

Client: **B6**  
Patient:

Chem 21 - 5/8/2019



Tufts Cummings School Of Veterinary Medicine  
200 Westboro Road  
North Grafton, MA 01536

DUPLICATE

Name/DOB: <b>B6</b>	Provider: <b>B6</b>
Patient ID: <b>B6</b>	Order Location: <b>B6</b> Investigation Info
Phone number:	Sample ID: 1905080053
Collection Date: 5/8/2019 12:31 PM	Sex: SF
Approval date: 5/8/2019 1:07 PM	Age: 3
	Species: Canine
	Breed:

Research Chemistry Profile - Small Animal (Cobas)

	Ref. Range/Females
DNOYES	
Glucose	67-135 mg/dL
Urea	8-30 mg/dL
Creatinine	0.6-2.0 mg/dL
Phosphorus	2.6-7.2 mg/dL
Calcium 2	9.4-11.3 mg/dL
Magnesium 2+	1.8-3.0 mEq/L
Total Protein	5.5-7.8 g/dL
Albumin	2.8-4.0 g/dL
Globulins	2.3-4.2 g/dL
A/G Ratio	0.7-1.0
Sodium	140-150 mEq/L
Chloride	106-116 mEq/L
Potassium	3.7-5.4 mEq/L
tCO2(Bicarb)	14-28 mEq/L
ACAP	8.0-19.0
NA/K	29-40
Total Bilirubin	0.10-0.30 mg/dL
Alkaline Phosphatase	12-127 U/L
GGT	0-10 U/L
ALT	14-36 U/L
AST	9-54 U/L
Creatine Kinase	22-422 U/L
Cholesterol	82-355 mg/dL
Triglycerides	30-338 mg/dl
Amylase	409-1250 U/L
Osmolality (calculated)	291-315 mmol/L

**B6**

Sample ID: 19050800534  
END OF REPORT (Final)

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

Client:  
Patient:

**B6**

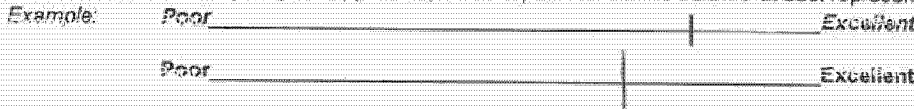
Diet bx 5/8/2019

# **B6**

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

Pet's name: **B6** Owner's name: **S** Today's date: **5/8/19**

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)



2. Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)

- Eats about the same amount as usual     Eats less than usual     Eats more than usual  
 Seems to prefer different foods than usual     Other \_\_\_\_\_

3. Over the last few weeks, has your pet (check one)  
 Lost weight     Gained weight     Stayed about the same weight     Don't know

1. Please list below ALL pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats and that you have fed in the last 2 years.

Please provide enough detail that we could go to the store and buy the exact same food - examples are shown in the table

Food (include specific product and flavor)	Form	Amount	How often?	Dates fed
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2016-present
85% lean hamburger	microwaved	3 oz	1x/week	June-Aug 2018
Pupperoni original beef flavor	treat	1/2	1x/day	Sept 2018-present
Rawhide	treat	8 inch twist	1x/week	Dec 2018-present
Royal Canin Early Cardiac	dry	~ 1/2 cup	2x/day	Feb 2019-present

\*Any additional diet information can be listed on the back of this sheet

2. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)?  Yes  No If yes, please list which ones and give brands and amounts:

	Brand/Concentration	Amount per day
Taurine <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Nova / 500	2x
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**

Ilexx NT-proBNP 5/8/2019

ILEXX Reference Laboratories

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

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: ENGLISH\_BULLDOG  
Gender: FEMALE S/PAYED  
Age: 0Y

Date: 05/08/2019  
Requisition #: 437321  
Accession #: **B6**  
Ordered by: **B6**

IDEXX VetConnect 1-888-453-3667  
TUFTS UNIVERSITY  
200 WESTBORD RD  
NORTH GRAFTON, Massachusetts 01536  
508-839-3395  
Account: **B6**

CARDIOPET proBNP - CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP - CANINE	<b>B6</b>	0-300 pmol/L		HIGH	<b>B6</b>

Comments

1 **B6**

Please note: complete interpretive comments for all concentrations of CardioPET proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: B6  
Patient:

Troponin 5/31/2019



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



Website User ID: B6 @tufts.edu

GI Lab Assigned Clinic ID: 20523

B6  
Tufts Cummings School of Vet Med - Cardiology/Nutrition  
200 Westboro Road  
North Grafton, MA 01536  
USA

Phone: 508 887 4806  
Fax:  
Animal Name:  
Owner Name: B6  
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	<span style="border: 1px dashed black; padding: 2px;">B6</span>	≤0.06	05/31/19

Interpretation: B6

B6

Comments:

GI Lab Contact Information

Phone: (979) 862-2661  
Fax: (979) 862-2864

Email: gilab@cvm.tamu.edu  
vetmed.tamu.edu/gilab

Client:

Address:

**B6**

**All Medical Records**

Patient:

**B6**

Breed:

English Bulldog

DOB:

**B6**

Species: Canine

Sex: Male

(Neutered)

Home Phone:

**B6**

Work Phone: ( ) -

Cell Phone:

**B6**

**Referring Information**

**B6**

Client:

Patient:

**B6**

**Initial Complaint:**

**Initial Complaint:**

**Initial Complaint:**

**Initial Complaint:**

Client:  
Patient:

**B6**

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**Initial Complaint:**

Scanned Record

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**Initial Complaint:**

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

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

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**Disposition/Recommendations**

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Client:  
Patient:

**B6**

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Client: **B6**  
Patient:

**Cummings**  
**Veterinary Medical Center**  
AT TUFTS UNIVERSITY

**Foster Hospital for Small Animals**

55 Willard Street  
North Grafton, MA 01536  
(508) 839-5395

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

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

**Lab Results Report**

Accession ID:			
Test	Results	Reference Range	Units



4/34

**B6**

Printed Monday, February 25, 2019



Client: **B6**  
Patient:

**IDEXX Hematology 1/24/19**



**B6**

PET OWNER: **B6**

SPECIES: Canine

BREED:

SEX: Male

AGE: 8 Years

PATIENT ID: **B6**

ACCOUNT #: **B6**

ATTENDING VET: **B6**

LAB ID: 2302815220

ORDER ID: 38459535

COLLECTION DATE: 1/23/19

DATE OF RECEIPT: 1/24/19

DATE OF RESULT: 1/24/19

**B6**

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

**Hematology**

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

3/2/17

TEST	RESULT	REFERENCE VALUE
RBC	<b>B6</b>	5.39 - 8.7 M/μL
Hematocrit		38.3 - 56.5 %
Hemoglobin		13.4 - 20.7 g/dL
MCV		59 - 76 fL
MCH		21.9 - 26.1 pg
MCHC		32.6 - 39.2 g/dL
% Reticulocyte		%
Reticulocytes		10 - 110 K/μL
Reticulocyte Hemoglobin		22.3 - 29.6 pg
WBC		4.9 - 17.6 K/μL
% Neutrophils		%
% Lymphocytes		%
% Monocytes		%
% Eosinophils		%
% Basophils		%
Neutrophils		2.94 - 12.67 K/μL
Lymphocytes		1.06 - 4.95 K/μL
Monocytes		0.13 - 1.15 K/μL
Eosinophils		0.07 - 1.49 K/μL
Basophils		0 - 0.1 K/μL
Platelets	143 - 448 K/μL	
Remarks	<b>B6</b>	Slide-mounted microscopically. SLIDE REV...

Client: **B6**  
Patient:

**IDEXX Hematology 1/24/19**



**B6**

PET OWNER **B6**

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

LAB ID: 2302815220

**Chemistry**

1/24/19 (Order Received)  
1/24/19 11:06 AM (Last Updated)

3/2/17

TEST	RESULT	REFERENCE VALUE
Glucose		63 - 114 mg/dL
IDEXX SDMA		0 - 14 µg/dL
Creatinine		0.5 - 1.5 mg/dL
BUN		9 - 31 mg/dL
BUN: Creatinine Ratio		
Phosphorus		2.5 - 6.1 mg/dL
Calcium		8.4 - 11.8 mg/dL
Sodium		142 - 152 mmol/L
Potassium		4.0 - 5.4 mmol/L
Na: K Ratio		28 - 37
Chloride		108 - 119 mmol/L
TCO2 (Bicarbonate)		13 - 27 mmol/L
Anion Gap		11 - 26 mmol/L
Total Protein		5.6 - 7.5 g/dL
Albumin		2.7 - 3.9 g/dL
Globulin		2.4 - 4.0 g/dL
Albumin: Globulin Ratio		0.7 - 1.5
ALT		18 - 121 U/L
AST		16 - 55 U/L
ALP		5 - 160 U/L
GGT		0 - 13 U/L
Bilirubin - Total		0.0 - 0.3 mg/dL
Bilirubin - Unconjugated		0.0 - 0.2 mg/dL
Bilirubin - Conjugated		0.0 - 0.1 mg/dL
Cholesterol		131 - 345 mg/dL
Amylase		337 - 1,469 U/L
Urease		138 - 755 U/L
Creatine Kinase		10 - 200 U/L

**B6**

**B6**

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

**IDEXX Hematology 1/24/19**



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

**Chemistry (continued)**

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

**B6**

**Endocrinology**

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

3/2/17

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

**B6**

**Serology**

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

Heartworm  
Antigen **B6**

Client: **B6**  
Patient:

**IDEXX Hematology 1/24/19**



**B6**

PET OWNER **B6**

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

LAB ID: **2302815220**

**Serology (continued)**

TEST

Ehrlichia canis /  
ewingii

Lyme (Borrelia  
burgdorferi)

Anaplasma  
phagocytophilum  
/ platys

RESULT

**B6**

**B6**

**Other**



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

TEST

More Information  
Needed

RESULT

**B6**

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

cbc and profile 2/1/19

**Cummings School of Veterinary Medicine**

Clinical Pathology Laboratory  
 200 Westboro Road  
 North Grafton, MA 01536

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

TEST NAME	IN RANGE	RESULT	OUT OF RANGE	RANGE	UNITS	REFERENCE RANGE
<b>CBC, Comprehensive, Sm Animal (Research)</b>						CSTCYR
WBC (ADVIA)	<b>B6</b>			<b>B6</b>	K/uL	4.40-15.10
RB C (Advia)					M/uL	5.80-8.50
Hemoglobin (ADVIA)					g/dL	13.3-20.5
Hematocrit (Advia)					%	39-55
MCV (ADVIA)					fL	64.5-77.5
MCH (ADVIA)					pg	21.3-25.9
CHCM					g/dl	
MCHC (ADVIA)					g/dL	31.9-34.3
RDW (ADVIA)						11.9-15.2
Platelet Count (Advia)			<b>B6</b>			K/uL
Mean Platelet Volume (Advia)				fL	8.29-13.20	
02/01/19 12:12 PM	<b>B6</b>					
Platelet Crit				%		0.129-0.403
02/01/19 12:12 PM	<b>B6</b>					
PDW				%		
Reticulocyte Count (Advia)	<b>B6</b>				%	0.20-1.60
Absolute Reticulocyte Count (Advia)				K/uL		14.7-113.7
CHr				pg		
MCVr	<b>B6</b>				fL	
Comments (Hematology)	<b>B6</b>					

TEST NAME	IN RANGE	RESULT	OUT OF RANGE	RANGE	UNITS	REFERENCE RANGE
<b>Microscopic Exam of Blood Smear (Advia)</b>						CSTCYR
Seg Neuts (%)	<b>B6</b>			<b>B6</b>	%	43-86
Lymphocytes (%)					%	7-17
Monocytes (%)					%	1-15
Eosinophils (%)					%	0-16
Seg Neutrophils (Abs) Advia					K/uL	2.800-11.500
Lymphs (Abs) Advia					K/uL	1.00-4.80
Mono (Abs) Advia					K/uL	0.10-1.50
Eosinophils (Abs)					K/uL	0.00-1.40

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

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

Client: **B6**  
 Patient:

cbc and profile 2/1/19

**Cummings School of Veterinary Medicine**

Clinical Pathology Laboratory  
 200 Westboro Road  
 North Grafton, MA 01536

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

TEST NAME	IN RANGE	RESULT	OUT OF RANGE	RANGE	UNITS	REFERENCE RANGE
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<b>Microscopic Exam of Blood Smear (Advia) (cont'd)</b>						CSTCYR
Advia						
WBC Morphology		<b>B6</b>				
RBC Morphology						

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

Glucose				mg/dL	67-135
Urea				mg/dL	8-30
Creatinine				mg/dL	0.6-2.0
Phosphorus				mg/dL	2.6-7.2
Calcium 2				mg/dL	9.4-11.3
Magnesium 2+				mEq/L	1.8-3.0
Total Protein		<b>B6</b>		g/dL	5.5-7.8
Albumin				g/dL	2.8-4.0
Globulins				g/dL	2.3-4.2
A/G Ratio					0.7-1.6
Sodium				mEq/L	140-150
Chloride				mEq/L	106-116
Potassium	<b>B6</b>			mEq/L	3.7-5.4
tCO2(Bicarb)				mEq/L	14-28
AGAP					8.0-19.0
NA/K					29-40
Total Bilirubin				mg/dL	0.10-0.30
Alkaline Phosphatase				U/L	12-127
GGT				U/L	0-10
ALT				U/L	14-86
AST				U/L	9-54
Creatine Kinase				U/L	22-422
Cholesterol				mg/dL	82-355
Triglycerides				mg/dl	30-338
Amylase				U/L	409-1250
Osmolality (calculated)		<b>B6</b>		mmol/L	291-315

Sample ID: 19020101022  
 END OF REPORT (Final)

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

Client:  
Patient:

**B6**

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

IDEXX Reference Laboratories

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

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: ENGLISH\_BULLDOG  
Gender: MALE NEUTERED  
Age: 0Y

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

IDEXX VetConnect 1-888-433-9967

TUFTS UNIVERSITY  
200 WESTBORO RD  
NORTH GRAFTON, Massachusetts 01536  
508-339-5395

Account: **B6**

**CARDIOPET proBNP - CANINE**

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP - CANINE	<b>B6</b>	0-980 pmol/L		HIGH	<b>B6</b>

**Comments**

**B6**

Please note: complete interpretive comments for all concentrations of CardioPET proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: **B6**  
Patient:

**CBC/CHEM**



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

**DUPLICATE**

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

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

	Ref. Range/Males
CSTCYR	
WBC (ADVIA)	4.40-15.10 K/uL
RBC (Advia)	5.80-8.50 M/uL
Hemoglobin (ADVIA)	13.3-20.5 g/dL
Hematocrit (Advia)	39-55 %
MCV (ADVIA)	64.5-77.5 fL
MCH (ADVIA)	21.3-25.9 pg
CHCM	
MCHC (ADVIA)	31.9-34.3 g/dL
RDW (ADVIA)	11.9-15.2
Platelet Count (Advia)	173-486 K/uL
Mean Platelet Volume (Advia)	8.29-13.20 fl

**B6**

02/01/19 12:12 PM		
Platelet Crit	0.129-0.403 %	
02/01/19 12:12 PM		
PDW	0.20-1.60 %	
Reticulocyte Count (Advia)	14.7-113.7 K/uL	
Absolute Reticulocyte Count (Advia)		
CHr		
MCVr		
Comments (Hematology)		

**B6**

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

	Ref. Range/Males
CSTCYR	
Seg Neuts (%)	43-86 %
Lymphocytes (%)	7-47 %
Monocytes (%)	1-15 %
Eosinophils (%)	0-16 %
Seg Neutrophils (Abs)	2.800-11.500 K/uL
Advia	
Lymphs (Abs) Advia	1.00-4.80 K uL
Mono (Abs) Advia	0.10-1.50 K uL
Eosinophils (Abs) Advia	0.00-1.40 K uL
WBC Morphology	
RBC Morphology	

**B6**

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

Sample ID: 19020101021  
This report continues... (Final)

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



Client: **B6**  
Patient:

**CBC/CHEM**



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

**DUPLICATE**

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

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

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

**B6**

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

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

Client:  
Patient:

**B6**

**Taurine level**

**B5**

**B6**

**Amino Acid Laboratory Sample Submission Form**

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

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

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

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

27/1/2019 <sup>post</sup> Race  
SHIP w ICE PACKS, TAURINE  
PANEL  
Lithium Heparin  
*RUSH*

Veterinarian Contact: **B6**

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

Address: 200 Westboro Road, North Grafton, MA 01536

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

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

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

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

Patient Name: **B6** Species: CANINE

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

Current Diet: Wellness Core

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

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

Taurine Results (lab use only)

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

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

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

Client: B6  
 Patient: B6

**Diet history 2/1/19**

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

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

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)  
 Example: Poor ----- | ----- Excellent  
 Poor ----- | ----- Excellent

2. Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)  
 Eats about the same amount as usual     Eats less than usual     Eats more than usual  
 Seems to prefer different foods than usual     Other \_\_\_\_\_

3. Over the last few weeks, has your pet (check one)  
 Lost weight     Gained weight     Stayed about the same weight     Don't know

4. Please list below ALL pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats. Please include the brand, specific product, and flavor so we know exactly what you pet is eating.

Examples are shown in the table – please provide enough detail that we could go to the store and buy the exact same food.

Food (include specific product and flavor)	Form	Amount	How often?	Fed since
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2018
85% lean hamburger	microwaved	3 oz	1x/week	Jan 2015
Pupperoni original beef flavor	treat	1/2	1x/day	Aug 2015
Rawhide	treat	6 inch twist	1x/week	Dec 2015
Wellness Core Canned chicken	wet	4 oz	1x/day	Dec 2015
Wellness Core fish	dry	1/4 cup	2x/day	Dec 2015
Wellness Core	treat	3 PCS	1x/day	11
(See <span style="border: 1px dashed black; padding: 2px;">B6</span> copy for exact brands/formulas)				

\*Any additional diet information can be listed on the back of this sheet

5. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)?     Yes     No    If yes, please list which ones and give brands and amounts:

	Brand/Concentration	Amount per day
Taurine	<input type="checkbox"/> Yes <input 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
_____	_____	_____
_____	_____	_____
_____	_____	_____

6. How do you administer pills to your pet?  
 I do not give any medications  
 I put them directly in my pet's mouth without food  
 I put them in my pet's dog/cat food  
 I put them in a Pill Pocket or similar product  
 I put them in foods (list foods): \_\_\_\_\_

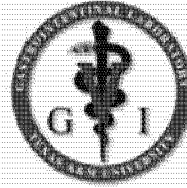
CHANGING DIET TO ROYAL CANIN BARLEY CRAB

Client: **B6**  
Patient:

**Troponin 2/1/19**



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



Website User ID: clinpath@tufts.edu

GI Lab Assigned Clinic ID: **B6**

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: Feb 12, 2019

GI Lab Accession: **B6**

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

**B6**

Comments:

Client:  
Patient:

**B6**

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**Troponin 2/1/19**

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**Important  
Notices:**

**Internal Medicine Conference**

**Join us for a unique continuing education event in Phuket, Thailand Oct 7th - 11th, 2019. For details see <http://texasimconference.tamu.edu>**

**Ongoing studies**

**Cobalamin Supplementation Study-** Dogs and cats with cobalamin deficiency with normal PLI, and either normal or low (consistent with EPI) TLI to compare the efficacy of oral vs parenteral cobalamin supplementation. Contact Dr. Chang at [chchang@cvm.tamu.edu](mailto:chchang@cvm.tamu.edu) for further information.

**Chronic Pancreatitis with Uncontrolled Diabetes Mellitus-** Seeking dogs with chronic pancreatitis and uncontrolled diabetes mellitus for enrollment into a drug trial (medication provided at no cost). Contact Dr. Sue Yee Lim at [slim@cvm.tamu.edu](mailto:slim@cvm.tamu.edu) or Dr. Sina Marsilio at [smarsilio@cvm.tamu.edu](mailto:smarsilio@cvm.tamu.edu)

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

**Chronic enteropathies in dogs-** Please fill out this brief form <http://tinyurl.com/dtd-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. Yamkata for further information at [pyamkata@cvm.tamu.edu](mailto:pyamkata@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.

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**GI Lab Contact Information**

Phone: (979) 862-2861  
Fax: (979) 862-2864

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

Client: **B6**  
Patient:

**Vitals Results**

2/1/2019 11:00:04 AM Weight (kg)

**Patient History**

01/28/2019 03:52 PM Appointment

02/01/2019 08:05 AM UserForm

02/01/2019 08:05 AM UserForm

02/01/2019 10:37 AM UserForm

02/01/2019 10:38 AM UserForm

02/01/2019 10:44 AM Purchase

02/01/2019 11:00 AM Vitals

02/01/2019 12:03 PM UserForm

02/01/2019 12:50 PM Appointment

02/01/2019 12:58 PM Prescription

02/20/2019 12:08 PM Patient Merge

02/21/2019 04:32 PM Purchase

02/21/2019 04:32 PM Purchase

**B6**



**B6**

B6 Male (Neutered)

Canine English Bulldog Brown/White

Patient ID: B5

## 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: 2/1/2019

Owner's address:

**B6**

*01-02-19*  
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**

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

## **Brachycephalic Consent Form** *Anesthesia, Sedation and Hospitalization*

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

### *Overview*

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

### *Respiratory problems*

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

### *Cooling problems*

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

### *Stomach and intestinal problems*

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

### *Restraint challenges*

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

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

### *Sedation and anesthesia*

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

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

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

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

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

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

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

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

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

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

YES     NO

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

YES     NO

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

YES     NO

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

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

Date: 2/1/2019

**B6**

### Discharge Instructions

**Patient**

Name: B6

Species: Canine

Brown/White Male (Neutered) English

Bulldog

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: B6

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

**Veterinary Nutritionist : Dr. Lisa Freeman**

Student: B6

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

Discharge Date: 2/1/2019

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

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

The following diagnostic test results were obtained today:

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

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

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

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

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

#### **Recommended Medications:**

# B6

#### **Dry Food Options:**

Royal Canin Early Cardiac (veterinary diet)

Royal Canin Bboxer

Purina Pro Plan Adult Weight Management

Purina Pro Plan Bright Mind Adult Small Breed Formula

#### **Canned Food Options:**

Hill's Science Diet Adult Beef and Barley Entree

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

Royal Canin Mature 8+

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

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

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

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

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

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

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

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

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**Prescription Refill Disclaimer:**

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

**Ordering Food:**

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

**Clinical Trials:**

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

---

Case:         B6        

Owner:         B6        

Discharge Instructions

**B6**

Patient ID:   
 Canine  
 Years Old Male (Neutered) English Bulldog  
Brown/White

**Cardiology Appointment Report**  
**Enrolled in DCM Study**

**Date:** 2/1/2019

**Attending Cardiologist:**

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

**B6**

**Cardiology Resident:**

**Cardiology Technician:**

**B6**

**Student:**

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

**Concurrent Diseases:**

**B6**

**General Medical History:**

O says seen at Tufts.  
Sedentary lifestyle, but healthy. Half-sister  here last month in CHF, which is what started concerns for DCM.  
Fasted today.  
Had reason for concern of DCM based on diet and sister, came in based on NTproBNP level.

**Diet and Supplements:**

Grain free diet- Wellness Core. Chicken and Turkey wet food 4oz BID. Fish dry food 1/4 cup BID.  
No supplements or treats.

**Cardiovascular History:**

Prior CHF diagnosis? N  
Prior heart murmur? N  
Prior ATE? N



Prior arrhythmia? N

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

Cough? N

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

Syncope or collapse? N

Sudden onset lameness? N

Exercise intolerance? N- Normally low energy.

**Current Medications Pertinent to CV System:**

**B6**

**Muscle condition:**

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

**Cardiovascular Physical Exam:**

**Murmur Grade:**

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

**Murmur location/description:**

**Jugular vein:**

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

**Arterial pulses:**

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

**Arrhythmia:**

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

**Gallop:**

- Yes
- Pronounced

- No
- Intermittent

Other:

**Pulmonary assessments:**

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

**Abdominal exam:**

- Normal
- Hepatomegaly
- Abdominal distension mostly adipose tissue?
- Mild ascites
- Marked ascites

**Problems:**

Related dog with DCM  
Has a high NT-proBNP

**Differential Diagnoses:** DCM vs other

**Diagnostic plan:**

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

**Echocardiogram Findings:**

**B6**

**Assessment and recommendations:**

Findings are consistent with ARVC with concurrent LV dysfunction which is either related to ARVC or could have a component of diet-related cardiomyopathy. There was not enough arrhythmia seen today to clearly trigger antiarrhythmic therapy, but a 24 hour Holter monitor could be performed for a better assessment of arrhythmia burden, or Alivacor tracings could be evaluated serially. B6

B6 Dog was enrolled in the DCM study, and troponin, NTproBNP, taurine levels, CBC/Chem were submitted via the study. Recheck echo, ECG, and blood work in

3, 6, and 9 months for the study. Discussed pros and cons of starting **B6** treatment today, or ACEi - owner leaning toward fewer drugs at this stage.

**Final Diagnosis:**

ARVC with LV dysfunction (possible component of diet associated cardiomyopathy)

**Heart Failure Classification Score:**

ISACHC Classification:

- Ia
- Ib
- II
- IIIa
- IIIb

ACVIM Classification:

- A
- B1
- B2
- C
- D

M-Mode

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

**B6**

M-Mode Normalized

IVSdN	{0.290 - 0.520} !
LVIDdN	{1.350 - 1.730}
LVPWdN	{0.330 - 0.530}
IVSsN	{0.430 - 0.710}
LVIDsN	{0.790 - 1.140}
LVPWsN	{0.530 - 0.780} !
Ao Diam N	{0.680 - 0.890} !
LA Diam N	{0.640 - 0.900} !

**B6**

2D

SALA  
Ao Diam  
SALA / 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

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  
TR Vmax

**B6**

cm  
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TR maxPG

B6

mmHg

**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  
B6 Male (Neutered)  
Canine English Bulldog  
Brown/White  
B6

2/12/2019

Dear B6

Thank you for referring B6 with their pet B6

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

John Rush DVM, DACVIM (Cardiology), DACVECC

**Discharge Instructions**

**Patient**

Name: B6  
Species: Canine  
Fawn Male (Neutered) Boxer  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6

Admit Date: B6 9:39:22 AM

**Diagnoses:** Dilated cardiomyopathy R/O ARVC vs diet-related, tricuspid valve dysplasia, active right-sided CHF with ascites, ventricular and supraventricular arrhythmias, cardiopulmonary arrest with cardiopulmonary resuscitation

**Clinical Findings:**

B6 presented for evaluation and possible enrollment in the diet DCM study, with prior diagnoses of DCM, tricuspid valve dysplasia, right heart failure, and some transient arrhythmias. We found similar findings to Dr. B6 except the dog might have developed atrial fibrillation and had one approximately 8-10 beat run of ventricular tachycardia during the echocardiogram. The dog was enrolled in the study. After Echo, ECG and blood draw, we started to talk to the owners about B6 heart disease. Within 2-3 minutes of the owners entering the cardiology room to discuss the findings, B6 fell over, did a short bit of limb paddling, and then respiratory arrested with no palpable pulses and white mucous membranes. The dog was suspected to have either sustained ventricular tachycardia or ventricular fibrillation but it was clear the dog had respiratory arrest with no pulses before the leads of the ECG could be attached. B6 was rushed to ER where CPR with chest compressions were started, ECG hooked up, and IV cath was placed. ROSC was achieved within minutes, and now there were clear P waves noted. Patient must have had run of pulseless VT or Vfib and once chest compressions begun, was able to convert back to normal rhythm. During CPR, B6 was given IV. Started at B6. Additional B6 were given until owners elected humane euthanasia. Dog was awake and responsive and visual by the time of euthanasia. The owners did not want to risk that he would collapse and arrest again at home and so they elected euthanasia. Gave permission to get a piece of the heart for

research purposes. Cremation with return of ashes elected.

Please contact our Cardiology liaison at (508)-887-4696 or email us at [cardiovet@tufts.edu](mailto:cardiovet@tufts.edu) for 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



B6

Patient ID: B6

B6

Canine

Years Old Male (Neutered) Boxer

Fawn

**Cardiology Appointment Report  
ENROLLED IN DCM DIET STUDY**

Date: B6

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6

**Presenting Complaint:** lethargic and wheezing, polydipsic, bloated stomach, some coughing, referred from B6

Prior echo demonstrated tricuspid valve dysplasia, mild SAS, DCM, R-CHF, and ventricular arrhythmias

**Concurrent Diseases:** hypersensitive stomach (vomiting, r/o food sensitivity)

**General Medical History:** Sensitive stomach, otherwise healthy

**Diet and Supplements:** Health Extension Grain free Chicken and Turkey with whole vegetables and berries, no other supplements

**Cardiovascular History:**

Prior CHF diagnosis? Y

Prior heart murmur? Y

Prior ATE? N

Prior arrhythmia? Y

Monitoring respiratory rate and effort at home? Not that has been noticed

Cough? Y

Shortness of breath or difficulty breathing? N

Syncope or collapse? N

Sudden onset lameness? N

Exercise intolerance? Y, pants when runs

**Current Medications Pertinent to CV System:**

**B6**

**Muscle condition:**

- Normal
- Mild muscle loss to
- Moderate cachexia over ribs
- Marked cachexia

**Cardiovascular Physical Exam:**

**Murmur Grade:**

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

**B6**

**Jugular vein:**

- Bottom 1/3 of the neck but with strong pulsations
- 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 Faint
- Pronounced

- No
- Intermittent

Other:

**Pulmonary assessments:**

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

**Abdominal exam:**

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites
- Marked ascites

**Problems:**

DCM, TVD, arrhythmias, R-CHF. Possible diet study candidate

**Diagnostic plan:**

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

**Echocardiogram Findings:**

**B6**

**B6**

**Radiographic findings:**

None taken

**Assessment and recommendations:**

Dilated cardiomyopathy: r/o nutritional vs AVRC

Discussed diet change and beginning antiarrhythmics, but dog collapsed and owners decided to euthanize.

After echocardiogram was done, owner was brought into cardiology to go over findings. B6 was excited to see owner then, about 2 minutes later, all of a sudden went down, paddling, and respiratory arrested. Suspected to have either sustained ventricular tachycardia or ventricular fibrillation but it was clear the dog had respiratory arrest and was pale white with no pulses before the leads of the ECG could be attached. Rushed to ER where CPR with chest compressions were started, ECG hooked up, and IV cath was placed. ROSC was achieved within minutes, and now there were clear P waves noted. Patient must have had run of pulseless VT or Vfib and once chest compressions begun, was able to convert back to normal rhythm. B6 was given IV. Started B6. Additional B6 were given until owners elected humane euthanasia. Dog was awake and responsive and visual by the time of euthanasia. The owners did not want to risk that he would collapse and arrest again at home and so they elected euthanasia. Gave permission to get a piece of the heart for research purposes. Cremation with return of ashes elected.

**Final Diagnosis:**

Dilated cardiomyopathy: r/o nutritional vs ARVC vs other cause of DCM

Ventricular arrhythmias and supraventricular arrhythmias, likely atrial fibrillation

Tricuspid valve dysplasia

Cardiopulmonary arrest and CPR during appointment with ROSC and subsequent euthanasia.

**Heart Failure Classification Score:**

ISACHC Classification:

- Ia
- Ib
- II
- IIIa
- IIIb

ACVIM 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

B6

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

LA/Ao  
Max LA  
TAPSE  
EPSS

cm  
cm  
cm

M-Mode Normalized

IVSdN  
LVIDdN  
LVPWdN  
IVSsN  
LVIDsN  
LVPWsN  
Ao Diam N  
LA Diam N

{0.290 - 0.520}  
{1.350 - 1.730}  
{0.330 - 0.530}  
{0.430 - 0.710} !  
{0.790 - 1.140} !  
{0.530 - 0.780}  
{0.680 - 0.890} !  
{0.640 - 0.900} !

2D

SA LA  
Ao Diam  
SA LA / Ao Diam  
IVSd  
LVIDd  
LVPWd  
EDV(Teich)  
IVSs  
LVIDs  
LVPWs  
ESV(Teich)  
EF(Teich)  
%FS  
SV(Teich)  
LV Major  
LV Minor  
Sphericity Index  
LVld A4C  
LVEDV MOD A4C  
LVls A4C  
LVESV MOD A4C  
LVEF MOD A4C  
SV MOD A4C  
R-R  
HR

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

**B6**

Doppler

MR Vmax  
MR maxPG  
E'  
S'  
AV Vmax  
AV maxPG  
PV Vmax

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

PV maxPG  
TR Vmax  
TR maxPG

**B6**

mmHg  
m/s  
mmHg

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

Research cbc/chem 4/26/2019



**Tufts Cummings School Of Veterinary Medicine**  
 200 Westboro Road  
 North Grafton, MA 01536

Name/DOB: <b>B6</b>	Sex: CM	Provider: Dr. Lisa Freeman
Patient ID: <b>B3</b>	Age: 2	Order Location: Foster Hospital for Small Animals
Phone number:	Species: Canine	Sample ID: <b>B6</b>
Collection Date: 4/26/2019 9:57 PM	Breed: Pit Bull	
Approval date: 4/26/2019 5:57 PM		

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

SMACHUMSK		Ref. Range/Males
WBC (ADVIA)	<b>B6</b>	4.40-15.10 K/uL
RBC (Advia)	<b>B6</b>	5.80-8.50 M/uL
Hemoglobin (ADVIA)	<b>B6</b>	13.3-20.5 g/dL
Hematocrit (Advia)	<b>B6</b>	39-55 %
MCV (ADVIA)	<b>B6</b>	64.5-77.5 fL
MCH (ADVIA)	<b>B6</b>	21.3-25.9 pg
CHCM	<b>B6</b>	
MCFC (ADVIA)	<b>B6</b>	31.0-34.3 g/dL
RDW (ADVIA)	<b>B6</b>	11.9-15.2
Platelet Count (Advia)	<b>B6</b>	173-485 K/uL
04/26/19 5:54 PM		
Mean Platelet Volume (Advia)	<b>B6</b>	8.29-13.20 fl
04/26/19 5:30 PM		
Platelet Crit	<b>B6</b>	0.129-0.405 %
04/26/19 5:30 PM		
PDW	<b>B6</b>	
Reticulocyte Count (Advia)	<b>B6</b>	0.20-1.60 %
Absolute Reticulocyte Count (Advia)	<b>B6</b>	14.7-113.7 K/uL
CHr	<b>B6</b>	
MCVr	<b>B6</b>	

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

SMACHUMSK		Ref. Range/Males
Seg Neuts (%)	<b>B6</b>	43-86 %
Lymphocytes (%)	<b>B6</b>	7-47 %
Monocytes (%)	<b>B6</b>	1-15 %
Eosinophils (%)	<b>B6</b>	0-16 %
Seg Neutrophils (Abs) Advia	<b>B6</b>	2.900-11.500 K/uL
Lymphs (Abs) Advia	<b>B6</b>	1.00-4.80 K/uL
Mono (Abs) Advia	<b>B6</b>	0.10-1.50 K/uL
Eosinophils (Abs) Advia	<b>B6</b>	0.00-1.40 K/uL
WBC Morphology	<b>B6</b>	
RBC Morphology	<b>B6</b>	

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

Sample ID: 19042601551  
 This report continues... (Final)

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

Client: **B6**  
Patient:

Research che/chem 4/26/2019



**Tufts Cummings School Of Veterinary Medicine**  
200 Westboro Road  
North Grafton, MA 01536

Name/DOB: **B6**      Provider: **Dr. Lisa Freeman**  
Patient ID: **B6**      Sex: **CM**      Order Location: **Foster Hospital for Small Animals**  
Phone number:      Age: **2**      Sample ID: **B6**  
Collection Date: **4/26/2019 4:57 PM**      Species: **Canine**  
Approval date: **4/26/2019 5:57 PM**      Breed: **Pit Bull**

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

		Ref. Range/Males
DM/CHUNSI		
Glucose		67-135 mg/dL
Urea		8-30 mg/dL
Creatinine		0.6-2.0 mg/dL
Phosphorus		2.0-7.2 mg/dL
Calcium 2		9.4-11.3 mg/dL
Magnesium 2+		1.8-3.0 mEq/L
Total Protein		5.5-7.8 g/dL
Albumin		2.8-4.0 g/dL
Globulins		2.3-4.2 g/dL
A/G Ratio		0.7-1.0
Sodium		140-150 mEq/L
Chloride		106-116 mEq/L
Potassium	<b>B6</b>	3.7-5.4 mEq/L
tCO2(Bicarb)		14-28 mEq/L
AGAP		8.0-19.0
NA/K		29-40
Total Bilirubin		0.10-0.30 mg/dL
Alkaline Phosphatase		12-127 U/L
GGT		0-10 U/L
ALT		14-86 U/L
AST		9-54 U/L
Creatine Kinase		22-422 U/L
Cholesterol		82-355 mg/dL
Triglycerides		30-338 mg/dl
Amylase		409-1250 U/L
Osmolality (calculated)		291-315 mmol/L

Sample ID: 19042601552  
END OF REPORT (Print)

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



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

**Ilexx NT-proBNP 4/26/2019**

IDEXX Reference Laboratories

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

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: AMERICAN PIT\_BU  
Gender: MALE NEUTERED  
Age: 2Y

Date: 04/26/2019  
Requisition #: 1A  
Accession #: **B6**  
Ordered by: **B6**

IDEXX VetConnect 1-888-433-9567

TUFTS UNIVERSITY  
200 WESTBORO RD  
NORTH GRAFTON, Massachusetts 01535  
508-339-3395

Account: **B6**

CARDIOPET proBNP - CANINE

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP - CANINE	<b>B6</b>	0-980 pmol/L	NEG		<b>B6</b>

Comments

**B6**

Please note: Complete interpretive comments for all concentrations of Cardiotest proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: **B6**  
 Patient:

Diet Hx 4/26/2019

**B6**

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

Pet's name: **B6** Owner's name: **B6** Today's date: **B6**

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: I have reduced his intake because of switching to grain foods
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
35% lean hamburger	microwaved	3oz	1x/week	June-Aug 2016
Pupperoni original beef flavor	treat	1/2	1x/day	Sept 2016-present
Rawhide	treat	8 inch twist	1x/week	Dec 2016-present
Nutra source PureVita Venison + Red Lentils	dry	2 cups	2x/day	July 2018 - Mar 2019
Natural Balance Venison + Sweet Potato	dry	2 1/2 cups	2x/day	Aug 2017 - Mar 2019
Natural Balance Venison + Sweet Potato	treat	6 treats/day	6x/day	Aug 2017 - Mar 2019
Natural Balance Sweet Potato + Fish	treat	11 treats	6x/day	Jan 2018 - Mar 2019
Nutra source Chicken + Pure Formula	dry	1.5 cups	2x/day	Mar 2019 - present
Pupperoni dog TREATS	treat	1.5 TBLS	2x/day	Mar 2019 - present
nick Bone Small	treat	1/2	1x/day	Mar 2019 - present
Pigeons	treat	4	1x/day	Mar 2019 - present
Treats: # Kween	treat	1	1x/week	Mar 2019 - present
	TREAT	1	1x/month	Mar 2019 - present

\*Any additional diet information can be listed on the back of this sheet

2. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)?  Yes  No If yes, please list which ones and give brands and amounts:
- |                      | Brand/Concentration  | Amount per day                    |
|----------------------|--|-----------------------------------|
| Taurine              | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>CAN</u> | <u>2000 mg</u>                    |
| Carnitine            | <input type="checkbox"/> Yes <input type="checkbox"/> No                       |                                   |
| Antioxidants         | <input type="checkbox"/> Yes <input type="checkbox"/> No                       |                                   |
| Multivitamin         | <input type="checkbox"/> Yes <input type="checkbox"/> No                       |                                   |
| Fish oil             | <input type="checkbox"/> Yes <input type="checkbox"/> No                       |                                   |
| Coenzyme Q10         | <input type="checkbox"/> Yes <input type="checkbox"/> No                       |                                   |
| Other (please list): |  |                                   |
| Example: Vitamin C   | <u>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:  
Patient:

**B6**

**rDVM Cardiology report 3/14/2019**

Dear Doctors,

Please see the accompanying cardiology report for our annual patient. Thank you for the referral and your continued support of **B6**. Please contact me if you need any more information regarding this patient. As I am only at **B6** once to twice per month, email (see below) is the best mode of communication for me.

**B6** DVM, DACVIM (Cardiology)

Cardiologist **B6**

**B6**

Email: **B6**

Website: **B6**

Consulting Cardiologist **B6** DVM, DACVIM (Cardiology)

Client: **B6**  
Patient:

rDVM Cardiology report **B6**

Client: **B6**  
Patient: **B6** (Qyo MN pit bull)  
Examination Date: **B6**

**CARDIOLOGY EXAMINATION**

HISTORY: Cough x 2 weeks, decreased appetite. Admitted yesterday for monitoring/echo. Started on **B6**  
rDVM **B6** amine drawn/not yet submitted. ECG 100 bpm NSF. TFAST suspect  
DCM. rDVM rads in record.

**MEDICATIONS:**

DIET: grain free pork and pea

WEIGHT: 27 kg



Consulting Cardiologist: **B6** DVM, DACVIM (Cardiology)

Client: **B6**  
Patient:

rDVM Cardiology report **B6**



**ECHOCARDIOGRAPHIC DIAGNOSIS:**

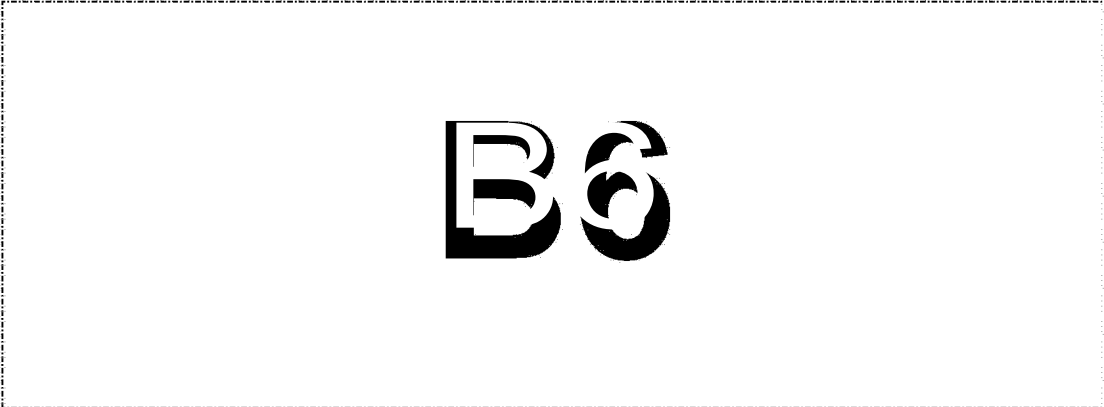
1. Dilated cardiomyopathy (severe left atrial and left ventricular enlargement; moderate right atrial and right ventricular enlargement; severely reduced left ventricular wall motion)
2. Mild mitral and trace tricuspid regurgitations – likely from annular stretch secondary to #1

**RADIOGRAPHIC FINDINGS:** 2 view thorax, rDVM: The cardiac silhouette is severely and globally enlarged. The pulmonary vasculature is moderately dilated. There is a moderate to severe bilateral caudodorsal interstitial pattern consistent with congestive heart failure.

**\*\*\*\* FINAL REPORT \*\*\*\*\***

**FINAL DIAGNOSIS:**

1. Dilated cardiomyopathy (severe left atrial and left ventricular enlargement; moderate right atrial and right ventricular enlargement; severely reduced left ventricular wall motion) – R/O nutritional (taurine deficiency or secondary to grain free/pork based diet) vs familial vs hypothyroidism
2. Mild mitral and trace tricuspid regurgitations – likely from annular stretch secondary to #1
3. Congestive heart failure (pulmonary edema) **B6**



**FOLLOW UP SCHEDULE:**

- 10-14 days for recheck exam, renal panel, CXR.
- 3 months for echocardiogram

\* There is a chance that some of **B6** cardiac disease may be reversible if this is secondary to nutritional cause. However, even some patients with diet-induced DCM can have irreversible cardiac changes. Thus, prognosis is variable and will be determined based on followup testing.

Consulting Cardiologist: **B6** DVM, DACVIM (Cardiology)

Consulting Cardiologist: **B6** DVM, DACVIM (Cardiology)

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

rDVM Cardiology report 3/14/2019

Consulting Cardiologist: **B6**, DVM, DACVIM (Cardiology)

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

**B4** thyroid panel 3/14/2019

03/16/2019 4:39:12 AM -0700

PAGE 1 OF 1

**B4**

**B6**  
**B6**

Accession No **B6**  
Received 03/14/2019  
Reported 03/16/2019 04:32 AM

Doctor **B6** DVM

Owner **LS**    Pet Name **B6**    Species Canine    Breed Other    Sex OM    Pet Age 3Y    Chart# **B4**

Test Requested	Results	Reference Range	Units
<b>T4</b>			
T4		0.8-3.5	µg/dL
<b>FREE T4 BY EQUILIBRIUM DIALYSIS</b>			
Free T4 (Dialysis)	<b>B6</b>	8-40	pmol/L
<b>TSH</b>			
TSH		0-0.80	ng/mL

While many dogs with primary hypothyroidism have elevated cTSH concentrations, up to one third of affected dogs have normal or low cTSH concentrations, for reasons that are unclear. In those cases where TSH concentrations are normal and hypothyroidism is still strongly suspected, consider performing a free T4 and/or thyroglobulin autoantibodies.

