06/03/2014 - Lab Report: Bilirubin Direct, Iron Binding Capacity Total, Ceruloplasmin ...

Note: All result statuses are Final unless otherwise noted.

Tests: (1) Bilirubin Direct (82248)			
Bili Direct		0.10 mg/dL	0.00-0.30
Tests: (2) Iron Binding Capacity Total (05474EX)			
Iron Lvl		116 mcg/dL	49-181
TIBC		284 mcg/dL	261-462
Iron Sat		41 %	20-55
Tests: (3) Ceruloplasmin (82390)			
! Ceruloplasmin	[L]	18 mg/dL	20-60
Tests: (4) IgA (82784)			
! IgA		232.0 mg/dL	70.0-400.0
Tests: (5) IgG (8278401)			
! IgG		1220 mg/dL	700-1600
Tests: (6) IgM (8278402)			
! IgM		106.0 mg/dL	40.0-230.0
Tests: (7) Ferritin (82728)			
Ferritin Lvl		347.6 ng/mL	28.0-365.0
Tests: (8) Complete Blood Count w/ Differential (85025)			
WBC		5.5 k/uL	4.0-10.8
RBC		4.39 million/uL	4.20-5.50
Hgb		14.2 gm/dL	12.5-16.5
Hct		40.5 %	37.5-49.5
MCV		92.3 FL	81.0-100.0
MCH	[H]	32.3 pg	27.0-31.0
MCHC		35.1 gm/dL	31.0-36.0
RDW		11.7 %	11.5-15.5
Platelet		177 k/uL	145-400
MPV		10.1 FL	7.5-10.4
NRBC auto		0 /100 wbcs	0-2
NRBC Abs		0.0 k/uL	0.0-0.1
Neutro %		51.7 %	43.0-75.0
Neutro Absolute		2.8 k/uL	1.7-8.1
! Imm Gran %	[H]	0.4 %	0.1-0.3
! Imm Gran Absolute		0.02 k/uL	0.01-0.03
Lymph %		35.7 %	15.0-45.0
Lymph Absolute		2.0 k/uL	0.6-4.9
Mono %		9.3 %	3.0-12.0
Monocyte Abs		0.5 k/uL	0.1-1.3
Eos %		2.9 %	0.0-6.0
Eosinophil Abs		0.2 k/uL	0.0-0.7

Basophil %	0.0 %	0.0-2.0
Basophil Abs	0.0 k/uL	0.0-0.2

Tests: (9) Hepatitis B Surface Ag Cntr (8734001)

HBsAg	Non-Reactive	Non-Reactive-

Tests: (10) Smooth Muscle Antibody-Mayo (8625501RF)

! SMA Screen-Mayo	SEE COMMENTS	

Test	Result	Flag	Unit	RefValue
Anti-Smooth Muscle Ab	Negative			Negative

Test Performed by:
Mayo Clinic Laboratories - Rochester Main Campus
200 First Street SW, Rochester, MN 55905
Laboratory Director: Franklin R. Cockerill, III, M.D.

Tests: (11) Mitochondrial Antibody, M2-Mayo (8351625RF)

! AMA Ab Screen-Mayo	SEE COMMENTS	

Test	Result	Flag	Unit	RefValue
Mitochondrial Ab, M2, S	<0.1		U	

-- REFERENCE VALUE --
<0.1 (Negative)

Test Performed by:
Mayo Clinic Laboratories - Rochester Main Campus
200 First Street SW, Rochester, MN 55905
Laboratory Director: Franklin R. Cockerill, III, M.D.

Tests: (12) Hepatitis B Core Ab Total Cntr (8670403)

HBC Total	Non-Reactive	Non-Reactive-

Tests: (13) Hepatitis A Ab Total Cntr (8670802)

HAV Total	Non-Reactive	Non-Reactive-

Tests: (14) PT and INR (85610)

PT	13.7 sec	11.8-14.5
INR	1.1	0.8-1.2

Tests: (15) PTT (85730)

PTT	34.0 sec	23.4-36.2

Tests: (16) Alpha-1-Antitrypsin Phenotype QST (8210401RF)

! A-1-A Phenotype QST	See Comment	

ALPHA-1-ANTITRYPSIN (AAT) PHENOTYPE

--------TESTS--------	RESULTS--------	UNITS--	REF. RANGE---
A-1-Antitrypsin Phenotype	SEE NOTE		

THIS PATIENT'S ALPHA-1-ANTITRYPSIN PHENOTYPE IS PI*MM.

