02/08/2019 04:36:46 AM

**Report Status: Final - Courtesy Copy**

[redacted]

| Patient Information | Specimen Information | Client Information |
|---|---|---|
| [redacted]<br>**DOB: 11/16/1979 AGE: 39**<br>Gender: M Fasting: Y<br>Phone: 310.710.9176<br>Patient ID: 11161979JN<br>Health ID: 8573017617743871 | Specimen: EN029092M<br>Requisition: 0000504<br><br>Collected: 01/31/2019 / 09:04 PST<br>Received: 02/01/2019 / 06:38 PST<br>Faxed: 02/08/2019 / 04:30 PST | Client #: 90403473 MAIL0000<br>[redacted]<br>2701 OCEAN PARK BLVD STE 119<br>SANTA MONICA, CA 90405-5213 |

**COMMENTS:** FASTING:YES

| Test Name | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| LIPID PANEL, STANDARD | | | | |
| **CHOLESTEROL, TOTAL** | | **252 H** | <200 mg/dL | EN |
| **HDL CHOLESTEROL** | | **34 L** | >40 mg/dL | EN |
| TRIGLYCERIDES | 91 | | <150 mg/dL | EN |
| **LDL-CHOLESTEROL** | | **197 H** | mg/dL (calc) | EN |

LDL-C levels > or = 190 mg/dL may indicate familial hypercholesterolemia (FH). Clinical assessment and measurement of blood lipid levels should be considered for all first degree relatives of patients with an FH diagnosis.
For questions about testing for familial hypercholesterolemia, please call Quest Genomics Client Services at 1.866.GENE.INFO.
Jacobson T, et al. J National Lipid Association Recommendations for Patient-Centered Management of Dyslipidemia: Part 1 Journal of Clinical Lipidology 2015;9(2), 129-169.
Reference range: <100

Desirable range <100 mg/dL for primary prevention; <70 mg/dL for patients with CHD or diabetic patients with > or = 2 CHD risk factors.

LDL-C is now calculated using the Martin-Hopkins calculation, which is a validated novel method providing better accuracy than the Friedewald equation in the estimation of LDL-C.
Martin SS et al. JAMA. 2013;310(19): 2061-2068
(http://education.QuestDiagnostics.com/faq/FAQ164)

| | | | | |
|---|---|---|---|---|
| **CHOL/HDLC RATIO** | | **7.4 H** | <5.0 (calc) | EN |
| **NON HDL CHOLESTEROL** | | **218 H** | <130 mg/dL (calc) | EN |

For patients with diabetes plus 1 major ASCVD risk factor, treating to a non-HDL-C goal of <100 mg/dL (LDL-C of <70 mg/dL) is considered a therapeutic option.

| | | | | |
|---|---|---|---|---|
| COMPREHENSIVE METABOLIC PANEL | | | | EN |
| GLUCOSE | 74 | | 65-99 mg/dL<br>Fasting reference interval | |
| UREA NITROGEN (BUN) | 10 | | 7-25 mg/dL | |
| CREATININE | 0.92 | | 0.60-1.35 mg/dL | |
| eGFR NON-AFR. AMERICAN | 104 | | > OR = 60 mL/min/1.73m2 | |
| eGFR AFRICAN AMERICAN | 121 | | > OR = 60 mL/min/1.73m2 | |
| BUN/CREATININE RATIO | NOT APPLICABLE | | 6-22 (calc) | |
| SODIUM | 138 | | 135-146 mmol/L | |
| POTASSIUM | 4.8 | | 3.5-5.3 mmol/L | |
| CHLORIDE | 101 | | 98-110 mmol/L | |
| CARBON DIOXIDE | 25 | | 20-32 mmol/L | |
| CALCIUM | 10.1 | | 8.6-10.3 mg/dL | |
| PROTEIN, TOTAL | 7.8 | | 6.1-8.1 g/dL | |

[redacted]

