

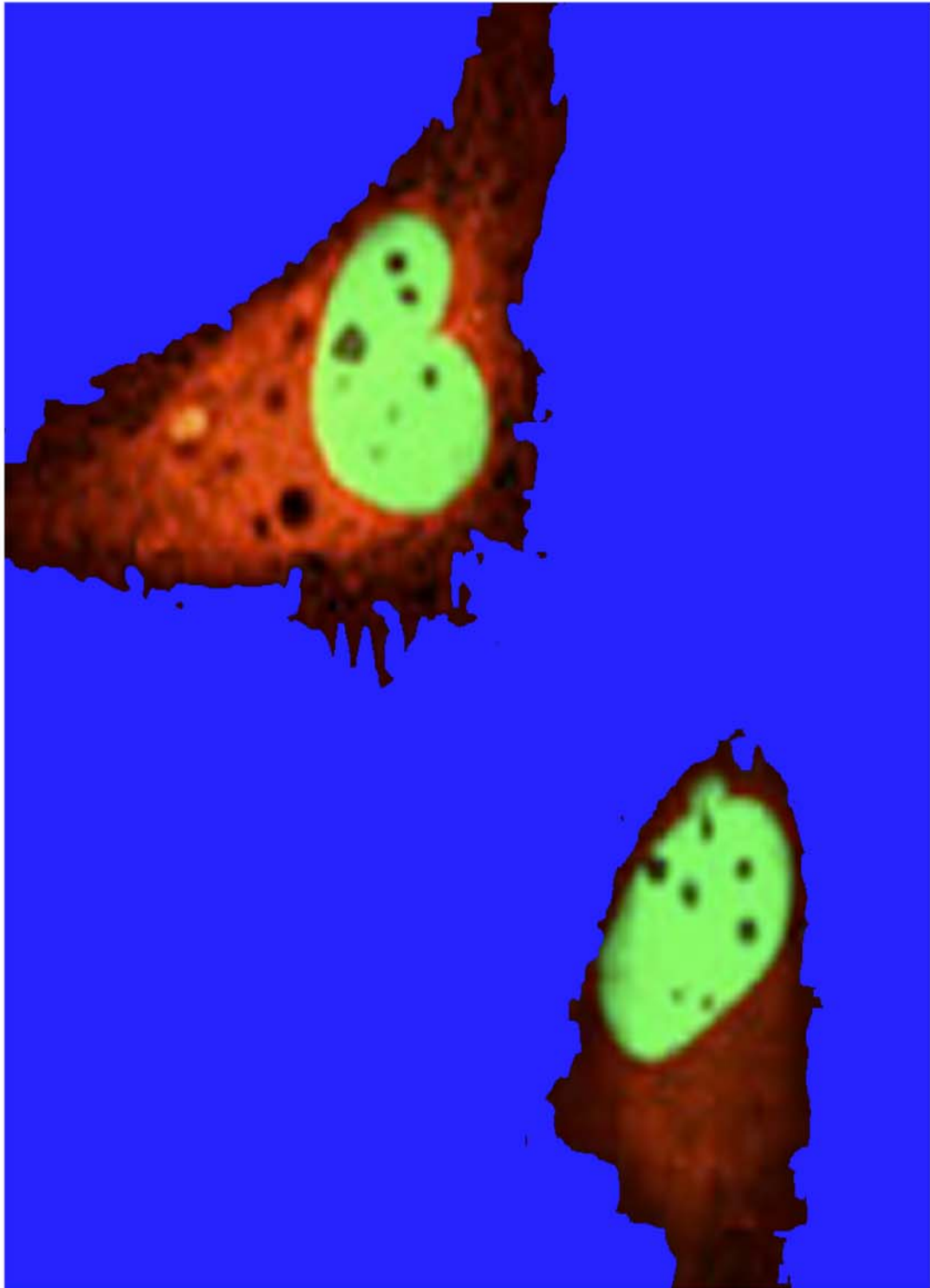
HUMIC ACID

EFFICACY FOR TREATMENT OF CHRONIC HEPATITIS C



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

April 2006



FRONTISPIECE: In liver cell nuclei a protein called CREBH (green) turns on the activity of specific inflammatory-response genes as a result of cellular stress (e.g., infection).

Forward

This Report documents the progression of hepatitis C in a patient treated specifically for this disease. The origin of the infection is unclear, although notes indicate that the patient suffered from chronic hepatitis C. A liver biopsy confirmed the presence of hepatitis C and associated mild liver inflammatory activity (grade 2/4). Following biopsy, treatment consisting of weekly injections of pegylated interferon alpha-2a ("Pegasys") in conjunction with the administration of ribavirin and humic acid was initiated.

Interferon was begun following the initial diagnosis, and was continued thereafter once per week for 9 months.

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 carried out for 9 months.

Humic acid was administered in tablet form (250 mg/tablet), commensurate with the administration of interferon and ribavirin. Two tablets were taken in the morning and two in the evening, for 9 months. Humic acid treatment was thereafter reduced to one tablet in the morning and one in the evening.

The patient was a male Hispanic-Caucasian, age 43, in otherwise-good condition.

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 in other U.S. and international patents and patents pending.

Table of Contents

Forward

1. Raw Blood Data

2. Data Tabulations

3. Graphical Presentation of Significant Data

RAW BLOOD DATA

Coverage: 514 Days

Date/Time Collected: 10/07/2003 07:00 PM

Blood Chemistry/Immunology

AA

Test Name	Results	Reference Range	Flag
Cholesterol	227 mg/dl	120 mg/dl - 210 mg/dl	*HIGH*
HDL Cholesterol	51 mg/dl	31 mg/dl - 85 mg/dl	
Cholesterol Ratio	4.5 %	0.0 % - 5.0 %	
LDL	148 mg/dl	70 mg/dl - 194 mg/dl	
LDL/HDL Ratio	2.90 mg/dl	0.96 mg/dl - 6.06 mg/dl	
Triglycerides	139 mg/dl	10 mg/dl - 190 mg/dl	
Glucose	43 mg/dl	70 mg/dl - 125 mg/dl	*LOW*
Fructosamine	1.3 mmol/l	1.2 mmol/l - 2.1 mmol/l	
SGOT (AST)	59 U/L	0 U/L - 41 U/L	*HIGH*
SGPT (ALT)	113 U/L	0 U/L - 45 U/L	*HIGH*
GGT (GGTP)	79 U/L	0 U/L - 65 U/L	*HIGH*
Alkaline Phosphatase	71 U/L	30 U/L - 115 U/L	
Total Bilirubin	0.8 mg/dl	0.1 mg/dl - 1.2 mg/dl	
Albumin	4.6 g/dl	3.7 g/dl - 4.7 g/dl	
BUN	14 mg/dl	5 mg/dl - 25 mg/dl	
Creatinine	1.0 mg/dl	0.5 mg/dl - 1.5 mg/dl	
Total Protein	8.0 g/dl	6.3 g/dl - 8.2 g/dl	
Globulin	3.4 g/dl	2.3 g/dl - 3.9 g/dl	
Serum HIV	NEG		
HEP B SURFAC ANTIGEN	NEG		
Hepatitis C	POS		Abnormal

Urinalysis

AA

Test Name	Results	Reference Range	Flag
Glucose quantitative	0.00 gm%	0.00 gm% - 0.50 gm%	
Gcast Micro Exam	0 /40LPF	0 /40LPF - 0 /40LPF	
Hcast Micro Exam	0	0 - 40	
RBC Micro Exam	0 /HPF	0 /HPF - 4 /HPF	
WBC Micro Exam	30 /HPF	0 /HPF - 9 /HPF	*HIGH*
Cotinine (Nicotine)	NEG		
Cocaine	NEG		
Protein	0	0 - 30	
Adult. Creatinine	36.0 mg/dl	0.0 mg/dl - 300.0 mg/dl	
Adulterant PH	6.5	4.0 - 8.7	

NO LIPEMIA

NO HEMOLYSIS

A STUDY OF 70 HCV EIA REACTIVE SPECIMENS REPEATED USING HCV RIBA
VERSION 3.0 CONFIRMATION YIELDED THE FOLLOWING RESULTS:

EIA	RIBA	RIBA	RIBA
REACTIVITY	NEGATIVE	INDETERMINATE	POSITIVE
WEAK POS.	19/25 (76%)	6/25 (24%)	0/25 (0%)
MOD. POS.	5/10 (50%)	3/10 (30%)	2/10 (20%)
STRONG POS.	0/35 (0%)	1/35 (3%)	34/35 (97%)

HCV VERSION 3.0 WITH HCV RIBA VERSION 3.0 CONFIRMATION REPRESENTS
THE MOST SENSITIVE AND SPECIFIC METHOD FOR DETERMINING HCV
INFECTION. USE CAUTION WHEN COMPARING THESE RESULTS WITH METHODS
OF LESSER SENSITIVITY. HEPATITIS C RIBA VERSION 3.0 CONFIRMATION

REQUESTING PHYSICIAN

11/03/03

ORDER MD:
CONSULT MD(s):
CONSULT MD(s):

Pull Chart	Review Complete
Initials	Initials
Date	Date

DRAW DATE/TIME

CHEMICAL PATHOLOGY

31OCT03 NONE

GLUCOSE METABOLISM	UNITS	REFERENCE
HGB A1C	5.4 f %	[4.1-6.5]
HGB EST.	94 MG/DL	

HGB A1C Hemoglobin A1C determined by an immunoturbidimetric method

Please note: Hemoglobin variants may result in HbA1C values that do not accurately reflect mean glucose values.