90% of normal individuals have the MM phenotype, with normal quantitative AAT levels. Many phenotypic patterns have been described, including deficiency states with F, S, Z, or other alleles. As a general estimation, compared to M allele of 100% of normal A-1-Antitrypsin protein, the S allele produces approximately 60% and the Z allele 20%. For example, an MS phenotype would have about 80% of normal A-1-Antitrypsin protein level, a 50% contribution from the M allele and 30% from the S allele. A ZZ phenotype would have about 20% of normal levels. The F allele has normal A-1-Antitrypsin levels, but the kinetics of elastase inhibition is not as efficient as an M allele product; F alleles should be considered functionally mildly deficient.
RESULTS RECEIVED 06/05/14
Reference lab accession: 18082632

Test performed by:
Quest Diagnostics Nichols Institute
33608 Ortega Hwy
San Juan Capistrano, CA 92675
Phone: 800-553-5445

Director: Jon M. Nakamoto, M.D.

Test Reported by Quest, Chantilly,
Quest Diagnostics Nichols Institute,
14225 Newbrook Drive, Chantilly, VA 20151

Tests: (17) Tissue Transglutaminase Antibody IgA-May (8351626RF)
! TTG IgA-Mayo SEE COMMENTS

Test	Result	Flag	Unit	RefValue
Tissue Transglutaminase Ab, IgA, S	<1.2		U/mL	

-- REFERENCE VALUE --
<4.0 (Negative)

Test Performed by:
Mayo Clinic Laboratories - Rochester Main Campus
200 First Street SW, Rochester, MN 55905
Laboratory Director: Franklin R. Cockerill, III, M.D.

Tests: (18) Comprehensive Metabolic Panel (80053)

Sodium Lvl	138 mmol/L	137-145
Potassium Lvl	4.1 mmol/L	3.5-5.1
Chloride	106 mmol/L	98-107
CO2	25 mmol/L	22-30
AGAP	7 mmol/L	5-15
Creatinine	0.78 mg/dL	0.66-1.50

Albumin Lvl		4.1 gm/dL	3.5-5.0
Globulin		3.1 gm/dL	1.3-4.7
A/G Ratio		1.3	1.0-3.8
Glucose Lvl Random		94 mg/dL	65-140

Random Glucose Level cannot be used for diagnosis of diabetes. Glucose target in the hospitalized patient is 80-110 before meals and no more than 180 at other times.

BUN		13 mg/dL	9-20
Bili Total		0.6 mg/dL	0.2-1.3
Calcium Lvl		9.5 mg/dL	8.4-10.2
Alk Phos		55 unit/L	38-126
Total Protein		7.2 gm/dL	6.3-8.2
AST		28 unit/L	3-34
ALT	[H]	54 unit/L	15-41

Tests: (19) Hereditary Hemochromatosis QST (02004EXRF)
! Hemochromatosis QST See Comment

DNA MUTATION ANALYSIS
RESULT: HOMOZYGOUS FOR THE H63D MUTATION

INTERPRETATION: DNA testing indicates that this individual is positive for two copies of the H63D mutation in the HFE gene. This individual is negative for the C282Y mutation. Only 1% of individuals with a biochemical diagnosis of hereditary hemochromatosis (HH) have this genotype. This result is consistent with a diagnosis of HH for an individual with clinical evidence of HH. However, this genotype does not predict a diagnosis of HH in an asymptomatic individual, as less than 2% of individuals with this genotype will develop symptoms or clinical evidence of this disorder. Consider genetic counseling and DNA testing for at-risk family members.
W. Christine Spence, Ph.D., FACMG
Director, Molecular Genetics

Hereditary hemochromatosis (HH) is an autosomal recessive disorder of iron metabolism that results in iron overload and potential organ failure. It is one of the most common genetic disorders in individuals of European-Caucasian ancestry, with an estimated carrier frequency of 10%. HH is caused by mutations in the HFE gene. Most individuals with HH (60-90%) are homozygous for the C282Y mutation. A smaller percentage of affected individuals are either compound heterozygous for the C282Y and H63D mutations (3%-8%), or homozygous for the H63D mutation (approximately 1%).

