet.</p> <p>+101.4 P 120 R. Panting</p> <p>has been eating grain free diet and concerned about possible issues with DCM. sending blood to UC Davis for Taurine levels</p>	<b>B6</b>
10-16-18	TL	<p>L/M to see how visit at specialist went yesterday</p>	<b>B6</b>
10-18-18		<p>faxed Records to</p>	<b>B6</b>
10-23-18		<p>TL: LM Dr. cardiologist. thinks my symptoms with Taurine</p>	

TREATMENT AND PROGRESS

ANIMAL NAME	<b>B6</b>
HOME	
WORK	

DATE	WEIGHT	TREATMENT AND PROGRESS
1-12-18	TC	LM
1-15-18	TC	Doing much better.
1-23-18	OC	Renew <b>B6</b> (#30)
		1 QD
2-21-18		<b>B6</b> 1 QD
3-8-18	22.0	VALS- <b>B6</b> HWTD FeO
		<b>B6</b> vrxl, 1 QD
		Sabd bump, eye exudate
		<del>PO <del>antibiotic</del> <del>antibiotic</del> <del>antibiotic</del></del>
3-9-18	TC	LM
3-28-18	4	
3-28-18		
4-12-18	22.4	<b>B6</b>
4-14-18	TC	LM <b>B6</b> <del>HWTD FeO</del>
4-23-18	TC	Renew <b>B6</b> (30ct) 1 QD
		Renew vrxl to vet dir. <b>B6</b>
5-18-18	OC	Renew <b>B6</b> (30ct) 1 QD
6-20-18		Renew <b>B6</b> 30ct 1 QD
7-21-18	TC	Renew <b>B6</b> 30ct 1 QD
8-17-18	OC	Renew <b>B6</b> (30ct) 1 QD
7-24-18	OC	Renew <b>B6</b> (30ct) 1 QD

DATE	WEIGHT	TREATMENT AND PROGRESS	ANIMAL NAME
4-12-17	69.2	By oral #2	B6
		B6	
4-13-17	TC	L/M	B6
4-25-17	85		
			B6
5-23-17	39.2		
			B6
6-20-17	45.6		
7-29-17	51.6		B6
8-26-17	56.0		
9-23-17	56.2		- very full
			B6
10-28-17	58.2		
11-8-17	58.2		B6
			B6
12-28-17	61.4		
	58.0		B6
12-29-17	TC		B6
1-8-18	60.2		
			B6
			B6

**B6**

**ANIMAL RECORD**

Home Phone

**B6**

Work Phone

Owner's Name

**B6**

Animal's Name

**B6**

Species

*KA*

Allergies

Sex

*F*

Birthdate

**B6**

Breed

*Golden Retriever*

Color

Rabies																				
DHLPP																				
HW																				
Bordetella																				
FVR-CP																				
FelV																				
FIP																				

**MAJOR PROBLEM**

**B6**

*22*

*28*

*30*

*32*

**B6**

**B6**

**B6**

**DISCHARGE INSTRUCTIONS AND REFERRAL CORRESPONDENCE**

Primary Veterinarian: Dr. **B6**  
Phone number: **B6**

Owner's name: **B6**  
Phone number: **B6**

Patient Name: **B6**      Weight: 38.6 Kgs  
Species: Canine      Breed: Retriever, Golden  
Sex: Spayed Female      Age: **B6**

Admission Date: 10/19/2018  
Discharge Date: 10/19/2018

History: Presented for Screening Echocardiogram for DCM. **B6** is currently in a Grain free diet and a low Taurine level was noted on her blood work. No signs of cardiac disease noted by the owner.

**B6**

CV9: Normal sinus rhythm, no murmurs or arrhythmias. Atrial and ventricular outflow tract normal. Cardiac size normal.

**B6**

**Diagnostic Tests Performed**

**Echocardiogram:** Evidence of occult dilated cardiomyopathy (DCM) based systolic dysfunction and left ventricular dilation noted on the echocardiogram today. Treatment with **B6** has been shown to significantly delay the onset of congestive heart failure (CHF) in these dogs. Since **B6** is an atypical breed to develop DCM, and the fact that she was being fed a grain free diet, with a low blood taurine level, we suspect that the cause is dietary taurine deficiency in golden retriever.

**Clinical Diagnosis:** Occult Dilated Cardiomyopathy - suspect dietary deficiency. Taurine is an amino acid that is found in high concentrations in heart and muscle. Among its many functions, it aids in normal contractile function. Evidence shows that taurine helps mediate calcium channel transports and modulates calcium sensitivity of the myofibrils. Taurine deficiency as a cause of dilated cardiomyopathy (DCM) is not a new issue. Taurine deficiency in cats was characterized by Pion et al in the late 1980s. Taurine deficiency has since been characterized as a cause of acquired DCM in dogs as well.

**Treatment and Recommendations:** Ongoing monitoring is recommended for signs of lethargy, decreased appetite, coughing, weakness/collapse, increased respiratory effort or rate (>40 breaths per minute AT REST) as these may be signs of progression of cardiac disease. If any of these signs are noted, please contact a veterinarian.

**Medications:**

1. **B6**

**Diet:** We recommend switching diet to a regular dog balanced diet and supplement Taurine and Omega 3 as follow. Taurine dose in dogs is 500 mg/ dog PO q 12h. Omega-3 fatty acids may improve appetite and reduce cachexia (EPA 30-40 mg/kg PO q 24h, DHA 20-25 mg/kg PO q 24h). Consider L-carnitine (110 mg/kg PO q 12h) in dogs not responding to taurine.

**Results Pending:** None

**Progress Exam:** We recommend a recheck Echocardiogram in 1 month, or sooner should you notice clinical signs listed above.

**Questions or Problems:** If any problems or questions arise associated with the procedure and treatment performed at Affiliated Veterinary Specialists, please do not hesitate to call **B6**

**B6**

**B6**  
Emergency & Critical Care

Dipl. B.C.V.E.C.C.

**B6**  
Board Certified Specialist - Cardiology

**B6**

**B6**

22470

# 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: \_\_\_\_\_ **B6** \_\_\_\_\_

Address: \_\_\_\_\_  
Email: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
**B6**

Billing Contact: \_\_\_\_\_ **B6** \_\_\_\_\_ Email: \_\_\_\_\_ **B6** \_\_\_\_\_

Patient Name: \_\_\_\_\_ **B6** \_\_\_\_\_ Species: Canine

Breed: Golden Retriever Owner's Name: \_\_\_\_\_ **B6** \_\_\_\_\_

Current Diet : Fromm Game Bird Recipe with Primal raw topper and raw goats milk

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

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

## Taurine Results (lab use only)

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

*please send  
copy of  
results to  
owner*

	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.





## CARDIOLOGY SERVICE UPDATES: DOG FOOD & DILATED CARDIOMYOPATHY

The Cardiology Service has developed this document in response to the alerts from the FDA. These alerts identify an associated risk for some grain-free diets containing certain ingredients (legumes like peas, pea components, lentils; white potatoes, sweet potatoes) and a diagnosis of dilated cardiomyopathy (DCM). The links provided throughout this document can be copied and pasted to obtain additional information.

FDA Alerts found here:

<https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm613305.htm>

<https://www.fda.gov/AnimalVeterinary/ResourcesforYou/AnimalHealthLiteracy/ucm616279.htm>

### **What is Dilated Cardiomyopathy (DCM)?**

DCM is a heart muscle disorder that results in a weak pump function and heart chamber enlargement. In the early stages of this disease pets may appear totally healthy with no apparent clinical signs. Later in the course of this disease, dogs may have a heart murmur, an arrhythmia (irregular heart beat), collapse episodes, weakness or tiredness with exercise, and even trouble breathing from congestive heart failure. While there are some breeds of dogs (like Dobermans) that have a genetic predisposition to development of DCM, there are also nutritional factors that may result in this disease.

### **What should I do?**

If you are feeding a diet of concern based upon the FDA alert we recommend that you consult with your veterinarian or veterinary cardiologist. We provide 4 general points for guidance below:

1. An initial step is to consider whether you are willing or interested in performing additional testing to assess whether your pet is affected with DCM. If you believe your dog is at risk, showing any of the aforementioned clinical signs or would prefer to simply rule out any heart disease, we recommend that you first have your pet's taurine levels tested (both whole blood and plasma levels) as well as seek an echocardiogram by a board-certified veterinary cardiologist. Low taurine levels are associated with development of DCM in dogs and are sometimes a component of this current issue.

Information on taurine testing can be found here: <https://www.vetmed.ucdavis.edu/labs/amino-acid-laboratory>

2. At this time, diet change is recommended when possible and should be considered regardless of the results obtained from any testing. You can consult with your veterinarian in selecting a new diet that avoids the ingredients of concern listed by the FDA. When selecting this diet, we recommend that you choose a diet that is manufactured with rigorous quality control measures and research behind the formulation. A way to ensure that your diet meets these recommendations is to follow the following guidelines that were generated by a large number of the world's leading experts in veterinary nutrition.

Food selection guidelines found here:

<https://www.wsava.org/WSAVA/media/Arpita-and-Emma-editorial/Selecting-the-Best-Food-for-your-Pet.pdf>

3. If your pet is identified through testing to have a low blood taurine level or evidence of DCM by echocardiogram, we urge you to report this information to the FDA.

FDA reporting guidelines found here: <https://www.fda.gov/AnimalVeterinary/SafetyHealth/ReportaProblem/ucm162403.htm>

4. Work with your veterinarian(s) to determine the best course of action and medical treatments if indicated. In the case of a DCM diagnosis, diet change alone may not be sufficient and additional medications may be prescribed.

Please continue to monitor the FDA website and the UC Davis School of Veterinary Medicine Newsfeeds for updates and recommendations regarding this issue.



STERN CARDIAC GENETICS LABORATORY  
 JOSHUA A. STERN, DVM, PHD, DACVIM (CARDIOLOGY)  
 sterngenetics@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 clinical reference ranges be used for Golden Retrievers and be considered for other known taurine-sensitive breeds such as Newfoundlands 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.

- Normal whole blood taurine: >250nmol/mL
- Normal plasma taurine: >70nmol/mL
- Marginal whole blood taurine: 200-250nmol/mL
- Marginal plasma taurine: 60-70nmol/mL
- Low whole Blood taurine: <200nmol/mL
- Low plasma taurine: <60nmol/mL

#### References:

- Kramer GA, Kittleson MD, Fox PR, Lewis J, Pion PD. Plasma taurine concentrations with normal dogs and in dogs with heart disease. *J Vet Intern Med* 1995;9:253-258.
- Belanger MC, Ouellet M, Queney G, Moreau M. Taurine-deficient dilated cardiomyopathy in a family of golden retrievers. *J Am Anim Hosp Assoc* 2005;41:284-291.
- Kittleson MD, Keene E, Pion PD, Loyer CG, MUST Study Investigators. Results of the multicenter spaniel trial (MUST): taurine- and carnitine-responsive dilated cardiomyopathy in American Cocker Spaniels with decreased plasma taurine concentration. *J Vet Intern Med* 1997;11:204-211.
- Backus RC, Choen G, Pion PD, Good KL, Rogers QR, Fascetti AJ. Taurine deficiency in Newfoundlands fed commercially available complete and balanced diets. *J Am Vet Med Assoc* 2003;223:1130-1136.
- Fascetti AJ, Reed JR, Rogers QR, Backus RC. Taurine deficiency in dogs with dilated cardiomyopathy: 12 cases (1997-2001). *J Am Vet Med Assoc* 2003;223:1137-1141.
- Freeman LM, Michel KE, Brown DJ, Kaplan PM, Stamoulis ME, Rosenthal SL, Keene BW, Rush JE. Idiopathic dilated cardiomyopathy in Dalmatians: nine cases (1990-1995). *J Am Vet Med Assoc* 1996;209:1592-1596.
- Delaney SJ, Kass PH, Rogers QR, Fascetti AJ. Plasma and whole blood taurine in normal dogs of varying size fed commercially prepared food. *J Anim Physiol a Anim Nutr* 2003;87:236-244.

#### 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 DCM, 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 utilized for our reference ranges was generated. <https://www.vetmed.ucdavis.edu/labs/amino-acid-laboratory>. 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.

## **Clinical Recommendations for Golden Retrievers based on taurine levels:**

### If taurine levels test <200nmol/mL in whole blood or <60nmol/mL in plasma

- An echocardiogram by a board-certified veterinary cardiologist is indicated
- After echocardiogram has been completed, a diet change is recommended.
  - If DCM is diagnosed, this patient may need a variety of cardiac medications that would be prescribed by the attending cardiologist.
  - If DCM 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 taurine-deficient DCM in our study showed slow and steady improvement over a period of 6-12 months.

### If taurine levels test 200 – 250nmol/mL in whole blood or 60-70nmol/mL 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 thus the value of screening should be carefully considered. If the dog is eating a diet that falls within the FDA warning or shares features with the diets 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 on the new diet should be considered.
- If DCM is diagnosed, this patient may need a variety of cardiac medications that would be prescribed by the attending cardiologist.
  - If DCM 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 taurine-deficient DCM in our study showed slow and steady improvement over a period of 6-12 months.

### If taurine levels test >250nmol/mL in whole blood or >70nmol/mL in plasma

- Diet change is recommended if you are feeding a diet that falls within the FDA warning or shares features with the diets identified in our study [see diets of concern section below]
- If your pet shows any signs of cardiac disease (trouble breathing, exercise intolerance, fainting/collapse, coughing) we recommend your veterinarian evaluate your pet.

### **Diets of Concern & Choosing 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 legumes like peas and lentils, white or sweet potatoes). These findings were largely recapitulated in our current study of Golden Retrievers with low taurine levels and DCM. 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 Guidelines published as consensus by veterinary nutritionists from around the world:
  - <https://www.wsava.org/WSAVA/media/Arpita-and-Emma-editorial/Selecting-the-Best-Food-for-your-Pet.pdf>
- FDA alert found here:
  - <https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm613305.htm>

### **Choosing a taurine or l-carnitine supplement:**

Selecting supplements should be performed based upon those that match their stated contents and are readily available for absorption. Luckily a previous publication tested multiple taurine and l-carnitine supplements. Based upon this publication our laboratory recommends the following supplements as those meeting our quality criteria. (Bragg et al. 2009 J Am Vet Med Assoc; 234(2))

#### Tested taurine supplements that test within 5% of stated contents and if applicable disintegrated within 30 minutes

- Mega taurine caps by Twinlab (1000 capsule)
- Taurine by Swanson Health Products (500mg capsule)
- Taurine by NOW foods (500mg capsule)
- Taurine 500 by GNC (500mg tablet)

#### Tested L-carnitine supplements that test within 5% of stated contents and if applicable disintegrated within 30 minutes

- L-carnitine 500 by Jarrow Formulas (500mg capsule)
- L-carnitine caps by Country Life (500mg capsule)
- Maxi L-carnitine by Solgar Vitamin and Herb (500mg tablet)
- L-carnitine by Puritan's Pride (500mg tablet)

The Stern lab does not recommend the empirical supplementation of taurine or l-carnitine to dogs without evidence of DCM and/or significant deficiency. If DCM is diagnosed we typically recommend dogs over 50lbs receive 1000mg of taurine every 12hrs and dogs under 50lbs receive 500mg of taurine every 12hours. 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 prescribing the best dose for your dog.

### **Reporting to the FDA:**

Understanding the basis of this condition requires a great deal of research and investigation. Clients 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/animalveterinary/safetyhealth/reportaproblem/ucm182403.htm>

Additional questions or comments:

[sterngenetics@ucdavis.edu](mailto:sterngenetics@ucdavis.edu)

This document last updated: Aug. 20, 2018

Page 3 of 3



SCHOOL OF VETERINARY MEDICINE  
DEPARTMENT OF MEDICINE & EPIDEMIOLOGY  
UNIVERSITY OF CALIFORNIA  
(530) 752-1363  
FAX (530) 752-0414

ONE SHIELDS AVENUE  
DAVIS, CALIFORNIA 95616-8734

June 28, 2017

### Taurine-deficient Dilated Cardiomyopathy in Golden Retrievers

In the wake of many golden retrievers being diagnosed with taurine-deficient DCM, we have started to collect information to better understand the condition and help the golden retriever community. Unfortunately due to concern and panic, many owners have identified concerns and proceeded with supplementation or diet change. This approach has led to more confusion and an inability to definitively say whether some dogs have an inherited cardiomyopathy or a nutritionally derived heart disease. This makes a huge difference in the prognosis and outcome for these dogs and their possible continuation in the breeding pool. Please review the following steps regarding evaluation of taurine-deficient DCM. Our group has put this together to help get to the bottom of this issue as fast and as medically appropriate as possible.

1. If you believe your dog is at risk for taurine deficient DCM and wish to have taurine levels tested - please request a whole-blood taurine level be submitted (~~to the laboratory of your choice~~) for analysis. The laboratory that I recommend can be found here: <https://www.vetmed.ucdavis.edu/labs/amino-acid-laboratory>
2. If you believe your dog is showing signs of DCM already - please seek an appointment with a board certified cardiologist to have an echocardiogram and taurine testing obtained simultaneously - do not change foods, do not supplement prior to the appointment.
3. If you receive taurine test results that come back as low - please seek an appointment with a board certified cardiologist to have an echocardiogram performed to determine if your pet needs cardiac medications and the appropriate supplements to be used (DO NOT SUPPLEMENT OR CHANGE FOODS UNTIL YOU HAVE THE CARDIOLOGY EVALUATION COMPLETED). If you live in close to UC Davis, we can arrange research-funded cardiology evaluations for your dog if you contact us via [sterngenetics@ucdavis.edu](mailto:sterngenetics@ucdavis.edu).
4. If you receive cardiologist confirmed DCM results, please take an image of the food bag, ingredient list and lot number. Please also request a copy of the images from the echocardiogram from your cardiologist (ensure that you have full DICOM image copies on a CD). Please complete a full diet history form found at this link [https://www.vetmed.ucdavis.edu/sites/g/files/dqvnsk491/files/inline-files/Diet\\_History\\_Form\\_FINAL\\_April2017.doc](https://www.vetmed.ucdavis.edu/sites/g/files/dqvnsk491/files/inline-files/Diet_History_Form_FINAL_April2017.doc) Please email the image of food bag, a 3-generation pedigree, diet history form, copies of the taurine level results and medical record to [sterngenetics@ucdavis.edu](mailto:sterngenetics@ucdavis.edu). A member of our laboratory team will contact you to discuss our thoughts and possible request additional information, food samples or blood samples for further testing.
5. If you have any questions on how to proceed please email Dr. Stern at [sterngenetics@ucdavis.edu](mailto:sterngenetics@ucdavis.edu).