Client: B6  
Patient:

---

**Vitals Results**

---

4/26/2019 2:52:48 PM	Weight (kg)	32.0000
----------------------	-------------	---------



Client:  
Patient:

**B6**

Medical Record Image

---

**B6**

Client:  
Patient:

**B6**

Medical Record Image

**B6**

Client:  
Patient:

**B6**

Medical Record Image

---

**B6**

Client: **B6**  
Patient:

**ECG from Cardio**

---

**B6**

**B6**

4:27:10 PM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

---

**B6**

Client:  
Patient:

**B6**

ECG from Cardio

---

**B6**

**B6**

1:27:45 PM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

---

**B6**

Client: **B6**  
Patient:

**ECG from Cardio**

---

**B6**

**B6**

4:29:13 PM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

---

**B6**

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

**Cummings**  
**Veterinary Medical Center**  
 AT TUFTS UNIVERSITY

**Foster Hospital for Small Animals**

55 Willard Street  
 North Grafton, MA 01536  
 (508) 839-5395

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

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

**Lab Results Report**

**Nova Full Panel-ICU** **B6** 1:30:25 AM **Accession ID: B6**

Test	Results	Reference Range	Units
SO2%	<b>B6</b>	94 - 100	%
HCT (POC)		38 - 48	%
HB (POC)		12.6 - 16	g/dL
NA (POC)		140 - 154	mmol/L
K (POC)		3.6 - 4.8	mmol/L
CL(POC)		109 - 120	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
BUN (POC)		12 - 28	mg/dL
CREAT (POC)		0.2 - 2.1	mg/dL
TCO2 (POC)		0 - 0	mmol/L
nCA		0 - 0	mmol/L
nMG		0 - 0	mmol/L
GAP		0 - 0	mmol/L
CA/MG		0 - 0	mol/mol
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE	0 - 0		



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

FiO2	<b>B6</b>	0 - 0	%
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

**Nova Full Panel-ICU** **B6** 1:52:25 AM Accession ID: **B6**

Test	Results	Reference Range	Units
TS (FHSA)	<b>B6</b>	0 - 0	g/dL
Lactate (FHSA) *		0 - 0	mmol/L
BG (FHSA)		0 - 0	g/dL
TS (FHSA)		0 - 0	g/dL
PCV		0 - 0	%

**Nova Full Panel-ICU** **B6** 2:06:14 AM Accession ID: **B6**

Test	Results	Reference Range	Units
PT (ER)-Citrate	<b>B6</b>	0 - 0	sec

**Nova Full Panel-ICU** **B6** 5:02:35 AM Accession ID: **B6**

Test	Results	Reference Range	Units	
SO2%	<b>B6</b>	94 - 100	%	
HCT (POC)		38 - 48	%	
HB (POC)		12.6 - 16	g/dL	
NA (POC)		140 - 154	mmol/L	
K (POC)		3.6 - 4.8	mmol/L	
Cl (POC)		109 - 120	mmol/L	
CA (ionized)		1.17 - 1.38	mmol/L	
MG (POC)		0.1 - 0.4	mmol/L	
GLUCOSE (POC)		80 - 120	mg/dL	
LACTATE		0 - 2	mmol/L	
BUN (POC)		12 - 28	mg/dL	
CREAT (POC)		uncalibrated	0.2 - 2.1	mg/dL
TCO2 (POC)		uncalibrated	0 - 0	mmol/L
rCA		<b>B6</b>	0 - 0	mmol/L
rMG		0 - 0	mmol/L	
GAP		uncalibrated	0 - 0	mmol/L
CA/MG		<b>B6</b>	0 - 0	mol/mol
BEcf		uncalibrated	0 - 0	mmol/L
BEb	uncalibrated	0 - 0	mmol/L	
A	uncalibrated	0 - 0	mmHg	
NOVA SAMPLE	Venous	0 - 0		





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

FiO2	<b>B6</b> (room air)	0 - 0	%
PCO2	uncalibrated	36 - 44	mmHg
PO2	<b>B6</b>	80 - 100	mmHg
PH	<b>B6</b>	7.337 - 7.467	
PCO2	uncalibrated	36 - 44	mmHg
PO2	<b>B6</b>	80 - 100	mmHg
HCO3	uncalibrated	18 - 24	mmol/L

**Nova Full Panel-ICU**      **B6**      1:30:17 PM      Accession ID: **B6**

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

**Nova Full Panel-ICU**      **B6**      7:54:25 AM      Accession ID: **B6**

Test	Results	Reference Range	Units
SO2%	<b>B6</b>	94 - 100	%
HCT (POC)	<b>B6</b>	38 - 48	%
HB (POC)	<b>B6</b>	12.6 - 16	g/dL
HA (POC)	<b>B6</b>	140 - 154	mmol/L
K (POC)	<b>B6</b>	3.6 - 4.8	mmol/L
CL (POC)	<b>B6</b>	109 - 120	mmol/L
CA (ionized)	<b>B6</b>	1.17 - 1.38	mmol/L
MG (POC)	<b>B6</b>	0.1 - 0.4	mmol/L
GLUCOSE (POC)	<b>B6</b>	80 - 120	mg/dL
LACTATE	<b>B6</b>	0 - 2	mmol/L
BUN (POC)	<b>B6</b>	12 - 23	mg/dL
CREAT (POC)	<b>B6</b>	0.2 - 2.1	mg/dL
TCO2 (POC)	<b>B6</b>	0 - 0	mmol/L
nCA	<b>B6</b>	0 - 0	mmol/L
nMG	<b>B6</b>	0 - 0	mmol/L
GAP	<b>B6</b>	0 - 0	mmol/L
CAMG	<b>B6</b>	0 - 0	mol/mol
BEeef	<b>B6</b>	0 - 0	mmol/L
BEb	<b>B6</b>	0 - 0	mmol/L
A	<b>B6</b>	0 - 0	mmHg
NOVA SAMPLE	<b>B6</b>	0 - 0	
FiO2	<b>B6</b> (room air)	0 - 0	%
PCO2	<b>B6</b>	36 - 44	mmHg
PO2	<b>B6</b>	80 - 100	mmHg
PH	<b>B6</b>	7.337 - 7.467	
PCO2	<b>B6</b>	36 - 44	mmHg



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

PO2 **B6** 80 - 100 mmHg  
 HCO3 18 - 24 mmol/L

**Nova Full Panel-ICU** **B6** 8:25:41 AM **Accession ID: B6**

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

**Nova Full Panel-ICU** **B6** 10:31:12 AM **Accession ID: B6**

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

**Nova Full Panel-ICU** 10/7/2018 10:31:27 AM **Accession ID: B6**

Test	Results	Reference Range	Units
GLUCOSE		67 - 135	mg/dL
UREA		8 - 30	mg/dL
CREATININE		0.6 - 2	mg/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
MAGNESIUM 2+		1.8 - 3	mEq/L
T. PROTEIN		5.5 - 7.8	g/dL
ALBUMIN	<b>B6</b>	2.8 - 4	g/dL
GLOBULINS		2.3 - 4.2	g/dL
A/G RATIO		0.7 - 1.6	
SODIUM		140 - 150	mEq/L
CHLORIDE		106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
iCO2 (BICARB)		14 - 28	mEq/L
ΔGAP		8 - 19	
NA/K		29 - 40	



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

T BILIRUBIN	<b>B6</b>	0.1 - 0.3	mg/dL
D.BILIRUBIN		0 - 0.1	mg/dL
I BILIRUBIN		0 - 0.2	mg/dL
ALK PHOS		12 - 127	U/L
GGT		0 - 10	U/L
ALT		14 - 86	U/L
4309 Result(s) verified			
AST		9 - 54	U/L
2648 Result(s) verified			
CK		22 - 422	U/L
16084 Result(s) verified			
CHOLESTEROL	<b>B6</b>	82 - 355	mg/dL
TRIGLYCERIDES		30 - 338	mg/dl
AMYLASE		409 - 1250	U/L
OSMOLALITY (CALCULATED)		291 - 315	mmol/L

**Nova Full Panel-ICU** 10/7/2018 10:31:11 AM Accession ID: **B6**

Test	Results	Reference Range	Units
SEGS%	<b>B6</b>	43 - 86	%
LYMPHS%		7 - 47	%
MONOS%		1 - 15	%
EOS%		0 - 16	%
SEGS (ABS)ADVIA		2.8 - 11.5	K/uL
LYMPHS (ABS)ADVIA		1 - 4.8	K/uL
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
EOS (ABS)ADVIA		0 - 1.4	K/uL
TOXIC CHANGE		0 - 0	
Occasional Occasional neutrophil appears slightly toxic			
ACANTHOCYTES	Occasional	0 - 0	
KERATOCYTES/BLISTER CELLS	Occasional	0 - 0	
POIKILOCYTOSIS	<b>B6</b>	0 - 0	

**Nova Full Panel-ICU** 10/31/2018 3:19:40 PM Accession ID: **B6**

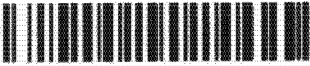
Test	Results	Reference Range	Units
Troponin I Research - HISA	<b>B6</b>	0 - 0.08	mg/dl



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

**Anesthesia Record**

**Tufts Cummings School of Veterinary Medicine SA Anesthesia Surgical Checklist**

App 

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

Species: Canine Patient ID: **B6**

Breed: Boxer Sex: Male City: **B6**

Weight kg: 0.00 Home Phone: **B6**

Date of Birth: **B6** Cell Phone: **B6**

Color: White Ref Facility: **B6**

Check-in Date: **B6** 2:54:23 AM Ref Phone: **B6**

Additional notes:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Before Premedication of Patient	After Induction in Prep Area	Prior to Leaving OR
<p><b>Confirmed by Anesthesia Team</b></p> <p><input checked="" type="checkbox"/> Patient ID, procedure, &amp; procedure site</p> <p><input checked="" type="checkbox"/> Blood work and SOAP complete</p> <p><input checked="" type="checkbox"/> Body weight matches patient size</p> <p><input checked="" type="checkbox"/> Work-up sheet reviewed &amp; signed by anesthesiologist</p>	<p><b>Initiated by Anesthesia Team</b></p> <p>Radiology work-up completed  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A</p> <p>Cefazolin (or other antibiotic) requested and available  <input type="checkbox"/> Yes <input type="checkbox"/> Hold <input type="checkbox"/> N/A</p> <p>Number of catheters placed is appropriate for patient needs  <input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No, additional catheters placed</p>	<p><b>Initiated by Anesthesia Team</b></p> <p>Phone call to radiology  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A</p> <p><b>Anesthesia Service States</b>  <input checked="" type="checkbox"/> Any concerns for patient recovery?</p> <p><b>Surgeon States</b>  <input checked="" type="checkbox"/> Any concerns for patient recovery?</p>
<p><b>Before Induction of Patient</b></p> <p><b>Confirmed by Anesthesia Team</b></p> <p>Met check cleared  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A</p> <p>Red line cleared by accounting  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A</p> <p><input checked="" type="checkbox"/> Anesthesia machine checked and pop-off valve open</p> <p>Difficult airway or aspiration risk?  <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes, nec. equipment available  <input type="checkbox"/> Yes, Surgeon must be present</p> <p>Risk of significant blood loss  <input type="checkbox"/> No  <input type="checkbox"/> Yes, blood type (+/- crossmatch) and appropriate blood available</p>	<p>Does patient need T-set?  <input type="checkbox"/> Yes (place T set in induction)  <input checked="" type="checkbox"/> No</p> <p><b>Before Skin Incision</b></p> <p><b>Initiated by Anesthesia Team</b></p> <p><input checked="" type="checkbox"/> Patient's ID, procedure, &amp; procedure site confirmed</p> <p>Cefazolin (or other a/b) requested &amp; given within the prev. 60 min  <input type="checkbox"/> Yes <input type="checkbox"/> Hold <input type="checkbox"/> N/A</p> <p><b>Anesthetist States</b>  <input checked="" type="checkbox"/> Any specific anesthetic concerns</p> <p><b>Surgeon States</b>  <input checked="" type="checkbox"/> Critical or non-routine steps  <input checked="" type="checkbox"/> Anticipated blood loss</p>	<p>If patient can receive NSAIDs  <input type="checkbox"/> Yes  <input checked="" type="checkbox"/> No</p> <p>Which NSAID? _____</p> <p>Additional analgesics surgery will use  <input checked="" type="checkbox"/> Yes rescue <u>fenanyl</u>  <input type="checkbox"/> No</p> <p>Which analgesic? _____</p> <p>Bladder  <input type="checkbox"/> Express <input checked="" type="checkbox"/> U cath</p>
<p>This form remains with the patient through recovery.</p>	<p><b>Surgery Technician States</b>  <input checked="" type="checkbox"/> Sterilization indicators confirmed</p>	<p>Surgeon/ Resident: <b>B6</b></p> <p>Anesthetist Tech/Student: <b>B6</b></p> <p>Surgery Tech: <b>B6</b></p> <p>Date: <b>B6</b></p>

Client:  
Patient:

**B6**

Anesthesia Record

Emergency Anesthesia/Surgeon Checklist

Faculty: Resident/Intern: **B6**

Surgical Procedure: **B6**

Patient Code: Green  Yellow  Red

Weight(kg): 30.8 Temp: 96.9 ASA Status: I II III  IV V

IVC placed? Y  N  Gauge/Location: 18G short cephalic  
lateral  
saphenous

Met Check completed? Y  N  N/A  Results: lateral saphenous

NOVA Completed? Y  N  Reviewed? Y  N

Analgesia? Y  N  Drug/Dose: B6 Time: 1:20 AM

Fluids? Y  N  Type/Amount: 1 bolus Time: 1:20 AM

Repeat AXR prior to surgery? Y  N

Surgical(surgeon/tech/student)/Anesthesia(anesthetist/student) Called? Time: \_\_\_\_\_

**if ASA status ≥ III consider (check if done):**

Blood Type \_\_\_\_\_ Coags \_\_\_\_\_ 2<sup>nd</sup> IVC (hind leg)

Lumen catheter \_\_\_\_\_ Doppler BP \_\_\_\_\_ Heat support \_\_\_\_\_

**Other Considerations (check if applicable):**

Brachycephalic? \_\_\_\_\_ vWD protocol \_\_\_\_\_ Sepsis protocol \_\_\_\_\_

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SOAP COMPLETE? Y  N  SX DEPOSIT COLLECTED? Y  N

Place **B6**

Species: Canine Patient ID: **B6**

Breed: Boxer

Sex: Male City: **B6**

Weight kg: 0.00 Home Phone: **B6**

Date of Birth: **B6** Cell Phone: **B6**

Color: White Ref Facility: **B6**

Check-in Date: **B6** 12:54:23 AM Ref Phone: \_\_\_\_\_

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

**Anesthesia Record**

Tufts University Cummings School of Veterinary Medicine  
**ANESTHESIA RECORD**

**B6**

**B6** Weight # **B6**  
Cage/Staff **B6** **B6**  
Procedure **B6**

- PRE-ANESTHESIA DISPOSITION**
- Alert  Recumbent
  - Excited  Cautious
  - Depressed  Painful
  - Anxious

**B6**

Species: Canine Patient ID: **B6**  
Breed: Boxer Sex: Male City: **B6**  
Weight kg: 0.00 Home Phone: **B6**  
Date of Birth: **B6** Cell Phone: **B6**  
Color: White Ref Facility: **B6**  
Chk'd P.D. **B6** 12:54:23 AM Ref Phone: **B6**

PRE-ANESTHETIC DRUGS			
Drug	Dose	Route	Time
<b>B6</b>	<b>B6</b>	IV	2:26 A
<b>B6</b>	<b>B6</b>	IV	2:26 A

PRE-MED. RESULTS		ANESTHETIC INDUCTION			
Sedation	Resistance	Drug	Dose	Route	Time
<input type="checkbox"/> None <input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>B6</b>	50.0mg	IV	2:29 AM
<input type="checkbox"/> Slight <input type="checkbox"/>	<input type="checkbox"/>				
<input checked="" type="checkbox"/> Moderate <input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/> Marked <input type="checkbox"/>	<input type="checkbox"/>				
Vomited: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

**B6**

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

Rx **B6** 10mg **B6**

**B6** 07:22 PM **B6** via **B6** FAX Page 1 of 1 **B6**

**B6**

**B6**

Employee # **B6**  
Date **B6**

Dear Doctor,

5243234

Please review and complete the following prescription authorization and fax the form back to our pharmacy at

**B6** If you need to speak with our pharmacists, or prefer to call us with this prescription, please call **B6** Thank you.



### Pet Owner Information

Pet Owner's Name (First) **B6** (Last) **B6** C# **B6**  
Address **B6** City **B6**  
State **B6** Zip **B6** Phone **B6** Ord # **B6**

### Pet & Prescription Information

Attn Veterinarian: Please enter all of the following Rx information.

	Pet Name	Weight	Medication	Strength	Qty	Additional Refills
<b>B6</b> 1	<b>B6</b>		<b>B6</b>	10mg	100	11
	Species DOG	Directions for Use: <i>Give 1 tablet by mouth twice daily</i>				
	Denied:	Reason:				
2	Species	Directions for Use:				
	Denied:	Reason:				

Additional Comments: **Client is requesting additional refills, thank you.**

### Veterinarian Information

In compliance with pharmacy law, we are only able to accept prescriptions faxed from a licensed veterinarian. Please fax the completed form to **B6** Thank You

Veterinarian Name **B6** State License **B6** DEA # \_\_\_\_\_ (if applicable)  
Clinic Name Cummings Medical Center Phone 508-839-5395 Fax 508-839-7951  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Email \_\_\_\_\_ ID # \_\_\_\_\_ (Pharmacy use only)

Patient Information \*\* To be completed by Veterinarian \*\*  
Please indicate any known significant allergies/medical conditions: \_\_\_\_\_  
Veterinarian's Signature **B6** Date **B6**  
Generic Equivalent Permissible **B6** Medically Necessary **B6** Printed Name \_\_\_\_\_

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Client: **B6**  
Patient:

BNP 10/31/18

**B4** Laboratory

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

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed:  
Gender:  
Age: 0Y

Date: 10/31/2018  
Requisition #: **B6**  
Accession #: **B6**  
Ordered by: NOT SPECIFIED

IDEXX VetConnect 1-888-433-9967

TUFTS UNIVERSITY  
200 WESTBORO RD  
NORTH GRAFTON, Massachusetts 01536-1828  
508-339-5395

Account: **B6**

CARDIOPET proBNP - CANINE

Test	Result	Reference Range	Unit	Normal
CARDIOPET proBNP - CANINE	<b>B6</b>	0-980 pmol/L	HIGH	<b>B6</b>

Comments:

**B6**

Please note: complete interpretive comments for all concentrations of cardiopet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.



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

**UCDavis Taurine Panel**

PL **B6**

**B6**  
B6  
10:45 AM  
TAURINE PANEL  
Lithium Heparin

**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 01536

Email: [Clinpath@tufts.edu](mailto:Clinpath@tufts.edu) / [cardiovet@tufts.edu](mailto: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: Boxer

Owner's Name: **B6**

Current Diet: Bachel Roy super premium dry chicken/veggie dry, Purina dog

Sample type:  Plasma  Whole Blood  Urine  Food  Other

*chicken rice  
canned,  
Wescan's own  
chicken rice*

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

**Taurine Results (lab use only)**

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

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

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

Client:

**B6**

Address:

**All Medical Records**

Patient:

**B6**

Breed: Boxer

DOB:

**B6**

Species: Canine

Sex: Male

(Neutered)

Home Phone:  
Work Phone:  
Cell Phone:

**B6**

**Referring Information**

**B6**

Client:

**B6**

Patient:

**Initial Complaint:**

ARVC vs. DCM with active CHF and uncontrolled Vtach.

**SOAP Text Feb 22 2019 9:34AM - Clinician, Unassigned FHSA**

**Subjective**

NEW VISIT (ER)

Doctor: Dr.

**B6**

Student:

**B6**

r V'19

Presenting complaint: wheezing

Referral visit?:

**B6**

Diagnostics completed prior to visit - saw this morning but referred straight here

rDVM records in email

**HISTORY:**

Signalment:

**B6**

/o MN Boxer

Current history:

In July primary vet noticed heart arrythmia during appointment, was seen then due to symptom of wheezing. rDVM

Started on **B6**, owners gave that for a couple of weeks and wheezing resolved, owners then stopped **B6** 1 week

ago started wheezing again (sporadic), became clingy and lethargic. Owner had been out of town for a week, **B6**

was at home with husband and owner is unsure what other symptoms **B6** has. Owner's husband did restart **B6**

on Tuesday. No vomiting/heaving. Owner reports that he is drinking water normally, but didn't finish his food this

morning which is abnormal for him. Unknown diarrhea, appetite status while owner was gone.

Prior medical history: none,

**B6**

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

Current medications: **B6**

**B6**

Diet: royal canin boxer, dry , unknown length of time (last 1.5-2 yrs)  
Vaccination status/flea & tick preventative use: UTD  
Travel history: none

**EXAM:**

**B6**

**ASSESSMENT:**

A1: Severe cardiomegaly with poor contractile function - r/o primary DCM, diet-induced cardiomyopathy, ARVC, tachycardiac induced cardiomyopathy.  
A2: Malignant ventricular arrhythmia - non-sustained VTach and frequent polymorphic VPCs  
A3: Left sided congestive heart failure.

**PLAN:**

**B6**

**Treatments:**

**B6**

**Diagnostics completed:**

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

Client: **B6**  
Patient:

recommended and repeat thoracic radiographs to monitor response to therapy.  
- Impression of faint rounded soft tissue opacities mixed in with the intersitial pattern may represent peribronchial cuffing and end on vessels, pulmonary nodules are thought less likely. Follow-up radiographs to reassess the lungs are recommended after resolution of cardiogenic pulmonary edema.  
- Concurrent mild diffuse bronchial pattern likely represents a component of lower airway disease.

- Echocardiogram:

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

**B6**

**B6** Patient has historically been on grain free diet for years before been switched to current diet. It is unclear whether this is a primary DCM, ARVC with DCM phenotype, or diet-induced cardiomyopathy, but **B6** **B6**

**B6**

**B6** Thus, recommend bloodwork and if liver values are normal, **B6** should be started. Fish oil may also be effective helping decrease ventricular arrhythmia density. **B6**

**B6** Recommend repeat echocardiogram in 3 months or sooner in case patient develops clinical signs consistent with progression of the disease (shortness breath, collapse, syncope, exercise intolerance, pale mucous membrane). Client can be instructed on how to use AliveCor and assess heart rate and rhythm from home if patient at rest and calm at home.

**PLAN** (cardio consult):

**B6**

**B6**

Client: **B6**  
Patient:

**Current history:**

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

**Prior medical history:** none **B6**

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

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

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

**Travel history:** none

**Overnight update:** AIVR and occasional VPCs. Not interested in food. Nauseous last night, was given one dose of **B6** that helped a little bit. Also had 2 episodes of vtach around 7am, resolved on own.

**EXAM:**

**B6**

**ASSESSMENT:**

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

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

A3: Left sided congestive heart failure

**PLAN:**

**Treatment Plan (2/22):**

**B6**

Client: **B6**  
Patient:

**B6**

**Diagnosics completed:**

- Thoracic radiographs (2/22):
  - Cardiopulmonary changes are consistent with left-sided congestive heart failure. Given moderate generalized cardiomegaly and moderate left atrial enlargement, consider DCM given breed. Echocardiography is recommended and repeat thoracic radiographs to monitor response to therapy.
  - Impression of faint rounded soft tissue opacities mixed in with the intersitital pattern may represent peribronchial cuffing and end on vessels, pulmonary nodules are thought less likely. Follow-up radiographs to reassess the lungs are recommended after resolution of cardiogenic pulmonary edema.
  - Concurrent mild diffuse bronchial pattern likely represents a component of lower airway disease.

- Echocardiogram/ Cardio recommendations (2/22):

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

**PLAN:**

**B6**

- NOVA **B6**
- PCV/T **B6**
- CBC **B6**
- Chemistry **B6**
- Chemistry **B6**

**Plan (2/23):**

- Re-check chemistry

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

**B6**

**B6** rDVM

SOAP Text Feb 24 2019 9:19AM - Clinician, Unassigned FHSA

**B6**  
**B6** yo MN Boxer

**HISTORY:**

Current history:

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

Prior medical history: none, **B6**

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

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

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

Travel history: none

**Overnight update:**

Patient starting to be a little interested in food. Arrhythmia still not well under control -- HR **B6** with intermittent R on T, pauses and AIVR, multiforme VPCs.

**EXAM:**

**B6**

Client: **B6**  
Patient:

# B6

**ASSESSMENT:**

- A1: Severe cardiomegaly with poor contractile function - r/o primary DCM, diet-induced cardiomyopathy, ARVC, tachycardiac induced cardiomyopathy
- A2: Malignant ventricular arrhythmia - non-sustained VTach and frequent polymorphic VPCs
- A3: Left sided congestive heart failure

**PLAN:**

**Diagnosics completed:**

- Thoracic radiographs (2/22):

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

- Echocardiogram/ Cardio recommendations (2/22):

Findings consistent with DCM with active CHF and frequent ventricular arrhythmia. Patient has enough malignant arrhythmia that hospitalization and **B6** **B6** q 4-6h is recommended for the day and depending how well he responds, maybe we can decrease to q6-8h overnight. Patient has historically been on grain free diet for years before been switched to current diet. It is unclear whether this is a primary DCM, ARVC with DCM phenotype, or diet-induced cardiomyopathy, but **B6** **B6** **B6** **B6** Thus, recommend bloodwork and if liver values are normal, **B6** **B6**. Recommend addition of an ACE inhibitor when patient is eating and not azotemic. Recommend repeat echocardiogram in 3 months or sooner in case patient develops clinical signs consistent with progression of the disease (shortness breath, collapse, syncope, exercise intolerance, pale mucous membrane). Client can be instructed on how to use AliveCor and assess heart rate and rhythm from home if patient at rest and calm at home.

- BNP (2/22): **B6**
- NOVA (2/22): **B6**
- PCV/TS (2/22): **B6**
- CBC (2/22): **B6**
- Chemistry **B6**
- Chemistry
- Chemistry

	BUN	creat	Na	K	Cl	ALT
2/22				<b>B6</b>		



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

2/23	<b>B6</b>
2/24	

**Treatment Plan (2/22):**

**B6**

**Plan (2/23):**

- Re-check chemistry

**B6**

**Plan (2/24)**

- Re-check chemistry this am

**B6**

**B6** DVM

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

**History:**

**B6** y.o MN Boxer presented to rDVM 2/22/19 for wheezing and decreased appetite at home for 1 week. rDVM referred to Tufts ER. O were on vacation and are unclear on exact symptoms and duration. Pt was previously seen at rDVM for wheezing in July where arrhythmia was noted and pt **B6** (O unclear on dose). **B6** when wheezing resolved. Was on grain-free diet until ~1.5 years ago.

**Subjective:**

T: n/a

HR: **B6**

RR: **B6**

W: **B6** with telemetry pack

Mentation: QAR, friendly

Hydration: Euhydrated, mucous membrane pink and moist. CRT <2sec.

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

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

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

**Objective:**

BCS(1-9): **B6**

MCS(normal, mild, moderate, severe): **B6**

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

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

**B6**

**Treatments in hospital**

**B6**

**Diagnostics**

- Thoracic rads 2/22: Moderate generalized cardiomegaly and moderate left atrial enlargement onsistent with left-sided congestive heart failure/DCM. Cardiogenic pulmonary edema. Concurrent mild diffuse bronchial pattern likely represents a component of lower airway disease.
- Echo (Abridged due to dyspnea)2/22: Findings consistent with DCM with active CHF and frequent ventricular arrhythmia. Severe cardiomegaly with poor contractile function.

- NOVA (2/22): **B6**

- BNP (2/22): **B6**

- PCV/TS (2/22): **B6**

- CBC (2/22): **B6**

- Chemistry **B6**  
- Chemistry **B6**  
- Chemistry **B6**

**Assessments**

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

**Plan**

1. **B6**
2. **B6**
3. **B6**

Client: **B6**  
Patient:

---

4. **B6**  
5.  
6.

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

**Disposition/Recommendations**

---

Client: **B6**  
Patient:

---

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Client:  
Patient:

**B6**

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

## Foster Hospital for Small Animals

55 Willard Street  
North Grafton, MA 01536  
(508) 839-5395

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

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

### Lab Results Report

Nova Full Panel-ICU      2/22/2019 9:30:25 AM      Accession ID: **B6**

Test	Results	Reference Range	Units
SO2%		94 - 100	%
HCT (POC)		38 - 48	%
HB (POC)		12.6 - 16	g/dL
NA (POC)		140 - 154	mmol/L
K (POC)		3.6 - 4.8	mmol/L
CL(POC)		109 - 120	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
BUN (POC)		12 - 28	mg/dL
CREAT (POC)		0.2 - 2.1	mg/dL
TCO2 (POC)		0 - 0	mmol/L
nCA		0 - 0	mmol/L
nMG		0 - 0	mmol/L
GAP		0 - 0	mmol/L
CA/MG		0 - 0	mol/mol
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE		0 - 0	

**B6**



12/85

**B6**

Printed Monday, February 25, 2019

Client: **B6**  
 Patient:

FiO2	<b>B6</b>	0 - 0	%
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

**Nova Full Panel-ICU**      2/22/2019 9:36:12 AM      Accession ID: **B6**

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

**Nova Full Panel-ICU**      2/23/2019 9:56:25 AM      Accession ID: **B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	67 - 135	mg/dL
UREA		8 - 30	mg/dL
CREATININE		0.6 - 2	mg/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
MAGNESIUM 2+		1.8 - 3	mEq/L
T. PROTEIN		5.5 - 7.8	g/dL
ALBUMIN		2.8 - 4	g/dL
GLOBULINS		2.3 - 4.2	g/dL
A/G RATIO		0.7 - 1.6	
SODIUM		140 - 150	mEq/L
CHLORIDE		106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
iCO2 (BICARB)		14 - 28	mEq/L
AGAP		8 - 19	
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
ALK PHOS		12 - 127	U/L
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		22 - 422	U/L
CHOLESTEROL		82 - 355	mg/dL
TRIGLYCERIDES		30 - 338	mg/dl
AMYLASE		409 - 1250	U/L

1930 Result(s) verified



Client:  
Patient:

**B6**

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

Nova Full Panel-ICU 2/24/2019 12:18:25 PM Accession ID: **B6**

Test	Results	Reference Range	Units
GLUCOSE		67 - 135	mg/dL
UREA		8 - 30	mg/dL
CREATININE		0.6 - 2	mg/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
MAGNESIUM 2+		1.8 - 3	mEq/L
T. PROTEIN		5.5 - 7.8	g/dL
ALBUMIN		2.8 - 4	g/dL
GLOBULINS		2.3 - 4.2	g/dL
A/G RATIO		0.7 - 1.6	
SODIUM		140 - 150	mEq/L
CHLORIDE		106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
ICO2 (BICARB)	<b>B6</b>	14 - 28	mEq/L
AGAP		8 - 19	
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
ALK PHOS		12 - 127	U/L
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		22 - 422	U/L
CHOLESTEROL		82 - 355	mg/dL
TRIGLYCERIDES		30 - 338	mg/dl
AMYLASE		409 - 1250	U/L
2888 Result(s) verified			
OSMOLALITY (CALCULATED)		291 - 315	mmol/L



14/85

**B6**

Printed Monday, February 25, 2019

Client:  
Patient:

**B6**

RDVM

**B6**

medical records 7/17/16-2/22/19

**B6**

**FAX COVER SHEET**

Date: 2/22/19

To: TDAs ER

Comments:

**B6**

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

If you have received this fax in error, please contact

**B6**

Thank you, and have a nice day!



01 / 1 #

**B6**

**B6**

02-22-19 09:58 AM FROM



Client:  
Patient:

**B6**

RDVM

**B6**

medical records 7/17/16-2/22/19

**B6**

Patient Chart

Printed: 02-22-19 at 8:51a

CLIENT INFORMATION

Name  
Address

**B6**

PATIENT INFORMATION

Name

**B6**

Sex

Male Neutered

Species

Canine

Birthday

**B6**

Breed

Boxer

ID

Color

Brown

Age

10y

Rabies

1959-16

Weight

57.40 Lbs

Reminded

02-18-19

Codes

Reminders for:

**B6**

Last done

- 06-12-20
- 07-24-19
- 07-24-19
- 07-24-19
- 05-26-19
- 02-23-19
- 08-14-18
- 07-07-17

**B6**

Charlie's weight history

- 02-22-19
- 12-26-17
- 09-08-17
- 06-13-17
- 11-07-18
- 07-07-16
- 05-26-16
- 07-17-15
- 05-30-14
- 10-28-13
- 10-28-13
- 05-06-13
- 01-06-11

**B6**

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

Date	By	Code	Description	Qty (Variance)	Photo
02-22-19			<b>B6</b>		

**B6**

SUBJECTIVE SECTION

# 2 / 10

**B6**

**B6**

101

02-22-19:09:58AM:FROM:

Client:  
Patient:

**B6**

RDVM

**B6**

medical records 7/17/16-2/22/19

**B6**

Patient Chart for **B6**  
Date: 02-22-19, Time: 8:51a

Client: Ms. **B6** Page: 2

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

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

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

**OBJECTIVE SECTION**

Quiet, nervous

**Examination Results:**

Heart

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

Oral / Nasal

**B6** d

Lungs

subjectively mild increased RE at rest (also nervous), audible crackles bilaterally

Musculoskeletal

**B6** )

Normal Systems: Coat & Skin, Eyes, Ears, Abdominal Palpation, Gastrointestinal, Lymph Nodes, Urogenital, Neurologic

**ASSESSMENT SECTION**

**NOTES**

10yo CM Boxer

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

**PLAN SECTION**

**NOTES**

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

01/10 #

**B6** 101

02-22-19:08:58AM FROM:

Client:  
Patient:

**B6**

RDVM

**B6**

medical records 7/17/16-2/22/19

**B6**

Patient Chart for **B6**  
Date: 02-22-19, Time: 8:51a

Client: Ms. **B6**

Page: 3

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

Age: 9y

**SUBJECTIVE SECTION**

Annual exam. O does not take dog on long walks or runs anymore after the collapsing episode. Hx of arrhythmia, not seen a cardiologist. Lump on left shoulder growing. **B6**

**OBJECTIVE SECTION**

BAR, nice, nervous, shaking

**B6**

**ASSESSMENT SECTION**

**NOTES**

1. Ventricular tachycardia
2. mass

**PLAN SECTION**

**NOTES**

EKG: many runs of V-tach mixed with normal QRS complex. More than 1/2 of complexes are VPCs  
FNA mass: monomorphic population. multiple nucleoli, sometimes in acini but sometimes the cells look stellate. Sample appears neoplastic. Need pathologist interpretation. Want to know is this something we should ignore or does it need surgery. If so, needs to see cardiologist ASAP to see if anesthesia possible.

Recommend see cardiologist for consultation and further work up. Going to start of **B6** today. Dog at risk for sudden death.  
lepto, Lyme #1, 4dx

01 / 7 #

**B6**

101

02-22-19:09:58AM:R/OM

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

RDVM: **B6** medical records 7/17/16-2/22/19

**B6**

Patient Chart for: **B6**  
Date: 02-22-19, Time: 8:51a

Client: Ms. **B6** Page: 4

Date	By	Code	Description	Qty (Variance)	Photo
12-26-17	rx:	<b>B6</b>			

**B6**

SUBJECTIVE SECTION

**B6**

OBJECTIVE SECTION

Examination Results:

**B6**

PLAN SECTION

NOTES

Disp 1. **B6**  
2.  
3.  
4.  
5.  
6.

NONWELL Non-Wellness Medical Record

Age: 9y

SUBJECTIVE SECTION

See 2nd EMR above

09-08-17 **B6** PRO Recheck for Brief Medical Record

Age: 9y Weight: 55.40

06-13-17 **B6** WELL Wellness Annual Medical Record

Age: 8y Weight: 53.30

**B6** 5.00 / 9.00

SUBJECTIVE SECTION

Annual exam. Doing well for an older dog. History of **B6** no recent signs of weakness or collapse. He does tremble sometimes but o thinks that is due to nervousness. A couple new skin bumps. **B6**

01 / 6 #

**B6** 10

02-22-19 10:58AM FROM:

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

RDVM **B6** medical records 7/17/16-2/22/19

**B6**

Patient Chart for **B6**  
Date: 02-22-19, Time: 8:51a

Client: Ms **B6** Page: 5

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

they intentionally reduced the food

**OBJECTIVE SECTION**

BAR

Examination Results:

Coat & Skin

**B6**

Heart

sinus arrhythmia and some ectopic beats. PSS. NMA

Oral / Nasal

**B6**

Normal Systems: Eyes, Ears, Lungs, Abdominal Palpation, Gastrointestinal, Lymph Nodes, Urogenital, Neurologic, Musculoskeletal

**ASSESSMENT SECTION**

**NOTES**

arrhythmia r/o ARVC vs DCM  
gingival hyperplasia

**PLAN SECTION**

**NOTES**

Since **B6** is not experiencing anything that sounds like heart disease, elects to hold off on diagnostics and medication.  
DAPPL, lyme, 4dx  
cysts, ok to just leave alone.

11-08-18

CJC NONWELL Non-Wellness Medical Record

Client instructions - Please keep **B6** rested for the next week (on a leash for short bathroom breaks then back inside). Avoid running/jumping/stairs if possible.

Give the **B6** as directed for discomfort.

He may need to wear an E-collar if he continues licking at his foot.

Please call if he doesn't improve over the next week. \*we can dispense gentaspray which is a topical that will help with inflammation or consider x-rays

Age: 8y Temp: **B6** Pulse: **B6**  
BCS: **B6**

**SUBJECTIVE SECTION**

**B6**

01 / 9 #

**B6** 10

02-22-19:09:56AM:FRM:

Client:  
Patient:

**B6**

RDVM

**B6**

medical records 7/17/16-2/22/19

**B6**

Patient Chart for **B6**  
Date: 02-22-19, Time: 8:51a

Client: **B6**

Page: 6

Date	By	Code	Description	Qty (Variance)	Photo
			O applying	<b>B6</b>	

OBJECTIVE SECTION

BAR

**B6**

Heart  
Arrhythmia (chronic hx).

**B6**

ASSESSMENT SECTION

NOTES

**B6**

PLAN SECTION

NOTES

Exercise restriction for the next week.

**B6**

Discussed Gentaspray but O to hold for now

Call if doesn't improve, can consider x-rays for further workup (would recommend bloodwork first ideally for further evaluation of weight loss)

11-07-16

**B6**

PRO

Recheck for Brief Medical Record

Age: 8y Weight: 34.00

SUBJECTIVE SECTION

**B6**

OBJECTIVE SECTION

BAR

Examination Results:  
Coat & Skin

# 7/10

**B6**

10

02-22-19:09:58AM:From

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

RDVM **B6** medical records 7/17/16-2/22/19

**B6**

Patient Chart for **B6**  
Date: 02-22-19, Time: 8:51a

Client: **B6** Page: 7

Date	By	Code	Description	Qty (Variance)	Photo
			<b>B6</b>		

PLAN SECTION

NOTES

**B6**

07-07-16

CJC WELL Wellness Annual Medical Record

Client Instructions - We will call tomorrow if there are any issues with his testing results (no call means clear).  
Please call if you would like to further discuss or schedule an echocardiogram and EKG to check his heart.

**B6**

**B6**

SUBJECTIVE SECTION

**B6**

OBJECTIVE SECTION

**B6**

Examination Results:

Heart  
Arrhythmia ausculted with occasional dropped pulses.

Oral / Nasal

**B6**

**B6**

ASSESSMENT SECTION

NOTES

Zya GM Boxer. Arrhythmia, history of collapsing episodes (none recently) no ARVC.  
**B6** Suspect neurogenic tremor in hind. **B6**

PLAN SECTION

NOTES

01 / 8 #

**B6**

02-22-19 09:58AM FROM:

Client:  
Patient:

**B6**

RDVM

**B6**

medical records 7/17/16-2/22/19

**B6**

Patient Chart for **B6**  
Date: 02-22-19, Time: 8:51a

Client: **B6** Page: 8

Date	By	Code	Description	Qty (Variance)	Photo
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4dx, fecal

05-26-18

**B6**

WELL

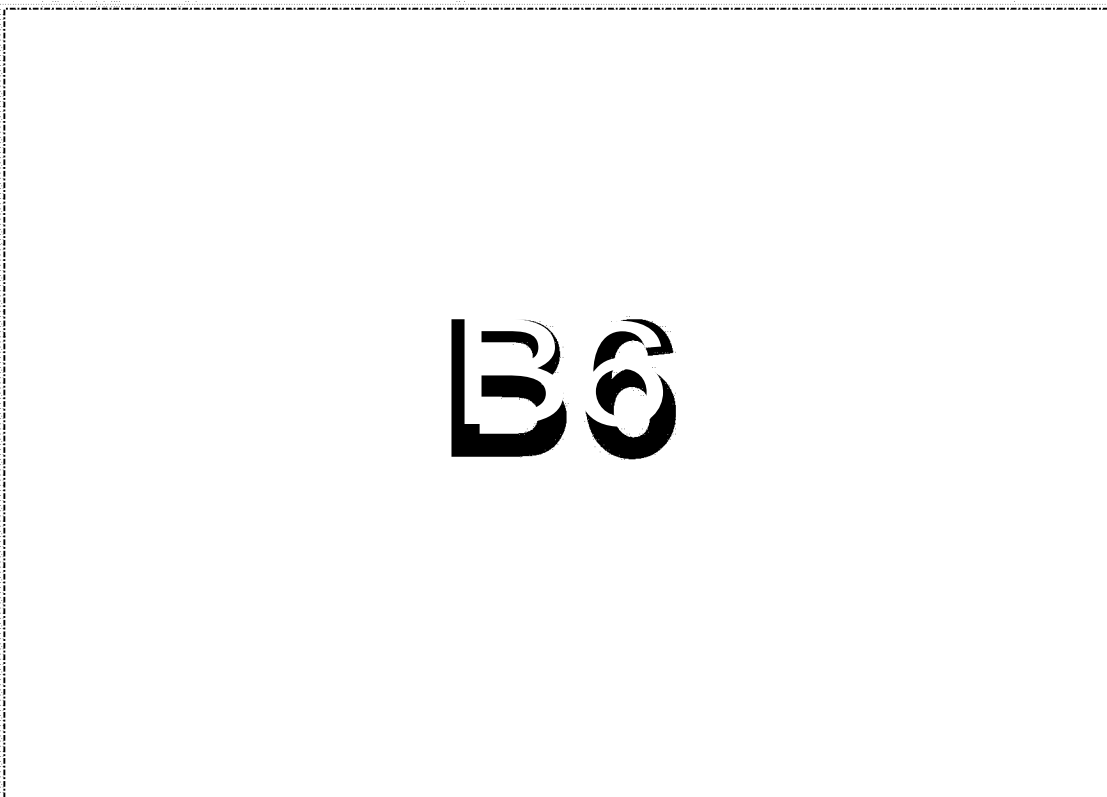
Wellness Annual Medical Record

**B6**

SUBJECTIVE SECTION

Presenting for rabies. Doing well. They are getting a puppy

PLAN SECTION



ASSESSMENT SECTION

01 / 8 #

**B6**

10

02-22-19:08:58AM; From:



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

RDVM: **B6** medical records 7/17/16-2/22/19

**B6**

Patient Chart for: **B6**  
Date: 02-22-19, Time: 8:51a

Client: **B6** Page: 9

Date	By	Code	Description	Qty (Variance)	Photo
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NOTES

6yo CM Boxer. Hx collapsing episodes during exercise r/o ARVC.

PLAN SECTION

NOTES

4dx, fecal  
Lepto, Lyme  
Recommend echo with EKG, gave handout on ARVC in boxers. Recommend call with questions or to schedule.