31OCT03 NONE

ENZYMES	UNITS	REFERENCE
LDH	181 U/L	[94-250]

31OCT03 NONE

CARDIAC RISK INDICATORS	UNITS	REFERENCE
TRIG	116 MG/DL	[0-149]
CHOL	205 H MG/DL	[0-199]
HDL CHOL	50 MG/DL	
CHOL/HDL	4.1 f RATIO	
LDL CALC	132 H MG/DL	[0-99]
LDL DIRECT	150 H MG/DL	[0-99]

CHOL/HDL	LIPID ABNORMALITIES in ADULTS		
	Desirable	Borderline Risk for CHD	High Risk for CHD
Cholesterol	< 200	200 - 239	≥ 240
HDL Cholesterol	≥ 60		< 40
LDL Cholesterol	< 130	130 - 159	≥ 160
	< 100 optimal		
Cholesterol/HDL	< 5	5 - 6	≥ 6
Triglyceride	< 150	150 - 199	≥ 200

This information is based on the Adult Treatment Panel III NCEP Guidelines for adults ≥ 20 years of age, for fasting specimens.

LDL cholesterol ranges are based on direct measurement assays.

LDL goals are further modified by clinical risk for CHD.

Ref: JAMA 2001;285:2486.

H-HIGH, f-FOOTNOTE

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11/03/03

ORDER MD:
CONSULT MD(s):
CONSULT MD(s):

Full Chart	Review Complete
Initials	Initials
Date	Date

DRAW DATE / TIME

CHEMICAL PATHOLOGY

31OCT03 NONE

THYROID FUNCTION	UNITS	REFERENCE
HS TSH	2.85 f IU/L	[0.35-5.50]
FREE T3	3.7 pg/ml	[2.3-4.2]
FREE T4	1.2 f NG/DL	[0.8-1.8]

HS TSH | Guidelines for interpreting TSH values: |

| If the TSH result is HIGH; suggests HYPOTHYROIDISM. |

| IF THE TSH result is LOW; suggests HYPERTHYROIDISM. |

| Some patients with LOW TSH values are clinically HYPERTHYROID, |

| while others are EUTHYROID. |

| Assays of FREE T4 and FREE T3 may be of value to confirm the |

| diagnosis. |

| TSH results alone can be misleading in patients with hypothalamic |

| or pituitary disorders, or in patients during the transitional |

| phase of thyroid treatment. |

FREE T4 | Guidelines for interpreting FREE T4 values: |

| If the TSH result is HIGH and FT4 is LOW; suggests HYPOTHYROIDISM |

| If the TSH result IS HIGH and FT4 is NORMAL; suggests SUBCLINICAL |

| HYPOTHYROIDISM. |

| If the TSH result is LOW and FT4 is HIGH; suggests HYPERTHYROIDISM |

| If the TSH result is LOW and FT4 is NORMAL; suggests SUBCLINICAL |

| HYPERTHYROIDISM. A FREE T3 to rule out T3 THYROTOXICOSIS is |

| also suggested. |

| These interpretations may not apply to patients with hypothalamic |

| or pituitary disorders, or in patients on thyroid treatment. |

ONCO-FETAL PROTEINS	UNITS	REFERENCE
PROS SP AG	1.13 f NG/ML	[0.00-4.00]

PROS SP AG | PSA determined by the Bayer
| ACS:CENTAUR PSA Equimolar Assay

ym

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ORDER NO:
CONSULT MD(s):
CONSULT MD(s):

Full Chart	Review Complete
Initials	Initials
Date	Date

DRAW DATE / TIME

HEMATOPATHOLOGY

31OCT03 NONE

CELL COUNTS	UNITS	REFERENCE	DIFFERENTIAL	%	ABSOLUTE DIFF	UNITS	REFERENCE
WBC	7.2	K/UL [4.3-10.0]	NEUTROPHIL	61	NEUTROPHIL	4.4	K/UL [1.0-7.5]
HGB	15.8	GM/DL [13.5-16.5]	LYMPHOCYTE	31	LYMPHOCYTE	2.2	K/UL [0.8-4.5]
HCT	46.3	% [40.0-50.0]	MONOCYTE	7	MONOCYTE	0.5	K/UL [0.1-1.5]
MCV	90	FL [80-98]	EOSINOPHIL	1	EOSINOPHIL	0.1	K/UL [0.0-0.4]
RBC	5.13	K/UL [4.40-5.80]	BASOPHIL	1	BASOPHIL	0.1	K/UL [0.0-0.5]
MCH	30.9	PG [27.0-34.0]					
MCHC	34.2	% [32.0-36.0]					
RDW	12.6	% [10.0-15.5]					
PLATELET	249	K/UL [150-450]					

URINALYSIS

31OCT03 NONE

URINALYSIS	REFERENCE	MICROSCOPIC	CASTS/LPF
SPEC GRAY	1.012 [1.005-1.030]	WBC/HFF	5
PH	7.0 [4.5-8.0]	RBC/HFF	0
PROTEIN	NEG [NEG]	BACTERIA	MANY
GLUCOSE	NEG [NEG]	SP EPITH/LPF	11
KETONES	NEG [NEG]		
BILIRUBIN	NEG [NEG]		
BLOOD	NEG [NEG]		
UROBILIN	0.2 [0.0-1.0]		
LEUK EST	SMALL *		
NITRITE	POS *		

Report UN

CHEMICAL PATHOLOGY

31OCT03 NONE

	UNITS	REFERENCE		UNITS	REFERENCE
GLUCOSE	93	MG/DL [65-110]	TOT BILI	.8	MG/DL [0.2-1.2]
NA	140	MMOL/L [135-147]	SGOT/AST	53 H	U/L [0-44]
K	4.3	MMOL/L [3.5-5.5]	SGT/ALT	99 H	U/L [0-44]
CL	106	MMOL/L [96-108]	GAMMA GT	59 H	U/L [11-49]
CO2	24	MMOL/L [22-29]	ALK PHOS	69	U/L [40-129]
ANION GAP	10	MMOL/L [5-14]	URIC ACID	6.8	MG/DL [3.4-7.0]
BUN	11	MG/DL [6-20]	PHOS	3.0	MG/DL [2.7-4.5]
CREA	1.0	MG/DL [0.5-1.2]	CALCIUM	13.0	MG/DL [8.4-10.5]
UREA/CREA	11	RATIO [10-22]			
OSMO CALC	276	MOS/KG [268-292]			
TOT PROTEIN	7.9	GM/DL [6.6-8.7]			
ALBUMIN	4.7	GM/DL [3.4-4.8]			
GLOBULIN	3.2	GM/DL [2.4-4.4]			
A/G RATIO	1.5	RATIO [0.7-2.5]			

Her ABC

mm H2O3 Au 20

11/26/03

ORDER MD:
CONSULT MD(s):
CONSULT MD(s):

Put Chan	Review
Initials	Complete
Date	Initials
	Date

VIRAL SEROLOGY

17NOV03 NONE

HEPATITIS TESTING

	NEG	REFERENCE
HBS AB	NEG	[NEG]
HB CORE IGM	NEG	[NEG]
HEP A AB (IGM)	NEG	[NEG]
HEP C RNA @	POSITIVE*f	

HEP C RNA..... 17NOV03 NONE The specimen was POSITIVE for Hepatitis C Viral RNA. HCV RNA was detected. This assay can detect down to 50 IU/mL (100 copies/mL). False positives can occur due to contamination.

TEST INFORMATION: Hepatitis C RNA, Qual by PCR

Assay methodology is polymerase chain reaction (PCR) using the FDA approved Roche Amplicor HCV Test, version 2.0.

This test is performed pursuant to an agreement with Roche Molecular Systems, Inc.
The above test was performed at:

m 11-2803 Ref to ED.
m

*-ABNORMAL, f-FOOTNOTE

@ = HEP C RNA TEST SENT TO

***** FINAL REPORT *****

11/26/03

ORDER MD:
CONSULT MD(s):
CONSULT MD(s):

VIRAL SEROLOGY

Put Chart	Review
Initials	Signature
Date	

17NOV03 NONE

HEPATITIS TESTING

HEP C GENOTYPE @

TYPE 4f

REFERENCE

HEP C GENOTYPE. 17NOV03 NONE

TYPE 4. Cannot be further subtyped.

TEST INFORMATION: Hepatitis C Genotyping

Isolates of Hepatitis C Virus are grouped into six major genotypes. These genotypes are subtyped according to sequence characteristics and are designated as 1a, 1b, 2a, 2b, 3a, 3b, 4a-h, 5a, and 6a.

Reports suggest that patient prognosis and disease course may be genotype dependent. For example, Hepatitis C Virus type 1 and type 4 infections may be associated with more severe disease and decreased responsiveness to therapy. In addition, types 2 and 3 may be treated with shorter durations of therapy.

Patient RNA is assayed using reverse transcription polymerase chain reaction (RT-PCR) to amplify a specific portion of the 5' untranslated region (5'UTR) of the hepatitis C virus. The amplified nucleic acid was sequenced bidirectionally using dye-terminator chemistry (ABI). Results are based on comparison with a database derived from GenBank sequences and published information (Maertens et al, 1997).

The performance characteristics of this test were validated by ARUP Laboratories, Inc. The U.S. Food and Drug Administration (FDA) has not approved this test. The results are not intended to be used as the sole means for clinical diagnosis or patient management decisions. ARUP is authorized under Clinical Laboratory Improvement Amendments (CLIA) and by all states to perform high-complexity testing.

This test is performed pursuant to a license agreement with Roche Molecular Systems, Inc.
The above test was performed at:

***** FINAL REPORT *****

11/26/03

ORDER MD:
CONSULT MD(s):
CONSULT MD(s):

VIRAL SEROLOGY

Order	Ref
Initials	Initials
Date	Date

17NOV03 NONE

HEPATITIS TESTING

HCV AB

POS*f

REFERENCE

[NEG]

HCV AB..... 17NOV03 NONE Follow up testing for Hepatitis C Virus RNA, QUALITATIVE (not quantitative) is recommended if clinically indicated. Patients with certain immunologic disorders (including but not limited to SLE, rheumatoid arthritis, hypergammaglobulinemia, and HIV-1 infection) may have a FALSE POSITIVE anti-HCV antibody test by the EIA method.