Kind Regards,

Joshua A Stern, DVM, PhD, DACVIM

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# Patient History Report

Client:	<b>B6</b>	Phone:	<b>B6</b>	
Patient:		Species:	Canine	Breed: Retriever, Golden
		Age:	<b>B6</b>	Sex: Female
		Days:		

Date	Type	Staff	History
------	------	-------	---------

12/28/2017 L

**B6**

Chemistry results from IDEXX VetLab In-clinic  
 Laboratory Requisition ID: 2953969      Posted      Final

Test	Result	Reference Range
ALB =		2.3 - 4.0
ALKP =		23 - 212
ALT =		10 - 125
BUN/UREA =		7 - 27
CREA =		0.5 - 1.8
GLU =		74 - 143
TP =		5.2 - 8.2
GLOB =		2.5 - 4.5
ALB/GLOB =		
BUN/CREA =		

**B6**

12/28/2017 L

**B6**

Hematology results from IDEXX VetLab In-clinic  
 Laboratory Requisition ID: 2953969      Posted      Final

Test	Result	Reference Range
HCT =		37.0 - 55.0
HGB =		12.0 - 18.0
MCHC =		30.0 - 37.5
WBC =		5.50 - 16.90
LYMPHS =		0.50 - 4.90
%LYMPHS =		
MONOS =		0.30 - 2.00
%MONOS =		
NEUT =		2.00 - 12.00
%NEUT =		
EOS =		0.10 - 1.49
%EOS =		
BASO =		0.00 - 0.10
%BASO =		
PLT =		175 - 500
Retics =		10.0 - 110.0
%Retics =		
RBC =		5.50 - 8.50
MCV =		60.0 - 77.0
MCH =		18.5 - 30.0
RDW =		14.7 - 17.9
MPV =		
PDW =		
PCT =		

**B6**

B: Billing, C: Med note, CB: Call back, CK: Check-in, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimates, I: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative med note, V: Vital signs

**B6**

B4

B4

B4

B4

OFFICIAL CERTIFICATE OF VETERINARY INSPECTION FOR INTRASTATE SALE OF A DOG OR CAT

EXPIRES 30 DAYS FROM DATE OF ISSUANCE

Pursuant to Section 828.29, F.S., Rule 5C-27 and Rule 5C-28, F.A.C.

Section 828.29, Florida Statutes, provides that each dog or cat offered for sale within the state must be accompanied by a current Official Certificate of Veterinary Inspection (OCVI), issued by a veterinarian licensed by the state and accredited by the United States Department of Agriculture.

SELLER				PURCHASER			
Name	B6			Name	B6		
Address	B6			Address	B6		
City	State	B6	City				
Email				Email			

B6

22470

# 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: \_\_\_\_\_ **B6** \_\_\_\_\_

Address: \_\_\_\_\_ **B6** \_\_\_\_\_  
Email: \_\_\_\_\_

Telephone: \_\_\_\_\_ **B4** \_\_\_\_\_, owner **B6** \_\_\_\_\_ Fax: \_\_\_\_\_ **B4** \_\_\_\_\_

Billing Contact: \_\_\_\_\_ **B6** \_\_\_\_\_ Email: \_\_\_\_\_ **B6** \_\_\_\_\_  
Patient Name: \_\_\_\_\_ Species: \_\_\_\_\_ Canine \_\_\_\_\_

*Please send  
copy of  
results to  
owner*

Breed: \_\_\_\_\_ Golden Retriever \_\_\_\_\_ Owner's Name: Nicole Ritter and Eric Yard

Current Diet : \_\_\_\_\_ Fromm Game Bird Recipe with Primal raw topper and raw goats milk \_\_\_\_\_

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

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

## Taurine Results (lab use only)

Plasma: \_\_\_\_\_ 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.



### Discharge Instructions

**Patient**

Name: B6

Species: Canine

Gold Male (Neutered) Golden Retriever

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: 426744

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Date: B6

**Diagnoses:**

Mild reduced contractile function, normal cardiac size

Low blood taurine levels

**Clinical Findings:** Thank you for bringing B6 in for evaluation of his heart. His heart is normal in size, but his contractile function is not quite as vigorous as some dogs. This could be a variation of normal for him, but it is also possible that it could be related to low taurine. We have submitted an NTproBNP test to gather more information about B6 heart health. We also submitted a total T4 to assess B6 thyroid on his current level of medication. We will call you with these results within the next few days.

**Monitoring at Home:** Please watch for any exercise intolerance, weakness, or collapse.

**Diet Suggestions:** We recommend a change in B6 diet. If you would like to pursue a mix of home cooking and new kibble we recommend scheduling a Nutrition consultation with Dr Lisa Freeman. If you would like to feed primarily home cooked diet then please schedule an appointment with B6

**Exercise Recommendations:** B6 can have normal exercise.

**Recommended Medications:**

B6

**Recheck Visits:** We will want to do a recheck echocardiogram in around 6-12 months, but we will decide based on his NTproBNP results.

Thank you for entrusting us with B6 care. He is such a good boy! 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

### Patient History Report

Client:	<b>B6</b>	Patient:	<b>B6</b>	Breed:	Golden Retriever
Phone:		Species:	Canine	Sex:	M/Neutered
Address:		Age:	<b>B6</b>	Color:	Buff

Date	Type	Staff	History
------	------	-------	---------

**B6** TC 012 Phone & Other Contact - TENTATIVE - Taurine level low, wants to see cardiologist.  
 Client Initiated Call / Contact  MVC Initiated Call / Contact  LMOM  In Person  E-mail  
**B6** taurine level was low and the vet at UC Davis recommends he have an echocardiogram with a cardiologist. Is there someone AS would recommend? **B6**  
 Called client and spoke to her. **B6** recommends **B6** (Medicine). Client has an appointment at **B6** for their earliest available (mid October), so will call to see if **B6** to see if they can get **B6** in earlier. **B6**

**B6**

8/21/2018 C 012 Office Visit - CLOSED 08/29/2018 - Blood draw--> owner to send to UC for taurine level  
 Reason For Visit: Blood draw for taurine level  
 Discussion Items: Blood draw, put into green top tube. Owner to send to UC lab herself for. Sent home styrofoam container and ice packs since lives 30 mins away.  
 Enter Item Discussed:  
 Follow Up needed / recommended: None

8/21/2018 V 088 Aug 21, 2018 09:14 AM Staff: 088  
 Weight : 72.2 pounds  
 8/21/2018 CK 0 Blood draw SCFD - AD

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimates, I: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative med note, V: Vital signs

### Patient History Report

Client:	<b>B6</b>	Patient:	<b>B6</b>	Breed:	Golden Retriever
Phone:		Species:	Canine	Sex:	M/Neutered
Address:		Age:	<b>B6</b>	Color:	Buff

Date	Type	Staff	History
------	------	-------	---------

8/21/2018	B	012	Reason for Visit: TECH APPOINTMENT Date Patient Checked Out: 08/21/18 Practice: 1 1.00 Blood Draw/Pack-Dodds/MSU-CT Mails (374) by 022
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8/7/2018	C	081	Phone & Other Contact - CLOSED 08/17/2018 - Wanting to schedule blood draw to check taurine levels
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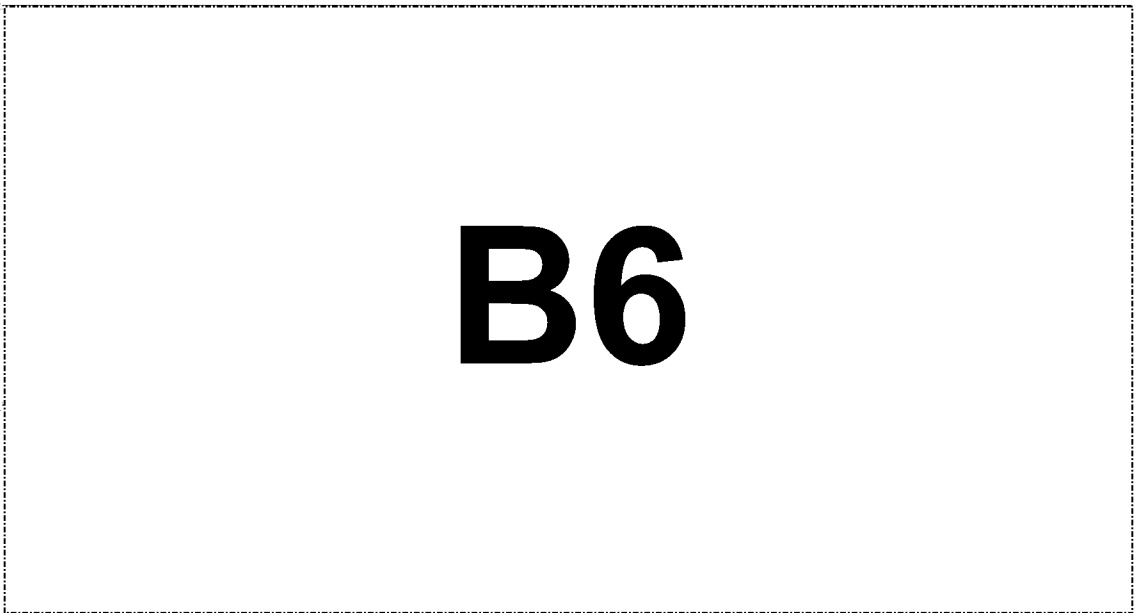
Client Initiated Call / Contact     M/C Initiated Call / Contact     LMQM     In Person     E-mail

Ct would like to schedule a blood draw so that she can get pt's taurine levels checked. **B6** Ct says the study for golden retrievers that she wants to join would prefer a blood sample sent to them and not run through Idaxx, it would need to be in a special blood tube (ct says green top) Ct is going to email us instructions. Note to **B6** to see best way to schedule this. **B6**

3:10 instructions attached to this note, ct says she will handle the shipping of the blood samples. **B6**

5:20 ok per **B6** to schedule with a tech, ct will wait till the blood tubes come in and we call her to schedule, ct would prefer a morning appt so that she can go to **B6** right after the appointment to send the blood. **B6**

8/11/18 ct called and sched appt with tech **B6**



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### Patient History Report

Client:	<b>B6</b>	Patient:	<b>B6</b>	Breed:	Golden Retriever
Phone:		Species:	Canine	Sex:	M/Neutered
Address:		Age:	<b>B6</b>	Color:	Buff

Date	Type	Staff	History
<b>B6</b>			

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimate, I: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative medl note, V: Vital signs

**B6**

### Patient History Report

Client:	<b>B6</b>	Patient:	<b>B6</b>	Breed:	Golden Retriever
Phone:		Species:	Canine	Sex:	M/Neutered
Address:		Age:	<b>B6</b>	Color:	Buff

Date	Type	Staff	History
<b>B6</b>			

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimates, I: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative medl note, V: Vital signs

**B6**

### Patient History Report

Client:	<b>B6</b>	Patient:	<b>B6</b>	Breed:	Golden Retriever
Phone:		Species:	Canine	Sex:	M/Neutered
Address:		Age:	<b>B6</b>	Color:	Buff

Date	Type	Staff	History
<b>B6</b>			

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimate, I: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative medl note, V: Vital signs

**B6**

### Patient History Report

Client:	<b>B6</b>	Patient:	<b>B6</b>	Breed:	Golden Retriever
Phone:		Species:	Canine	Sex:	M/Neutered
Address:		Age:	<b>B6</b>	Color:	Buff

Date	Type	Staff	History
<b>B6</b>			

B: Billing, C: Med note, CB: Call back, CK: Check-in, CM: Communications, D: Diagnosis, DH: Declined to history, E: Examination, ES: Estimate, I: Departing instr, L: Lab result, M: Image cases, P: Prescription, PA: PVL Accepted, PB: problems, PP: PVL Performed, PR: PVL Recommended, R: Correspondence, T: Images, TC: Tentative medl note, V: Vital signs

**B6**



### Patient History Report

Client:	<b>B6</b>	Patient:	<b>B6</b>	Breed:	Golden Retriever
Phone:		Species:	Canine	Sex:	M/Neutered
Address:		Age:	<b>B6</b>	Color:	Buff

Date	Type	Staff	History
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**B6**

### Patient History Report

Client:	<b>B6</b>	Patient:	<b>B6</b>	Breed:	Golden Retriever
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### Patient History Report

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Address:		Age:	<b>B6</b>	Color:	Buff

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**B6**

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**B6**

**B6**

Client Initiated Call / Contact     MVC Initiated Call / Contact     LMOM     In Person     E-mail  
Ct says that one of her dogs got into a fela's naptcha laundry soap bar last night. She says about 1 oz in a half is missing. Note sent to **B6**

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Address:		Age:	<b>B6</b>		
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**B6**

55 Willard Street  
 North Grafton, MA 01536  
 (508) 839-5395

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

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

**Lab Results Report**

<b>T4/Clin Path</b>		<b>B6</b>	5:43:00 PM	<b>Accession ID:</b>	<b>B6</b>
Test	Results	Reference Range	Units		
T4/TOSOH	<b>B6</b>	1 - 4.1	ug/dl		

**From:** Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>  
**To:** Carey, Lauren; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L; Rotstein, David  
**Sent:** 10/1/2018 9:24:42 PM  
**Subject:** please see prior PFR 364577-FW: Honest Kitchen whole grain turkey: Lisa Freeman - EON-367347  
**Attachments:** 2055560-report.pdf; Honest Kitchen Whole Grain Turkey: Lisa Freeman - EON-364577; 2055560-attachments.zip

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>  
**Sent:** Monday, October 01, 2018 5:05 PM  
**To:** Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; **B6**  
**Subject:** Honest Kitchen whole grain turkey: Lisa Freeman - EON-367347

A PFR Report has been received and PFR Event [EON-367347] has been created in the EON System.

A "PDF" report by name "2055560-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 "2055560-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-367347  
**ICSR #:** 2055560  
**EON Title:** PFR Event created for Honest Kitchen whole grain turkey beef or chicken + Ziwi Peak (just started again) - see diet history for **B6** and **B6** attached; 2055560

<b>AE Date</b>	09/27/2018	<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>	Stable
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	<b>B6</b> Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2055560

**Product Group:** Pet Food

**Product Name:** Honest Kitchen whole grain turkey, beef, or chicken + Ziwi Peak (just started again) - see diet history for **B6** and **B6** attached

**Description:** Housemate diagnosed with reduced contractile function on echo **B6**  
Asymptomatic NT-proBNP tested at RDVM. Will send results

**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>
Honest Kitchen whole grain turkey, beef, or chicken + Ziwi Peak (just started again) - see diet history for <b>B6</b> and <b>B6</b> attached		

**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-367347>

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

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=12&issueld=384261>

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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.

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; B6  
**Sent:** 9/7/2018 9:20:34 PM  
**Subject:** Honest Kitchen Whole Grain Turkey: Lisa Freeman - EON-364577  
**Attachments:** 2054750-report.pdf; 2054750-attachments.zip

A PFR Report has been received and PFR Event [EON-364577] has been created in the EON System.

A "PDF" report by name "2054750-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 "2054750-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-364577

**ICSR #:** 2054750

**EON Title:** PFR Event created for Honest Kitchen Whole Grain Turkey Beef or CHicken, Ziwi Peak (recently started); 2054750

<b>AE Date</b>	09/05/2018	<b>Number Fed/Exposed</b>	
<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>	<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:** 2054750

**Product Group:** Pet Food

**Product Name:** Honest Kitchen Whole Grain Turkey, Beef, or CHicken, Ziwi Peak (recently started)

**Description:** Not true DCM but reduced contractility. B6 taurine (whole blood)

**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 Reacted With Product:** 1



Product Name	Lot Number or ID	Best By Date
Ziwi Peak (recently started)		
Honest Kitchen Whole Grain Turkey, Beef, or CHicken		

**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-364577>

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=381311>

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

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

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

55 Willard Street  
 North Grafton, MA 01536  
 (508) 839-5395

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

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

**Lab Results Report**

<b>T4/Clin Path</b>		9/5/2018 5:43:00 PM	<b>Accession ID:</b>	<b>B6</b>
Test	Results	Reference Range	Units	
T4/TOSOH	<b>B6</b>	1 - 4.1	ug/dl	

### Discharge Instructions

**Patient**

Name: B6  
Species: Canine  
Gold Female (Spayed) Golden Retriever  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: 426794

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6, V19

Date: B6

**Diagnoses:**

Mild reduced contractile function, normal cardiac size

**Clinical Findings:** Thank you for bringing B6 in for evaluation of her heart. Similar to B6 B6 heart is normal in size, but her contractile function is not quite as vigorous as some dogs. This could be a variation of normal for her, but it is also possible that this is an abnormality related to having been eating a grain free diet. We recommend getting an NT-pro BNP test done when you take B6 in for her physical examination on Monday to better assess her heart function.

**Monitoring at Home:** Please watch for any exercise intolerance, weakness, or collapse.

**Diet Suggestions:** We recommend continuing to feed a main stream brand diet with standard protein source that is not grain-free.

**Exercise Recommendations:** B6 can have normal exercise.

**Recheck Visits:** We will want to do a recheck echocardiogram in 6-12 months (on the sooner side if B6 BNP is very high.)

Thank you for entrusting us with B6 care. She is so sweet! 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

# 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: **B6**

Address: **B6**  
Email: \_\_\_\_\_

Telephone: **B6** Fax: **B6**  
Billing Contact: \_\_\_\_\_ Email: \_\_\_\_\_

Patient Name: **B6** Species: Dog  
Breed: Golden Retriever Owner's Name: **B6**

Current Diet: K-9 Naturals, RC GR, ZiwiPeak

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

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

Taurine Results (lab use only) **B6**  
Plasma: \_\_\_\_\_ Whole Blood: \_\_\_\_\_ 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.

\* Please send results to **B6** in addition to **B6** Vet. Thank you

**From:** Jones, Jennifer L </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0F6CA12EAA9348959A4CBB1E829AF244-JENNIFER.JO>  
**To:** Rotstein, David  
**CC:** Peloquin, Sarah  
**Sent:** [REDACTED] 4:42:56 PM  
**Subject:** FW: [REDACTED] - time sensitive  
**Importance:** High  
**Attachments:** 2063133-report - Copy.pdf; 2063133-report.pdf; 2063134-report - Copy.pdf; 2063134-report.pdf

Dave,

I know we're chatting Thursday about the results and next steps. [REDACTED] B5

[REDACTED] B5

[REDACTED] B5 what do you think?

Jen

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



**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**Sent:** [REDACTED] B6 2:30 PM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** [REDACTED] B6 time sensitive  
**Importance:** High

Hi Jen  
I also left you a voice message but I just heard that [REDACTED] B6 died suddenly [REDACTED] B6 This is one of at least 3 dogs in the household affected by DCM eating the same diet. We're actually scheduled to see the 3 dogs tomorrow and to evaluate a 4<sup>th</sup> dog in the household that has an elevated BNP. So, this is a particularly interesting household.

The referring vet contacted me and said the owner is bringing [REDACTED] B6 in for cremation. He will ask if he can get samples for you but we'd need to know what tissues to get, how to store them, etc.

Please let me know next steps  
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)  
508-887-4523

**From:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Sent:** Tuesday, March 26, 2019 1:50 PM

**To:** Freeman, Lisa <[Lisa.Freeman@tufts.edu](mailto:Lisa.Freeman@tufts.edu)>

**Subject:** RE: Cobalt

Hi Lisa,

We based this on the 25 mg/kg diet for chicks, rats, and sheep per Mineral Tolerances of Animals 2<sup>nd</sup> Ed, 2005 (NRC). The cobalt in the products we tested was below 1 ppm.

Hope you're well,

Jen

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



**From:** Freeman, Lisa <[Lisa.Freeman@tufts.edu](mailto:Lisa.Freeman@tufts.edu)>

**Sent:** Saturday, March 23, 2019 11:43 AM

**To:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>

**Subject:** Cobalt

Hi Jen,

In the Feb, 2019 Vet-LIRN report, it states that cobalt was tested in the diets and was within normal nutrient ranges recommended by AAFCO. Since Co is not an essential nutrient listed in the AAFCO profiles, are you using the max of 10 ppm that is for all species from AAFCO (ie, the level that "will not impair animal performance and should not produce unsafe residues in human food derived from that animal"?)

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:

Home Phone:  
Work Phone:  
Cell Phone:

B6

All Medical Records

Patient:

B6

Breed: Doberman Pinscher

DOB:

B6

Species: Canine

Sex: Male  
(Neutered)

Referring Information

B6

Client:

B6

Patient:

**Initial Complaint:**

New cruciate evaluation, possibly sx at rDVM

SOAP Text Jul 8 2015 2:30PM

B6

7/8/2015 4:58:22 PM NEW VISIT

History: 7 yo CM Dobie presenting for his right hind limb lameness. 2 weeks ago he became acutely lame on his RH after running around. He was taken to the DVM who suspected a cranial cruciate ligament rupture. B6 rDVM did bloodwork, showed increase of ALT and started him on B6 ALT decreased after 2 weeks.

