

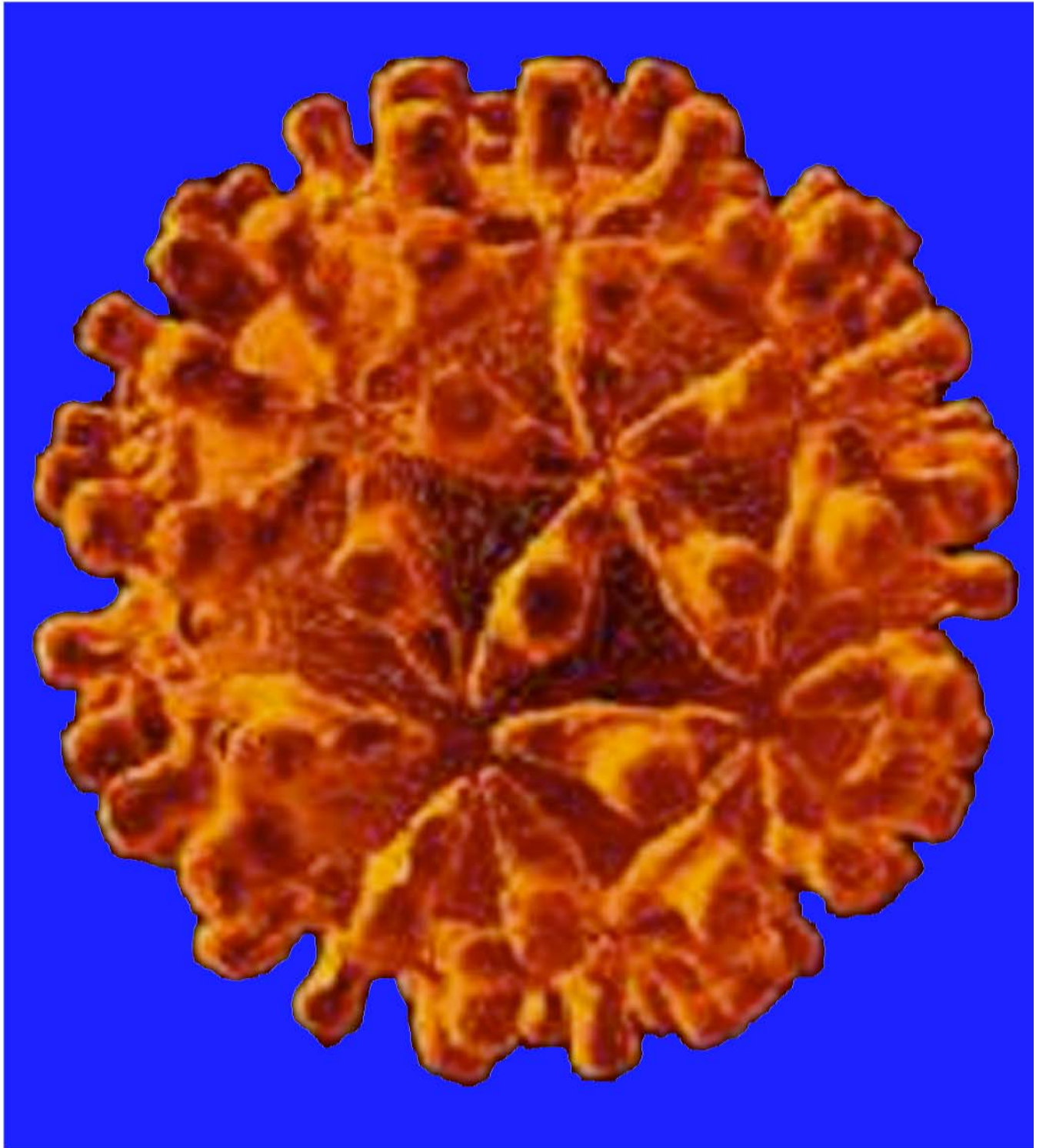
HUMIC ACID

EFFICACY FOR TREATMENT OF ACUTE HEPATITIS C



***Laub BioChemicals Corporation
1401 Quail St., Suite 121
Newport Beach, CA 92660***

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FRONTISPIECE: Hepatitis C virus—the virus uses the rigid glycoprotein spikes on its surface to fuse to host cells.

Forward

This Report documents the progression of hepatitis C in a patient recently treated specifically for this disease. Although the origin of the infection is unclear, the patient most likely acquired the disease nosocomially (the patient had been hospitalized previously for abdominal surgery). The treatment consisted of injections of pegylated interferon alpha-2a, carried out together with the administration of ribavirin and humic acid.

Interferon was begun on Day 6—a Friday—following the initial diagnosis, and was continued thereafter once per week (Fridays) for 5 months. The dose was 1 mL, corresponding to 180 µg.

Ribavirin treatment (200 mg/tablet) was begun simultaneously with interferon administration. The dose was 3 tablets in the morning and 3 tablets in the evening, which was continued for 4 months. The dose was then reduced to 2 tablets in the morning and 2 tablets in the evening for an additional month.

Humic acid was administered in tablet form (250 mg/tablet), commencing with the onset of presentation of symptoms. Two tablets were taken in the morning and two in the evening, for 5 months. Humic acid treatment was thereafter reduced to one tablet in the morning and one in the evening.

The patient was a male Caucasian, age 25, in otherwise-excellent condition. The patient's overall physical appearance was that of a fit and muscular individual.

The preparation of natural-product and synthetic humate materials is described in U.S. patents 5,946,445; 6,569,416; 6,524,566; 6,524,567; 6,534,049; 6,576,229; and other U.S. and international patents and patents pending.

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Forward

1. Raw Blood Data

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RAW BLOOD DATA

Coverage: 224 Days

ALPHA FETOPROT

SPEC'M 05/26/05 10:30

(0-5.5)

! ALPHA FETOPROT .. 5.5
 ! TEST PERFORMED BY DPC IMMULITE
 ! 2000 ASSAY

CBC WITH DIFF

SPEC'M 05/26/05 10:30

(4.0-10.5)
 (4.38-5.62)
 (13.5-16.9)
 (39.5-50)
 (81.5-97.0)
 (27.0-33.5)
 (32-35.5)
 (11.6-14.4)
 (150-400)
 (2.0-8.1)

! WBC 3.3 THOUS/MCL
 ! RBC 5.82 MILL/MCL
 ! HEMOGLOBIN 16.9 G/DL
 ! HEMATOCRIT 49.6 %
 ! MCV 85.1 FL
 ! MCH 29.0 PG
 ! MCHC 34.1 G/DL
 ! RDW-CV 13.3 %
 ! PLATELETS 137 THOUS/MCL
 ! NEUTROPHILS 1.4
 ! 42.0%
 ! LYMPHOCYTE 1.4
 ! 44.0%
 ! MONOCYTE 0.4
 ! 11.0%
 ! EOSINOPHIL 0.1
 ! 3.0%
 ! RBC MORPH NORMAL
 ! PLT MORPH/COMM .. PLATELET MORPHOLOGY WAS NORMAL.
 ! PERIPHERAL BLOOD SMEAR WAS
 ! REVIEWED.

COMP METAB PANEL

SPEC'M 05/26/05 10:30

(135-145)
 (3.3-4.8)

! SODIUM, SERUM ... 139 MEQ/L
 ! POTASSIUM SERUM . 4.6
 ! SLT HEMOLYSIS
 ! DEGREE OF HEMOLYSIS IS UNLIKELY
 ! TO EFFECT RESULT

(101-111)
 (25-34)
 (2-12)
 (70-115)
 (8-26)
 (0.5-1.3)
 (8.4-10.2)
 (6.1-8.2)
 (3.2-5.5)
 (26-110)
 (8-40)
 (0-60)
 (0.0-1.4)

! CHLORIDES SERUM . 103 MEQ/L
 ! CO2 29 MEQ/L
 ! ELECTROLYTE BAL . 7.0 MEQ/L
 ! GLUCOSE 53 MG/DL
 ! UREA NITROGEN ... 17 MG/DL
 ! CREATININE 1.1 MG/DL
 ! CALCIUM 9.5 MG/DL
 ! PROTEIN TOTAL ... 7.3 G/DL
 ! ALBUMIN 4.3 G/DL
 ! ALK PHOSPHATASE . 81 IU/L
 ! AST 25 IU/L
 ! ALT 31 IU/L
 ! BILIRUBIN TOTAL . 1.0 MG/DL

PROTHROMBIN TIME
SPEC'M 05/26/05 10:30

! (12.4-15.9) ! PT 15.1

Advisory Comment:
Effective January 23, 2003, a new reference range was implemented for the prothrombin time (PT). For optimum interpretation of the PT, please see the INR result that is reported below.

! (0.80-1.21) ! INR 1.09

THERAPY GUIDELINES USING THE INR FOR PATIENTS STABILIZED ON ORAL ANTICOAGULANT THERAPY:

STANDARD DOSE:
2.0 - 3.0 INR

(0.80-1.21) ! INR HIGH DOSE (MECHANICAL

PROSTHETIC VALVES):
2.5 - 3.5 INR

(0.80-1.21) ! INR 2.5 - 3.5 INR

=====

HEP C PCR QUANT
SPEC'M 05/26/05 10:30

! HCV QUANT 2,140,000 IU/ML/ML
! COMMENT

(NOTE)

The COBAS AMPLICOR HCV MONITOR v.2.0 quantitative test provides results in International Units (IU/ml; WHO International Standard of HCV RNA), and has a linear range from 600 IU/ml to 700,000 IU/ml.

Thus a result of <600 IU/ml does not necessary indicate that the patient is not infected with HCV.

! COMMENT The Hepatitis C RNA quantitation test is not currently FDA approved for diagnostic purposes. Results should be correlated with clinical findings and other laboratory test results.

CBC WITH DIFF
SPEC'M 06/24/05 08:20

(4.0-10.5)	!	WBC	1.6	THOUS/MCL
(4.38-5.62)	!	RBC	4.03	MILL/MCL
(13.5-16.9)	!	HEMOGLOBIN	11.8	G/DL
(39.5-50)	!	HEMATOCRIT	34.6	%
(81.5-97.0)	!	MCV	85.8	FL
(27.0-33.5)	!	MCH	29.1	PG
(32-35.5)	!	MCHC	33.9	G/DL
(11.6-14.4)	!	RDW-CV	16.7	%
(150-400)	!	PLATELETS	151	THOUS/MCL
(2.0-8.1)	!	NEUTROPHILS	0.6	
			36.0%	
(0.9-3.3)	!	LYMPHOCYTE	0.8	
			49.0%	
(0.0-0.8)	!	MONOCYTE	0.2	
			11.0%	
(0.0-0.5)	!	EOSINOPHIL	0.0	
			3.0%	
(0.0-0.2)	!	BASOPHIL	0.0	
			1.0%	
	!	RBC MORPH	NORMAL	
	!	PLT MORPH/COMM ..	PLATELET MORPHOLOGY WAS NORMAL.	
			PERIPHERAL BLOOD SMEAR WAS REVIEWED.	

