**HEMATOLOGY**

**CBC WITH DIFFERENTIAL**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC</td>
<td>6.5</td>
<td>4.0-11.0</td>
<td>10(3)/uL</td>
<td></td>
</tr>
<tr>
<td>RBC</td>
<td>4.5</td>
<td>3.9-5.0</td>
<td>10(6)/uL</td>
<td></td>
</tr>
<tr>
<td>HEMOGLOBIN</td>
<td>12.4</td>
<td>11.9-15.5</td>
<td>g/dL</td>
<td></td>
</tr>
<tr>
<td>HEMATOCRIT</td>
<td>38.0</td>
<td>35.0-45.0</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>MCV</td>
<td>84.8</td>
<td>80-99</td>
<td>fL</td>
<td></td>
</tr>
<tr>
<td>MCH</td>
<td>28</td>
<td>25-33</td>
<td>pg</td>
<td></td>
</tr>
<tr>
<td>MCHC</td>
<td>33</td>
<td>31-35</td>
<td>g/dL</td>
<td></td>
</tr>
<tr>
<td>RDWSD</td>
<td>40.6</td>
<td>37.0-49.2</td>
<td>fL</td>
<td></td>
</tr>
<tr>
<td>RDWCV</td>
<td>13.2</td>
<td>11.0-15.5</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>PLT</td>
<td>221</td>
<td>150-450</td>
<td>10(3)/uL</td>
<td></td>
</tr>
<tr>
<td>MPV</td>
<td>10.1</td>
<td>9.7-13.0</td>
<td>fL</td>
<td></td>
</tr>
<tr>
<td>NE#</td>
<td>3.00</td>
<td>1.40-6.51</td>
<td>10(3)/uL</td>
<td></td>
</tr>
<tr>
<td>LY#</td>
<td>2.43</td>
<td>0.57-3.97</td>
<td>10(3)/uL</td>
<td></td>
</tr>
<tr>
<td>MO#</td>
<td>0.83</td>
<td>0.22-0.93</td>
<td>10(3)/uL</td>
<td></td>
</tr>
<tr>
<td>EO#</td>
<td>0.08</td>
<td>0.00-0.39</td>
<td>10(3)/uL</td>
<td></td>
</tr>
<tr>
<td>IG#</td>
<td>0.13 H</td>
<td>0.00-0.03</td>
<td>10(3)/uL</td>
<td></td>
</tr>
<tr>
<td>NE%</td>
<td>46.00</td>
<td>38.66-74.15</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>LY%</td>
<td>37</td>
<td>19-53</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>MO%</td>
<td>12.7 H</td>
<td>2.0-12.5</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>EO%</td>
<td>1.2</td>
<td>0-7</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>BA%</td>
<td>0.8</td>
<td>0-2</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>IG%</td>
<td>2.00 H</td>
<td>0.00-0.50</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

**ESR**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESR</td>
<td>1</td>
<td>&lt;=20</td>
<td>mm/hr</td>
<td></td>
</tr>
</tbody>
</table>

**CHEMISTRY**

**CMP (COMPREHENSIVE METABOLIC PANEL)**

**GLUCOSE FASTING, SERUM**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLUCOSE</td>
<td>64 L</td>
<td>65-99</td>
<td>mg/dL</td>
<td></td>
</tr>
</tbody>
</table>

**SODIUM, SERUM**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM</td>
<td>137</td>
<td>132-146</td>
<td>mEq/L</td>
<td></td>
</tr>
</tbody>
</table>

**POTASSIUM, SERUM**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>POTA</td>
<td>note.0</td>
<td></td>
<td>mEq/L</td>
<td></td>
</tr>
</tbody>
</table>

**CHLORIDE, SERUM**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHLORIDE</td>
<td>104</td>
<td>99-109</td>
<td>mEq/L</td>
<td></td>
</tr>
</tbody>
</table>