RESULTS REPORTED TO THE DEPARTMENT OF PUBLIC HEALTH.

m

*-ABNORMAL, f-FOOTNOTE

***** FINAL REPORT *****

PRINTED: 01/10/04
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CHEMICAL PATHOLOGY

JAN04 1705

ONCO-FETAL PROTEINS	UNITS	REFERENCE
A-FETOPROT	3 f NG/ML	[0-8]

FETOPROT

The above reference range is for non-pregnant adult patients. Pregnant patients should be processed through the STATE OF CALIFORNIA AFP SCREENING PROGRAM ONLY.

AFP ranges for neonates (premature or full-term, male or female) are significantly higher (several thousandfold) than the above reference range. It is not known precisely at what age AFP levels in infants drop to the adult range. Therefore serial serum AFP levels are recommended when evaluating patients less than one year of age.

AFP determined by the Bayer ACS: Centaur AFP assay.

VIRAL SEROLOGY

JAN04 1705

HEPATITIS TESTING	REFERENCE
HEP A AB(TOTAL)	[NEG]
HEP A AB(IGM)	[NEG]

* A AB(IGM).. 05JAN04 1705 * Hepatitis A total antibody screen (IgM & IgG) NEGATIVE. Hepatitis A IgM NOT indicated.

OOTNOTE

ENT:

PT NO:

LOCATION:

***** FINAL REPORT *****

Pull Chart	Review Complete
Initials	Initials
DATE: 01/10/04	
Date	Date

PRINTED: 01/10/04
TIME: 0509
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VIRAL SEROLOGY

HEPATITIS TESTING

REFERENCE

05JAN04 1705

HEP C RNA @

HEP C RNA..... 05JAN04 1705

4.6 f log IU
<<<>VIRAL LOAD RESULT FOR HCV RNA IS 37,100 IU/mL<<<>
THE LOG 10 VALUE OF HCV RNA IS 4.6
TEST INFORMATION: HEP C RNA Quant Real-Time PCR
Assay methodology is polymerase chain reaction (PCR)
using the ROCHE COBAS TaqMan Analyte Specific Reagent.
The reference interval for this assay is:
Less than 2.3 log IU (200 IU) of HCV RNA/mL.
The analytic measurement range of this assay is:
200-100,000,000 IU/mL (2.3-8.0 Log IU/mL).

There is an approximate relationship of 1 HCV RNA IU/mL
to 2.5 HCV RNA copies/mL. The INTERNATIONAL UNIT (IU)
is a designated unit value assigned to the "International
Standard for Nucleic Acid Amplification Technology Assays
for HCV RNA" which is accepted by the WHO Expert Committee
on Biological Standardization. The International Standard
is a lyophilized preparation of HCV genotype 1. The IU
value is based on results obtained after extensive testing
in a variety of assay types.

Analyte Specific Reagents (ASR) are used in many
laboratory tests necessary for standard medical care and
generally do not require U.S. Food and Drug Administration
approval. This test was developed and its performance
characteristics determined by ARUP Laboratories, Inc.
It has not been approved by the U.S. Food and Drug
Administration. This test should not be regarded as
investigational or for research use.

This test is performed pursuant to an agreement with
Roche Molecular Systems, Inc.
The above test was performed at: Associated Regional and
University Pathologists, 500 Chipeta Way, SLC UT 84108

1-16-04
Discussed with PT
Hep C test mod @
Recommend liver
biopsy by
Radiologist

f-FOOTNOTE

@ = HEP C RNA TEST SENT TO

PT NO:

LOCATION:

***** FINAL REPORT *****

Pull Chart	Review Complete
Initials	Initials
Date	Date

3-FEB-2004

Accession#:
Patient:
Collected: 01/30/04

Loc:
Pt#:
SS#:
DOB:

P A T H O L O G Y R E P O R T

SPECIMEN:

LIVER BIOPSY

GROSS DESCRIPTION:

Received in formalin, labeled US liver biopsy, and 1599, is a 2.0 x 0.1 cm tan, cylindrical portion of soft tissue. T1 in 1599.

CC:Jm

MICROSCOPIC DESCRIPTION:

Sections show a needle core of liver tissue. This shows at least ten portal areas for evaluation. There is a variable chronic inflammatory infiltrate in the portal areas with small lymphoid follicle formation. This pattern is compatible with the stated history of hepatitis C. There is focal interface activity with lymphocytes in many of the portal areas extending beyond the limiting plate. There appears to be some probable mild fibrous portal expansion, but no periportal fibrosis is identified. Bile ductules are present within the portal areas and do not show evidence of damage. Iron is not increased.

JK :am

Notify

OK to start
Pegasys / Ribavirin
1200 mg

✓
2/4/04 auth for med submitter

Printed: 02/03/04
Page: 1

Continued on next page...

2004 16:27

Accession#:
Patient:

P A T H O L O G Y R E P O R T

DIAGNOSIS:

LIVER, BIOPSY:

CHRONIC HEPATITIS DISPLAYING MILD INFLAMMATORY ACTIVITY
(GRADE 2/4) AND MILD FIBROUS PORTAL EXPANSION (STAGE 1/4).

COMMENT: The patient is noted to have a history of hepatitis C.

Q: TG
JK :am 02/02/04

(Electronic Signature) Ver:JK 02/02/04

✓)

Printed: 02/03/04 1626
Page: 2

End of Report...

PRINTED: 03/16/04

HEMATOPATHOLOGY

CELL COUNTS	UNITS	REFERENCE	DIFFERENTIAL	%	ABSOLUTE DIFF	UNITS	REFERENCE
15MAR04 1300							
WBC	6.0 K/UL	[4.3-10.0]	NEUTROPHIL	70	NEUTROPHIL	4.2 K/UL	[1.8-7.5]
HGB	12.0L GM/DL	[13.5-16.5]	LYMPHOCYTE	21	LYMPHOCYTE	1.3 K/UL	[0.8-4.5]
HCT	34.7L %	[40.0-50.0]	MONOCYTE	9	MONOCYTE	0.5 K/UL	[0.1-1.5]
MCV	89 FL	[80-98]	EOSINOPHIL	0	EOSINOPHIL	0.0 K/UL	[0.0-0.4]
RBC	3.91L M/UL	[4.40-5.80]	BASOPHIL	1	BASOPHIL	0.1 K/UL	[0.0-0.5]
MCH	30.7 PG	[27.0-34.0]					
MCHC	34.6 %	[32.0-36.0]					
RDW	13.8 %	[0.0-15.5]					
PLATELET	199 K/UL	[150-450]					

3/17/04
Disca'd c pt
✓

PT NO:

LOCATION:

***** FINAL REPORT *****

Pull Chart	Review Complete
Initials	Initials
Date	Date

PATIENT:
PT NO:
SEX:
AGE:
DOB:
ADMITTING MD:
ORDERING MD:
CONSULTING MD:

Date of Service: 04/12/2004 02:04 PM

FINAL REPORT

Test	Value	Units	Range	Remark
OBTAINED: 04/12/2004 09:10 AM			REPORTED: 04/12/2004 05:00 PM	
*** HEPATIC FUNCTN ***				
SGOT/AST	21	U/L	0-44	
GPT/ALT	32	U/L	0-44	
ALK PHOS	86	U/L	40-129	
TOT PROTEIN	6.9	GM/DL	6.3-8.3	
ALBUMIN	4.0	GM/DL	3.6-5.0	
TOT BILI	.6	MG/DL	.2-1.2	
CONJ BILI	.1	MG/DL	.0-.3	
GLOBULIN	2.9	GM/DL	2.4-4.4	
A/G RATIO	1.4	RATIO	0.7-2.5	
*** CBC ***				
WBC	3.9	K/UL	4.3-10.0	LOW
RBC	3.82	M/UL	4.40-5.80	LOW
HGB	11.7	GM/DL	13.5-16.5	LOW
HCT	35.6	%	40.0-50.0	LOW
MCV	93	FL	80-98	
MCH	30.8	PG	27.0-34.0	
MCHC	32.9	%	32.0-36.0	
RDW	17.9	%	0.0-15.5	HIGH
PLATELET	180	K/UL	150-450	
MPV	11.5		8.2-10.0	HIGH
NEUTROPHIL	67	%		
LYMPHOCYTE	25	%		
MONOCYTE	8	%		
EOSINOPHIL	0	%		
BASOPHIL	0	%		
NEUTROPHIL	2.6	K/UL	1.8-7.5	
LYMPHOCYTE	1.0	K/UL	0.8-4.5	
MONOCYTE	0.3	K/UL	0.1-1.5	
EOSINOPHIL	0.0	K/UL	0.0-0.4	
BASOPHIL	0.0	K/UL	0.0-0.5	

Reviewed by:

Labs OK - liver tests better
On Pegasis / Ribavirin x 7 hrs
✓

Normal

4-14-04 pt notified

04/13/2004

PD

PATIENT:
PT NO:
SEX:
AGE:
DOB:
ORDER MD:
CONSULT MD(s):
CONSULT MD(s):

ROUTE TO:

REFERRING MEDICAL RECORD NUMBER:
DIAGNOSIS:

PRINTED: 05/12/04

HEMATOPATHOLOGY

CELL COUNTS	UNITS	REFERENCE	DIFFERENTIAL	%	ABSOLUTE DIFF	UNITS	REFERENCE
11MAY04 1520							
WBC	2.9L K/UL	[4.3-10.0]	NEUTROPHIL	55	NEUTROPHIL	1.6 L K/UL	[1.8-7.5]
HGB	11.2L GM/DL	[13.5-16.5]	LYMPHOCYTE	33	LYMPHOCYTE	1.0 K/UL	[0.8-4.5]
HCT	33.3L %	[40.0-50.0]	MONOCYTE	11	MONOCYTE	0.3 K/UL	[0.1-1.5]
MCV	93 FL	[80-98]	EOSINOPHIL	0	EOSINOPHIL	0.0 K/UL	[0.0-0.4]
RBC	3.57L M/UL	[4.40-5.80]	BASOPHIL	1	BASOPHIL	0.0 K/UL	[0.0-0.5]
MCH	31.5 PG	[27.0-34.0]					
MCHC	33.8 %	[32.0-36.0]					
RDW	16.0H %	[0.0-15.5]					
PLATELET	189 K/UL	[150-450]					

CHEMICAL PATHOLOGY

	UNITS	REFERENCE		UNITS	REFERENCE
11MAY04 1520					
TOT PROTEIN	7.1 GM/DL	[6.3-8.3]	TOT BILI	.7 MG/DL	[.2-1.2]
ALBUMIN	4.1 GM/DL	[3.6-5.0]	CONJ BILI	.1 MG/DL	[.0-.3]
GLOBULIN	3.0 GM/DL	[2.4-4.4]	SGOT/AST	24 U/L	[0-44]
A/G RATIO	1.4 RATIO	[0.7-2.5]	GPT/ALT	31 U/L	[0-44]
			ALK PHOS	87 U/L	[40-129]

THYROID FUNCTION	UNITS	REFERENCE
11MAY04 1520		
HS TSH	1.33 f IU/L	[0.35-5.50]
HS TSH	<p>Guidelines for interpreting TSH values:</p> <p>If the TSH result is HIGH; suggests HYPOTHYROIDISM.</p> <p>IF THE TSH result is LOW; suggests HYPERTHYROIDISM.</p> <p>Some patients with LOW TSH values are clinically HYPERTHYROID, while others are EUTHYROID.</p> <p>Assays of FREE T4 and FREE T3 may be of value to confirm the diagnosis.</p> <p>TSH results alone can be misleading in patients with hypothalamic or pituitary disorders, or in patients during the transitional phase of thyroid treatment.</p>	

L-LOW, H-HIGH, f-FOOTNOTE

PT NO:

LOCATION:

***** FINAL REPORT *****

Pull Chart	Review Complete
Initials	Initials
Date	Date

DRY

DATE: 05/19/04
TIME: 1421
PAGE: 1

DIAGNOSIS:

CONSULT MD(s):
CONSULT MD(s):

***** VIRAL SEROLOGY *****

11MAY04 1520

HEPATITIS TESTING

TEST	RESULT	UNIT
HCV RNA BDNA	<3200	COPIES
HCV RNA LOG CPY	<3.5	LOG
HCV RNA IU	<615	IU/ML
HCV RNA LOG IU	<2.8	LOG IU

HCV RNA BDNA

ANALYTICAL RANGE of the HCV RNA assay:

Copies/ml: 3,200 to 40,000,000
Log Copies: 3.5 to 7.6
IU/ml: 615 to 7,692,308
Log IU: 2.8 to 6.9

The International Unit (IU) is a unit value assigned to the "First International Standard for Nucleic Acid Amplification Technology Assays for HCV RNA" accepted by the WHO Expert Committee on Biological Standardization. The International Standard is a preparation of HCV genotype 1 and is based on results obtained in a variety of assay types.

The quantitative HCV RNA assay is intended for use in patients with an established diagnosis of Hepatitis C. It should NOT be used as a diagnostic test. Results less than the limit of detectability do not imply either the presence or absence of virus.

This patient's result was obtained using the Bayer Diagnostics (Versant) branched-DNA HCV RNA methodology, version 3.0. The U.S. Food and Drug Administration has approved this assay for the quantitation of Hepatitis C viral RNA in the serum or plasma of HCV infected individuals.

Notify

HCV RNA Neg

*Good
Liver tests WNL
Cont Rx*

1-FOOTNOTE

END OF REPORT

✓ J

Notified Patient
Date: 5-19-04

PATIENT:
PT NO:
SEX:
AGE:
DOB:
ADMITTING MD:
ORDERING MD:
CONSULTING MD:

Date of Service: 06/17/2004 12:29 AM

FINAL REPORT JUN 18 2004

Test	Value	Units	Range	Remark
OBTAINED: 06/16/2004 12:01 AM			REPORTED: 06/17/2004 08:40 AM	
*** CBC ***				
WBC	3.9	K/UL	4.3-10.0	LOW
RBC	3.54	M/UL	4.40-5.80	LOW
HGB	11.1	GM/DL	13.5-16.5	LOW
HCT	33.7	%	40.0-50.0	LOW
MCV	95	FL	80-98	
MCH	31.4	PG	27.0-34.0	
MCHC	33.0	%	32.0-36.0	
RDW	15.6	%	0.0-15.5	HIGH
PLATELET	210	K/UL	150-450	
MPV	10.6		8.2-10.0	HIGH
NEUTROPHIL	69	%		
LYMPHOCYTE	20	%		
MONOCYTE	11	%		
EOSINOPHIL	0	%		
BASOPHIL	0	%		
NEUTROPHIL	2.7	K/UL	1.8-7.5	
LYMPHOCYTE	0.8	K/UL	0.8-4.5	
MONOCYTE	0.4	K/UL	0.1-1.5	
EOSINOPHIL	0.0	K/UL	0.0-0.4	
BASOPHIL	0.0	K/UL	0.0-0.5	

Reviewed by:

CBC

OK

Notify

Notified Patient by v-mail
Date: 6-18-04 [Signature]

6/18/2004

PATIENT:**PT NO:****SEX:****AGE:****DOB:****ADMITTING MD:****ORDERING MD:****CONSULTING MD:****Date of Service:** 08/16/2004 07:40 PM

FINAL REPORT

Test	Value	Units	Range	Remark
OBTAINED: 08/16/2004 04:30 PM			REPORTED: 08/18/2004 01:31 PM	
*** HEPATIC FUNCTN ***				
SGOT/AST	26	U/L	0-44	
GPT/ALT	29	U/L	0-44	
ALK PHOS	84	U/L	40-129	
TOT PROTEIN	8.0	GM/DL	6.3-8.3	
ALBUMIN	4.2	GM/DL	3.6-5.0	
TOT BILI	.5	MG/DL	.2-1.2	
CONJ BILI	.1	MG/DL	.0-.3	
GLOBULIN	3.8	GM/DL	2.4-4.4	
A/G RATIO	1.1	RATIO	0.7-2.5	
*** CBC ***				
WBC	5.3	K/UL	4.3-10.0	
RBC	3.64	M/UL	4.40-5.80	LOW
HGB	11.5	GM/DL	13.5-16.5	LOW
HCT	34.5	%	40.0-50.0	LOW
MCV	95	FL	80-98	
MCH	31.6	PG	27.0-34.0	
MCHC	33.2	%	32.0-36.0	
RDW	14.9	%	0.0-15.5	
PLATELET	228	K/UL	150-450	
MPV	11.5		8.2-10.0	HIGH
NEUTROPHIL	76	%		
LYMPHOCYTE	14	%		
MONOCYTE	10	%		
EOSINOPHIL	0	%		
BASOPHIL	0	%		
NEUTROPHIL	4.0	K/UL	1.8-7.5	
LYMPHOCYTE	0.7	K/UL	0.8-4.5	LOW
MONOCYTE	0.5	K/UL	0.1-1.5	
EOSINOPHIL	0.0	K/UL	0.0-0.4	
BASOPHIL	0.0	K/UL	0.0-0.5	
*** HEP C bDNA ***				
HCV RNA BDNA	<3200	COPIES		

ANALYTICAL RANGE of the HCV RNA assay:

Copies/ml: 3,200 to 40,000,000

Log Copies: 3.5 to 7.6

IU/ml: 615 to 7,692,308

Log IU: 2.8 to 6.9

The International Unit (IU) is a unit value assigned to the "First

8-23-04 pt satisfied with lab requisition

Not in

Hep C tests ⊖ Good
 OK to stop Pegaseg/Ribavirin
 Repeat same tests in 3 mo.

8/18/2004

International Standard for Nucleic Acid Amplification Technology Assays for HCV RNA" accepted by the WHO Expert Committee on Biological Standardization. The International Standard is a preparation of HCV genotype 1 and is based on results obtained in a variety of assay types.

The quantitative HCV RNA assay is intended for use in patients with an established diagnosis of Hepatitis C. It should NOT be used as a diagnostic test. Results less than the limit of detectability do not imply either the presence or absence of virus.

This patient's result was obtained using the Bayer Diagnostics (Versant) branched-DNA HCV RNA methodology, version 3.0. The U.S. Food and Drug Administration has approved this assay for the quantitation of Hepatitis C viral RNA in the serum or plasma of HCV infected individuals.