COMP METAB PANEL
SPEC'M 06/24/05 08:20

(135-145)	!	SODIUM, SERUM ...	141	MEQ/L
(3.3-4.8)	!	POTASSIUM SERUM .	4.4	MEQ/L
(101-111)	!	CHLORIDES SERUM .	104	MEQ/L
(25-34)	!	CO2	28	MEQ/L
(2-12)	!	ELECTROLYTE BAL .	9.0	MEQ/L
(70-115)	!	GLUCOSE	72	MG/DL
(8-26)	!	UREA NITROGEN ...	12	MG/DL
(0.5-1.3)	!	CREATININE	1.2	MG/DL
(8.4-10.2)	!	CALCIUM	9.5	MG/DL
(6.1-8.2)	!	PROTEIN TOTAL ...	6.7	G/DL
(3.2-5.5)	!	ALBUMIN	4.1	G/DL
(26-110)	!	ALK PHOSPHATASE .	77	IU/L
(8-40)	!	AST	22	IU/L
(0-60)	!	ALT	19	IU/L
(0.0-1.4)	!	BILIRUBIN TOTAL .	1.7	MG/DL

HEP C PCR QUANT
SPEC'M 06/24/05 08:20

!	HCV QUANT	<600	IU/ML
!	COMMENT		

(NOTE)

The COBAS AMPLICOR HCV MONITOR v.2.0 quantitative test provides results in International Units (IU/ml; WHO International Standard of HCV RNA), and has a linear range from 600 IU/ml to 700,000 IU/ml. Thus a result of <600 IU/ml does not necessary indicate that the patient is not infected with HCV.

ALPHA FETOPROT
SPEC'M 07/07/05 10:18

(0-5.5) | ALPHA FETOPROT .. 1.7
TEST PERFORMED BY DPC IMMULITE
2000 ASSAY

CBC WITH DIFF
SPEC'M 07/07/05 10:18

(4.0-10.5)	WBC	1.3	THOUS/MCL
(4.38-5.62)	RBC	3.66	MILL/MCL
(13.5-16.9)	HEMOGLOBIN	11.1	G/DL
(39.5-50)	HEMATOCRIT	33.1	%
(81.5-97.0)	MCV	90.3	FL
(27.0-33.5)	MCH	30.2	PG
(32-35.5)	MCHC	33.4	G/DL
(11.6-14.4)	RDW-CV	21.1	%
(150-400)	PLATELETS	113	THOUS/MCL
(2.0-8.1)	NEUTROPHILS	0.5	
		37.0%	
(0.9-3.3)	LYMPHOCYTE	0.7	
		54.0%	
(0.0-0.8)	MONOCYTE	0.1	

COMP METAB PANEL
SPEC'M 07/07/05 10:18

(135-145)	SODIUM, SERUM	136	MEQ/L
(3.3-4.8)	POTASSIUM SERUM	4.6	MEQ/L
(101-111)	CHLORIDES SERUM	107	MEQ/L
(25-34)	CO2	26	MEQ/L
(2-12)	ELECTROLYTE BAL	3.0	MEQ/L
(70-115)	GLUCOSE	88	MG/DL
(8-26)	UREA NITROGEN	16	MG/DL
(0.5-1.3)	CREATININE	1.0	MG/DL
(8.4-10.2)	CALCIUM	9.0	MG/DL
(6.1-8.2)	PROTEIN TOTAL	6.4	G/DL
(3.2-5.5)	ALBUMIN	4.0	G/DL
(26-110)	ALK PHOSPHATASE	70	IU/L
(8-40)	AST	21	IU/L
(0-60)	ALT	20	IU/L
(0.0-1.4)	BILIRUBIN TOTAL	1.4	MG/DL

BILIRUBIN DIRECT
SPEC'M 07/07/05 10:18

(0.0-0.2) | BILIRUBN DIRECT . 0.2 MG/DL

PROTHROMBIN TIME
SPEC'M 07/07/05 10:18

! (12.4-15.9) ! PT 14.6 SEC
! (0.80-1.21) ! INR 1.05

THERAPY GUIDELINES USING THE
INR FOR PATIENTS STABILIZED ON
ORAL ANTICOAGULANT THERAPY:

STANDARD DOSE:
2.0 - 3.0 INR
HIGH DOSE (MECHANICAL
PROSTHETIC VALVES):
2.5 - 3.5 INR

REFERENCE: CHEST 108: 2315,1995

=====

HEP C PCR QUAL
SPEC'M 07/07/05 10:18

! HEP C PCR QUAL .. NEGATIVE
! COMMENT

(NOTE)

A negative result does not
rule out the presence of virus
in
concentrations below the level
of detection by the assay.

CBC WITH DIFF
SPEC'M 07/18/05 08:20

(4.0-10.5)	!	WBC	1.3	THOUS/MCL
(4.38-5.62)	!	RBC	3.42	MILL/MCL
(13.5-16.9)	!	HEMOGLOBIN	10.7	G/DL
(39.5-50)	!	HEMATOCRIT	32.1	%
(81.5-97.0)	!	MCV	93.6	FL
(27.0-33.5)	!	MCH	31.3	PG
(32-35.5)	!	MCHC	33.5	G/DL
(11.6-14.4)	!	RDW-CV	19.7	%
(150-400)	!	PLATELETS	80	
			RESULT CHECKED	
(2.0-8.1)	!	NEUTROPHILS	0.4	
			31.0%	
(0.9-3.3)	!	LYMPHOCYTE	0.7	
			52.0%	
(0.0-0.8)	!	MONOCYTE	0.2	
			14.0%	
(0.0-0.5)	!	EOSINOPHIL	0.0	
			2.0%	
(0.0-0.2)	!	BASOPHIL	0.0	
			1.0%	
	!	RBC MORPH	SLIGHT	
	!	PLT MORPH/COMM ..	ANISOCYTOSIS PRESENT	
			PLATELET MORPHOLOGY WAS NORMAL.	
			PERIPHERAL BLOOD SMEAR WAS	
			REVIEWED.	
			8.0%	
(0.0-0.5)	!	EOSINOPHIL	0.0	
			1.0%	
(0.0-0.2)	!	BASOPHIL	0.0	
			0.0%	
	!	RBC MORPH	NORMAL	
	!	PLT MORPH/COMM ..	PLATELET MORPHOLOGY WAS NORMAL.	
			PERIPHERAL BLOOD SMEAR WAS	
			REVIEWED.	

CBC WITH DIFF
SPEC'M 07/25/05 09:00

(4.0-10.5)	!	WBC	1.2	THOUS/MCL
(4.38-5.62)	!	RBC	3.32	MILL/MCL
(13.5-16.9)	!	HEMOGLOBIN	10.8	G/DL
(39.5-50)	!	HEMATOCRIT	30.8	%
(81.5-97.0)	!	MCV	92.6	FL
(27.0-33.5)	!	MCH	32.4	PG
(32-35.5)	!	MCHC	35.0	G/DL
(11.6-14.4)	!	RDW-CV	17.9	%
(150-400)	!	PLATELETS	92	THOUS/MCL
(2.0-8.1)	!	NEUTROPHILS	0.4	
			35.0%	
(0.9-3.3)	!	LYMPHOCYTE	0.7	
			51.0%	
(0.0-0.8)	!	MONOCYTE	0.1	
			11.0%	
(0.0-0.5)	!	EOSINOPHIL	0.0	
			2.0%	
(0.0-0.2)	!	BASOPHIL	0.0	
			1.0%	
	!	RBC MORPH	SLIGHT POLYCHROMASIA PRESENT	
			SLIGHT OVALOCYTES PRESENT	
			SLIGHT TEARDROP CELLS PRESENT	
			SLIGHT	
			ANISOCYTOSIS PRESENT	
	!	PLT MORPH/COMM ..	PLATELET MORPHOLOGY WAS NORMAL.	
			PERIPHERAL BLOOD SMEAR WAS	

CBC WITH DIFF
SPEC'M 08/01/05 08:50

(4.0-10.5)	WBC	1.4	THOUS/MCL
(4.38-5.62)	RBC	3.48	MILL/MCL
(13.5-16.9)	HEMOGLOBIN	11.4	G/DL
(39.5-50)	HEMATOCRIT	32.9	%
(81.5-97.0)	MCV	94.5	FL
(27.0-33.5)	MCH	32.6	PG
(32-35.5)	MCHC	34.5	G/DL
(11.6-14.4)	RDW-CV	16.6	%
(150-400)	PLATELETS	98	THOUS/MCL
(2.0-8.1)	NEUTROPHILS	0.6	
		44.0%	
(0.9-3.3)	LYMPHOCYTE	0.7	
		45.0%	
(0.0-0.8)	MONOCYTE	0.1	
		9.0%	
(0.0-0.5)	EOSINOPHIL	0.0	
		1.0%	
(0.0-0.2)	BASOPHIL	0.0	
		1.0%	
	RBC MORPH		SLIGHT TEARDROP CELLS PRESENT SLIGHT OVALOCYTES PRESENT SLIGHT ANISOCYTOSIS PRESENT SLIGHT MICROCYTES PRESENT SLIGHT POLYCHROMASIA PRESENT
	PLT MORPH/COMM		PLATELET MORPHOLOGY WAS NORMAL. PERIPHERAL BLOOD SMEAR WAS
	PLT MORPH/COMM		REVIEWED.

COMP METAB PANEL
SPEC'M 08/01/05 08:50

(135-145)	SODIUM, SERUM	137	MEQ/L
(3.3-4.8)	POTASSIUM SERUM	4.3	MEQ/L
(101-111)	CHLORIDES SERUM	107	MEQ/L
(25-34)	CO2	25	MEQ/L
(2-12)	ELECTROLYTE BAL	5.0	MEQ/L
(70-115)	GLUCOSE	99	MG/DL
(8-26)	UREA NITROGEN	16	MG/DL
(0.5-1.3)	CREATININE	1.2	MG/DL
(8.4-10.2)	CALCIUM	8.9	MG/DL
(6.1-8.2)	PROTEIN TOTAL	6.3	G/DL
(3.2-5.5)	ALBUMIN	4.0	G/DL
(26-110)	ALK PHOSPHATASE	88	IU/L
(8-40)	AST	20	IU/L
(0-60)	ALT	15	IU/L
(0.0-1.4)	BILIRUBIN TOTAL	1.8	MG/DL

BILIRUBIN DIRECT
SPEC'M 08/01/05 08:50

(0.0-0.2)	BILIRUBIN DIRECT	0.2	MG/DL
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PROTHROMBIN TIME
SPEC'M 08/01/05 08:50

! (12.4-15.9) ! PT 14.4 SEC
! (0.80-1.21) ! INR 1.03

THERAPY GUIDELINES USING THE
INR FOR PATIENTS STABILIZED ON
ORAL ANTICOAGULANT THERAPY:

STANDARD DOSE:
2.0 - 3.0 INR
HIGH DOSE (MECHANICAL
PROSTHETIC VALVES):
2.5 - 3.5 INR

REFERENCE: CHEST 108: 2315,1995

=====
HEP C PCR QUAL
SPEC'M 08/01/05 08:50

!
! HEP C PCR QUAL .. NEGATIVE
! COMMENT

(NOTE)

A negative result does not
rule out the presence of virus
in
concentrations below the level
of detection by the assay.

ALPHA FETOPROT
SPEC'M 09/07/05 09:59

(0-5.5) ! ALPHA FETOPROT .. 1.5
TEST PERFORMED BY DPC IMMULITE
2000 ASSAY

CBC WITH DIFF
SPEC'M 09/07/05 09:59

(4.0-10.5) ! WBC 2.6 THOUS/MCL
(4.38-5.62) ! RBC 3.60 MILL/MCL
(13.5-16.9) ! HEMOGLOBIN 11.7 G/DL
(39.5-50) ! HEMATOCRIT 34.5 %
(81.5-97.0) ! MCV 95.9 FL
(27.0-33.5) ! MCH 32.5 PG
(32-35.5) ! MCHC 33.9 G/DL
(11.6-14.4) ! RDW-CV 15.7 %
(150-400) ! PLATELETS 97 THOUS/MCL
(2.0-8.1) ! NEUTROPHILS 1.9
74.0%
(0.9-3.3) ! LYMPHOCYTE 0.5
20.0%
(0.0-0.8) ! MONOCYTE 0.2
6.0%
(0.0-0.5) ! EOSINOPHIL 0.0
0.0%
(0.0-0.2) ! BASOPHIL 0.0
0.0%
! RBC MORPH NORMAL
! PLT MORPH/COMM .. PLATELET MORPHOLOGY WAS NORMAL.
PERIPHERAL BLOOD SMEAR WAS
REVIEWED.