**CARBON DIOXIDE**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>25</td>
<td>22-35</td>
<td>mEq/L</td>
<td></td>
</tr>
</tbody>
</table>

**ANION GAP**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANION GAP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BLOOD UREA NITROGEN**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUN</td>
<td>11</td>
<td>9-23</td>
<td>mg/dL</td>
<td></td>
</tr>
</tbody>
</table>
**CHEMISTRY (Continued)**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATININE, SERUM</td>
<td>0.80</td>
<td>0.50-1.10</td>
<td>mg/dL</td>
<td></td>
</tr>
<tr>
<td>BUN/CREATININE RATIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUN/CREATININE RATIO is not reported when the BUN and Creatinine values are within the normal range.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CALCIUM, SERUM</td>
<td>9.1</td>
<td>8.3-10.6</td>
<td>mg/dL</td>
<td></td>
</tr>
<tr>
<td>TOTAL PROTEIN</td>
<td>7.1</td>
<td>5.7-8.2</td>
<td>g/dL</td>
<td></td>
</tr>
<tr>
<td>ALBUMIN</td>
<td>4.8</td>
<td>3.2-4.8</td>
<td>g/dL</td>
<td></td>
</tr>
<tr>
<td>GLOBULIN</td>
<td>2.3</td>
<td>1.8-4</td>
<td>g/dL</td>
<td></td>
</tr>
<tr>
<td>A/G RATIO</td>
<td>2.09</td>
<td>1.00-2.10</td>
<td>g/dl</td>
<td></td>
</tr>
<tr>
<td>BILIRUBIN, TOTAL</td>
<td>1.6</td>
<td>0.3-1.2</td>
<td>mg/dL</td>
<td></td>
</tr>
<tr>
<td>ALKALINE PHOSPHATASE, ALP</td>
<td>66</td>
<td>45-129</td>
<td>U/L</td>
<td></td>
</tr>
<tr>
<td>ALT (SGPT)</td>
<td>19</td>
<td>10-49</td>
<td>U/L</td>
<td></td>
</tr>
<tr>
<td>AST</td>
<td>30</td>
<td>14-34</td>
<td>U/L</td>
<td></td>
</tr>
<tr>
<td>EGFR NON AFR AMERICAN</td>
<td>95</td>
<td>&gt;=60</td>
<td>mL/min/1.73m</td>
<td></td>
</tr>
<tr>
<td>EGFR AFR AMERICAN</td>
<td>115</td>
<td>&gt;=60</td>
<td>mL/min/1.73m</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BILIRUBIN, DIRECT</td>
<td>0.4</td>
<td>0.1-0.4</td>
<td>mg/dL</td>
<td></td>
</tr>
<tr>
<td>MAGNESIUM, SERUM</td>
<td>2.2</td>
<td>1.3-2.7</td>
<td>mg/dL</td>
<td></td>
</tr>
<tr>
<td>MAGNESIUM, RBC</td>
<td>4.0</td>
<td>*1</td>
<td></td>
<td>mg/dL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.0-6.4</td>
<td>mg/dL</td>
<td></td>
</tr>
</tbody>
</table>

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Nichols Institute Chantilly, VA. It has not been cleared or approved by the U.S. Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

This test was performed at:
Quest Diagnostics Nichols Institute Chantilly
14225 Newbrook Drive
Chantilly, VA 20151

URIC ACID
**CHEMISTRY (Continued)**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>URIC ACID</td>
<td>4.7</td>
<td>3.1–7.8</td>
<td>mg/dL</td>
<td></td>
</tr>
<tr>
<td>PHOSPHATE (PHOSPHORUS)</td>
<td>3.8</td>
<td>2.4–5.1</td>
<td>mg/dL</td>
<td></td>
</tr>
</tbody>
</table>

**HOMOCYSTEINE**

*HOMOCYSTEINE* 15.1 \( H \) 3.7–13.9 \( \text{umol/L} \)

Patients taking methotrexate, nicotinic acid, theophylline, nitrous oxide, S-adenosyl-methionine, or L-dopa can have elevated HCY levels.