Exam:

B6



Client: **B6**  
Patient:

**B6**

SOAP Text Jul 16 2015 9:30PM **B6**

Subjective

Objective

Assessment

Plan

**B6**

7/17/2015 7:21:04 AM EXAM, GENERAL

**B6**

Client: **B6**  
Patient:

**B6**

7/17/2015 8:08:32 AM

**B6**

7/17/2015 11:02:11 AM

**B6**

**B6**

\*\*\* 3 doses\*\*\* - Expires: 7/16/2016 No Refills

7/17/2015 6:40:43 PM

Prescribed **B6**

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

Instructions - 3.8 mg IV q6 - Expires: 7/16/2016 No Refills

SOAP Text Jul 18 2015 8:08AM - **B6**

**B6**

Plan (P)

- P1: Continue **B6**
- P2: Continue **B6**
- P3: Continue **B6**
- P4: Feed q8,
- P5: water , walk, HR, RR q4
- P6: BW and Temp q12
- P7: Discharge 7/19/15
- P8: Move to B-ward

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

Prescribed: **B6**

Instructions - Give 3.6 mg IV q6 - Expires: 7/17/2016 No Refills

SOAP Text Jul 19 2015 8:18AM - **B6**

7/19/2015 8:19:07 AM EXAM, GENERAL

**B6**

Client: **B6**  
Patient:

**B6**

Plan (P)

P1: Discharge today

P2: Go home meds

P3: Go home meds

**B6**

SOAP completed by: **B6** 6

SOAP reviewed by:

7/19/2015 8:26:05 AM

**B6**

7/19/2015 8:26:59 AM

**B6**

**Initial Complaint:**

Chief Recheck No Xrays

SOAP Text Oct 7 2015 3:13PM **B6**

**B6**

Recheck examination:

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

---

SOAP created by: **B6** V16  
SOAP reviewed by:

**Initial Complaint:**

New **B6** - DCM/arrhythmia (poss DCM study)

---

**Initial Complaint:**

Emergency

---

**Initial Complaint:**

**B6** - CT on hold 12/11 @ 3PM  
Hx VW and heart disease (cardio appt 12/5)

---

**Initial Complaint:**

Drop Off Chief Surgery, Admit to E **B6**

---

SOAP Text Dec 20 2018 9:28AM **B6**

---

**Subjective**

EXAM, GENERAL

Subjective (S)

10 yo CM Doberman

**B6**

and it has since discontinued and the odor has returned **B6** has a history of VWD and DCM which he is on medications to help manage.

Subjective (S)

BAR, nervous

mild dehydration

MM pink, Crt 0.5 seconds

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

---

Objective (O)

**B6**

H/L: NMA, NSR, FPSS. Normal BVS in all lung fields, no crackles or wheezes ausculted. Eupnic.

**B6**

Diagnostics Completed:

12/10/2018:

**B6**

Assessment (A)

A1: **B6**

A2: History of DCM

A3: **B6**  
A4:

Plan (P)

P1: **B6**

SOAP completed by: **B6** V'19

SOAP reviewed by:

**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: 320320  
Visit ID:

Patient: **B6**  
Species: Canine  
Breed: Doberman Pinscher  
Sex: Male (Neutered)  
Age: **B6** Years Old

**Lab Results Report**

None 7/16/2015 10:03:39 PM Accession ID: **B6**

Test	Results	Reference Range	Units
Blood Glucose - fee charged (TVETS)	<b>B6</b>	0 - 0	mg/dl
PCV for PCV/TS/AZO/BG	<b>B6</b>	0 - 0	
TS (TVETS)	<b>B6</b>	0 - 0	g/dl
AZO	<b>B6</b>	0 - 0	mg/dl

None 7/17/2015 9:11:00 AM Accession ID: **B6**

Test	Results	Reference Range	Units
VWF:AG	<b>B6</b>	0 - 0	%

None 7/17/2015 10:52:00 AM Accession ID: **B6**

Test	Results	Reference Range	Units
SALINE AGGLUTINATION	<b>B6</b>	0 - 0	
BLOOD TYPE	<b>B6</b>	0 - 0	

None 12/10/2018 1:54:00 PM Accession ID: **B6**

Test	Results	Reference Range	Units
VWF:AG	<b>B6</b>	0 - 0	%

None 12/20/2018 9:22:02 AM Accession ID: **B6**

Test	Results	Reference Range	Units
PLT(ADVIA)	<b>B6</b>	173 - 486	K/uL
PT	<b>B6</b>	6.2 - 9.3	seconds
PTT	<b>B6</b>	8.9 - 16.3	seconds

None 12/20/2018 9:38:56 AM Accession ID: **B6**



9/406

**B6**

Printed Thursday, December 27, 2018



Client:  
Patient:

**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	%



10/406

**B6**

Printed Thursday, December 27, 2018

Client: B6  
Patient: B6

Anesthesia Record & checklist

Tulane University Cummings School of Veterinary Medicine  
ANESTHESIA RECORD

B6

B6

B6

B6

B6

Patient: B6  
Client: B6

Species: Canine  
Breed: Labrador  
Sex: Female  
Weight: 45.0 (Pounds)  
Date of Birth: 11/23/2012  
Color: BRN/WT

Client Name: JESSICA  
Patient ID: J00123  
Room No: B6  
Ref: B6

B6

B6

Time	SpO2	HR	RR	Temp	MAP	ET
14:00	98	120	24	101.5	80	1.5
14:05	98	115	22	101.5	80	1.5
14:10	98	110	20	101.5	80	1.5
14:15	98	105	18	101.5	80	1.5
14:20	98	100	16	101.5	80	1.5
14:25	98	95	14	101.5	80	1.5
14:30	98	90	12	101.5	80	1.5
14:35	98	85	10	101.5	80	1.5
14:40	98	80	8	101.5	80	1.5
14:45	98	75	6	101.5	80	1.5
14:50	98	70	4	101.5	80	1.5
14:55	98	65	2	101.5	80	1.5
15:00	98	60	1	101.5	80	1.5
15:05	98	55	0	101.5	80	1.5
15:10	98	50	0	101.5	80	1.5
15:15	98	45	0	101.5	80	1.5
15:20	98	40	0	101.5	80	1.5
15:25	98	35	0	101.5	80	1.5
15:30	98	30	0	101.5	80	1.5
15:35	98	25	0	101.5	80	1.5
15:40	98	20	0	101.5	80	1.5
15:45	98	15	0	101.5	80	1.5
15:50	98	10	0	101.5	80	1.5
15:55	98	5	0	101.5	80	1.5
16:00	98	0	0	101.5	80	1.5

B6

B6

B6



Client:  
Patient:

**B6**

Anesthesia Record & checklist

**B6**

Patient:

**B6**

Client:

Name: Cassini

(Check in Date: 11/01/2019 11:53 PM)

Room: 210-200

Phone No: 328-8296

Age: 70

Weight (kg): 70

Home (City): 01117-200-2000

Sex: M

Ref Facility:

Ref No: **B6**

Ref Phone:

**B6**

Order: 11/01/2019

Tufts Cummings School of Veterinary Medicine SA Anesthesia Checklist

<p>Pre-anesthetic evaluation of patient completed by Anesthesia Team</p> <p>Medical history and physical examination completed by Anesthesia Team</p> <p>Any weight changes noted by Anesthesia Team</p> <p>Check on blood pressure and oxygen saturation</p> <p>Pre-anesthetic evaluation completed by Anesthesia Team</p> <p>Check on blood pressure and oxygen saturation</p> <p>Pre-anesthetic evaluation completed by Anesthesia Team</p>	<p>After induction in Pre-Op</p> <p>Respiratory rate and depth</p> <p>Color of mucous membranes</p> <p>Heart rate and rhythm</p> <p>Number of breaths per minute</p> <p>Response to reflexes</p> <p>Reflexes</p> <p>Pre-Op vital signs</p> <p>Pre-Op blood pressure</p> <p>Pre-Op oxygen saturation</p> <p>Pre-Op heart rate</p> <p>Pre-Op respiratory rate</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p>	<p>Pre-Op vital signs</p> <p>Pre-Op blood pressure</p> <p>Pre-Op oxygen saturation</p> <p>Pre-Op heart rate</p> <p>Pre-Op respiratory rate</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p>
<p>Pre-Op vital signs</p> <p>Pre-Op blood pressure</p> <p>Pre-Op oxygen saturation</p> <p>Pre-Op heart rate</p> <p>Pre-Op respiratory rate</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p>	<p>Pre-Op vital signs</p> <p>Pre-Op blood pressure</p> <p>Pre-Op oxygen saturation</p> <p>Pre-Op heart rate</p> <p>Pre-Op respiratory rate</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p>	<p>Pre-Op vital signs</p> <p>Pre-Op blood pressure</p> <p>Pre-Op oxygen saturation</p> <p>Pre-Op heart rate</p> <p>Pre-Op respiratory rate</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p>
<p>Pre-Op vital signs</p> <p>Pre-Op blood pressure</p> <p>Pre-Op oxygen saturation</p> <p>Pre-Op heart rate</p> <p>Pre-Op respiratory rate</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p>	<p>Pre-Op vital signs</p> <p>Pre-Op blood pressure</p> <p>Pre-Op oxygen saturation</p> <p>Pre-Op heart rate</p> <p>Pre-Op respiratory rate</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p>	<p>Pre-Op vital signs</p> <p>Pre-Op blood pressure</p> <p>Pre-Op oxygen saturation</p> <p>Pre-Op heart rate</p> <p>Pre-Op respiratory rate</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p> <p>Pre-Op reflexes</p>

Client:  
Patient:

**B6**

**Anesthesia Record & checklist**

---

[The main body of the page contains a very faint and illegible text, likely representing the anesthesia record and checklist content.]

Client:  
Patient:

**B6**

**transfusion request and monitoring form 7.17.2015**

**B6**

**POST-TRANSFUSION (1-2hr)**

**Blue copy: Patient Record**

**PCV/TSS (color of serum): \_\_\_\_\_ / \_\_\_\_\_ PT/PTT: \_\_\_\_\_**

**Yellow Copy: Blood Bank**

**Pink Copy: Accounting**

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

**B6** insurance form

DATE: 10/15/2015 TO: **B6** FROM: **B6**

**B4**



VETERINARY RECORDS REQUEST

DATE: 10/15/2015

ATTENTION VETERINARIAN and/or STAFF: **B6**  
**B6**

PET OWNER: **B6**

PET NAME: **B6**

POLICY NUMBER: **B6**

CLAIM NUMBER: **B6**

INFORMATION NEEDED:

1. MEDICAL RECORDS, INCLUDING DOCTOR'S NOTES AND LAB RESULTS FROM 6/1/2014 to Present

**B6**

Client:  
Patient:

**B6**

**B6** insurance form

**B6**

**B6**

Signature of the Owner

**B6**

Date: 9/8/05

Please read (B6) (b)(7)(C) before signing this document for additional information.



**B6**

**B6**

**B6**

**B6**

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Client: **B6**  
Patient:

**Alba Holter**

**B6**

Client: **B6**  
Patient:

**Patient History**

06/24/2015 11:43 AM Appointment  
  
07/08/2015 01:11 PM Purchase  
07/08/2015 01:13 PM UserForm  
07/08/2015 02:32 PM UserForm  
  
07/08/2015 02:32 PM UserForm  
  
07/08/2015 04:00 PM Vitals  
07/08/2015 04:00 PM Vitals  
07/08/2015 04:00 PM Vitals  
07/08/2015 04:00 PM Vitals  
07/08/2015 04:29 PM Purchase  
07/08/2015 04:30 PM Purchase  
07/08/2015 04:31 PM Purchase  
07/08/2015 04:32 PM Treatment  
  
07/08/2015 04:33 PM Vitals  
07/08/2015 04:34 PM Treatment  
07/08/2015 04:56 PM Purchase  
07/08/2015 05:02 PM Appointment  
  
07/16/2015 08:55 PM UserForm  
  
07/16/2015 09:11 PM Purchase  
07/16/2015 09:11 PM Purchase  
07/16/2015 09:11 PM Vitals  
  
07/16/2015 09:18 PM Vitals  
07/16/2015 09:22 PM Vitals  
  
07/16/2015 09:38 PM Treatment  
07/16/2015 09:38 PM Vitals  
07/16/2015 09:39 PM Treatment  
07/16/2015 09:39 PM Vitals  
07/16/2015 09:43 PM Treatment  
07/16/2015 09:43 PM Vitals  
07/16/2015 10:03 PM Treatment  
  
07/16/2015 11:54 PM Treatment  
07/16/2015 11:59 PM Treatment  
07/16/2015 11:59 PM Vitals  
07/16/2015 11:59 PM Treatment  
07/16/2015 11:59 PM Vitals  
07/16/2015 11:59 PM Treatment  
07/16/2015 11:59 PM Vitals  
07/16/2015 11:59 PM Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

07/16/2015 11:59 PM	Vitals
07/17/2015 03:50 AM	Treatment
07/17/2015 03:50 AM	Vitals
07/17/2015 03:51 AM	Treatment
07/17/2015 03:51 AM	Treatment
07/17/2015 03:51 AM	Vitals
07/17/2015 03:51 AM	Treatment
07/17/2015 03:51 AM	Vitals
07/17/2015 03:51 AM	Treatment
07/17/2015 03:51 AM	Vitals
07/17/2015 07:15 AM	Vitals
07/17/2015 07:21 AM	Treatment
07/17/2015 07:21 AM	Vitals
07/17/2015 07:21 AM	Treatment
07/17/2015 07:21 AM	Treatment
07/17/2015 07:21 AM	Vitals
07/17/2015 07:37 AM	Treatment
07/17/2015 07:37 AM	Vitals
07/17/2015 08:10 AM	Prescription
07/17/2015 09:11 AM	Purchase
07/17/2015 09:11 AM	Purchase
07/17/2015 09:11 AM	Treatment
07/17/2015 10:52 AM	Purchase
07/17/2015 10:53 AM	Treatment
07/17/2015 10:54 AM	Treatment
07/17/2015 11:10 AM	Prescription
07/17/2015 11:19 AM	UserForm
07/17/2015 11:27 AM	Treatment
07/17/2015 11:27 AM	Vitals
07/17/2015 11:51 AM	Vitals
07/17/2015 11:51 AM	Purchase
07/17/2015 11:52 AM	Purchase
07/17/2015 11:52 AM	UserForm
07/17/2015 01:24 PM	Purchase
07/17/2015 01:24 PM	Deleted Reason
07/17/2015 01:25 PM	Purchase
07/17/2015 01:26 PM	Deleted Reason
07/17/2015 02:17 PM	Purchase
07/17/2015 02:18 PM	Purchase
07/17/2015 02:33 PM	Vitals
07/17/2015 02:46 PM	Vitals
07/17/2015 03:15 PM	Treatment
07/17/2015 03:15 PM	Vitals

**B6**

Client:  
Patient:

**B6**

**Patient History**

07/17/2015 03:16 PM Treatment  
07/17/2015 03:16 PM Vitals  
07/17/2015 03:16 PM Treatment  
07/17/2015 03:16 PM Vitals  
07/17/2015 03:17 PM Treatment  
07/17/2015 03:22 PM Purchase  
07/17/2015 03:22 PM Purchase  
07/17/2015 03:22 PM Purchase  
07/17/2015 05:38 PM Prescription  
07/17/2015 06:42 PM Prescription  
07/17/2015 07:35 PM Treatment  
07/17/2015 07:47 PM Treatment  
07/17/2015 07:47 PM Vitals  
07/17/2015 07:47 PM Treatment  
07/17/2015 07:47 PM Vitals  
07/17/2015 07:47 PM Treatment  
  
07/17/2015 07:47 PM Vitals  
  
07/17/2015 07:47 PM Treatment  
07/17/2015 07:47 PM Treatment  
07/17/2015 07:47 PM Vitals  
07/17/2015 07:47 PM Treatment  
07/17/2015 07:47 PM Vitals  
07/17/2015 09:13 PM Purchase  
07/17/2015 09:13 PM Purchase  
07/17/2015 11:26 PM Treatment  
07/17/2015 11:26 PM Vitals  
07/17/2015 11:26 PM Treatment  
07/17/2015 11:26 PM Vitals  
07/17/2015 11:26 PM Treatment  
07/17/2015 11:26 PM Treatment  
07/17/2015 11:26 PM Treatment  
07/17/2015 11:26 PM Treatment  
07/17/2015 11:26 PM Vitals  
07/18/2015 03:02 AM Treatment  
07/18/2015 03:25 AM Treatment  
07/18/2015 03:25 AM Treatment  
07/18/2015 03:25 AM Vitals  
07/18/2015 03:25 AM Treatment  
07/18/2015 03:25 AM Vitals  
07/18/2015 03:25 AM Treatment  
07/18/2015 03:25 AM Vitals  
07/18/2015 03:25 AM Treatment  
07/18/2015 03:30 AM Treatment  
  
07/18/2015 03:30 AM Vitals  
  
07/18/2015 07:25 AM Vitals  
07/18/2015 07:26 AM Treatment  
07/18/2015 07:26 AM Vitals  
07/18/2015 07:40 AM Vitals

**B6**



Client:  
Patient:

**B6**

**Patient History**

07/18/2015 07:40 AM	Vitals
07/18/2015 08:00 AM	Treatment
07/18/2015 08:08 AM	Treatment
07/18/2015 08:08 AM	Treatment
07/18/2015 08:08 AM	Vitals
07/18/2015 08:08 AM	Treatment
07/18/2015 08:08 AM	Treatment
07/18/2015 08:08 AM	Vitals
07/18/2015 08:08 AM	Treatment
07/18/2015 08:08 AM	Vitals
07/18/2015 09:11 AM	Purchase
07/18/2015 10:03 AM	Prescription
07/18/2015 10:58 AM	Deleted Reason
07/18/2015 10:58 AM	Deleted Reason
07/18/2015 10:58 AM	Deleted Reason
07/18/2015 10:58 AM	Deleted Reason
07/18/2015 10:58 AM	Deleted Reason
07/18/2015 10:59 AM	Deleted Reason
07/18/2015 10:59 AM	Deleted Reason
07/18/2015 11:41 AM	Treatment
07/18/2015 11:41 AM	Treatment
07/18/2015 11:41 AM	Vitals
07/18/2015 11:41 AM	Treatment
07/18/2015 11:47 AM	Treatment
07/18/2015 11:49 AM	Treatment
07/18/2015 11:49 AM	Vitals
07/18/2015 12:17 PM	Treatment
07/18/2015 12:17 PM	Treatment
07/18/2015 12:17 PM	Vitals
07/18/2015 12:20 PM	Treatment
07/18/2015 12:20 PM	Vitals
07/18/2015 02:21 PM	Treatment
07/18/2015 03:05 PM	Treatment
07/18/2015 03:05 PM	Treatment
07/18/2015 03:05 PM	Vitals
07/18/2015 03:29 PM	Treatment
07/18/2015 03:30 PM	Treatment
07/18/2015 03:30 PM	Vitals
07/18/2015 03:30 PM	Treatment
07/18/2015 03:30 PM	Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