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|---|---|---|---|---|
| ALBUMIN | 5.0 | | 3.6-5.1 g/dL | |
| GLOBULIN | 2.8 | | 1.9-3.7 g/dL (calc) | |
| ALBUMIN/GLOBULIN RATIO | 1.8 | | 1.0-2.5 (calc) | |
| BILIRUBIN, TOTAL | 0.7 | | 0.2-1.2 mg/dL | |
| **ALKALINE PHOSPHATASE** | | **32 L** | 40-115 U/L | |
| AST | 40 | | 10-40 U/L | |
| ALT | 42 | | 9-46 U/L | |
| HEMOGLOBIN A1c | 5.3 | | <5.7 % of total Hgb | EN |

For the purpose of screening for the presence of diabetes:

| | |
|---|---|
| <5.7% | Consistent with the absence of diabetes |
| 5.7-6.4% | Consistent with increased risk for diabetes (prediabetes) |
| > or =6.5% | Consistent with diabetes |

This assay result is consistent with a decreased risk of diabetes.

Currently, no consensus exists regarding use of hemoglobin A1c for diagnosis of diabetes in children.

According to American Diabetes Association (ADA) guidelines, hemoglobin A1c <7.0% represents optimal control in non-pregnant diabetic patients. Different metrics may apply to specific patient populations. Standards of Medical Care in Diabetes(ADA).

| | | | | |
|---|---|---|---|---|
| GGT | 21 | | 3-90 U/L | EN |
| TSH | 1.67 | | 0.40-4.50 mIU/L | EN |
| T4 (THYROXINE), TOTAL | 7.3 | | 4.9-10.5 mcg/dL | EN |
| T4, FREE | 1.3 | | 0.8-1.8 ng/dL | EN |
| T3, FREE | 3.1 | | 2.3-4.2 pg/mL | EN |
| T3, TOTAL | 79 | | 76-181 ng/dL | EN |
| IGF 1, LC/MS | 144 | | 53-331 ng/mL | EZ |
| Z SCORE (MALE) | 0.0 | | -2.0 - +2.0 SD | |

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Nichols Institute San Juan Capistrano. It has not been cleared or approved by FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

DIHYDROTESTOSTERONE EZ

| | | | |
|---|---|---|---|
| **DIHYDROTESTOSTERONE, LC/MS/MS** | | **<5 L** | 16-79 ng/dL |

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| Test Name | In Range | Out Of Range | Reference Range | Lab |
|---|---|---|---|---|
| CBC (INCLUDES DIFF/PLT) | | | | EN |
| WHITE BLOOD CELL COUNT | 6.2 | | 3.8-10.8 Thousand/uL | |
| RED BLOOD CELL COUNT | 5.31 | | 4.20-5.80 Million/uL | |
| HEMOGLOBIN | 16.0 | | 13.2-17.1 g/dL | |
| HEMATOCRIT | 46.7 | | 38.5-50.0 % | |
| MCV | 87.9 | | 80.0-100.0 fL | |
| MCH | 30.1 | | 27.0-33.0 pg | |
| MCHC | 34.3 | | 32.0-36.0 g/dL | |
| RDW | 12.9 | | 11.0-15.0 % | |
| PLATELET COUNT | 350 | | 140-400 Thousand/uL | |
| MPV | 9.3 | | 7.5-12.5 fL | |
| ABSOLUTE NEUTROPHILS | 3912 | | 1500-7800 cells/uL | |
| ABSOLUTE LYMPHOCYTES | 1500 | | 850-3900 cells/uL | |
| ABSOLUTE MONOCYTES | 484 | | 200-950 cells/uL | |
| ABSOLUTE EOSINOPHILS | 242 | | 15-500 cells/uL | |
| ABSOLUTE BASOPHILS | 62 | | 0-200 cells/uL | |
| ABSOLUTE NUCLEATED RBC | 0 | | 0 cells/uL | |
| NEUTROPHILS | 63.1 | | % | |
| LYMPHOCYTES | 24.2 | | % | |
| MONOCYTES | 7.8 | | % | |
| EOSINOPHILS | 3.9 | | % | |
| BASOPHILS | 1.0 | | % | |
| DHEA, UNCONJUGATED | 175 | | 147-1760 ng/dL | EZ |