COMP METAB PANEL
SPEC'M 09/07/05 09:59

(135-145) ! SODIUM, SERUM ... 141 MEQ/L
(3.3-4.8) ! POTASSIUM SERUM . 4.5 MEQ/L
(101-111) ! CHLORIDES SERUM . 103 MEQ/L
(25-34) ! CO2 27 MEQ/L
(2-12) ! ELECTROLYTE BAL . 11.0 MEQ/L
(70-115) ! GLUCOSE 81 MG/DL
(8-26) ! UREA NITROGEN ... 8 MG/DL
(0.5-1.3) ! CREATININE 1.2 MG/DL
(8.4-10.2) ! CALCIUM 9.7 MG/DL
(6.1-8.2) ! PROTEIN TOTAL ... 6.6 G/DL
(3.2-5.5) ! ALBUMIN 4.1 G/DL
(26-110) ! ALK PHOSPHATASE . 89 IU/L
(8-40) ! AST 26 IU/L
(0-60) ! ALT 15 IU/L
(0.0-1.4) ! BILIRUBIN TOTAL . 1.5 MG/DL

BILIRUBIN DIRECT
SPEC'M 09/07/05 09:59

(0.0-0.2) ! BILIRUBN DIRECT . 0.2 MG/DL

PROTHROMBIN TIME

SPEC'M 09/07/05 09:59

(12.4-15.9)
(0.80-1.21)

! PT 14.8 SEC
! INR 1.07

THERAPY GUIDELINES USING THE
INR FOR PATIENTS STABILIZED ON
ORAL ANTICOAGULANT THERAPY:

STANDARD DOSE:
2.0 - 3.0 INR
HIGH DOSE (MECHANICAL
PROSTHETIC VALVES):
2.5 - 3.5 INR

REFERENCE: CHEST 108: 2315,1995

=====

HEP C PCR QUAL

SPEC'M 09/07/05 09:59

! HEP C PCR QUAL .. NEGATIVE
! COMMENT
(NOTE)

A negative result does not
rule out the presence of virus
in
concentrations below the level
of detection by the assay.

ALPHA FETOPROT
 SPEC'M 10/12/05 13:50

(0-5.5) ! ALPHA FETOPROT .. 2.0
 TEST PERFORMED BY DPC IMMULITE
 2000 ASSAY

CBC WITH DIFF
 SPEC'M 10/12/05 13:50

(4.0-10.5) ! WBC 1.1
 RESULT CHECKED
(4.38-5.62) ! RBC 3.40 MILL/MCL
(13.5-16.9) ! HEMOGLOBIN 11.1 G/DL
(39.5-50) ! HEMATOCRIT 33.0 %
(81.5-97.0) ! MCV 96.9 FL
(27.0-33.5) ! MCH 32.7 PG
(32-35.5) ! MCHC 33.8 G/DL
(11.6-14.4) ! RDW-CV 15.4 %
(150-400) ! PLATELETS 106 THOUS/MCL
(2.0-7.5) ! PMN 0.5
 47.0%
(0.9-3.3) ! LYMPHOCYTE 0.5
 44.0%
(0.0-0.8) ! MONOCYTE 0.1
 7.0%
(0.0-0.5) ! EOSINOPHIL 0.0
 2.0%
 ! RBC MORPH SLIGHT OVALOCYTES PRESENT
 SLIGHT
 POLYCHROMASIA PRESENT
 ! PLT MORPH/COMM .. MANUAL DIFFERENTIAL WAS
 PERFORMED

COMP METAB PANEL
 SPEC'M 10/12/05 13:50

(135-145) ! SODIUM, SERUM ... 142 MEQ/L
(3.3-4.8) ! POTASSIUM SERUM . 4.3 MEQ/L
(101-111) ! CHLORIDES SERUM . 108 MEQ/L
(25-34) ! CO2 28 MEQ/L
(2-12) ! ELECTROLYTE BAL . 6.0 MEQ/L
(70-115) ! GLUCOSE 74 MG/DL
(8-26) ! UREA NITROGEN ... 9 MG/DL
(0.5-1.3) ! CREATININE 1.1 MG/DL
(8.4-10.2) ! CALCIUM 8.9 MG/DL
(6.1-8.2) ! PROTEIN TOTAL ... 6.4 G/DL
(3.2-5.5) ! ALBUMIN 4.0 G/DL
(26-110) ! ALK PHOSPHATASE . 87 IU/L
(8-40) ! AST 26 IU/L
(0-60) ! ALT 17 IU/L
(0.0-1.4) ! BILIRUBIN TOTAL . 1.1 MG/DL

BILIRUBIN DIRECT
 SPEC'M 10/12/05 13:50

(0.0-0.2) ! BILIRUBN DIRECT . 0.2 MG/DL

PROTHROMBIN TIME
SPEC'M 10/12/05 13:50

! (12.4-15.9) ! PT 15.1 SEC
! (0.80-1.21) ! INR 1.09

! THERAPY GUIDELINES USING THE
! INR FOR PATIENTS STABILIZED ON
! ORAL ANTICOAGULANT THERAPY:

STANDARD DOSE:
2.0 - 3.0 INR
HIGH DOSE (MECHANICAL
PROSTHETIC VALVES):
2.5 - 3.5 INR

REFERENCE: CHEST 108: 2315,1995

===== !
HEP C PCR QUAL
SPEC'M 10/12/05 13:50

! HEP C PCR QUAL .. NEGATIVE
! COMMENT
(NOTE)

A negative result does not
rule out the presence of virus
in
concentrations below the level
of detection by the assay.

CBC WITH DIFF
 SPEC'M 10/20/05 10:40

(4.0-10.5)	!	WBC	1.5	THOUS/MCL
(4.38-5.62)	!	RBC	3.61	MILL/MCL
(13.5-16.9)	!	HEMOGLOBIN	11.6	G/DL
(39.5-50)	!	HEMATOCRIT	35.4	%
(81.5-97.0)	!	MCV	97.9	FL
(27.0-33.5)	!	MCH	32.1	PG
(32-35.5)	!	MCHC	32.8	G/DL
(11.6-14.4)	!	RDW-CV	15.3	%
(150-400)	!	PLATELETS	96	THOUS/MCL
(2.0-8.1)	!	NEUTROPHILS	0.5	
			32.0%	
(0.9-3.3)	!	LYMPHOCYTE	0.8	
			52.0%	
(0.0-0.8)	!	MONOCYTE	0.2	
			14.0%	
(0.0-0.5)	!	EOSINOPHIL	0.0	
			2.0%	
(0.0-0.2)	!	BASOPHIL	0.0	
			0.0%	
	!	RBC MORPH	SLIGHT ANISOCYTOSIS PRESENT	
			SLIGHT OVALOCYTES PRESENT	
			SLIGHT	
			POLYCHROMASIA PRESENT	
	!	PLT MORPH/COMM ..	PLATELET MORPHOLOGY WAS NORMAL.	
			PERIPHERAL BLOOD SMEAR WAS	
			REVIEWED.	

CBC WITH DIFF
SPEC'M 11/03/05 08:40

(4.0-10.5)	WBC	1.0	THOUS/MCL
(4.38-5.62)	RBC	3.39	MILL/MCL
(13.5-16.9)	HEMOGLOBIN	11.1	G/DL
(39.5-50)	HEMATOCRIT	32.8	%
(81.5-97.0)	MCV	96.7	FL
(27.0-33.5)	MCH	32.9	PG
(32-35.5)	MCHC	34.0	G/DL
(11.6-14.4)	RDW-CV	15.0	%
(150-400)	PLATELETS	91	THOUS/MCL
(2.0-8.1)	NEUTROPHILS	0.5	
		46.0%	
(0.9-3.3)	LYMPHOCYTE	0.4	
		40.0%	
(0.0-0.8)	MONOCYTE	0.1	
		10.0%	
(0.0-0.5)	EOSINOPHIL	0.0	
		3.0%	
(0.0-0.2)	BASOPHIL	0.0	
		1.0%	
	RBC MORPH	MODERATE OVALOCYTES PRESENT SLIGHT POLYCHROMASIA PRESENT SLIGHT MACROCYTES PRESENT SLIGHT MICROCYTES PRESENT SLIGHT ELLIPTOCYTES	
	PLT MORPH/COMM	PLATELET MORPHOLOGY WAS NORMAL. PERIPHERAL BLOOD SMEAR WAS REVIEWED.	

COMP METAB PANEL
SPEC'M 11/03/05 08:40

(135-145)	SODIUM, SERUM	140	MEQ/L
(3.3-4.8)	POTASSIUM SERUM	4.5	MEQ/L
(101-111)	CHLORIDES SERUM	109	MEQ/L
(25-34)	CO2	27	MEQ/L
(2-12)	ELECTROLYTE BAL	4.0	MEQ/L
(70-115)	GLUCOSE	96	MG/DL
(8-26)	UREA NITROGEN	11	MG/DL
(0.5-1.3)	CREATININE	1.1	MG/DL
(8.4-10.2)	CALCIUM	8.7	MG/DL
(6.1-8.2)	PROTEIN TOTAL	6.1	G/DL
(3.2-5.5)	ALBUMIN	3.8	G/DL
(26-110)	ALK PHOSPHATASE	87	IU/L
(8-40)	AST	22	IU/L
(0-60)	ALT	20	IU/L
(0.0-1.4)	BILIRUBIN TOTAL	1.2	MG/DL

BILIRUBIN DIRECT
SPEC'M 11/03/05 08:40

(0.0-0.2)	BILIRUBN DIRECT	0.2	MG/DL
-----------	-----------------	-----	-------

PROTHROMBIN TIME
SPEC'M 11/03/05 08:40

(12.4-15.9)
(0.80-1.21)

! PT 15.3 SEC
! INR 1.11
!