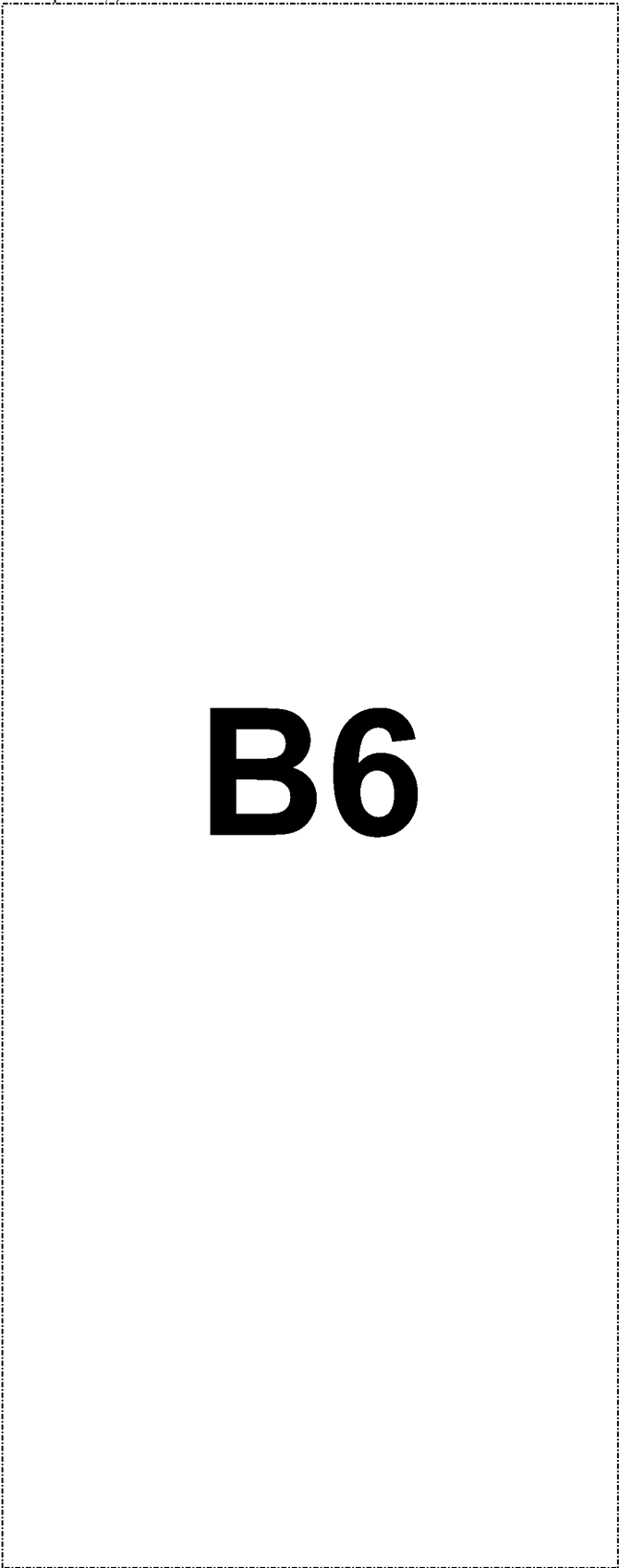
07/18/2015 07:21 PM Treatment  
07/18/2015 07:21 PM Treatment  
07/18/2015 07:21 PM Vitals  
07/18/2015 07:38 PM Treatment  
  
07/18/2015 07:38 PM Vitals  
  
07/18/2015 07:42 PM Treatment  
  
07/18/2015 07:48 PM Treatment  
07/18/2015 07:48 PM Vitals  
07/18/2015 07:49 PM Treatment  
07/18/2015 07:49 PM Treatment  
07/18/2015 07:49 PM Vitals  
07/18/2015 07:49 PM Treatment  
07/18/2015 07:49 PM Vitals  
07/18/2015 07:51 PM Treatment  
07/18/2015 09:13 PM Purchase  
07/18/2015 09:13 PM Purchase  
07/18/2015 10:35 PM Vitals  
07/19/2015 12:01 AM Treatment  
  
07/19/2015 12:01 AM Treatment  
07/19/2015 12:01 AM Vitals  
07/19/2015 12:02 AM Treatment  
07/19/2015 12:09 AM Treatment  
07/19/2015 12:09 AM Vitals  
07/19/2015 12:09 AM Treatment  
07/19/2015 12:09 AM Vitals  
07/19/2015 01:58 AM Treatment  
07/19/2015 04:14 AM Treatment  
  
07/19/2015 04:14 AM Treatment  
07/19/2015 04:15 AM Treatment  
07/19/2015 04:15 AM Vitals  
07/19/2015 04:27 AM Vitals  
  
07/19/2015 04:27 AM Vitals  
  
07/19/2015 04:27 AM Vitals  
  
07/19/2015 04:30 AM Treatment  
07/19/2015 04:30 AM Treatment  
07/19/2015 04:30 AM Treatment  
07/19/2015 04:34 AM Treatment

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Client: **B6**  
Patient:

**Patient History**

07/19/2015 04:34 AM	Vitals
07/19/2015 04:34 AM	Vitals
07/19/2015 04:40 AM	Treatment
07/19/2015 04:40 AM	Treatment
07/19/2015 04:40 AM	Vitals
07/19/2015 04:40 AM	Treatment
07/19/2015 04:40 AM	Vitals
07/19/2015 07:28 AM	Treatment
07/19/2015 07:28 AM	Vitals
07/19/2015 07:28 AM	Treatment
07/19/2015 07:28 AM	Treatment
07/19/2015 07:30 AM	Vitals
07/19/2015 07:35 AM	Treatment
07/19/2015 07:35 AM	Vitals
07/19/2015 07:35 AM	Treatment
07/19/2015 07:35 AM	Vitals
07/19/2015 07:35 AM	Treatment
07/19/2015 07:35 AM	Vitals
07/19/2015 08:20 AM	Treatment
07/19/2015 09:09 AM	Prescription
07/19/2015 09:09 AM	Prescription
07/19/2015 09:11 AM	Purchase
07/19/2015 09:29 AM	Deleted Reason
07/19/2015 09:29 AM	Deleted Reason
09/22/2015 02:48 PM	Appointment
10/07/2015 03:32 PM	UserForm
10/07/2015 03:32 PM	Purchase
11/15/2018 02:09 PM	Appointment
12/03/2018 10:44 AM	Appointment
12/03/2018 10:47 AM	Appointment
12/03/2018 10:55 AM	Appointment
12/03/2018 02:19 PM	Appointment



Client: B6  
Patient:

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**Patient History**

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12/04/2018 01:53 PM	Appointment
12/05/2018 09:13 AM	UserForm
12/05/2018 09:32 AM	Treatment
12/05/2018 09:35 AM	Vitals
12/05/2018 10:24 AM	Purchase
12/05/2018 10:24 AM	Purchase
12/05/2018 10:24 AM	Purchase
12/05/2018 10:56 AM	UserForm
12/05/2018 11:39 AM	Purchase
12/05/2018 11:40 AM	Prescription
12/05/2018 11:48 AM	Purchase
12/10/2018 01:51 PM	Purchase
12/10/2018 01:54 PM	Purchase
12/10/2018 01:57 PM	Prescription
12/10/2018 02:05 PM	Purchase
12/10/2018 02:29 PM	UserForm
12/13/2018 09:28 AM	Email
12/14/2018 10:43 AM	Appointment
12/19/2018 07:50 AM	Appointment
12/19/2018 07:52 AM	Appointment
12/20/2018 07:56 AM	UserForm
12/20/2018 08:06 AM	Vitals
12/20/2018 08:06 AM	Vitals
12/20/2018 09:07 AM	Vitals
12/20/2018 09:22 AM	Purchase
12/20/2018 09:28 AM	Vitals
12/20/2018 09:28 AM	Vitals
12/20/2018 09:28 AM	Vitals
12/20/2018 09:28 AM	Vitals
12/20/2018 09:28 AM	Vitals
12/20/2018 09:37 AM	Treatment

**B6**

Client:  
Patient:

**B6**

**Patient History**

12/20/2018 09:39 AM	Labwork
12/20/2018 09:40 AM	Prescription
12/20/2018 09:48 AM	Purchase
12/20/2018 11:31 AM	Treatment
12/20/2018 11:31 AM	Treatment
12/20/2018 11:31 AM	Vitals
12/20/2018 11:31 AM	Treatment
12/20/2018 11:31 AM	Vitals
12/20/2018 11:32 AM	Treatment
12/20/2018 11:32 AM	Vitals
12/20/2018 12:45 PM	Prescription
12/20/2018 12:56 PM	Vitals
12/20/2018 01:14 PM	Purchase
12/20/2018 01:15 PM	Purchase
12/20/2018 01:22 PM	Prescription
12/20/2018 01:22 PM	Treatment
12/20/2018 01:22 PM	Vitals
12/20/2018 01:22 PM	Prescription
12/20/2018 01:23 PM	Treatment
12/20/2018 01:23 PM	Vitals
12/20/2018 01:24 PM	Prescription
12/20/2018 01:31 PM	UserForm
12/20/2018 01:45 PM	Purchase
12/20/2018 01:45 PM	Purchase
12/20/2018 01:45 PM	Purchase
12/20/2018 01:45 PM	Purchase
12/20/2018 01:45 PM	Purchase
12/20/2018 01:45 PM	Purchase
12/20/2018 01:53 PM	Treatment
12/20/2018 01:53 PM	Treatment
12/20/2018 01:59 PM	Purchase
12/20/2018 02:18 PM	UserForm
12/20/2018 02:50 PM	Purchase
12/20/2018 02:50 PM	Deleted Reason
12/20/2018 02:50 PM	Deleted Reason
12/20/2018 03:29 PM	Treatment
12/20/2018 03:29 PM	Vitals
12/20/2018 03:29 PM	Vitals
12/20/2018 03:36 PM	Treatment
12/20/2018 03:36 PM	Vitals
12/20/2018 03:37 PM	Treatment
12/20/2018 03:37 PM	Vitals
12/20/2018 03:38 PM	Treatment

**B6**

Client: **B6**  
Patient:

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**Patient History**

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12/20/2018 03:38 PM  
12/21/2018 08:04 AM

Vitals  
Purchase

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**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Reimschuessel, Renate  
**CC:** Jones, Jennifer L  
**Sent:** 7/20/2018 12:06:11 PM  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Renata and Jennifer

That seems reasonable. I was never contacted about the other cases that I submitted. There was some confusion about the way I submitted them so I want to be sure you actually got them [B6]

[B6] I'm sure you're all getting slammed with reports (and there will probably be even more coming now) but just wanted to check to be sure they got recorded.

Thanks  
Lisa

**From:** Reimschuessel, Renate [mailto:Renate.Reimschuessel@fda.hhs.gov]  
**Sent:** Friday, July 20, 2018 7:55 AM  
**To:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**Cc:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Lisa

Thanks for gathering the information.

I think, since we are getting so many reports since our CVM update, we should pass on the [B6] case as it is not clear-cut.

I think Jen is more familiar with the [B6] case, so I'll let her respond regarding that one. Thank you again for all your work on this investigation.

rr

Renate Reimschuessel V.M.D. Ph.D. Director Vet-LIRN  
*Phone 1-240-402-5404*  
Fax 301-210-4685  
<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>

**From:** Freeman, Lisa [mailto:Lisa.Freeman@tufts.edu]  
**Sent:** Thursday, July 19, 2018 5:59 PM  
**To:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Renate

In looking back through this case, I'm not sure this is a completely clear-cut one. The dog has degenerative mitral valve disease and CHF but also has reduced cardiac contractility so might be a combination. Do you still want me to collect the info below?

Also, I have an update on [B6] who died at home last week. I do have food from the owner if you want that.

Thanks  
Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
Professor

Cummings School of Veterinary Medicine  
Friedman School of Nutrition Science and Policy  
Tufts Clinical and Translational Science Institute  
Tufts University  
[www.petfoodology.org](http://www.petfoodology.org)

**From:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Sent:** Tuesday, July 17, 2018 11:48 AM  
**To:** Freeman, Lisa <[lisa.freeman@tufts.edu](mailto:lisa.freeman@tufts.edu)>  
**Subject:** 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Dr. Freeman,

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

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

- **Full Medical Records**

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

- **Phone interview** about [B6] diet and environmental exposures

- Please confirm permission to contact the owner.

- The interview generally lasts 30 minutes.

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

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

Thank you kindly, especially for submitting multiple cases,  
Dr. Reimschuessel

Renate Reimschuessel V.M.D. Ph.D.

Director: Vet-LIRN

*(Veterinary Laboratory Investigation and Response Network)*

Center For Veterinary Medicine, FDA,

8401 Muirkirk Road, Laurel, MD 20708

*Phone 1-240-402-5404 Fax 301-210-4685*

*EMAIL : [renate.reimschuessel@fda.hhs.gov](mailto:renate.reimschuessel@fda.hhs.gov)*

Vet-LIRN

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

Phish-Pharm

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ToolsResources/Phish-Pharm/default.htm>

Aquaculture

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ResearchAreas/ucm130892.htm>

---

**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Jones, Jennifer L  
**Sent:** 8/3/2018 9:23:00 AM  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)  
**Attachments:** [B6] appt 5-25-18.pdf; [B6] cardi appt 5-17-18.pdf; [B6] client comm.pdf; [B6] discharge 5-18-18.pdf; [B6] discharge 5-25-18.pdf; [B6] ecg 5-25-18.pdf; [B6] profile and t4.pdf; [B6] rads 5-18-18.pdf; [B6] rdvm records and taurine.pdf; [B6] soap.pdf

Hi Jen

I'm attaching records from [B6] re: [B6]  
She's also given permission for you to contact her.

[B6]

I still have food in my office from

[B6]

if you want any of that

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)

**From:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Sent:** Friday, July 20, 2018 8:47 AM  
**To:** Freeman, Lisa <lisa.freeman@tufts.edu>  
**Cc:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Good morning Lisa,

Yes, we got the reports you previously submitted and recorded the information for our database. Will you please forward any medical records for:

- [B6] are you able to send any updates on the Taurine testing or echocardiogram (if done?)
- [B6] Also was an autopsy done?

Thank you in advance and for your time to report all the cases!

Jen

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



**From:** Freeman, Lisa [mailto:Lisa.Freeman@tufts.edu]  
**Sent:** Friday, July 20, 2018 8:06 AM  
**To:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Cc:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Renata and Jennifer

That seems reasonable. I was never contacted about the other cases that I submitted. There was some confusion about the way I submitted them so I want to be sure you actually got them [B6]

[B6] I'm sure you're all getting slammed with reports (and there will probably be even more coming now) but just wanted to check to be sure they got recorded.

Thanks

Lisa

**From:** Reimschuessel, Renate [mailto:Renate.Reimschuessel@fda.hhs.gov]  
**Sent:** Friday, July 20, 2018 7:55 AM  
**To:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**Cc:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Lisa

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I think Jen is more familiar with the [B6] case, so I'll let her respond regarding that one.

Thank you again for all your work on this investigation.

rr

Renate Reimschuessel V.M.D. Ph.D. Director Vet-LIRN

**Phone 1- 240-402-5404**

Fax 301-210-4685

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

**From:** Freeman, Lisa [mailto:Lisa.Freeman@tufts.edu]  
**Sent:** Thursday, July 19, 2018 5:59 PM  
**To:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Renate

In looking back through this case, I'm not sure this is a completely clear-cut one. The dog has degenerative mitral valve disease and CHF but also has reduced cardiac contractility so might be a combination.

Do you still want me to collect the info below?

Also, I have an update on [B6] who died at home last week. I do have food from the owner if you want that.

Thanks

Lisa

Lisa M. Freeman, DVM, PhD, DACVN

Professor

Cummings School of Veterinary Medicine

Friedman School of Nutrition Science and Policy

**From:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Sent:** Tuesday, July 17, 2018 11:48 AM  
**To:** Freeman, Lisa <[lisa.freeman@tufts.edu](mailto:lisa.freeman@tufts.edu)>  
**Subject:** 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Dr. Freeman,

Thank you for submitting your consumer complaint to FDA. I'm sorry to hear about [B6] illness.  
As part of our investigation, we'd like to request:

- **Full Medical Records**

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

- **Phone interview** about [B6] diet and environmental exposures

- Please confirm permission to contact the owner.
- The interview generally lasts 30 minutes.

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

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

Thank you kindly, especially for submitting multiple cases,  
Dr. Reimschuessel

Renate Reimschuessel V.M.D. Ph.D.

Director: Vet-LIRN

*(Veterinary Laboratory Investigation and Response Network)*

Center For Veterinary Medicine, FDA,  
8401 Muirkirk Road, Laurel, MD 20708

**Phone 1- 240-402-5404** Fax 301-210-4685

**EMAIL :** [renate.reimschuessel@fda.hhs.gov](mailto:renate.reimschuessel@fda.hhs.gov)

Vet-LIRN

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

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Aquaculture

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ResearchAreas/ucm130892.htm>



---

**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** 'Freeman, Lisa'  
**Sent:** 8/31/2018 1:03:03 PM  
**Subject:** [REDACTED] **B6**

Thank you, Lisa! Enjoy your weekend,  
Jen

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



**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**Sent:** Wednesday, August 29, 2018 6:45 PM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** [REDACTED] **B6**

Dear Jen,  
I just spoke to [REDACTED] **B6** owner. I already submitted his case and sent in his food earlier this week (he is deceased).  
They gave permission to be contacted directly for more info. Their phone is [REDACTED] **B6**  
Thanks  
Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
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[www.petfoodology.org](http://www.petfoodology.org)

**From:** Freeman, Lisa  
**Sent:** Thursday, July 19, 2018 5:59 PM  
**To:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Subject:** RE: 800.267-FDA Case Investigation for [REDACTED] **B6** (EON-358523)

Dear Renate  
In looking back through this case, I'm not sure this is a completely clear-cut one. The dog has degenerative mitral valve disease and CHF but also has reduced cardiac contractility so might be a combination.  
Do you still want me to collect the info below?

Also, I have an update on [REDACTED] **B6** who died at home last week. I do have food from the owner if you want that.  
Thanks  
Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
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Tufts Clinical and Translational Science Institute  
Tufts University  
[www.petfoodology.org](http://www.petfoodology.org)

**From:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Sent:** Tuesday, July 17, 2018 11:48 AM  
**To:** Freeman, Lisa <[lisa.freeman@tufts.edu](mailto:lisa.freeman@tufts.edu)>  
**Subject:** 800.267-FDA Case Investigation for [REDACTED] (EON-358523)

Dear Dr. Freeman,

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

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

- **Full Medical Records**

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

- **Phone interview** about [REDACTED] diet and environmental exposures

- Please confirm permission to contact the owner.
  - The interview generally lasts 30 minutes.

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

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

Thank you kindly, especially for submitting multiple cases,  
Dr. Reimschuessel

Renate Reimschuessel V.M.D. Ph.D.

Director: Vet-LIRN

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8401 Muirkirk Road, Laurel, MD 20708

*Phone 1-240-402-5404 Fax 301-210-4685*

*EMAIL : [renate.reimschuessel@fda.hhs.gov](mailto:renate.reimschuessel@fda.hhs.gov)*

Vet-LIRN

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

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<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ToolsResources/Phish-Pharm/default.htm>

Aquaculture

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ResearchAreas/ucm130892.htm>

---

**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Jones, Jennifer L  
**Sent:** 8/22/2018 6:14:37 PM  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)  
**Attachments:** cardio report 7-11-18.pdf; discharge 7-4-18.pdf; echo\_report 7-3-18.pdf; [B6] bnp 7-3-18.pdf; [B6] discharge 7-11-18.pdf; [B6] profile 7-11-18.pdf; [B6] 7-3-18.pdf

Hi Jen

I think you're probably right. In addition to [B6] we've noted a few that don't have clear-cut DCM but have reduced fractional shortening. I've recorded these and will try to recheck them

- \*Boxer with 3<sup>rd</sup> degree AV block but also cardiac enlargement (Earthborn diet)
- \*Border collieX with reduced contractile function (Merrick – I have a sample of his diet)
- \*Mix breed with a murmur on Zignature (no echo done)
- \*Catahoula with a PDA but reduced contractile function on Taste of the Wild
- \*German Shepherd with mitral valve disease with questionable contractile function (unknown diet)
- \*Boxer with reduced contractile function eating 4Health

I'm attaching [B6] files. We have not heard from owners recently  
Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
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Friedman School of Nutrition Science and Policy  
Tufts Clinical and Translational Science Institute  
Tufts University  
[www.petfoodology.org](http://www.petfoodology.org)

**From:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Sent:** Wednesday, August 22, 2018 12:46 PM  
**To:** Freeman, Lisa <lisa.freeman@tufts.edu>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Hi Lisa,  
I'm curious if we may be seeing a spectrum of disease with these complaints. Can you forward [B6] medical records please?  
Thank you,  
Jen

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



**From:** Reimschuessel, Renate  
**Sent:** Friday, July 20, 2018 7:55 AM  
**To:** 'Freeman, Lisa' <Lisa.Freeman@tufts.edu>  
**Cc:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Lisa

Thanks for gathering the information.