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| | | | | |
|---|---|---|---|---|
| DHEA SULFATE | 357 | | 106-464 mcg/dL | EN |
| PROLACTIN | 4.5 | | 2.0-18.0 ng/mL | EN |
| ESTRADIOL | 16 | | < OR = 39 pg/mL | EN |

Reference range established on post-pubertal patient population. No pre-pubertal reference range established using this assay. For any patients for whom low Estradiol levels are anticipated (e.g. males, pre-pubertal children and hypogonadal/post-menopausal females), the Quest Diagnostics Nichols Institute Estradiol, Ultrasensitive, LCMSMS assay is recommended (order code 30289).

Please note: patients being treated with the drug fulvestrant (Faslodex(R)) have demonstrated significant interference in immunoassay methods for estradiol measurement. The cross reactivity could lead to falsely elevated estradiol test results leading to an inappropriate clinical assessment of estrogen status. Quest Diagnostics order code 30289-Estradiol, Ultrasensitive LC/MS/MS demonstrates negligible cross reactivity with fulvestrant.

| | | | | |
|---|---|---|---|---|
| PSA, TOTAL | 0.6 | | < OR = 4.0 ng/mL | EN |

The total PSA value from this assay system is standardized against the WHO standard. The test result will be approximately 20% lower when compared

Diagnostics

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| to the equimolar-standardized total PSA (Beckman Coulter). Comparison of serial PSA results should be interpreted with this fact in mind.<br><br>This test was performed using the Siemens chemiluminescent method. Values obtained from different assay methods cannot be used interchangeably. PSA levels, regardless of value, should not be interpreted as absolute evidence of the presence or absence of disease. | | | | |
| MAGNESIUM, RBC | 5.3 | | 4.0-6.4 mg/dL | SLI |
| This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Nichols Institute Valencia. It has not been cleared or approved by the US Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. | | | | |
| TESTOSTERONE, FREE (DIALYSIS) AND TOTAL,MS | | | | SLI |
| **TESTOSTERONE, TOTAL, MS** | | **81 L** | 250-1100 ng/dL | |
| **TESTOSTERONE, FREE** | | **17.2 L** | 35.0-155.0 pg/mL | |
| **Data from J Clin Invest 1974:53:819-828 and J Clin Endocrinol Metab 1973;36:1132-1142. Men with clinically significant hypogonadal symptoms and testosterone values repeatedly in the range of the 200-300 ng/dL or less, may benefit from testosterone treatment after adequate risk and benefits counseling.<br><br>For additional information, please refer to http://education.questdiagnostics.com/faq/FAQ165 (This link is being provided for informational/ educational purposes only.)<br><br>This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Nichols Institute Valencia. It has not been cleared or approved by the US Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. | | | | |

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Endocrinology

| Test Name | Result | Reference Range | Lab |
|---|---|---|---|
| VITAMIN D,25-OH,TOTAL,IA | 18 L | 30-100 ng/mL | EN |

Vitamin D Status 25-OH Vitamin D:

Deficiency: <20 ng/mL
Insufficiency: 20 - 29 ng/mL
Optimal: > or = 30 ng/mL

For 25-OH Vitamin D testing on patients on D2-supplementation and patients for whom quantitation of D2 and D3 fractions is required, the QuestAssureD(TM) 25-OH VIT D, (D2,D3), LC/MS/MS is recommended: order code 92888 (patients >2yrs).

For more information on this test, go to: http://education.questdiagnostics.com/faq/FAQ163 (This link is being provided for informational/ educational purposes only.)

Physician Comments:

**PERFORMING SITE:**

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EZ QUEST DIAGNOSTICS/NICHOLS SFC, 33608 ORTEGA HWY, SAN JUAN CAPISTRANO, CA 92675-2042 Laboratory Director: IRINA MARAMICA,MD,PHD,MBA, CLIA: 05D0643352
SLI QUEST DIAGNOSTICS NICHOLS VALENCIA, 27027 TOURNEY ROAD, VALENCIA, CA 91355-5386 Laboratory Director: JON M NAKAMOTO,MD,PHD, CLIA: 05D0550302