THERAPY GUIDELINES USING THE
INR FOR PATIENTS STABILIZED ON
ORAL ANTICOAGULANT THERAPY:

STANDARD DOSE:
2.0 - 3.0 INR
HIGH DOSE (MECHANICAL
PROSTHETIC VALVES):
2.5 - 3.5 INR

REFERENCE: CHEST 108: 2315,1995

ALPHA FETOPROT

SPEC'M 11/17/05 08:07

(0-5.5)

ALPHA FETOPROT .. 2.4

TEST PERFORMED BY DPC IMMULITE
2000 ASSAY

CBC WITH DIFF

SPEC'M 11/17/05 08:07

(4.0-10.5)	WBC	1.1	THOUS/MCL
(4.38-5.62)	RBC	3.89	MILL/MCL
(13.5-16.9)	HEMOGLOBIN	12.7	G/DL
(39.5-50)	HEMATOCRIT	38.3	%
(81.5-97.0)	MCV	98.2	FL
(27.0-33.5)	MCH	32.6	PG
(32-35.5)	MCHC	33.2	G/DL
(11.6-14.4)	RDW-CV	15.3	%
(150-400)	PLATELETS	107	THOUS/MCL
(2.0-7.5)	PMN	0.4	
		36.0%	
(0-0.6)	BAND	0.0	
		2.0%	
(0.9-3.3)	LYMPHOCYTE	0.6	
		45.0%	
(0.0-0.8)	MONOCYTE	0.1	
		13.0%	
(0.0-0.5)	EOSINOPHIL	0.0	
		4.0%	
	RBC MORPH	SLIGHT POLYCHROMASIA PRESENT SLIGHT MODERATE MACROCYTES PRESENT SLIGHT MODERATE MICROCYTES PRESENT SLIGHT MODERATE OVALOCYTES PRESENT SLIGHT ELLIPTOCYTES	
	PLT MORPH/COMM ..	MANUAL DIFFERENTIAL WAS PERFORMED	

COMP METAB PANEL

SPEC'M 11/17/05 08:07

(135-145)	SODIUM, SERUM ...	143	MEQ/L
(3.3-4.8)	POTASSIUM SERUM .	4.7	MEQ/L
(101-111)	CHLORIDES SERUM .	110	MEQ/L
(25-34)	CO2	27	MEQ/L
(2-12)	ELECTROLYTE BAL .	6.0	MEQ/L
(70-115)	GLUCOSE	87	MG/DL
(8-26)	UREA NITROGEN ...	16	MG/DL
(0.5-1.3)	CREATININE	1.0	MG/DL
(8.4-10.2)	CALCIUM	9.4	MG/DL
(6.1-8.2)	PROTEIN TOTAL ...	6.5	G/DL
(3.2-5.5)	ALBUMIN	4.1	G/DL
(26-110)	ALK PHOSPHATASE .	80	IU/L
(8-40)	AST	22	IU/L
(0-60)	ALT	21	IU/L
(0.0-1.4)	BILIRUBIN TOTAL .	1.2	MG/DL

HEP C PCR QUAL

SPEC'M 11/17/05 08:07

HEP C PCR QUAL .. NEGATIVE

ALPHA FETOPROT
SPEC'M 01/04/06 08:50

(0-5.5) ! ALPHA FETOPROT .. 1.2
TEST PERFORMED BY DPC IMMULITE
2000 ASSAY

CBC WITH DIFF
SPEC'M 01/04/06 08:50

(4.0-10.5) ! WBC 2.6 THOUS/MCL
(4.38-5.62) ! RBC 4.57 MILL/MCL
(13.5-16.9) ! HEMOGLOBIN 14.7 G/DL
(39.5-50) ! HEMATOCRIT 43.6 %
(81.5-97.0) ! MCV 95.3 FL
(27.0-33.5) ! MCH 32.2 PG
(32-35.5) ! MCHC 33.8 G/DL
(11.6-14.4) ! RDW-CV 12.0 %
(150-400) ! PLATELETS 136 THOUS/MCL
(2.0-8.1) ! NEUTROPHILS 1.5
60.0%
(0.9-3.3) ! LYMPHOCYTE 0.7
26.0%
(0.0-0.8) ! MONOCYTE 0.3
10.0%
(0.0-0.5) ! EOSINOPHIL 0.1
3.0%
(0.0-0.2) ! BASOPHIL 0.0
1.0%
! RBC MORPH MODERATE
! OVALOCYTES PRESENT
! PLT MORPH/COMM .. PLATELET MORPHOLOGY WAS NORMAL.
! PERIPHERAL BLOOD SMEAR WAS
! REVIEWED.

COMP METAB PANEL
SPEC'M 01/04/06 08:50

(135-145) ! SODIUM, SERUM ... 143 MEQ/L
(3.3-4.8) ! POTASSIUM SERUM . 4.4 MEQ/L
(101-111) ! CHLORIDES SERUM . 103 MEQ/L
(25-34) ! CO2 31 MEQ/L
(2-12) ! ELECTROLYTE BAL . 9.0 MEQ/L
(70-115) ! GLUCOSE 85 MG/DL
(8-26) ! UREA NITROGEN ... 10 MG/DL
(0.5-1.3) ! CREATININE 1.2 MG/DL
(8.4-10.2) ! CALCIUM 9.5 MG/DL
(6.1-8.2) ! PROTEIN TOTAL ... 6.9 G/DL
(3.2-5.5) ! ALBUMIN 4.2 G/DL
(26-110) ! ALK PHOSPHATASE . 75 IU/L
(8-40) ! AST 14 IU/L
(0-60) ! ALT 15 IU/L
(0.0-1.4) ! BILIRUBIN TOTAL . 0.4 MG/DL

BILIRUBIN DIRECT
SPEC'M 01/04/06 08:50

(0.0-0.2) ! BILIRUBN DIRECT . 0.1 MG/DL

PROTHROMBIN TIME
SPEC'M 01/04/06 08:50

(12.0-15.5)
(0.80-1.21)

! PT 14.7 SEC
! INR 1.15

THERAPY GUIDELINES USING THE
INR FOR PATIENTS STABILIZED ON
ORAL ANTICOAGULANT THERAPY:

STANDARD DOSE:
2.0 - 3.0 INR
HIGH DOSE (MECHANICAL
PROSTHETIC VALVES):
2.5 - 3.5 INR

REFERENCE: CHEST 108: 2315,1995

=====

! HEP C PCR QUAL
SPEC'M 01/04/06 08:50

! HEP C PCR QUAL .. NEGATIVE

=====

DATA TABULATIONS

- I. Hepatic Tumor Markers**
- II. Complete Blood Count with Differential Leukocytes**
- III. Comprehensive Metabolic Panel**
- IV. Prothrombin Time**
- V. Hepatitis C Viral Load**

Table I. Hepatic Tumor Markers

Test	Day	Result		
		Normal	Low	High
<u>Alpha Fetoprotein</u> (0.0-5.5 ng/mL)	1	1.5		
	43	1.7		
	105	1.5		
	140	2.0		
	176	2.4		
	224	1.2		

Table II.
Complete Blood Count with Differential Leukocytes

Test	Day	Result		
		Normal	Low	High
<u>White Blood Cells</u> (WBC) (4.0-10.5 10 ³ /μL)	1		3.3	
	30		1.6	
	43		1.3	
	54		1.3	
	61		1.2	
	68		1.4	
	105		2.6	
	140		1.1	
	148		1.5	
	162		1.0	
	176		1.1	
	224		2.6	
<u>Red Blood Cells</u> (RBC) (4.38-5.62 10 ⁶ /μL)	1			5.82
	30		4.03	
	43		3.66	
	54		3.42	
	61		3.32	
	68		3.48	
	105		3.60	
	140		3.40	
	148		3.61	
	162		3.39	
	176		3.89	
	224	4.57		
<u>Hemoglobin</u> (13.5-16.9 g/dL)	1	16.9		
	30		11.8	
	43		11.1	
	54		10.7	
	61		10.8	
	68		11.4	
	105		11.7	
	140		11.1	
	148		11.6	
	162		11.1	
	176		12.7	
	224	14.7		

Table II. Complete Blood Count (Cont'd.)

<u>Test</u>	<u>Day</u>	<u>Result</u>		
		<u>Normal</u>	<u>Low</u>	<u>High</u>
<u>Hematocrit</u> (39.5-50.0%)	1	49.6		
	30		34.6	
	43		33.1	
	54		32.1	
	61		30.8	
	68		32.9	
	105		34.5	
	140		33.0	
	148		35.4	
	162		32.8	
	176		38.3	
	224	43.6		
<u>Mean Corpuscular Volume (MCV)</u> (81.5-97.0 fL)	1	85.1		
	30	85.8		
	43	90.3		
	54	93.6		
	61	92.6		
	68	94.5		
	105	95.9		
	140	96.9		
	148			97.9
	162	96.7		
	176			98.2
	224	95.3		
<u>Mean Corpuscular Hemoglobin (MCH)</u> (27.0-33.5 pg)	1	29.0		
	30	29.1		
	43	30.2		
	54	31.3		
	61	32.4		
	68	32.6		
	105	32.5		
	140	32.7		
	148	32.1		
	162	32.9		
	176	32.6		
	224	32.2		

Table II. Complete Blood Count (Cont'd.)

Test	Day	Result		
		Normal	Low	High
<u>Mean Corpuscular Hemoglobin Concentration (MCHC)</u> (32.0-35.5 g/dL)	1	34.1		
	30	33.9		
	43	33.4		
	54	33.5		
	61	35.0		
	68	34.5		
	105	33.9		
	140	33.8		
	148	32.8		
	162	34.0		
	176	33.2		
224	33.8			
<u>Red Blood Cell Distribution Width Correlation of Variation (RDW-CV)</u> (11.6-14.4%)	1	13.3		
	30			16.7
	43			21.1
	54			19.7
	61			17.9
	68			16.6
	105			15.7
	140			15.4
	148			15.3
	162			15.0
	176			15.3
224	12.0			
<u>Platelets</u> (150-400 10 ³ /μL)	1		137	
	30	151		
	43		113	
	54		80	
	61		92	
	68		98	
	105		97	
	140		106	
	148		96	
	162		91	
	176		107	
224		136		

Table II. Complete Blood Count (Cont'd.)

Test	Day	Result		
		Normal	Low	High
<u>Neutrophils</u> (2.0-8.1 10 ³ /μL)	1		1.4	
	30		0.6	
	43		0.5	
	54		0.4	
	61		0.4	
	68		0.6	
	105		1.9	
	140		0.5	
	148		0.5	
	162		0.5	
	176		0.4	
224		1.5		
<u>Lymphocytes</u> (0.9-3.3 10 ³ /μL)	1	1.4		
	30		0.8	
	43		0.7	
	54		0.7	
	61		0.7	
	68		0.7	
	105		0.5	
	140		0.5	
	148		0.8	
	162		0.4	
	176		0.6	
224		0.7		
<u>Monocytes</u> (0.0-0.8 10 ³ /μL)	1	0.4		
	30	0.2		
	43	0.1		
	54	0.2		
	61	0.1		
	68	0.1		
	105	0.2		
	140	0.1		
	148	0.2		
	162	0.1		
	176	0.1		
224	0.3			

Table II. Complete Blood Count (Cont'd.)

Test	Day	Result		
		Normal	Low	High
<u>Eosinophils</u> (0.0-0.5 10 ³ /μL)	30	0.1		
	43	0.0		
	54	0.0		
	61	0.0		
	68	0.0		
	105	0.0		
	140	0.0		
	148	0.0		
	162	0.0		
	176	0.0		
224	0.1			
<u>Basophils</u> (0.0-0.2 10 ³ /μL)	30	0.0		
	43	0.0		
	54	0.0		
	61	0.0		
	68	0.0		
	105	0.0		
	148	0.0		
	162	0.0		
	224	0.0		

Table III.
Comprehensive Metabolic Panel

Test	Day	Result		
		Normal	Low	High
<u>Sodium</u> (Serum) (135-145 meq/L)	1	139		
	30	141		
	43	136		
	68	137		
	105	141		
	140	142		
	162	140		
	176	143		
	224	143		
<u>Potassium</u> (Serum) (3.3-4.8 meq/L)	1	4.6		
	30	4.4		
	43	4.6		
	68	4.3		
	105	4.5		
	140	4.3		
	162	4.5		
	176	4.7		
	224	4.4		
<u>Chlorides</u> (Serum) (101-111 meq/L)	1	103		
	30	104		
	43	107		
	68	107		
	105	103		
	140	108		
	162	109		
	176	110		
	224	103		

Table III.
Comprehensive Metabolic Panel (Cont'd.)

Test	Day	Result		
		Normal	Low	High
<u>Carbon Dioxide</u> (25-34 meq/L)	1	29		
	30	28		
	43	26		
	68	25		
	105	27		
	140	28		
	162	27		
	176	27		
	224	31		
<u>Electrolyte Balance</u> (2-12 meq/L)	1	7		
	30	9		
	43	3		
	68	5		
	105	11		
	140	6		
	162	4		
	176	6		
	224	9		
<u>Glucose</u> (70-115 mg/dL)	1		53	
	30	72		
	43	88		
	68	99		
	105	81		
	140	74		
	162	96		
	176	87		
	224	85		

Table III.
Comprehensive Metabolic Panel (Cont'd.)