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I think Jen is more familiar with the [B6] case, so I'll let her respond regarding that one.

Thank you again for all your work on this investigation.

rr

Renate Reimschuessel V.M.D. Ph.D. Director Vet-LIRN

**Phone 1- 240-402-5404**

Fax 301-210-4685

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

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]

**Sent:** Thursday, July 19, 2018 5:59 PM

**To:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>

**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Renate

In looking back through this case, I'm not sure this is a completely clear-cut one. The dog has degenerative mitral valve disease and CHF but also has reduced cardiac contractility so might be a combination.

Do you still want me to collect the info below?

Also, I have an update on [B6] who died at home last week. I do have food from the owner if you want that.

Thanks

Lisa

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Professor

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**From:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>

**Sent:** Tuesday, July 17, 2018 11:48 AM

**To:** Freeman, Lisa <[lisa.freeman@tufts.edu](mailto:lisa.freeman@tufts.edu)>

**Subject:** 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Dr. Freeman,

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

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

- **Full Medical Records**

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

- **Phone interview** about [B6] diet and environmental exposures

- Please confirm permission to contact the owner.
- The interview generally lasts 30 minutes.

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

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

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Director: Vet-LIRN

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Center For Veterinary Medicine, FDA,

8401 Muirkirk Road, Laurel, MD 20708

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Vet-LIRN

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Aquaculture

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ResearchAreas/ucm130892.htm>

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**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** 'Freeman, Lisa'  
**CC:** Reimschuessel, Renate  
**Sent:** 8/1/2018 6:52:47 PM  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Thank you, Lisa.

Yes, please send [B6] medical records. We can send you a box to collect the foods. Where would be the best address? It will have a prepaid shipping label, and you can reuse the box to ship the samples by UPS.

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



**From:** Freeman, Lisa [mailto:Lisa.Freeman@tufts.edu]  
**Sent:** Wednesday, August 01, 2018 2:45 PM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Cc:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Hi Jen  
I'm still working on getting permission from [B6] owners. They may be on vacation – tough to get people at this time of year.

I also just heard that [B6] (Boxer with low taurine eating Petcarean) has improved even further on echo after diet change and taurine supplementation. I submitted that but wanted to be sure that got entered into the system correctly. His cardiologist and I are happy to provide records.

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**Cc:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Good morning Lisa,  
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- [B6] Also was an autopsy done?

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**Sent:** Friday, July 20, 2018 8:06 AM  
**To:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Cc:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Renata and Jennifer

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[B6]

I'm sure you're all getting slammed with reports

(and there will probably be even more coming now) but just wanted to check to be sure they got recorded.

Thanks

Lisa

**From:** Reimschuessel, Renate [mailto:Renate.Reimschuessel@fda.hhs.gov]  
**Sent:** Friday, July 20, 2018 7:55 AM  
**To:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**Cc:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

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Renate Reimschuessel V.M.D. Ph.D. Director Vet-LIRN

Phone 1-240-402-5404

Fax 301-210-4685

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

**From:** Freeman, Lisa [mailto:Lisa.Freeman@tufts.edu]  
**Sent:** Thursday, July 19, 2018 5:59 PM  
**To:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

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Friedman School of Nutrition Science and Policy  
Tufts Clinical and Translational Science Institute  
Tufts University  
[www.petfoodology.org](http://www.petfoodology.org)

**From:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Sent:** Tuesday, July 17, 2018 11:48 AM  
**To:** Freeman, Lisa <[lisa.freeman@tufts.edu](mailto:lisa.freeman@tufts.edu)>  
**Subject:** 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Dr. Freeman,

Thank you for submitting your consumer complaint to FDA. I'm sorry to hear about [B6] illness. As part of our investigation, we'd like to request:

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- Please confirm permission to contact the owner.
  - The interview generally lasts 30 minutes.

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Thank you kindly, especially for submitting multiple cases,  
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Renate Reimschuessel V.M.D. Ph.D.

Director: Vet-LIRN

*(Veterinary Laboratory Investigation and Response Network)*

Center For Veterinary Medicine, FDA,

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Vet-LIRN

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Aquaculture

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ResearchAreas/ucm130892.htm>



---

**From:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**To:** Jones, Jennifer L  
**Sent:** 8/1/2018 10:33:10 PM  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)  
**Attachments:** [B6] dcm taurine deficiency 7 7 17.pdf; [B6] august 2017 echo.pnrx; [B6] [B6] medical records.pnrx; [B6] nutrition request.pnrx; [B6] diet history.pnrx

Hi Jen  
I'll ask [B6] to send their records. I'm attaching what I have from [B6] and the primary care vet plus some Tufts records including diet history.  
I don't know if owner still has the original food but will check  
Thanks  
Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
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Friedman School of Nutrition Science and Policy  
Tufts Clinical and Translational Science Institute  
Tufts University  
[www.petfoodology.org](http://www.petfoodology.org)

**From:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Sent:** Wednesday, August 01, 2018 2:53 PM  
**To:** Freeman, Lisa <lisa.freeman@tufts.edu>  
**Cc:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Thank you, Lisa.  
Yes, please send [B6] medical records. We can send you a box to collect the foods. Where would be the best address? It will have a prepaid shipping label, and you can reuse the box to ship the samples by UPS.

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



**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Wednesday, August 01, 2018 2:45 PM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Cc:** Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

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Thanks

Lisa

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**From:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>  
**Sent:** Friday, July 20, 2018 8:47 AM  
**To:** Freeman, Lisa <[lisa.freeman@tufts.edu](mailto:lisa.freeman@tufts.edu)>  
**Cc:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Subject:** RE: 800.267-FDA Case Investigation for [REDACTED] (EON-358523)

Good morning Lisa,

Yes, we got the reports you previously submitted and recorded the information for our database. Will you please forward any medical records for:

- [REDACTED] are you able to send any updates on the Taurine testing or echocardiogram (if done?)
- [REDACTED] Also was an autopsy done?

Thank you in advance and for your time to report all the cases!  
Jen

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



**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, July 20, 2018 8:06 AM  
**To:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Cc:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>  
**Subject:** RE: 800.267-FDA Case Investigation for [REDACTED] (EON-358523)

Dear Renata and Jennifer

That seems reasonable. I was never contacted about the other cases that I submitted. There was some confusion about the way I submitted them so I want to be sure you actually got them [REDACTED]

[REDACTED] I'm sure you're all getting slammed with reports (and there will probably be even more coming now) but just wanted to check to be sure they got recorded.

Thanks  
Lisa

**From:** Reimschuessel, Renate [<mailto:Renate.Reimschuessel@fda.hhs.gov>]  
**Sent:** Friday, July 20, 2018 7:55 AM  
**To:** Freeman, Lisa <[Lisa.Freeman@tufts.edu](mailto:Lisa.Freeman@tufts.edu)>  
**Cc:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>  
**Subject:** RE: 800.267-FDA Case Investigation for [REDACTED] (EON-358523)

Dear Lisa

Thanks for gathering the information.

I think, since we are getting so many reports since our CVM update, we should pass on the [REDACTED] case as it is

not clear-cut.

I think Jen is more familiar with the [B6] case, so I'll let her respond regarding that one.  
Thank you again for all your work on this investigation.  
rr

Renate Reimschuessel V.M.D. Ph.D. Director Vet-LIRN

**Phone 1- 240-402-5404**

Fax 301-210-4685

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

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Thursday, July 19, 2018 5:59 PM  
**To:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Subject:** RE: 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Renate

In looking back through this case, I'm not sure this is a completely clear-cut one. The dog has degenerative mitral valve disease and CHF but also has reduced cardiac contractility so might be a combination. Do you still want me to collect the info below?

Also, I have an update on [B6] who died at home last week. I do have food from the owner if you want that.

Thanks

Lisa

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

**From:** Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>  
**Sent:** Tuesday, July 17, 2018 11:48 AM  
**To:** Freeman, Lisa <[lisa.freeman@tufts.edu](mailto:lisa.freeman@tufts.edu)>  
**Subject:** 800.267-FDA Case Investigation for [B6] (EON-358523)

Dear Dr. Freeman,

Thank you for submitting your consumer complaint to FDA. I'm sorry to hear about [B6] illness. As part of our investigation, we'd like to request:

- **Full Medical Records**
  - Please email (preferred) or fax (301-210-4685) a copy of [B6] **entire** medical history (not just this event), including any referral diagnostics.
- **Phone interview** about [B6] diet and environmental exposures
  - Please confirm permission to contact the owner.
  - The interview generally lasts 30 minutes.

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

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

Thank you kindly, especially for submitting multiple cases,  
Dr. Reimschuessel

Renate Reimschuessel V.M.D. Ph.D.

Director: **Vet-LIRN**

*(Veterinary Laboratory Investigation and Response Network)*

Center For Veterinary Medicine, FDA,

8401 Muirkirk Road, Laurel, MD 20708

**Phone 1- 240-402-5404** Fax 301-210-4685

**EMAIL :** [renate.reimschuessel@fda.hhs.gov](mailto:renate.reimschuessel@fda.hhs.gov)

Vet-LIRN

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

Phish-Pharm

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ToolsResources/Phish-Pharm/default.htm>

Aquaculture

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ResearchAreas/ucm130892.htm>

**From:** Rotstein, David </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0A3B17EBFCF14A6CB8E94F322906BADD-DROTSTEI>  
**To:** Carey, Lauren; Ceric, Olgica; Glover, Mark; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Peloquin, Sarah; Queen, Jackie L; Rotstein, David  
**Sent:** 10/1/2018 8:56:50 PM  
**Subject:** Decreased contractility with MRx-FW: Honest Kitchen Grain Free beef (love): Lisa Freeman - EON-367344  
**Attachments:** 2055558-report.pdf; 2055558-attachments.zip

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>  
**Sent:** Monday, October 01, 2018 4:53 PM  
**To:** Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; **B6**  
**Subject:** Honest Kitchen Grain Free beef (love): Lisa Freeman - EON-367344

A PFR Report has been received and PFR Event [EON-367344] has been created in the EON System.

A "PDF" report by name "2055558-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 "2055558-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-367344  
**ICSR #:** 2055558  
**EON Title:** PFR Event created for Honest Kitchen Grain Free beef (love) fish (zeal) chicken (force) or turkey (keen). Also Instinct raw beef patties; 2055558

<b>AE Date</b>	09/19/2018	<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>	Stable
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	<b>B6</b> years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2055558

**Product Group:** Pet Food

**Product Name:** Honest Kitchen Grain Free beef (love), fish (zeal), chicken (force), or turkey (keen). Also, Instinct raw beef patties

**Description:** Eating grain-free diet so owner wanted baseline echo. No clinical signs Echo showed no overt DCM but reduced contractility. Taurine low (plasma **B6** WB=**B6**) Recommended diet change and taurine supplementation

**Submission Type:** Initial

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

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

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

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

<b>Product Name</b>	<b>Lot Number or ID</b>	<b>Best By Date</b>
Honest Kitchen Grain Free beef (love), fish (zeal), chicken (force), or turkey (keen). Also, Instinct raw beef patties		

**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-367344>

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

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspa?decorator=none&e=0&issueType=12&issueld=384258>

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**From:** Related PFR Event <pfrsignificantactivitycreation@fda.hhs.gov>  
**To:** Rotstein, David; Cleary, Michael \*; HQ Pet Food Report Notification;  
B6  
**Sent:** 6/10/2019 8:20:57 PM  
**Subject:** Fromm Game Bird Recipe Dog - Four-Star - Dry -Grain-Free formula; B6  
B6 EON-390092  
**Attachments:** 2068038-report.pdf; 2068038-attachments.zip

A PFR Report has been received and Related PFR Event [EON-390092] has been created in the EON System.

A "PDF" report by name "2068038-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 "2068038-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-390092

**ICSR #:** 2068038

**EON Title:** Related PFR Event created for Fromm Game Bird Recipe Dog · Four-Star · Dry Grain-Free formula; 2068038

<b>AE Date</b>	04/16/2019	<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>	Better/Improved/Recovering
<b>Breed</b>	Hound (unspecified)		
<b>Age</b>	B6 years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2068038

**Product Group:** Pet Food

**Product Name:** Fromm Game Bird Recipe Dog · Four-Star · Dry Grain-Free formula

**Description:** Patient presented to rDVM for evaluation of abdominal distension x 5 weeks and increase in respiratory rate and effort. FAST scan revealed moderate ascites. Patient was referred to Tufts for further evaluation. Findings consistent with advanced DMVD with suspect L-CHF and poor contractile function.



Considering LA enlargement and severity of MR and AI, we would expect a better systolic function.

**B6**

is recommended. Mild respiratory effort and occasional b-lines vote in favor to L-CHF.

There is enough cardiac changes to justify L and R CHF. Since patient is on a BEG diet, it is unclear whether diet is playing a role on decreased contractile function. Recommend transition to a grain-based, low sodium diet and consider Taurine supplementation. Abdominocentesis was performed (5 liters of serous sanguineous fluid) and analysis is recommended. Recommend hospitalization, patient on telemetry monitoring and respiratory watch. Fluid check in the morning and kidney values daily while in the hospital. Since patient is on a BEG diet, recommend transition to a grain-based, low sodium diet.

**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:** 1

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

Product Name	Lot Number or ID	Best By Date
Fromm Game Bird Recipe Dog · Four-Star · Dry Grain-Free formula		

This report is linked to:

**Initial EON Event Key:** EON-388971

**Initial ICSR:** 2067510

**Sender information**

**B6**

**Owner information**

**B6**

USA

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

<https://eon.fda.gov/eon//browse/EON-390092>

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

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jspx?decorator=none&e=0&issueType=10100&issueId=407364&parentIssueTypeId=12>

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---

**From:** Reimschuessel, Renate </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4C00C47AE2794134B2906D6B9252FCF6-RREIMSCH>  
**To:** lisa.freeman@tufts.edu  
**Sent:** 7/17/2018 3:48:03 PM  
**Subject:** 800.267-FDA Case Investigation for [B6] (EON-358523)  
**Attachments:** 02-Vet-LIRN-NetworkProceduresVets-12.22.2015.pdf; 03-Vet-LIRN-NetworkProceduresOwners-12.22.2015.pdf

Dear Dr. Freeman,

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

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

- **Full Medical Records**

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

- **Phone interview** about [B6] diet and environmental exposures

- Please confirm permission to contact the owner.
- The interview generally lasts 30 minutes.

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

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

Thank you kindly, especially for submitting multiple cases,  
Dr. Reimschuessel

Renate Reimschuessel V.M.D. Ph.D.

Director: Vet-LIRN

*(Veterinary Laboratory Investigation and Response Network)*

Center For Veterinary Medicine, FDA,

8401 Muirkirk Road, Laurel, MD 20708

*Phone 1-240-402-5404 Fax 301-210-4685*

*EMAIL : [renate.reimschuessel@fda.hhs.gov](mailto:renate.reimschuessel@fda.hhs.gov)*

Vet-LIRN

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

Phish-Pharm

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ToolsResources/Phish-Pharm/default.htm>

Aquaculture

<http://www.fda.gov/AnimalVeterinary/ScienceResearch/ResearchAreas/ucm130892.htm>

**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** Rotstein, David; Palmer, Lee Anne; Carey, Lauren  
**Sent:** 4/3/2019 1:57:30 PM  
**Subject:** RE: ACANA - Heritage Red Meat Formula Dog Food (Grain-free) [B6] - EON-383914

FYI-MRx in PFR show DCM w/ CHF. [B6] is submitting reports from Tufts (in leui of Lisa Freeman) NFA for Vet-LIRN

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



**From:** PFR Event <preventioncreation@fda.hhs.gov>  
**Sent:** Monday, April 01, 2019 5:49 PM  
**To:** Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov> [B6]  
**Subject:** ACANA - Heritage Red Meat Formula Dog Food (Grain-free) [B6] EON-383914

A PFR Report has been received and PFR Event [EON-383914] has been created in the EON System.

A "PDF" report by name "2065085-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 "2065085-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-383914

**ICSR #:** 2065085

**EON Title:** PFR Event created for ACANA - Heritage Red Meat Formula Dog Food (Grain-free); 2065085

<b>AE Date</b>	03/15/2019	<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>	Shepherd Dog - German		
<b>Age</b>	11.5 Years		
<b>District Involved</b>	PFR-New England DO		

**Product information**

**Individual Case Safety Report Number:** 2065085

**Product Group:** Pet Food

**Product Name:** ACANA - Heritage Red Meat Formula Dog Food (Grain-free)

**Description:** 3/15/2019 - Acute onset of difficulty breathing on walk, increased resp rate, wheezing and short of breath. Diagnosed with DCM and CHF

**Submission Type:** Initial

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

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

**Number of Animals Treated With Product:** 2

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

Product Name	Lot Number or ID	Best By Date
ACANA - Heritage Red Meat Formula Dog Food (Grain-free)		

**Sender information**

**B6**

USA

**Owner information**

**B6**

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

<https://eon.fda.gov/eon//browse/EON-383914>

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

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jsps?decorator=none&e=0&issueType=12&issuelid=401042>

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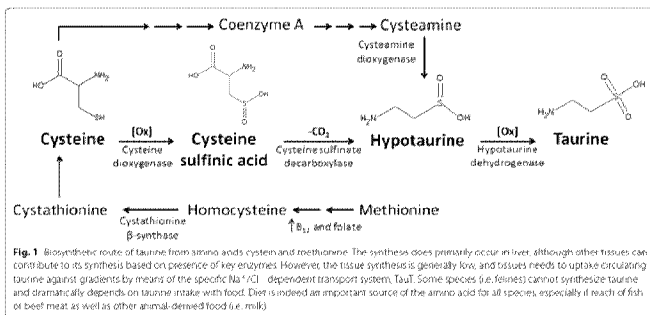
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**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** Rotstein, David; Glover, Mark; Palmer, Lee Anne; Queen, Jackie L; Carey, Lauren  
**CC:** Ceric, Olgica; Nemser, Sarah; 'Reimschuessel, Renate (Renate.Reimschuessel@fda.hhs.gov)'  
**Sent:** 1/23/2018 6:24:22 PM  
**Subject:** RE: California Natural and Zignature- Kangaroo Diets and DCM EON-345833-345835-345831-345822  
**Attachments:** DeLuca-2015-Taurine-metabolism.pdf; EON-345822-**B6**-MRx 1.pdf; EON-345822-**B6**-MRx 2.pdf; EON-345831-**B6**-MRx 1.pdf; EON-345831-**B6**-MRx 2.pdf; EON-345833-**B6**-MRx.pdf; EON-345835-**B6**-MRx 1.pdf; EON-345835-**B6**-MRx 2.pdf; EON-Multi-**B6**-case summary-1.23.2018.doc; EON-Multi-**B6**-DCM-1.23.2018.xlsx; Listserve on kangaroo and lentil diets.pdf

# B5, B6

MRx summaries attached.