**LACTATE DEHYDROGENASE LDH**

LACTATE DEHYDROGENASE LDH 292 \( H \) 100–200 \( \text{U/L} \)

**IRON AND IRON-BINDING CAP**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRON, TOTAL</td>
<td>64</td>
<td>40–190 ( \text{ug/dL} )</td>
</tr>
<tr>
<td>TRANSFERRIN</td>
<td>366</td>
<td>196–490 ( \text{mg/dL} )</td>
</tr>
<tr>
<td>TIBC</td>
<td>513.2 ( H )</td>
<td>250–450 ( \text{ug/dL} )</td>
</tr>
<tr>
<td>UIBC</td>
<td>449.2 ( H )</td>
<td>130.0–375.0 ( \text{ug/dL} )</td>
</tr>
<tr>
<td>%SATURATION</td>
<td>12.5 ( L )</td>
<td>15.00–50.00%</td>
</tr>
</tbody>
</table>

**FERRITIN**

FERRITIN 14.8 10.0–291.0 \( \text{ng/mL} \)

Iron deficiency: 0.68–34.5 \( \text{ng/mL} \)
Other anemias: 13.0–1390.8 \( \text{ng/mL} \)
Iron overload: 334.6–8573.0 \( \text{ng/mL} \)
Renal dialysis: 31.3–1321.2 \( \text{ng/mL} \)
Chronic liver disease: 7.9–12826.0 \( \text{ng/mL} \)

**LEPTIN**

LEPTIN 6.0 \( *1 \) \( \text{ng/mL} \)

Reference Ranges for Leptin:

Adult Lean Subjects (18–71 years) with BMI range of 18–25:

- Males: 0.3–13.4 \( \text{ng/mL} \)
- Females: 4.7–23.7 \( \text{ng/mL} \)
NATURAL BALANCE WELLNESS MEDICAL CENTER

Adult Subjects (19-60 years) with BMI range of 25-30:

Males:     1.8-19.9 ng/mL
Females:   8.0-38.9 ng/mL

Pediatric Reference Ranges for Leptin:

5-9.9  years:     0.6-16.8 ng/mL
10-13.9 years:     1.4-16.5 ng/mL
14-17.9 years:     0.6-24.9 ng/mL

C-REACTIVE PROTEIN, HIGH SENSITIVITY

Interpretation of the results:
Average cardiovascular risk according to AHA/CDC guidelines.
For ages >17 years:
CRP mg/dL Risk
<1.0 Low cardiovascular risk according to AHA/CDC
1.0-3.0 Average cardiovascular risk according to AHA/CDC
>3.0-10.0 High cardiovascular risk according to AHA/CDC
>10.0 Persistent elevations may represent non-cardiovascular inflammation.

For ages < or = 17 years:
AHA/CDC recommendations for cardiovascular risk assessment does not apply to
CHEMISTRY (Continued)

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTISTREPTOLYSIN O (ASO) ANTIBODY</td>
<td></td>
<td></td>
<td>0.0-200.0</td>
<td>IU/mL</td>
</tr>
<tr>
<td>ASO ANTISTREPTOLYSIN O AB</td>
<td>157.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHOLESTEROL</td>
<td></td>
<td>&lt;=200</td>
<td></td>
<td>mg/dL</td>
</tr>
<tr>
<td>CHOLESTEROL</td>
<td>146</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desirable Range</td>
<td>&lt; 200</td>
<td>mg/dL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borderline High Risk</td>
<td>200 to 239</td>
<td>mg/dL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High risk</td>
<td>&gt; or = 240</td>
<td>mg/dL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CERULOPLASMIN</td>
<td></td>
<td></td>
<td>*1</td>
<td></td>
</tr>
<tr>
<td>CERULOPLASMIN</td>
<td>30</td>
<td>18-53</td>
<td>mg/dL</td>
<td></td>
</tr>
<tr>
<td>HISTAMINE, PLASMA</td>
<td></td>
<td></td>
<td>*1</td>
<td></td>
</tr>
<tr>
<td>HISTAMINE, PLASMA</td>
<td>11.0 H</td>
<td>&lt; OR = 1.8</td>
<td>ng/mL</td>
<td></td>
</tr>
</tbody>
</table>