Test	Day	Result		
		Normal	Low	High
<u>Urea Nitrogen</u> (8-26 mg/dL)	1	17		
	30	12		
	43	16		
	68	16		
	105	8		
	140	9		
	162	11		
	176	16		
	224	10		
<u>Creatinine</u> (0.5-1.3 mg/dL)	1	1.1		
	30	1.2		
	43	1.0		
	68	1.2		
	105	1.2		
	140	1.1		
	162	1.1		
	176	1.0		
	224	1.2		
<u>Calcium</u> (8.4-10.2 mg/dL)	1	9.5		
	30	9.5		
	43	9.0		
	68	8.9		
	105	9.7		
	140	8.9		
	162	8.7		
	176	9.4		
	224	9.5		

Table III.
Comprehensive Metabolic Panel (Cont'd.)

Test	Day	Result		
		Normal	Low	High
<u>Protein</u> (Total) (6.1-8.2 g/dL)	1	7.3		
	30	6.7		
	43	6.4		
	68	6.3		
	105	6.6		
	140	6.4		
	162	6.1		
	176	6.5		
	224	6.9		
<u>Albumin</u> (3.2-5.5 g/dL)	1	4.3		
	30	4.1		
	43	4.0		
	68	4.0		
	105	4.1		
	140	4.0		
	162	3.8		
	176	4.1		
	224	4.2		
<u>Alkaline Phosphatase</u> (26-110 IU/L)	1	81		
	30	77		
	43	70		
	68	88		
	105	89		
	140	87		
	162	87		
	176	80		
	224	75		

Table III.
Comprehensive Metabolic Panel (Cont'd.)

Test	Day	Result		
		Normal	Low	High
<u>Aspartate Aminotransferase/Serum Glutamic Oxaloacetic Trans-Aminase (AST/SGOT)</u> (8-40 IU/L)	1	25		
	30	22		
	43	21		
	68	20		
	105	26		
	140	26		
	162	22		
	176	22		
224	14			
<u>Alanine Aminotransferase/Serum Glutamic-Pyruvic Transaminase (ALT/SGPT)</u> (0-60 IU/L)	1	31		
	30	19		
	43	20		
	68	15		
	105	15		
	140	17		
	162	20		
	176	21		
224	15			
<u>Bilirubin (Total)</u> (0.0-1.4 mg/dL)	1	1.0		
	30			1.7
	43	1.4		
	68			1.8
	105			1.5
	140	1.1		
	162	1.2		
	176	1.2		
224	0.4			

Table IV. Prothrombin Time

Test	Day	Result		
		Normal	Low	High
<u>Prothrombin Time (PT)</u> (12.4-15.9 sec)	1	15.1		
	43	14.6		
	68	14.4		
	105	14.8		
	140	15.1		
	162	15.3		
	224	14.7		
<u>International Normal- ized Ratio (INR)</u> (0.8-1.21)	1	1.09		
	43	1.05		
	68	1.03		
	105	1.07		
	140	1.09		
	162	1.11		
	224	1.15		

Table V. Hepatitis C Viral Load

Test	Day	Result		
		Normal	Low	High
Hepatitis C Viral Load (HCV-PCR Quant) (0 IU/mL)	1			2,140,000
	30			<600
	43	n/d		
	68	n/d		
	105	n/d		
	140	n/d		
	176	n/d		
	224	n/d		

GRAPHICAL PRESENTATION OF SIGNIFICANT DATA

- 1. Hepatic Tumor Markers: Alpha Fetoprotein**
- 2. Complete Blood Count: White Blood Cells (WBC)**
- 3. Complete Blood Count: Red Blood Cells (RBC)**
- 4. Complete Blood Count: Hemoglobin**
- 5. Complete Blood Count: Hematocrit**
- 6. Complete Blood Count: Red Blood Cell Distribution Width–Correlation of Variation (RDW-CV)**
- 7. Complete Blood Count: Platelets**
- 8. Complete Blood Count: Neutrophils**
- 9. Complete Blood Count: Lymphocytes**
- 10. Comprehensive Metabolic Panel: Bilirubin**
- 11. Hepatitis C Viral Load**