The Message Board is worth reading-start on the last page. Good article (DeLuca et al) with Tau biosynthesis diagram (below) attached.



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



**From:** Rotstein, David  
**Sent:** Tuesday, January 23, 2018 7:02 AM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>; Glover, Mark <Mark.Glover@fda.hhs.gov>; Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Queen, Jackie L <Jackie.Queen@fda.hhs.gov>; Carey, Lauren <Lauren.Carey@fda.hhs.gov>  
**Subject:** RE: California Natural and Zignature- Kangaroo Diets and DCM EON-345833-345835-345831-345822

Thanks---that's what I figured!

**From:** Jones, Jennifer L  
**Sent:** Tuesday, January 23, 2018 7:01 AM  
**To:** Rotstein, David <David.Rotstein@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>; Glover, Mark <Mark.Glover@fda.hhs.gov>; Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Queen, Jackie L <Jackie.Queen@fda.hhs.gov>; Carey,

Lauren <[Lauren.Carey@fda.hhs.gov](mailto:Lauren.Carey@fda.hhs.gov)>

**Subject:** RE: California Natural and Zignature- Kangaroo Diets and DCM EON-345833-345835-345831-345822

I wasn't-However, I bet it's related to our contact from NCSU. She had a cardiologist friend in **B6** with a few cases. We can get MRx, to start!

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



**From:** Rotstein, David

**Sent:** Monday, January 22, 2018 10:06 PM

**To:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>; Nemser, Sarah <[Sarah.Nemser@fda.hhs.gov](mailto:Sarah.Nemser@fda.hhs.gov)>; Reimschuessel, Renate <[Renate.Reimschuessel@fda.hhs.gov](mailto:Renate.Reimschuessel@fda.hhs.gov)>; Glover, Mark <[Mark.Glover@fda.hhs.gov](mailto:Mark.Glover@fda.hhs.gov)>; Palmer, Lee Anne <[LeeAnne.Palmer@fda.hhs.gov](mailto:LeeAnne.Palmer@fda.hhs.gov)>; Queen, Jackie L <[Jackie.Queen@fda.hhs.gov](mailto:Jackie.Queen@fda.hhs.gov)>; Carey, Lauren <[Lauren.Carey@fda.hhs.gov](mailto:Lauren.Carey@fda.hhs.gov)>

**Cc:** Rotstein, David <[David.Rotstein@fda.hhs.gov](mailto:David.Rotstein@fda.hhs.gov)>

**Subject:** California Natural and Zignature- Kangaroo Diets and DCM EON-345833-345835-345831-345822

Not sure if you were expecting these at Vet-LIRN

---

**From:** Ceric, Olgica </O=FDA/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=OLGICA.CERIC>  
**To:** Carey, Lauren; Reimschuessel, Renate; Rotstein, David; CVM Vet-LRN-OR; Queen, Jackie L; Palmer, Lee Anne  
**Sent:** 5/14/2015 6:42:19 PM  
**Subject:** RE: EON-206801-ICSR 1039368-FW: Golden Reward: [REDACTED] B6  
**Attachments:** EON-206801 [REDACTED] B6 case summary-05.13.15.doc.html

We received urine for Fanconi panel.

I spoke with owner today:

05/14/2015

OC-spoke with an owner. His email: [REDACTED] B6

[REDACTED] B6 regular food is "Nature's Recipe, Salmon", grain free. No table scraps, no other food. The only jerky treats she ever had were Golden Rewards. He began feeding her the treats sometime in January, 2015. She was receiving them for approximately 4 months when she showed first symptoms and stopped eating. Her water intake and urination actually decreased. [REDACTED] B6 would eat 3-5 treats every day, and she always asked for more. The bag that owner gave to veterinarian to send to us is unopened. [REDACTED] B6 is Chiweenie (Chihuahua/Dachshund mix), 1.5 years old, spayed. She had absolutely no health issues before this event. She was even hit by a car, but was not hurt.

She only received [REDACTED] B6 but on the same day owner took her to the vet when she already showed symptoms.

[REDACTED] B6 is primarily indoor dog, rarely goes out but is always supervised. She was never boarded.

Other pets: owner has two other dogs, they also consumed treats but are without symptoms. They are :

1. Hound mix- 85lbs.
2. Basenji mix-50 lbs.

Owner also has a Sugar Glider. Glider does not come out of the cage and is not in contact with [REDACTED] B6 They also have a cat-in perfect health.

Environmental exposures: indoor, no plants, grapes or raisins, nuts, mushrooms, birds... (none of the ones from the list)

***Olgica Ceric, DVM, PhD***

Veterinary Medical Officer  
U.S. Food & Drug Administration  
Center for Veterinary Medicine  
Office of Research  
Veterinary Laboratory Investigation and Response Network (Vet-LIRN)  
8401 Muirkirk Road, G704  
Laurel, Maryland 20708  
tel: 240-402-5419  
fax: 301-210-4685  
**e-mail: [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)**  
Web: <http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>

---

**From:** Ceric, Olgica  
**Sent:** Tuesday, May 05, 2015 12:14 PM  
**To:** Carey, Lauren; Reimschuessel, Renate; Rotstein, David; CVM Vet-LRN-OR; Queen, Jackie L; Palmer, Lee Anne  
**Subject:** RE: EON-206801-ICSR 1039368-FW: Golden Reward: [REDACTED] B6

OC-medical records:

05/04/2015



Presenting complaint: inappetence, diarrhea, painful abdomen

**B6**

05/02/2015

Presenting complaint: not eating for 4 days, vomited once  
Diagnostics declined.

Medications:

**B6**

04/13/2015

Presented for coughing.

12/12/2014

Presented for spaying.

11/29/2014

Presenting complaint: hit by a car, limping

Treatment: no treatment, healthy patient

***Olgica Ceric, DVM, PhD***

Veterinary Medical Officer

U.S. Food & Drug Administration

Center for Veterinary Medicine

Office of Research

Veterinary Laboratory Investigation and Response Network (Vet-LIRN)

8401 Muirkirk Road, G704

Laurel, Maryland 20708

tel: 240-402-5419

fax: 301-210-4685

**e-mail: [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)**

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

---

**From:** Ceric, Olgica

**Sent:** Tuesday, May 05, 2015 11:56 AM

**To:** Carey, Lauren; Reimschuessel, Renate; Rotstein, David; CVM Vet-LRN-OR; Queen, Jackie L; Palmer, Lee Anne

**Subject:** RE: EON-206801-ICSR 1039368-FW: Golden Reward:

**B6**

Pictures in the attachment, Chicken Jerky Recipe:

iced with 1% tarted

Crude Fat (min)	..... 0.5%
Crude Fat (max)	..... 1%
Crude Fiber (max)	..... 5.5%
Moisture (max)	..... 1%
	..... 16%

AST, VEGETABLE GLYCERIN, SALT.

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**GOLDEN REWARDS**

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**GOLDEN REWARDS**

Highly Moist with Real Chicken Breast • High Protein

Net Weight 1.25 lb (567g)

Guaranteed Analysis:

Crude Protein (min)	..... 12.0%
Crude Fat (min)	..... 3.0%
Crude Fiber (max)	..... 5.5%
Moisture (max)	..... 16%

Guaranteed Analysis:

Crude Protein (min)	..... 12.0%
Crude Fat (min)	..... 3.0%
Crude Fiber (max)	..... 5.5%
Moisture (max)	..... 16%

Walmart.com



**Olgica Ceric, DVM, PhD**  
Veterinary Medical Officer  
U.S. Food & Drug Administration  
Center for Veterinary Medicine  
Office of Research  
Veterinary Laboratory Investigation and Response Network (Vet-LIRN)  
8401 Muirkirk Road, G704  
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tel: 240-402-5419  
fax: 301-210-4685  
**e-mail:** [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)  
Web: <http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>

---

**From:** Carey, Lauren  
**Sent:** Tuesday, May 05, 2015 11:53 AM  
**To:** Reimschuessel, Renate; Rotstein, David; CVM Vet-LRN-OR; Queen, Jackie L; Palmer, Lee Anne  
**Subject:** RE: EON-206801-ICSR 1039368-FW: Golden Reward: B6

The actual product fed would be great to know. Golden Rewards is a brand with multiple jerky treats and combos.

---

**From:** Reimschuessel, Renate  
**Sent:** Tuesday, May 05, 2015 8:49 AM  
**To:** Rotstein, David; CVM Vet-LRN-OR; Queen, Jackie L; Palmer, Lee Anne; Carey, Lauren  
**Subject:** RE: EON-206801-ICSR 1039368-FW: Golden Reward: B6

1 year old dachs eating 2-3 jerky treats per day sometimes instead of food.  
I agree – please touch base with vet – get feeding history as well – ?Dingo?

Renate Reimschuessel V.M.D. Ph.D. Vet-LIRN

Phone 1-240-402-5404

Fax 301-210-4685

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

---

**From:** Rotstein, David

**Sent:** Monday, May 04, 2015 4:37 PM

**To:** CVM Vet-LRN-OR; Queen, Jackie L; Palmer, Lee Anne; Carey, Lauren

**Subject:** EON-206801-ICSR 1039368-FW: Golden Reward: [REDACTED] B6

Dog fed GR for over a year. Hard to say if related at this point.

Suggest: ICERT contact vet to see if any bloodwork or UA. (will mention freezing urine). Can go from there.

d.

David Rotstein, DVM, MPVM, Dipl. ACVP

CVM Vet-LIRN Liaison

CVM OSC/DC/ICERT

7519 Standish Place, RM 120

240-402-5613 (Office and Fax) (NEW NUMBER)

240-506-6763 (BB)

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---

**From:** PFR Event [<mailto:pfreventcreation@fda.hhs.gov>]

**Sent:** Monday, May 04, 2015 4:32 PM

**To:** [REDACTED] B6 HQ Pet Food Report Notification; [REDACTED] B6

[REDACTED] B6

**Subject:** Golden Reward: [REDACTED] B6

A PFR Report has been received and PFR Event [EON-206801] has been created in the EON System

A "PDF" report by name "1039368-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report

**EON Key:** EON-206801

**EON Title:** PFR Event created for Golden Reward; 1039368

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

<https://eon.fda.gov/eon//browse/EON-206801>

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=219576>

**Product information**

**Individual Case Safety Report Number:** 1039368

**Product Group:** Pet Food

**Product Name:** Golden Reward

**Description:** Pet stopped eating about 5-6 days ago, vomited once. receives sometimes 2-3 jerky treats/day,

sometimes replacing her meals. treated 2 days ago with antinausea meds and fluids, appetite stimulants. pet did not improve. presented today still anorexic and lethargic.

**Submission Type:** Initial

**Report Type:** Both

**Outcome of reaction/event at the time of last observation:** Worse/Declining/Deteriorating

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

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

**Sender information**

**B6**

USA

**Owner information**

**B6**

USA

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**From:** Glover, Mark </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=23FC3452DFD0414184CBB290047B7865-MARK.GLOVER>  
**To:** Carey, Lauren; Ceric, Olgica; Jones, Jennifer L; Nemser, Sarah; Palmer, Lee Anne; Queen, Jackie L; Reimschuessel, Renate; Rotstein, David  
**Sent:** 5/21/2018 11:16:27 AM  
**Subject:** RE: EON-354199 RFR Event: Dog owner

Yes please J

**From:** Carey, Lauren  
**Sent:** Monday, May 21, 2018 6:46 AM  
**To:** Ceric, Olgica <Olgica.Ceric@fda.hhs.gov>; Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>; Glover, Mark <Mark.Glover@fda.hhs.gov>; Nemser, Sarah <Sarah.Nemser@fda.hhs.gov>; Palmer, Lee Anne <LeeAnne.Palmer@fda.hhs.gov>; Queen, Jackie L <Jackie.Queen@fda.hhs.gov>; Reimschuessel, Renate <Renate.Reimschuessel@fda.hhs.gov>; Rotstein, David <David.Rotstein@fda.hhs.gov>  
**Subject:** FW: EON-354199 RFR Event: Dog owner

We should probably stress to these groups that they should reports as PFRs, not RFRs. We could send a guide as to how to answer the first few questions in order to ensure they choose the PFR route. Should I enter this as a PFR?

**From:** RFR Event [<mailto:rfreventcreation@fda.hhs.gov>]  
**Sent:** Saturday, May 19, 2018 5:48 PM  
**To:** Lambkin, Sonya <[Sonya.Lambkin@fda.hhs.gov](mailto:Sonya.Lambkin@fda.hhs.gov)>; [orahqreportablefoodnotificationtriagegroup@fda.hhs.gov](mailto:orahqreportablefoodnotificationtriagegroup@fda.hhs.gov); Bataller, Neal <[Neal.Bataller@fda.hhs.gov](mailto:Neal.Bataller@fda.hhs.gov)>; Johnston, Ying F <[Ying.Johnston@fda.hhs.gov](mailto:Ying.Johnston@fda.hhs.gov)>; Edwards, Elizabeth <[Elizabeth.Edwards@fda.hhs.gov](mailto:Elizabeth.Edwards@fda.hhs.gov)>; Rotstein, David <[David.Rotstein@fda.hhs.gov](mailto:David.Rotstein@fda.hhs.gov)>; Yowell, Ruth <[Ruth.Yowell@fda.hhs.gov](mailto:Ruth.Yowell@fda.hhs.gov)>; ORA HAF EAST1 Reportable Food Notification <[orahafeast1reportablefoodnotification@fda.hhs.gov](mailto:orahafeast1reportablefoodnotification@fda.hhs.gov)>; Krieger, Darlene <[Darlene.Krieger@fda.hhs.gov](mailto:Darlene.Krieger@fda.hhs.gov)>; CFSAN Reportable Food Registry <[CFSANReportableFoodRegistry@fda.hhs.gov](mailto:CFSANReportableFoodRegistry@fda.hhs.gov)>; FDA Emergency Operations <[emergency.operations@fda.hhs.gov](mailto:emergency.operations@fda.hhs.gov)>; Cleary, Michael \* <[Michael.Cleary@fda.hhs.gov](mailto:Michael.Cleary@fda.hhs.gov)>; Weems, Shellie \* <[Shellie.Weems@fda.hhs.gov](mailto:Shellie.Weems@fda.hhs.gov)>; Hodges, April <[April.Hodges@fda.hhs.gov](mailto:April.Hodges@fda.hhs.gov)>; ORA OEIO RECALLS Branch <[oraoeio recallsbranch@fda.hhs.gov](mailto:oraoeio recallsbranch@fda.hhs.gov)>; Nelson, Eric <[Eric.Nelson@fda.hhs.gov](mailto:Eric.Nelson@fda.hhs.gov)>; McCoig, Amber <[Amber.McCoig@fda.hhs.gov](mailto:Amber.McCoig@fda.hhs.gov)>; Glover, Mark <[Mark.Glover@fda.hhs.gov](mailto:Mark.Glover@fda.hhs.gov)>; Palmer, Lee Anne <[LeeAnne.Palmer@fda.hhs.gov](mailto:LeeAnne.Palmer@fda.hhs.gov)>; Carey, Lauren <[Lauren.Carey@fda.hhs.gov](mailto:Lauren.Carey@fda.hhs.gov)>; Queen, Jackie L <[Jackie.Queen@fda.hhs.gov](mailto:Jackie.Queen@fda.hhs.gov)>; B6  
**Subject:** EON-354199 RFR Event: Dog owner

A RFR Report has been received and RFR Event [EON-354199] has been created in the EON System under ICSR # 2048088.

**Reason this food is reportable:** Other

**Please describe Other:** Associated with case of dilated cardiomyopathy

**Product Name:** 4Health large breed dry food

Type of Site:	Sender	Food Facility Site
FDA Districts Impacted:	NWE	NWE
Organization Name:	Tufts Cummings School of Veterinary Medicine	Dog owner

<b>Address:</b>	200 Westboro Rd North Grafton, MA 01536 United States	unknown unknown, MA 01536 United States
-----------------	--	--

**Discovery Date:** 2018-05-18

**Product Group:** Pet Food

**Description:** 2 year old Great Dane with DCM and CHF. Has eaten 4Health dog food (large breed dry) since 6/2016. Taurine levels pending

**Product Recall:** No

**Human Symptoms Present:** No

**Animal Symptoms Present:** Yes

**Animal Symptoms Description:** Please see above. More details can be provided

**Product Distribution Type:** Retail

**Root Cause:** Not applicable

**Discovery Code:** Consumer

**Submission Type:** Initial

**Reporting Type:** Voluntary

**EON Key:** EON-354199

**EON Title:** RFR Event created for 4Health large breed dry food; 2048088

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

<https://eon.fda.gov/eon//browse/EON-354199>

To view the RFR Report, please click the link below:

<https://eon.fda.gov/eon//EventCustomDetailsAction!viewReport.jsps?decorator=none&e=0&issueType=9&issueId=370681>

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---

**From:** Jones, Jennifer L </O=FDA/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JENNIFER.JONESAA8>  
**To:** Rotstein, David  
**CC:** Nemser, Sarah  
**Sent:** 10/7/2015 6:53:52 PM  
**Subject:** RE: EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE: **B6**  
**B6**

Dave, we don't have records of receiving this report, and are not following up.

**Jennifer Jones, DVM**

Veterinary Medical Officer  
FDA-CVM-Vet-LIRN  
Tel: 240-402-5421

---

**From:** Rotstein, David  
**Sent:** Wednesday, October 07, 2015 2:11 PM  
**To:** Jones, Jennifer L  
**Subject:** FW: EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE: **B6**

Double checking-are you all doing any follow-up?

David Rotstein, DVM, MPVM, Dipl. ACVP  
CVM Vet-LIRN Liaison  
CVM OSC/DC/ICERT  
7519 Standish Place, RM 120  
**240-402-5613** (Office) (NEW NUMBER)  
240-506-6763 (BB)

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---

**From:** PFR Event [<mailto:pfreventcreation@fda.hhs.gov>]  
**Sent:** Tuesday, October 06, 2015 6:12 PM  
**To:** **B6**; **B6** HQ Pet Food Report Notification;  
**B6** **B6**  
**Subject:** EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE: **B6**

A PFR Report has been received and PFR Event [EON-228487] has been created in the EON System

A "PDF" report by name "1042641-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report

**EON Key:** EON-228487

**EON Title:** PFR Event created for EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE; 1042641

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

<https://eon.fda.gov/eon//browse/EON-228487>

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



**Product information**

**Individual Case Safety Report Number:** 1042641

**Product Group:** Pet Food

**Product Name:** EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE

**Description:** [B6] a 6 pound 7 ounce maltese, died on [B6] after eating a bowl of Evolve Dog Food. She was safely secured in my clean kitchen for the day with only the food and a water bowl at her disposal. [B6] was well and lively in the morning per usual. When the owner returned home she appeared listless, had difficulty moving and laid down and began to cry/whimper. She was first taken to her vet at [B6] where [B6] found that she had a cold body temp, blood that was not coagulating, high blood sugar and she eventually passed a bloody stool. She was dehydrated and an IV for fluids was started. She was placed in a warmer. The office was closing and I was advised to bring her to [B6] which I did right away. There [B6] had xrays, fluid, and a transfusion amongst other interventions. Both [B6] of [B6] and [B6] [B6] strongly felt poison was the cause of death. [B6] died on the night of [B6] [B6] was not exposed to poison in her yard as there is none used and is always accompanied on walks via leash. My yard is fenced and it is in excellent condition. There is no crime per se in my neighborhood.