HCV RNA LOG CPY	<3.5	LOG
HCV RNA IU	<615	IU/ML
HCV RNA LOG IU	<2.8	LOG IU

Reviewed by:

8/18/2004

PATIENT:
PT NO:
SEX:
AGE:
DOB:
ADMITTING MD:
ORDERING MD:
CONSULTING MD:

Date of Service: 11/29/2004 10:15 P

FINAL REPORT

DEC 02 2004

Test Value Units Range Remark
ACCESSION: OBTAINED: 11/29/2004 04:50 PM REPORTED: 12/01/2004 01:11 PI

*** HEPATIC FUNCTN ***

SGOT/AST	23	U/L	0-44
GPT/ALT	21	U/L	0-44
ALK PHOS	57	U/L	40-129
TOT PROTEIN	7.4	GM/DL	6.3-8.3
ALBUMIN	4.5	GM/DL	3.6-5.0
TOT BILI	.4	MG/DL	.2-1.2
CONJ BILI	.1	MG/DL	.0-.3
GLOBULIN	2.9	GM/DL	2.4-4.4
A/G RATIO	1.6	RATIO	0.7-2.5

*** CBC ***

WBC	7.4	K/UL	4.3-10.0
RBC	5.17	M/UL	4.40-5.80
HGB	15.9	GM/DL	13.5-16.5
HCT	45.6	%	40.0-50.0
MCV	88	FL	80-98
MCH	30.7	PG	27.0-34.0
MCHC	34.8	%	32.0-36.0
RDW	13.5	%	0.0-15.5
PLATELET	206	K/UL	150-450
MPV	9.3		8.2-10.0
NEUTROPHIL	61	%	
LYMPHOCYTE	30	%	
MONOCYTE	8	%	
EOSINOPHIL	1	%	
BASOPHIL	0	%	
NEUTROPHIL	4.5	K/UL	1.8-7.5
LYMPHOCYTE	2.2	K/UL	0.8-4.5
MONOCYTE	0.6	K/UL	0.1-1.5
EOSINOPHIL	0.1	K/UL	0.0-0.4
BASOPHIL	0.0	K/UL	0.0-0.5

*** HEP C bDNA ***

HCV RNA BDNA <3200 COPIES

ANALYTICAL RANGE of the HCV RNA assay:

Copies/ml: 3,200 to 40,000,000
Log Copies: 3.5 to 7.6
IU/ml: 615 to 7,692,308
Log IU: 2.8 to 6.9

The International Unit (IU) is a unit value assigned to the "First

Notify

Good results

Liver tests
NormalHep c test
Non active
nowOk to stop
Peggy / Ribavirin

Notified Patient

Date: 12/03/04 9:45 AM

Mailed pt. lab stop.

Repeat these labs
in 12 wks

12/2/04 @ 2:00

12/1/2004

International Standard for Nucleic Acid Amplification Technology Assays for HCV RNA" accepted by the WHO Expert Committee on Biological Standardization. The International Standard is a preparation of HCV genotype 1 and is based on results obtained in a variety of assay types.

The quantitative HCV RNA assay is intended for use in patients with an established diagnosis of Hepatitis C. It should NOT be used as a diagnostic test. Results less than the limit of detectability do not imply either the presence or absence of virus.

This patient's result was obtained using the Bayer Diagnostics (Versant) branched-DNA HCV RNA methodology, version 3.0. The U.S. Food and Drug Administration has approved this assay for the quantitation of Hepatitis C viral RNA in the serum or plasma of HCV infected individuals.

HCV RNA LOG CPY	<3.5	LOG
HCV RNA IU	<615	IU/ML
HCV RNA LOG IU	<2.8	LOG IU

Reviewed by:

12/1/2004

PATIENT:
PT NO:
SEX:
AGE:
DOB:
ADMITTING MD:
ORDERING MD:
CONSULTING MD:

Date of Service: 03/01/2005 05:22 P

FINAL REPORT

Test	Value	Units	Range	Remark
ACCESSION:	OBTAINED: 03/01/2005 03:00 PM REPORTED: 03/04/2005 11:46 A			

*** HEPATIC FUNCTN ***

SGOT/AST	24	U/L	0-44
GPT/ALT	25	U/L	0-44
ALK PHOS	59	U/L	40-129
TOT PROT	7.8	GM/DL	6.3-8.3
ALBUMIN	4.6	GM/DL	3.6-5.0
TOT BILI	.6	MG/DL	.2-1.2
CONJ BILI	.1	MG/DL	.0-.3
GLOBULIN	3.2	GM/DL	2.4-4.4
A/G RATIO	1.4	RATIO	0.7-2.5

*** CBC ***

WBC	7.9	K/UL	4.3-10.0
RBC	4.90	M/UL	4.40-5.80
HGB	15.0	GM/DL	13.5-16.5
HCT	43.6	%	40.0-50.0
MCV	89	FL	80-98
MCH	30.6	PG	27.0-34.0
MCHC	34.4	%	32.0-36.0
RDW	13.1	%	0.0-15.5
PLATELET	236	K/UL	150-450
MPV	10.0		8.2-10.0
NEUTROPHIL	68	%	
LYMPHOCYTE	23	%	
MONOCYTE	8	%	
EOSINOPHIL	1	%	
BASOPHIL	1	%	
NEUTROPHIL	5.4	K/UL	1.8-7.5
LYMPHOCYTE	1.8	K/UL	0.8-4.5
MONOCYTE	0.6	K/UL	0.1-1.5
EOSINOPHIL	0.1	K/UL	0.0-0.4
BASOPHIL	0.1	K/UL	0.0-0.5

*** HEP C bDNA ***

HCV RNA BDNA <3200 COPIES

ANALYTICAL RANGE of the HCV RNA assay:

Copies/ml: 3,200 to 40,000,000
Log Copies: 3.5 to 7.6
IU/ml: 615 to 7,692,308
Log IU: 2.8 to 6.9

The International Unit (IU) is a unit value assigned to the "First

Notified Patient
Date: 3/8/05 @ 9:35am

03-07-05, 12:55pm LHM for PL, to CIB

3/7/2005

International Standard for Nucleic Acid Amplification Technology Assays for HCV RNA" accepted by the WHO Expert Committee on Biological Standardization. The International Standard is a preparation of HCV genotype 1 and is based on results obtained in a variety of assay types.

The quantitative HCV RNA assay is intended for use in patients with an established diagnosis of Hepatitis C. It should NOT be used as a diagnostic test. Results less than the limit of detectability do not imply either the presence or absence of virus.

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HCV RNA LOG CPY	<3.5	LOG
HCV RNA IU	<615	IU/ML
HCV RNA LOG IU	<2.8	LOG IU

Reviewed by:

3/7/2005

DATA TABULATIONS

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

Table I. Hepatic Tumor Markers

Test	Day	Result		
		Low	Normal	High
<u>Alpha Fetoprotein</u> (0.0-5.5 ng/mL)	95		3	

Table II.
Complete Blood Count with Differential Leukocytes

Test	Day	Result		
		Low	Normal	High
<u>White Blood Cells</u> (WBC) (4.0-10.5 $10^3/\mu\text{L}$)	27		7.2	
	160		6.0	
	187	3.9		
	217	2.9		
	253	3.9		
	313		5.3	
	418		7.4	
	514		7.9	
<u>Red Blood Cells</u> (RBC) (4.38-5.62 $10^6/\mu\text{L}$)	27		5.13	
	160	3.91		
	187	3.82		
	217	3.57		
	253	3.54		
	313	3.64		
	418		5.17	
	514		4.90	
<u>Hemoglobin</u> (13.5-16.9 g/dL)	27		15.8	
	160	12.0		
	187	11.7		
	217	11.2		
	253	11.1		
	313	11.5		
	418		15.9	
	514		15.0	

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

Test	Day	Result		
		Low	Normal	High
<u>Hematocrit</u> (39.5-50.0%)	27		46.3	
	160	34.7		
	187	35.6		
	217	33.3		
	253	33.7		
	313	34.5		
	418		45.6	
	514		43.6	
<u>Mean Corpuscular</u> <u>Volume</u> (MCV) (81.5-97.0 fL)	27		90	
	160		89	
	187		93	
	217		93	
	253		95	
	313		95	
	418		88	
	514		89	
<u>Mean Corpuscular</u> <u>Hemoglobin</u> (MCH) (27.0-33.5 pg)	27		30.9	
	160		30.7	
	187		30.8	
	217		31.5	
	253		31.4	
	313		31.6	
	418		30.7	
	514		30.6	
<u>Mean Corpuscular</u> <u>Hemoglobin Concen-</u> <u>tration</u> (MCHC) (32.0-35.5 g/dL)	27		34.2	
	160		34.6	
	187		32.9	
	217		33.8	
	253		33.0	
	313		33.2	
	418		34.8	
	514		34.4	

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

Test	Day	Result		
		Low	Normal	High
<u>Red Blood Cell Distribution Width</u> (RDW) (11.5-14.5%)	27		12.6	
	160		13.8	
	187			17.9
	217			16.0
	253			15.6
	313			14.9
	418		13.5	
	514		13.1	
<u>Platelets</u> (150-400 10 ³ /μL)	27		249	
	160		199	
	187		180	
	217		189	
	253		210	
	313		228	
	418		206	
	514		236	
<u>Neutrophils</u> (2.0-8.1 10 ³ /μL)	27		4.4	
	160		4.2	
	187		2.6	
	217	1.6		
	253		2.7	
	313		4.0	
	418		4.5	
	514		4.4	
<u>Lymphocytes</u> (0.9-3.3 10 ³ /μL)	27		2.2	
	160		1.3	
	187		1.0	
	217		1.0	
	253	0.8		
	313	0.7		
	418		2.2	
	514		1.8	

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

Test	Day	Result		
		Low	Normal	High
<u>Monocytes</u> (0.0-0.8 10 ³ /μL)	27		0.5	
	160		0.5	
	187		0.3	
	217		0.3	
	253		0.4	
	313		0.5	
	418		0.6	
	514		0.6	
<u>Eosinophils</u> (0.0-0.5 10 ³ /μL)	27		0.1	
	160		0.0	
	187		0.0	
	217		0.0	
	253		0.0	
	313		0.0	
	418		0.1	
	514		0.1	
<u>Basophils</u> (0.0-0.2 10 ³ /μL)	27		0.1	
	160		0.1	
	187		0.0	
	217		0.0	
	253		0.0	
	313		0.0	
	418		0.0	
	514		0.1	

Table III.
Comprehensive Metabolic Panel

Test	Day	Result		
		Low	Normal	High
<u>Sodium</u> (Serum) (135-145 meq/L)	27		140	
<u>Potassium</u> (Serum) (3.3-4.8 meq/L)	27		4.3	
<u>Chlorides</u> (Serum) (101-111 meq/L)	27		106	
<u>Carbon Dioxide</u> (25-34 meq/L)	27	24		
<u>Electrolyte Balance</u> (2-12 meq/L)	27		10	
<u>Glucose</u> (70-115 mg/dL)	1 27	43	93	
<u>Urea Nitrogen</u> (8-26 mg/dL)	1 27		14 11	
<u>Creatinine</u> (0.5-1.3 mg/dL)	1 27		1.0 1.0	