This test was performed using a kit that has not been cleared or approved by the FDA. The analytical performance characteristics of this test have been determined by Quest Diagnostics Nichols Institute San Juan Capistrano. This test should not be used for diagnosis without confirmation by other medically established means.

Test performed by:
Quest Diagnostics Nichols Institute
33608 Ortega Highway
San Juan Capistrano, California 92690
Medical Director: Irina Maramica MD

GLYCO

HEMOGLOBIN A1C                             |          |              | 4.2-5.6  | %     |
| HEMOGLOBIN A1C                           | 4.3      |              | 4.2-5.6  | %     |

Test Performed by Capillary Electrophoresis for HbAlc
See Below:
Non Diabetic                             <=5.7    %
**GLYCO (Continued)**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild Risk</td>
<td>5.7% - &lt;=6.1</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod Risk</td>
<td>6.1% - &lt;=6.5</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Risk Diabetic</td>
<td>&gt;=6.5</td>
<td>%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GLYCOMARK (R)**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLYCOMARK</td>
<td>17.84</td>
<td>7.3-36.6</td>
<td>ug/mL</td>
</tr>
</tbody>
</table>

GlycoMark reference ranges apply to persons without diabetes. In people with diabetes, under good to moderate glycemic control (Hemoglobin A1c levels =8%) GlycoMark level <8 g/mL suggest significant glycemic variability most likely due to post meal blood glucose levels increasing above 180 mg/dL.

**ELECTROPHORESIS**

**IGA SERUM**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMMUNOGLOBULIN A (IGA) SERUM</td>
<td>297</td>
<td>57-300</td>
<td>mg/dl</td>
</tr>
</tbody>
</table>

**IGG SERUM**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMMUNOGLOBULIN G (IGG) SERUM</td>
<td>1017</td>
<td>694-1618</td>
<td>mg/dl</td>
</tr>
</tbody>
</table>

**IGM SERUM**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMMUNOGLOBULIN M (IGM) SERUM</td>
<td>85</td>
<td>48-271</td>
<td>mg/dl</td>
</tr>
</tbody>
</table>

**ENDOCRINOLOGY**

**THYROID PANEL**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSH, 3RD GENERATION</td>
<td>1.00</td>
<td>0.35-5.50</td>
<td>uIU/mL</td>
</tr>
</tbody>
</table>

Pregnancy:

First Trimester: 0.30-4.50 uIU/mL
Second Trimester: 0.50-4.60 uIU/mL
Third Trimester: 0.80-5.20 uIU/mL

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>T4 FREE, THYROXINE</td>
<td>1.35</td>
<td>0.89-1.76</td>
<td>ng/dL</td>
</tr>
<tr>
<td>T4 TOTAL THYROXINE</td>
<td>8.6</td>
<td>4.5-10.9</td>
<td>ug/dL</td>
</tr>
<tr>
<td>T3 FREE TRIIODOTHYRONINE</td>
<td>2.70</td>
<td>2.30-4.20</td>
<td>pg/mL</td>
</tr>
<tr>
<td>T3 TOTAL</td>
<td>86</td>
<td>60.0-181.0</td>
<td>ng/dL</td>
</tr>
<tr>
<td>T3 UPTAKE</td>
<td>26.00</td>
<td>22.50-37.00</td>
<td>%</td>
</tr>
<tr>
<td>FTI</td>
<td>2.24</td>
<td>1.20-4.90</td>
<td>Index</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>T3 REVERSE, LC/MS/MS</td>
<td>28 H</td>
<td>8-25</td>
<td>ng/dL</td>
</tr>
</tbody>
</table>