**Submission Type:** Initial

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

**Outcome of reaction/event at the time of last observation:** Died Naturally

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

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

**Sender information**

[B6]

USA

---

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---

**From:** Jones, Jennifer L </O=FDA/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JENNIFER.JONESAA8>  
**To:** Rotstein, David  
**CC:** Nemser, Sarah  
**Sent:** 10/7/2015 6:53:52 PM  
**Subject:** RE: EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE: **B6**  
**B6**

Dave, we don't have records of receiving this report, and are not following up.

**Jennifer Jones, DVM**  
Veterinary Medical Officer  
FDA-CVM-Vet-LIRN  
Tel: 240-402-5421

---

**From:** Rotstein, David  
**Sent:** Wednesday, October 07, 2015 2:11 PM  
**To:** Jones, Jennifer L  
**Subject:** FW: EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE: **B6**

Double checking-are you all doing any follow-up?

David Rotstein, DVM, MPVM, Dipl. ACVP  
CVM Vet-LIRN Liaison  
CVM OSC/DC/ICERT  
7519 Standish Place, RM 120  
**240-402-5613** (Office) (NEW NUMBER)  
240-506-6763 (BB)

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---

**From:** PFR Event [<mailto:pfreventcreation@fda.hhs.gov>]  
**Sent:** Tuesday, October 06, 2015 6:12 PM  
**To:** **B6**; **B6** HQ Pet Food Report Notification;  
**B6** **B6**  
**Subject:** EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE: **B6**

A PFR Report has been received and PFR Event [EON-228487] has been created in the EON System

A "PDF" report by name "1042641-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report

**EON Key:** EON-228487  
**EON Title:** PFR Event created for EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE: 1042641

To view this PFR Event, please click the link below:  
<https://eon.fda.gov/eon//browse/EON-228487>

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

**Product information**

**Individual Case Safety Report Number:** 1042641

**Product Group:** Pet Food

**Product Name:** EVOLVE GRAIN FREE DOG FOOD TURKEY< GARBANZO BEANS & PEA RECIPE

**Description:** [B6] a 6 pound 7 ounce maltese, died on [B6] after eating a bowl of Evolve Dog Food. She was safely secured in my clean kitchen for the day with only the food and a water bowl at her disposal. [B6] was well and lively in the morning per usual. When the owner returned home she appeared listless, had difficulty moving and laid down and began to cry/whimper. She was first taken to her vet at [B6] where [B6] found that she had a cold body temp, blood that was not coagulating, high blood sugar and she eventually passed a bloody stool. She was dehydrated and an IV for fluids was started. She was placed in a warmer. The office was closing and I was advised to bring her to [B6] which I did right away. There [B6] had xrays, fluid, and a transfusion amongst other interventions. Both [B6] of [B6] and [B6] [B6] strongly felt poison was the cause of death. [B6] died on the night of [B6] [B6] was not exposed to poison in her yard as there is none used and is always accompanied on walks via leash. My yard is fenced and it is in excellent condition. There is no crime per se in my neighborhood.

**Submission Type:** Initial

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

**Outcome of reaction/event at the time of last observation:** Died Naturally

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

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

**Sender information**

[B6]

USA

---

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---

**From:** Jones, Jennifer L </O=FDA/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JENNIFER.JONESAA8>  
**To:** Scalera, Alexander  
**Sent:** 11/3/2016 1:16:56 PM  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

No worries, thanks Alex.

Jennifer Jones, DVM  
Veterinary Medical Officer



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**From:** Scalera, Alexander  
**Sent:** Thursday, November 03, 2016 9:10 AM  
**To:** Jones, Jennifer L  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Sorry for not responding, Jen. I will call today or tomorrow.

Thanks,

**Alex Scalera**  
*Program Support Specialist*

**Center for Veterinary Medicine**  
**Office of Research**  
**U.S. Food and Drug Administration**  
Tel: 240-402-0888  
[Alexander.Scalera@fda.hhs.gov](mailto:Alexander.Scalera@fda.hhs.gov)



---

**From:** Jones, Jennifer L  
**Sent:** Wednesday, November 02, 2016 11:22 AM  
**To:** Scalera, Alexander  
**Subject:** FW: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Alex, for PO 6.  
You can call the number below to pay with VISA.  
Thanks,  
Jen

Jennifer Jones, DVM  
Veterinary Medical Officer



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**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Wednesday, November 02, 2016 10:47 AM

**To:** Jones, Jennifer L  
**Subject:** FW: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Hi Jennifer  
Please see message below re: using Visa for this invoice  
Thanks  
Lisa

**From:** SAH Accounting Department  
**Sent:** Wednesday, November 02, 2016 9:53 AM  
**To:** [REDACTED] **B6**  
**Subject:** FW: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Hi [REDACTED] **B6**

This went to medical records and they forwarded it to me. Visa is fine. She can just call with the number. [REDACTED] **B6**

Thanks,

[REDACTED] **B6**

*Accounting Department  
Cummings School of Veterinary Medicine at Tufts University  
55 Willard St.  
North Grafton, MA 01536  
1-508-887-4314  
Hours M-F 7am-8pm, S & S 7am-3pm*

---

**From:** medrec  
**Sent:** Wednesday, November 02, 2016 9:43 AM  
**To:** SAH Accounting Department  
**Subject:** FW: FDA case follow up-EON-285648-Freeman-Nature's Vareity

See email below from Dr. Freeman.

[REDACTED] **B6**

Medical Records Department  
Foster Hospital for Small Animals  
Tufts University, Cummings School of Veterinary Medicine  
tel: 508.887.4636  
fax: 508.8874393  
email: [medrec@tufts.edu](mailto:medrec@tufts.edu)

---

**From:** Freeman, Lisa  
**Sent:** Tuesday, November 01, 2016 6:42 PM  
**To:** medrec  
**Subject:** Fwd: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Hi [REDACTED] **B6** How should I respond? This is for the reimbursement for [REDACTED] **B6** blood culture that we talked about a couple weeks ago by the Fda. Thanks. Lisa

Sent from my iPhone

Begin forwarded message:

**From:** "Jones, Jennifer L" <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>  
**Date:** November 1, 2016 at 3:08:43 PM EDT  
**To:** "Freeman, Lisa" <[Lisa.Freeman@tufts.edu](mailto:Lisa.Freeman@tufts.edu)>

**Subject: RE: FDA case follow up-EON-285648-Freeman-Nature's Variety**

Good afternoon Lisa,

My accountant asked if you're able to be reimbursed by credit (VISA) or if a check was needed?

Thank you,  
Jennifer

Jennifer Jones, DVM  
Veterinary Medical Officer

---

**From:** Jones, Jennifer L  
**Sent:** Monday, October 31, 2016 7:32 AM  
**To:** 'Freeman, Lisa'  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Variety

Sounds great! Thank you, Lisa.  
Please forward me the ICSR number (confirmation number) when you submit the report. It will help us find the case after it's been submitted.

Jennifer Jones, DVM  
Veterinary Medical Officer

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 28, 2016 3:36 PM  
**To:** Jones, Jennifer L  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Variety

Thanks very much.  
I'm going to have another one for you. 3 unrelated dogs in a family who've developed dilated cardiomyopathy. Supposedly on a commercial vegan diet and then small company's dog food. Once I get more details, I'll submit that one.

Best,  
Lisa  
Lisa M. Freeman, DVM, PhD, DACVN  
Professor  
Cummings School of Veterinary Medicine  
Tufts University

---

**From:** Jones, Jennifer L [<mailto:Jennifer.Jones@fda.hhs.gov>]  
**Sent:** Friday, October 28, 2016 3:07 PM  
**To:** Freeman, Lisa  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Variety

Good afternoon Lisa,

Thank you for sending the invoices. I'll submit them for repayment.  
I'll be on the look-out for the Medical records and the final blood culture result.  
We will send the results of the food testing as soon as they are received. As a head's up, they usually take a few weeks.

Thank you again for your help with the investigation.  
Kind regards and enjoy your weekend,  
Jen

Jennifer Jones, DVM  
Veterinary Medical Officer

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 28, 2016 10:01 AM  
**To:** Jones, Jennifer L  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Jennifer

Please see attached for an invoice, as well as the receipt for shipping and the invoice that includes the blood culture.

So far, the blood culture is negative but I'll send the final report when it's available.

We're getting written permission for release of records from the owner and will send those asap

Will I be updated on the results of the food analysis? That will be helpful information for treating this dog since she's not doing especially well

Thanks

Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
Professor  
Cummings School of Veterinary Medicine  
Tufts University

---

**From:** Jones, Jennifer L [<mailto:Jennifer.Jones@fda.hhs.gov>]  
**Sent:** Friday, October 21, 2016 11:15 AM  
**To:** Freeman, Lisa  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Good morning Dr. Freeman,

Thank you for the update. We will look for the medical records to arrive.

In the meantime, please move forward with the Listeria blood culture as **B4** Please send a copy of the results when finished and an invoice for the blood collection/shipping/Listeria testing.

For the open product testing, an instruction document and pre-filled out laboratory submission forms are attached. Please include those in the shipment. After shipping, please send an invoice for the shipping materials and shipping.

Please email or call with any questions.

Thank you kindly,  
Jennifer

Jennifer Jones, DVM  
Veterinary Medical Officer

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 21, 2016 10:24 AM  
**To:** Nemser, Sarah; Ceric, Olgica  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L

**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Sarah

I got information from Dr. Ceric on submitting a blood culture for Listeria but not any information on submitting the food for analysis.

I'm traveling this week but can submit an estimate for blood testing on Monday

Kind regards,  
Lisa

---

**From:** Nemser, Sarah [mailto:Sarah.Nemser@fda.hhs.gov]

**Sent:** Friday, October 21, 2016 10:22 AM

**To:** Ceric, Olgica; Freeman, Lisa

**Cc:** Reimschuessel, Renate; Jones, Jennifer L

**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dr. Freeman,

I wanted to follow up on this case.

**B6**

In her email below she stated that she would provide information on sending the food to the Ohio laboratory. Please let us know if that information was provided, if not we can follow up.

Please also send along an estimate for the blood testing so that we can prepare a purchase order.

Thank you very much for your assistance on this case.

Sarah

**Sarah Nemser M.S.**

Vet-LIRN Network Coordinator

tel: **240-402-0892**

fax: **301-210-4685**

[sarah.nemser@fda.hhs.gov](mailto:sarah.nemser@fda.hhs.gov)

---

**From:** Ceric, Olgica

**Sent:** Wednesday, October 19, 2016 2:09 PM

**To:** Freeman, Lisa

**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah

**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

If **B4** can test blood, that would be the fastest way to get it to the lab. We will reimburse you for the charges, but we will need an estimate first, in order to prepare purchase order.

As for the food, we can test it at our network lab in Ohio, I'll send you instructions in a separate email.

We will reimburse you for the shipping charges. You'll just need to submit invoice ( one for blood testing and shipping), once you ship the sample.

**Olgica Ceric, DVM, PhD**

Veterinary Medical Officer

U.S. Food & Drug Administration

Center for Veterinary Medicine

Office of Research

Veterinary Laboratory Investigation and Response Network (Vet-LIRN)

8401 Muirkirk Road, G704

Laurel, Maryland 20708

tel: 240-402-5419

fax: 301-210-4685



**e-mail:** [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)

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

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Wednesday, October 19, 2016 1:43 PM  
**To:** Ceric, Olgica  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Hi all

We just got a blood sample from the dog (just so happened she was coming in for a recheck today so I was fortunate to catch her primary clinician before the dog left). We typically submit our blood cultures to B4 I'm on the phone right now to see if they can test for Listeria. If not, can you tell me where to submit?

We do not have the ability to easily test the food for Listeria so if you could send details on that as well, I'd appreciate it

The owner did give permission to get records sent. I'm traveling through Friday but can get those submitted to you on Monday

I'll get someone to submit samples as soon as you provide info on labs, etc

Thanks

Lisa

---

**From:** Ceric, Olgica [<mailto:Olgica.Ceric@fda.hhs.gov>]  
**Sent:** Wednesday, October 19, 2016 10:10 AM  
**To:** Freeman, Lisa  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Dr. Freeman,

Thank you for the prompt response.

Do you have in-house lab available for testing the food? If so, please let me know the testing estimate.

Once you get approval from the owner to release medical records, please email them, or fax to: 301-210-4685.

Regarding Listeria, perhaps you could ask the owner if they are willing to submit blood for testing when you contact them regarding medical records? I understand your concerns regarding antibiotics, but we'd like to do it just in case.

Please reply to all when responding, my responses might be delayed since I'll be on leave part day by the end of the week.

Thank you,

**Olgica Ceric, DVM, PhD**  
Veterinary Medical Officer  
U.S. Food & Drug Administration  
Center for Veterinary Medicine  
Office of Research  
Veterinary Laboratory Investigation and Response Network (Vet-LIRN)  
8401 Muirkirk Road, G704  
Laurel, Maryland 20708  
tel: 240-402-5419  
fax: 301-210-4685

**e-mail:** [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)

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

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Tuesday, October 18, 2016 7:28 AM  
**To:** Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Varsity

Dear Olgica

We're happy to get permission from owners for medical records and I can get food submitted for testing next week

My question is on the blood culture. I'm not sure when the dog will be coming back in (she was discharged late last week) and am wondering if Listeria could be cultured if dog has been on antibiotics for >1 week

Thanks

Lisa

---

**From:** Ceric, Olgica [<mailto:Olgica.Ceric@fda.hhs.gov>]  
**Sent:** Monday, October 17, 2016 1:03 PM  
**To:** Freeman, Lisa  
**Cc:** Nemser, Sarah; Jones, Jennifer L  
**Subject:** FDA case follow up-EON-285648-Freeman-Nature's Varsity

Good morning Dr. Freeman,

We received your consumer complaint and would like to request the following:

- a copy of full medical records for the dog
- blood culture for Listeria
- open bag testing for Listeria and Salmonella

FDA will pay for the testing.

We have a network of veterinary diagnostic laboratories and could send samples to one of them, unless your lab has the capabilities?

**Please** email (preferred) or fax (301) 210-4685 us the **medical records**. Please send the **full medical history**-not just for this illness event.

Attached are a copy of our network procedures. They describe how veterinarians help with our case investigations. I also attached an owner friendly version.

Sincerely,

***Olgica Ceric, DVM, PhD***

Veterinary Medical Officer

U.S. Food & Drug Administration

Center for Veterinary Medicine

Office of Research

Veterinary Laboratory Investigation and Response Network (Vet-LIRN)

8401 Muirkirk Road, G704

Laurel, Maryland 20708

tel: 240-402-5419

fax: 301-210-4685

**e-mail: [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)**

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

---

**From:** Jones, Jennifer L </O=FDA/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JENNIFER.JONESAA8>  
**To:** Freeman, Lisa; medrec  
**Sent:** 11/2/2016 3:07:38 PM  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Thank you, Lisa.  
The address is:  
Attn: Jennifer Jones  
8401 Muirkirk Rd.  
Laurel, MD 20708

Jennifer Jones, DVM  
Veterinary Medical Officer



---

**From:** Freeman, Lisa [mailto:Lisa.Freeman@tufts.edu]  
**Sent:** Wednesday, November 02, 2016 10:50 AM  
**To:** Jones, Jennifer L; medrec  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Hi Jennifer  
Our medical records department is asking for your mailing address since B6 file is rather large  
Could you provide that? I'm cc'ing them here  
Thanks  
Lisa

**From:** Jones, Jennifer L [mailto:Jennifer.Jones@fda.hhs.gov]  
**Sent:** Tuesday, November 01, 2016 3:09 PM  
**To:** Freeman, Lisa <Lisa.Freeman@tufts.edu>  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Good afternoon Lisa,

My accountant asked if you're able to be reimbursed by credit (VISA) or if a check was needed?

Thank you,  
Jennifer

Jennifer Jones, DVM  
Veterinary Medical Officer



---

**From:** Jones, Jennifer L  
**Sent:** Monday, October 31, 2016 7:32 AM  
**To:** 'Freeman, Lisa'  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Sounds great! Thank you, Lisa.

Please forward me the ICSR number (confirmation number) when you submit the report. It will help us find the case after it's been submitted.

Jennifer Jones, DVM  
Veterinary Medical Officer



---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 28, 2016 3:36 PM  
**To:** Jones, Jennifer L  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Thanks very much.

I'm going to have another one for you. 3 unrelated dogs in a family who've developed dilated cardiomyopathy. Supposedly on a commercial vegan diet and then small company's dog food. Once I get more details, I'll submit that one.

Best,  
Lisa  
Lisa M. Freeman, DVM, PhD, DACVN  
Professor  
Cummings School of Veterinary Medicine  
Tufts University

---

**From:** Jones, Jennifer L [<mailto:Jennifer.Jones@fda.hhs.gov>]  
**Sent:** Friday, October 28, 2016 3:07 PM  
**To:** Freeman, Lisa  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Good afternoon Lisa,

Thank you for sending the invoices. I'll submit them for repayment.  
I'll be on the look-out for the Medical records and the final blood culture result.  
We will send the results of the food testing as soon as they are received. As a head's up, they usually take a few weeks.

Thank you again for your help with the investigation.  
Kind regards and enjoy your weekend,  
Jen

Jennifer Jones, DVM  
Veterinary Medical Officer



---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 28, 2016 10:01 AM  
**To:** Jones, Jennifer L  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Jennifer

Please see attached for an invoice, as well as the receipt for shipping and the invoice that includes the blood culture.

So far, the blood culture is negative but I'll send the final report when it's available.

We're getting written permission for release of records from the owner and will send those asap

Will I be updated on the results of the food analysis? That will be helpful information for treating this dog since she's not doing especially well

Thanks

Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
Professor  
Cummings School of Veterinary Medicine  
Tufts University

---

**From:** Jones, Jennifer L [<mailto:Jennifer.Jones@fda.hhs.gov>]  
**Sent:** Friday, October 21, 2016 11:15 AM  
**To:** Freeman, Lisa  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Variety

Good morning Dr. Freeman,

Thank you for the update. We will look for the medical records to arrive.

In the meantime, please move forward with the Listeria blood culture at B4 Please send a copy of the results when finished and an invoice for the blood collection/shipping/Listeria testing.

For the open product testing, an instruction document and pre-filled out laboratory submission forms are attached. Please include those in the shipment. After shipping, please send an invoice for the shipping materials and shipping.

Please email or call with any questions.

Thank you kindly,

Jennifer

Jennifer Jones, DVM  
Veterinary Medical Officer

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 21, 2016 10:24 AM  
**To:** Nemser, Sarah; Ceric, Olgica  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Variety

Dear Sarah

I got information from Dr. Ceric on submitting a blood culture for Listeria but not any information on submitting the food for analysis.

I'm traveling this week but can submit an estimate for blood testing on Monday

Kind regards,

Lisa

---

**From:** Nemser, Sarah [<mailto:Sarah.Nemser@fda.hhs.gov>]  
**Sent:** Friday, October 21, 2016 10:22 AM  
**To:** Ceric, Olgica; Freeman, Lisa  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L

**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Variety

Dr. Freeman,

I wanted to follow up on this case.

B6

In her email below she stated that she would provide information on sending the food to the Ohio laboratory. Please let us know if that information was provided, if not we can follow up.

Please also send along an estimate for the blood testing so that we can prepare a purchase order.

Thank you very much for your assistance on this case.

Sarah

**Sarah Nemser M.S.**

**Vet-LIRN Network Coordinator**

**tel: 240-402-0892**

**fax: 301-210-4685**

**[sarah.nemser@fda.hhs.gov](mailto:sarah.nemser@fda.hhs.gov)**

---

**From:** Ceric, Olgica

**Sent:** Wednesday, October 19, 2016 2:09 PM

**To:** Freeman, Lisa

**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah

**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Variety

If **B4** can test blood, that would be the fastest way to get it to the lab. We will reimburse you for the charges, but we will need an estimate first, in order to prepare purchase order.