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

Test	Day	Result		
		Low	Normal	High
<u>Calcium</u> (8.4-10.2 mg/dL)	27		10.0	
<u>Protein</u> (Total) (6.1-8.2 g/dL)	1 27 187 217		8.0 7.9 6.9 7.1	
<u>Albumin</u> (3.2-5.5 g/dL)	1 27 187 217		4.6 4.7 4.0 4.1	
<u>Alkaline Phosphatase</u> (26-110 IU/L)	1 27 187 217		71 69 86 87	
<u>Aspartate Aminotrans- ferase/Serum Glutamic Oxaloacetic Trans- Aminase</u> (AST/SGOT) (8-40 IU/L)	1 27 187 217			59 53
<u>Alanine Aminotransferase/ Serum Glutamic-Pyruvic Transaminase</u> (ALT/SGPT) (0-60 IU/L)	1 27 187 217			113 99
			32 31	

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

Test	Day	Result		
		Low	Normal	High
<u>Bilirubin</u> (Total) (0.0-1.4 mg/dL)	1		0.8	
	27		0.8	
	187		0.6	
	217		0.7	

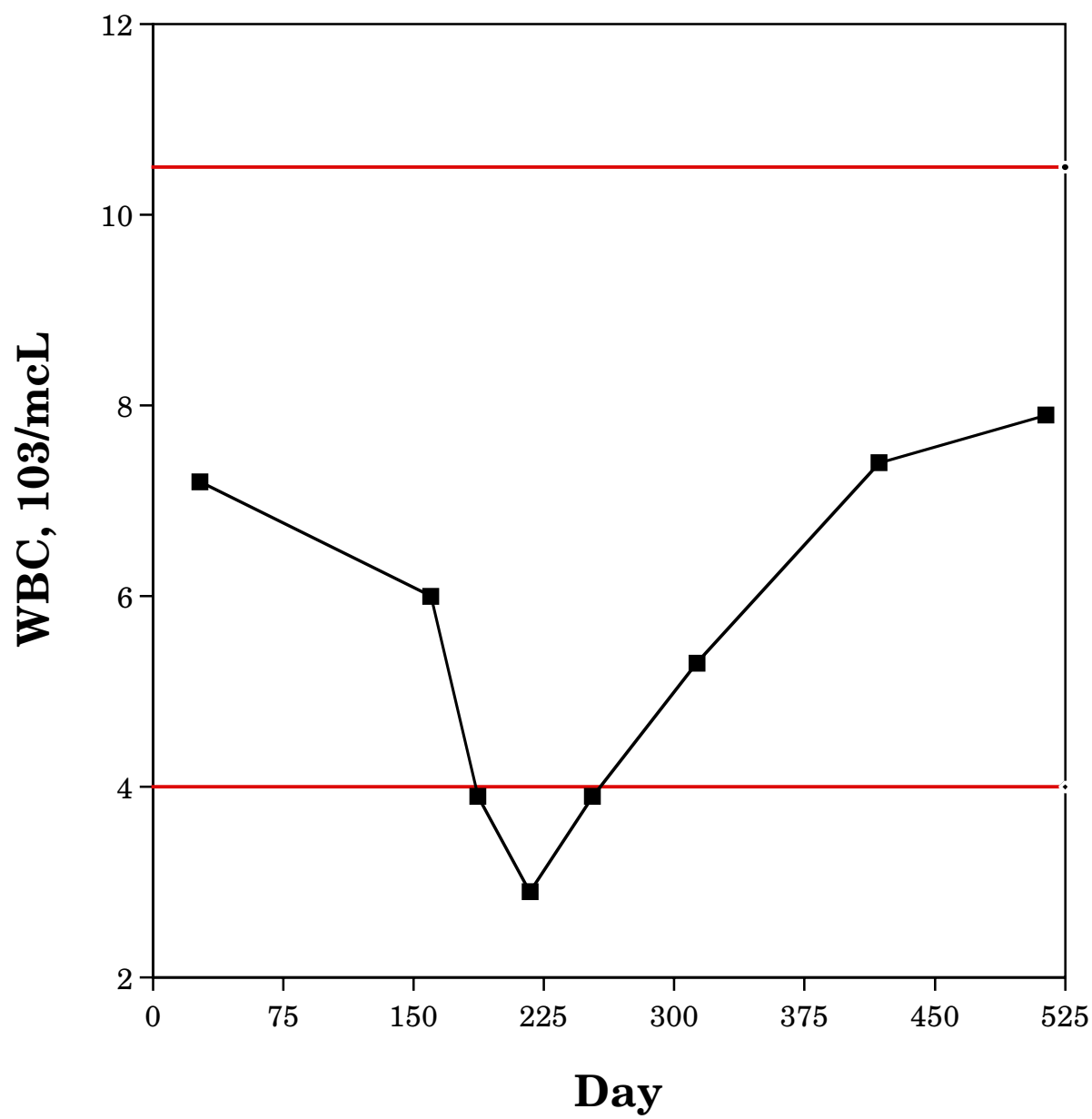
Table IV. Hepatitis C Viral Load

Test	Day	Result		
		Low	Normal	High
Hepatitis C Viral Load (HCV-PCR Quant) (0 IU/mL)	1			pos.
	27			pos.
	50			pos.
	95			37,100
	224		neg.	
	313		neg.	
	418		neg.	
	514		neg.	

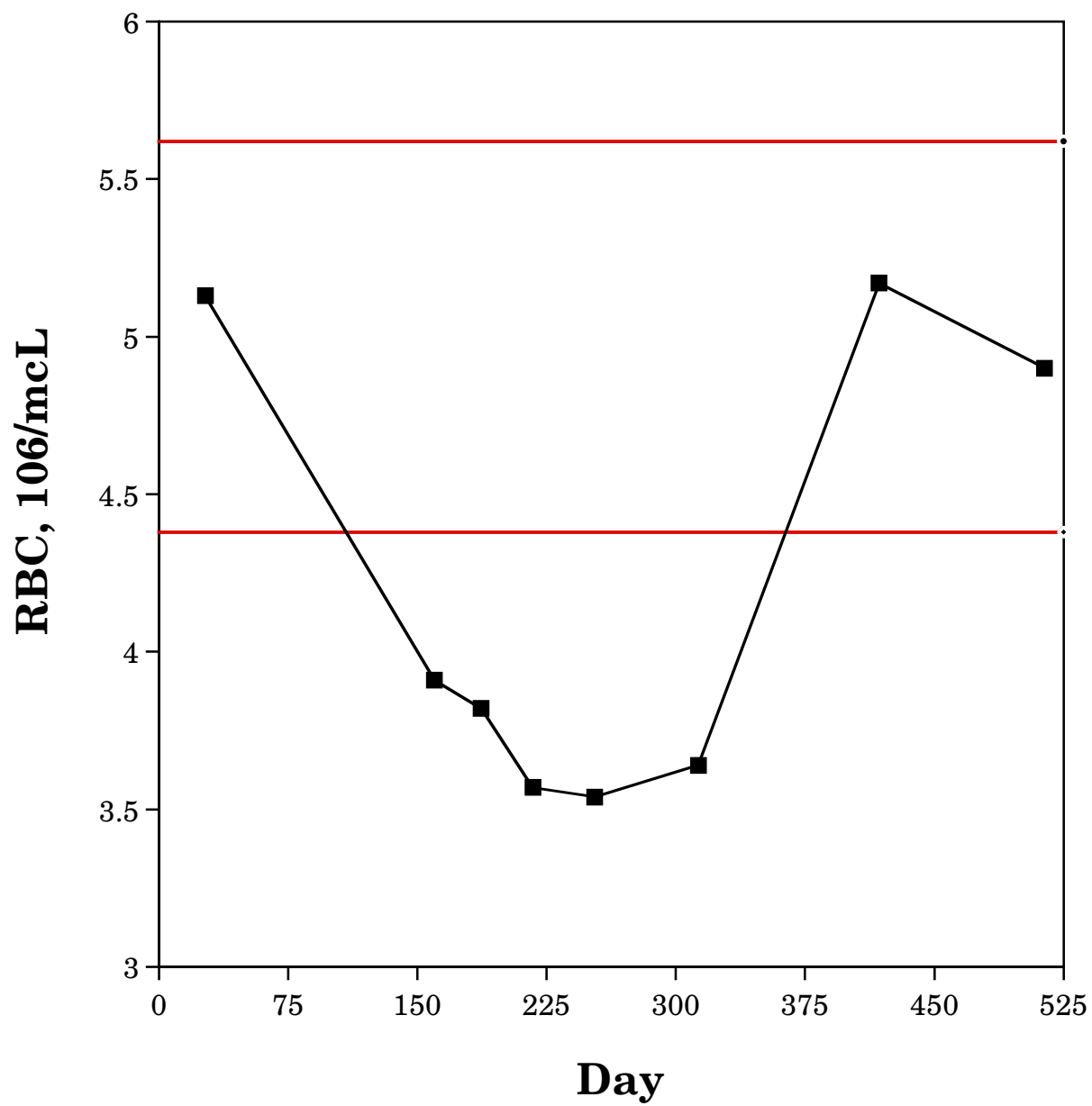
GRAPHICAL PRESENTATION OF SIGNIFICANT DATA

- 1. Complete Blood Count: White Blood Cells (WBC)**
- 2. Complete Blood Count: Red Blood Cells (RBC)**
- 3. Complete Blood Count: Hemoglobin**
- 4. Complete Blood Count: Hematocrit**
- 5. Complete Blood Count: Red Blood Cell Distribution Width (RDW)**
- 6. Comprehensive Metabolic Profile: ALT/SGPT**
- 7. Comprehensive Metabolic Profile: AST/SGOT**
- 8. Hepatitis C Viral Load**