Alpha Fetoprotein

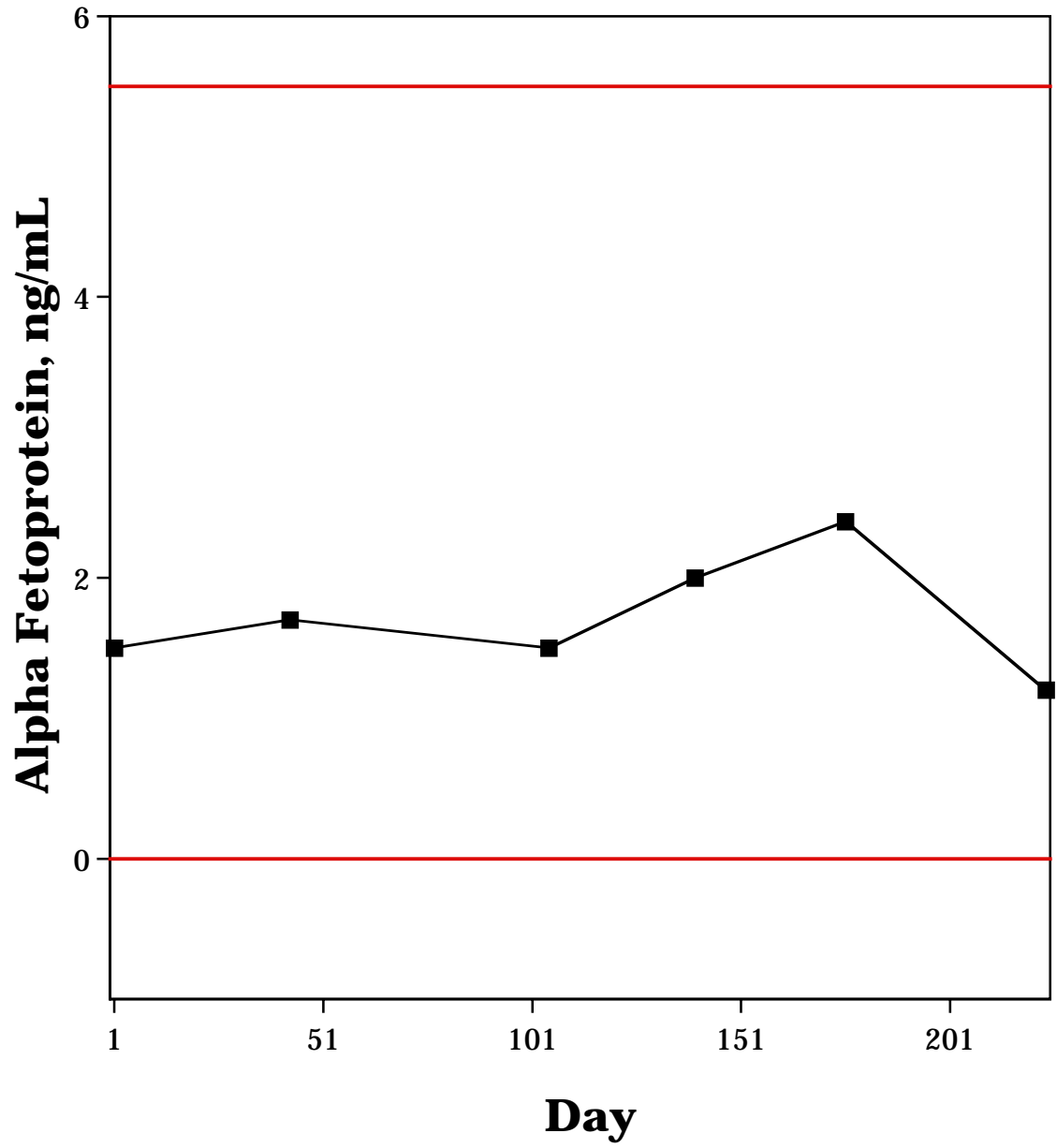


Figure 1

WBC

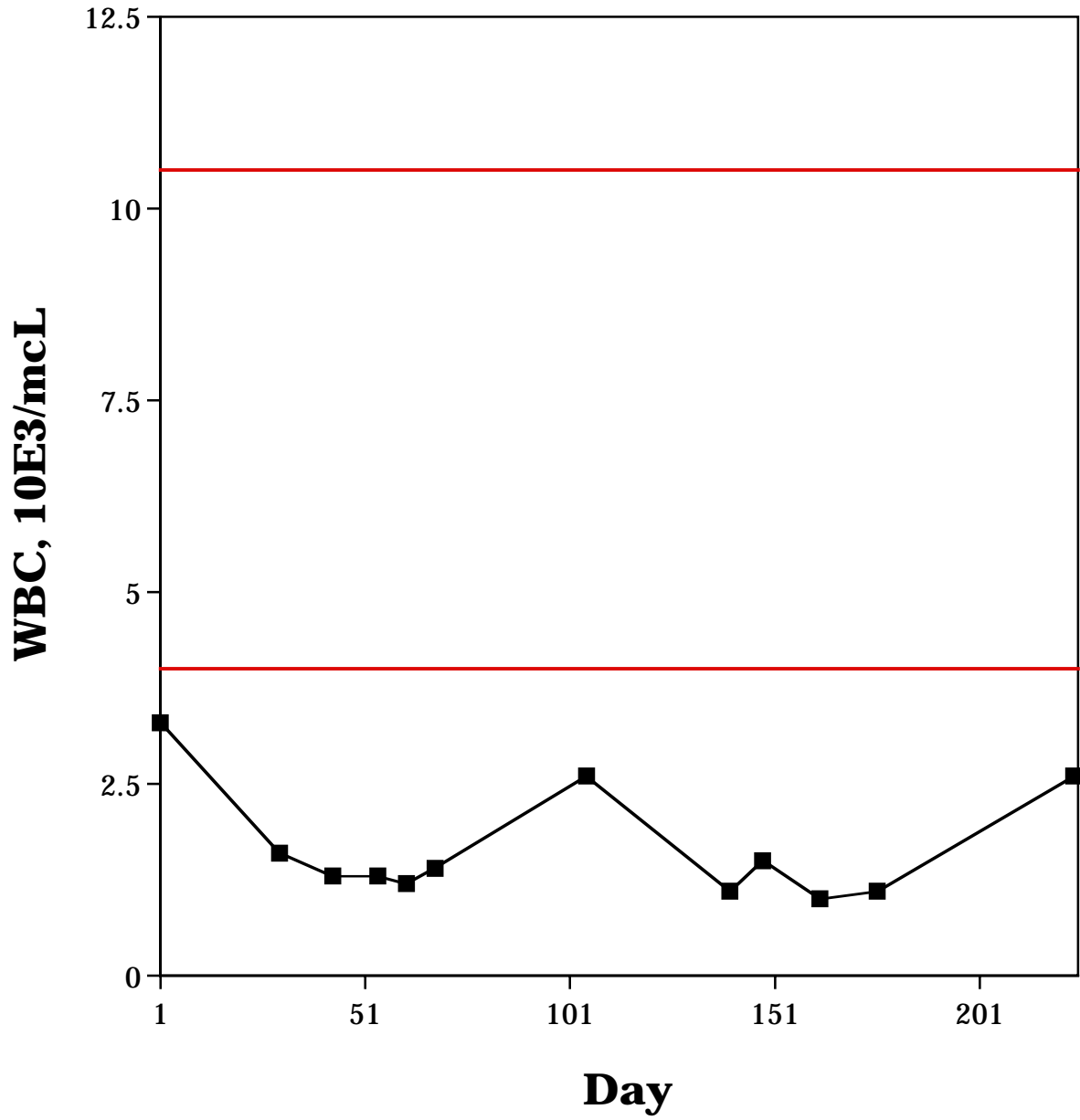


Figure 2

RBC

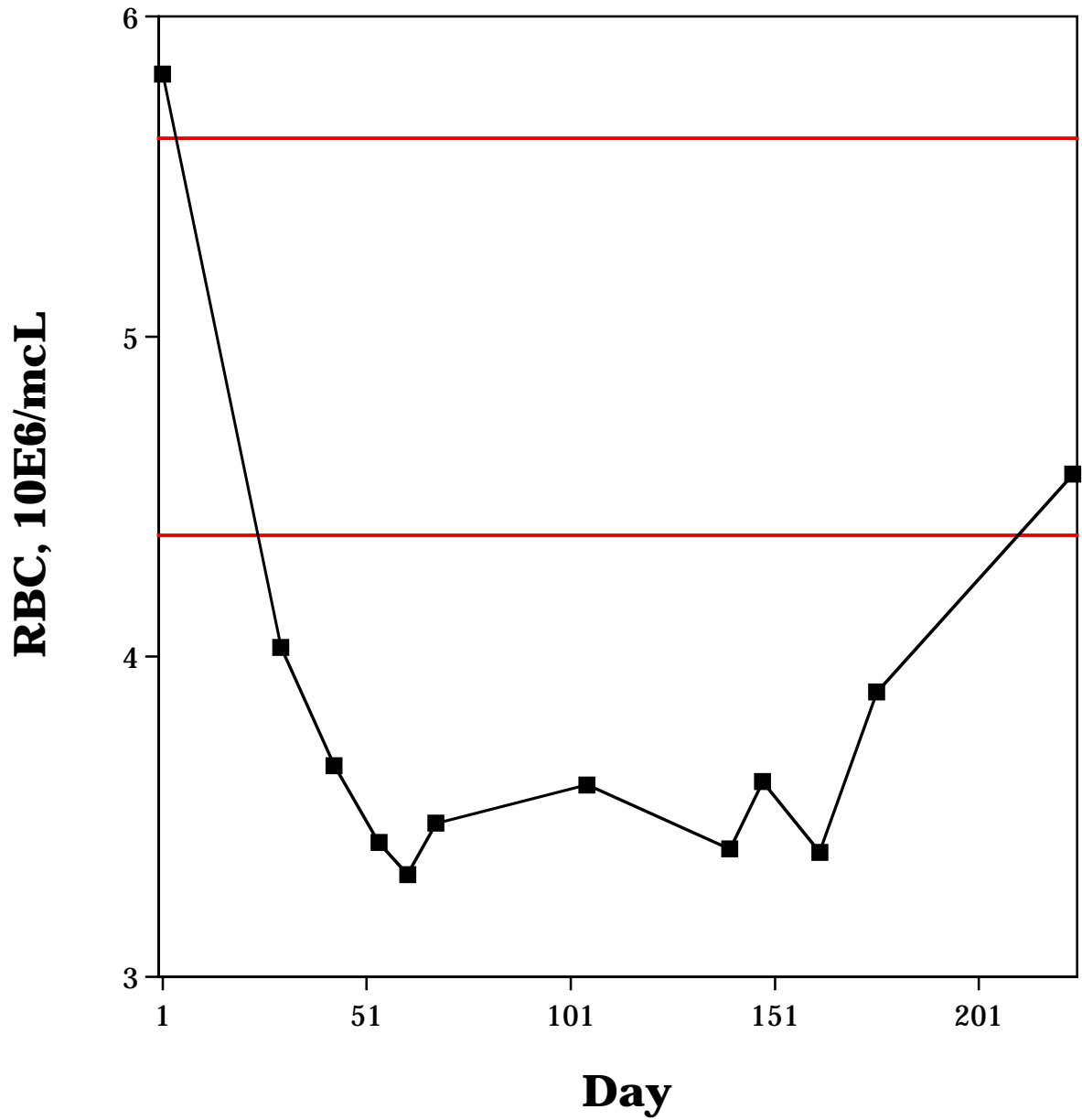


Figure 3

Hemoglobin

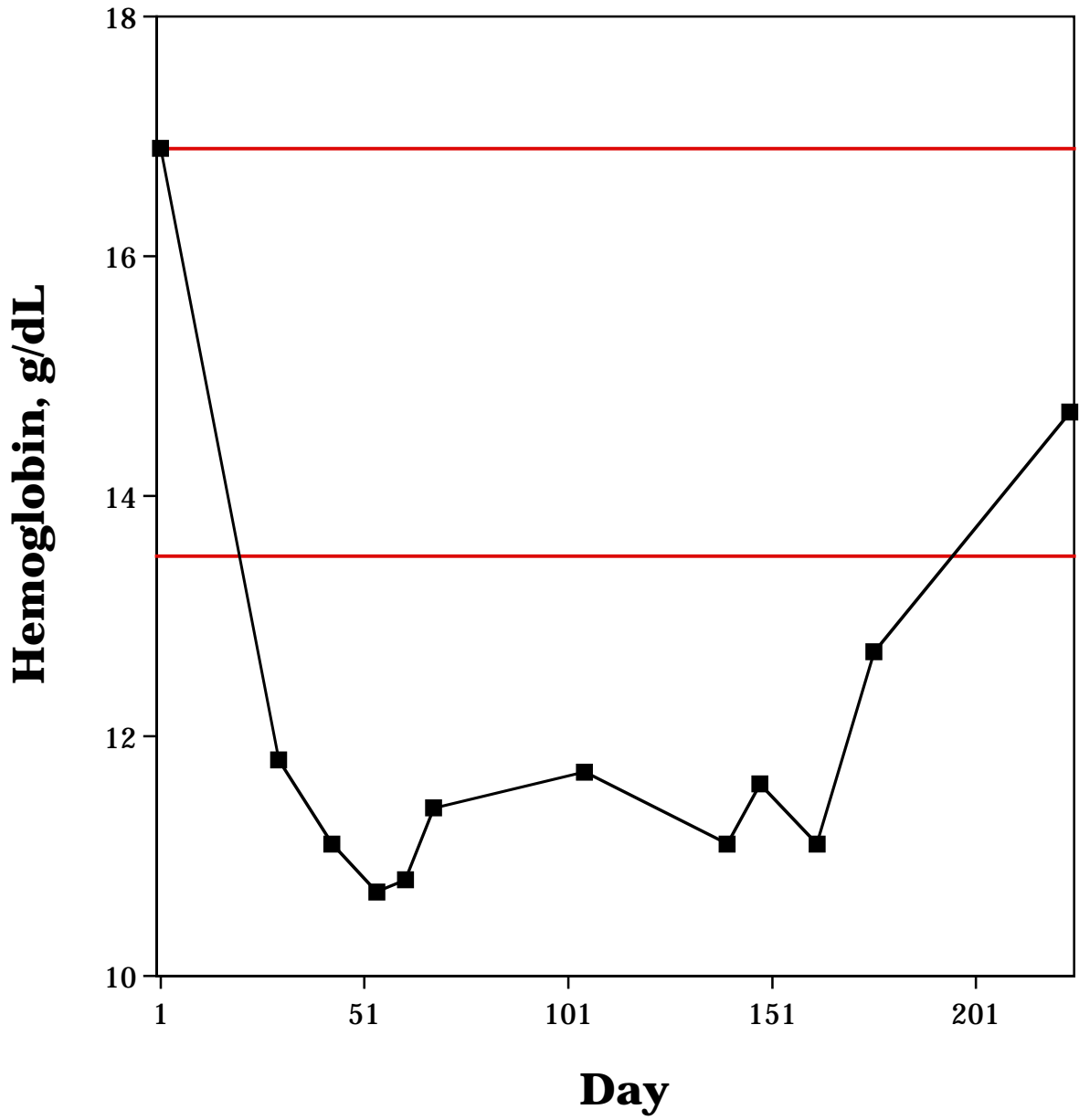