05-30-14		CONVW	Converted Weight	0	
	Age: 5y		Weight: 60.80		
10-28-13		CONVW	Converted Weight	0	
	Age: 5y		Weight: 58.70		
		CONVW	Converted Weight	0	
	Age: 5y		Weight: 58.70		
05-06-13		CONVW	Converted Weight	0	
	Age: 4y		Weight: 59.30		
01-06-11		CONVW	Converted Weight	0	
	Age: 2y		Weight: 55.00		

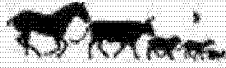
# 10/10

**B6**

02-22-19 08:58 AM From:

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

CBC/Chem - 2/22/2019



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

**DUPLICATE**

Name/DOB: **B6** Sex: CM  
Patient ID: **B6** Age: 10  
Phone number: Order Location: V320559: Investigation into  
Collection Date: 2/22/2019 12:37 PM Species: Canine Sample ID: 1902220072  
Approval date: 2/22/2019 1:35 PM Breed: Boxer

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

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

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

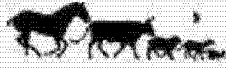
SMACHUNSK		Ref. Range/Males
Seg Neuts (%)	<b>B6</b>	43-86 %
Lymphocytes (%)	<b>B6</b>	7-47 %
Monocytes (%)	<b>B6</b>	1-15 %
Nucleated RBC	<b>B6</b>	0-1 /100 WBC
02/22/19 1:13 PM	<b>B6</b>	
Seg Neutrophils (Abs) Advia	<b>B6</b>	2.800-11.500 K/uL
Lymphs (Abs) Advia	<b>B6</b>	1.00-4.80 K/uL
Mono (Abs) Advia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

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

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

Client: **B6**  
Patient:

CBC/Chem - 2/22/2019



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

**DUPLICATE**

Name/DOB: **B6** Sex: CM  
Patient ID: **B6** Age: 10  
Phone number: Species: Canine  
Collection Date: 2/22/2019 12:37 PM Breed: Boxer  
Approval date: 2/22/2019 1:35 PM  
Provider: **B6**  
Order Location: V320559: Investigation into  
Sample ID: 1902220072

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

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

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

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

Sample ID: 1902220072/2  
REPRINT: Orig. printing on 2/22/2019 (Final)

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

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

**IDEXX BNP - 2/22/2019**

IDEXX Reference Laboratories

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

IDEXX VetConnect 1-888-433-9967

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

Date: 02/22/2019  
Requisition #: 1326693  
Accession #: **B6**  
Ordered by: **B6**

TUFTS UNIVERSITY  
200 WESTBORO RD  
NORTH GRAFTON, Massachusetts 01536  
508-339-5395

Account: **B6**

**CARDIOPET proBNP - CANINE**

Test	Result	Reference Range	Low	Normal	High
CARDIOPET proBNP - CANINE	<b>B6</b>	0-960 pmol/L		HIGH	<b>B6</b>

**Comments**

1 **B6**

Please note: complete interpretive comments for all concentrations of Cardiotet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

**B6**

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

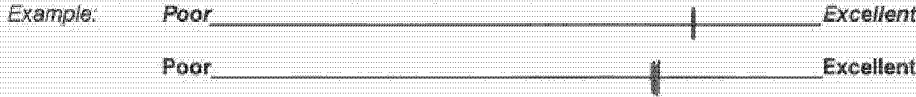
**Diet history 2/22/19**

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

**B6**

Pet's name: **B6** Owner's name: **B6** Today's date: 2/22/19

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)



2. Have you noticed a change in your pet's appetite over the last 1-2 weeks? (check all that apply)  
 Eats about the same amount as usual  Eats less than usual  Eats more than usual  
 Seems to prefer different foods than usual  Other \_\_\_\_\_

3. Over the last few weeks, has your pet (check one)  
 Lost weight  Gained weight  Stayed about the same weight  Don't know

1. Please list below **ALL** pet foods, people food, treats, snack, dental chews, rawhides, and any other food item that your pet currently eats and that you have fed in the last 2 years.

Please provide enough detail that we could go to the store and buy the exact same food - examples are shown in the table

Food (include specific product and flavor)	Form	Amount	How often?	Dates fed
Nutro Grain Free Chicken, Lentil, & Sweet Potato Adult	dry	1 1/2 cup	2x/day	Jan 2016-present
85% lean hamburger	microwaved	3 oz	1x/week	June -Aug 2016
Pupperoni original beef flavor	treat	1/2	1x/day	Sept 2016-present
Rawhide	treat	6 inch twist	1x/week	Dec 2018-present
Wellness Complete Health - Sweet Potato & Fish	dru	1 cup	2x/day	2012-2018
Mother Hubbard's Grainfree	dru	1 cup	2x/day	2018-2012
Milkbone brushing chews	treat	1/day	1/day	2018-2019
Milkbone treat	treats		2-3x/day	longtime
Rawl Canine Boxer	Dru	1 cup	2x/day	2018-present
Wellness Soft Bites Lamb Salmon & Grainfree	treats		1x/day	longtime

\*Any additional diet information can be listed on the back of this sheet

2. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)?  Yes  No If yes, please list which ones and give brands and amounts:

	Brand/Concentration	Amount per day
Taurine <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Carnitine <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Antioxidants <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Multivitamin <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Fish oil <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Coenzyme Q10 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Other (please list): Example: Vitamin C	Nature's Bounty	500 mg tablets - 1 per day

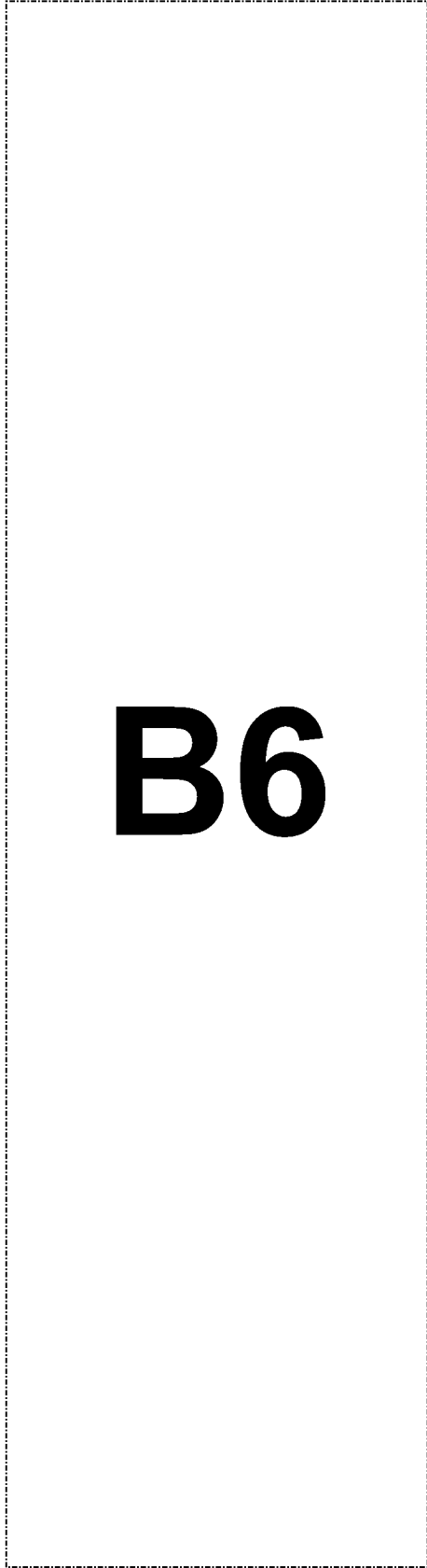
3. How do you administer pills to your pet?

- I do not give any medications
- I put them directly in my pet's mouth without food
- I put them in my pet's dog/cat food
- I put them in a Pill Pocket or similar product
- I put them in foods (list foods): cheese, Peppersoni

*Will switch to RC Carnitine*

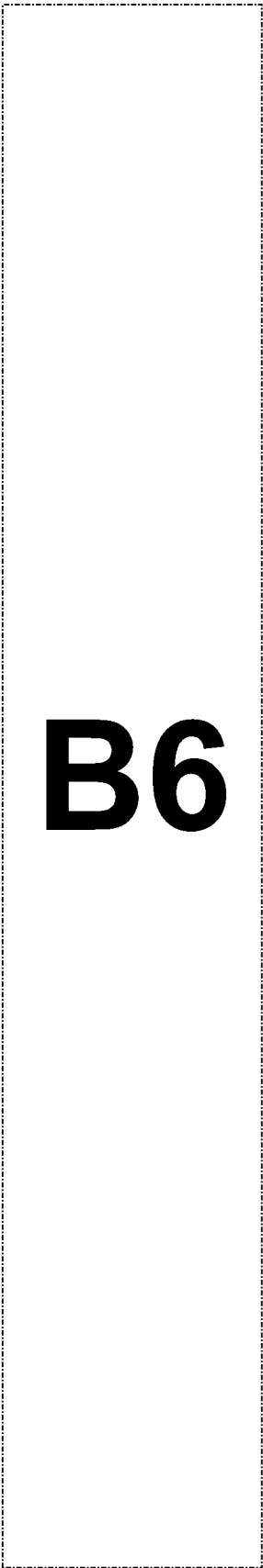
**Vitals Results**

2/22/2019 10:25:01 AM Lasix treatment note  
2/22/2019 10:36:48 AM Weight (kg)  
2/22/2019 10:58:00 AM Lasix treatment note  
  
2/22/2019 12:43:21 PM Eliminations  
2/22/2019 12:43:37 PM Nursing note  
  
2/22/2019 12:44:22 PM Quantify IV Fluids (CRI) in mls  
2/22/2019 12:50:46 PM Cardiac rhythm  
2/22/2019 12:50:47 PM Heart Rate (/min)  
2/22/2019 12:52:26 PM Respiratory Rate  
2/22/2019 1:00:33 PM Eliminations  
2/22/2019 1:10:19 PM Quantify IV Fluids (CRI) in mls  
2/22/2019 1:10:20 PM Catheter Assessment  
2/22/2019 2:03:55 PM Cardiac rhythm  
2/22/2019 2:03:56 PM Heart Rate (/min)  
2/22/2019 2:04:50 PM Respiratory Rate  
2/22/2019 2:25:32 PM Lasix treatment note  
2/22/2019 2:40:57 PM Eliminations  
2/22/2019 3:00:23 PM Cardiac rhythm  
2/22/2019 3:00:24 PM Heart Rate (/min)  
2/22/2019 3:01:00 PM Respiratory Rate  
2/22/2019 3:49:48 PM Cardiac rhythm  
2/22/2019 3:49:49 PM Heart Rate (/min)  
2/22/2019 3:50:33 PM Respiratory Rate  
2/22/2019 4:05:52 PM Eliminations  
2/22/2019 4:07:29 PM Eliminations  
  
2/22/2019 4:07:44 PM Nursing note  
  
2/22/2019 4:31:46 PM Nursing note  
2/22/2019 5:00:16 PM Cardiac rhythm  
2/22/2019 5:00:17 PM Heart Rate (/min)  
2/22/2019 5:05:10 PM Respiratory Rate  
2/22/2019 5:38:29 PM Eliminations  
2/22/2019 5:38:44 PM Amount eaten  
2/22/2019 5:55:28 PM Nursing note  
2/22/2019 6:03:19 PM Cardiac rhythm  
2/22/2019 6:03:20 PM Heart Rate (/min)  
2/22/2019 6:04:06 PM Respiratory Rate  
2/22/2019 6:24:06 PM Quantify IV Fluids (CRI) in mls



**Vitals Results**

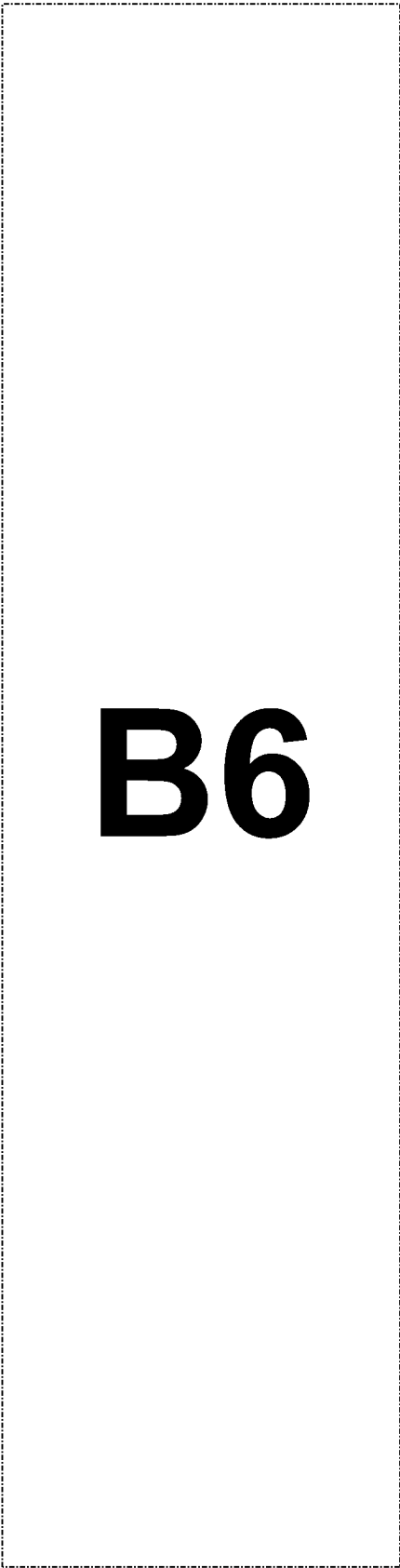
2/22/2019 6:24:07 PM Catheter Assessment  
2/22/2019 6:51:37 PM Cardiac rhythm  
2/22/2019 6:51:38 PM Heart Rate (/min)  
2/22/2019 6:51:49 PM Respiratory Rate  
2/22/2019 7:51:32 PM Respiratory Rate  
2/22/2019 7:52:03 PM Cardiac rhythm  
2/22/2019 7:52:04 PM Heart Rate (/min)  
2/22/2019 7:53:44 PM Lasix treatment note  
2/22/2019 8:45:01 PM Eliminations  
2/22/2019 8:52:50 PM Cardiac rhythm  
2/22/2019 8:52:51 PM Heart Rate (/min)  
2/22/2019 8:59:02 PM Respiratory Rate  
2/22/2019 9:25:37 PM Quantify IV Fluids (CRI) in mls  
2/22/2019 9:25:38 PM Catheter Assessment  
2/22/2019 9:49:17 PM Cardiac rhythm  
2/22/2019 9:49:18 PM Heart Rate (/min)  
2/22/2019 9:56:13 PM Respiratory Rate  
2/22/2019 10:51:19 PM Cardiac rhythm  
2/22/2019 10:51:20 PM Heart Rate (/min)  
2/22/2019 10:52:28 PM Respiratory Rate  
2/22/2019 11:34:01 PM Amount eaten  
2/22/2019 11:55:25 PM Respiratory Rate  
2/22/2019 11:55:36 PM Eliminations  
2/22/2019 11:55:46 PM Cardiac rhythm  
2/22/2019 11:55:47 PM Heart Rate (/min)  
2/23/2019 1:00:00 AM Cardiac rhythm  
2/23/2019 1:00:01 AM Heart Rate (/min)  
2/23/2019 1:00:21 AM Respiratory Rate  
2/23/2019 1:52:25 AM Lasix treatment note  
2/23/2019 1:52:38 AM Eliminations  
2/23/2019 1:53:31 AM Respiratory Rate  
2/23/2019 1:53:43 AM Quantify IV Fluids (CRI) in mls  
2/23/2019 1:53:44 AM Catheter Assessment  
2/23/2019 1:54:09 AM Cardiac rhythm  
2/23/2019 1:54:10 AM Heart Rate (/min)  
2/23/2019 2:16:55 AM Eliminations  
2/23/2019 2:33:32 AM Eliminations  
2/23/2019 2:39:52 AM Cardiac rhythm  
2/23/2019 2:39:53 AM Heart Rate (/min)  
2/23/2019 3:36:15 AM Cardiac rhythm  
2/23/2019 3:36:16 AM Heart Rate (/min)



Client: **B6**  
Patient:

**Vitals Results**

2/23/2019 3:41:17 AM	Respiratory Rate
2/23/2019 3:41:27 AM	Eliminations
2/23/2019 4:49:07 AM	Cardiac rhythm
2/23/2019 4:49:08 AM	Heart Rate (/min)
2/23/2019 4:49:51 AM	Respiratory Rate
2/23/2019 5:28:53 AM	Respiratory Rate
2/23/2019 5:29:07 AM	Quantify IV Fluids (CRI) in mls
2/23/2019 5:29:08 AM	Catheter Assessment
2/23/2019 5:36:36 AM	Temperature (F)
2/23/2019 5:56:48 AM	Cardiac rhythm
2/23/2019 5:56:49 AM	Heart Rate (/min)
2/23/2019 6:56:08 AM	Cardiac rhythm
2/23/2019 6:56:09 AM	Heart Rate (/min)
2/23/2019 6:56:56 AM	Respiratory Rate
2/23/2019 7:37:07 AM	Weight (kg)
2/23/2019 7:37:52 AM	Eliminations
2/23/2019 7:58:21 AM	Cardiac rhythm
2/23/2019 7:58:22 AM	Heart Rate (/min)
2/23/2019 7:59:12 AM	Respiratory Rate
2/23/2019 9:09:20 AM	Cardiac rhythm
2/23/2019 9:09:21 AM	Heart Rate (/min)
2/23/2019 9:33:45 AM	Respiratory Rate
2/23/2019 10:02:14 AM	Cardiac rhythm
2/23/2019 10:02:15 AM	Heart Rate (/min)
2/23/2019 10:05:31 AM	Respiratory Rate
2/23/2019 10:05:43 AM	Catheter Assessment
2/23/2019 10:05:50 AM	Lasix treatment note
2/23/2019 11:06:13 AM	Cardiac rhythm
2/23/2019 11:06:14 AM	Heart Rate (/min)
2/23/2019 11:07:32 AM	Respiratory Rate
2/23/2019 11:27:21 AM	Eliminations
2/23/2019 11:27:43 AM	Amount eaten
2/23/2019 12:23:03 PM	Cardiac rhythm
2/23/2019 12:23:04 PM	Heart Rate (/min)
2/23/2019 12:26:12 PM	Respiratory Rate
2/23/2019 1:04:31 PM	Cardiac rhythm
2/23/2019 1:04:32 PM	Heart Rate (/min)
2/23/2019 1:05:24 PM	Respiratory Rate
2/23/2019 1:20:37 PM	Catheter Assessment

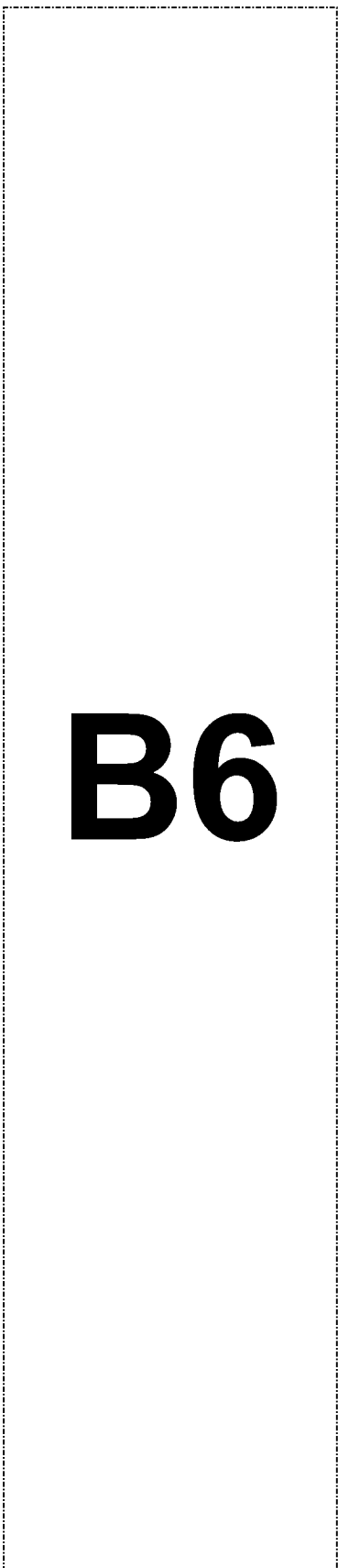




Client: **B6**  
Patient:

**Vitals Results**

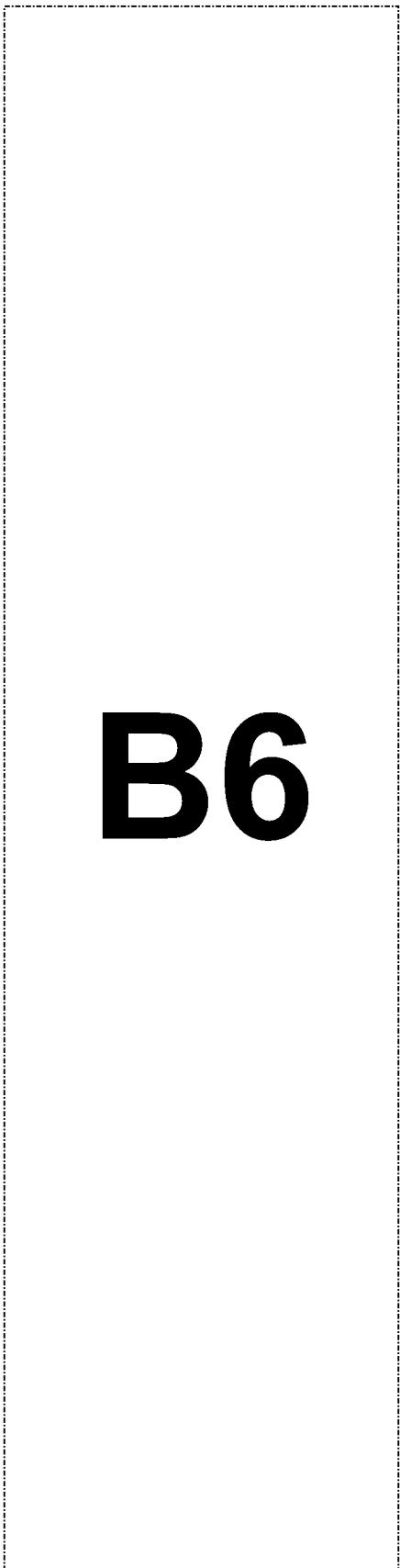
2/23/2019 1:55:09 PM	Cardiac rhythm
2/23/2019 1:55:10 PM	Heart Rate (/min)
2/23/2019 1:55:50 PM	Respiratory Rate
2/23/2019 2:52:23 PM	Cardiac rhythm
2/23/2019 2:52:24 PM	Heart Rate (/min)
2/23/2019 2:53:23 PM	Respiratory Rate
2/23/2019 3:12:08 PM	Eliminations
2/23/2019 3:50:24 PM	Respiratory Rate
2/23/2019 3:50:40 PM	Cardiac rhythm
2/23/2019 3:50:41 PM	Heart Rate (/min)
2/23/2019 4:49:31 PM	Respiratory Rate
2/23/2019 4:54:01 PM	Cardiac rhythm
2/23/2019 4:54:02 PM	Heart Rate (/min)
2/23/2019 5:22:43 PM	Catheter Assessment
2/23/2019 5:33:09 PM	Amount eaten
2/23/2019 5:46:40 PM	Respiratory Rate
2/23/2019 5:46:52 PM	Cardiac rhythm
2/23/2019 5:46:53 PM	Heart Rate (/min)
2/23/2019 6:00:15 PM	Amount eaten
2/23/2019 6:20:32 PM	Lasix treatment note
2/23/2019 6:30:51 PM	Eliminations
2/23/2019 7:00:21 PM	Cardiac rhythm
2/23/2019 7:00:22 PM	Heart Rate (/min)
2/23/2019 7:08:36 PM	Respiratory Rate
2/23/2019 8:00:49 PM	Eliminations
2/23/2019 8:07:32 PM	Cardiac rhythm
2/23/2019 8:07:33 PM	Heart Rate (/min)
2/23/2019 8:08:32 PM	Respiratory Rate
2/23/2019 9:00:28 PM	Cardiac rhythm
2/23/2019 9:00:29 PM	Heart Rate (/min)
2/23/2019 9:06:37 PM	Respiratory Rate
2/23/2019 9:17:59 PM	Catheter Assessment
2/23/2019 9:36:52 PM	Eliminations
2/23/2019 9:40:20 PM	Respiratory Rate
2/23/2019 9:41:25 PM	Cardiac rhythm
2/23/2019 9:41:26 PM	Heart Rate (/min)
2/23/2019 11:21:33 PM	Cardiac rhythm
2/23/2019 11:21:34 PM	Heart Rate (/min)
2/23/2019 11:22:05 PM	Respiratory Rate
2/23/2019 11:24:38 PM	Amount eaten
2/23/2019 11:27:39 PM	Weight (kg)



Client: **B6**  
Patient:

**Vitals Results**

2/24/2019 12:10:14 AM Cardiac rhythm  
2/24/2019 12:10:15 AM Heart Rate (/min)  
2/24/2019 12:10:41 AM Respiratory Rate  
2/24/2019 1:02:51 AM Catheter Assessment  
2/24/2019 1:03:53 AM Cardiac rhythm  
2/24/2019 1:03:54 AM Heart Rate (/min)  
2/24/2019 1:04:19 AM Respiratory Rate  
2/24/2019 1:05:57 AM Eliminations  
2/24/2019 1:22:13 AM Respiratory Rate  
2/24/2019 1:22:23 AM Eliminations  
2/24/2019 1:22:32 AM Nursing note  
2/24/2019 1:57:47 AM Lasix treatment note  
2/24/2019 2:00:09 AM Cardiac rhythm  
2/24/2019 2:00:10 AM Heart Rate (/min)  
2/24/2019 2:59:53 AM Cardiac rhythm  
2/24/2019 2:59:54 AM Heart Rate (/min)  
2/24/2019 3:03:46 AM Respiratory Rate  
2/24/2019 3:04:41 AM Eliminations  
2/24/2019 3:51:27 AM Respiratory Rate  
2/24/2019 3:58:14 AM Cardiac rhythm  
2/24/2019 3:58:15 AM Heart Rate (/min)  
2/24/2019 4:58:50 AM Catheter Assessment  
2/24/2019 5:06:40 AM Weight (kg)  
2/24/2019 5:06:48 AM Eliminations  
2/24/2019 5:06:59 AM Temperature (F)  
2/24/2019 5:08:17 AM Cardiac rhythm  
2/24/2019 5:08:18 AM Heart Rate (/min)  
2/24/2019 5:08:31 AM Respiratory Rate  
2/24/2019 5:14:08 AM Amount eaten  
2/24/2019 5:48:40 AM Cardiac rhythm  
2/24/2019 5:48:41 AM Heart Rate (/min)  
2/24/2019 5:48:58 AM Respiratory Rate  
2/24/2019 6:48:56 AM Cardiac rhythm  
2/24/2019 6:48:57 AM Heart Rate (/min)  
2/24/2019 6:49:50 AM Respiratory Rate  
2/24/2019 7:40:17 AM Eliminations  
2/24/2019 8:00:06 AM Cardiac rhythm  
2/24/2019 8:00:07 AM Heart Rate (/min)  
2/24/2019 8:01:08 AM Respiratory Rate  
2/24/2019 9:04:42 AM Respiratory Rate  
2/24/2019 9:10:17 AM Cardiac rhythm



Client: **B6**  
Patient:

**Vitals Results**

2/24/2019 9:10:18 AM	Heart Rate (/min)
2/24/2019 9:53:51 AM	Cardiac rhythm
2/24/2019 9:53:52 AM	Heart Rate (/min)
2/24/2019 10:00:19 AM	Respiratory Rate
2/24/2019 10:01:02 AM	Lasix treatment note
2/24/2019 10:01:17 AM	Catheter Assessment
2/24/2019 10:02:17 AM	Eliminations
2/24/2019 11:05:02 AM	Respiratory Rate
2/24/2019 11:06:36 AM	Cardiac rhythm
2/24/2019 11:06:37 AM	Heart Rate (/min)
2/24/2019 11:31:26 AM	Amount eaten
2/24/2019 12:11:21 PM	Cardiac rhythm
2/24/2019 12:11:22 PM	Heart Rate (/min)
2/24/2019 12:13:06 PM	Respiratory Rate
2/24/2019 12:55:17 PM	Respiratory Rate
2/24/2019 12:55:33 PM	Cardiac rhythm
2/24/2019 12:55:34 PM	Heart Rate (/min)
2/24/2019 12:59:07 PM	Eliminations
2/24/2019 12:59:18 PM	Catheter Assessment
2/24/2019 1:49:53 PM	Respiratory Rate
2/24/2019 1:50:09 PM	Cardiac rhythm
2/24/2019 1:50:10 PM	Heart Rate (/min)
2/24/2019 3:10:31 PM	Respiratory Rate
2/24/2019 3:11:24 PM	Cardiac rhythm
2/24/2019 3:11:25 PM	Heart Rate (/min)
2/24/2019 4:04:23 PM	Cardiac rhythm
2/24/2019 4:04:24 PM	Heart Rate (/min)
2/24/2019 4:04:40 PM	Respiratory Rate
2/24/2019 5:04:41 PM	Cardiac rhythm
2/24/2019 5:04:42 PM	Heart Rate (/min)
2/24/2019 5:04:55 PM	Respiratory Rate
2/24/2019 5:11:38 PM	Eliminations
2/24/2019 5:19:41 PM	Amount eaten
2/24/2019 5:31:53 PM	Amount eaten
2/24/2019 5:35:31 PM	Catheter Assessment
2/24/2019 5:57:20 PM	Cardiac rhythm
2/24/2019 5:57:21 PM	Heart Rate (/min)
2/24/2019 5:57:37 PM	Respiratory Rate

**B6**

Client:  
Patient:

**B6**

**Vitals Results**

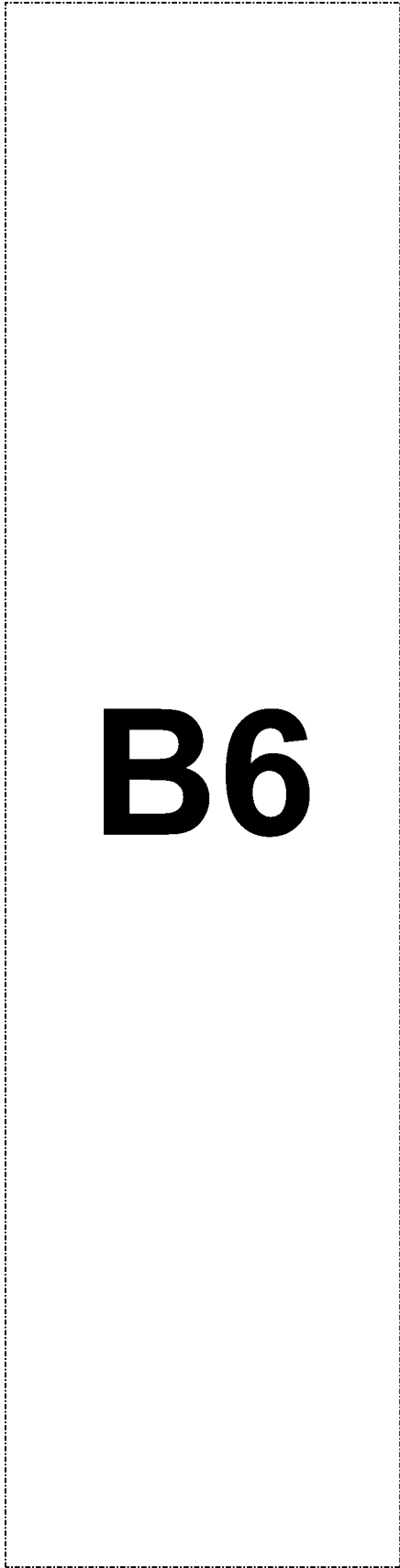
2/24/2019 7:23:42 PM	Cardiac rhythm
2/24/2019 7:23:43 PM	Heart Rate (/min)
2/24/2019 7:24:28 PM	Respiratory Rate
2/24/2019 7:56:19 PM	Cardiac rhythm
2/24/2019 7:56:20 PM	Heart Rate (/min)
2/24/2019 7:56:35 PM	Respiratory Rate
2/24/2019 8:11:41 PM	Eliminations
2/24/2019 8:11:50 PM	Weight (kg)
2/24/2019 8:46:12 PM	Cardiac rhythm
2/24/2019 9:17:13 PM	Catheter Assessment
2/24/2019 9:17:21 PM	Lasix treatment note
2/24/2019 9:18:03 PM	Cardiac rhythm
2/24/2019 9:18:04 PM	Heart Rate (/min)
2/24/2019 9:19:25 PM	Respiratory Rate
2/24/2019 9:23:52 PM	Weight (kg)
2/24/2019 9:24:05 PM	Eliminations
2/24/2019 9:53:36 PM	Cardiac rhythm
2/24/2019 9:53:37 PM	Heart Rate (/min)
2/24/2019 9:53:49 PM	Respiratory Rate
2/24/2019 11:08:13 PM	Cardiac rhythm
2/24/2019 11:08:14 PM	Heart Rate (/min)
2/24/2019 11:08:51 PM	Respiratory Rate
2/24/2019 11:09:13 PM	Amount eaten
2/25/2019 12:11:22 AM	Cardiac rhythm
2/25/2019 12:11:23 AM	Heart Rate (/min)
2/25/2019 12:12:14 AM	Respiratory Rate
2/25/2019 12:50:11 AM	Cardiac rhythm
2/25/2019 12:50:12 AM	Heart Rate (/min)
2/25/2019 12:50:28 AM	Respiratory Rate
2/25/2019 12:50:56 AM	Catheter Assessment
2/25/2019 2:11:35 AM	Cardiac rhythm
2/25/2019 2:11:36 AM	Heart Rate (/min)
2/25/2019 2:12:04 AM	Eliminations
2/25/2019 2:15:50 AM	Respiratory Rate
2/25/2019 3:09:06 AM	Cardiac rhythm
2/25/2019 3:09:07 AM	Heart Rate (/min)
2/25/2019 3:09:21 AM	Respiratory Rate
2/25/2019 4:42:38 AM	Cardiac rhythm
2/25/2019 4:42:39 AM	Heart Rate (/min)
2/25/2019 4:42:59 AM	Respiratory Rate
2/25/2019 5:32:29 AM	Catheter Assessment

**B6**

Client: **B6**  
Patient:

**Vitals Results**

2/25/2019 5:32:40 AM	Respiratory Rate
2/25/2019 5:32:49 AM	Cardiac rhythm
2/25/2019 5:32:50 AM	Heart Rate (/min)
2/25/2019 5:41:15 AM	Eliminations
2/25/2019 5:41:26 AM	Weight (kg)
2/25/2019 5:45:16 AM	Temperature (F)
2/25/2019 5:45:27 AM	Amount eaten
2/25/2019 5:58:53 AM	Cardiac rhythm
2/25/2019 5:58:54 AM	Heart Rate (/min)
2/25/2019 5:59:10 AM	Respiratory Rate
2/25/2019 7:26:07 AM	Respiratory Rate
2/25/2019 7:28:28 AM	Cardiac rhythm
2/25/2019 7:28:29 AM	Heart Rate (/min)
2/25/2019 7:52:07 AM	Cardiac rhythm
2/25/2019 7:52:08 AM	Heart Rate (/min)
2/25/2019 7:54:41 AM	Respiratory Rate
2/25/2019 9:01:52 AM	Cardiac rhythm
2/25/2019 9:01:53 AM	Heart Rate (/min)
2/25/2019 9:09:06 AM	Respiratory Rate
2/25/2019 9:22:41 AM	Eliminations
2/25/2019 10:03:30 AM	Cardiac rhythm
2/25/2019 10:03:31 AM	Heart Rate (/min)
2/25/2019 10:21:53 AM	Catheter Assessment
2/25/2019 10:22:05 AM	Respiratory Rate
2/25/2019 10:25:31 AM	Lasix treatment note
2/25/2019 10:51:49 AM	Cardiac rhythm
2/25/2019 10:51:50 AM	Heart Rate (/min)
2/25/2019 10:57:46 AM	Respiratory Rate
2/25/2019 12:03:00 PM	Cardiac rhythm
2/25/2019 12:03:01 PM	Heart Rate (/min)
2/25/2019 12:03:41 PM	Respiratory Rate
2/25/2019 12:59:10 PM	Cardiac rhythm
2/25/2019 12:59:11 PM	Heart Rate (/min)
2/25/2019 1:00:11 PM	Respiratory Rate
2/25/2019 1:06:35 PM	Eliminations
2/25/2019 1:07:04 PM	Catheter Assessment
2/25/2019 1:58:26 PM	Cardiac rhythm
2/25/2019 1:58:27 PM	Heart Rate (/min)
2/25/2019 1:59:52 PM	Respiratory Rate
2/25/2019 2:49:26 PM	Cardiac rhythm



Client:  
Patient:

**B6**

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**Vitals Results**

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2/25/2019 2:49:27 PM	Heart Rate (/min)
2/25/2019 2:49:40 PM	Respiratory Rate
2/25/2019 3:47:30 PM	Cardiac rhythm
2/25/2019 3:47:31 PM	Heart Rate (/min)
2/25/2019 3:47:42 PM	Respiratory Rate

**B6**

Client:  
Patient:

**B6**

**ECG from Cardio**

---

**B6**

2/22/2019 11:43:38 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

---

**B6**

Client: **B6**  
Patient:

**ECG from Cardio**

---

**B6**

2/22/2019 11:45:45 AM

Page 1 of 2

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

---

**B6**



Client: **B6**  
Patient:

**ECG from Cardio**

---

**B6**

2/22/2019 11:45:45 AM

Page 2 of 2

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

---

**B6**

Client: **B6**  
Patient:

**ECG from Cardio**

---

**B6**

2/22/2019 11:46:06 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

---

**B6**

Client:  
Patient:

**B6**

**ECG from Cardio**

---

**B6**

2/22/2019 11:46:06 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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**B6**

Client: **B6**  
Patient:

**ECG from Cardio**

---

**B6**

2/22/2019 11:48:08 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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**B6**

Client:  
Patient:

**B6**

**ECG from Cardio**

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**B6**

2/22/2019 11:50:34 AM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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**B6**

Client: **B6**  
Patient:

**Patient History**

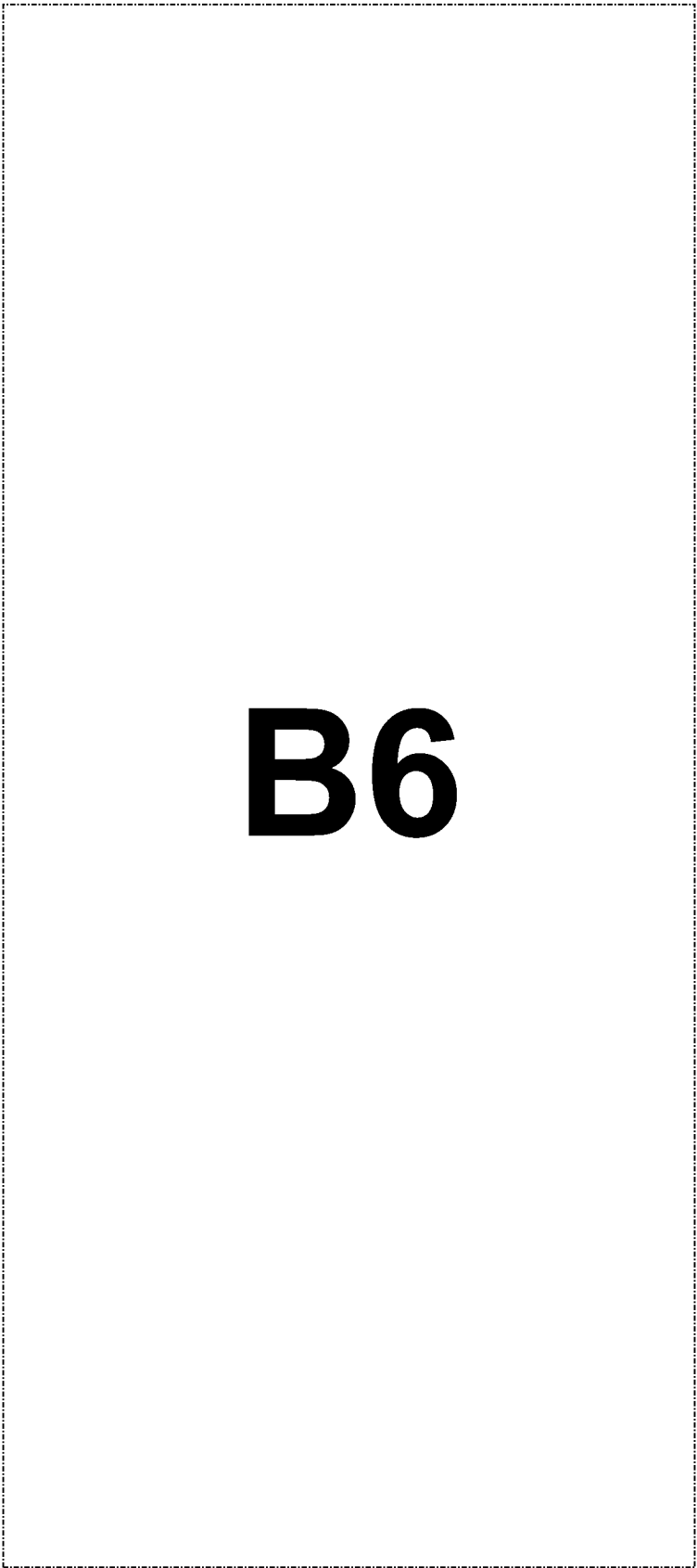
02/22/2019 09:15 AM UserForm  
02/22/2019 09:30 AM Purchase  
02/22/2019 09:36 AM Labwork  
02/22/2019 09:36 AM Purchase  
02/22/2019 10:10 AM UserForm  
02/22/2019 10:16 AM Purchase  
02/22/2019 10:16 AM Treatment  
02/22/2019 10:25 AM Vitals  
02/22/2019 10:34 AM UserForm  
  
02/22/2019 10:36 AM Vitals  
02/22/2019 10:46 AM UserForm  
  
02/22/2019 10:52 AM Deleted Reason  
  
02/22/2019 10:52 AM Deleted Reason  
  
02/22/2019 10:52 AM Treatment  
02/22/2019 10:58 AM Vitals  
02/22/2019 11:36 AM Treatment  
02/22/2019 11:47 AM Purchase  
02/22/2019 12:01 PM Prescription  
02/22/2019 12:02 PM Prescription  
02/22/2019 12:43 PM Vitals  
02/22/2019 12:43 PM Vitals  
02/22/2019 12:44 PM Vitals  
02/22/2019 12:50 PM Purchase  
02/22/2019 12:50 PM Purchase  
02/22/2019 12:50 PM Treatment  
  
02/22/2019 12:50 PM Vitals  
02/22/2019 12:50 PM Vitals  
02/22/2019 12:52 PM Treatment  
02/22/2019 12:52 PM Vitals  
02/22/2019 01:00 PM Treatment  
02/22/2019 01:00 PM Vitals  
02/22/2019 01:00 PM Treatment  
02/22/2019 01:10 PM Treatment  
02/22/2019 01:10 PM Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

02/22/2019 01:10 PM Vitals  
02/22/2019 01:26 PM Purchase  
02/22/2019 01:26 PM Purchase  
02/22/2019 01:26 PM Purchase  
02/22/2019 01:42 PM Purchase  
02/22/2019 01:42 PM Purchase  
02/22/2019 02:03 PM Treatment  
  
02/22/2019 02:03 PM Vitals  
02/22/2019 02:03 PM Vitals  
02/22/2019 02:04 PM Treatment  
02/22/2019 02:04 PM Vitals  
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02/22/2019 02:11 PM Purchase  
02/22/2019 02:25 PM Vitals  
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02/22/2019 04:32 PM Prescription  
02/22/2019 05:00 PM Treatment  
  
02/22/2019 05:00 PM Vitals  
02/22/2019 05:00 PM Vitals  
02/22/2019 05:05 PM Treatment  
02/22/2019 05:05 PM Vitals



Client: **B6**  
Patient:

**Patient History**

02/22/2019 05:16 PM Treatment  
02/22/2019 05:38 PM Treatment  
02/22/2019 05:38 PM Vitals  
02/22/2019 05:38 PM Treatment  
  
02/22/2019 05:38 PM Vitals  
02/22/2019 05:39 PM Treatment  
02/22/2019 05:55 PM Vitals  
02/22/2019 06:03 PM Treatment  
  
02/22/2019 06:03 PM Vitals  
02/22/2019 06:03 PM Vitals  
02/22/2019 06:04 PM Treatment  
02/22/2019 06:04 PM Vitals  
02/22/2019 06:24 PM Treatment  
02/22/2019 06:24 PM Vitals  
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02/22/2019 07:53 PM Vitals  
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02/22/2019 08:52 PM Treatment  
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02/22/2019 08:52 PM Vitals  
02/22/2019 08:52 PM Vitals  
02/22/2019 08:59 PM Treatment  
02/22/2019 08:59 PM Vitals  
02/22/2019 09:09 PM Treatment  
  
02/22/2019 09:09 PM Treatment  
  
02/22/2019 09:25 PM Treatment  
02/22/2019 09:25 PM Vitals  
02/22/2019 09:25 PM Vitals

**B6**



Client: **B6**  
Patient:

**Patient History**

02/22/2019 09:49 PM	Treatment
02/22/2019 09:49 PM	Vitals
02/22/2019 09:49 PM	Vitals
02/22/2019 09:56 PM	Treatment
02/22/2019 09:56 PM	Vitals
02/22/2019 10:51 PM	Treatment
02/22/2019 10:51 PM	Vitals
02/22/2019 10:51 PM	Vitals
02/22/2019 10:52 PM	Treatment
02/22/2019 10:52 PM	Vitals
02/22/2019 11:34 PM	Treatment
02/22/2019 11:34 PM	Vitals
02/22/2019 11:55 PM	Treatment
02/22/2019 11:55 PM	Vitals
02/22/2019 11:55 PM	Treatment
02/22/2019 11:55 PM	Vitals
02/22/2019 11:55 PM	Treatment
02/22/2019 11:55 PM	Vitals
02/22/2019 11:55 PM	Treatment
02/22/2019 11:55 PM	Vitals
02/22/2019 11:55 PM	Vitals
02/23/2019 12:00 AM	Purchase
02/23/2019 01:00 AM	Treatment
02/23/2019 01:00 AM	Vitals
02/23/2019 01:00 AM	Vitals
02/23/2019 01:00 AM	Treatment
02/23/2019 01:00 AM	Vitals
02/23/2019 01:00 AM	Treatment
02/23/2019 01:52 AM	Vitals
02/23/2019 01:52 AM	Treatment
02/23/2019 01:52 AM	Vitals
02/23/2019 01:53 AM	Treatment
02/23/2019 01:53 AM	Vitals
02/23/2019 01:53 AM	Treatment
02/23/2019 01:53 AM	Vitals
02/23/2019 01:53 AM	Vitals
02/23/2019 01:54 AM	Treatment
02/23/2019 01:54 AM	Vitals
02/23/2019 01:54 AM	Vitals
02/23/2019 02:16 AM	Vitals
02/23/2019 02:33 AM	Vitals
02/23/2019 02:39 AM	Treatment
02/23/2019 02:39 AM	Vitals

**B6**

Client:  
Patient:

**B6**

**Patient History**

02/23/2019 02:39 AM	Vitals
02/23/2019 03:36 AM	Treatment
02/23/2019 03:36 AM	Vitals
02/23/2019 03:36 AM	Vitals
02/23/2019 03:41 AM	Treatment
02/23/2019 03:41 AM	Vitals
02/23/2019 03:41 AM	Treatment
02/23/2019 03:41 AM	Vitals
02/23/2019 04:49 AM	Treatment
02/23/2019 04:49 AM	Vitals
02/23/2019 04:49 AM	Vitals
02/23/2019 04:49 AM	Treatment
02/23/2019 04:49 AM	Vitals
02/23/2019 05:25 AM	Treatment
02/23/2019 05:28 AM	Treatment
02/23/2019 05:28 AM	Vitals
02/23/2019 05:29 AM	Treatment
02/23/2019 05:29 AM	Vitals
02/23/2019 05:29 AM	Vitals
02/23/2019 05:29 AM	Vitals
02/23/2019 05:29 AM	Treatment
02/23/2019 05:36 AM	Treatment
02/23/2019 05:36 AM	Vitals
02/23/2019 05:36 AM	Treatment
02/23/2019 05:56 AM	Treatment
02/23/2019 05:56 AM	Vitals
02/23/2019 05:56 AM	Vitals
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02/23/2019 06:56 AM	Vitals
02/23/2019 06:56 AM	Vitals
02/23/2019 06:56 AM	Treatment
02/23/2019 06:56 AM	Vitals
02/23/2019 07:37 AM	Treatment
02/23/2019 07:37 AM	Vitals
02/23/2019 07:37 AM	Treatment
02/23/2019 07:37 AM	Vitals
02/23/2019 07:38 AM	Treatment
02/23/2019 07:58 AM	Treatment
02/23/2019 07:58 AM	Vitals
02/23/2019 07:58 AM	Vitals
02/23/2019 07:59 AM	Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

02/23/2019 07:59 AM	Vitals
02/23/2019 09:02 AM	Treatment
02/23/2019 09:05 AM	Prescription
02/23/2019 09:09 AM	Treatment
02/23/2019 09:09 AM	Vitals
02/23/2019 09:09 AM	Vitals
02/23/2019 09:12 AM	Treatment
02/23/2019 09:27 AM	Deleted Reason
02/23/2019 09:29 AM	Purchase
02/23/2019 09:29 AM	Treatment
02/23/2019 09:33 AM	Treatment
02/23/2019 09:33 AM	Vitals
02/23/2019 09:46 AM	Treatment
02/23/2019 09:56 AM	Purchase
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02/23/2019 10:05 AM	Treatment
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02/23/2019 11:07 AM	Vitals
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02/23/2019 12:02 PM	Purchase
02/23/2019 12:02 PM	Purchase
02/23/2019 12:23 PM	Treatment
02/23/2019 12:23 PM	Vitals
02/23/2019 12:23 PM	Vitals
02/23/2019 12:26 PM	Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

02/23/2019 12:26 PM Vitals  
02/23/2019 01:04 PM Treatment  
  
02/23/2019 01:04 PM Vitals  
02/23/2019 01:04 PM Vitals  
02/23/2019 01:05 PM Treatment  
02/23/2019 01:05 PM Vitals  
02/23/2019 01:05 PM Treatment  
02/23/2019 01:20 PM Treatment  
02/23/2019 01:20 PM Vitals  
02/23/2019 01:55 PM Treatment  
  
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02/23/2019 05:22 PM Treatment  
  
02/23/2019 05:22 PM Treatment  
02/23/2019 05:22 PM Vitals  
02/23/2019 05:28 PM Treatment  
02/23/2019 05:29 PM Treatment  
  
02/23/2019 05:33 PM Treatment  
  
02/23/2019 05:33 PM Vitals  
02/23/2019 05:46 PM Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

02/23/2019 05:46 PM Vitals  
02/23/2019 05:46 PM Treatment

02/23/2019 05:46 PM Vitals  
02/23/2019 05:46 PM Vitals  
02/23/2019 06:00 PM Vitals  
02/23/2019 06:20 PM Vitals  
02/23/2019 06:21 PM Treatment

02/23/2019 06:21 PM Treatment

02/23/2019 06:30 PM Vitals  
02/23/2019 06:45 PM Treatment  
02/23/2019 06:51 PM Treatment  
02/23/2019 07:00 PM Vitals  
02/23/2019 07:00 PM Vitals  
02/23/2019 07:08 PM Treatment

02/23/2019 07:08 PM Treatment  
02/23/2019 07:08 PM Vitals  
02/23/2019 08:00 PM Vitals  
02/23/2019 08:07 PM Treatment

02/23/2019 08:07 PM Vitals  
02/23/2019 08:07 PM Vitals  
02/23/2019 08:08 PM Treatment  
02/23/2019 08:08 PM Vitals  
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02/23/2019 09:00 PM Vitals  
02/23/2019 09:06 PM Treatment  
02/23/2019 09:06 PM Vitals  
02/23/2019 09:14 PM Treatment  
02/23/2019 09:17 PM Treatment  
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02/23/2019 09:18 PM Treatment

02/23/2019 09:36 PM Treatment

02/23/2019 09:36 PM Treatment  
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02/23/2019 09:40 PM Vitals  
02/23/2019 09:41 PM Treatment

02/23/2019 09:41 PM Vitals

02/23/2019 09:41 PM Vitals  
02/23/2019 11:21 PM Treatment

02/23/2019 11:21 PM Vitals  
02/23/2019 11:21 PM Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

02/23/2019 11:22 PM	Treatment
02/23/2019 11:22 PM	Vitals
02/23/2019 11:24 PM	Treatment
02/23/2019 11:24 PM	Vitals
02/23/2019 11:27 PM	Vitals
02/24/2019 12:00 AM	Purchase
02/24/2019 12:10 AM	Treatment
02/24/2019 12:10 AM	Vitals
02/24/2019 12:10 AM	Vitals
02/24/2019 12:10 AM	Treatment
02/24/2019 12:10 AM	Vitals
02/24/2019 01:02 AM	Treatment
02/24/2019 01:02 AM	Treatment
02/24/2019 01:02 AM	Vitals
02/24/2019 01:03 AM	Treatment
02/24/2019 01:03 AM	Vitals
02/24/2019 01:03 AM	Vitals
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02/24/2019 01:05 AM	Vitals
02/24/2019 01:22 AM	Treatment
02/24/2019 01:22 AM	Vitals
02/24/2019 01:22 AM	Treatment
02/24/2019 01:22 AM	Vitals
02/24/2019 01:22 AM	Vitals
02/24/2019 01:57 AM	Vitals
02/24/2019 01:58 AM	Treatment
02/24/2019 02:00 AM	Treatment
02/24/2019 02:00 AM	Vitals
02/24/2019 02:00 AM	Vitals
02/24/2019 02:59 AM	Treatment
02/24/2019 02:59 AM	Vitals
02/24/2019 02:59 AM	Vitals
02/24/2019 03:03 AM	Treatment
02/24/2019 03:03 AM	Vitals
02/24/2019 03:04 AM	Vitals
02/24/2019 03:51 AM	Treatment
02/24/2019 03:51 AM	Vitals
02/24/2019 03:58 AM	Treatment
02/24/2019 03:58 AM	Vitals
02/24/2019 03:58 AM	Vitals
02/24/2019 03:58 AM	Vitals
02/24/2019 04:58 AM	Treatment

**B6**

Client:  
Patient:

**B6**

**Patient History**

02/24/2019 04:58 AM	Treatment
02/24/2019 04:58 AM	Treatment
02/24/2019 04:58 AM	Vitals
02/24/2019 04:59 AM	Treatment
02/24/2019 04:59 AM	Treatment
02/24/2019 05:06 AM	Treatment
02/24/2019 05:06 AM	Vitals
02/24/2019 05:06 AM	Treatment
02/24/2019 05:06 AM	Vitals
02/24/2019 05:06 AM	Treatment
02/24/2019 05:06 AM	Vitals
02/24/2019 05:08 AM	Treatment
02/24/2019 05:08 AM	Vitals
02/24/2019 05:08 AM	Vitals
02/24/2019 05:08 AM	Treatment
02/24/2019 05:08 AM	Vitals
02/24/2019 05:14 AM	Treatment
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02/24/2019 05:48 AM	Treatment
02/24/2019 05:48 AM	Vitals
02/24/2019 05:48 AM	Vitals
02/24/2019 05:48 AM	Treatment
02/24/2019 05:48 AM	Vitals
02/24/2019 06:48 AM	Treatment
02/24/2019 06:48 AM	Vitals
02/24/2019 06:48 AM	Vitals
02/24/2019 06:49 AM	Treatment
02/24/2019 06:49 AM	Vitals
02/24/2019 07:40 AM	Vitals
02/24/2019 08:00 AM	Treatment
02/24/2019 08:00 AM	Vitals
02/24/2019 08:00 AM	Vitals
02/24/2019 08:01 AM	Treatment
02/24/2019 08:01 AM	Vitals
02/24/2019 09:04 AM	Treatment
02/24/2019 09:04 AM	Vitals
02/24/2019 09:05 AM	Treatment
02/24/2019 09:10 AM	Treatment
02/24/2019 09:10 AM	Vitals
02/24/2019 09:10 AM	Vitals
02/24/2019 09:53 AM	Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

02/24/2019 09:53 AM Vitals  
02/24/2019 09:53 AM Vitals  
02/24/2019 10:00 AM Treatment  
02/24/2019 10:00 AM Vitals  
02/24/2019 10:00 AM Treatment  
  
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02/24/2019 10:01 AM Treatment  
02/24/2019 10:01 AM Treatment  
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02/24/2019 12:11 PM Vitals  
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02/24/2019 01:49 PM Vitals  
02/24/2019 01:50 PM Treatment  
  
02/24/2019 01:50 PM Vitals

**B6**



Client: B6  
Patient:

**Patient History**

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02/24/2019 01:50 PM	Vitals
02/24/2019 03:10 PM	Treatment
02/24/2019 03:10 PM	Vitals
02/24/2019 03:11 PM	Treatment
02/24/2019 03:11 PM	Vitals
02/24/2019 03:11 PM	Vitals
02/24/2019 04:04 PM	Treatment
02/24/2019 04:04 PM	Vitals
02/24/2019 04:04 PM	Vitals
02/24/2019 04:04 PM	Treatment
02/24/2019 04:04 PM	Vitals
02/24/2019 05:04 PM	Treatment
02/24/2019 05:04 PM	Vitals
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02/24/2019 05:07 PM	Treatment
02/24/2019 05:11 PM	Treatment
02/24/2019 05:11 PM	Vitals
02/24/2019 05:19 PM	Treatment
02/24/2019 05:19 PM	Vitals
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02/24/2019 05:31 PM	Treatment
02/24/2019 05:31 PM	Vitals
02/24/2019 05:35 PM	Treatment
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02/24/2019 05:57 PM	Treatment
02/24/2019 05:57 PM	Vitals
02/24/2019 05:57 PM	Vitals
02/24/2019 05:57 PM	Treatment
02/24/2019 05:57 PM	Vitals
02/24/2019 07:23 PM	Treatment
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02/24/2019 07:56 PM	Vitals

**B6**

Client:  
Patient:

**B6**

**Patient History**

02/24/2019 07:56 PM	Vitals
02/24/2019 07:56 PM	Treatment
02/24/2019 07:56 PM	Vitals
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02/24/2019 08:46 PM	Treatment
02/24/2019 08:46 PM	Vitals
02/24/2019 09:17 PM	Treatment
02/24/2019 09:17 PM	Treatment
02/24/2019 09:17 PM	Vitals
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02/24/2019 09:53 PM	Treatment
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02/25/2019 12:50 AM	Vitals
02/25/2019 12:50 AM	Treatment
02/25/2019 12:50 AM	Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

02/25/2019 12:50 AM Treatment  
02/25/2019 12:50 AM Treatment  
02/25/2019 12:50 AM Vitals  
02/25/2019 02:11 AM Treatment  
  
02/25/2019 02:11 AM Vitals  
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02/25/2019 02:12 AM Treatment  
02/25/2019 02:12 AM Vitals  
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02/25/2019 05:58 AM Treatment  
  
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02/25/2019 05:58 AM Vitals  
02/25/2019 05:59 AM Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

02/25/2019 05:59 AM Vitals  
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02/25/2019 07:52 AM Vitals  
02/25/2019 07:52 AM Vitals  
02/25/2019 07:54 AM Treatment  
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02/25/2019 12:02 PM Treatment  
  
02/25/2019 12:03 PM Vitals  
02/25/2019 12:03 PM Vitals



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

**Patient History**

02/25/2019 12:03 PM	Treatment
02/25/2019 12:03 PM	Vitals
02/25/2019 12:59 PM	Treatment
02/25/2019 12:59 PM	Vitals
02/25/2019 12:59 PM	Vitals
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02/25/2019 01:06 PM	Treatment
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02/25/2019 01:59 PM	Vitals
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02/25/2019 02:49 PM	Vitals
02/25/2019 02:49 PM	Treatment
02/25/2019 02:49 PM	Vitals
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02/25/2019 03:41 PM	Prescription
02/25/2019 03:41 PM	Prescription
02/25/2019 03:47 PM	Treatment
02/25/2019 03:47 PM	Vitals
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02/25/2019 03:47 PM	Treatment
02/25/2019 03:47 PM	Vitals
02/25/2019 03:53 PM	Purchase
02/25/2019 04:34 PM	UserForm

**B6**









**B6**

**B6**

Male (Neutered)

Canine Boxer Brindle

Patient ID: **B6**

## STANDARD CONSENT FORM

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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: 2/22/2019

Owner's address:

2/22/19  
Date

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

The owner of the animal  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  
 02/22/2019

**B6**

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

Patient	Description	Low Qty	Low Extended	High Qty	High Extended
<b>B6</b>					

**B6**

Doctor of Record

**B6**

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

Procedural (X)ray 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	
Low Total	
75% Deposit	

**B6**

**Radiology Request & Report**

**Patient**

Name: B6  
Species: Canine  
Breed: Male (Neutered) Boxer  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6  
Date of request: 2/22/2019

Attending Clinician: B6 DVM (Intern - SAM) Student:

Date of exam: 2/22/2018

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

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

**Sedation**

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

**Examination Desired:**

3 view chest

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

Emergency

**Pertinent History:**

Arrythmia

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

**Findings:**

THORAX, THREE VIEWS.

**B6**

# B6

## Conclusions:

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

## Radiologists

Primary:  DVM

Reviewing:

## Dates

Reported: 2/22/2019

Finalized:

**Discharge Instructions**

**Patient**

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

**Owner**

Name:  
Address:

B6

Patient ID: B6  
Emergency Clinician: B6 DVM  
Consulting Clinician: B6 DVM

**ER Supervisor:**

B6

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

**Diagnosis:**

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

**Case Summary:**

B6 has been diagnosed with a primary heart muscle disease called dilated cardiomyopathy (DCM). This disease is more common in large and giant breed dogs and is characterized by thinning of the walls of the heart, reduced cardiac pump function, and enlargement of the upper chambers of the heart. Many dogs with DCM will also have significant arrhythmias (like B6) which can be life-threatening and also require medical management. The heart enlargement has now progressed to the point of congestive heart failure, meaning that fluid is backing up into the lungs or belly. Unfortunately this is a progressive disease and we cannot reverse the changes to the heart muscle, however we can use cardiac medications and some changes to the diet to make your dog comfortable and have him breathing easier.

**Diagnostic test results and findings:**

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

**History:**

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

**Physical exam:**

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

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

**Diagnostic/Treatment plan:**

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

While in the hospital, B6 was closely monitored with a continuous EKG, and he was given several medications to treat his conditions, including B6

B6

**Monitoring at home:**

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

2. We would like you to monitor your dog's breathing rate and effort at home, ideally during sleep or at a time of rest. The doses of drugs will be adjusted based on the breathing rate and effort. In general, most dogs with heart failure that is well controlled have a breathing rate at rest of less than 35 to 40 breaths per minute. In addition, the breathing effort, noted by the amount of belly wall motion used for each breath, is fairly minimal if heart failure is controlled. An increase in breathing rate or effort will usually mean that you should give an extra dose of B6. If difficulty breathing is not improved by within 30-60 minutes after giving B6 then we recommend that a recheck exam be scheduled and/or that your dog be evaluated by an emergency clinic. There are instructions for monitoring breathing, and a form to help keep track of breathing rate and drug doses, on the Tufts HeartSmart web site (<http://vet.tufts.edu/heartsmart/at-home-monitoring/>).

**Recommended Medications:**

B6

**Diet suggestions:**

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

Dogs with heart failure accumulate more fluid in their body if they eat large amounts of sodium (salt). Sodium can be found in all foods, but some foods are lower in sodium than others.

Many pet treats, people foods, and supplements used to give pills often have more sodium than is desirable - a sheet that has suggestions for low sodium treats can be found on the HeartSmart web site (<http://vet.tufts.edu/heartsmart/diet/>). You can also find additional information on supplements such as fish oil or other supplements that you might have questions about may be found on the Tufts HeartSmart web site: (<http://vet.tufts.edu/heartsmart/diet/>).

- The FDA is currently investigating an apparent association between diet and a type of heart disease called dilated cardiomyopathy. The exact cause is still unclear, but it appears to be associated with boutique diets and those containing exotic ingredient or are grain-free. Therefore, we are currently recommending that dogs do not eat these types of diets.
- We recommend switching **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 ScienceDiet Adult Beef and Barley Entree

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

Royal Canin Mature 8+

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

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

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

#### Exercise recommendations:

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

#### Recheck/Follow-up:

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



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

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

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

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY  
Cardiology Liaison: 508-887-4696

**B6**

Patient ID: B6

**B6**

Canine

Years Old Male (Neutered) Boxer

Brindle BW: Weight(lbs) 0.00

## Cardiology Inpatient ENROLLED IN DCM DIET STUDY

Date: **B6**

Weight: Weight(lbs) 25kg

Attending Cardiologist:

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

**B6**

Cardiology Resident:

**B6**

Thoracic radiographs available for review?

- Yes - in SS  
 Yes - in PACS  
 No

Patient location:

ER

Presenting complaint and important concurrent diseases:

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

Current medications and doses:

**B6** (unknown concentration): 1/2 tab BID

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

Royal canin boxer dry

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

Historical arrhythmia

Questions to be answered:

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

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

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

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

**Physical Examination**

**B6**

**Muscle condition:**

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

**Cardiovascular Physical Exam**

**Murmur Grade:**

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

**B6**

**Jugular vein:**

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

**Arterial pulses:**

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

**Arrhythmia:**

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

**Gallop:**

- Yes
- No
- Intermittent
- Pronounced
- Other:

**Pulmonary assessments:**

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

**Abdominal exam:**

- Normal
- Abdominal distension

Hepatomegaly

Mild ascites

**Echocardiogram Findings:**

**B6**

**Doppler findings:**

**B6**

**ECG findings:**

**B6**

**Radiographic findings:**

**B6**

**Assessment and recommendations:**

Findings consistent with DCM with active CHF and frequent ventricular arrhythmia. Patient has enough malignant arrhythmia that hospitalization and **B6** monitoring is recommended. **B6** and depending how well he responds, maybe we can decrease to q6-8h overnight. Patient has historically been on grain free diet for years before been switched to current diet. It is unclear whether this is a primary DCM, ARVC with DCM phenotype, or diet-induced cardiomyopathy, but **B6** are also recommended. Apparently patient tolerated well **B6** in the past, but we generally avoid it at this point due to potential beta-blocker effects that may worsen systolic function. Thus, recommend bloodwork and if liver values are normal, **B6** should be started. However since he tolerated it in the past **B6** could be considered once CHF is resolved if liver values are elevated. Fish oil may also be effective helping decrease ventricular arrhythmia density. Recommend addition of an **B6**. Recommend repeat echocardiogram in 3 months or sooner in case patient develops clinical signs consistent with progression of the disease (shortness breath, collapse, syncope, exercise intolerance, pale mucous membrane). Client can be instructed on how to use AliveCor and assess heart rate and rhythm from home if patient at rest and calm at home.

Addendum 02/25/2019:

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

**Treatment Plan:**

0  
0  
0  
0  
0  
0  
0  
**B6**

**Final Diagnosis:**

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

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

Left sided congestive heart failure.

**Heart Failure Classification Score:**

ISACHC Classification:

- Ia
- Ib
- II
- IIIa
- IIIb

ACVIM CHF Classification:

- A
- B1
- B2
- C
- D

M-Mode

IVSd

LVIDd

LVPWd

IVSs

LVIDs

LVPWs

EDV(Teich)

ESV(Teich)

EF(Teich)

%FS

SV(Teich)

M-Mode Normalized

IVSdN

LVIDdN

LVPWdN

**B6**

cm

cm

cm

cm

cm

cm

ml

ml

%

%

ml

{0.290 - 0.520}

{1.350 - 1.730} !

{0.330 - 0.530}

IVSsN  
LVIDsN  
LVPWsN

{0.430 - 0.710} !  
{0.790 - 1.140} !  
{0.530 - 0.780} !

2D  
SA LA  
Ao Diam  
SA LA / Ao Diam  
IVSd  
LVIDd  
LVPWd  
EDV(Teich)  
IVSs  
LVIDs  
LVPWs  
ESV(Teich)  
EF(Teich)  
%FS  
SV(Teich)  
LVld LAX  
LVAd LAX  
LVEDV A-L LAX  
LVEDV MOD LAX  
LVls LAX  
LVAs LAX  
LVESV A-L LAX  
LVESV MOD LAX  
HR  
EF A-L LAX  
LVEF MOD LAX  
SV A-L LAX  
SV MOD LAX  
CO A-L LAX  
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l/min  
l/min

B6

Doppler  
MR Vmax  
MR maxPG  
PV Vmax  
PV maxPG

m/s  
mmHg  
m/s  
mmHg

B6

### Discharge Instructions

**Patient**

Name: B6

Species: Canine

Breed: Male (Neutered) Boxer

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: B6

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

**Student:**

Admit Date: B6 9:12:55 AM

Discharge Date: B6

**Diagnoses:**

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

**Clinical Findings:**

Thank you for bringing B6 to Tufts University.

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

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

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

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

As we discussed over the phone, another possibility to explain the changes within B6 heart is a type of heart disease called dilated cardiomyopathy (DCM). This disease is more common in large and giant breed dogs and is characterized by thinning of the walls of the heart, reduced cardiac pump function, and enlargement of the upper chambers of the heart. Many dogs with DCM will also have significant arrhythmias which can be life-threatening and also require medical management.

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

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

#### Monitoring at home:

- We would like you to monitor your dog's breathing rate and effort at home, ideally during sleep or at a time of rest. The doses of drugs will be adjusted based on the breathing rate and effort.
- In general, most dogs with heart failure that is well controlled have a breathing rate at rest of less than 35 to 40 breaths per minute. In addition, the breathing effort, noted by the amount of belly wall motion used for each breath, is fairly minimal if heart failure is controlled.
- An increase in breathing rate or effort will usually mean that you should give an extra dose of B6 if difficulty breathing is not improved by within 30-60 minutes after giving B6. When we recommend that a recheck exam be scheduled and/or that your dog be evaluated by an emergency clinic.
- There are instructions for monitoring breathing, and a form to help keep track of breathing rate and drug doses, on the Tufts HeartSmart web site (<http://vet.tufts.edu/heartsmart/at-home-monitoring/>).
- We also want you to watch for weakness or collapse, a reduction in appetite, worsening cough, or distention of the belly as these findings indicate that we should do a recheck examination.
- If you have an iPhone or Android smartphone device, you may want to explore the option of purchasing the Kardia Mobile device which will allow you to monitor the heart rate and rhythm at home ([www.alivacor.com](http://www.alivacor.com)). If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

#### Recommended Medications:

**B6**



# B6

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

- The FDA is currently investigating an apparent association between diet and a type of heart disease called dilated cardiomyopathy. The exact cause is still unclear, but it appears to be associated with boutique diets and those containing exotic ingredient or are grain-free. Therefore, we are currently recommending that dogs do not eat these types of diets.
- We recommend switching B6 to commercial diet made by a well-established company that is not grain-free and does not contain any exotic ingredients, such as kangaroo, duck, lamb, venison, lentils, peas, beans, buffalo, tapioca, barley, and chickpeas.
- The FDA issued a statement regarding this issue (<https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/uom613305.htm>) and a recent article published by Dr. Lisa Freeman on the Cummings School's Pet Foodology blog can further explain these findings (<http://vetnutrition.tufts.edu/2018/06/a-broken-heart-risk-of-heart-disease-in-boutique-or-grain-free-diets-and-exotic-ingredients/>).
- Our nutritionists have compiled a list of dog foods that are good options for dogs with heart disease.

## **Dry Food Options:**

Royal Canin Early Cardiac (veterinary diet)

Royal Canin Boxer

Purina Pro Plan Adult Weight Management

Purina Pro Plan Bright Mind Adult Small Breed Formula

## **Canned Food Options:**

Hill's Science Diet Adult Beef and Barley Entree

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

Royal Canin Mature 8+

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

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

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

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

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

**Recheck visits:**

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

Sincerely, B6 was enrolled in the DCM study, we will need to see him back in 3, 6, and 9 months.

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

Sincerely,

B6

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

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**Prescription Refill Disclaimer:**

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

**Ordering Food:**

*Please check with your primary veterinarian to purchase the recommended diet(s). If you wish to purchase your food from us, please call 7-10 days in advance (508-887-6529) 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/omni/clinical-studies](http://vet.tufts.edu/omni/clinical-studies)*

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Case: B6

Owner: B6

Discharge Instructions

**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/>  
Referring Vet Direct Line 508-887-4988

**Notice of Patient Admit**

Date: B6 9:12:55 AM

Case # B6

Referring Doctor: B6

Client Name:

Patient Name: B6

---

Dear Colleague,

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

The attending doctor is: Dr. B6

The reason for admission to the FHSA is: ARVC, poor systolic function, L-CHF

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

Thank you for your referral to our Emergency Service.

# 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/>  
Referring Vet Direct Line 508-887-4988

### Notice of Patient Admit

Date: [B6] 9:12:55 AM

Case No. [B6]

Referring Doctor: [B6]

Client Name:

Patient Name: [B6]

---

Dear Dr. [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: Dr. [B6]

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

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

Thank you for your referral to our Emergency Service.

**Cummings**  
**Veterinary Medical Center**  
AT TUFTS UNIVERSITY

Foster Hospital for Small Animals  
55 Willard Street  
North Grafton, MA 01536  
Telephone (508) 839-5395  
Fax (508) 839-7951  
<http://vetmed.tufts.edu/Charlie>

**B6**

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

**Daily Update From the Cardiology Service**

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

Thank you for referring patients to the Foster Hospital for Small Animals at the Cummings School of Tufts University.

Your patient **B6** was admitted and is being cared for by the Cardiology Service.

Today, **B6**

- is in stable condition
- is still in the oxygen cage
- is critically ill
- discharged from the hospital today

Today's treatments include:

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

Additional plans:

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

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

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

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**From:** Darcy Adin <dbadin@ncsu.edu>  
**To:** Jones, Jennifer L  
**CC:** Ceric, Olgica; Nemser, Sarah  
**Sent:** 1/23/2018 1:49:20 PM  
**Subject:** Re: dog food concern

Hi Jennifer,

I wondered if I could speak with you sometime today about the diets and some data we have compiled? My office is 919-513-6032 and my cell is [REDACTED] B6 Alternatively, we could email - just let me know!

Take care  
Darcy

On Fri, Jan 12, 2018 at 8:01 AM, Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)> wrote:

Thank you, Darcy!

[REDACTED] B5

[REDACTED] B5

I'll forward the feed results when they are back.

Have a nice weekend,

Jen

Jennifer Jones, DVM

Veterinary Medical Officer

Tel: [240-402-5421](tel:240-402-5421)



**From:** Darcy Adin [<mailto:dbadin@ncsu.edu>]  
**Sent:** Wednesday, January 10, 2018 6:13 PM

**To:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>  
**Cc:** Ceric, Olgica <[Olgica.Ceric@fda.hhs.gov](mailto:Olgica.Ceric@fda.hhs.gov)>; Nemser, Sarah <[Sarah.Nemser@fda.hhs.gov](mailto:Sarah.Nemser@fda.hhs.gov)>  
**Subject:** Re: dog food concern

Thank you Jennifer - we will be on the lookout for it.

As additional information, one of our cardiologist colleagues in [REDACTED] B6 posted a question about this association

today on our list serve. She has seen 4 cases of DCM in dogs eating kangaroo and lentil (I assume CN but not sure) in the last year - 2 were housemates but related.

Take care

Darcy

On Jan 10, 2018, at 8:05 AM, Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)> wrote:

Thank you, Darcy. We're sending the kit this week. It should arrive by close of business Friday.

Jennifer Jones, DVM

Veterinary Medical Officer

Tel: [240-402-5421](tel:240-402-5421)

<[image001.png](#)> <[image006.png](#)>

**From:** Darcy Adin [<mailto:dbadin@ncsu.edu>]

**Sent:** Tuesday, January 09, 2018 11:27 AM

**To:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>

**Cc:** Ceric, Olgica <[Olgica.Ceric@fda.hhs.gov](mailto:Olgica.Ceric@fda.hhs.gov)>; Nemser, Sarah <[Sarah.Nemser@fda.hhs.gov](mailto:Sarah.Nemser@fda.hhs.gov)>

**Subject:** Re: dog food concern

Hi Jennifer,

That is great! I've attached a picture of the food sample - the weight is 0.36 kg. We sent blood samples off from 2 dogs to test for B5 one was in the reference range and the other a bit high.

Thank you!

Take care

Darcy

On Tue, Jan 9, 2018 at 10:07 AM, Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)> wrote:

Good morning Darcy,

We'd like to collect some of the food from your current case (California Naturals Kangaroo). I'm going to send it with the archived sample of food from the B6 case B5



**B5**

Please let me know the size/weight of the sample you have, and I'll send a box to collect it.

Thank you,  
Jen

Jennifer Jones, DVM

Veterinary Medical Officer

Tel: [240-402-5421](tel:240-402-5421)

[<image001.png>](#) [<image003.png>](#)

**From:** Darcy Adin [mailto:[dbadin@ncsu.edu](mailto:dbadin@ncsu.edu)]

**Sent:** Thursday, January 04, 2018 2:47 PM

**To:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>

**Cc:** Ceric, Olgica <[Olgica.Ceric@fda.hhs.gov](mailto:Olgica.Ceric@fda.hhs.gov)>; Nemser, Sarah <[Sarah.Nemser@fda.hhs.gov](mailto:Sarah.Nemser@fda.hhs.gov)>

**Subject:** Re: dog food concern

I also have a food sample for our current inpatient (same food - California Naturals kangaroo and lentil).

**B5**

**B5**

On Thu, Jan 4, 2018 at 2:39 PM, Darcy Adin <[dbadin@ncsu.edu](mailto:dbadin@ncsu.edu)> wrote:

The myocardium is from **B6** Maybe we will wait to see what the blood levels show.

**B5**

Thanks!

Darcy

On Thu, Jan 4, 2018 at 2:14 PM, Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)> wrote:

Thank you for the update. I'll let you know the [B5] concentration from [B6] food after the results are back.

The frozen myocardium, is it from the [B6] base?

Jennifer Jones, DVM

Veterinary Medical Officer

Tel: [240-402-5421](tel:240-402-5421)

<[image001.png](#)> <[image004.png](#)>

**From:** Darcy Adin [<mailto:dbadin@ncsu.edu>]

**Sent:** Wednesday, January 03, 2018 3:10 PM

**To:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>

**Cc:** Ceric, Olgica <[Olgica.Ceric@fda.hhs.gov](mailto:Olgica.Ceric@fda.hhs.gov)>; Nemser, Sarah <[Sarah.Nemser@fda.hhs.gov](mailto:Sarah.Nemser@fda.hhs.gov)>

**Subject:** Re: dog food concern

Hi Jennifer,

Thank you! We have not tested for [B5] in any of the dogs. We have stored blood samples from several dogs and have an inpatient right now that we can submit blood from ([B4] runs this). We will probably start with looking at blood samples from 2 dogs as a screening. We also have frozen myocardium from one dog - do you think this should also be evaluated?

Thank you!

Darcy

On Wed, Jan 3, 2018 at 2:30 PM, Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)> wrote:

Good afternoon Darcy,

Happy New Year! Thank you for the additional information. I discussed the information you provided below and from the previous case ([B6] Miniature Schnauzers-800.218) with my colleagues.

Based on our discussions, I will test some leftover food from the 800.218 case, for B5 content. Have any of the dogs with DCM had blood or tissue B5 levels tested?

Thank you kindly,

Jen

Jennifer Jones, DVM

Veterinary Medical Officer

Tel: 240-402-5421

[<image001.png>](#) [<image005.png>](#)

**From:** Darcy Adin [mailto:[dbadin@ncsu.edu](mailto:dbadin@ncsu.edu)]  
**Sent:** Wednesday, January 03, 2018 11:31 AM  
**To:** Jones, Jennifer L <[Jennifer.Jones@fda.hhs.gov](mailto:Jennifer.Jones@fda.hhs.gov)>  
**Subject:** dog food concern

Hi Dr. Jones,

I'm hoping that you recall our communications over the summer regarding food testing for unrelated housemate dogs that developed DCM. These dogs were eating California Naturals Kangaroo and Lentil diet and we were not able to identify a cause of the DCM, dietary or infectious or toxic.

I wanted to reach out again because we continue to see DCM in non-genetically predisposed breeds and it seems that this diet is a relatively common theme. We have been increasingly better about recording a diet history in dogs that are presented to cardiology or ER at our hospital with DCM in the last 6 months. Most of the dogs have been tested for taurine and carnitine deficiency and have been within the reference range. About half of them are alive and half died close to the time of diagnosis.

I also searched our records for this diet (knowing that recording of diet in the MR history has been spotty at best) and found another pair of unrelated housemate dogs eating California naturals kangaroo and lentil that were diagnosed with DCM 6 months apart.

We will continue to record the cases we see but since last june we have seen 7 dogs eating California Naturals diet (5 kangaroo and lentil) in addition to the pair of housemates from 2016 (so total of 9). We also have 4 dogs eating Acana (3/4 are dobermans though) and 1 each of 4Health and Iams - so maybe these are not necessarily related.

Have you had any other reports of such an association? If you have any other thoughts or testing suggestions, I would be all ears!

Thank you!

Darcy

--

Darcy B. Adin, DVM, DACVIM (Cardiology)

Clinical Assistant Professor of Cardiology

North Carolina State University

NC State Veterinary Hospital

1060 William Moore Drive

Raleigh, NC 27607

919-513-6032

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Raleigh, NC 27607  
919-513-6032

## Clinical Nutrition Service

Foster Hospital for Small Animals  
200 Westboro Road  
North Grafton, MA 01536  
Phone: (508) 887-4696 Attn: Nutrition Liaison  
Fax: 508-887-4363  
[www.petfoodology.org](http://www.petfoodology.org)  
[vetnutrition@tufts.edu](mailto:vetnutrition@tufts.edu)



## Nutrition Consultation

Date: 9/24/18

Pet Name: [B6]

Signalment: 4 year old, castrated male Miniature Schnauzer

Weight: 22 pounds (10 kg), body condition score: 5.5/9, mild muscle loss

Relevant health conditions: Apparent diet-associated dilated cardiomyopathy and congestive heart failure diagnosed April 2018 (whole blood taurine [B6] – UC Davis Amino Acid Lab). Owners reported to FDA. Also has dysrexia (altered food preferences or eating patterns).

Referring veterinarians: Dr. [B6] Dr. [B6]  
[B6]

### Diet History:

- Current diet: Chicken or beef (lightly cooked), rice, vegetables
- Previous diets: Canidae Grain-Free Pure Fields Small Breed Chicken dry, Blue Buffalo Life Protection Adult Small Breed Chicken/Brown Rice dry, Instinct Original Small Breed Grain Free Recipe with Real Chicken dry (Nature's Variety). Tried Royal Canin Early Cardiac after diagnosis but stopped eating
- Treats: Cheese, fruits, carrots
- Medications: [B6]
- Supplements: None currently; has used [B6] (1 teaspoon/day) in past
- Medication administration: Pill Pockets dog tablet size – chicken flavor (5/day)

### Nutritional Goals

- Nutritionally balanced diet from well-established company with nutrition expertise and rigorous quality control that contains standard ingredients, including grains
- Adequate calories to maintain body weight at 22 pounds
- Increased protein (to minimize muscle loss)
- Reduced sodium
- Supplements: Consider taurine and omega-3 fatty acids

### Recommendations:

- It's great that you're being proactive about [B6] diet to ensure he's getting optimal nutrition. Nutrition is an integral part of the treatment for any dog with heart disease, but especially when it is very possible that [B6] has a diet-responsive form of DCM. As we discussed, it is still unclear whether this problem is caused by a nutrient deficiency or a toxicity. Either way, one of our key goals, in addition to the excellent medical care he's been getting, is to change his diet. While you have changed from his original suspected diets, the homecooked diet you're currently feeding is not nutritionally balanced so it's important for us to modify his diet as soon as possible. [B6] lack of improvement since April could be because his diet still has deficiencies of nutrients critical for normal heart function, because his heart hasn't had enough time to recover, or because the damage to his heart was too severe. It will be important to continue to monitor his heart function once his diet has been changed.
- My strong preference is for a nutritionally balanced commercial dog food made by a company with excellent nutritional expertise and quality control, one that doesn't contain any unusual ingredients, and is very tasty. That way, we'll be sure [B6] getting all the nutrients he needs in the right proportions and that other ingredients in the diet do not reduce nutrient availability. If we can't make a commercial diet work, then we will go to Plan B and I will formulate a nutritionally balanced homecooked diet for him.
- To meet all of our nutritional goals for [B6] the high quality diets I recommend are below:

Diet	Amount to feed (this amount may need to be adjusted to maintain his weight at 22 pounds)
Canned food options	
Hill's Science Diet <u>Adult 1-6 Healthy Cuisine Roasted Chicken, Carrots, &amp; Spinach Stew</u> - 12.5 oz cans	¾ cans twice daily
Hill's Science Diet <u>Adult 7+ Healthy Cuisine Braised Beef, Carrots &amp; Peas Stew Dog Food</u> - 12.5 oz cans	¾ cans twice daily
Royal Canin <u>Mature 8+</u> - 5.8 oz cans	1 ½ cans twice daily
Dry food options	
Purina Pro Plan <u>Bright Mind Adult Small Breed Formula</u>	½ cup twice daily
Purina Pro Plan <u>Adult Weight Management</u>	2/3 cup twice daily
Royal Canin <u>Early Cardiac</u>	¾ cup twice daily

- I would start with the canned foods since I think he may enjoy those most.
- Introduce the new food gradually over 5-7 days to avoid gastrointestinal upset.
- Most dogs enjoy these food but if he doesn't like any of them, please let me know and we'll go to Plan B.

### Treats and Taste Enhancers

- To ensure **B6** overall diet is nutritionally balanced, it's important that at least 90% of his calories are coming from the dog food above and a maximum of 45 calories come from treats and taste enhancers. If he gets more than that, he is at risk for having nutritional deficiencies which are critical to avoid right now!
- I'm hoping that **B6** will enjoy the canned foods and eat them well by themselves. If not, you can add small amounts of one of the taste enhancers below (these contribute to his daily calories so the maximum amount is listed below for each option):
  - Sugar (brown or white) sprinkled on top of the food (1 teaspoon/meal)
  - Cooked meat (1 tablespoon/meal): chicken, fish (tilapia, salmon, cod), or lean meat. Avoid deli meats, prepared meats with seasoning or sauces, any canned meat or fish, and rotisserie chicken
  - Cooked brown or white rice or pasta (1 tablespoon/meal)
  - Vanilla or fruit yogurt (1 tablespoon/meal)– Two options that dogs seem to like and are low in sodium are *Yoplait Custard Yogurt* (caramel or vanilla flavors) or *Chobani Greek plain, vanilla, or fruit on the bottom yogurts*
  - Maple syrup (1 tablespoon/meal). Low salt brands include *Log Cabin All Natural, Maple Grove Farm 100% pure maple syrup, or Stop and Shop Original Syrup*
  - Homemade chicken, beef, or fish broth (made without salt; ¼ cup/meal). Avoid store bought broths because even the low sodium brands are too high in sodium
  - Ketchup (*Hunts or Heinz no salt added* varieties; 1 tablespoon/meal)
  - Pasta sauce (no salt added varieties only – *Francesco Rinaldi no salt added or Enrico's no salt added* are 2 options; 1 tablespoon/meal)
  - *Frosted Mini Wheats Original* – 4-5 pieces can be crumbled on his meal
- Try different temperatures for the canned food – some dogs prefer food at room temperature, some prefer it warmed, and some prefer it cold or even put into the freezer for 10-15 mins.
- The fruits and vegetables you're using are great treats! **B6** can have apples, carrots, pears, watermelon or other melon, cucumbers, green beans, green peppers, or tomatoes. He could have an occasional unsalted walnut but these are higher in calories than the fruits and vegetables so the calories add up quickly. Avoid macadamia nuts, avocado, garlic, onions, grapes, raisins, and other foods known to be toxic to dogs.
- A good quality, low sodium dog treat is: *Royal Canin Original Dog Treats (maximum of 4/day)*.
- Please discontinue the cheese as even low sodium varieties of cheese are too high for **B6**
- Avoid people foods that are high in sodium, such as bread, peanut butter, soup, prepared foods with seasonings or sauces, deli meats, rotisserie chicken, canned tuna, and other high sodium foods.
- There is also now a good appetite stimulant available for dogs (*Entyce*), so we could consider that if his



appetite for these diets continues to be an issue.

### Dietary Supplements:

- Unfortunately, there is little regulation of supplements for people or animals so safety, effectiveness, and quality control are questionable. Therefore, I am very selective when it comes to recommending specific supplements that have undergone independent quality control testing.
- Although [B6] taurine level was normal, until we know the cause of the non-aurine deficient DCM cases, it might be worthwhile to supplement taurine. It is a very safe supplement for dogs (as long as we use a good quality brand) and can have some other benefits for the heart. Good brands include:
  - *Solgar, Twinlab, Swanson, Twinlab, or Vitamin Shoppe brands.*
  - [B6] dose is 500 mg per day
- Omega-3 fatty acids: Fish oil, which is high in the omega-3 fatty acids, EPA and DHA, can have modest benefits on reducing inflammation, maintaining muscle mass, reducing abnormal heart rhythms, and improving appetite. From past experience, it sounds like [B6] doesn't mind the taste of fish oil. However, please do not start fish oil until you have him completely transitioned to the new diet (we only want to change one thing at a time). Once we're sure [B6] enjoys his new food, you can introduce one of the fish oils below that has had independent quality control testing. If he doesn't mind the taste, you can put the liquid fish oil in his food but if he dislikes the taste, discontinue giving it immediately since it can negatively affect his appetite. There are also small capsules that can be used instead of the liquid.

Fish oil brand	Dose
<i>CVS Brand Half the Size Fish Oil Capsules (1000 mg total, with 180 mg EPA and 120 mg DHA per capsule)</i>	2 capsules/day
<i>Welactin Canine Liquid</i>	1/2 scoop/day

### Medication Administration

- It sounds like it's working well to give [B6] his medications in *Pill Pockets*, so that's fine to continue. They are relatively low in sodium as long as you avoid the Duck and Pea flavor (which is high in sodium). I would try to avoid giving more than 5 tablet-sized *Pill Pockets* per day. If pill administration becomes an issue, some other good options besides *Pill Pockets* are bananas, melon, or mini marshmallows.

### Follow Up:

- Please follow Dr. [B6] and Dr. [B6] recommendations for monitoring [B6] clinical condition, laboratory tests, and echocardiogram. Changes in heart function for dogs with diet-associated DCM can take 3-6 months.
- Please weigh [B6] in 2 weeks to be sure he's maintaining his weight at 22 pounds. The amount of food in my recommendations above may need to be adjusted to keep him at a healthy weight of 22 pounds. Once you weigh him, please send me an update so I can help you if any dietary adjustments are needed.

Please contact me if you have any questions about [B6] nutritional plan.

Sincerely,

Lisa M. Freeman, DVM, PhD, DACVN  
Professor, Clinical Nutrition  
508-887-4696 (telephone)  
vetnutrition@tufts.edu (email)  
[www.petfoodology.org](http://www.petfoodology.org)

# Cummings

## Veterinary Medical Center

AT TUFTS UNIVERSITY

Foster Hospital for Small Animals  
55 Willard Street  
North Grafton, MA 01536  
Telephone (508) 839-5395  
Fax (508) 839-7951  
<http://vetmed.tufts.edu/>

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

**Patient**

**Name:**

B6

**Signalment:**

B6 Years Old White Male Boxer

**Owner**

**Name:**

**Address:**

B6

**Patient ID:**

B6

**Emergency Clinician:**

B6

DVM (Emergency and Critical Care Resident)

**Consulting Clinician:**

B6

DVM DACVECC, B6

B6

(Cardiology)

**ER Supervisor:**

B6

### Discharge Instructions

**Admit Date:** B6 12:54:23 AM

**Check Out Date:** B6

**Case Summary**

**Diagnosis:**

1. Gastric dilatation and volvulus (GDV, "bloat")
2. Dilated cardiomyopathy (DCM)
3. Elevated liver enzymes

**Case Summary:**

Thank you for bringing B6 to Tufts Emergency Service for evaluation of an acute onset of abdominal distension and discomfort. On presentation to the ER, B6 had an elevated heart rate and abdominal distension consistent with GDV, which was confirmed on abdominal radiographs. Point of care ultrasound identified dilated heart chambers.