As for the food, we can test it at our network lab in Ohio, I'll send you instructions in a separate email.

We will reimburse you for the shipping charges. You'll just need to submit invoice ( one for blood testing and shipping), once you ship the sample.

***Olgica Ceric, DVM, PhD***

Veterinary Medical Officer

U.S. Food & Drug Administration

Center for Veterinary Medicine

Office of Research

Veterinary Laboratory Investigation and Response Network (Vet-LIRN)

8401 Muirkirk Road, G704

Laurel, Maryland 20708

tel: 240-402-5419

fax: 301-210-4685

**e-mail: [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)**

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

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]

**Sent:** Wednesday, October 19, 2016 1:43 PM

**To:** Ceric, Olgica

**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah

**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Hi all

We just got a blood sample from the dog (just so happened she was coming in for a recheck today so I was fortunate to catch her primary clinician before the dog left). We typically submit our blood cultures to [B4] I'm on the phone right now to see if they can test for Listeria. If not, can you tell me where to submit?

We do not have the ability to easily test the food for Listeria so if you could send details on that as well, I'd appreciate it

The owner did give permission to get records sent. I'm traveling through Friday but can get those submitted to you on Monday

I'll get someone to submit samples as soon as you provide info on labs, etc

Thanks

Lisa

---

**From:** Ceric, Olgica [<mailto:Olgica.Ceric@fda.hhs.gov>]

**Sent:** Wednesday, October 19, 2016 10:10 AM

**To:** Freeman, Lisa

**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah

**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Dr. Freeman,

Thank you for the prompt response.

Do you have in-house lab available for testing the food? If so, please let me know the testing estimate.

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Regarding Listeria, perhaps you could ask the owner if they are willing to submit blood for testing when you contact them regarding medical records? I understand your concerns regarding antibiotics, but we'd like to do it just in case.

Please reply to all when responding, my responses might be delayed since I'll be on leave part day by the end of the week.

Thank you,

***Olgica Ceric, DVM, PhD***

Veterinary Medical Officer

U.S. Food & Drug Administration

Center for Veterinary Medicine

Office of Research

Veterinary Laboratory Investigation and Response Network (Vet-LIRN)

8401 Muirkirk Road, G704

Laurel, Maryland 20708

tel: 240-402-5419

fax: 301-210-4685

**e-mail: [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)**

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

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]

**Sent:** Tuesday, October 18, 2016 7:28 AM

**To:** Ceric, Olgica

**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Olgica

We're happy to get permission from owners for medical records and I can get food submitted for testing next week

My question is on the blood culture. I'm not sure when the dog will be coming back in (she was discharged late last week) and am wondering if Listeria could be cultured if dog has been on antibiotics for >1 week

Thanks

Lisa

---

**From:** Ceric, Olgica [<mailto:Olgica.Ceric@fda.hhs.gov>]

**Sent:** Monday, October 17, 2016 1:03 PM

**To:** Freeman, Lisa

**Cc:** Nemser, Sarah; Jones, Jennifer L

**Subject:** FDA case follow up-EON-285648-Freeman-Nature's Variety

Good morning Dr. Freeman,

We received your consumer complaint and would like to request the following:

- a copy of full medical records for the dog
- blood culture for Listeria
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FDA will pay for the testing.

We have a network of veterinary diagnostic laboratories and could send samples to one of them, unless your lab has the capabilities?

**Please** email (preferred) or fax (301) 210-4685 us the **medical records**. Please send the **full medical history**-not just for this illness event.

Attached are a copy of our network procedures. They describe how veterinarians help with our case investigations. I also attached an owner friendly version.

Sincerely,

***Olgica Ceric, DVM, PhD***

Veterinary Medical Officer

U.S. Food & Drug Administration

Center for Veterinary Medicine

Office of Research

Veterinary Laboratory Investigation and Response Network (Vet-LIRN)

8401 Muirkirk Road, G704

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tel: 240-402-5419

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**e-mail: [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)**

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



---

**From:** Jones, Jennifer L </O=FDA/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JENNIFER.JONESAA8>  
**To:** Freeman, Lisa  
**Sent:** 11/1/2016 7:08:43 PM  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Good afternoon Lisa,

My accountant asked if you're able to be reimbursed by credit (VISA) or if a check was needed?

Thank you,  
Jennifer

Jennifer Jones, DVM  
Veterinary Medical Officer



---

**From:** Jones, Jennifer L  
**Sent:** Monday, October 31, 2016 7:32 AM  
**To:** 'Freeman, Lisa'  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Sounds great! Thank you, Lisa.  
Please forward me the ICSR number (confirmation number) when you submit the report. It will help us find the case after it's been submitted.

Jennifer Jones, DVM  
Veterinary Medical Officer



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**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 28, 2016 3:36 PM  
**To:** Jones, Jennifer L  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Thanks very much.  
I'm going to have another one for you. 3 unrelated dogs in a family who've developed dilated cardiomyopathy. Supposedly on a commercial vegan diet and then small company;s dog food. Once I get more details, I'll submit that one.

Best,  
Lisa  
Lisa M. Freeman, DVM, PhD, DACVN  
Professor  
Cummings School of Veterinary Medicine  
Tufts University

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

**Sent:** Friday, October 28, 2016 3:07 PM  
**To:** Freeman, Lisa  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Good afternoon Lisa,

Thank you for sending the invoices. I'll submit them for repayment.  
I'll be on the look-out for the Medical records and the final blood culture result.  
We will send the results of the food testing as soon as they are received. As a head's up, they usually take a few weeks.

Thank you again for your help with the investigation.  
Kind regards and enjoy your weekend,  
Jen

Jennifer Jones, DVM  
Veterinary Medical Officer



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**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 28, 2016 10:01 AM  
**To:** Jones, Jennifer L  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Jennifer  
Please see attached for an invoice, as well as the receipt for shipping and the invoice that includes the blood culture.  
So far, the blood culture is negative but I'll send the final report when it's available.  
We're getting written permission for release of records from the owner and will send those asap  
Will I be updated on the results of the food analysis? That will be helpful information for treating this dog since she's not doing especially well  
Thanks  
Lisa

Lisa M. Freeman, DVM, PhD, DACVN  
Professor  
Cummings School of Veterinary Medicine  
Tufts University

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**From:** Jones, Jennifer L [<mailto:Jennifer.Jones@fda.hhs.gov>]  
**Sent:** Friday, October 21, 2016 11:15 AM  
**To:** Freeman, Lisa  
**Cc:** Nemser, Sarah; Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Good morning Dr. Freeman,

Thank you for the update. We will look for the medical records to arrive.

In the meantime, please move forward with the Listeria blood culture at **B4**. Please send a copy of the results when finished and an invoice for the blood collection/shipping/Listeria testing.

For the open product testing, an instruction document and pre-filled out laboratory submission forms are attached. Please include those in the shipment. After shipping, please send an invoice for the shipping materials and shipping.

Please email or call with any questions.  
Thank you kindly,  
Jennifer

Jennifer Jones, DVM  
Veterinary Medical Officer

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**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Friday, October 21, 2016 10:24 AM  
**To:** Nemser, Sarah; Ceric, Olgica  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Sarah  
I got information from Dr. Ceric on submitting a blood culture for Listeria but not any information on submitting the food for analysis.  
I'm traveling this week but can submit an estimate for blood testing on Monday  
Kind regards,  
Lisa

---

**From:** Nemser, Sarah [<mailto:Sarah.Nemser@fda.hhs.gov>]  
**Sent:** Friday, October 21, 2016 10:22 AM  
**To:** Ceric, Olgica; Freeman, Lisa  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dr. Freeman,

I wanted to follow up on this case.

B6

In her email below she stated that she would provide information on sending the food to the Ohio laboratory. Please let us know if that information was provided, if not we can follow up.

Please also send along an estimate for the blood testing so that we can prepare a purchase order.

Thank you very much for your assistance on this case.

Sarah

**Sarah Nemser M.S.**

**Vet-LIRN Network Coordinator**

**tel: 240-402-0892**

**fax: 301-210-4685**

**[sarah.nemser@fda.hhs.gov](mailto:sarah.nemser@fda.hhs.gov)**

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**From:** Ceric, Olgica  
**Sent:** Wednesday, October 19, 2016 2:09 PM

**To:** Freeman, Lisa  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

If **B4** can test blood, that would be the fastest way to get it to the lab. We will reimburse you for the charges, but we will need an estimate first, in order to prepare purchase order.

As for the food, we can test it at our network lab in Ohio, I'll send you instructions in a separate email.

We will reimburse you for the shipping charges. You'll just need to submit invoice ( one for blood testing and shipping), once you ship the sample.

**Olgica Ceric, DVM, PhD**  
Veterinary Medical Officer  
U.S. Food & Drug Administration  
Center for Veterinary Medicine  
Office of Research  
Veterinary Laboratory Investigation and Response Network (Vet-LIRN)  
8401 Muirkirk Road, G704  
Laurel, Maryland 20708  
tel: 240-402-5419  
fax: 301-210-4685  
**e-mail:** [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)  
Web: <http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>

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**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Wednesday, October 19, 2016 1:43 PM  
**To:** Ceric, Olgica  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Hi all  
We just got a blood sample from the dog (just so happened she was coming in for a recheck today so I was fortunate to catch her primary clinician before the dog left). We typically submit our blood cultures to **B4** I'm on the phone right now to see if they can test for Listeria. If not, can you tell me where to submit?

We do not have the ability to easily test the food for Listeria so if you could send details on that as well, I'd appreciate it

The owner did give permission to get records sent. I'm traveling through Friday but can get those submitted to you on Monday

I'll get someone to submit samples as soon as you provide info on labs, etc  
Thanks  
Lisa

---

**From:** Ceric, Olgica [<mailto:Olgica.Ceric@fda.hhs.gov>]  
**Sent:** Wednesday, October 19, 2016 10:10 AM  
**To:** Freeman, Lisa  
**Cc:** Reimschuessel, Renate; Jones, Jennifer L; Nemser, Sarah  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Dr. Freeman,

Thank you for the prompt response.

Do you have in-house lab available for testing the food? If so, please let me know the testing estimate.

Once you get approval from the owner to release medical records, please email them, or fax to: 301-210-4685.

Regarding Listeria, perhaps you could ask the owner if they are willing to submit blood for testing when you contact them regarding medical records? I understand your concerns regarding antibiotics, but we'd like to do it just in case.

Please reply to all when responding, my responses might be delayed since I'll be on leave part day by the end of the week.

Thank you,

**Olgica Ceric, DVM, PhD**  
Veterinary Medical Officer  
U.S. Food & Drug Administration  
Center for Veterinary Medicine  
Office of Research  
Veterinary Laboratory Investigation and Response Network (Vet-LIRN)  
8401 Muirkirk Road, G704  
Laurel, Maryland 20708  
tel: 240-402-5419  
fax: 301-210-4685  
**e-mail: [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)**  
Web: <http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>

---

**From:** Freeman, Lisa [<mailto:Lisa.Freeman@tufts.edu>]  
**Sent:** Tuesday, October 18, 2016 7:28 AM  
**To:** Ceric, Olgica  
**Subject:** RE: FDA case follow up-EON-285648-Freeman-Nature's Vareity

Dear Olgica

We're happy to get permission from owners for medical records and I can get food submitted for testing next week

My question is on the blood culture. I'm not sure when the dog will be coming back in (she was discharged late last week) and am wondering if Listeria could be cultured if dog has been on antibiotics for >1 week

Thanks

Lisa

---

**From:** Ceric, Olgica [<mailto:Olgica.Ceric@fda.hhs.gov>]  
**Sent:** Monday, October 17, 2016 1:03 PM  
**To:** Freeman, Lisa  
**Cc:** Nemser, Sarah; Jones, Jennifer L  
**Subject:** FDA case follow up-EON-285648-Freeman-Nature's Vareity

Good morning Dr. Freeman,

We received your consumer complaint and would like to request the following:

- a copy of full medical records for the dog
- blood culture for Listeria
- open bag testing for Listeria and Salmonella

FDA will pay for the testing.

We have a network of veterinary diagnostic laboratories and could send samples to one of them, unless your lab has the capabilities?

**Please** email (preferred) or fax (301) 210-4685 us the **medical records**. Please send the **full medical history**-not just for this illness event.

Attached are a copy of our network procedures. They describe how veterinarians help with our case investigations. I also attached an owner friendly version.

Sincerely,

**Olgica Ceric, DVM, PhD**

Veterinary Medical Officer  
U.S. Food & Drug Administration  
Center for Veterinary Medicine  
Office of Research  
Veterinary Laboratory Investigation and Response Network (Vet-LIRN)  
8401 Muirkirk Road, G704  
Laurel, Maryland 20708  
tel: 240-402-5419  
fax: 301-210-4685  
**e-mail: [olgica.ceric@fda.hhs.gov](mailto:olgica.ceric@fda.hhs.gov)**  
Web: <http://www.fda.gov/AnimalVeterinary/ScienceResearch/ucm247334.htm>

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**From:** [REDACTED] **B6**  
**To:** Jones, Jennifer L  
**Sent:** 5/18/2018 5:43:58 PM  
**Subject:** Diet Breakdown by brand and breed  
**Attachments:** Diet Breakdown by Brand.xlsx; Diet Breakdown by Breed.xlsx

**From:** Jones, Jennifer L </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0F6CA12EAA9348959A4CBB1E829AF244-JENNIFER.JO>  
**To:** Palmer, Lee Anne  
**CC:** Carey, Lauren  
**Sent:** 7/19/2019 5:04:40 PM  
**Subject:** RE: presentations!  
**Attachments:** FDA DCM presentation to AVMA meeting\_for clearance-jj.pptx; JJones-DCM Updates-AVMA-v2.pptx

Here you go! Please also share my slides with Martine

**B5**

As I mentioned,

**B5**

**B5**

For your presentation

**B5**

**B5**

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



**From:** Palmer, Lee Anne  
**Sent:** Friday, July 19, 2019 9:53 AM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Cc:** Carey, Lauren <Lauren.Carey@fda.hhs.gov>  
**Subject:** presentations!

Hi there – thanks for today’s meetings. I made edits and sliced a few and here’s the pre-clearance version of ours.

Thanks!

Lee Anne

**Lee Anne M. Palmer, VMD, MPH**  
Acting Director, Division of Veterinary Product Safety

**Center for Veterinary Medicine**  
**Office of Surveillance and Compliance**  
**U.S. Food and Drug Administration**  
Tel: 240-402-5767  
[Leeanne.palmer@fda.hhs.gov](mailto:Leeanne.palmer@fda.hhs.gov)







**From:** Palmer, Lee Anne </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=CF7C8BD53B6C45A39318A596ACEA7C53-LPALMER>  
**To:** Jones, Jennifer L  
**CC:** Rotstein, David; Carey, Lauren  
**Sent:** 4/12/2018 5:39:08 PM  
**Subject:** FW: Zignature Kangaroo Formula [B6] - EON-351031  
**Attachments:** 2045676-report.pdf

Hi Jen – were you expecting this one? Thx - LA

**From:** PFR Event [mailto:pfreventcreation@fda.hhs.gov]  
**Sent:** Thursday, April 12, 2018 1:36 PM  
**To:** Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; [B6]  
**Subject:** Zignature Kangaroo Formula [B6] - EON-351031

A PFR Report has been received and PFR Event [EON-351031] has been created in the EON System.

A "PDF" report by name "2045676-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report:

**EON Key:** EON-351031

**ICSR #:** 2045676

**EON Title:** PFR Event created for Zignature Kangaroo Formula; 2045676

<b>AE Date</b>	02/22/2018	<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>	Stable
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	6 Years		
<b>District Involved</b>	PFR [B6] DO		

**Product information**

**Individual Case Safety Report Number:** 2045676

**Product Group:** Pet Food

**Product Name:** Zignature Kangaroo Formula

**Description:** Feb 23, 2018 Patient presented to the cardiology service at [B6] [B6] for tachypnea. He was diagnosed with dilated cardiomyopathy and left side congestive heart failure. Whole blood taurine level was [B6] (ref 200-350, critical level <150). At the time, patient consuming Zignature Kangaroo Formula and was advised to change.

**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
Zignature Kangaroo Formula		

**Sender information**

**B6**

USA

**Owner information**

**B6**

USA

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

<https://eon.fda.gov/eon//browse/EON-351031>

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=367419>

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**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** Palmer, Lee Anne  
**CC:** Rotstein, David; Carey, Lauren  
**Sent:** 4/13/2018 10:39:16 AM  
**Subject:** RE: Zignature Kangaroo Formula: [B6] - EON-351031

Thanks, Lee Anne. No, I wasn't expecting it, but I can start with MRx!

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



**From:** Palmer, Lee Anne  
**Sent:** Thursday, April 12, 2018 1:39 PM  
**To:** Jones, Jennifer L <Jennifer.Jones@fda.hhs.gov>  
**Cc:** Rotstein, David <David.Rotstein@fda.hhs.gov>; Carey, Lauren <Lauren.Carey@fda.hhs.gov>  
**Subject:** FW: Zignature Kangaroo Formula: [B6] - EON-351031

Hi Jen – were you expecting this one? Thx - LA

**From:** PFR Event [<mailto:pfpreventcreation@fda.hhs.gov>]  
**Sent:** Thursday, April 12, 2018 1:36 PM  
**To:** Cleary, Michael \* <Michael.Cleary@fda.hhs.gov>; HQ Pet Food Report Notification <HQPetFoodReportNotification@fda.hhs.gov>; [B6]  
**Subject:** Zignature Kangaroo Formula: [B6] - EON-351031

A PFR Report has been received and PFR Event [EON-351031] has been created in the EON System.

A "PDF" report by name "2045676-report.pdf" is attached to this email notification for your reference.

Below is the summary of the report:

**EON Key:** EON-351031

**ICSR #:** 2045676

**EON Title:** PFR Event created for Zignature Kangaroo Formula; 2045676

<b>AE Date</b>	02/22/2018	<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>	Stable
<b>Breed</b>	Retriever - Golden		
<b>Age</b>	6 Years		
<b>District Involved</b>	PFR [B6] DO		

**Product information**

**Individual Case Safety Report Number:** 2045676

**Product Group:** Pet Food

**Product Name:** Zignature Kangaroo Formula

**Description:** Feb 23, 2018 Patient presented to the cardiology service at [B6]

[B6] for tachypnea. He was diagnosed with dilated cardiomyopathy and left side congestive heart failure. Whole blood taurine level was [B6] (ref 200-350, critical level <150). At the time, patient consuming Zignature Kangaroo Formula and was advised to change.

**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
Zignature Kangaroo Formula		

**Sender information**

[B6]

USA

**Owner information**

[B6]

USA

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

<https://eon.fda.gov/eon//browse/EON-351031>

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=367419>

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**From:** Jones, Jennifer L </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f6ca12eaa9348959a4cbb1e829af244-Jennifer.Jo>  
**To:** [REDACTED] B6  
**Sent:** 4/19/2018 11:41:25 AM  
**Subject:** FDA case investigation for [REDACTED] B6 (800.261)  
**Attachments:** 02-Vet-LIRN-NetworkProceduresVets-12.22.2015.pdf; 03-Vet-LIRN-NetworkProceduresOwners-12.22.2015.pdf

Good morning [REDACTED] B6

Thank you for submitting your consumer complaint to FDA. I'm sorry to hear about [REDACTED] B6 illness. As part of our investigation, we'd like to request:

- **Full Medical Records**

- o Please email (preferred) or fax (301-210-4685) a copy of [REDACTED] B6 entire medical history (not just this event).

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

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

Thank you kindly,  
Dr. Jones

**Jennifer L. A. Jones, DVM**

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