This assay detects the two mutations in the HFE gene, C282Y (NM_000410.2: c.845G>A) and H63D (NM_000410.2: c.187C>G), that are commonly associated with HH. The mutations are detected by multiplex-polymerase chain reaction (PCR) amplification, followed by digestion of the amplification products with the restriction enzymes

Rsal and NlaIII, for the detection of the C282Y and H63D mutations respectively. Fluorescent-labeled restriction fragments are detected by capillary electrophoresis.

This assay does not detect other mutations in the HFE gene that can cause HH. Since genetic variation and other factors can affect the accuracy of direct mutation testing, these results should be interpreted in light of clinical and familial data.

For assistance with interpretation of these results, please contact your local Quest Diagnostics genetic counselor or call 1-866-GENEINFO (436-3463).

This test was developed and its performance characteristics have been determined by Quest Diagnostics Nichols Institute, Chantilly, VA. Performance characteristics refer to the analytical performance of the test.

For more information on this test, go to http://education.questdiagnostics.com/faq/hemochromatos

Test Performed by Quest, Chantilly,
Quest Diagnostics Nichols Institute,
14225 Newbrook Drive, Chantilly, VA 20151
Kenneth Sisco, M.D., Ph.D., Director of Laboratories
(703) 802-6900, CLIA 49D0221801

Tests: (20) .GFR (00783NB)
GFR African American >60 mL/min/1.73 m2
Below 60 mL/min/1.73m2 - the prevalance of complications of CKD increases. GFR declines with age.
Calculation in use for the GFR result is the MDRD (Modification of Diet in Renal Disease) equation from the National Kidney Foundation.
GFR Non African American >60 mL/min/1.73 m2
Below 60 mL/min/1.73m2 - the prevalance of complications of CKD increases. GFR declines with age.
Calculation in use for the GFR result is the MDRD (Modification of Diet in Renal Disease) equation from the National Kidney Foundation.

Note: An exclamation mark (!) indicates a result that was not dispersed into the flowsheet.
Document Creation Date: 06/06/2014 8:09 AM

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(1) Order result status: Final
Collection or observation date-time: 06/03/2014 12:05:00
Requested date-time: 06/03/2014 12:05:00
Receipt date-time: 06/03/2014 12:40:00
Reported date-time: 06/03/2014 13:06:21

Reported date-time: 06/05/2014 20:52:00
Referring Physician:
Ordering Physician: Rohit Satoskar (RSS8)
Specimen Source:
Source: Millennium
Filler Order Number: 2012845569
Lab site:
Producer ID *61:QUEST CONTRIBUTOR_SYSTEM

(20) Order result status: Corrected
Collection or observation date-time: 06/03/2014 12:05:00
Requested date-time: 06/03/2014 12:05:00
Receipt date-time: 06/03/2014 12:40:00
Reported date-time: 06/03/2014 13:06:32
Referring Physician:
Ordering Physician: Rohit Satoskar (RSS8)
Specimen Source:
Source: Millennium
Filler Order Number: 2013027212
Lab site:
Producer ID *62:SYSTEM SYSTEM SYSTEM
Producer ID *63:SYSTEM SYSTEM SYSTEM

The following lab values were dispersed to the flowsheet
with no units conversion:

RBC, 4.39 MILLION/UL, (F) expected units: 10*6/mm3
MCHC, 35.1 GM/DL, (F) expected units: %
Alk Phos, 55 UNIT/L, (F) expected units: U/L
AST, 28 UNIT/L, (F) expected units: U/L
ALT, 54 UNIT/L, (F) expected units: U/L

The following non-numeric lab results were dispersed to
the flowsheet even though numeric results were expected:

GFR African American, >60
GFR Non African American, >60

The following results were not dispersed to the flowsheet:

Ceruloplasmin, 18 mg/dL, (F)
IgA, 232.0 mg/dL, (F)
IgG, 1220 mg/dL, (F)
IgM, 106.0 mg/dL, (F)
Imm Gran %, 0.4 %, (F)
Imm Gran Absolute, 0.02 k/uL, (F)
SMA Screen-Mayo, SEE COMMENTS, (F)
AMA Ab Screen-Mayo, SEE COMMENTS, (F)

A-1-A Phenotype QST, See Comment, (F)
TTG IgA-Mayo, SEE COMMENTS, (F)
Hemochromatosis QST, See Comment, (F)

Electronically Signed by Adam C Deising MD on 06/09/2014 at 3:26 PM