B6 was treated with IV fluids and pain medications prior to surgery to de-rotate the stomach. A gastropexy (stomach tacking) was performed to prevent recurrent GDV. B6 had low blood pressure in surgery but recovered well post-operatively. The following day, a cardiology consultation was performed which revealed dilated cardiomyopathy (DCM), which is a common heart disease of Boxer's. Bloodwork showed elevated liver enzymes, which can sometimes be seen after GDV or surgery or could indicate an underlying liver issue.

B6 has continued to do very well in hospital and is now ready to be discharged home for continued supportive care, with the following instructions:

**Patient Care Instructions:**

**1. MONITORING:** Please monitor B6 closely for any vomiting, lethargy, lack of appetite or pale gums. If any of these signs are noted, please have him re-evaluated immediately.

2. **INCISION:** Check the incision at least once daily to ensure that it is clean and dry with no oozing, discharge, separation of skin edges or increased redness or bruising. The sutures are absorbable; there is no need for suture removal.

3. **EXERCISE & ACTIVITY:** B6 must remain exercise restricted for 2 weeks after surgery. This means NO running, jumping, rough housing with other dogs or any off leash activity for 2 weeks. He may be taken outside on a leash for short walks for eliminations, but should otherwise remain indoors. No bath or swimming for 2 weeks.

4. **DIET:** B6 can continue his normal diet. If he is not eating at least 50% of his normal amount within 24 hours of discharge, please call for advice.

#### **Medications:**

*New medications:*

**B6**

#### **Cardiology Summary:**

B6 has been diagnosed with a primary heart muscle disease called dilated cardiomyopathy (DCM). This disease is more common in large and giant breed dogs and is characterized by thinning of the walls of the heart, reduced cardiac pump function, and enlargement of the upper chambers of the heart. Many dogs with DCM will also have significant arrhythmias which can be life-threatening and also require medical management. The heart enlargement has NOT YET progressed to the point of congestive heart failure, meaning that fluid is backing up into the lungs or belly. Unfortunately this is a progressive disease and we cannot reverse the changes to the heart muscle, however we can use cardiac medications to improve his quality and duration of life.

#### **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 have a breathing rate at rest of less than 35 to 40 breaths per minute. **WHILE AT REST OR ASLEEP.** 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.

#### **Recheck Visits:**

1) Recheck exam and bloodwork is recommended in 1-2 weeks. This can be performed with your primary care veterinarian or here at Tufts by scheduling an appointment with B6 at 508-887-4745.

2) Recheck with the Cardiology team for recheck echocardiogram is recommended in 3-6 months, or sooner if B6 develops ANY of the following symptoms: increased effort or rate of breathing at rest, cough, exercise intolerance or collapse / fainting. Cardiology recheck can be scheduled by calling 508-887-4696.

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#### **Prescription Refill Disclaimer:**

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

**Ordering Food:**

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

**Clinical Trials:**

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

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Case: B6

Owner: B6

Discharge Instructions

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY  
Cardiology Liaison: 508-887-4696

B6

Patient ID: B6  
B6 Canine  
B6 Years Old Male Boxer  
White BW: Weight (kg) 36.80

## Cardiology Consultation

Date: B6

Weight: Weight (kg) 36.80

Requesting Clinician: B6 DVM (Emergency and Critical Care Resident)

### Attending Cardiologist:

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

B6

### Cardiology Resident:

B6

### Thoracic radiographs available for review?

- Yes - in SS
- Yes - in PACS
- No

Patient location: ICU

### Presenting complaint and important concurrent diseases:

GDV - <12 hours post op

No previously diagnosed heart disease or heart murmurs

B6

At-home diet: Unknown

**Key indication for consultation:** Concern for LV dilation and decreased contractility on TFAST, minimal ventricular ectopy intra op and none post op. Hypotensive intra op and received dobutamine, BP post op 80-110.

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

### Physical Examination

B6

- Normal
- Mild muscle loss

- Moderate cachexia
- Marked cachexia

**Cardiovascular Physical Exam**

**Murmur Grade:**

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

**Jugular vein:**

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

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

**ECG findings:**

Sinus tachycardia during the echocardiogram.

**Radiographic findings:**

Mild cardiomegaly (VHS 11.5) with mild LA enlargement. The pulmonary vessels are within normal limits although hard to visualize. No evidence of congestive heart failure.

**Assessment and recommendations:**

Echocardiogram findings are consistent with DCM-like changes. Base on the current chest radiographs the patient does not appear to be in active CHF. There is decreased contractile function which could be secondary to cardiomyopathy but could also be influenced by the fact that the patient was tachycardic and had recent major surgery (inflammation/sepsis component). The degree of LAE in a dog would argue for intrinsic heart disease (DCM). We would still recommend to start pimobendan 10 mg PO BID and to be careful with fluid administration. Differentials for the changes visualized include primary DCM vs. diet-related vs. ARVC vs. end-stage DMVD (seems less likely base on the small amount of MR and the fact that the jet was very central). Because of the breed, ARVC that would affect mainly the LV remains a differential and the patient should be on telemetry to monitor for ventricular arrhythmia. A quick recheck echocardiogram could be perform before the patient leaves the hospital to reassess the contractile function once the patient is systemically better. Full recheck echocardiogram in 4-6 months or sooner if the patient develops clinical signs consistent with worsening heart disease such as increased RR/RE, cough, exercise intolerance, or syncope.

The diet should be explored and if a grain free diet it should be reported to the FDA.

**Final Diagnosis:**

- DCM-like changes r/o DCM vs. diet-related vs. ARVC vs. end-stage DMVD

**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 CHF 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

%FS

Ao Diam

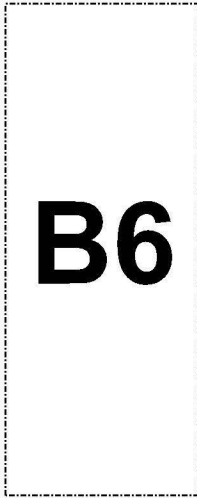
LA Diam

LA/Ao

Max LA

TAPSE

EPSS



cm

cm

cm

cm

cm

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cm

M-Mode Normalized

IVSdN

LVIDdN

LVPWdN

IVSsN

LVIDsN

LVPWsN

Ao Diam N

LA Diam N



{0.29 - 0.52}

{1.35 - 1.73} !

{0.33 - 0.53} !

{0.43 - 0.71} !

{0.79 - 1.14} !

{0.53 - 0.78} !

{0.68 - 0.89} !

{0.64 - 0.90} !

2D

IVSd

LVIDd

LVPWd

EDV(Teich)

IVSs

LVIDs

LVPWs

ESV(Teich)

EF(Teich)

%FS

SV(Teich)



cm

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Doppler

MR Vmax

MR maxPG

MV E Vel

MV DecT

MV A Vel

MV E/A Ratio

E'

A'

E/E'

PV Vmax



m/s

mmHg

m/s

ms

m/s

m/s

m/s

m/s



PV maxPG  
AV Vmax  
AV maxPG  
TR Vmax  
TR maxPG

B6

mmHg  
m/s  
mmHg  
m/s  
mmHg

**Discharge Instructions**

**Patient**

**Name:** B6  
**Species:** Canine  
**White Male Boxer**  
**Birthdate:** B6

**Owner**

**Name:** B6  
**Address:** B6

**Patient ID:** B6

**Attending Cardiologist:**

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

**Date:** B6

**Diagnoses:** Dilated cardiomyopathy (DCM)

**Case summary:**

Thank you for bringing Tufts for evaluation of his heart. B6 has been diagnosed with a primary heart muscle disease called dilated cardiomyopathy (DCM). This disease is more common in large and giant breed dogs and is characterized by thinning of the walls of the heart, reduced cardiac pump function, and enlargement of the upper chambers of the heart. Many dogs with DCM will also have significant arrhythmias which can be life-threatening and also require medical management (so far B6 has not had this). The heart enlargement can eventually progress to the point of congestive heart failure, meaning that fluid would be backing up into the lungs or belly. Unfortunately this is typically a progressive disease and we usually cannot reverse the changes to the heart muscle. However, some dogs that have been on certain grain/gluten free diets have shown improvement in their hearts when the diet has been changed and they have received taurine supplementation.

**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. Normal breathing rate at rest is less than 35 to 40 breaths per minute.
- We also want you to watch for weakness or collapse, a reduction in appetite, worsening cough, or distention of the belly as these findings indicate that we should do a recheck examination.
- If you have any concerns, please call or have your dog evaluated by a veterinarian. Our emergency clinic is open 24 hours/day.

B6

# B6

**2. Taurine supplementation** - Give 1000 mg by mouth twice daily.

*We recommend using GNC, Twinlab, Swanson, or NOW brands.*

This is a supplement that has helped some dogs with DOM. It is usually well tolerated, and can be purchased from a human supplement store.

## **Diet suggestions:**

We recommend feeding a diet formulated by a well established company since certain unique dog foods have been anecdotally associated with heart disease. Below are some dry and canned options, or if B6 does not like these foods then you could consider scheduling an appointment with our Nutrition Service (this can be done over the phone).

## **Dry options:**

Royal Canin Early Cardiac

Royal Canin Boxer

Purina Pro Plan Adult Weight Management (not significantly calory restricted despite the name)

## **Canned options:**

Hill's Science Diet Adult Beef and Barley Entree

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

Royal Canin Mature 8+

## **Exercise Recommendations:**

B6 can continue his walks as long as he does not lag behind or seem tired after. We generally recommend avoiding vigorous high intensity activity as this could worsen strain on the heart or cause arrhythmias.

## **Recheck Visits:**

A recheck visit is recommended in 3 months. B6 has been enrolled in a study and this recheck along with another one in 6 months would be included in the study. We also recommend having B6 daughter B6 screened for heart disease, which may also be covered by the study. We will plan to call you to set this appointment up, but if you have not heard from us by next week then please give us a call.

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

Please visit our HeartSmart website for more information

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

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## **Prescription Refill Disclaimer:**

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

## **Ordering Food:**

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

## **Clinical Trials:**

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

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Case B6

Owner B6

Discharge Instructions

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Cardiology Liaison: 508-887-4696

**B6**

Patient ID:

B6

B6

Canine

B6 Years Old Male Boxer  
White

## Cardiology Appointment Report

Date: B6

### Attending Cardiologist:

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

**B6**

### Cardiology Resident:

B6

### Cardiology Technician:

**B6**

**Presenting Complaint:** Doing great at home since surgery. Eating and drinking normally. No V/D. Had since he was a puppy. Is on heartworm prev.

**Concurrent Diseases:** Injured cornea 6 months ago, got stick in his eye, has had a few UTI.

**General Medical History:** Had GDV about 4 weeks ago. Cardio consult done at that hospitalization. No cough or trouble breathing, no exercise intolerance, goes on long walks.

### Diet and Supplements:

Rachel ray super premium dry real chicken and veggie dry, purina one chicken and rice canned, Newmans own chicken and rice, hamburger and chicken and rice cooked, mixed every other day. O feels is not grain free, but it is wheat and gluten free.

### Cardiovascular History:

Prior CHF diagnosis? No

Prior heart murmur? No

Prior ATE? No

Prior arrhythmia? No

Monitoring respiratory rate and effort at home?

Cough? 2 weeks before GVD had bad cough, no fine

Shortness of breath or difficulty breathing? No

Syncope or collapse? No

Sudden onset lameness? No

Exercise intolerance? No

# B6

## Muscle condition:

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

## Cardiovascular Physical Exam:

### Murmur Grade:

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

Murmur location/description: systolic left apical

### Jugular vein:

- Bottom 1/3 of 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 when more excited

### 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
- Mild ascites

- Hepatomegaly
- Abdominal distension

- Marked ascites

**Problems:**

DCM like changes at time of GDV (r/o DCM v ARVC variant v sepsis/inflammatory related)

**Diagnostic plan:**

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

**Echocardiogram Findings:**

**B6**

**Assessment and recommendations:**

Echocardiogram reveals persistent DCM like changes consistent with cardiomyopathy (primary DCM v ARVC with DCM phenotype v dietary) rather than sepsis/inflammatory induced cardiac changes. Patient was enrolled in DCM study. Recommend   Will report current diet to FDA (owner gave permission and will save bag). Recheck for study in 3 months and again in 6 months. House mate should be screened for DCM also.

**Final Diagnosis:**

DCM-like changes (r/o primary DCM v ARVC with DCM phenotype v dietary)

**Heart Failure Classification Score:**

**ISACHC Classification:**

- Ia
- Ib
- II
- IIIa
- IIIb

**ACVIM Classification:**

- A
- B1
- B2
- C
- D

M-Mode

IVSd	<b>B6</b>	cm
LVIDd		cm
LVPWd		cm
IVSs		cm
LVIDs		cm
LVPWs		cm
%FS		%
Ao Diam		cm
LA Diam		cm
LA/Ao		
Max LA		cm
TAPSE		cm
EPSS		cm

M-Mode Normalized

IVSdN	<b>B6</b>	(0.29 - 0.52)
LVIDdN		(1.35 - 1.73) !
LVPWdN		(0.33 - 0.53)
IVSsN		(0.43 - 0.71)
LVIDsN		(0.79 - 1.14) !
LVPWsN		(0.53 - 0.78) !
Ao Diam N		(0.68 - 0.89) !
LA Diam N		(0.64 - 0.90) !

2D

SA LA	<b>B6</b>	cm
Ao Diam		cm
SA LA / Ao Diam		
IVSd		cm
LVIDd		cm
LVPWd		cm
EDV(Teich)		ml
IVSs		cm
LVIDs		cm
LVPWs		cm
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
LVID LAX		cm
LVA d LAX		cm
LVEDV A-L LAX		ml
LVEDV MOD LAX		ml
LVLs LAX		cm
LVA s LAX		cm
LVESV A-L LAX		ml
LVESV MOD LAX		ml

HR  
EF A-L LAX  
LVEF MOD LAX  
SV A-L LAX  
SV MOD LAX  
CO A-L LAX  
CO MOD LAX

B6

BPM  
%  
%  
ml  
ml  
l/min  
l/min

Doppler  
MV E Vel  
MV DecT  
MV A Vel  
MV E/A Ratio  
E'  
A'  
E/E'  
PV Vmax  
PV maxPG  
AV Vmax  
AV maxPG

B6

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



**B6**

**B6** Male  
Canine Boxer White  
Patient ID: **B6**

**Outside Prescription Log**

1.

**B6**

- 2. Date:  
Clinician:  
Prescription:  
Pharmacy sent to:  
Completed by:  
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:**

**Radiology Request & Report**

**Patient**

Name: B6  
Species: Canine  
White Male Boxer  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6  
Date of request: B6

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

Student:

Date of exam:

Patient Location: Ward/Cage:

Weight (kg) 36.80

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

**Sedation**

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

Examination Desired:

Presenting Complaint and Clinical Questions you wish to answer:  
Emergency

Pertinent History:

B6

**B6**

**Conclusions:**

- Gastric dilatation and volvulus. Surgery is recommended. Cranial diaphragmatic displacement is secondary to gastric distention.
- Appearance of the pulmonary vessels and caudal vena cava suggest hypovolemia.
- Mild diffuse bronchointerstitial pattern is likely incidental. There is no evidence of pulmonary metastatic disease.

**Radiologists**

Primary: [B6] DVM

Reviewing: [B6] DVM, DACVR

**Dates**

Reported: [B6]

Finalized: 11/5/2018

# 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/>

**Patient**

**Name:** B6  
**Signalment:** B6 Years Old White Male Boxer

**Owner**

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

B6

**Patient ID:** B6

**Contact Clinician:** B6 DVM, PhD, DECVS,

B6  
**Alternate Clinician:** B6 DVM, MPH  
(Ophthalmology Intern)

**Student:** B6 V19

### Discharge Instructions

**Admit Date:** B6 3:00:03 PM

**Discharge Date:**

**Diagnosis:**

**Procedures:**

B6

B6

**Diagnosis:** No changes indicated at this time.

### CASE SUMMARY

**General summary:**

B6

**B6**

**B6**

---

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**Ordering Food:**

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

---

Case: B6

Owner: B6

Discharge Instructions

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Ophthalmology Liason: 508-887-4839

Foster Hospital for Small Animals  
55 Willard Street  
North Grafton, MA 01536  
Telephone (508) 839-5395  
Fax (508) 839-7951  
<http://vetmed.tufts.edu/>

## Indolent Ulcer

### **What is an indolent ulcer and why do they occur?**

Indolent ulcers are also called spontaneous chronic corneal epithelial defects (SCCEDs) or Boxer ulcers. This is a condition in which a minor corneal trauma occurs and fails to heal. In most animals, a small scratch or cut to the cornea heals quickly and is not even noticed by owners. In some animals, however, the top layer of the cornea (the epithelium) does not adhere properly to the underlying layers as it tries to heal. It forms a loose lip or flap of tissue. This is thought to be due to an underlying abnormality in the tissue of the cornea. Indolent ulcers usually do not worsen (get deeper) but they are uncomfortable - you may notice squinting and discharge from the eye, or your dog may be rubbing at his or her eye. This type of ulcer is common in older animals and in certain breeds (Boxers, for example). This type of ulcer may also occur if your dog has hair rubbing his or her eyes, or if he or she has foreign material (dirt, plant material) in or around the eyes. If this is the case, we may need to take additional steps to address the underlying cause of the ulcer.

### **How are indolent ulcers treated?**

We typically treat the surface of your dog's eye with a diamond burr or with a small needle. This speeds healing dramatically. In most cases we also place a protective contact lens. The contact lens keeps your dog comfortable and helps the eye to heal. In addition, we will treat your dog with antibiotic eyedrops or ointment and a lubricating product. We will either dispense the lubricating product here or instruct you to pick it up at the drugstore. This is very important for healing so please do not neglect to use this medication. In addition to eyedrops, most dogs are also treated with minocycline or doxycycline, which are oral antibiotics. We use these oral antibiotics not to treat infection, but because these particular antibiotics also have wound-healing properties. They have been shown to help indolent ulcers heal more quickly. Finally, rubbing at the eyes can also delay healing, so it is also very important that your dog wears his/her e-collar when unattended.

### **How long do indolent ulcers take to heal?**

With the type of treatment done today, most indolent ulcers heal within 1-2 weeks. Some dogs require multiple treatments and can take months to heal, however. It is very important that you understand this - patience is necessary in treating this condition. Rarely, a small surgical procedure (superficial keratectomy) is required to get the ulcer to heal.

### **What if the contact lens falls out?**

The contact lens is very helpful in promoting healing but is not absolutely necessary. You do not need to bring your dog in if the lens falls out, and you should not try to replace it. If the lens does not fall out on its own, we will remove it when we recheck your dog.

**Will my dog get more indolent ulcers in the future?**

Maybe. Dogs who have had one indolent ulcer seem to be predisposed to develop more. Sometimes we can prevent future ulcers with long-term use of eyedrops or ointments. Indolent ulcers likely occur because the cornea is abnormal, however, and this is something we cannot fix. If you notice squinting, rubbing, discharge, or redness, please make an appointment to have your dog evaluated.



# Cummings

## Veterinary Medical Center

AT TUFTS UNIVERSITY

**B6**

**B6** Male  
 Canine Boxer White  
 B6

**OCULAR EXAMINATION**

Date: B6 8:00:03 PM

Chief complaint: ocular FB over the summer, cornea scratch in June or July, meds: ABX ointment, refresh

Attending Ophthalmologist:

B6

Ophthalmology Resident:

B6

OD	Exam	OS
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:	Menace	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:	PLR(Direct)	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:
<input type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:	PLR(Indirect)	<input type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:	Dazzle	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:
15mm/ 30sec	STT(mm/sec)	15 mm/ 10sec
Comment:	Orbit	Comment:
Comment: marked epiphora and staining	Eyelids	Comment:
Comment:	Nictitating	Comments:

**Membranes**

**Comment:**

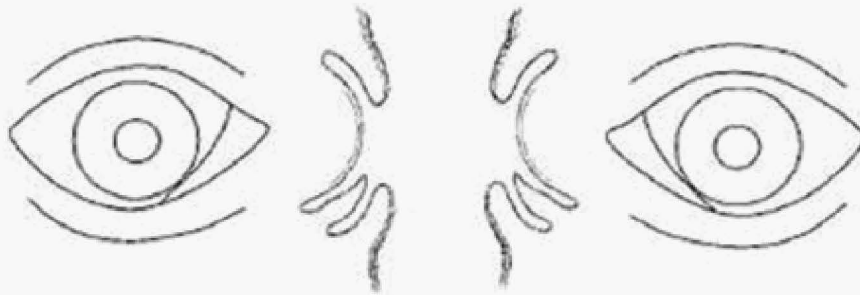
**Sclera**

**Comments:**

**Comment: hyperemia**

**Conjunctiva**

**Comment:**



**OD**

**Exam**

**OS**

**Comment:** axial, linear 3mm superficial epithelial erosion with redundant epithelial lip

**Cornea**

**Comment:** round opacity, lipid likely

**Esthesiometry**

**Comment: 0**

**Flare**

**Comment: 0**

Negative  
 Positive

**Fluorescein**

Negative  
 Positive

Negative  
 Positive

**Jones Test**

Negative  
 Positive

Negative  
 Positive

**Rose Bengal**

Negative  
 Positive

**Comment:**

**Comment:**



**OD**

12 mmHg

*Comment:*

*Comment:*

**Exam**

IOP (TV)

Iris

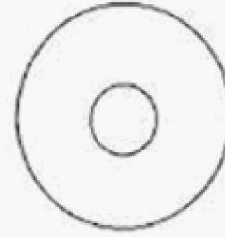
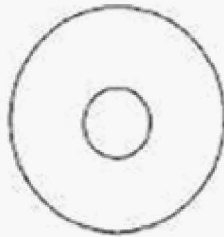
Pupil

**OS**

17 mmHg

*Comment:*

*Comment:*



**OD**

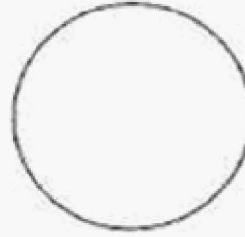
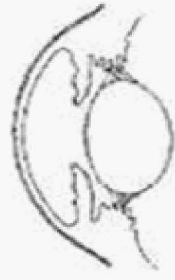
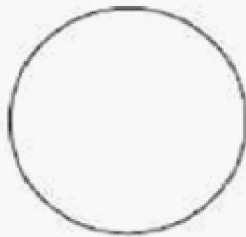
*Comment:*

**Exam**

Lens

**OS**

*Comment:*



**OD**

*Comment:*

*Comment: wnl*

**Exam**

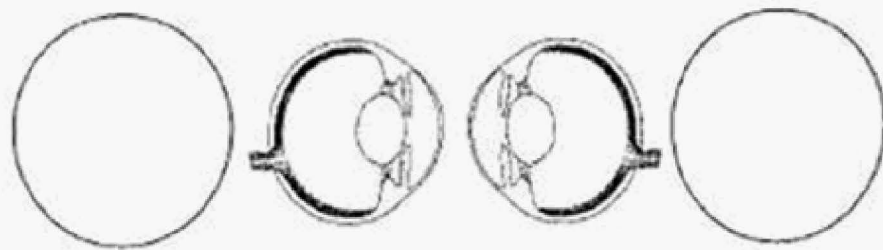
Vitreous

Fundus

**OS**

*Comment:*

*Comment: wnl*



**Findings:**

**Diagnosis: indolent corneal ulcer OD**

**Therapy: diamond burr keratectomy + contact lens placement**

**tobramycin OD TID**

**serum OD TID**

**Refresh OU TID**

**doxycycline 5mg/kg PO q12**

**gabapentin 10mg/kg PO q8-12**

**recheck in 10-14 days**

**Photography**

**Video**

**Patient**

**Name:** B6  
**Signalment:** B6 Years Old White Male Boxer

**Owner**

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

B6

**Patient ID:** B6

**Contact Clinician:** B6 DVM, MPH  
**Alternate Clinician:** B6 DVM, PhD, DECVS,

**Student:** B6 V19

**Discharge Instructions**

**Admit Date:** B6 9:06:06 AM  
**Discharge Date:**

**Diagnosis:**

**Procedures:**

**Medications:**

B6

B6

**CASE SUMMARY**

**General summary:**

B6

Thank you for entrusting us with **B6** care. He is a very sweet boy!

---

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---

Case: **B6**

Owner: **B6**

Discharge Instructions

**B6**

**B6** Male  
Canine Boxer White  
B6

**OCULAR EXAMINATION**

Date: B6 9:06:06 AM

**B6**

Attending Ophthalmologist: **B6**

Ophthalmology Resident: **B6**

OD	Exam	OS
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:	Menace	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:	PLR(Direct)	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:	PLR(Indirect)	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:	Dazzle	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent Comment:
mm/ sec	STT(mm/sec)	mm/ sec
Comment:	Orbit	Comment:
Comment: moderate epiphora staining, lateral 1/3 superior palpebrum small susp meib adenoma (~2mm)	Eyelids	Comment:

Comment:

**Nictitating Membranes**

Comments:

Comment:

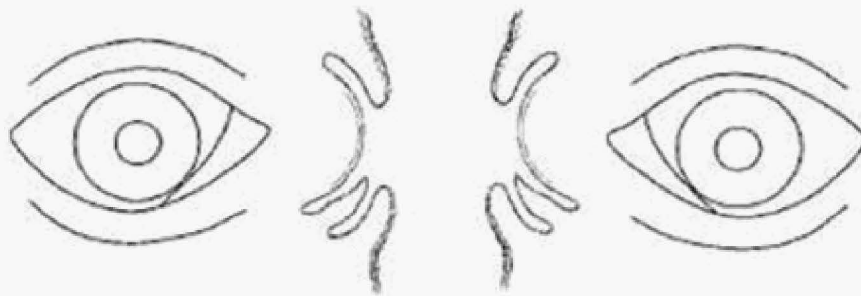
**Sclera**

Comments:

Comment: mild hyperemia

**Conjunctiva**

Comment:



**OD**

Comment: contact lens in place, no evidence of previous ulcer, ventral paraxial corneal opacity most likely lipid

**Exam**

Cornea

**OS**

Comment: round opacity, lipid likely

**Esthesiometry**

Comment: 0

**Flare**

Comment: 0

- Negative
- Positive

**Fluorescein**

- Negative
- Positive

- Negative
- Positive

**Jones Test**

- Negative
- Positive

- Negative
- Positive

**Rose Bengal**

- Negative
- Positive

Comment:

Comment:





OD

12 mmHg

Exam

IOP (TP)

OS

14 mmHg

*Comment:*

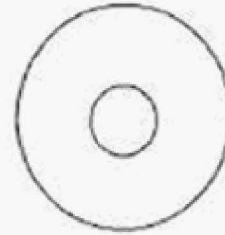
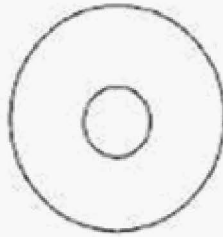
Iris

*Comment:*

*Comment:*

Pupil

*Comment:*



OD

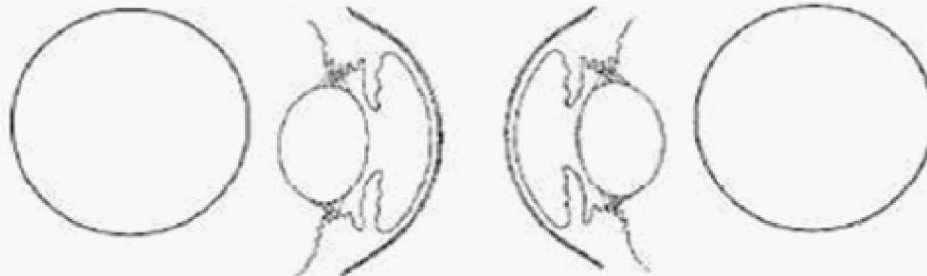
*Comment:*

Exam

Lens

OS

*Comment:*



OD

*Comment:*

Exam

Vitreous

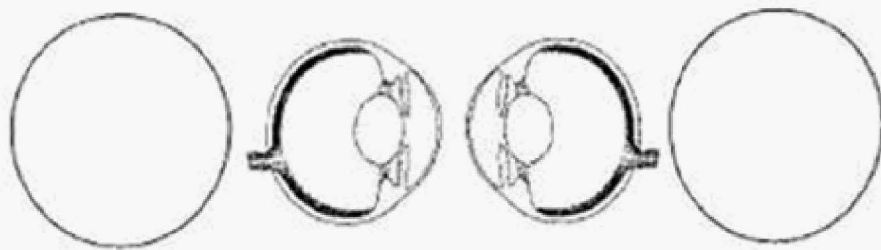
OS

*Comment:*

*Comment:* wnl

Fundus

*Comment:* wnl



**Findings:**

**Diagnosis: indolent corneal ulcer OD - fully healed**

**Therapy:**

**Refresh OUtD**

**no recheck indicated**

**Photography**

**Video**

### Discharge Instructions

**Patient**

Name: B6  
Species: Canine  
White Male Boxer  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6

**Attending Cardiologist:**

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6 V20

Date: B6

**Diagnoses:**

Dilated cardiomyopathy (DCM)

**Case summary:**

Thank you for bringing B6 in today for re-evaluation of his heart - he is such a sweet boy! B6 echocardiogram today showed a large left ventricle with decreased contractile function (as previously seen), and further enlargement of his left atrium, one of the upper chambers of his heart. Since B6 has some progressive heart enlargement, we are going to add a new medication and have you take another medication home to have on hand in case of trouble breathing (see below).

**Monitoring at home:**

- We would like you to monitor B6 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 will have a breathing rate at rest of less than 35 to 40 breaths per minute.
- In the case of an increase in breathing rate or effort, you can give B6 a dose of B6 per giving the dose of B6 please call Tufts or your primary care veterinarian.
- 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:**

Please continue  current diet.

## **Exercise Recommendations:**

can continue his walks as long as he does not lag behind or seem tired after. We generally recommend avoiding vigorous high intensity activity as this could worsen strain on the heart or cause arrhythmias.

## **Recheck Visits:**

Recheck blood work is recommended to check kidney values and electrolytes 2-3 weeks after starting . This can be done here as a technician appointment or at your primary care veterinarian.

A recheck with cardiology has been scheduled for  or  at 2:30 P.M. This is his next appointment for the DCM study.

Please call 508-887-4745 to schedule an appointment with dermatology if  skin on his face does not improve. You could also try an e-collar to prevent him from scratching at his face.

Thank you for entrusting us with  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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---

Case:

Owner:

Discharge Instructions

B6

Patient ID: B6  
B6 Canine  
B6 Years Old Male Boxer  
White

**Cardiology Appointment Report**

Date: B6

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6

**Presenting Complaint:**

B6 presents for 4-month recheck following diagnosis of DCM following GDV correction and gastropexy in October. Per O is doing very well at home, no concerns related to his DCM.

**Concurrent Diseases:**

Hypothyroid managed with Thyrotabs

**General Medical History:**

B6

**Diet and Supplements:**

RC dry + Hills Science Diet canned (chicken stew)

No supplements after discontinuing Taurine in October/November

**Cardiovascular History:**

Prior CHF diagnosis? No

Prior heart murmur? Grade I/M

Prior ATE? No

Prior arrhythmia? No

Monitoring respiratory rate and effort at home? Yes, resting RR 25 or less

Cough? None since before the GDV sx

Shortness of breath or difficulty breathing? No

Syncope or collapse? No

Sudden onset lameness? No

Exercise intolerance? No, goes on several mile walks daily

# B6

**Muscle condition:**

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

**Cardiovascular Physical Exam:**

**Murmur Grade:**

- |  |                                |
|--|--------------------------------|
| <input checked="" type="checkbox"/> None | <input type="checkbox"/> IV/VI |
| <input type="checkbox"/> I/VI            | <input type="checkbox"/> V/VI  |
| <input type="checkbox"/> II/VI           | <input type="checkbox"/> VI/VI |
| <input type="checkbox"/> III/VI          |                                |

**Jugular vein:**

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

**Arterial pulses:**

- |  |   |
|--|---|
| <input type="checkbox"/> Weak            | <input type="checkbox"/> Bounding         |
| <input checked="" type="checkbox"/> Fair | <input type="checkbox"/> Pulse deficits   |
| <input type="checkbox"/> Good            | <input type="checkbox"/> Pulsus paradoxus |
| <input type="checkbox"/> Strong          | <input type="checkbox"/> Other:           |

**Arrhythmia:**

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

- Sinus arrhythmia
- Premature beats

- Tachycardia

**Gallop:**

- Yes
- No
- Intermittent

- Pronounced
- Other:

**Pulmonary assessments:**

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

- Pulmonary crackles
- Wheezes
- Upper airway stridor

**Abdominal exam:**

- Normal
- Hepatomegaly
- Abdominal distension

- Mild ascites
- Marked ascites

**Problems:**

-DCM, r/o primary cardiomyopathy, diet induced

-Facial excoriations, r/o bacterial folliculitis, allergic dermatitis, atopic dermatitis, behavioral

**Diagnostic plan:**

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

- Dialysis profile
- Thoracic radiographs
- NT-proBNP
- Troponin I
- Other tests: DCM study; Recommend Derm Appt

**B6**

**Mitral inflow:**

- Summated
- Normal
- Delayed relaxation

- Pseudonormal
- Restrictive

**ECG findings:**

Sinus tachycardia, occasional variation in P wave morphology (as previously noted)

**Assessment and recommendations:**

Echocardiogram reveals persistent DCM changes with progression in LA size. Recommend having

B6

on hand in case of increased RR/RE or cough. Recommend starting

B6

increase to BID if well tolerated). Recheck renal values and electrolytes 2-3 weeks after starting enalapril.

Continue pimobendan at current dose. Recommend dermatology consultation for facial skin issues.

Recheck echo and blood work for study in 3 months, or sooner if clinical signs occur.

**Final Diagnosis:**

DCM-like changes (r/o primary DCM v ARVC with DCM phenotype v dietary)

**Heart Failure Classification Score:**

ISACHC Classification:

- Ia
- Ib
- II
- IIIa
- IIIb

ACVIM Classification:

- A
- B1
- B2
- C
- D

M-Mode

IVSd	B6	cm
LVIDd		cm
LVPWd		cm
IVSs		cm
LVIDs		cm
LVPWs		cm
EDV(Teich)		ml
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
Ao Diam		cm
LA Diam		cm
LA/Ao		
Max LA		cm
Ao Diam		cm
LA Diam		cm
LA/Ao		
TAPSE	cm	
EPSS	cm	

M-Mode Normalized

IVSdN	B6	{0.290 - 0.520}
LVIDdN		{1.350 - 1.730} !
LVPWdN		{0.330 - 0.530}
IVSsN		{0.430 - 0.710} !
LVIDsN		{0.790 - 1.140} !
LVPWsN		{0.530 - 0.780} !
Ao Diam N		{0.680 - 0.890} !
LA Diam N		{0.640 - 0.900} !

2D

SALA	B6	cm
------	----	----



Ao Diam		cm
SA LA / Ao Diam		
IVSd		cm
LVIDd		cm
LVPWd		cm
EDV(Teich)		ml
IVSs		cm
LVIDs		cm
LVPWs		cm
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
LV Major		cm
LV Minor		cm
Sphericity Index		
LVLd LAX		cm
LVAAd LAX		cm
LVEDV A-L LAX		ml
LVEDV MOD LAX		ml
LVLs LAX		cm
LVAAs LAX		cm
LVESV A-L LAX		ml
LVESV MOD LAX		ml
HR		BPM
EF A-L LAX		%
LVEF MOD LAX		%
SV A-L LAX		ml
SV MOD LAX		ml
CO A-L LAX		l/min
CO MOD LAX		l/min
LVLd A4C		cm
LVEDV MOD A4C		ml
LVLs A4C		cm
LVESV MOD A4C		ml
LVEF MOD A4C		%
SV MOD A4C		ml

B6

<u>Doppler</u>		
E'		m/s
A'		m/s
S'		m/s
EASUM		m/s
AV Vmax		m/s
AV maxPG		mmHg
PV Vmax		m/s
PV maxPG		mmHg

B6

Client: **B6**  
Patient:

Chem 21 - 5/8/2019



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

**DUPLICATE**

Name/DOB: **B6**      Sex: SF      Provider: **B6**  
Patient ID:      Age: 8      Order Location: V320559: Investigation into  
Phone number:      Species: Canine      Sample ID: 1905080053  
Collection Date: 5/8/2019 12:31 PM      Breed:  
Approval date: 5/8/2019 1:07 PM

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

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

**B6**

Sample ID: 1905080053/1  
END OF REPORT (Final)

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

Client: **B6**  
 Patient:

Diet hx **B6**

# **B6**

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

Pet's name: **B6** Owner's name: **B6** Today's date: **B6**

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)  
 Example: **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
Royal Canin Early Cardiac	dry	1 1/2 cup	2x/day	FEB 2019-PRES.

\*Any additional diet information can be listed on the back of this sheet

2. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)?  Yes  No If yes, please list which ones and give brands and amounts:
- |  | Brand/Concentration | Amount per day             |
|--|---------------------|----------------------------|
| Taurine                                    | Now / 500           | 2x                         |
| Carnitine                                  |                     |                            |
| Antioxidants                               |                     |                            |
| Multivitamin                               |                     |                            |
| Fish oil                                   |                     |                            |
| Coenzyme Q10                               |                     |                            |
| Other (please list):<br>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**

**B6** NT-proBNP 5/8/2019

IDEXX Reference Laboratories

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

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: ENGLISH\_BULLDOG  
Gender: FEMALE SPAYED  
Age: 0Y

Date: **B6**  
Requisition: **B6**  
Accession: **B6**  
Ordered by: **B6**

**B6**  
TUFTS UNIVERSITY  
200 WESTBORO RD  
NORTH GRAFTON, Massachusetts 01536  
508-839-5395  
Account: **B6**

CARDIOPET proBNP - CANINE

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

Comments

**B6**

PLEASE NOTE: Complete interpretive comments for all concentrations of Cardipet proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

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

**Troponin** **B6**



**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

**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:**  
**437321**

**GI Lab Accession:** **B6**

<u>Test</u>	<u>Result</u>	<u>Reference Interval</u>	<u>Assay Date</u>
Ultra-Sensitive Troponin I-Estima	<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](mailto:gilab@cvm.tamu.edu)  
[vetmed.tamu.edu/gilab](mailto:vetmed.tamu.edu/gilab)

**Report Details - EON-381040**

ICSR: 2063286  
 Type Of Submission: Initial  
 Report Version: FPSR.FDA.PETF.V.V1  
 Type Of Report: Adverse Event (a symptom, reaction or disease associated with the product)  
 Reporting Type: Voluntary  
 Report Submission Date: 2019-02-27 13:49:14 EST

**Reported Problem:**  
**Problem Description:** DCM and CHF diagnosed 2/25/19. Eating BEG diet. 2 other dogs in household will be screened. Will change diet on [B6] and reassess in 3 months. Just being discharged today. Taurine and troponin pending  
**Date Problem Started:** 02/25/2019  
**Concurrent Medical Problem:** Yes  
**Pre Existing Conditions:** [B6]  
**Outcome to Date:** Stable

**Product Information:**  
**Product Name:** CANIDAE® ALL LIFE STAGES CHICKEN MEAL & RICE FORMULA DRY DOG FOOD  
**Product Type:** Pet Food  
**Lot Number:**  
**Product Use Information:** **Description:** Fed this diet most of his life  
**Manufacturer /Distributor Information:**  
**Purchase Location Information:**

**Animal Information:**  
**Name:** [B6]  
**Type Of Species:** Dog  
**Type Of Breed:** Doberman Pinscher  
**Gender:** Male  
**Reproductive Status:** Intact  
**Weight:** 60 Kilogram  
**Age:** [B6] Years  
**Assessment of Prior Health:** Excellent  
**Number of Animals Given the Product:** 3  
**Number of Animals Reacted:** 1  
**Owner Information:** **Owner Information provided:** Yes  
**Contact:** **Name:** [B6]  
**Phone:** [B6]  
**Email:**  
**Address:** [B6]  
**Healthcare Professional Information:** **Practice Name:** Tufts Cummings School of Veterinary Medicine  
**Contact:** **Name:** Lisa Freeman  
**Phone:** (508) 887-4523  
**Email:** lisa.freeman@tufts.edu

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

Client:

B6

Address:

All Medical Records

Patient:

B6

Breed: Irish Wolfhound

DOB:

B6

Species: Canine

Sex: Female

Home Phone:

B6

Work Phone:

Cell Phone:

Referring Information

B6

Client:

B6

Patient:

Initial Complaint:

Emergency

SOAP Text:

B6

7:40PM

B6

Subjective

NEW VISIT (ER)

Doctor:

B6

DVM

Student:

B6

V19

Presenting complaint: rDVM:

B6

Referral visit? Y

Diagnostics completed prior to visit:

B6

HISTORY:

Signalment: 5 yo intact female irish wolfhound

B6



Client:  
Patient:

**B6**

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

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SOAP Text **B6** 12:41PM - **B6**

**Disposition/Recommendations**

Client:  
Patient:

**B6**

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Client: **B6**  
 Patient:

**Cummings**  
**Veterinary Medical Center**  
 AT TUFTS UNIVERSITY

**Foster Hospital for Small Animals**

55 Willard Street  
 North Grafton, MA 01536  
 (508) 839-5395

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

Patient:	<b>B6</b>
Species:	Canine
Breed:	Irish Wolfhound
Sex:	Female
Age:	<b>B6</b> Years Old

**Lab Results Report**

**Chemistry Profile - Small Animal** **B6** 3:25:27 AM **Accession ID: B6**

Test	Results	Reference Range	Units
GLUCOSE	<b>B6</b>	67 - 135	mg/dL
UREA		8 - 30	mg/dL
CREATININE		0.6 - 2	mg/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
MAGNESIUM 2+		1.8 - 3	mEq/L
T. PROTEIN		5.5 - 7.8	g/dL
ALBUMIN		2.8 - 4	g/dL
GLOBULINS		2.3 - 4.2	g/dL
A/G RATIO		0.7 - 1.6	
SODIUM		140 - 150	mEq/L
CHLORIDE		106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
tCO2 (BICARB)		14 - 28	mEq/L
AGAP		8 - 19	
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
D.BILIRUBIN		0 - 0.1	mg/dL
I BILIRUBIN		0 - 0.2	mg/dL
ALK PHOS		12 - 127	U/L
GGT	0 - 10	U/L	



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

ALT	<b>B6</b>	14 - 86	U/L
AST		9 - 54	U/L
CK		22 - 422	U/L
CHOLESTEROL		82 - 355	mg/dL
TRIGLYCERIDES		30 - 338	mg/dl
AMYLASE		409 - 1250	U/L
OSMOLALITY (CALCULATED)		291 - 315	mmol/L

**Chemistry Profile - Small Animal (Pa)** **B6** 8:26:12 AM **Accession ID:** **B6**

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

**Chemistry Profile - Small Animal** **B6** 8:26:11 AM **Accession ID:** **B6**

Test	Results	Reference Range	Units
SEGS%	<b>B6</b>	43 - 86	%
LYMPHS%		7 - 47	%
MONOS%		1 - 15	%
EOS%		0 - 16	%
SEGS (AB)ADVIA		2.8 - 11.5	K/ul
LYMPHS (ABS)ADVIA		1 - 4.8	K/uL
MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
EOS (ABS)ADVIA		0 - 1.4	K/uL
WBC MORPHOLOGY		0 - 0	
Occasional reactive lymphocytes			
TOXIC CHANGE		0 - 0	
RBC MORPHOLOGY		0 - 0	
POIKILOCYTOSIS		0 - 0	

**Chemistry Profile - Small Animal (Pa)** **B6** 8:59:23 AM **Accession ID:** **B6**

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



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

PCV **	<b>B6</b>	0 - 0	%
TS (FHSA)		0 - 0	g/dl

**Chemistry Profile - Small Animal** **B6** 9:46:25 AM Accession ID: **B6**

Test	Results	Reference Range	Units
SO2%	<b>B6</b>	94 - 100	%
IICT (POC)		38 - 48	%
HB (POC)		12.6 - 16	g/dL
NA (POC)		140 - 154	mmol/L
K (POC)		3.6 - 4.8	mmol/L
CL(POC)		109 - 120	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
BUN (POC)		12 - 28	mg/dL
CREAT (POC)		0.2 - 2.1	mg/dL
TCO2 (POC)		0 - 0	mmol/L
nCA		0 - 0	mmol/L
nMG		0 - 0	mmol/L
GAP		0 - 0	mmol/L
CA/MG		0 - 0	mol/mol
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE		0 - 0	
FiO2		0 - 0	%
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2	36 - 44	mmHg	
PO2	80 - 100	mmHg	
HCO3	18 - 24	mmol/L	

**Chemistry Profile - Small Animal** **B6** 9:53:16 AM Accession ID: **B6**

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

**Chemistry Profile - Small Animal** **B6** 11:04:00 AM Accession ID: **B6**

Test	Results	Reference Range	Units
		0 - 0	





Client:  
Patient:

**B6**

**B6**



Client: **B6**  
Patient:

# B6

**Chemistry Profile - Small Animal (Pa)**    **B6**    5:25:25 AM    Accession ID    **B6**

Test	Results	Reference Range	Units
SO2%	<b>B6</b>	94 - 100	%
HCT (POC)		38 - 48	%
HB (POC)		12.6 - 16	g/dL
NA (POC)		140 - 154	mmol/L
K (POC)		3.6 - 4.8	mmol/L
CL(POC)		109 - 120	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
BUN (POC)		12 - 28	mg/dL
CREAT (POC)		0.2 - 2.1	mg/dL
TCO2 (POC)		0 - 0	mmol/L
nCA		0 - 0	mmol/L
nMG		0 - 0	mmol/L
GAP		0 - 0	mmol/L
CA/MG		0 - 0	mol/mol
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE		0 - 0	
FiO2		0 - 0	%
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2	36 - 44	mmHg	
PO2	80 - 100	mmHg	
HCO3	18 - 24	mmol/L	