Figure 4

Hematocrit

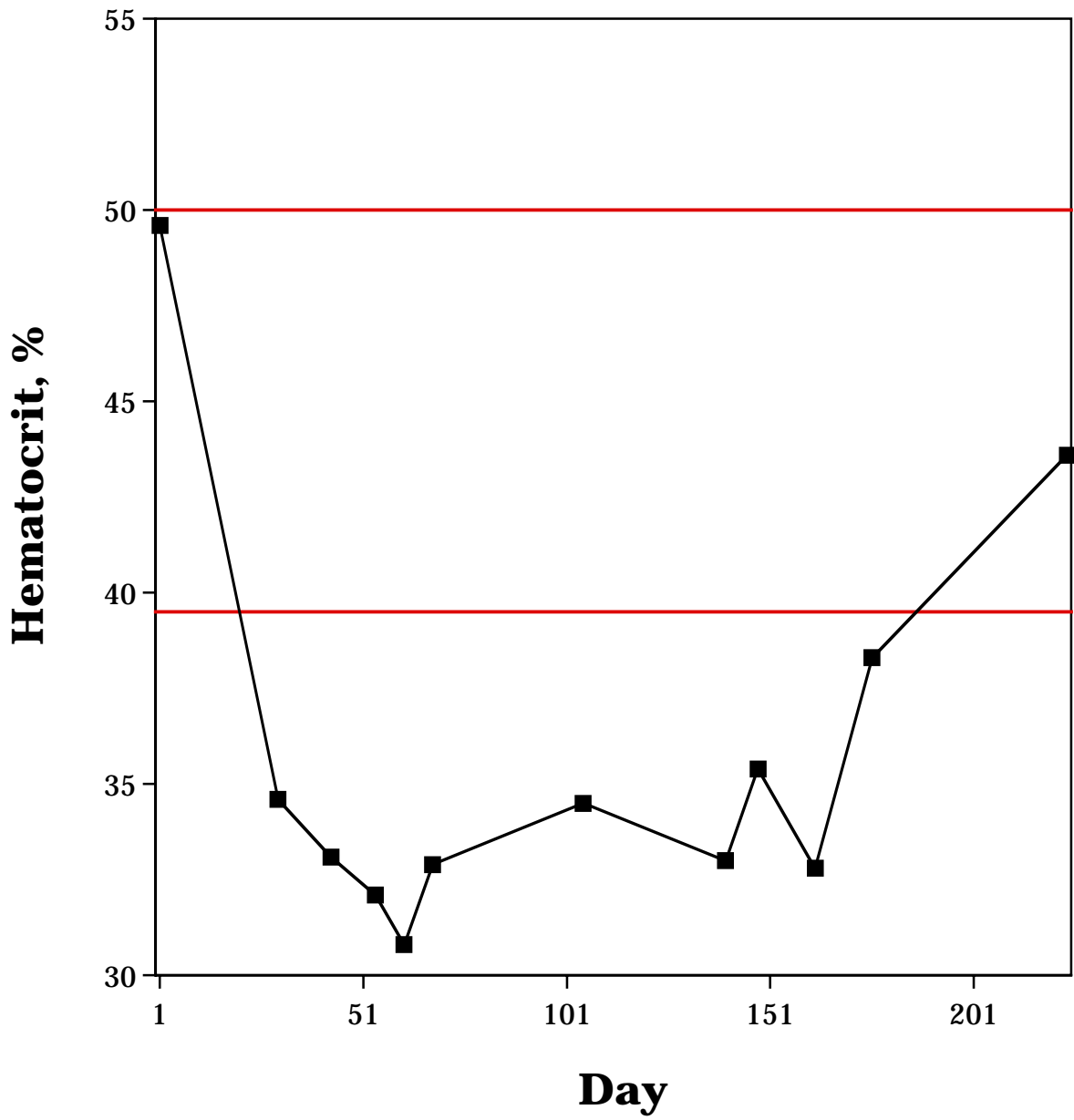


Figure 5

RDW-CV

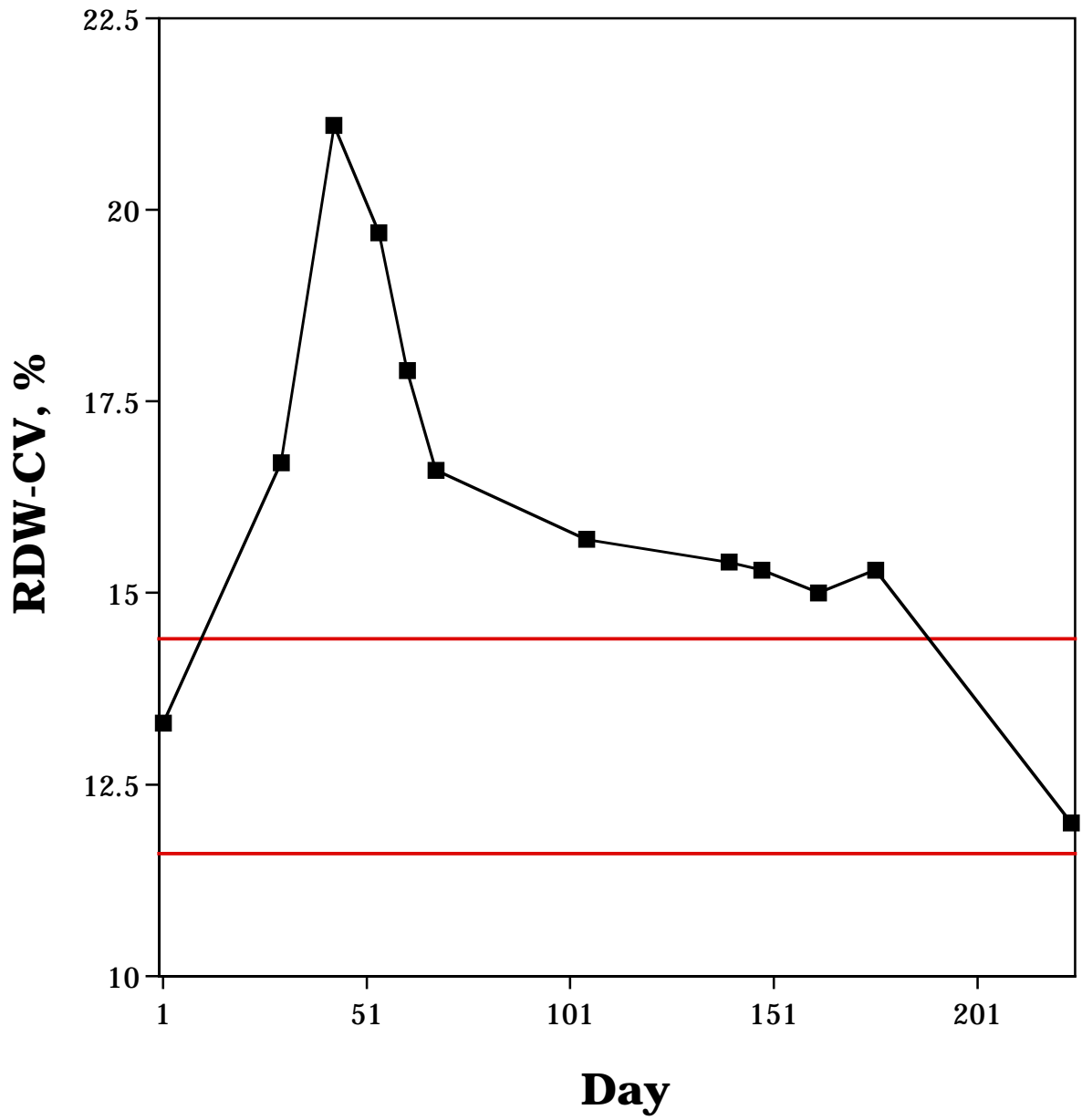


Figure 6

Platelets

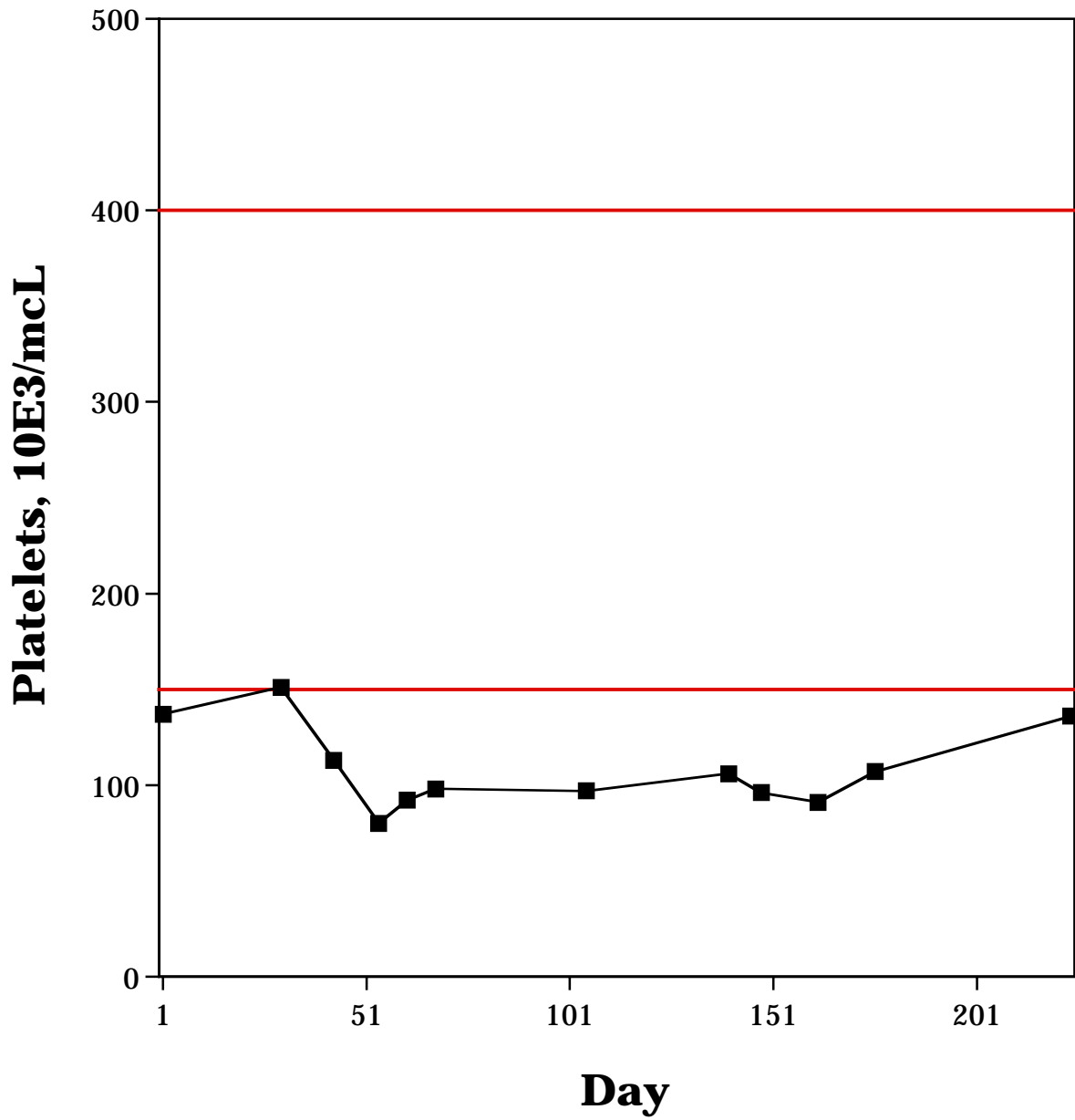


Figure 7

Neutrophils