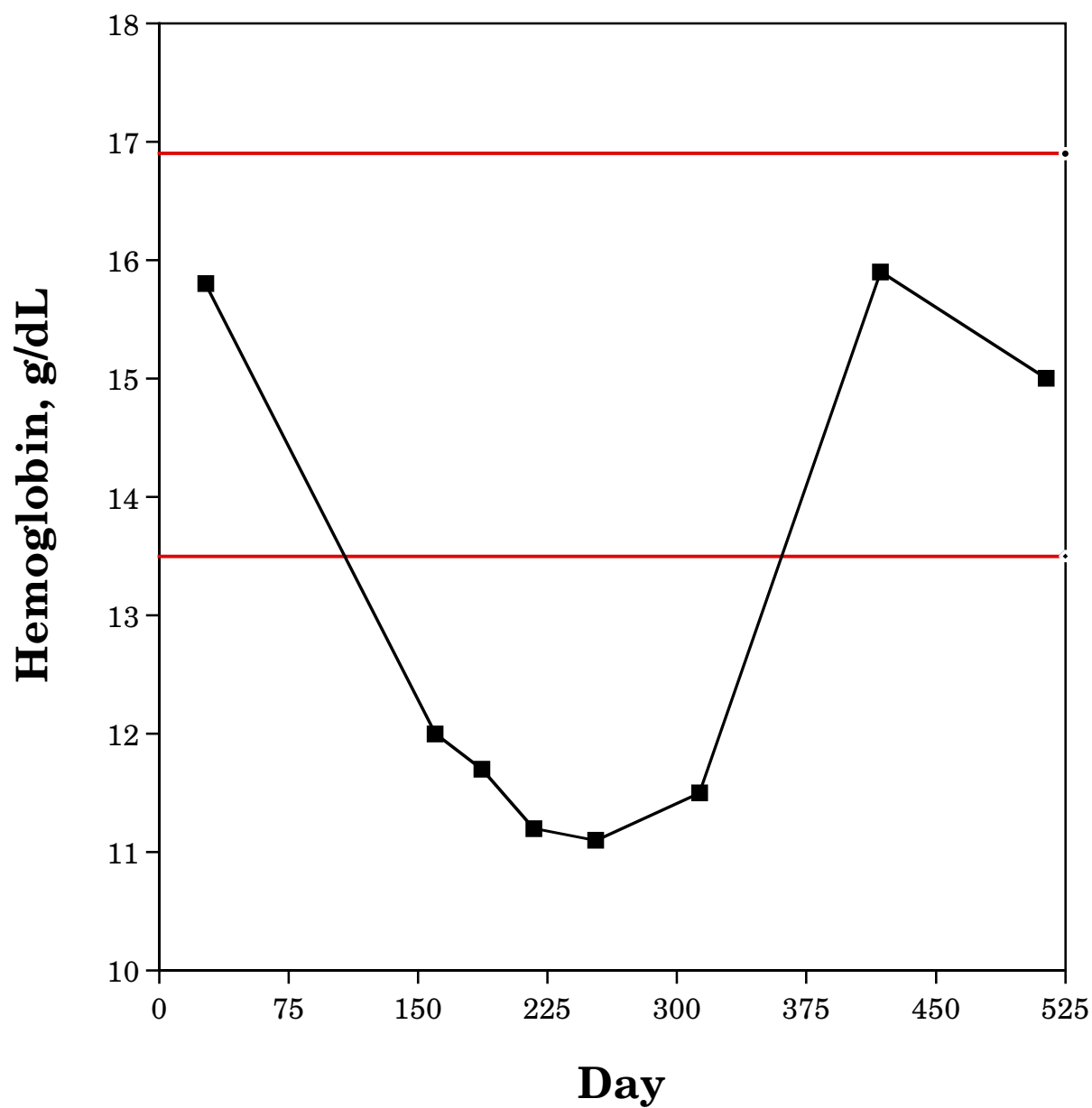
WBC



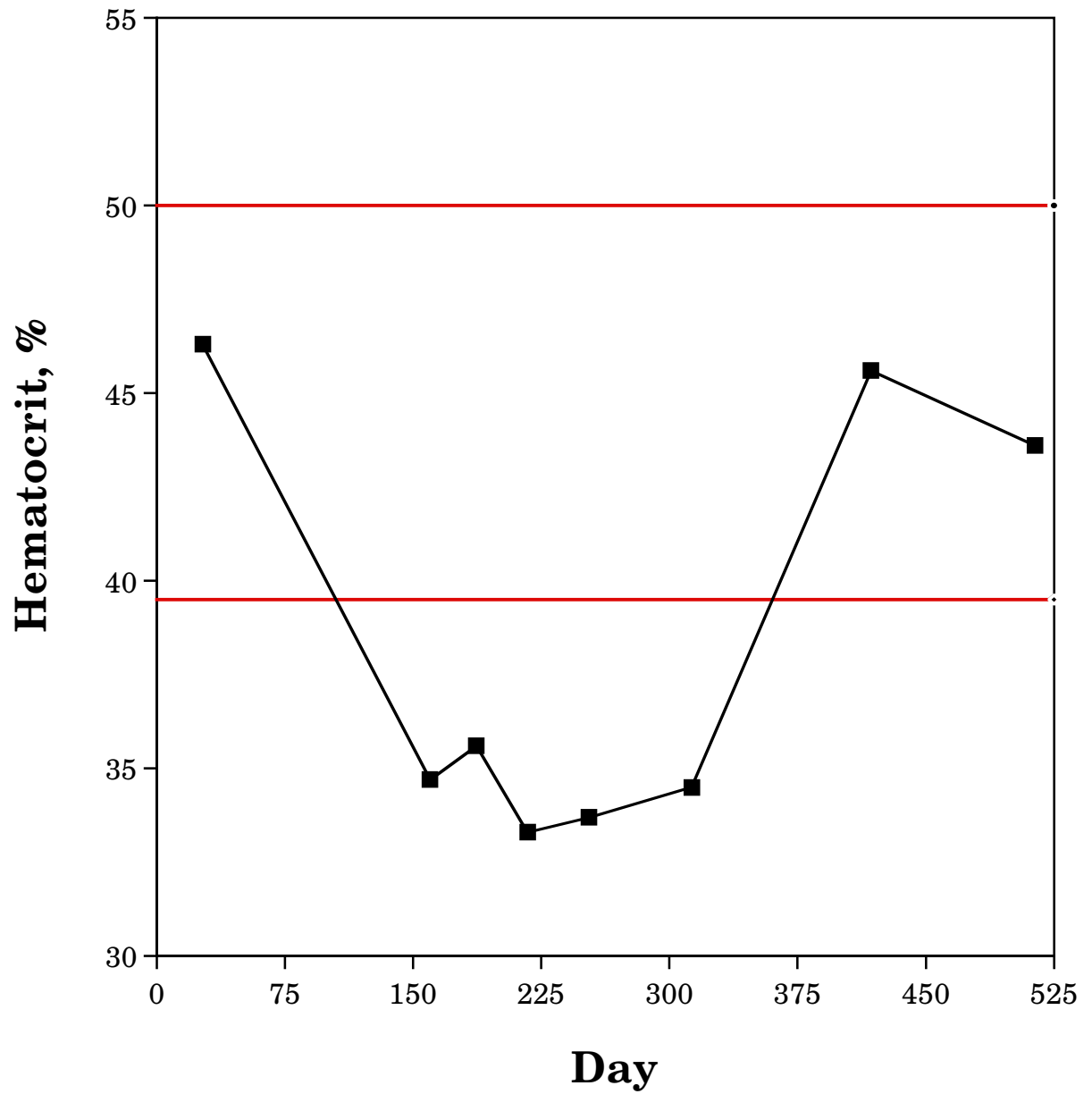
RBC



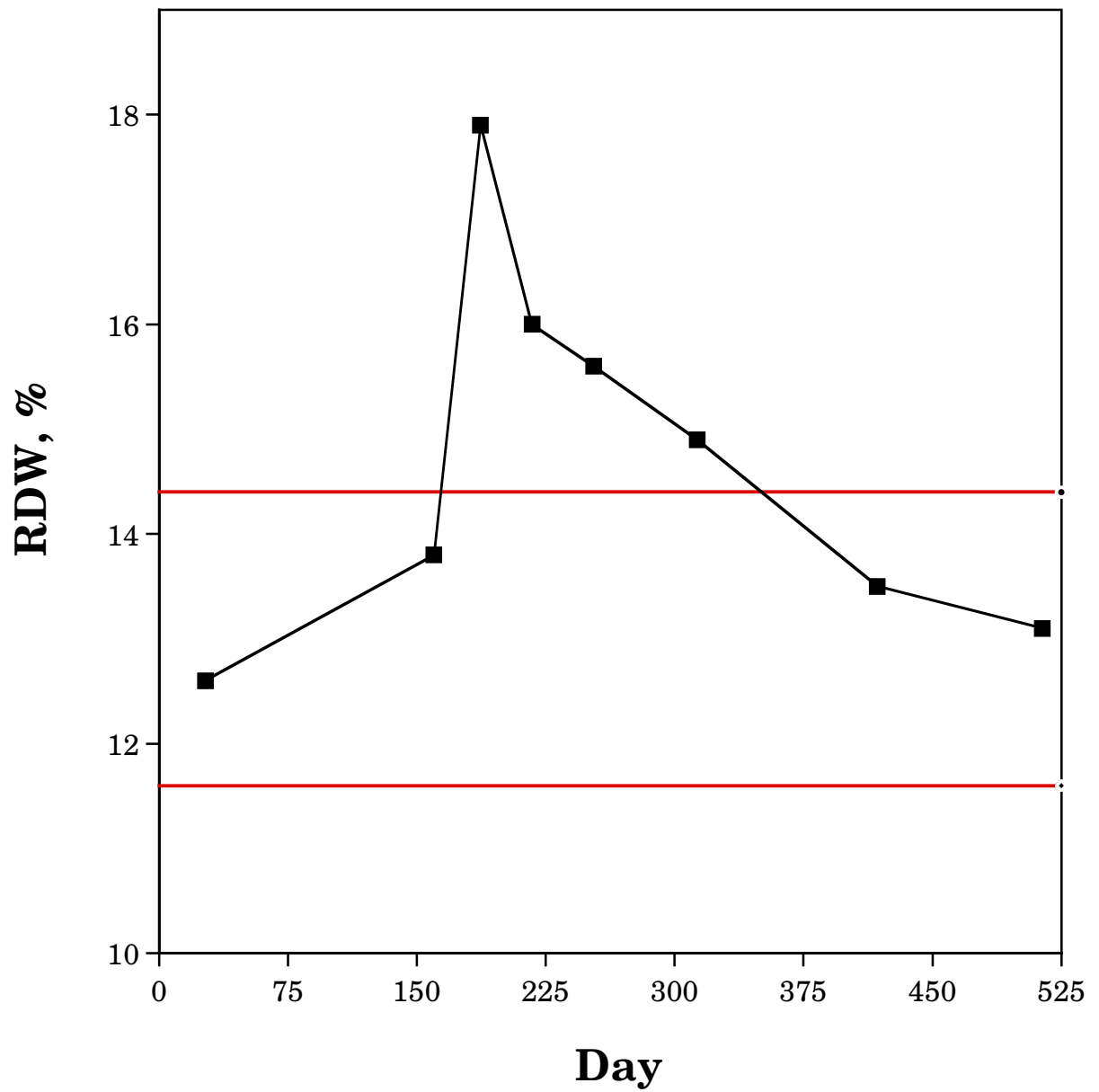