27/142

**B6**

Printed Sunday, February 24, 2019

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

Chemistry Profile - Small Animal (Pa <b>B6</b> ) :32:29 AM Accession ID: <b>B6</b>			
Test	Results	Reference Range	Units
TS (FHSA)	<b>B6</b>	0 - 0	g/dl
PCV **	<b>B6</b>	0 - 0	%
TS (FHSA)	<b>B6</b>	0 - 0	g/dl

Chemistry Profile - Small Animal (Pa <b>B6</b> ) 1:01:12 PM Accession ID: <b>B6</b>			
Test	Results	Reference Range	Units
WBC (ADVIA)	<b>B6</b>	4.4 - 15.1	K/uL
RBC(ADVIA)	<b>B6</b>	5.8 - 8.5	M/uL
HGB(ADVIA)	<b>B6</b>	13.3 - 20.5	g/dL
HCT(ADVIA)	<b>B6</b>	39 - 55	%
MCV(ADVIA)	<b>B6</b>	64.5 - 77.5	fL
MCH(ADVIA)	<b>B6</b>	21.3 - 25.9	pg
MCHC(ADVIA)	<b>B6</b>	31.9 - 34.3	g/dL
RDW (ADVIA)	<b>B6</b>	11.9 - 15.2	
PLT(ADVIA)	<b>B6</b>	173 - 486	K/uL
MPV (ADVIA)	<b>B6</b>	8.29 - 13.2	fl
PLTCRT	<b>B6</b>	0.129 - 0.403	%
RETIC(ADVIA)	<b>B6</b>	0.2 - 1.6	%
RETICS (ABS) ADVIA	<b>B6</b>	14.7 - 113.7	K/uL

Chemistry Profile - Small Animal (Pa <b>B6</b> ) :01:09 PM Accession ID: <b>B6</b>			
Test	Results	Reference Range	Units
SEGS%	<b>B6</b>	43 - 86	%
LYMPHS%	<b>B6</b>	7 - 47	%
MONOS%	<b>B6</b>	1 - 15	%
EOS%	<b>B6</b>	0 - 16	%
SEGS (AB)ADVIA	<b>B6</b>	2.8 - 11.5	K/ul
LYMPHS (ABS)ADVIA	<b>B6</b>	1 - 4.8	K/uL
MONOS (ABS)ADVIA	<b>B6</b>	0.1 - 1.5	K/uL
EOS (ABS)ADVIA	<b>B6</b>	0 - 1.4	K/uL
WBC MORPHOLOGY	<b>B6</b>	0 - 0	
No Morphologic Abnormalities	<b>B6</b>		
CRENATION	<b>B6</b>	0 - 0	

Chemistry Profile - Small Animal (Pa <b>B6</b> ) :03:25 AM Accession ID: <b>B6</b>			
Test	Results	Reference Range	Units
SO2%	<b>B6</b>	94 - 100	%
HCT (POC)	<b>B6</b>	38 - 48	%
HB (POC)	<b>B6</b>	12.6 - 16	g/dL
NA (POC)	<b>B6</b>	140 - 154	mmol/L
K (POC)	<b>B6</b>	3.6 - 4.8	mmol/L



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

CL(POC)		109 - 120	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
BUN (POC)		12 - 28	mg/dL
CREAT (POC)		0.2 - 2.1	mg/dL
TCO2 (POC)		0 - 0	mmol/L
nCA		0 - 0	mmol/L
nMG		0 - 0	mmol/L
GAP		0 - 0	mmol/L
CA/MG		0 - 0	mol/mol
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE		0 - 0	
FiO2		0 - 0	%
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

**B6**

**Chemistry Profile - Small Animal (Pa)** **B6** 8:48:35 AM **Accession ID:** **B6**

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

**Chemistry Profile - Small Animal (Pa)** **B6** 4:42:12 AM **Accession ID:** **B6**

Test	Results	Reference Range	Units
WBC (ADVIA)		4.4 - 15.1	K/uL
RBC(ADVIA)		5.8 - 8.5	M/uL
HGB(ADVIA)		13.3 - 20.5	g/dL
HCT(ADVIA)		39 - 55	%
MCV(ADVIA)		64.5 - 77.5	fL
MCH(ADVIA)		21.3 - 25.9	pg
MCHC(ADVIA)		31.9 - 34.3	g/dL
RDW (ADVIA)		11.9 - 15.2	
PLT(ADVIA)		173 - 486	K/uL
MPV (ADVIA)		8.29 - 13.2	fl

**B6**



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

PLTCRT		0.129 - 0.403	%
RETIC(ADVIA)	<b>B6</b>	0.2 - 1.6	%
RETICS (ABS) ADVIA		14.7 - 113.7	K/uL

**Chemistry Profile - Small Animal (Pa)** **B6** 4:42:27 AM **Accession ID:** **B6**

Test	Results	Reference Range	Units
GLUCOSE		67 - 135	mg/dL
UREA		8 - 30	mg/dL
CREATININE		0.6 - 2	mg/dL
PHOSPHORUS		2.6 - 7.2	mg/dL
CALCIUM2		9.4 - 11.3	mg/dL
MAGNESIUM 2+		1.8 - 3	mEq/L
T. PROTEIN		5.5 - 7.8	g/dL
ALBUMIN		2.8 - 4	g/dL
GLOBULINS		2.3 - 4.2	g/dL
A/G RATIO		0.7 - 1.6	
SODIUM		140 - 150	mEq/L
CHLORIDE		106 - 116	mEq/L
POTASSIUM		3.7 - 5.4	mEq/L
iCO2 (BICARB)	<b>B6</b>	14 - 28	mEq/L
AGAP		8 - 19	
NA/K		29 - 40	
T BILIRUBIN		0.1 - 0.3	mg/dL
D.BILIRUBIN		0 - 0.1	mg/dL
I BILIRUBIN		0 - 0.2	mg/dL
ALK PHOS		12 - 127	U/L
GGT		0 - 10	U/L
ALT		14 - 86	U/L
AST		9 - 54	U/L
CK		22 - 422	U/L
CHOLESTEROL		82 - 355	mg/dL
TRIGLYCERIDES		30 - 338	mg/dl
AMYLASE		409 - 1250	U/L
OSMOLALITY (CALCULATED)		291 - 315	mmol/L

**Chemistry Profile - Small Animal (Pa)** **B6** 4:42:07 AM **Accession ID:** **B6**

Test	Results	Reference Range	Units
SEGS%		43 - 86	%
LYMPHS%		7 - 47	%
MONOS%	<b>B6</b>	1 - 15	%
SEGS (AB)ADVIA		2.8 - 11.5	K/ul
LYMPHS (ABS)ADVIA		1 - 4.8	K/uL



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

MONOS (ABS)ADVIA		0.1 - 1.5	K/uL
WBC MORPHOLOGY	<b>B6</b>	0 - 0	
No Morphologic Abnormalities			
POIKILOCYTOSIS		0 - 0	

**Chemistry Profile - Small Animal (Pa)** **B6** 8:46:25 AM **Accession ID: B6**

Test	Results	Reference Range	Units
SO2%		94 - 100	%
HCT (POC)		38 - 48	%
HB (POC)		12.6 - 16	g/dL
NA (POC)		140 - 154	mmol/L
K (POC)		3.6 - 4.8	mmol/L
CL(POC)		109 - 120	mmol/L
CA (ionized)		1.17 - 1.38	mmol/L
MG (POC)		0.1 - 0.4	mmol/L
GLUCOSE (POC)		80 - 120	mg/dL
LACTATE		0 - 2	mmol/L
BUN (POC)		12 - 28	mg/dL
CREAT (POC)		0.2 - 2.1	mg/dL
TCO2 (POC)		0 - 0	mmol/L
nCA		0 - 0	mmol/L
nMG		0 - 0	mmol/L
GAP		0 - 0	mmol/L
CA/MG		0 - 0	mol/mol
BEecf		0 - 0	mmol/L
BEb		0 - 0	mmol/L
A		0 - 0	mmHg
NOVA SAMPLE		0 - 0	
FiO2		0 - 0	%
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
PH		7.337 - 7.467	
PCO2		36 - 44	mmHg
PO2		80 - 100	mmHg
HCO3		18 - 24	mmol/L

**B6**

**Chemistry Profile - Small Animal (Pa)** **B6** 2:42:36 PM **Accession ID: B6**

Test	Results	Reference Range	Units
Troponin I (i-STAT) Cardiology - FHSA	<b>B6</b>	0 - 0	ng/ml



**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

hx, labs, 2/9/13-9/11/18

**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

AH - hx, labs, 2/9/13-9/11/18

**B6**



Client:  
Patient:

**B6**

RDVM

**B6**

AH - hx, labs, 2/9/13-9/11/18

**B6**

Client:  
Patient:

**B6**

RDVM **B6** AH - hx, labs, 2/9/13-9/11/18

**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

AH - hx, labs, 2/9/13-9/11/18

**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

AH - hx, labs, 2/9/13-9/11/18

**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

AH - hx, labs, 2/9/13-9/11/18

**B6**

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

RDVM **B6** AH - hx, labs, 2/9/13-9/11/18

Client: **B6** Gender: Female  
Patient Name: **B6** Weight: 0.00 lbs  
Species: Canine Age: 5 Years  
Breed: Irish Wolfhound Doctor: **B6**

Test	Results	Reference Interval	LOW	NORMAL	HIGH
ProCyte Dx:	<b>B6</b>	3:16 PM)			
RBC		5.65 - 8.87			
HCT		37.3 - 61.7			
HGB		13.1 - 20.5			
MCV		61.6 - 73.5			
MCH		21.2 - 25.9			
MCHC		32.0 - 37.9			
RDW		13.6 - 21.7			
%RETIC		10.0 - 110.0			
RETIC		22.3 - 29.6			
RETIC-HGB		5.05 - 16.76			
WBC					
%NEU	<b>B6</b>				
%LYM					
%MONO					
%EOS					
%BASO					
NEU		2.95 - 11.64	HIGH		
LYM		1.05 - 5.10			
MONO		0.16 - 1.12			
EOS		0.06 - 1.23			
BASO		0.00 - 0.10			
PLT		148 - 484			
MPV		8.7 - 13.2			
PDW		9.1 - 19.4			
PCT		0.14 - 0.46			

**B6**

**B6**

Printed: September 11, 2018 3:16 PM

Page 1 of 1

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

RDVM: **B6** AH - hx, labs, 2/9/13-9/11/18

Client: **B6** Gender: Female  
Patient Name: **B6** Weight: 0.00 lbs  
Species: Canine Age: 5 Years  
Breed: Irish Wolfhound Doctor: **B6**

Test	Results	Reference Interval	LOW	NORMAL	HIGH
Catalyst Dx ( <b>B6</b> )		:55 AM)			8/24/18
CREA		0.5 - 1.8			
BUN		7 - 27			
BUN/CREA	<b>B6</b>				
ALT		10 - 125			
AST		0 - 50			
ALKP		23 - 212			

HIGH

B6

Printed: August 25, 2018 9:55 AM

Page 1 of 1

**B6**

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

RDVM **B6** AH - hx, labs, 2/9/13-9/11/18

Client: **B6** Gender: Female  
Patient Name: **B6** Weight: 0.00 lbs  
Species: Canine Age: 5 Years  
Breed: Irish Wolfhound Doctor: **B6**

Test	Results	Reference Interval	LOW	NORMAL	HIGH
Catalyst Dx	<b>B6</b>	1:16 PM)			
CREA		0.5 - 1.8			
BUN		7 - 27			
BUN/CREA	<b>B6</b>				
ALT		10 - 125			
AST		0 - 50			
ALKP		23 - 212			

**B6**

Printed: August 24, 2018 1:16 PM

Page 1 of 1

**B6**



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

**NOVA Panel 9/12/18**

**Sample Profile**

Patient ID: **B6**  
Patient Name:  
Analyzed: 09/12/2018 09:46:36 AM  
Analyzer ID: TDome  
Sample Type: Arterial  
Panel: Critical Care  
Operator: 123456  
Releaser: auto

**B6**  
B6 Canine  
9/12/2018 9:46 AM  
NOVA PANEL-ICU  
Lithium Heparin

Required Fields

Optional Fields

40% / 7.0g/dL

**Measured**

Test	Value	Units	Reference Range	Flags
pH	7.365		-	
pCO2		mmHg	-	
pO2		mmHg	-	
SO2%			-	
Hct		%	-	
Hb		g/dL	-	
Na+		mmol/L	-	
K+		mmol/L	-	
Cl-		mmol/L	-	
Ca++		mmol/L	-	
Mg++		mmol/L	-	
Glu		mg/dL	-	
Lac		mmol/L	-	
BUN		mg/dL	-	
Creat		mg/dL	-	
TCO2		mmol/L	-	

**Calculated**

Test	Value	Units	Reference Range	Flags
nCa		mmol/L	-	
nMg		mmol/L	-	
Gap		mmol/L	-	
Ca++/Mg++		mol/mol	-	
BUN/Creat		mg/mg	-	
BE-ecf		mmol/L	-	
BE-b		mmol/L	-	
SBC		mmol/L	-	
HCO3-		mmol/L	-	
RI			-	
P50		mmHg	-	
pO2/FIO2		mmHg	-	
O2Cap		mL/dL	-	
O2Ct		mL/dL	-	
A		mmHg	-	
A-aDO2		mmHg	-	
a/A			-	
Osm		mOsm/kg	-	

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

**B6** Aerobic Culture 9/12/18

**B6**

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

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: IRISH\_WOLFHOUND  
Gender: FEMALE  
Age: 5Y

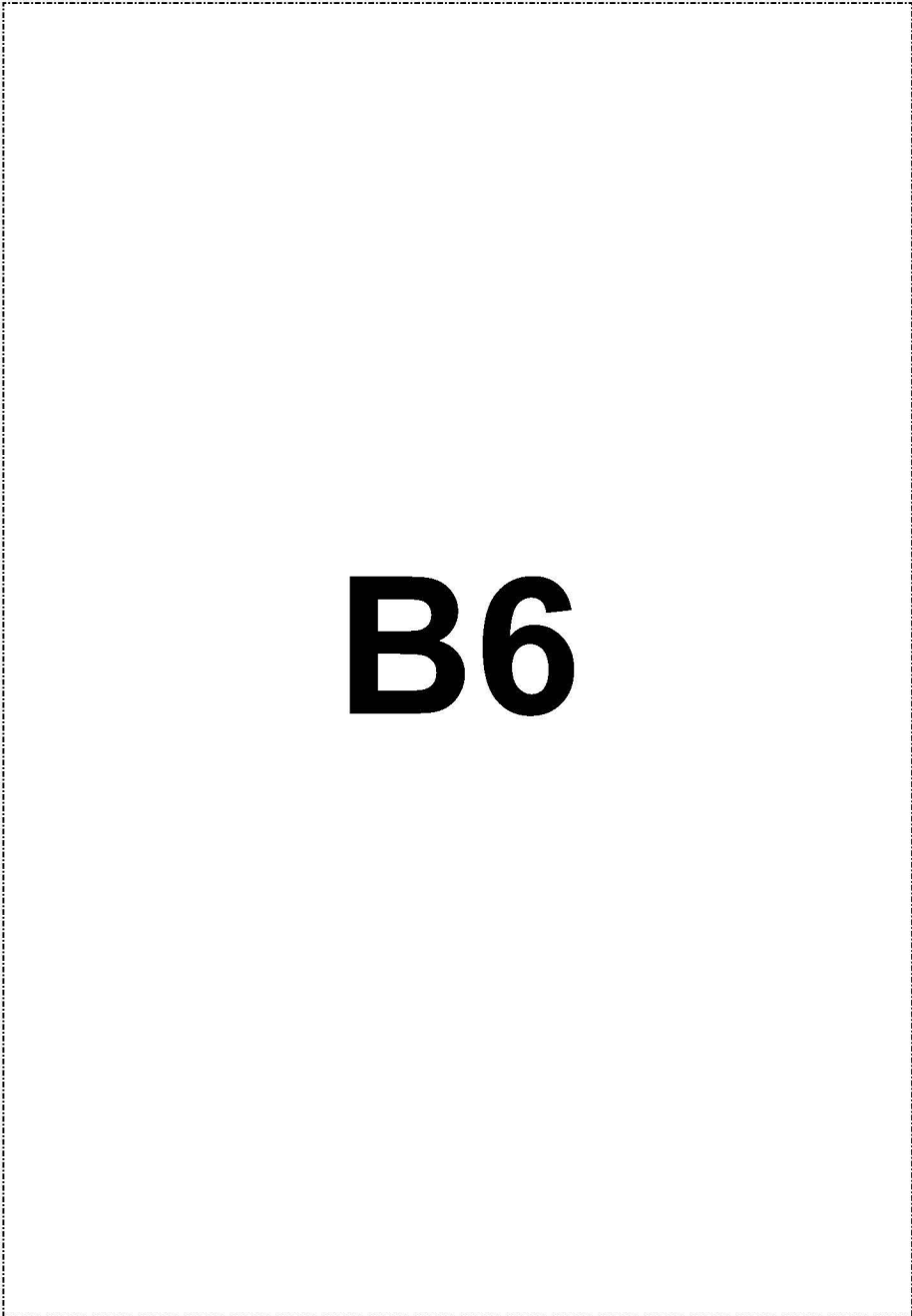
Date: **B6**  
Requisition #: **B6**  
Accession #: **B6**  
Ordered by: **B6**

**B6**

TUFTS UNIVERSITY  
200 WESTBORO RD  
NORTH GRAFTON, Massachusetts 01536-1828  
508-839-5395

Account: **B6**

AEROBIC CULTURE



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

**B6** Aerobic Culture 9/12/18

**B6**

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

**B6**

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

**BNP**

**B6**

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

Client: **B6**  
Patient: **B6**  
Species: CANINE  
Breed: IRISH\_WOLFHOUND  
Gender: FEMALE  
Age: 6Y

Date: 02/05/2019  
Requisition #: 1A  
Accession #: **B6**  
Ordered by: **B6**

**B6**  
TUFTS UNIVERSITY  
200 WESTBORO RD  
NORTH GRAFTON, Massachusetts 01536  
508-839-5395  
Account: **B6**

**CARDIOPET proBNP- CANINE**

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

**Comments**

**B6**

PLEASE NOTE: COMPLETE INTERPRETIVE COMMENTS FOR ALL CONCENTRATIONS OF CARDIOPET proBNP are available in the online directory of services. Serum specimens received at room temperature may have decreased NT-proBNP concentrations.

Client: **B6**  
Patient:

Prescription 2/6/2019



Cummings School  
of Veterinary Medicine



Dear Pharmacist:

Veterinarians do not have NPI numbers because they do not bill human insurance. If it is a non-control, you will be provided with a MA State License number; if it is a control, you will be provided with a DEA number.

To: **B6** Fax: **B6** Date: 2/6/2019

From Department: Internal Medicine

55 Willard St. North Grafton, MA 01536 – Phone: 508-887-4839

**B6**

Patient Name: **B6** Owner Name: **B6** Date: 2/6/2019

Patient Species: canine Patient Weight: 60.5 kg Owner Phone: **B6**

Address: **B6**

RX **B6**

Refills: 1 2 3 4 5 6 7 8 9 10 11 NR **B6** partial fill upon owner request

Signature of Veterinarian (name checked above): **B6**

DEA Number (only for CII-V): \_\_\_\_\_

\_\_\_\_\_

Interchange mandated unless practitioner indicates "No substitution" in above box in accordance with the law

Client: **B6**  
Patient:

troponin 2/5/19



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



Website User ID: clinpath@tufts.edu

GI Lab Assigned Clinic ID: 11405

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

Phone: 508 887 4669  
Fax: 9 508 839 7936

Animal Name:  
Owner Name: **B6**  
Species: Canine  
Date Received: Feb 12, 2019

GI Lab Accession: 6974

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

**B6**

Comments:

Client:  
Patient:

**B6**

**troponin 2/5/19**

---

**Important  
Notices:**

**Internal Medicine Conference**

**Join us for a unique continuing education event in Phuket, Thailand Oct 7th - 11th, 2019. For details see <http://texasimconference.tamu.edu>**

**Ongoing studies**

**Cobalamin Supplementation Study-** Dogs and cats with cobalamin deficiency with normal PLI, and either normal or low (consistent with EPI) TLI to compare the efficacy of oral vs parenteral cobalamin supplementation. Contact Dr. Chang at [chchang@cvm.tamu.edu](mailto:chchang@cvm.tamu.edu) for further information.

**Chronic Pancreatitis with Uncontrolled Diabetes Mellitus-** Seeking dogs with chronic pancreatitis and uncontrolled diabetes mellitus for enrollment into a drug trial (medication provided at no cost). Contact Dr. Sue Yee Lim at [slim@cvm.tamu.edu](mailto:slim@cvm.tamu.edu) or Dr. Sina Marsilio at [smarsilio@cvm.tamu.edu](mailto:smarsilio@cvm.tamu.edu)

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

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

**Chronic enteropathies in dogs-** Please fill out this brief form <http://tinyurl.com/ibd-enroll> to see if your patient qualifies.

**Feline Chronic Pancreatitis-** Cats with chronic pancreatitis for more than 2 weeks and fPLI >10 µg/L are eligible for enrollment into a treatment trial investigating the efficacy of prednisolone or cyclosporine. Please contact Dr. Yamkate for further information at [pyamkate@cvm.tamu.edu](mailto:pyamkate@cvm.tamu.edu).

**We can not accept packages that are marked "Bill Receiver"**

**Use our preprinted shipping labels to save on shipping. Call 979-862-2861 for assistance. The GI Lab is not here to accept packages on the weekend. Samples may be compromised if you ship for arrival on Saturday or Sunday or if shipped via US Mail.**

---

**GI Lab Contact Information**

Phone: (979) 862-2861

Fax: (979) 862-2864

Email: [gilab@cvm.tamu.edu](mailto:gilab@cvm.tamu.edu)

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

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

**CBC and profile 2/5/19**



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

**DUPLICATE**

Name/DOB: <b>B6</b>	Sex: F	Provider: <b>B6</b>
Patient ID: <b>B6</b>	Age: 6	Order Location: V320559: Investigation into
Phone number:	Species: Canine	Sample ID: 1902050104
Collection Date: 2/5/2019 12:44 PM	Breed: Irish Wolfhound	
Approval date: 2/5/2019 2:27 PM		

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

	Ref. Range/Females
SLOPEZ	
WBC (ADVIA)	4.40-15.10 K/uL
RBC (Advia)	5.80-8.50 M/uL
Hemoglobin (ADVIA)	13.3-20.5 g/dL
Hematocrit (Advia) <b>H</b>	39-55 %
MCV (ADVIA)	64.5-77.5 fL
MCH (ADVIA)	21.3-25.9 pg
CHCM	
MCHC (ADVIA)	31.9-34.3 g/dL
RDW (ADVIA)	11.9-15.2
Platelet Count (Advia)	173-486 K/uL
02/05/19 2:26 PM	
Mean Platelet Volume (Advia)	8.29-13.20 fl
02/05/19 1:09 PM	
Platelet Crit	0.129-0.403 %
02/05/19 1:09 PM	
PDW	
Reticulocyte Count (Advia)	0.20-1.60 %
Absolute Reticulocyte Count (Advia)	14.7-113.7 K/uL
CHr	
MCVr	

**B6**

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

	Ref. Range/Females
SLOPEZ	
Seg Neuts (%)	43-86 %
Lymphocytes (%)	7-47 %
Monocytes (%)	1-15 %
Eosinophils (%)	0-16 %
Seg Neutrophils (Abs) Advia	2.800-11.500 K/ul
Lymphs (Abs) Advia <b>L</b>	1.00-4.80 K/uL
Mono (Abs) Advia	0.10-1.50 K/uL
Eosinophils (Abs) Advia	0.00-1.40 K/uL
WBC Morphology	
Poikilocytosis	

**B6**

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

Sample ID: 1902050104/1  
This report continues... (Final)

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



Client: **B6**  
Patient:

**CBC and profile 2/5/19**



**Tufts Cummings School Of Veterinary Medicine**

200 Westboro Road  
North Grafton, MA 01536

**DUPLICATE**

Name/DOB:	<b>B6</b>	Sex:	F	Provider:	<b>B6</b>
Patient ID:		Age:	6	Order Location:	V320559: Investigation info
Phone number:		Species:	Canine	Sample ID:	1902050104
Collection Date:	2/5/2019 12:44 PM	Breed:	Irish Wolfhound		
Approval date:	2/5/2019 2:27 PM				

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

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

Sample ID: 1902050104/2  
REPRINT: Orig. printing on 2/5/2019 (Final)

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

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

Diet history 2/5/19

**CARDIOLOGY DIET HISTORY FORM**

Please answer the following for \_\_\_\_\_ pet

Pet's name: **B6** Owner's name: **B6** Today's date: 2/5/19

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**  
*Sometimes has decreased appetite when she comes into season.*

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
<i>Purina Pro Form Lamb &amp; Rice Adult Maintenance</i>	<i>Dry</i>	<i>1 1/2 cup</i>	<i>2x/day</i>	<i>6/16-Jan 15, 2019</i>
<i>Purina Pro-Plan - Chicken &amp; Rice</i>	<i>Dry</i>	<i>1 1/2 cup</i>	<i>2x/day</i>	<i>1/15/19 - present</i>
<i>Canidae All Life Stages Lamb meal &amp; rice formula</i>	<i>Dry</i>	<i>2 cups</i>	<i>2x/day</i>	<i>10/15 - 6-2016 of age</i>
<i>Occasional table scraps - beef &amp; veggies</i>	<i>treat</i>	<i>1/4 cup</i>	<i>1x/week</i>	<i>- throughout life</i>
<i>fried beef liver - training treat</i>	<i>treat</i>	<i>1 oz</i>		
<i>mackerel</i>	<i>canned</i>	<i>2 oz</i>	<i>2x/year</i>	<i>occasionally</i>

\*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	<i>Nature's Bounty</i>	<i>500 mg tablets - 1 per day</i>
_____	_____	_____
_____	_____	_____
_____	_____	_____

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): American cheese or Velveta

Client: **B6**  
Patient:

**Vitals Results**

**B6**

7:41:21 PM Heart Rate (/min)  
7:41:22 PM Temperature (F)  
7:41:23 PM Respiratory Rate  
7:41:24 PM Weight (kg)  
11:20:40 PM Respiratory Rate  
11:23:43 PM Quantify IV fluids (mls)  
11:23:52 PM Eliminations  
11:26:02 PM Heart Rate (/min)  
1:18:47 AM Respiratory Rate  
2:02:32 AM Eliminations  
2:02:40 AM Nursing note

**B6**

3:26:45 AM Respiratory Rate  
3:30:49 AM Heart Rate (/min)  
3:31:45 AM Weight (kg)  
3:31:55 AM Quantify IV fluids (mls)  
3:31:56 AM Catheter Assessment  
3:32:14 AM Eliminations  
5:40:13 AM Respiratory Rate  
5:40:59 AM Temperature (F)  
6:48:29 AM Body Condition Score (BCS)  
6:48:30 AM Temperature (F)  
6:48:32 AM Heart Rate (/min)  
6:48:33 AM Respiratory Rate  
6:48:34 AM Muscle Condition Score (MCS)  
6:48:35 AM Pain assessment  
6:55:52 AM Eliminations  
6:56:01 AM Respiratory Rate  
6:56:09 AM Heart Rate (/min)  
8:24:33 AM Quantify IV fluids (mls)  
8:24:34 AM Catheter Assessment  
8:56:24 AM Nursing note  
  
9:17:40 AM Respiratory Rate  
9:39:00 AM Nursing note  
  
11:55:20 AM Heart Rate (/min)  
11:56:38 AM Quantify IV fluids (mls)  
11:56:59 AM Respiratory Rate  
1:17:51 PM Quantify IV fluids (mls)

**B6**

Client: **B6**  
Patient:

**Vitals Results**

<b>B6</b>	1:17:52 PM	Catheter Assessment
	1:18:06 PM	Heart Rate (/min)
	1:18:12 PM	Respiratory Rate
	1:19:36 PM	Nursing note
<b>B6</b>	2:01:10 PM	Nursing note
<b>B6</b>	3:08:22 PM	Respiratory Rate
	3:27:51 PM	Quantify IV fluids (mls)
	3:27:52 PM	Catheter Assessment
	3:28:25 PM	Catheter Assessment
	3:28:34 PM	Respiratory Rate
	3:30:59 PM	Temperature (F)
	3:31:21 PM	Heart Rate (/min)
	3:40:27 PM	Nursing note
	4:25:11 PM	Respiratory Rate
	5:24:40 PM	Respiratory Rate
	7:02:22 PM	Respiratory Rate
	7:31:01 PM	Quantify IV fluids (mls)
	7:31:02 PM	Catheter Assessment
	7:31:14 PM	Catheter Assessment
	7:31:21 PM	Respiratory Rate
	7:31:42 PM	Heart Rate (/min)
	7:33:02 PM	Temperature (F)
	8:42:52 PM	Respiratory Rate
	9:18:33 PM	Weight (kg)
	9:28:00 PM	Eliminations
	9:28:46 PM	Respiratory Rate
	9:44:59 PM	Amount eaten
	9:45:25 PM	FiO2 (%)
	9:45:35 PM	Amount eaten
	12:45:02 AM	Respiratory Rate
	1:01:23 AM	Quantify IV fluids (mls)
	1:01:24 AM	Catheter Assessment
1:01:40 AM	Catheter Assessment	
1:01:49 AM	Heart Rate (/min)	
1:35:15 AM	Respiratory Rate	
1:55:00 AM	FiO2 (%)	
1:55:13 AM	Respiratory Rate	
1:55:32 AM	Eliminations	
1:58:05 AM	Temperature (F)	

**B6**

Client: **B6**  
Patient:

**Vitals Results**

<b>B6</b>	3:46:19 AM	Catheter Assessment
	3:48:22 AM	Respiratory Rate
	3:48:32 AM	Quantify IV fluids (mls)
	3:48:33 AM	Catheter Assessment
	3:48:57 AM	Heart Rate (/min)
	5:13:41 AM	Respiratory Rate
	6:16:58 AM	FiO2 (%)
	6:17:16 AM	Respiratory Rate
	6:24:46 AM	SpO2 (%)
	6:35:41 AM	Nursing note
	8:21:16 AM	Weight (kg)
	8:22:10 AM	Eliminations
	8:34:32 AM	Eliminations
	8:57:34 AM	Temperature (F)
	8:57:48 AM	Catheter Assessment
	8:58:05 AM	Quantify IV fluids (mls)
	8:58:23 AM	Respiratory Rate
	8:58:34 AM	Heart Rate (/min)
	8:59:39 AM	Eliminations
	9:03:21 AM	Amount eaten
9:03:38 AM	Respiratory Rate	
9:04:57 AM	FiO2 (%)	
11:15:10 AM	FiO2 (%)	
11:15:25 AM	Heart Rate (/min)	
11:15:33 AM	Respiratory Rate	
11:15:51 AM	Catheter Assessment	
11:31:09 AM	Quantify IV fluids (mls)	
1:17:07 PM	Respiratory Rate	
1:19:49 PM	Eliminations	
<b>B6</b>	2:09:45 PM	Respiratory Rate
	3:07:24 PM	Respiratory Rate
	3:56:47 PM	Respiratory Rate
	3:56:54 PM	Catheter Assessment
	3:57:11 PM	FiO2 (%)
	3:57:35 PM	Quantify IV fluids (mls)
	4:05:31 PM	Heart Rate (/min)
4:05:37 PM	Amount eaten	
<b>B6</b>	4:06:09 PM	Temperature (F)

Client: **B6**  
Patient:

**Vitals Results**

<b>B6</b>	5:02:51 PM	Respiratory Rate
	6:10:52 PM	Respiratory Rate
	7:00:44 PM	Respiratory Rate
	7:31:41 PM	FiO2 (%)
	7:32:04 PM	Catheter Assessment
<b>B6</b>	7:32:20 PM	Heart Rate (/min)
	7:32:25 PM	Quantify IV fluids (mls)
	7:32:51 PM	Eliminations
	8:20:46 PM	Respiratory Rate
	10:00:34 PM	Eliminations
<b>B6</b>	10:02:48 PM	Amount eaten
	10:15:33 PM	Respiratory Rate
	11:20:31 PM	Respiratory Rate
	12:15:17 AM	Quantify IV fluids (mls)
	12:15:18 AM	Catheter Assessment
	12:19:11 AM	Catheter Assessment
	12:19:22 AM	Heart Rate (/min)
	12:19:31 AM	Respiratory Rate
	12:19:49 AM	FiO2 (%)
	12:21:56 AM	Temperature (F)
	1:03:34 AM	Respiratory Rate
	1:50:26 AM	Respiratory Rate
	2:33:32 AM	Weight (kg)
	2:33:40 AM	Eliminations
	2:51:31 AM	Respiratory Rate
	3:41:38 AM	FiO2 (%)
	3:41:52 AM	Catheter Assessment
	3:43:39 AM	Quantify IV fluids (mls)
	3:43:40 AM	Catheter Assessment
3:51:57 AM	Heart Rate (/min)	
3:52:08 AM	Respiratory Rate	
3:52:23 AM	Amount eaten	
5:12:50 AM	Respiratory Rate	
5:27:49 AM	Eliminations	
<b>B6</b>	5:42:55 AM	Catheter Assessment
<b>B6</b>	5:51:59 AM	Respiratory Rate
	5:39:01 AM	Respiratory Rate

**B6**

Client: **B6**  
Patient:

**Vitals Results**

**B6** 8:06:02 AM  
**B6** 8:07:49 AM  
8:08:31 AM  
8:14:49 AM  
8:15:31 AM  
8:15:32 AM  
8:18:54 AM  
9:24:28 AM  
9:24:49 AM  
9:40:24 AM  
10:21:24 AM  
10:21:51 AM

FiO2 (%)  
Respiratory Rate  
Catheter Assessment  
Temperature (F)  
Quantify IV fluids (mls)  
Catheter Assessment  
Heart Rate (/min)  
Weight (kg)  
Eliminations  
Respiratory Rate  
Respiratory Rate  
Amount eaten

**B6** 2:37:52 PM  
2:39:25 PM  
2:40:03 PM  
2:41:45 PM  
2:22:29 PM  
4:41:42 PM  
5:50:42 PM  
5:50:51 PM  
6:34:02 AM  
6:49:04 AM  
6:49:21 AM  
6:43:57 AM  
6:43:36:14 AM  
7:03:30 AM  
7:05:49:58 AM  
7:26:00 AM  
7:03:48 AM  
7:03:07:48 AM  
7:03:07:59 AM  
7:03:08:05 AM  
7:03:08:06 AM  
7:03:49:27 AM  
7:00:00:04 AM  
7:00:13:39 AM  
7:00:15:55 AM

Respiratory Rate  
Heart Rate (/min)  
Quantify IV fluids (mls)  
Eliminations  
Respiratory Rate  
Respiratory Rate  
Respiratory Rate  
Heart Rate (/min)  
Weight (kg)  
Weight (kg)  
Notes  
Quantify IV fluids (mls)  
Respiratory Rate  
Respiratory Rate  
Respiratory Rate  
Eliminations  
Respiratory Rate  
Temperature (F)  
Heart Rate (/min)  
Quantify IV fluids (mls)  
Catheter Assessment  
Respiratory Rate  
Respiratory Rate  
Eliminations  
Cardiac rhythm

**B6**

Client: **B6**  
Patient:

**Vitals Results**

<b>B6</b>	10:15:56 AM	Heart Rate (/min)
	11:12:01 AM	Respiratory Rate
	11:12:08 AM	FiO2 (%)
	11:32:18 AM	FiO2 (%)
	11:49:12 AM	Catheter Assessment
	11:49:13 AM	Quantify IV fluids (mls)
	12:11:08 PM	Cardiac rhythm
	12:11:09 PM	Heart Rate (/min)
	12:11:46 PM	Respiratory Rate
	12:57:30 PM	FiO2 (%)
	12:57:45 PM	Respiratory Rate
	12:58:05 PM	Eliminations
	2:30:53 PM	Eliminations
	2:31:01 PM	FiO2 (%)
	2:31:41 PM	Cardiac rhythm
<b>B6</b>	2:31:42 PM	Heart Rate (/min)
	3:22:43 PM	Amount eaten
	3:23:02 PM	FiO2 (%)
	3:23:26 PM	Respiratory Rate
	3:43:14 PM	Temperature (F)
	4:02:08 PM	Respiratory Rate
	4:02:15 PM	Cardiac rhythm
	4:02:16 PM	Heart Rate (/min)
	4:45:58 PM	Respiratory Rate
	5:16:04 PM	Weight (kg)
	5:16:35 PM	Eliminations
	5:52:25 PM	Cardiac rhythm
	5:52:26 PM	Heart Rate (/min)
	5:52:40 PM	Respiratory Rate
	7:46:50 PM	Cardiac rhythm
7:46:51 PM	Heart Rate (/min)	
7:47:35 PM	Respiratory Rate	
7:52:43 PM	Amount eaten	
8:57:15 PM	Respiratory Rate	
9:18:37 PM	Cardiac rhythm	
9:18:38 PM	Heart Rate (/min)	
9:23:06 PM	Eliminations	
10:14:39 PM	Respiratory Rate	
10:49:54 PM	Respiratory Rate	
11:18:51 PM	Temperature (F)	



Client: **B6**  
Patient:

**Vitals Results**

<b>B6</b>	11:58:35 PM	Cardiac rhythm	
	11:58:36 PM	Heart Rate (/min)	
	11:59:13 PM	Respiratory Rate	
	12:50:19 AM	Respiratory Rate	
	1:44:24 AM	Eliminations	
	1:58:05 AM	Cardiac rhythm	
	1:58:06 AM	Heart Rate (/min)	
	1:59:11 AM	Respiratory Rate	
	2:48:26 AM	Respiratory Rate	
	3:50:13 AM	Amount eaten	
	3:56:57 AM	Respiratory Rate	
	4:52:04 AM	Respiratory Rate	
	5:48:32 AM	Cardiac rhythm	
	5:48:33 AM	Heart Rate (/min)	
	5:49:24 AM	Respiratory Rate	
<b>B6</b>	7:38:12 AM	Eliminations	
	7:38:27 AM	Weight (kg)	
	7:38:42 AM	Respiratory Rate	
	7:40:32 AM	Temperature (F)	
	7:56:00 AM	Cardiac rhythm	
	7:56:01 AM	Heart Rate (/min)	
	7:56:46 AM	Respiratory Rate	
	8:58:12 AM	Respiratory Rate	
	9:23:03 AM	Eliminations	
	10:06:28 AM	Respiratory Rate	
	10:33:52 AM	Cardiac rhythm	
	10:33:53 AM	Heart Rate (/min)	
	11:16:05 AM	Respiratory Rate	
	11:45:15 AM	Amount eaten	
	11:45:32 AM	Respiratory Rate	
	11:45:51 AM	Cardiac rhythm	
	11:45:52 AM	Heart Rate (/min)	
	1:29:09 PM	Respiratory Rate	
<b>B6</b>	2:16:19 PM	Weight (kg)	
	11:01:35 AM	Weight (kg)	

Client:  
Patient:

**B6**

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**ECG from Cardio**

---

**B6**

**B6**

2:59:28 PM

Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

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**B6**

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

**ECG from Cardio**

**B6**

**B6**

2:59:48 PM

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Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

12-Lead, Standard Placement

**B6**

Client: **B6**  
Patient:

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**ECG from Cardio**

---

**B6**

**B6** 2:59:48 PM Page 2 of 2  
Tufts University  
Tufts Cummings School of Vet Med  
Cardiology

---

**B6**

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

**ECG from cardio**

**B6**

**B6** 12:48:42 PM

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Tufts University  
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Cardiology

12 Lead: Standard Placement

**B6**

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

---

**ECG from cardio**

---

**B6**

**B6**

12:48:42 PM

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Tufts University  
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Cardiology

---

**B6**

Client:  
Patient:

**B6**

---

**ECG from cardio**

---

**B6**

**B6**

12:48:57 PM

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Tufts University  
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Cardiology

---

**B6**

Client:  
Patient:

**B6**

---

**ECG from cardio**

---

**B6**

**B6**

12:48:57 PM

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Tufts University  
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Cardiology

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**B6**



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

**ECG from cardio**

**B6**

**B6**

12:49:06 PM

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Tufts University  
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Cardiology

12 Lead: Standard Placement

**B6**

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

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**ECG from cardio**

---

**B6**

**B6**

12:49:06 PM

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Tufts University  
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Cardiology

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**B6**

Client: **B6**  
Patient:

**Patient History**

**B6** 07:26 PM UserForm  
07:27 PM Email

**B6** 07:40 PM Purchase  
07:41 PM Vitals  
07:41 PM Vitals  
07:41 PM Vitals  
07:41 PM Vitals  
08:35 PM UserForm

**B6** 08:53 PM Treatment  
09:25 PM UserForm  
09:36 PM Purchase  
10:40 PM UserForm

**B6** 1:05 PM Purchase

**B6** 11:05 PM Purchase  
11:18 PM Treatment  
11:20 PM Treatment  
11:20 PM Vitals  
11:23 PM Treatment  
11:23 PM Vitals  
11:23 PM Treatment  
11:23 PM Vitals  
11:26 PM Treatment  
11:26 PM Vitals  
01:18 AM Treatment  
01:18 AM Vitals  
02:02 AM Vitals  
02:02 AM Vitals

**B6** 02:05 AM Treatment  
02:05 AM Treatment  
03:26 AM Treatment  
03:26 AM Vitals  
03:30 AM Treatment  
03:30 AM Vitals  
03:31 AM Treatment  
03:31 AM Vitals  
03:31 AM Treatment  
03:31 AM Vitals  
03:31 AM Vitals

**B6** 03:32 AM Treatment  
03:32 AM Vitals  
05:40 AM Treatment  
05:40 AM Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	05:40 AM	Vitals
	05:40 AM	Treatment
	05:40 AM	Vitals
	06:48 AM	Vitals
	06:48 AM	Vitals
<b>B6</b>	06:48 AM	Vitals
	06:48 AM	Vitals
	06:48 AM	Vitals
	06:48 AM	Vitals
	06:48 AM	Vitals
	06:55 AM	Treatment
	06:55 AM	Vitals
	06:56 AM	Treatment
	06:56 AM	Vitals
	06:56 AM	Treatment
	06:56 AM	Vitals
	08:18 AM	Purchase
	08:18 AM	Purchase
	08:18 AM	Purchase
08:24 AM	Treatment	
08:24 AM	Vitals	
<b>B6</b>	08:24 AM	Vitals
	08:24 AM	Treatment
	08:25 AM	Purchase
	08:26 AM	Purchase
	08:56 AM	Treatment
<b>B6</b>	08:56 AM	Vitals
<b>B6</b>	08:59 AM	Labwork
	09:08 AM	Purchase
	09:17 AM	Treatment
	09:17 AM	Vitals
	09:17 AM	Vitals
	09:35 AM	Purchase
	09:39 AM	Vitals
<b>B6</b>	09:46 AM	Purchase
	09:53 AM	Labwork
	10:04 AM	UserForm
<b>B6</b>	10:09 AM	Treatment
	10:09 AM	Treatment
	10:14 AM	Treatment
	10:22 AM	Treatment
	10:28 AM	Prescription
	10:28 AM	Prescription
	10:29 AM	Prescription

**B6**

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

**Patient History**

**B6** 10:53 AM Purchase  
10:53 AM Treatment  
11:01 AM Purchase  
11:03 AM Purchase

**B6** 11:05 AM Purchase  
11:14 AM Treatment

**B6** 11:38 AM Purchase  
11:49 AM Treatment

**B6** 11:55 AM Treatment

**B6** 11:55 AM Treatment  
11:55 AM Vitals  
11:56 AM Treatment  
11:56 AM Vitals  
11:56 AM Treatment  
11:56 AM Vitals  
11:59 AM Purchase  
12:46 PM Treatment  
01:17 PM Treatment  
01:17 PM Vitals