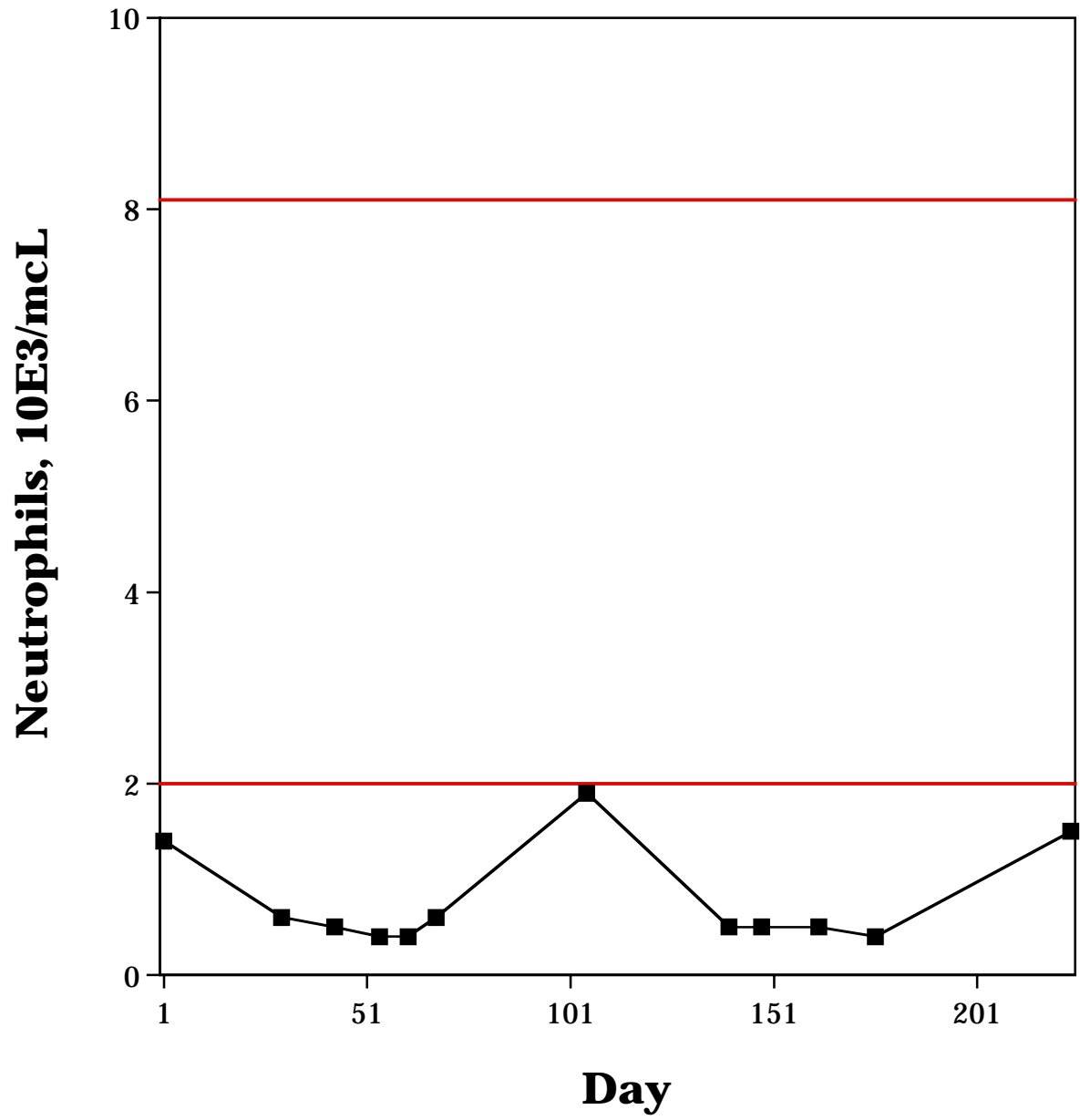


Figure 8

Lymphocytes

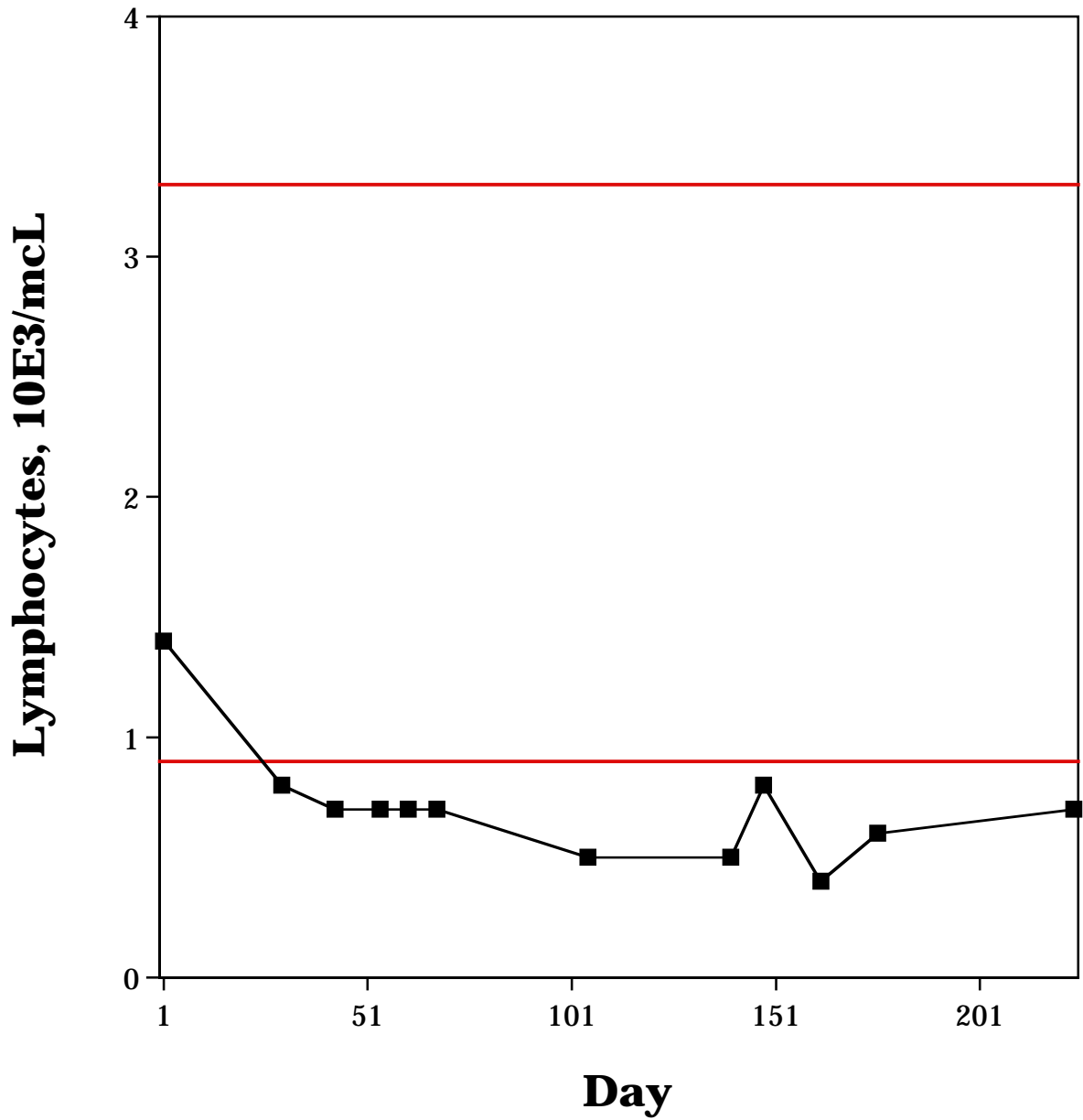


Figure 9

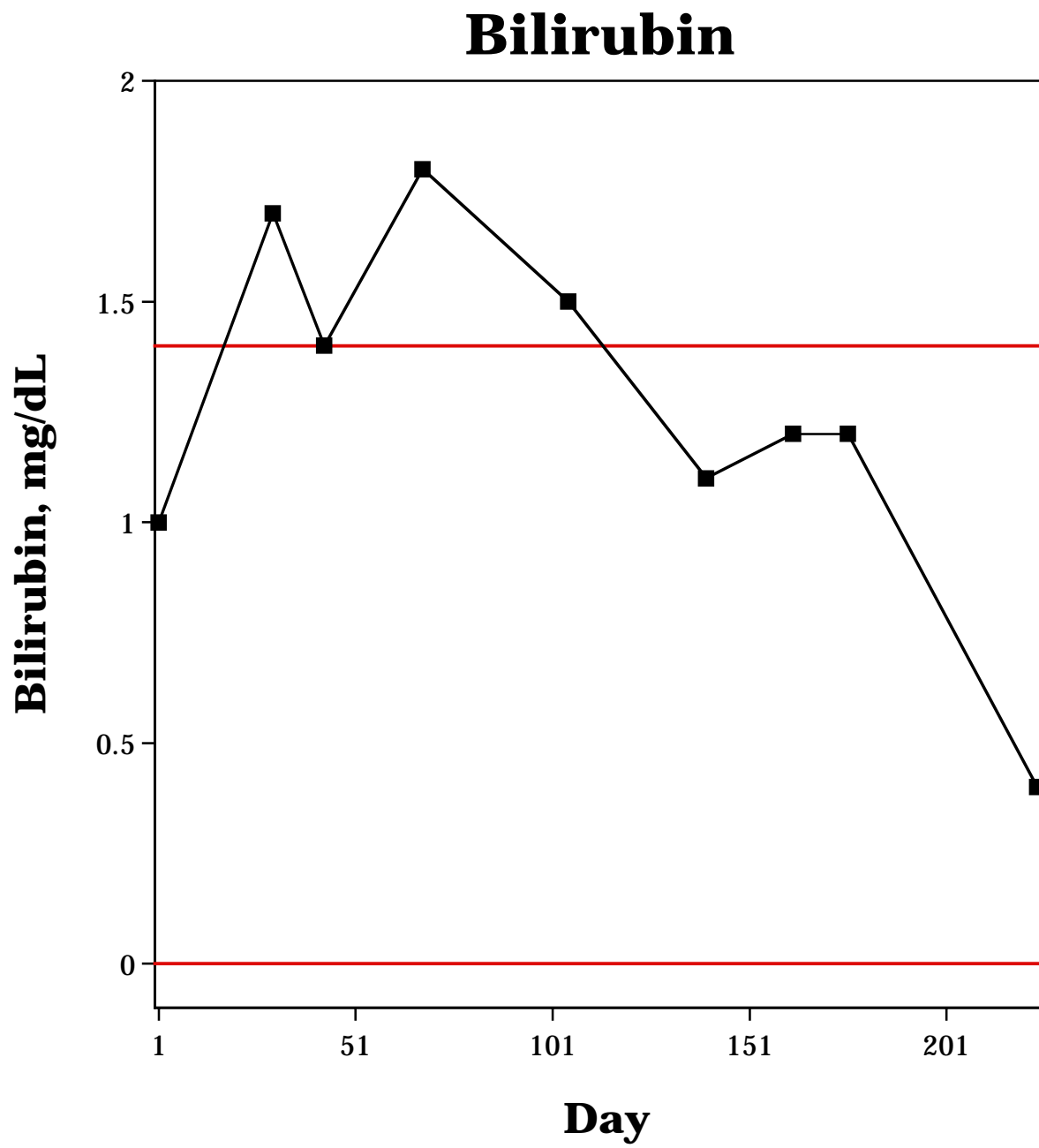


Figure 10

HCV Viral Load

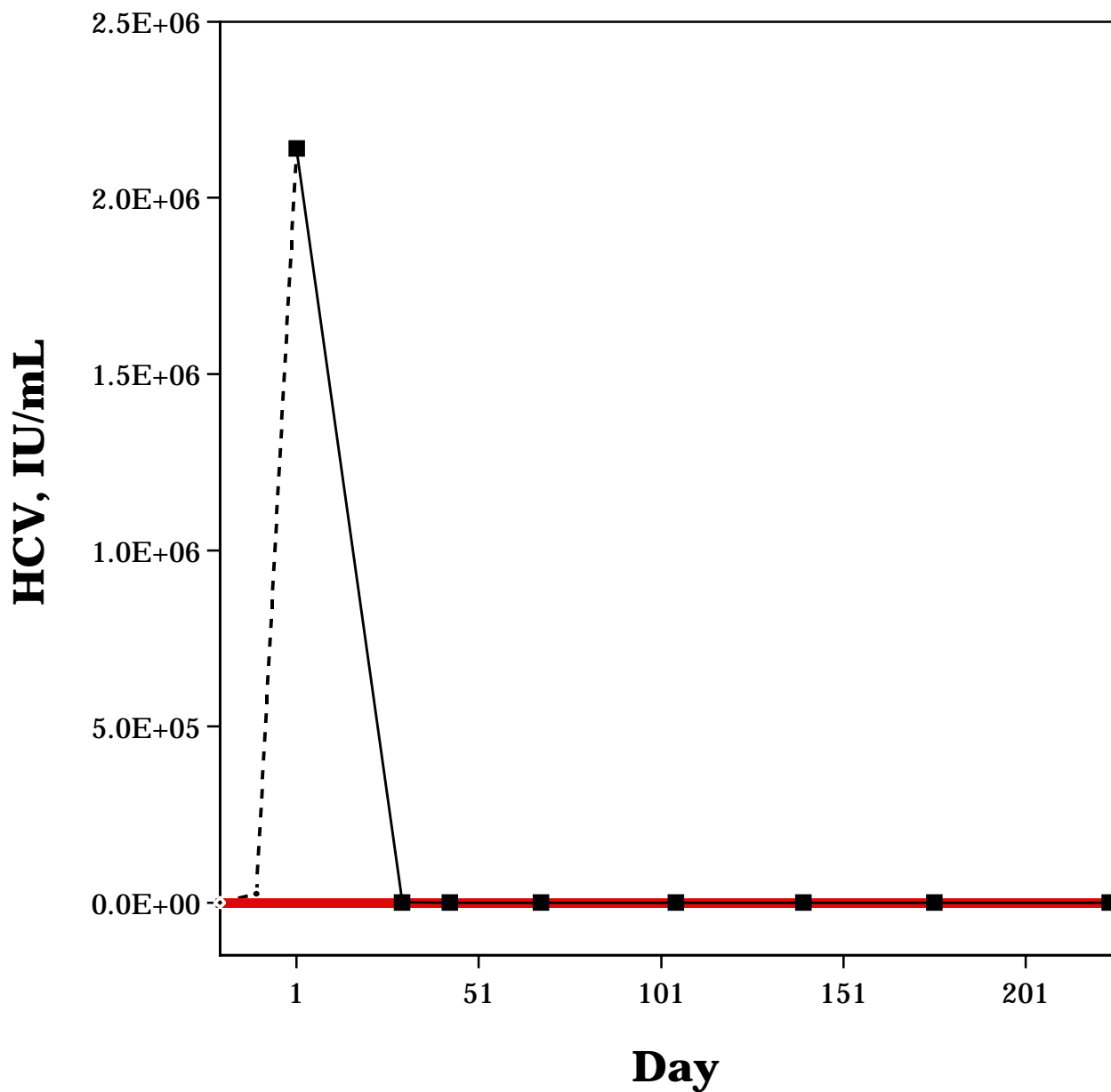


Figure 11