Hemoglobin



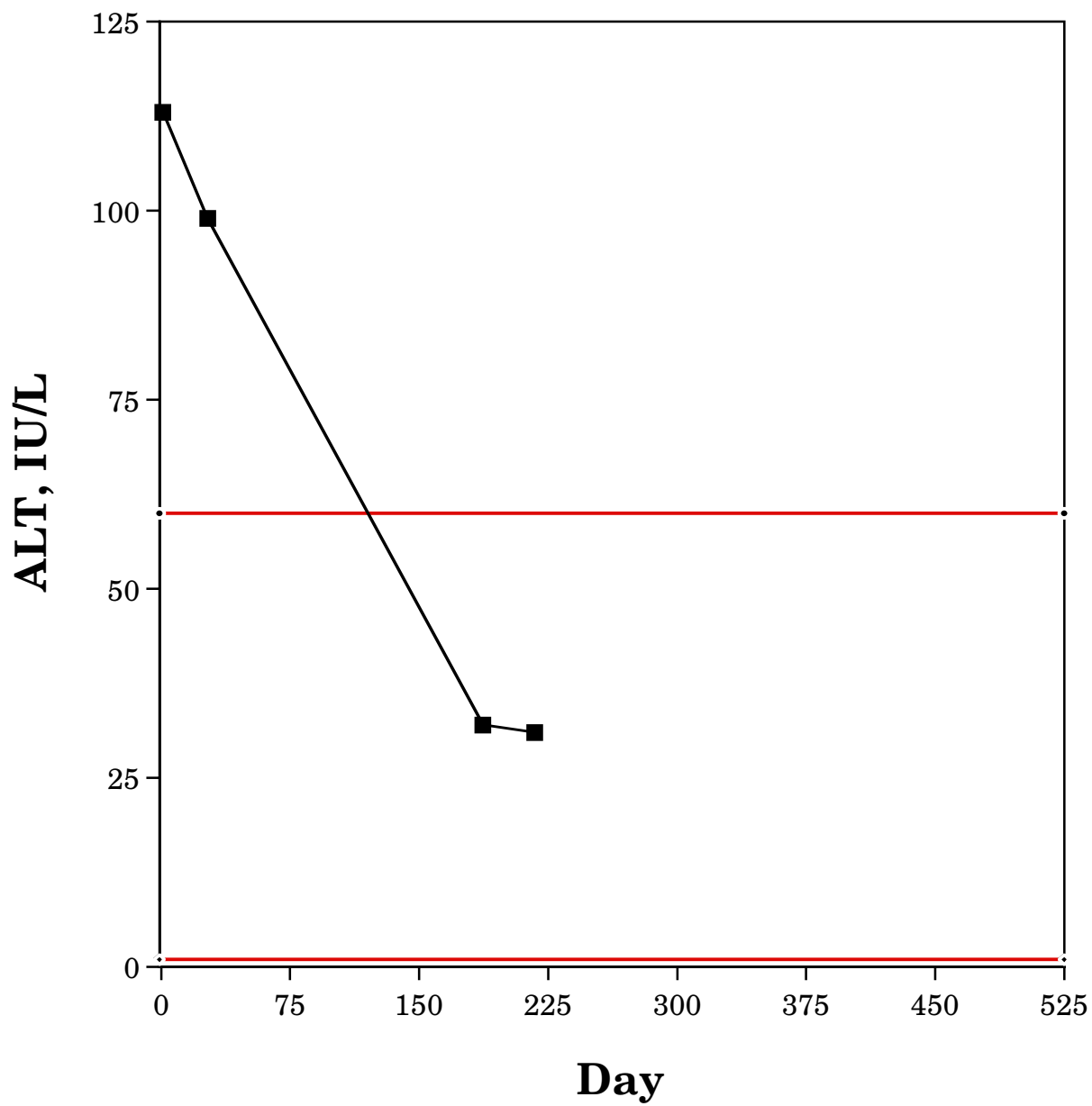
Hematocrit



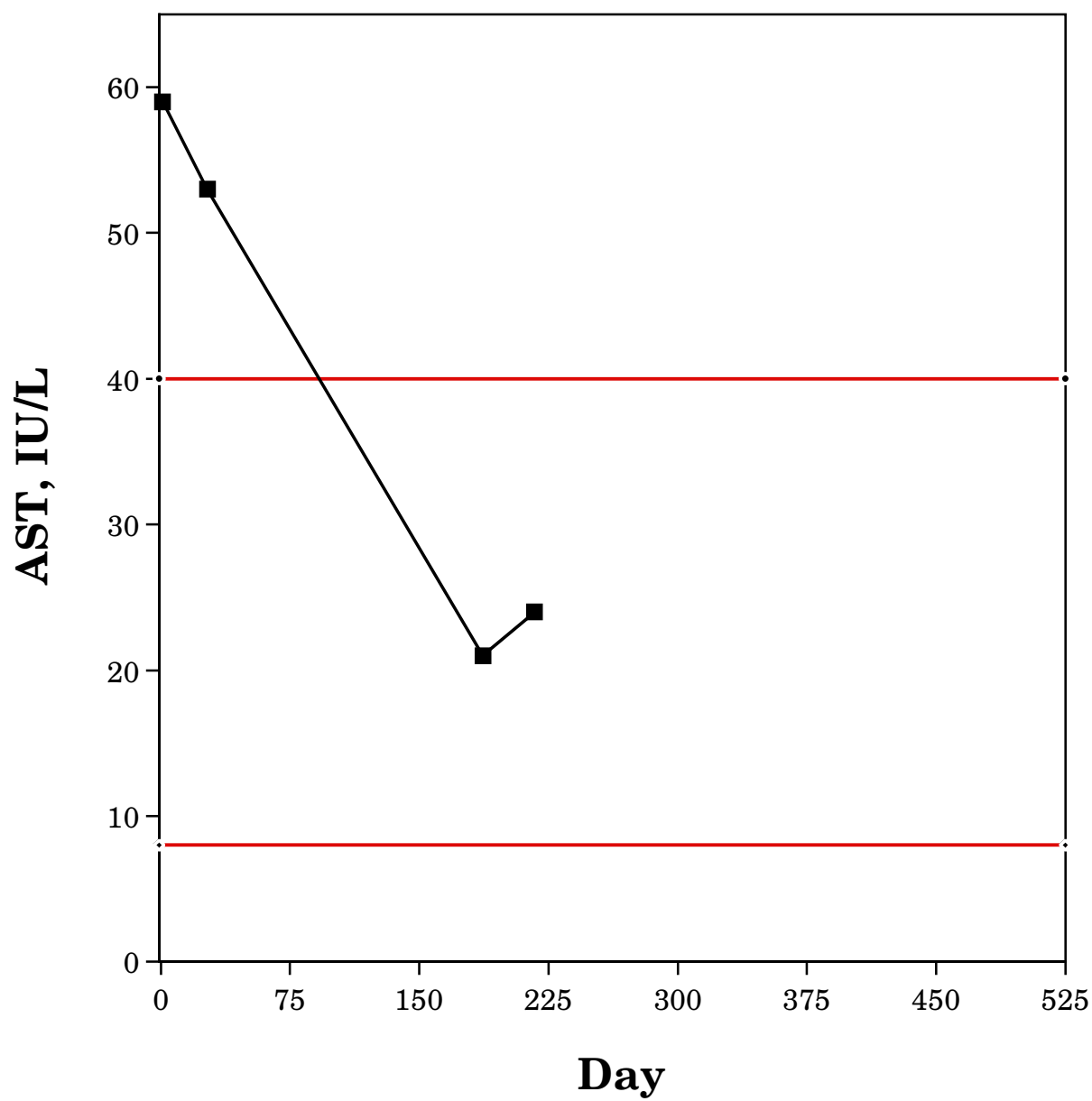
RDW



ALT



AST



HCV