**B6** 01:17 PM Vitals  
01:18 PM Treatment  
01:18 PM Vitals  
01:18 PM Treatment  
01:18 PM Vitals  
01:19 PM Vitals

**B6** 02:01 PM Vitals

**B6** 02:53 PM UserForm  
03:08 PM Treatment  
03:08 PM Vitals  
03:27 PM Treatment  
03:27 PM Vitals

**B6** 03:27 PM Vitals  
03:28 PM Treatment  
03:28 PM Vitals  
03:28 PM Treatment  
03:28 PM Vitals  
03:30 PM Treatment  
03:30 PM Vitals  
03:31 PM Treatment  
03:31 PM Vitals  
03:40 PM Vitals  
04:12 PM Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	04:25 PM	Treatment
	04:25 PM	Vitals
	05:24 PM	Treatment
	05:24 PM	Vitals
	05:27 PM	Treatment
<b>B6</b>	07:02 PM	Treatment
	07:02 PM	Vitals
	07:31 PM	Treatment
	07:31 PM	Vitals
	07:31 PM	Vitals
<b>B6</b>	07:31 PM	Treatment
	07:31 PM	Vitals
	07:31 PM	Treatment
	07:31 PM	Vitals
	07:31 PM	Treatment
	07:31 PM	Vitals
	07:31 PM	Vitals
	07:33 PM	Vitals
	08:42 PM	Treatment
	08:42 PM	Vitals
	09:18 PM	Treatment
	09:18 PM	Vitals
	09:28 PM	Treatment
	09:28 PM	Vitals
09:28 PM	Treatment	
09:28 PM	Vitals	
	09:32 PM	Treatment
<b>B6</b>	09:44 PM	Vitals
	09:45 PM	Treatment
<b>B6</b>	09:45 PM	Vitals
	09:45 PM	Treatment
	09:45 PM	Treatment
<b>B6</b>	09:45 PM	Vitals
	11:07 PM	Purchase
	11:07 PM	Purchase
	12:45 AM	Treatment
	12:45 AM	Vitals
	01:01 AM	Treatment
	01:01 AM	Vitals
<b>B6</b>	01:01 AM	Vitals
<b>B6</b>	01:01 AM	Treatment
	01:01 AM	Vitals
	01:01 AM	Treatment
	01:01 AM	Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	01:35 AM	Treatment
	01:35 AM	Vitals
	01:35 AM	Treatment
	01:55 AM	Treatment
<b>B6</b>	01:55 AM	Vitals
	01:55 AM	Treatment
	01:55 AM	Vitals
	01:55 AM	Treatment
<b>B6</b>	01:55 AM	Treatment
	01:55 AM	Vitals
	01:58 AM	Treatment
	01:58 AM	Vitals
	03:46 AM	Treatment
	03:46 AM	Vitals
	03:48 AM	Treatment
	03:48 AM	Vitals
	03:48 AM	Treatment
03:48 AM	Vitals	
<b>B6</b>	03:48 AM	Vitals
<b>B6</b>	03:48 AM	Treatment
	03:48 AM	Vitals
	05:13 AM	Treatment
	05:13 AM	Vitals
	05:18 AM	Treatment
	06:16 AM	Treatment
<b>B6</b>	06:16 AM	Vitals
	06:17 AM	Treatment
	06:17 AM	Vitals
	06:24 AM	Vitals
	06:25 AM	Treatment
	06:25 AM	Treatment
<b>B6</b>	06:25 AM	Purchase
	06:32 AM	Labwork
	06:35 AM	Vitals
	08:21 AM	Treatment
	08:21 AM	Vitals
	08:22 AM	Treatment
	08:22 AM	Vitals
	08:34 AM	Vitals
	08:57 AM	Treatment
	08:57 AM	Vitals
	08:57 AM	Treatment
08:57 AM	Vitals	
08:58 AM	Treatment	

**B6**

Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	08:58 AM	Vitals
	08:58 AM	Treatment
	08:58 AM	Vitals
	08:58 AM	Treatment
	08:58 AM	Vitals
	08:59 AM	Treatment
	08:59 AM	Vitals
	09:03 AM	Treatment
09:03 AM	Treatment	
<b>B6</b>	09:03 AM	Vitals
	09:03 AM	Treatment
	09:03 AM	Vitals
	09:04 AM	Treatment
<b>B6</b>	09:04 AM	Vitals
	10:43 AM	Prescription
	11:01 AM	Prescription
	11:04 AM	Prescription
	11:05 AM	Purchase
11:15 AM	Treatment	
<b>B6</b>	11:15 AM	Vitals
	11:15 AM	Treatment
	11:15 AM	Vitals
	11:15 AM	Treatment
	11:15 AM	Vitals
	11:15 AM	Treatment
	11:15 AM	Vitals
	11:24 AM	Treatment
<b>B6</b>	11:31 AM	Treatment
	11:31 AM	Vitals
	11:43 AM	Purchase
	11:47 AM	Treatment
<b>B6</b>	12:07 PM	Treatment
<b>B6</b>	12:30 PM	UserForm
	01:17 PM	Treatment
	01:17 PM	Vitals
	01:17 PM	Treatment
	01:19 PM	Treatment
	01:19 PM	Vitals
	01:19 PM	Vitals
<b>B6</b>	02:09 PM	Treatment
	02:09 PM	Vitals
	03:07 PM	Treatment
	03:07 PM	Vitals

**B6**



Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	03:56 PM	Treatment
	03:56 PM	Vitals
	03:56 PM	Treatment
	03:56 PM	Vitals
	03:57 PM	Treatment
<b>B6</b>	03:57 PM	Vitals
	03:57 PM	Treatment
	03:57 PM	Vitals
<b>B6</b>	04:05 PM	Treatment
	04:05 PM	Vitals
	04:05 PM	Treatment
<b>B6</b>	04:05 PM	Vitals
<b>B6</b>	04:06 PM	Treatment
	04:06 PM	Vitals
	05:02 PM	Treatment
	05:02 PM	Vitals
	05:03 PM	Treatment
<b>B6</b>	05:05 PM	Treatment
	06:10 PM	Treatment
	06:10 PM	Vitals
	07:00 PM	Treatment
	07:00 PM	Vitals
<b>B6</b>	07:31 PM	Treatment
	07:31 PM	Vitals
	07:32 PM	Treatment
	07:32 PM	Vitals
<b>B6</b>	07:32 PM	Treatment
	07:32 PM	Vitals
	07:32 PM	Treatment
	07:32 PM	Vitals
<b>B6</b>	07:32 PM	Treatment
	07:32 PM	Vitals
	08:20 PM	Treatment
	08:20 PM	Vitals
	10:00 PM	Treatment
	10:00 PM	Treatment
	10:00 PM	Vitals
<b>B6</b>	10:02 PM	Treatment
	10:02 PM	Vitals
	10:15 PM	Treatment
<b>B6</b>	10:15 PM	Vitals

**B6**

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

**Patient History**

<b>B6</b>	10:39 PM	Treatment
<b>B6</b>	11:07 PM	Purchase
	11:07 PM	Purchase
	11:20 PM	Treatment
	11:20 PM	Vitals
	12:15 AM	Treatment
	12:15 AM	Vitals
	12:15 AM	Vitals
	12:19 AM	Treatment
	12:19 AM	Vitals
	12:19 AM	Treatment
	12:19 AM	Vitals
	12:19 AM	Treatment
12:19 AM	Vitals	
12:19 AM	Treatment	
<b>B6</b>	12:19 AM	Vitals
	12:21 AM	Treatment
	12:21 AM	Vitals
	01:03 AM	Treatment
	01:03 AM	Vitals
<b>B6</b>	01:12 AM	Treatment
	01:49 AM	Treatment
	01:50 AM	Treatment
	01:50 AM	Vitals
	02:33 AM	Treatment
	02:33 AM	Vitals
	02:33 AM	Treatment
02:33 AM	Vitals	
<b>B6</b>	02:51 AM	Treatment
	02:51 AM	Vitals
	03:41 AM	Treatment
	03:41 AM	Vitals
	03:41 AM	Treatment
	03:41 AM	Vitals
	03:43 AM	Treatment
	03:43 AM	Vitals
	03:43 AM	Vitals
	03:51 AM	Treatment
03:51 AM	Vitals	
<b>B6</b>	03:52 AM	Treatment
	03:52 AM	Vitals
	03:52 AM	Treatment
<b>B6</b>	03:52 AM	Vitals
	05:12 AM	Treatment
	05:12 AM	Vitals

**B6**

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

**Patient History**

<b>B6</b>	05:27 AM	Treatment
	05:27 AM	Treatment
	05:27 AM	Vitals
	05:42 AM	Vitals
<b>B6</b>	05:51 AM	Treatment
	05:51 AM	Vitals
	06:39 AM	Treatment
	06:39 AM	Vitals
<b>B6</b>	08:06 AM	Treatment
	08:06 AM	Vitals
	08:07 AM	Treatment
	08:07 AM	Vitals
	08:07 AM	Vitals
	08:07 AM	Vitals
	08:08 AM	Treatment
	08:08 AM	Vitals
	08:14 AM	Treatment
	08:14 AM	Vitals
<b>B6</b>	08:15 AM	Treatment
	08:15 AM	Vitals
	08:15 AM	Vitals
	08:18 AM	Treatment
	08:18 AM	Vitals
	08:18 AM	Vitals
	09:24 AM	Treatment
	09:24 AM	Vitals
	09:24 AM	Treatment
	09:24 AM	Vitals
<b>B6</b>	09:40 AM	Treatment
	09:40 AM	Vitals
	10:08 AM	Purchase
	10:15 AM	Treatment
	10:16 AM	Treatment
	10:19 AM	Prescription
	10:19 AM	Prescription
	10:21 AM	Treatment
	10:21 AM	Vitals
	10:21 AM	Treatment
<b>B6</b>	10:21 AM	Vitals
<b>B6</b>	10:21 AM	Vitals
<b>B6</b>	10:42 AM	Prescription
	11:05 AM	Purchase
	12:37 PM	Treatment

**B6**

Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	12:37 PM	Vitals
	12:39 PM	Treatment
	12:39 PM	Vitals
	12:39 PM	Treatment
	12:40 PM	Treatment
	12:40 PM	Vitals
	12:46 PM	Treatment
<b>B6</b>	12:55 PM	Prescription
	12:55 PM	Prescription
	12:56 PM	Prescription
	12:58 PM	Purchase
	02:21 PM	Treatment
	02:21 PM	Vitals
	02:22 PM	Treatment
<b>B6</b>	02:22 PM	Treatment
<b>B6</b>	02:22 PM	Treatment
	02:22 PM	Vitals
	02:22 PM	Treatment
	03:41 PM	Treatment
	03:41 PM	Vitals
	03:55 PM	Treatment
	04:50 PM	Treatment
	04:50 PM	Vitals
	04:50 PM	Treatment
	04:50 PM	Vitals
	05:50 PM	Appointment
<b>B6</b>	11:14 AM	UserForm
<b>B6</b>	11:34 AM	Vitals
	11:49 AM	Vitals
	12:12 PM	UserForm
	12:25 PM	Purchase
	12:59 PM	Purchase
	12:59 PM	Treatment
	01:01 PM	Purchase
	01:12 PM	Prescription
	01:19 PM	Prescription
	01:20 PM	Purchase
	01:23 PM	Purchase
	03:04 AM	Treatment
	03:25 AM	Treatment
	03:58 AM	Purchase
	03:58 AM	Purchase
	03:58 AM	Purchase
	04:00 AM	Purchase

**B6**

Client: **B6**  
Patient:

**Patient History**

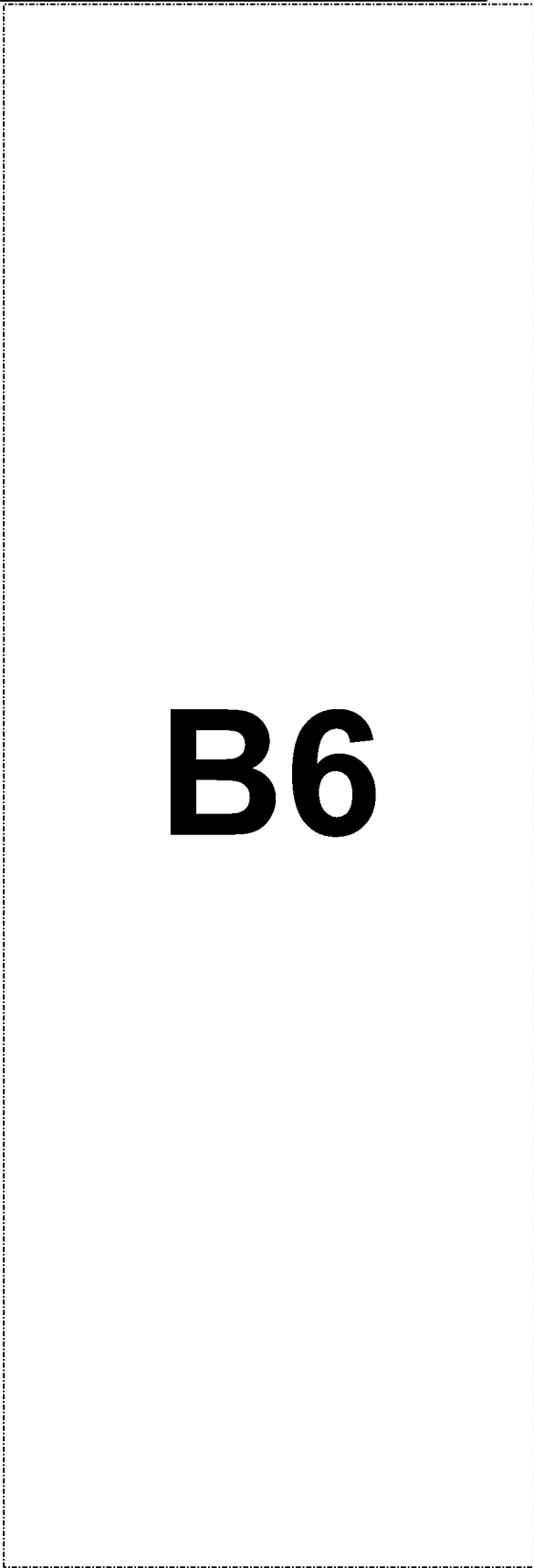
<b>B6</b>	04:00 AM	Purchase
	04:05 AM	UserForm
<b>B6</b>	04:08 AM	Purchase
	04:08 AM	Purchase
	04:18 AM	Labwork
	04:18 AM	Prescription
	04:19 AM	Deleted Reason
<b>B6</b>	04:19 AM	Vitals
	04:19 AM	Purchase
	04:20 AM	Purchase
	04:20 AM	Purchase
	04:20 AM	Purchase
	04:32 AM	Prescription
	04:35 AM	Treatment
	04:35 AM	Vitals
<b>B6</b>	04:36 AM	Treatment
	04:36 AM	Vitals
	04:37 AM	Treatment
	04:37 AM	Treatment
	04:42 AM	Purchase
	04:42 AM	Purchase
	05:02 AM	Treatment
<b>B6</b>	05:03 AM	Treatment
<b>B6</b>	05:03 AM	Treatment
	05:03 AM	Vitals
	05:03 AM	Treatment
	05:49 AM	Treatment
	05:49 AM	Vitals
	07:26 AM	Treatment
	07:26 AM	Vitals
	08:03 AM	Treatment
	08:03 AM	Vitals
	08:07 AM	Treatment
	08:07 AM	Vitals
	08:07 AM	Treatment
	08:07 AM	Vitals
	08:08 AM	Treatment
	08:08 AM	Vitals
	08:08 AM	Vitals
	08:44 AM	Purchase
	08:46 AM	Purchase
	08:49 AM	Treatment
	08:49 AM	Vitals
	10:00 AM	Treatment
	10:00 AM	Vitals

**B6**

Client: **B6**  
Patient:

**Patient History**

<b>B6</b>	10:13 AM	Treatment
	10:13 AM	Vitals
	10:15 AM	Treatment
<b>B6</b>	10:15 AM	Vitals
	10:15 AM	Vitals
	10:20 AM	Prescription
	10:24 AM	UserForm
	11:12 AM	Treatment
	11:12 AM	Vitals
	11:12 AM	Treatment
<b>B6</b>	11:12 AM	Vitals
	11:32 AM	Treatment
	11:32 AM	Treatment
<b>B6</b>	11:32 AM	Vitals
	11:49 AM	Treatment
<b>B6</b>	11:49 AM	Treatment
	11:49 AM	Vitals
	11:49 AM	Vitals
<b>B6</b>	12:11 PM	Treatment
<b>B6</b>	12:11 PM	Vitals
	12:11 PM	Vitals
	12:11 PM	Treatment
	12:11 PM	Vitals
	12:57 PM	Treatment
<b>B6</b>	12:57 PM	Vitals
	12:57 PM	Treatment
	12:57 PM	Vitals
	12:58 PM	Vitals
	12:59 PM	UserForm
<b>B6</b>	01:00 PM	Treatment
	01:32 PM	Purchase
	01:46 PM	Treatment
<b>B6</b>	02:30 PM	Treatment
	02:30 PM	Vitals
	02:31 PM	Treatment
<b>B6</b>	02:31 PM	Vitals
	02:31 PM	Treatment
<b>B6</b>	02:31 PM	Vitals
	02:31 PM	Vitals
	02:31 PM	Treatment



Client:  
Patient:

**B6**

**Patient History**

02:42 PM	Labwork
03:22 PM	Treatment
03:22 PM	Vitals
03:23 PM	Treatment
03:23 PM	Vitals
03:23 PM	Treatment
03:23 PM	Vitals
03:43 PM	Treatment
03:43 PM	Vitals
04:02 PM	Treatment
04:02 PM	Vitals
04:02 PM	Treatment
04:02 PM	Vitals
04:02 PM	Vitals
04:09 PM	Purchase
04:20 PM	Purchase
04:20 PM	Purchase
04:21 PM	Purchase
04:45 PM	Treatment
04:45 PM	Treatment
04:45 PM	Vitals
05:16 PM	Treatment
05:16 PM	Vitals
05:16 PM	Treatment
05:16 PM	Vitals
05:52 PM	Treatment
05:52 PM	Vitals
05:52 PM	Vitals
05:52 PM	Treatment
05:52 PM	Vitals
06:59 PM	UserForm
07:46 PM	Treatment
07:46 PM	Vitals
07:46 PM	Vitals
07:47 PM	Treatment
07:47 PM	Vitals
07:52 PM	Treatment
07:52 PM	Treatment
07:52 PM	Vitals
08:57 PM	Treatment
08:57 PM	Vitals
09:18 PM	Treatment

**B6**

**B6**

Client:  
Patient:

**B6**

**Patient History**

09:18 PM	Vitals
09:18 PM	Vitals
09:19 PM	Treatment
09:23 PM	Treatment
09:23 PM	Vitals
10:14 PM	Treatment
10:14 PM	Vitals
10:49 PM	Treatment
10:49 PM	Vitals
11:18 PM	Treatment
11:18 PM	Vitals
11:58 PM	Treatment
11:58 PM	Vitals
11:58 PM	Vitals
11:59 PM	Treatment
11:59 PM	Vitals
12:50 AM	Treatment
12:50 AM	Vitals
01:44 AM	Treatment
01:44 AM	Vitals
01:58 AM	Treatment
01:58 AM	Vitals
01:58 AM	Vitals
01:59 AM	Treatment
01:59 AM	Vitals
02:48 AM	Treatment
02:48 AM	Vitals
03:30 AM	Treatment
03:50 AM	Treatment
03:50 AM	Vitals
03:56 AM	Treatment
03:56 AM	Treatment
03:56 AM	Vitals
04:07 AM	Purchase
04:07 AM	Purchase
04:52 AM	Treatment
04:52 AM	Vitals
05:30 AM	Treatment
05:48 AM	Treatment
05:48 AM	Vitals
05:48 AM	Vitals
05:49 AM	Treatment
05:49 AM	Vitals
07:38 AM	Treatment

**B6**

**B6**



Client: **B6**  
Patient:

**Patient History**

07:38 AM	Vitals
07:38 AM	Vitals
07:38 AM	Treatment
07:38 AM	Vitals
07:40 AM	Treatment
07:40 AM	Vitals
07:56 AM	Treatment
07:56 AM	Vitals
07:56 AM	Vitals
07:56 AM	Treatment
07:56 AM	Vitals
08:58 AM	Treatment
08:58 AM	Vitals
09:23 AM	Vitals
09:59 AM	Deleted Reason
10:00 AM	Purchase
10:06 AM	Treatment
10:06 AM	Vitals
10:11 AM	Prescription
10:12 AM	Prescription
10:16 AM	Purchase
10:33 AM	Treatment
10:33 AM	Vitals
10:33 AM	Vitals
10:40 AM	Treatment
11:16 AM	Treatment
11:16 AM	Vitals
11:45 AM	Treatment
11:45 AM	Vitals
11:45 AM	Treatment
11:45 AM	Vitals
11:45 AM	Treatment
11:45 AM	Vitals
11:45 AM	Vitals
12:47 PM	Prescription
01:26 PM	Treatment
01:29 PM	Treatment
01:29 PM	Vitals
12:15 PM	Appointment
12:18 PM	Appointment

**B6**

**B6**

Client: **B6**  
Patient:

**Patient History**

	05:14 PM	Appointment	
	02:16 PM	Vitals	
	02:25 PM	UserForm	
	03:41 PM	Treatment	
	04:01 PM	Purchase	
	04:01 PM	Treatment	
	04:15 PM	Purchase	
	04:17 PM	Prescription	
	04:19 PM	Prescription	
	04:30 PM	Prescription	
	04:31 PM	Prescription	
	04:36 PM	Purchase	
	05:22 PM	UserForm	
	05:27 PM	Email	
	03:24 PM	Appointment	
<b>B6</b>	11:01 AM	UserForm	<b>B6</b>
	11:01 AM	Vitals	
	11:29 AM	Treatment	
	11:36 AM	UserForm	
	11:41 AM	UserForm	
	12:36 PM	Treatment	
	12:36 PM	Purchase	
	12:52 PM	Deleted Reason	
	12:52 PM	Deleted Reason	
	12:52 PM	Purchase	
	12:52 PM	Purchase	
	12:34 PM	UserForm	
	05:20 PM	Appointment	

















**B6**

**B6**

Female

Canine Irish Wolfhound Gray

Patient ID: **B6**

## STANDARD CONSENT FORM

---

I am the owner, or agent for the owner, of the above described animal and have the authority to execute consent. I hereby authorize the Cummings School of Veterinary Medicine at Tufts University (herein after Cummings School) to prescribe for treatment of said animal according to the following terms and conditions.

Cummings School and its officers, agents and employees will provide such veterinary medical care as they deem reasonable and appropriate under the circumstances.

Cummings School and its officers, agents, and employees will use all reasonable care in the treatment of the above mentioned animal, but will not be liable for any loss or accident that may occur or any disease that may develop as a result of the care and treatment provided.

I understand that the above identified animal may be treated by Cummings School students under the supervision and assistance of Cummings School staff members.

In executing this form, I hereby expressly acknowledge that risks, benefits and alternative forms of treatment have been explained to me. I understand said explanation, and I consent to treatment. Should any additional treatments or diagnostics be required during the continued care of my animal, I understand that I will be given the opportunity to discuss and consent to these additional procedures. I understand that further or additional treatment may be required without an opportunity for discussion and consideration by me, in the case of the development of any life-threatening emergency during the continued care of my animal and I expressly consent to all such reasonable treatment as required. I realize and understand that results cannot be guaranteed.

If any equipment is left with the animal, it will be accepted with the understanding that Cummings School assumes no responsibility for any loss of equipment that may occur.

I agree to pick up the animal when notified that it is ready for release.

In the event the animal is not picked up, and if ten (10) days have expired since a registered letter was sent to the address given above, notifying me to call for the animal, the animal may be sold or otherwise disposed of in a humane manner and the proceeds applied to the charges incurred in caring and treating the animal. Failure to remove said animal will not and does not relieve me from obligation for the costs of services rendered.

I hereby grant to the Cummings School of Veterinary Medicine at Tufts University, its officers and employees (collectively referred to herein as Cummings School), and its agents and assigns (the Grantees) the irrevocable rights to photograph / videotape the operation or procedure to be performed, including appropriate and otherwise use such photographs and images for, and in connection with, a Grantee's medical, scientific, educational, and publicity purposes, by any means, methods and media (print and electronic) now known or, in the future, developed that the Grantee deems appropriate (provided that such photographs and images may not be used in for-profit commercials, unless such commercials are publicizing educational programs at Cummings School). As medical and surgical treatment necessitates the removal of tissue, cells, fluids or body parts of my animal, I authorize the Grantees to dispose of or use these tissues, cells, fluids or body parts for scientific and educational purposes.

I understand that a FINANCE CHARGE will be applied to all accounts unpaid after 30 days. The FINANCE CHARGE is computed on a monthly rate of 1.33% per month, which is an annual percentage rate of 16% applied to the average daily balance outstanding, with a minimum fee of \$50.

I do further agree that should any payment, or the full amount of the sum stated above, become overdue more than 20 days from the above-agreed upon time of payment or payments, the entire balance shall be considered in default and become due and payable. I further agree to be responsible for any or all collection agency and/or attorney fees necessary to collect the full amount.

I do further agree to comply with hours of visitation in conjunction with our Hospital's policy.

I have read, understand, and agree to accept the terms and conditions herein.

Owner's name:  Date: 9/11/2018

Owner's address:

*9-11-18*

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

# Cummings

## Veterinary Medical Center

AT TUFTS UNIVERSITY

Foster Hospital for Small Animals  
55 Willard Street  
North Grafton, MA 01536  
Telephone (508) 839-5395  
Fax (508) 839-7951  
<http://vetmed.tufts.edu/>

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

**Patient**

**Name:**

B6

**Signalment:**

B6 Years Old Gray Female Irish  
Wolfhound

**Owner**

**Name:**

**Address:**

B6

**Patient ID:**

B6

**Emergency Clinician:**

B6

VMD (Intern)

B6

**Consulting Clinician:**

**ER Supervisor:**

B6

### Discharge Instructions

**Admit Date:** B6 7:25:56 PM

**Check Out Date:** B6

**Case Summary**

**Diagnosis:**

- 1.
- 2.
- 3.

**Case Summary:** Thank you for bringing B6 to see us here at the Tufts Emergency Service. You report that a few

B6

**Patient Care Instructions:**

- 1.

**Medications:**

**Continue:**

- 1.

**New medications:**

- 1.

**Recheck Visits: Please call [B6] at (508) 887-4745 to make a recheck appointment.**

---

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

---

Case: [B6]

Owner: [B6]

Discharge Instructions

# Treatment Plan

Estimated Charges

B6

**B6**

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

Patient	Description	Low Qty	Low Extended	High Qty	High Extended
B6	B6	1.00	B6	1.00	B6

**B6**

Doctor of Record: B6

Owner 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		

# 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/>

**Patient**

**Name:**

B6

**Signalment:**

B6 years Old Gray Female Irish  
Wolfhound

**Owner**

**Name:**

B6

**Address:**

**Patient ID:**

B6

**Contact Clinician:**

B6 DVM (Emergency &  
Critical Care Resident)

**Alternate Clinician:**

B6

**Student:**

B6 V19

### Discharge Instructions

**Admit Date:** B6 7:25:56 PM

**Check Out Date:** B6

**Case Summary**

**Diagnosis:**

1. B6

**General Summary:**

**History:** Thank you for bringing B6 to Tufts. You report that on 08/24/18 B6 ingested several medications

B6

# B6

---

**Prescription Refill Disclaimer:**

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**Ordering Food:**

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---

Case B6

Owner B6

Discharge Instructions



# Cummings

## Veterinary Medical Center

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North Grafton, MA 01536  
Telephone (508) 839-5395  
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<http://vetmed.tufts.edu/>

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

**Patient**

**Name:**

B6

**Signalment:**

B6 Years Old Gray Female Irish  
Wolfhound

**Owner**

**Name:**

B6

**Address:**

**Patient ID:**

B6

**Emergency Clinician:**  
Resident)

B6

DVM (Emergency & Critical Care Resident),

B6

DVM (SAM

**ER Supervisor:**

B6

### Discharge Instructions

**Admit Date:** B6 7:25:56 PM

**Check Out Date:** B6

**Diagnosis:**

1. B6

**Case Summary:**

B6

# B6

---

**Prescription Refill Disclaimer:**

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---

Case: B6

Owner: B6

Discharge Instructions

# Cummings

## Veterinary Medical Center

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North Grafton, MA 01536  
Telephone (508) 839-5395  
Fax (508) 839-7951  
<http://vetmed.tufts.edu/>

Patient

Name:

B6

Signalment:

B6 Years Old Gray Female Irish  
Wolfhound

Owner

Name:

Address:

B6

Patient ID:

B6

Contact Clinician:

B6 DVM (Resident -

Alternate Clinician:

B6

---

### Discharge Instructions

Appointment Date:

B6

Case Summary

Diagnosis:

B6

General Summary:

B6

# B6

---

**Prescription Refill Disclaimer:**

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

**Ordering Food:**

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

**Clinical Trials:**

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

---

Case: B6

Owner: B6

Discharge Instructions

**Radiology Request & Report**

**Patient**

Name: B6

Species: Canine

Gray Female Irish Wolfhound

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: B6

Date of request: B6

Attending Clinician: B6 DVM (Resident): B6

Student:

Date of exam: B6

Patient Location: Ward/Cage:

Weight (kg) 61.4

**B6**

**B6**

**Dates**

**Reported** **B6**

**Finalized: 10/9/2018**

# Treatment Plan

Estimated Charges  
 12/22/2018

**B6**

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

Patient	Description	Low Qty	Low Extended	High Qty	High Extended
B6	B6	1.00	B6	1.00	B6

**B6**

Doctor of Record **B6**

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

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

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

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

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

# Cummings

## Veterinary Medical Center

AT TUFTS UNIVERSITY

Foster Hospital for Small Animals  
55 Willard Street  
North Grafton, MA 01536  
Telephone (508) 839-5395  
Fax (508) 839-7951  
<http://vetmed.tufts.edu/>

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

**Patient**

**Name:**

B6

**Signalment:**

B6 Years Old Gray Female Irish  
Wolfhound

**Owner**

**Name:**

**Address:**

B6

**Patient ID:**

B6

**Emergency Clinician:**

B6

DVM

**ECC Supervisor:**

B6

### Discharge Instructions

**Admit Date:** B6 2:43:45 AM

**Check Out Date:** B6

**Diagnosis:**

- 1.
- 2.
- 3.

B6

**Case Summary:**

B6



**B6**

Case: **B6**

Owner: **B6**

Discharge Instructions

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY  
Cardiology Liaison: 508-887-4696

B6

Patient ID: B6  
B6 Canine  
B6 Years Old Female Irish Wolfhound  
Gray BW: Weight (kg) 61.40

## Cardiology Consultation

Date: B6  
Weight: Weight (kg) 61.40  
Requesting Clinician: B6

### Attending Cardiologist:

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

B6

### Cardiology Resident:

B6

### Thoracic radiographs available for review?

- Yes - in SS
- Yes - in PACS
- No

Patient location: ICU run 4

**Presenting complaint and important concurrent diseases:** Presented for coughing, tachypnea, and dyspnea. Was hospitalized in September 2018 due to aspiration pneumonia and has done well at home until 10 PM yesterday, at which point B6 became acutely tachypneic, dyspneic, and began coughing on the car ride to Tufts.

**Current medications and doses:** B6  
last night, but this was discontinued today.

**At-home diet:** Poulin lamb and rice kibble, free fed

**Key indication for consultation:** SVT and NS Vtach on telemetry, tachypnea, subjectively enlarged pulmonary veins on CrL.

**Questions to be answered:** Respiratory pattern more likely secondary to cardiac disease vs recurrence of pneumonia?

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

- Yes (explain):
- No

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

**Physical Examination**

**B6**

**Muscle condition:**

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

**Cardiovascular Physical Exam**

**Murmur Grade:**

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

**Jugular vein:**

- Bottom 1/3 of the neck
- Middle 1/3 of the neck
- 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: harsh lung sounds, bilaterally in caudal lung lobes

**Abdominal exam:**

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites

**Echocardiogram Findings:**

**B6**

**Assessment and recommendations:**

Findings consistent with normal cardiac structure and somewhat slightly decreased to normal contractile function. There is no obvious cardiac abnormalities to justify the arrhythmias, tachypnea and cough. Thus, patient appears to be able to tolerate IV fluids based on the findings of the present study, and respiratory signs are suspected to be related to pneumonia. Patient has been on Lamb & Rice based diet for years and it is unclear whether mild contractile dysfunction is diet induced, early stage DCM, or related to systemic illness. The arrhythmias observed in the telemetry could be secondary to systemic disease, infection, decreased myocardial oxygenation, early stage DCM, or myocarditis. Troponin CnTi is slightly increased which does not support severe cardiac injury. Once fully recovered from current event, recommend switch the current Lamb & Rice diet to a diet manufactured by a major brand pet food company with standard protein sources. There is currently no clear evidence of endocarditis, but there is some thickening of the MV and echocardiography is not the most sensitive test for endocarditis; if the patient has recurrent fevers or is not responding well to current therapy, then consider brief recheck echo to assess valves in 2-3 days. No cardiac medications needed at this time. Consider recheck echo after recovery from current illness, as patient could potentially be induced in the DCM study if there is still low contractile function.

**Final Diagnosis:**

Slight decreased systolic function;  
Non sustained ventricular tachycardia;  
Supraventricular tachycardia.  
(r/o secondary to systemic disease v early DCM v diet related)

M-Mode

IVSd	B6	cm
LVIDd		cm
LVPWd		cm
IVSs		cm
LVIDs		cm
LVPWs		cm
EDV(Teich)		ml
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
EPSS		cm

M-Mode Normalized

IVSdN	B6	{0.290 - 0.520}
LVIDdN		{1.350 - 1.730}
LVPWdN		{0.330 - 0.530}
IVSsN		{0.430 - 0.710}
LVIDsN		{0.790 - 1.140}
LVPWsN		{0.530 - 0.780}

2D

SA LA	B6	cm
Ao Diam		cm
SA LA / Ao Diam		
IVSd		cm
LVIDd		cm
LVPWd		cm
EDV(Teich)		ml
IVSs		cm
LVIDs		cm
LVPWs		cm
ESV(Teich)		ml
EF(Teich)		%
%FS		%
SV(Teich)		ml
IVSd		cm
LVIDd		cm
EDV(Teich)		ml
LVPWd		cm
IVSs		cm
LVIDs		cm
ESV(Teich)		ml
EF(Teich)		%
ESV(Cube)		ml
EF(Cube)		%
%FS		%

SV(Teich)  
SI(Teich)  
SV(Cube)  
SI(Cube)  
LVPWs  
LVld LAX  
LVAd LAX  
LVEDV A-L LAX  
LVEDV MOD LAX

LVLs LAX  
LVA<sub>s</sub> LAX  
LVESV A-L LAX  
LVESV MOD LAX  
HR  
EF A-L LAX  
LVEF MOD LAX  
SV A-L LAX  
SV MOD LAX  
CO A-L LAX  
CO MOD LAX

B6

B6

ml  
ml/m  
ml  
ml/m  
cm  
cm  
cm  
ml

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

Patient

Name: B6  
Signalment: B6 Years Old Gray Female Irish  
Wolfhound

Owner

Name:  
Address:

B6

Patient ID: B6

Contact Clinician: B6 DVM (Resident -

B6  
Alternate Clinician: B6 DVM, DACVIM

---

### Discharge Instructions

Admit Date: B6 2:04:12 PM

Check Out Date: B6

Case Summary

Diagnosis:

B6

- Decreased cardiac contractility noted on previous echocardiogram B6  
B6

General Summary:

History B6 presented to Tufts Internal Medicine Service for recheck of her B6 episode. She was diagnosed B6 by our Emergency Service from radiographs. A tracheal wash and culture were performed during her first hospital stay in B6 but were not repeated for this most recent episode. The current antibiotic choice B6 was based off the initial culture. B6 has been doing well at home. She is breathing comfortably, eating well and has normal energy. No gastrointestinal signs have been noted at home, so it is currently unclear why B6 might be aspirating. We questioned more about bark change and B6 and it is possible that these have been present. B6 has B6 that has been bothering her some.

Exam findings: B6 was bright and alert with normal vital parameters on presentation. Her heart and lung sounds were normal and she was breathing without any effort. She did not cough during the exam. Her abdomen was soft and nonpainful. Her left ear had some dark debris and was slightly inflamed. Her right ear looked fine. The rest of the physical exam was unremarkable.

Diagnostics:

- Chest x-rays: near complete resolution of B6 possible small focal patch remaining overlying the cardiac silhouette

B6

Treatment plan: We discussed today that B6 chest x-rays look much improved from her previous set. She appears to be responding both clinically and radiographically to antibiotics. We have recommended that B6 continue four

more weeks of B6 to ensure that we completely clear this infection. We currently do not know why B6 is developing recurrent bouts of B6. Possible causes discussed today include silent B6. We asked about signs that may be linked to B6. B6 has potentially had some hind end weakness. A voice change is less definitive. B6 can contribute to B6 due to an inability to protect the airway. We should monitor changes associated with this carefully. Some management and monitoring strategies have been recommended below.

**Patient Care Instructions:**

**B6**

**Prescription Refill Disclaimer:**

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

**Ordering Food:**

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

**Clinical Trials:**

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

Case: B6

Owner: B6

Discharge Instructions





### Discharge Instructions

**Patient**

Name: B6  
Species: Canine  
Gray Female Irish Wolfhound  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6 V19

Discharge Date: B6

**Diagnoses:**

Slightly decreased cardiac contractility  
Non-sustained frequent single ventricular premature contractions (VPCs)

**Clinical Findings:**

Thank you for bringing B6 to the Tufts Cardiology Service for a recheck echocardiogram, ECG, and chest X-rays.

Her physical exam was mostly unremarkable. You report that B6 is doing much better at home. Your only concern is that she has a B6 that is healing. B6 echocardiogram today demonstrated that the contractility of her heart is still slightly abnormal, though the chambers in her heart are normal sized and the walls of the chambers are normal thickness.

B6

We discussed whether or not B6 is a candidate for a study involving diet related heart disease. At this time, B6 does not have classic dilated cardiomyopathy. We have sent out two blood tests to check for damage to the heart muscle. Depending on the results of these tests, she may still be a candidate for the study. We should have these results back in 1-2 weeks.

We can consider using a holter monitor for at home heart rhythm tracking. You can elect to have a holter monitor placed at any time. This monitor would track her heart rhythm for a period of 24 hours at home which would give us a better idea of

how frequently B6 is having abnormal electrical activity of the heart. Alternatively, you can purchase an Aivecor monitor for at home ECG tracking.

B6 will contact you with the results of B6 chest radiographs.

**Monitoring at Home:**

Please monitor B6 for changes in appetite, vomiting, diarrhea, coughing, difficulty breathing, exercise intolerance, lethargy, or any other changes. If you note any of these, please contact us or bring her to see a veterinarian as soon as possible.

**Diet Suggestions:**

Please continue feeding Darcy the Purina Proplan food.

**Exercise Recommendations:**

B6 does not need any exercise restriction at this time. If you notice that she is not tolerating exercise, stop and contact a veterinarian.

**Medications:**

**B6**

**Recheck Visits:** The timing of B6 recheck examination will depend on her eligibility for the study. If we get the bloodwork results back and she does qualify, she will need a recheck echocardiogram in 3 months. If she does not qualify for the study, B6 should have a recheck in 3-6 months. You can call to schedule a technician appointment for placement of the Holter monitor at any time should you elect to do so.

Thank you for entrusting us with B6 care, she is such a sweetheart! 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

**Radiology Request & Report**

**Patient**

Name: B6  
Species: Canine  
Gray Female Irish Wolfhound  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6  
Date of request: B6

Attending Clinician: B6 DVM (Intern: B6 Student: B6

Date of exam: B6

Patient Location: Ward/Cage:

Weight (kg) 61.90

**Sedation**

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

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

Examination Desired: chest rads, +/- 4 quadrant views

Presenting Complaint and Clinical Questions you wish to answer: rDVM referred for B6  
workup  
Emergency

Pertinent History:

B6

The cardiovascular structures, mediastinum, pleural space, and imaged cranial abdomen are normal. Ventral spondylosis deformans, as well as degenerative changes to the costochondral junctions of

B6

**Conclusions:**

**B6**

**Radiologists**

Primary: B6 DVM

Reviewing: B6 DVM, DACVR; B6 DVM, DACVR

**Dates**

Reported: B6

Finalized: 2/6/19

**Radiology Request & Report**

**Patient**

Name: B6  
Species: Canine  
Gray Female Irish Wolfhound  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6  
Date of request: B6

Attending Clinician: B6 DVM (Resident - SA Medicine) Student:

Date of exam: B6

Patient Location: Ward/Cage: Weight (kg) 61.00

- Inpatient  
 Outpatient Time:  
 Waiting  
 Emergency

**Sedation**

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

**Examination Desired:**

left lateral and VD

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

**Pertinent History:**

**Findings:**

**B6**

**Conclusions:**

- Right cranial, right middle and left cranial (caudal subsegment) aspiration pneumonia. Follow up radiographs are recommended to monitor for resolution/progression.

**Radiologists**

Primary: [B6] DVM

Reviewing: [B6] DVM, DACVR; [B6] DVM, DACVR

**Dates**

Reported [B6]

Finalized: 2/6/19

**Radiology Request & Report**

**Patient**

Name: B6  
Species: Canine  
Gray Female Irish Wolfhound  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6  
Date of request: B6

Attending Clinician: B6

Student:

Date of exam: B6

Patient Location: Ward/Cage:

Weight (kg) 61.40

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

**Sedation**

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

**Examination Desired:**

2 view chest

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

B6

**Pertinent History:**

**Findings:**

B6



B6

**Conclusions:**

**B6**

**Radiologists**

Primary: B6 DVM

Reviewing: B6 DVM, DACVR; B6 DVM, DACVR

**Dates**

Reported: 1/10/2019

Finalized: 2/6/19

**Radiology Request & Report**

**Patient**

Name: B6

Species: Canine

Gray Female Irish Wolfhound

Birthdate: B6

**Owner**

Name: B6

Address: B6

Patient ID: B6

Date of request: B6

Attending Clinician: B6

DVM (Resident - SAM)

Student:

Date of exam: B6

Patient Location: Ward/Cage: with owner- no runs in B ward or radiology holding

Weight (kg) 64.40

- Inpatient
- Outpatient Time:
- Waiting
- Emergency

**Sedation**

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

Examination Desired: met check

Presenting Complaint and Clinical Questions you wish to answer:

B6

Pertinent History:

B6

B6

Findings:

B6

B6

**Conclusions:**

B6

**Radiologists**

Primary: B6 DVM

Reviewing: B6 DVM, DACVR; B6 DVM, DACVR

**Dates**

Reported: B6

Finalized: 2/6/19

**Radiology Request & Report**

**Patient**

Name: B6  
Species: Canine  
Gray Female Irish Wolfhound  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6  
Date of request: 2/5/2019

Attending Clinician: B6 DVM (Resident, Cardiology) Student: B6 V19

Date of exam: 2/5/19

Patient Location: Ward/Cage: Cardio

Weight (kg) 60.50

- Inpatient  
 Outpatient Time:  
11am  
 Waiting  
 Emergency

**Sedation**

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

Examination Desired: 3 view chest

Presenting Complaint and Clinical Questions you wish to answer:

B6

Pertinent History:

B6

Findings:

B6

**Conclusions:**

[Redacted] B6

**Radiologists**

Primary: [Redacted] B6 DVM

Reviewing: [Redacted] B6 DVM, DACVR

**Dates**

Reported: 2/5/19

Finalized: 2/6/19

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY  
Cardiology Liaison: 508-887-4696

B6

Patient ID: B6  
B6 Canine  
B6 Years Old Female Irish Wolfhound  
Gray

## Cardiology Appointment Report

Date: 2/5/2019

### Attending Cardiologist:

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

B6

### Cardiology Resident:

B6

### Cardiology Technician:

B6

Student: B6, V19

### Presenting Complaint:

Recheck for possible diet associated DCM and B6

B6 no coughing, no trouble breathing, great energy level, no exercise restriction and tolerating that well. Normal appetite and drinking habits. No v/d/c/s.

O has noted a change in her bark (not as deep and more high pitched). Also has been B6 which she has been doing for her whole life. O mentions this because she was asked this when seen by internal medicine related to the B6

Overdue for vaccines, O is wondering when it is ok to give her vaccines.

### Concurrent Diseases:

B6

### General Medical History:

History of B6

### Diet and Supplements:

Purina pro plan chicken and rice, 1.5 cups twice a day since January 15, 2019. Cheese with medications. Occasional dog treats.

No supplements.

**Cardiovascular History:**

Prior CHF diagnosis? N

Prior heart murmur? N

Prior ATE? N

Prior arrhythmia? Y

Monitoring respiratory rate and effort at home? N

Cough? N

Shortness of breath or difficulty breathing? N

Syncope or collapse? N

Sudden onset lameness? N

Exercise intolerance? N

**Current Medications Pertinent to CV System:**

**B6**

**Cardiac Physical Examination:**

**B6**

**Muscle condition:**

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

**Cardiovascular Physical Exam:**

**Murmur Grade:**

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

**Murmur location/description:**

**Jugular vein:**

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

**Arterial pulses:**

- Weak
- Fair
- Good
- Strong
- Bounding
- Pulse deficits
- Pulsus paradoxous
- 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:**

History of

History of

**Differential Diagnoses:**

arrhythmias secondary to systemic disease at the time vs early DCM vs diet related

**Diagnostic plan:**

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

**Echocardiogram Findings:**

# B6



## B6

### 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:

## B6

### Assessment and recommendations:

Echocardiogram is similar to previous examination with normal cardiac size but a contractile function that is low normal to slightly decreased. The patient is doing much better at home and the pneumonia is under control which makes the changes visualized at the previous echocardiogram (as well as today) unlikely to be related to sepsis or general inflammation. The patient is an athletic large breed and it is possible that the changes visualized are a variant of normal although we cannot rule out for sure DCM that is either diet related or breed related. Full bloodwork as well as NT-proBNP and troponin were submitted today and if one or the other is elevated the patient could officially be enrolled in the study in the equivocal category. Isolated VPCs were still visualized today and we discuss with the owner the possibility of doing a Holter monitor vs. purchasing an AliveCor vs. starting a beta-blocker. A Holter was not performed today because it was logistically not feasible for the owner to come back tomorrow but she will contact us if she wants to schedule a Holter placement. No cardiac medications are recommended as of right now. The patient has been switched to a Purina diet for the past 2 weeks and it has been tolerated well. A recheck echocardiogram and ECG are recommended in 3 months or sooner if the patient develops clinical signs consistent with worsening heart disease such as increased RR/RE, cough, exercise intolerance, or syncope.

### Final Diagnosis:

- Mild decreased of the contractile function r/o variant of normal vs. DCM (diet related vs. breed related)

2D

SALA  
Ao Diam  
SALA / Ao Diam  
IVSd  
LVIDd  
LVPWd  
EDV(Teich)  
IVSs  
LVIDs  
LVPWs  
ESV(Teich)  
EF(Teich)  
%FS  
SV(Teich)  
LV Major  
LV Minor  
Sphericity Index  
LVLd A4C  
LVEDV MOD A4C  
LVLs A4C  
LVESV MOD A4C  
LVEF MOD A4C  
SV MOD A4C

B6

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

M-Mode

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

B6

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

Doppler

MV E Vel  
MV DecT  
MV Dec Slope  
MV A Vel

B6

m/s  
ms  
m/s  
m/s

MV E/A Ratio

E'

E/E'

A'

S'

AV Vmax

AV maxPG

PV Vmax

PV maxPG

B6

m/s

m/s

m/s

m/s

mmHg

m/s

mmHg

**B6**

**B6** Female  
Canine Irish Wolfhound Gray  
Patient ID: **B6**

**Outside Prescription Log**

1. Date: 02/07/19  
Clinician: **B6**  
Prescription: **B6** no refills  
Pharmacy sent to: faxed to **B6**  
Completed by: **B6**  
Origin of request: dr

2. Date:  
Clinician:  
Prescription:  
Pharmacy sent to:  
Completed by:  
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:**

**Notice of Patient Admit**

Date: [ B6 ] 7:25:56 PM  
Referring Doctor: [ B6 ]  
Client Name: [ B6 ]  
Patient Name: [ B6 ]

Case No: [ B6 ]

---

Dear Colleague,

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

The attending doctor is: [ B6 ]  
The reason for admission to the FHSA is: [ B6 ]

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

Thank you for your referral to our Emergency Service.

**Notice of Patient Admit**

Date: [B6] 7:25:56 PM

Case No: [B6]

Referring Doctor: [B6]

Client Name: [B6]

Patient Name: [B6]

---

Dear [B6]

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

The attending doctor is [B6]

The reason for admission to the FHSA is: [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) 839-7951  
<http://vetmed.tufts.edu/>

**B6**

**B6** Female  
Canine Irish Wolfhound Gray  
**B6**

9/14/2018

Dear **B6**

**B6**

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

**B6** DVM (Resident - SAM)



**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**

Female

Canine Irish Wolfhound Gray

**B6**

9/28/2018

Dear

**B6**

**B6**

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

**B6**

DVM (Resident - SAM)

**Notice of Patient Admit**

Date: B6 2:43:45 AM  
Referring Doctor: B6  
Client Name: B6  
Patient Name: B6

Case No: B6

---

Dear B6

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

The attending doctor is: B6  
The reason for admission to the FHSA is: 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) 839-7951  
<http://vetmed.tufts.edu/>

**B6**

**B6** Female  
Canine Irish Wolfhound Gray  
**B6**

**B6**

Dear **B6**

**B6**

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

**B6** DVM (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) 839-7951  
<http://vetmed.tufts.edu/>

**B6**

**B6**

Female

Canine Irish Wolfhound Gray

**B6**

1/9/2019

Dear

**B6**

**B6**

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

**B6**

DVM (Resident - SAM)

**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** Female  
Canine Irish Wolfhound Gray  
**B6**

2/11/2019

Dear **B6**

Thank you for referring **B6** with their pet **B6**

If you have any questions, or concerns, please contact us at 508-887-4988.

Thank you,

**B6** DVM (Resident, Cardiology)

**Report Details - EON-376448**

ICSR: 2061217  
 Type Of Submission: Initial  
 Report Version: FPSR.FDA.PETF.V.V1  
 Type Of Report: Adverse Event (a symptom, reaction or disease associated with the product)  
 Reporting Type: Voluntary  
 Report Submission Date: 2019-01-15 15:57:50 EST

**Reported Problem:**  
**Problem Description:** Eating BEG diet Syncopal episodes - identified arrhythmia recently. Owner changing diet and will recheck in 3 months Elevated BNP: **B6** taurine and troponin pending 2 other dogs in household eating same diet - they have not been screened yet  
**Date Problem Started:** 01/03/2019  
**Concurrent Medical Problem:** Yes  
**Pre Existing Conditions:** **B6**  
**Outcome to Date:** Stable

**Product Information:**  
**Product Name:** 4Health salmon and potato adult dog food  
**Product Type:** Pet Food  
**Lot Number:**  
**Product Use Information:** **Description:** Alternates with other product listed  
**Manufacturer /Distributor Information:**  
**Purchase Location Information:**  
**Product Name:** 4Health whitefish and potato dry  
**Product Type:** Pet Food  
**Lot Number:**  
**Product Use Information:** **Description:** Alternates with other listed 4Health product  
**Manufacturer /Distributor Information:**  
**Purchase Location Information:**

**Animal Information:**  
**Name:** **B6**  
**Type Of Species:** Dog  
**Type Of Breed:** Pit Bull  
**Gender:** Male  
**Reproductive Status:** Neutered  
**Weight:** 33.4 Kilogram  
**Age:** **B6** Years  
**Assessment of Prior Health:** Excellent  
**Number of Animals Given the Product:** 3  
**Number of Animals Reacted:** 1  
**Owner Information:** **Owner Information provided:** Yes  
**Contact:** **Name:** **B6**  
**Phone:**  
**Email:**

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

**Report Details - EON-383414**

ICSR:	2064645
Type Of Submission:	Followup
Report Version:	FPSR.FDA.PETF.V.V1
Type Of Report:	Adverse Event (a symptom, reaction or disease associated with the product)
Reporting Type:	Voluntary
Report Submission Date:	2019-03-26 14:13:37 EDT
Initial Report Date:	01/15/2019
Parent ICSR:	2061217
Follow-up Report to FDA Request:	Yes

<b>Reported Problem:</b>	<b>Problem Description:</b>	Eating BEG diet Syncopal episodes - identified arrhythmia recently Owner changing diet and will recheck in 3 months Elevated BNP [B6] taurine and troponin pending 2 other dogs in household eating same diet - they have not been screened yet
	<b>Date Problem Started:</b>	01/03/2019
	<b>Concurrent Medical Problem:</b>	Yes
	<b>Pre Existing Conditions:</b>	[B6]
	<b>Outcome to Date:</b>	Died Euthanized
	<b>Date of Death:</b>	[B6]

<b>Product Information:</b>	<b>Product Name:</b>	4Health salmon and potato adult dog food
	<b>Product Type:</b>	Pet Food
	<b>Lot Number:</b>	
	<b>Product Use Information:</b>	<b>Description:</b> Alternates with other product listed
	<b>Manufacturer /Distributor Information:</b>	
	<b>Purchase Location Information:</b>	
	<b>Product Name:</b>	4Health whitefish and potato dry
	<b>Product Type:</b>	Pet Food
	<b>Lot Number:</b>	
	<b>Product Use Information:</b>	<b>Description:</b> Alternates with other listed 4Health product
	<b>Manufacturer /Distributor Information:</b>	
	<b>Purchase Location Information:</b>	

<b>Animal Information:</b>	<b>Name:</b>	[B6]
	<b>Type Of Species:</b>	Dog
	<b>Type Of Breed:</b>	Pit Bull
	<b>Gender:</b>	Male
	<b>Reproductive Status:</b>	Neutered
	<b>Weight:</b>	33.4 Kilogram
	<b>Age:</b>	[B6] Years
	<b>Assessment of Prior Health:</b>	Good
	<b>Number of Animals Given the Product:</b>	3
	<b>Number of Animals Reacted:</b>	1



	<b>Owner Information:</b>	<b>Owner Information provided:</b> Yes
		<b>Contact:</b> Name: [Redacted] Phone: [Redacted] Email: [Redacted]
		<b>Address:</b> [Redacted] United States
	<b>Healthcare Professional Information:</b>	<b>Practice Name:</b> Tufts Cummings School of Veterinary Medicine
		<b>Contact:</b> Name: Lisa Freeman Phone: (508) 887-4523 Email: lisa.freeman@tufts.edu
		<b>Address:</b> 200 Westboro Rd North Grafton Massachusetts 01536 United States
<b>Sender Information:</b>	<b>Name:</b>	Lisa Freeman
	<b>Address:</b>	200 Westboro Rd North Grafton Massachusetts 01536 United States
	<b>Contact:</b>	Phone: 5088874523 Email: lisa.freeman@tufts.edu
	<b>Permission To Contact Sender:</b>	Yes
	<b>Preferred Method Of Contact:</b>	Email
	<b>Reported to Other Parties:</b>	None
<b>Additional Documents:</b>	<b>Attachment:</b> [Redacted]	<b>Description:</b> Medical record
		<b>Type:</b> Medical Records
	<b>Attachment:</b> [Redacted]	<b>Description:</b> Medical record
		<b>Type:</b> Medical Records
	<b>Attachment:</b> [Redacted]	<b>Description:</b> Medical record
		<b>Type:</b> Medical Records
	<b>Attachment:</b> [Redacted]	<b>Description:</b> Medical record
		<b>Type:</b> Medical Records

Client:  
Address:

**B6**

**All Medical Records**

Patient: **B6**  
Breed: Pit Bull  
DOB: **B6**

Species: Canine  
Sex: Male  
(Neutered)

**B6**

**Referring Information**

**B6**

Client: **B6**  
Patient:

**Initial Complaint:**  
Scanned Record

**Initial Complaint:**  
Cardiology New - will be here at 1:30 PM

SOAP Text Jan 3 2019 1:03PM

**B6**

**Disposition/Recommendations**

Client:  
Patient

**B6**

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---

Client: **B6**  
Patient:

**Cummings**  
**Veterinary Medical Center**  
AT TUFTS UNIVERSITY

**Foster Hospital for Small Animals**  
55 Willard Street  
North Grafton, MA 01536  
(508) 839-5395

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

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

**Lab Results Report**

Accession ID:			
Test	Results	Reference Range	Units



**B6**

Printed Tuesday, March 26, 2019

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

**B6** History 9/2018-12/29/18

**B6**

# INVOICE

FOR: **B6**

Printed: 12-31-18 at 2:26p  
Date: 12-29-18  
Account: 10080  
Invoice: 106408

Date	For	Qty	Description	Price	Discount	Net Price
------	-----	-----	-------------	-------	----------	-----------

12-29-18						40.00
----------	--	--	--	--	--	-------

**B6**

Heart- NMA, irregularly irregular rhythm, femoral pulses deficits

**B6**

Assessment -

1. Cardiac arrhythmia
2. Pulse deficits
3. Apparent syncopal events

Ddx - DCM, atrial fibrillation, PSVT

Plan -

1. Referral to specialist for echocardiogram + ECG

2. **B6**

O reports intermittent, more frequent syncopal episodes recently. Sometimes

Client:  
Patient:

**B6**

**B6**

History 9/2018-12/29/18

fainting, but other times appears nauseated and unstable. Strongly recommended referral to cardiologist for complete work up including ECHO, ECG, BP, proBNP and complete thoracic radiograph series. VHS = 10.5 based on prior radiograph taken in hospital

12-29-18

1 Ultrasound - In House

55.00

**B6**

A minimum Service Charge of \$5.00 per month in addition to a 1.5% monthly finance charge will be applied to all balances after 30 days.

Patient

Total charges

**B6**

**B6**

Doctor's Instructions

Office Call - Brief Exam

Our Regular Business Hours are Mon, Tues, Wed and Fri 9am-5pm, Thurs 9am-7pm and Sat 9am-12pm

In Case of an Emergency After Hours:

**B6**

to the appropriate hospital providing coverage at that time.

In order to ensure the most comprehensive care for your pet, all overnight, weekend and holiday emergencies are referred to the closest fully staffed 24 hour emergent facilities by all of the **B6** area animal hospitals.

**B6**

Client:  
Patient:

**B6**

**B6**

History 9/2018-12/29/18

PET OWNER'S COPY

**B6**

**B6**

THAT TO MY KNOWLEDGE THIS DOG HAS NOT BITTEN ANYONE WITHIN 10 DAYS.

This is to certify that this date 3/17/2018, a (dog) (cat)  
(ferret) (wolf)

belonging to  
mailing address  
and residing in

**B6**

**B6**

was vaccinated with Boehringer-Ingelheim Rabivac 3 Killed vac  
brand type rabies vaccine,  
serial no. 1215388A

Breed P. Bull mix Age 4 yrs Sex NM

Weight 76.6# Tag No. \_\_\_\_\_

Animal's Name **B6**

Markings of animal \_\_\_\_\_

Re-vaccination Due

Date 3/17/2018

**B6**

Retain this certificate. A charge for replacement may be made.

The Veterinarian signing this certificate is licensed by the State of \_\_\_\_\_ and has the approval of the Department of Agriculture for the issuance of Health Certificates and Rabies Vaccinations.

Client:  
Patient:

**B6**

**B6**

History 9/2018-12/29/18

**B6**

INVOICE

FOR:

**B6**

Printed: 12-31-18 at 2:44p  
Date: 12-29-18  
Account: 10080  
Invoice: 106408

Date	For	Qty	Description	Price	Discount	Net Price
------	-----	-----	-------------	-------	----------	-----------

12-29-18

**B6**

Heart- NMA, irregularly irregular rhythm, femoral pulses deficits

**B6**

Assessment -

1. Cardiac arrhythmia
2. Pulse deficits
3. Apparent syncopal events

Ddx - DCM, atrial fibrillation, PSVT

Plan -

1. Referral to specialist for echocardiogram + ECG
2. **B6**

O reports intermittent, more frequent syncopal episodes recently. Sometimes



Client:  
Patient:

**B6**

**B6**

History 9/2018-12/29/18

Patient Chart

**B6**

Printed: 12-31-18 at 2:30p

CLIENT INFORMATION

Name  
Address

**B6**

Significant Other

**B6**

PATIENT INFORMATION

Name **B6**  
Sex Male, Neutered  
Birthday **B6**  
ID  
Color Tan & White  
Reminded 03-08-18

Species Canine  
Breed American Pit Bull  
Age 7y  
Rabies 6696  
Weight 74.20 lbs  
Codes

⚠ 03-22-18 11:23a: CAUTION! **B6** excellent handler

**B6**

MEDICAL HISTORY

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

09-20-18

**B6**

Client:  
Patient:

**B6**

**B6**

History 9/2018-12/29/18

Patient Chart for **B6**  
Date: 12-31-18, Time: 2:30p

Client: **B6**  
Page: 2

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

09-20-18

**B6**

Heart- NMA, NSR, femoral pulses are strong and synchronous - just very fast.

**B6**

Age: 7y

(Additional history not shown)

Client:  
Patient:

**B6**

**B6**

et Med 3/17/18 3 year Rabies Cert

PET OWNER'S COPY

**B6**

**B6**

RSA 436:10JL REQUIRES THE FOLLOWING OWNER STATEMENT:

I, **B6** \_\_\_\_\_ SWEAR  
THAT TO MY KNOWLEDGE THIS DOG HAS NOT BITTEN ANYONE WITHIN 10 DAYS.

This is to certify that this date 3/17/18, a (dog) (cat)  
(ferret) (wolf)

belonging to **B6**  
mailing address **B6**  
and residing in **B6**

was vaccinated with Rabvac 3 KV  
serial no. **B6** brand rabies vaccine, type

Breed Pitbull mix Age 7 YRS Sex NM

Weight 80 lbs Tag No. **B6**

Animal's Name **B6**

Markings of animal tan & white

Re-vaccination Due **B6**  
Date 3/17/21

Retain this certificate. A charge for rep made.

The Veterinarian signing this certificate is licensed by the State of **B6** and has the approval of the Department of Agriculture for the issuance of Health Certificates and Rabies Vaccinations.

**B6**

Client:  
Patient:

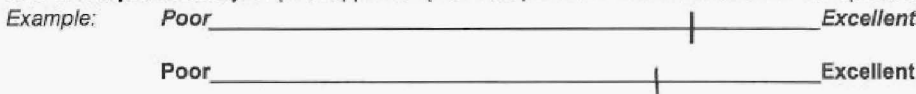
**B6**

diet history 1/3/19

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

Pet's name: **B6** Owner's name: **B6** Today's date: 1/3/19

1. How would you assess your pet's appetite? (mark the point on the line below that best represents your pet's appetite)



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: seems more hesitant to eat but once encouraged, he eats his meals. Elevating his bowl has helped

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
4Health adult kibble (alternating proteins - lamb, fish)	dry	1 1/4 C	Twice daily	12/18
↓ WHITERISH + POTATO OR SALMON + POTATO ADULT				

\*Any additional diet information can be listed on the back of this sheet

5. Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)?     Yes     No    If yes, please list which ones and give brands and amounts:

	Brand/Concentration	Amount per day
Taurine	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Carnitine	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Antioxidants	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Multivitamin	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Fish oil	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Coenzyme Q10	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	_____
Other (please list): Example: Vitamin C	Nature's Bounty	500 mg tablets - 1 per day

Aug 10 powder \_\_\_\_\_  
CBD oil - 4 drops BID \_\_\_\_\_  
1 tsp twice daily (just for flavor)

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 - canned food
- I put them in a Pill Pocket or similar product
- I put them in foods (list foods): \_\_\_\_\_

diet history 1/3/19

---

Has been eating 4health grain free (alternating proteins) for multiple years, just recently switched to regular kibble (w/grain)

has ~~use~~ been fed a very wide variety of canned food, only used to give medications - about 2 tablespoons twice daily

- pedigree
- pure balance
- 4 health

Client:  
Patient:

**B6**

RDVM

**B6**

vet hospital records

**B6**

Patient Chart

Printed: 01-02-19 at 5:09p

CLIENT INFORMATION

Name  
Address

**B6**

Significant Other

**B6**

PATIENT INFORMATION

Name

**B6**

Sex

Male, Neutered

Birthday

**B6**

ID

Color

Tan & White

Reminded

03-08-18

Species

Canine

Breed

American Pit Bull

Age

7y

Rabies

6696

Weight

74.20 lbs

Codes

⚠ 03-22-18 11:23a: CAUTION! **B6** excellent handler

**B6**

HEALTH HISTORY SUMMARY

Date

Diagnosis

**B6**

MEDICAL HISTORY

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

01-02-19

**B6**

**B6**

NOTES

Notes

01-02-19 at 4:40p: emailed chart to liaisons@tufts.edu

12-31-18

**B6**

**B6**

FNOTES

By: NKS, notes? Plan?

12-31-18 at 1:36p: looks like she left without being checked out? Plan? Was he referred? Payment?

**B6**

12-31-18 at 4:35p: Took care of bill today - sent home with thoracic image from previous date + notes from Saturday's exam. He has an appointment with a specialist at Tufts on Thurs 1/3/19

12-29-18

**B6**

1IHUL

Ultrasound - In House

Client:  
Patient:

**B6**

RDVM

**B6**

hospital records

Patient Chart for **B6**  
Date: 01-02-19, Time: 5:09p

Client **B6**  
Page: 2

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

**B6**

Heart: NMA, irregularly irregular rhythm, femoral pulses deficits

**B6**

Assessment -  
 1. Cardiac arrhythmia  
 2. Pulse deficits  
 3. Apparent syncopal events

Ddx - DCM, atrial fibrillation, PSVT

Plan -  
 1. Referral to specialist for echocardiogram + ECG  
 2. **B6**

O reports intermittent, more frequent syncopal episodes recently. Sometimes fainting, but other times appears nauseated and unstable. Strongly recommended referral to cardiologist for complete work up including ECHO, ECG, BP, proBNP and complete thoracic radiograph series. VHS = 10.5 based on prior radiograph taken in hospital

12-29-18

SGY MSIT Patient check-in

**B6** 12-29-18 at 11:01a: urgent- check heart- having a episode. Having a tough time hearing HR

Age: 7y

Client:  
Patient:

**B6**

RDVM

**B6**

hospital records

Patient Chart for **B6**  
Date: 01-02-19, Time: 5:08p

Client **B6**

Page: 3

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

**B6**



Client:  
Patient:

**B6**

RDVM:

**B6**

hospital records

---

**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

vet hospital records

---

**B6**

Client: **B6**  
Patient:

RDVM **B6** hospital records

Patient Chart **B6**  
Date: 01-02-19, Time: 5:09p

Client: **B6**  
Page: 6

Date	By	Code	Description	Qty (Variance)	Photo
CHEM 27 w/ SDMA.03-22-18.8:38a					
			ALP	5 160	U/L
			ALT	18 121	U/L
			AST	16 55	U/L
			CREATINE KINASE	10 200	U/L
			GGT	0 13	U/L
			AMYLASE	337 1469	U/L
			LIPASE	138 755	U/L
			ALBUMIN	2.7 3.9	g/dL
			TOTAL PROTEIN	5.5 7.5	g/dL
			GLOBULIN	2.4 4.0	g/dL
			TOTAL BILIRUBIN	0.0 0.3	mg/dL
			BILIRUBIN CONJUGATED	0.0 0.1	mg/dL
			BUN	9 31	mg/dL
			CREATININE	0.5 1.5	mg/dL
			CHOLESTEROL	131 345	mg/dL
			GLUCOSE	63 114	mg/dL
			CALCIUM	8.4 11.8	mg/dL
			PHOSPHORUS	2.5 6.1	mg/dL
			TCO2 (BICARBONATE)	13 27	mmol/L
			CHLORIDE	108 119	mmol/L
			POTASSIUM	4.0 5.4	mmol/L
			SODIUM	142 152	mmol/L
			ALB/GLOB RATIO	0.7 1.5	
			BUN/CREATININE		
			BILIRUBIN UNCONJUGATED	0.0 0.2	mg/dL
			NA/K RATIO	28 37	
			HEMOLYSIS INDEX		

**B6**

**B6**

Index of N, 1+, 2+ exhibits no significant effect on chemistry values.

RESULTS MAY BE AFFECTED BY THE PRESENCE OF HEMOLYSIS.

LIPEMIA INDEX **B6**

Index of N, 1+, 2+ exhibits no significant effect on chemistry values.

ANION GAP 11 26 mmol/L  
SDMA **B6** 0 14 ug/dL

SDMA IS WITHIN THE REFERENCE INTERVAL AND CREATININE IS INCREASED. This combination of results is uncommon. Hemolysis, if present, can result in decreased SDMA. SDMA and creatinine can both be affected by biologic and assay variability resulting in fluctuations around the upper end of the reference interval; this can be seen with well-managed stable CKD and results will likely align as disease progresses. Creatinine can exceed the reference interval in muscular dogs with normal kidney function. Creatinine can be artifactually increased postprandially. If kidney disease is still suspected, a complete urinalysis should be performed on all patients to evaluate for inappropriate specific gravity, proteinuria or other evidence of kidney disease.

Test	Result	Flag	Normal Range		Measure
			Low	High	
T4 03-22-18 8:38a	<b>B6</b>		1.0	4.0	ug/dL

**B6**

Interpretive ranges:

- <1.0 Low
- 1.0-4.0 Normal
- >4.0 High
- 2.1-5.4 Therapeutic

Dogs with no clinical signs of hypothyroidism and results within the normal reference range are likely euthyroid. Dogs with low T4 concentrations may be hypothyroid or "euthyroid sick". Occasionally,

Client:

**B6**

Patient:

RDVM

**B6**

hospital records

Patient Chart for

**B6**

Date: 01-02-19, Time: 5:09p

Client

**B6**

Page: 7

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

hypothyroid dogs can have T4 concentrations that are low normal. Dogs with clinical signs of hypothyroidism and low or low normal T4 concentrations may be evaluated further by submission of free T4 and canine TSH. A high T4 concentration in a clinically normal dog is likely variation of normal; however elevations may occur secondary to thyroid autoantibodies or rarely thyroid neoplasia. For dogs on thyroid supplement, acceptable 4-6 hour post pill total T4 concentrations generally fall within the higher end or slightly above the reference range.

Test	Result	Flag	Normal Range		Measure	
			Low	High		
<b>CBC STANDARD 03-22-18 8:38a</b>						
WBC	<b>B6</b>		4.9	17.6	K/uL	
REC			5.39	8.70	M/uL	
HGB			13.4	20.7	g/dL	
HCT			38.3	56.5	%	
MCV			59	76	fL	
MCH			21.9	26.1	pg	
MCHC			32.6	39.2	g/dL	
% RETICULOCYTE					%	
RETICULOCYTE				10	110	K/uL
% NEUTROPHIL					%	
% LYMPHOCYTE					%	
% MONOCYTE					%	
% EOSINOPHIL					%	
% BASOPHIL					%	
PLATELET				143	448	K/uL
NEUTROPHIL			2940	12670	/uL	
LYMPHOCYTE		L	1060	4950	/uL	
MONOCYTE			130	1150	/uL	
EOSINOPHIL			70	1490	/uL	
BASOPHIL			0	100	/uL	

**B6**

Test	Result	Flag	Normal Range		Measure
			Low	High	

**UPC IF INDICATED 03-22-18 8:38a**

UPC IF INDICATED

A urine protein-to-creatinine ratio (UPC) was not indicated because there was either a negative SSA protein or an active urine sediment (presence of gross hematuria, >100 RBC/hpf, >5 WBC/hpf or bacteria).

Test	Result	Flag	Normal Range		Measure
			Low	High	

**URINALYSIS 03-22-18 8:38a**

COLLECTION METHOD  
 COLOR  
 CLARITY  
 SPECIFIC GRAVITY  
 GLUCOSE  
 BILIRUBIN  
 KETONES  
 BLOOD  
 PH  
 PROTEIN

**B6**

Protein test is performed and confirmed by the sulfosalicylic acid test

WBC	<b>B6</b>		0	5	HPF
-----	-----------	--	---	---	-----

Client:  
Patient:

**B6**

**RDV**

**B6**

hospital records

Patient Chart for **B6**  
Date: 01-02-19, Time: 5:09p

Client **B6**  
Page: 8

Date	By	Code	Description	Qty (Variance)	Photo
			RBC	NONE SEEN	HPF
			BACTERIA	NONE SEEN	
			EPI CELL	RARE (0-1)	
			MUCUS	NONE SEEN	
			CASTS	OCC HYALINE (0-1)/LP	
			CRYSTALS	NONE SEEN	
			UROBILINOGEN	NORMAL	

Test	Result	Flag	Normal Range	Measure
			<u>Low</u> <u>High</u>	

NOTE FROM IDEXX 03-22-18 8:38a  
NOTE

Sample submitted in non-IDEXX glass tube: IDEXX no longer supports the use of glass collection tubes in order to minimize safety concerns. Plastic collection tubes can be ordered at no charge online at [order.idexx.com](http://order.idexx.com) or through the Inside Sales Center at 888-79-IDEXX using product number 98-0003497-00.

03-22-18	<b>B6</b>	1SPR	Senior Profile w/Reflex UA #26639999
		1DOCI	Doctors' Instructions

**B6**

Client: **B6**  
Patient:

**B6** hospital records

Patient Chart for **B6**  
Date: 01-02-19, Time: 5:09p

Client **B6**  
Page: 9

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

<b>B6</b>			Heart-NMA, NSR, femoral pulses are strong and synchronous		
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**B6**

**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

hospital records

Patient Chart for **B6**  
Date: 01-02-19, Time: 5:09p

Client **B6**  
Page: 10

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

**B6**

Client:  
Patient:

**B6**

RDVM

**B6**

hospital records

Patient Chart for **B6**  
Date: 01-02-19, Time: 5:09p

Client **B6**

Page: 11

Date	By	Code	Description	Qty (Variance)	Photo
------	----	------	-------------	----------------	-------

**B6**



Client: **B6**  
Patient:

RDVN **B6** hospital records

Patient Chart # **B6**  
Date: 01-02-19, Time: 5:09p

Client **B6**  
Page: 12

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

Client: **B6**  
Patient:

**RDVM** **B6** hospital records

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**B6**

**Consumer Complaint Issue Screen - EON-383456**

<b>Complaint Number:</b>	156879										
<b>Complaint Date:</b>	03/25/2019										
<b>Receiving Organization:</b>	DET-DO										
<b>Complaint Identification:</b>	<table border="1"><tr><td><b>Name:</b></td><td rowspan="2"><b>B6</b></td></tr><tr><td><b>Address:</b></td></tr><tr><td></td><td>US</td></tr><tr><td><b>Phone (H):</b></td><td><b>B6</b></td></tr><tr><td><b>Phone (W):</b></td><td></td></tr></table>	<b>Name:</b>	<b>B6</b>	<b>Address:</b>		US	<b>Phone (H):</b>	<b>B6</b>	<b>Phone (W):</b>		
<b>Name:</b>	<b>B6</b>										
<b>Address:</b>											
	US										
<b>Phone (H):</b>	<b>B6</b>										
<b>Phone (W):</b>											
<b>Complaint/Injury:</b>	<b>Complaint Description:</b> Zignature - Turkey Blend Grain Free Consumer was feeding her 10-year-old male Lab/Weimer mix when he developed a hacking cough. Upon visit to the family vet they noted that he had a heart murmur and the dog was referred to a Vet Cardiologist. An Echo Cardio Gram was performed, and the vet diagnosed him with Dilated Cardio Myopathy and the owner was instructed to take the dog off this food and start on a dog food with grain product in it. There had been no other medical issues with the animal other than allergies.										
<b>Complaint Symptoms:</b>	<b>Symptom:</b> Coughing Other cardiovascular										
<b>Health Care Professional:</b>	<table border="1"><tr><td><b>Provider Name:</b></td><td rowspan="2"><b>B6</b></td></tr><tr><td><b>Address:</b></td></tr><tr><td></td><td>US</td></tr><tr><td><b>Phone:</b></td><td><b>B6</b></td></tr></table>	<b>Provider Name:</b>	<b>B6</b>	<b>Address:</b>		US	<b>Phone:</b>	<b>B6</b>			
<b>Provider Name:</b>	<b>B6</b>										
<b>Address:</b>											
	US										
<b>Phone:</b>	<b>B6</b>										
<b>Hospital Information:</b>	<table border="1"><tr><td><b>Hospital Name:</b></td><td><b>B6</b></td></tr><tr><td><b>Address:</b></td><td></td></tr><tr><td><b>Phone:</b></td><td></td></tr></table>	<b>Hospital Name:</b>	<b>B6</b>	<b>Address:</b>		<b>Phone:</b>					
<b>Hospital Name:</b>	<b>B6</b>										
<b>Address:</b>											
<b>Phone:</b>											
<b>Product and Labeling:</b>	<table border="1"><tr><td><b>Brand Name:</b></td><td>Zignature</td></tr><tr><td><b>Product Name:</b></td><td>Turkey Blend Grain Free</td></tr><tr><td><b>UPC Code:</b></td><td>unk</td></tr><tr><td><b>Lot/Serial #:</b></td><td>unk</td></tr><tr><td><b>Exp/Use by Date:</b></td><td>unk</td></tr></table>	<b>Brand Name:</b>	Zignature	<b>Product Name:</b>	Turkey Blend Grain Free	<b>UPC Code:</b>	unk	<b>Lot/Serial #:</b>	unk	<b>Exp/Use by Date:</b>	unk
<b>Brand Name:</b>	Zignature										
<b>Product Name:</b>	Turkey Blend Grain Free										
<b>UPC Code:</b>	unk										
<b>Lot/Serial #:</b>	unk										
<b>Exp/Use by Date:</b>	unk										

**From:** PFR Event <pfpreventcreation@fda.hhs.gov>  
**To:** Cleary, Michael \*; HQ Pet Food Report Notification; **B6**  
**Sent:** 3/27/2019 5:52:32 AM  
**Subject:** Taste of the Wild High Prairie Puppy; **B6** EON-383461  
**Attachments:** 2064711-report.pdf; 2064711-attachments.zip

A PFR Report has been received and PFR Event [EON-383461] has been created in the EON System.

A "PDF" report by name "2064711-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 "2064711-attachments.zip" and is attached to this email notification.

Below is the summary of the report:

**EON Key:** EON-383461

**ICSR #:** 2064711

**EON Title:** PFR Event created for Taste of the Wild High Prairie Puppy; 2064711

<b>AE Date</b>	03/11/2019	<b>Number Fed/Exposed</b>	2
<b>Best By Date</b>	12/30/2019	<b>Number Reacted</b>	1
<b>Animal Species</b>	Dog	<b>Outcome to Date</b>	Stable
<b>Breed</b>	Beagle		
<b>Age</b>	9 Months		
<b>District Involved</b>	PFR; <b>B6</b> DO		

**Product information**

**Individual Case Safety Report Number:** 2064711

**Product Group:** Pet Food

**Product Name:** Taste of the Wild High Prairie Puppy

**Description:** Echocardiogram done by cardiologist 3/18/19 because of an enlarged heart found on x-rays done at our regular vet's office. Diagnosis by the cardiologist "early occult dilated cardiomyopathy, likely diet-related". His "contractility is just below normal range and his left ventricle measures mildly dilated. His left atrium is normal in size, therefore there is no concern for imminent heart failure. However, we recommend supplementing Taurine, switching to a non grain free diet and medicating with Vetmedin for the next 3 months. In 3 months time, some improvement in **B6** cardiac dimensions should be noted; it may take up to 6 months for full

return to normal cardiac structure and function

**B6**

shows improvement in 3 months, his overall prognosis will be good."

**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
Taste of the Wild High Prairie Puppy	THP1207 032S B0B 09:48	12/30/2019

**Sender information**

**B6**

USA

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

<https://eon.fda.gov/eon//browse/EON-383461>

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=400559>

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

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**From:** B5, 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

### 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/ucm182403.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.

### Discharge Instructions

**Patient**

Name: B6  
Species: Canine  
Breed: Male Irish Wolfhound  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6 V19

Discharge Date: B6

**Diagnoses:** Mildly low taurine

**Clinical Findings:**

Thank you for bringing B6 to Tufts Cardiology Service for screening for dilated cardiomyopathy (DCM).

On physical exam, B6 was bright, alert, and responsive and his vital parameters (heart rate and respiratory rate) were within normal limits. We did not hear any obvious heart murmurs or arrhythmias.

We performed an echocardiogram (ultrasound of the heart) today, which revealed that B6 heart did not show any obvious signs of DCM. However, in early stages of the disease, the ventricles (lower chambers of the heart) are not dilated. Similarly, the atria (upper chambers of the heart) are not obviously dilated. B6 heart had very mildly reduced contractility, which could be normal for him or could possibly be an early indication of DCM. Additionally, the speed of blood flow through the aorta, the main artery of the heart that supplies the blood to the rest of the body, is mildly increased, but this is not a concerning finding.

Overall, B6 looks good and he does not appear to have significant heart disease. Given his low taurine levels, we would like to begin taurine supplementation as instructed below.

Our Cardiology and Nutrition team here at Tufts are conducting a study on DCM and its correlation with diet. Although B6 does not have DCM, the study includes normal cardiac dogs that have a history of a grain-free diet. You have elected to enroll B6 in the study so we pulled some blood for that today.

**Diet Suggestions:**

We understand that B6 has food sensitivities. If he is tolerating the Hill's I/D diet well, then he can continue to eat this.



If you need to change **B6** diet for any reason, we recommend choosing something from Royal Canin, Hill's, and Purina.

- 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 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/>).

**Exercise Recommendations:**

**B6** may be allowed to dictate his own activity level.

**Recommended Medications:**

There are no heart medications indicated for **B6** at this time. However, we would like to begin taurine supplementation since the levels in his blood plasma are low. You can purchase a taurine supplement over-the-counter from any human pharmacy. The brands our nutritionists recommend are Twinlab, GNC, NOW, or Swanson. **B6** should receive 1000mg by mouth twice daily (every 12 hours).

**Recheck Visits:** **B6** will need a recheck echocardiogram in 3 months and 6 months for the study.

Thank you for entrusting us with **B6** care. He is such a sweet boy! Please contact our Cardiology liaison at (508)-887-4696 or email us at [cardiovet@tufts.edu](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

# Cummings Veterinary Medical Center

AT TUFTS UNIVERSITY

Cardiology Liaison: 508-887-4696

**B6**

Patient ID: B6

B6 Canine

B6 Years Old Male Irish Wolfhound  
Brindle

## Cardiology Appointment Report ENROLLED IN DCM DIET STUDY

Date: B6

### Attending Cardiologist:

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

**B6**

### Cardiology Resident:

B6

### Cardiology Technician:

**B6**

Student: B6 V'19

Presenting Complaint: Screen for DCM

### Concurrent Diseases:

**B6**

### General Medical History:

B6 has history of B6 - owner suspects it's when she changed from puppy food to adult food. Owner acquired B6 as a puppy. Owner reports that B6 pants a lot, but owner feels it is increased. Owner sent sputum to a diagnostic lab to find out allergens and sensitivities. Eating and drinking normally. No c/s/v/PUPD; B6 currently resolved with B6 B6 littermate was recently diagnosed with DCM about 6 months ago and was also on a grain free diet. Owner requested taurine levels by rDVM - owner sent blood sample (plasma) to UC Davis for taurine levels, plasma level was B6 currently being treated for B6, lost weight during bout of B6 diet change, but has gained weight back.

### Diet and Supplements:

Previously fed Taste of the Wild (grain-free)

Acana in 2016

Hill's I/D kibble and canned - for 4 weeks

**B6**

**B6**

**Cardiovascular History:**

Prior CHF diagnosis? No

Prior heart murmur? No

Prior ATE? No

Prior arrhythmia? No

Monitoring respiratory rate and effort at home? Normal effort, pants all the time except when sleeping

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:**

None

**Cardiac Physical Examination:**

**B6**

**Muscle condition:**

Normal

Mild muscle loss

Moderate cachexia

Marked cachexia

**Cardiovascular Physical Exam:**

**Murmur Grade:**

None

I/VI

II/VI

III/VI

IV/VI

V/VI

VI/VI

**Jugular vein:**

Bottom 1/3 of the neck

Middle 1/3 of the neck

1/2 way up the neck

Top 2/3 of the neck

**Arterial pulses:**

Weak

Fair

Good

Strong

Bounding

Pulse deficits

Pulsus paradoxus

Other:

**Arrhythmia:**

None

Sinus arrhythmia

Premature beats

Bradycardia

Tachycardia

**Gallop:**

- Yes
- No
- Intermittent

- Pronounced
- Other:

**Pulmonary assessments:**

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

**Abdominal exam:**

- Normal
- Hepatomegaly
- Abdominal distension
- Mild ascites
- Marked ascites

**Problems:**

Low plasma taurine (42, ref range 60-120)

**Differential Diagnoses:**

R/o dietary induced taurine deficiency → DCM

**Diagnostic plan:**

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

**Echocardiogram Findings:**

# B6

**Assessment and recommendations:**

Echocardiogram reveals relatively normal cardiac structure and function. The LV contractile function is low normal, so early DCM cannot be definitively ruled out. Patient was enrolled in the DCM study, and whole blood and plasma taurine were submitted; recommend supplementing taurine 1000mg PO BID until those results are back. Recheck per study protocol in 3 and 6 months.

**Final Diagnosis:**

Low plasma taurine

No clear evidence of DCM

**Heart Failure Classification Score:**

**ACVIM Classification:**

A

B1

B2

C

D

M-Mode

IVSd

LVIDd

LVPWd

IVSs

LVIDs

LVPWs

%FS

B6

cm  
cm  
cm  
cm  
cm  
cm  
%

M-Mode Normalized

IVSdN

LVIDdN

LVPWdN

IVSsN

LVIDsN

LVPWsN

B6  
(0.29 - 0.52)  
(1.35 - 1.73)  
(0.33 - 0.53)  
(0.43 - 0.71)  
(0.79 - 1.14)  
(0.53 - 0.78)

2D

SALA

Ao Diam

SALA / Ao Diam

IVSd

LVIDd

LVPWd

EDV(Teich)

IVSs

LVIDs

LVPWs

ESV(Teich)

EF(Teich)

%FS

SV(Teich)

LVLd A2C

LVEDV MOD A2C

LVLs A2C

LVESV MOD A2C

LVEF MOD A2C

SV MOD A2C

LVLd IAX

B6

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

LVAd LAX  
LVEDV A-L LAX  
LVEDV MOD LAX  
LVLS LAX  
LVA<sub>s</sub> LAX  
LVESV A-L LAX  
LVESV MOD LAX  
HR  
EF A-L LAX  
LVEF MOD LAX  
SV A-L LAX  
SV MOD LAX  
CO A-L LAX  
CO MOD LAX

B6

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

Doppler  
MV E Vel  
MV DecT  
MV A Vel  
MV E/A Ratio  
E'  
A'  
E/E'  
AV Vmax  
AV maxPG

B6

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

### Discharge Instructions

**Patient**

Name: B6  
Species: Canine  
Breed: Male Irish Wolfhound  
Birthdate: B6

**Owner**

Name: B6  
Address: B6

Patient ID: B6

**Attending Cardiologist:**

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

B6

**Cardiology Resident:**

B6

**Cardiology Technician:**

B6

Student: B6 /19

Appointment Date: 3/ B6

**Diagnosis:** Stable to slightly improved healthy heart

**Clinical Findings:**

Thank you for bringing B6 to Tufts Cardiology Service for recheck examination as part of the dilated cardiomyopathy (DCM) study. On physical exam B6 was bright, alert, and responsive and his vital parameters (heart rate and respiratory rate) were within normal limits. We did not hear any obvious heart murmurs or arrhythmias.

We performed an echocardiogram (ultrasound of the heart) today, which revealed that B6 heart was stable since his last visit and did not show any obvious signs of DCM. He may even have somewhat improved contractile function. Overall, B6 looks good and he does not appear to have significant heart disease. We also took blood samples today to check for biomarkers of heart disease which had been slightly elevated at this last visit. We will call you with the results of these tests.

**Diet Suggestions:**

It is great that B6 is doing well on the Hills I/D diet! He has gained over 13 pounds since his last visit so we recommend cutting back just a little bit on how much he is eating. You can start with feeding a total of 5 cups of dry food and 1/2 can of wet food per day. If he is getting treats at home, it is also important to cut back on his regular diet to account for those extra calories.

**Exercise Recommendations:**

B6 may be allowed to dictate his own activity level.

**Recommended Medications:**

There are no heart medications indicated for B6 at this time.

**Recheck Visits:** A recheck visit is scheduled for in 3 months as part of the study. We have scheduled an appointment for Tuesday, [B6]. At this visit we will want to recheck an echocardiogram and bloodwork.

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

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

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**Prescription Refill Disclaimer:**

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

**Ordering Food:**

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

**Clinical Trials:**

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

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Case: [B6]

Owner: [B6]

Discharge Instructions



B6

Patient ID: B6  
B6 Canine  
B6 Years Old Male Irish Wolfhound  
Brindle

Cardiology Appointment Report  
DCM STUDY

Date: B6

Attending Cardiologist:

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

B6

Cardiology Resident:

B6

Cardiology Technician:

B6

Student: B6 V19

**Presenting Complaint:** Recheck DCM study

**Concurrent Diseases:** B6 -well-controlled with Hills I/D food

**General Medical History:**

Last seen in November for a DCM screen when a littermate had been diagnosed with DCM on a grain-free diet. B6 had been on a grain free diet and rDVM had previously dx with low taurine. We measured taurine in November which was normal (B6 reference range 200-350). B6 has been doing well at home. Since changing diet to Hill I/D has not had any B6 and has gained back the weight he had lost. 4 months ago treated for B6 and has not had any B6 issues. Good appetite and energy levels at home. Owner says is doing great with no issues (no c/s/v/d).

**Diet and Supplements:**

B6

**Cardiovascular History:**

B6

**B6**

**Current Medications Pertinent to CV System:**

**B6**

**B6**

**B6**

not rule out early DCM

**Echocardiogram Findings:**

**B6**

**Assessment and recommendations:**

Echocardiogram reveals relatively normal cardiac structure and function. The LV contractile function is slightly higher on all measurements, but this could also be daily variation. Blood work submitted via DCM study. Recheck per study protocol in 3 months.

**Heart Failure Classification Score:**

ACVIM Classification:

- A
- B1
- B2

- C
- D

M-Mode

IVSd	B6	cm
LVIDd	B6	cm
LVPWd	B6	cm
IVSs	B6	cm
LVIDs	B6	cm
LVPWs	B6	cm
EDV(Teich)	B6	ml
ESV(Teich)	B6	ml
EF(Teich)	B6	%
%FS	B6	%
SV(Teich)	B6	ml
Ao Diam	B6	cm
LA Diam	B6	cm
LA/Ao	B6	
TAPSE	B6	cm

M-Mode Normalized

IVSdN	B6	(0.290 - 0.520)
LVIDdN	B6	(1.350 - 1.730)
LVPWdN	B6	(0.330 - 0.530)
IVSsN	B6	(0.430 - 0.710)
LVIDsN	B6	(0.790 - 1.140)
LVPWsN	B6	(0.530 - 0.780)
Ao Diam N	B6	(0.680 - 0.890) !
LA Diam N	B6	(0.640 - 0.900) !

2D

SA LA	B6	cm
Ao Diam	B6	cm
SA LA / Ao Diam	B6	
IVSd	B6	cm
LVIDd	B6	cm
LVPWd	B6	cm
EDV(Teich)	B6	ml
IVSs	B6	cm
LVIDs	B6	cm
LVPWs	B6	cm
ESV(Teich)	B6	ml
EF(Teich)	B6	%
%FS	B6	%
SV(Teich)	B6	ml
LV Major	B6	cm
LV Minor	B6	cm
Sphericity Index	B6	
LVLd LAX	B6	cm
LVAd LAX	B6	cm

LVEDV A-L LAX  
LVEDV MOD LAX  
LVLS LAX  
LVA<sub>s</sub> LAX  
LVESV A-L LAX  
LVESV MOD LAX  
HR  
EF A-L LAX  
LVEF MOD LAX  
SV A-L LAX  
SV MOD LAX  
CO A-L LAX  
CO MOD LAX

B6

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

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

B6

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