*1
ENDOCRINOLOGY (Continued)

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Nichols Institute Chantilly, VA. It has not been cleared or approved by the U.S. Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

This test was performed at:
Quest Diagnostics Nichols Institute Chantilly
14225 Newbrook Drive
Chantilly, VA 20151

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>THYROID STIMULATING IMMUN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSI</td>
<td>&lt;0.10</td>
<td>0-0.55</td>
<td>IU/L</td>
<td></td>
</tr>
<tr>
<td>TRAB (TSH RECEPTOR BINDING ANTIBODY)</td>
<td></td>
<td></td>
<td>*1</td>
<td></td>
</tr>
<tr>
<td>TRAB</td>
<td>&lt;6.0</td>
<td>&lt;=16.0</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

Reference Range: <=16% inhibition

This test was performed at:
Quest Diagnostics Nichols Institute Chantilly
14225 Newbrook Drive
Chantilly, VA 20151

| THYROGLOBULIN IGG AB                  |          |              |           |       |
| Thyroglobulin IgG                     | <12      | 0-40         | IU/ml     |       |
| <40 Negative                          |          |              |           |       |
| 40-60 Equivocal                       |          |              |           |       |
| >60 Positive                          |          |              |           |       |

| THYROID PEROXIDASE ANTIBO             |          |              |           |       |
| Thyroid Peroxidase IgG                | <4       | 0-25         | IU/ml     |       |
| <25 Negative                          |          |              |           |       |
| 25-35 Equivocal                       |          |              |           |       |
| >35 Positive                          |          |              |           |       |

ESTRONE, LC/MS/MS                      |          |              | *1        |       |
ENDOCRINOLOGY (Continued)

No suitable specimen received for test requested. Please resubmit.

**ESTRADIOL-E2**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESTRADIOL-E2</td>
<td>97</td>
<td>SEE BELOW</td>
<td>pg/mL</td>
<td></td>
</tr>
</tbody>
</table>

Adult Female Normal Ranges:
- **Follicular Phase:** 19-144 pg/mL
- **Mid-Cycle:** 64-357 pg/mL
- **Luteal Phase:** 56-214 pg/mL
- **Postmenopausal:** <=32 pg/mL

The drug Fulvestrant cross reactivity could lead to falsely elevated estradiol test results leading to an inappropriate clinical assessment of estrogen status.

**PREGNENOLONE**

*1

No suitable specimen received for test requested. Please resubmit.

**TESTOSTERONE FREE & TOTAL**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEX HORMONE BINDING GLOBU</td>
<td>114</td>
<td>18.0-144.0</td>
<td>nmol/L</td>
</tr>
<tr>
<td>TESTOSTERONE FREE CALCULATED</td>
<td>0.10</td>
<td>0.01-0.64</td>
<td>ng/dL</td>
</tr>
<tr>
<td>FREE TESTOSTERONE%</td>
<td>0.7</td>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>

**TESTOSTERONE TOTAL**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TESTOSTERONE TOTAL</td>
<td>18.08</td>
<td>&lt;=73.0</td>
<td>ng/dL</td>
</tr>
</tbody>
</table>

Female Normal Ranges:
- **Premenopausal:** < or = 73 ng/dL
- **Postmenopausal:** < or = 43 ng/dL

**FSH (FOLLICLE STIMULATING HORMONE)**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSH (FOLLICLE STIMULATING HORMONE)</td>
<td>15.4</td>
<td>*SEE BELOW *</td>
<td>mIU/mL</td>
</tr>
</tbody>
</table>
ENDOCRINOLOGY (Continued)

Female Normal Ranges:
- Follicular Phase: 2.5 - 10.2 mIU/mL
- Midcycle Peak: 3.4 - 33.4 mIU/mL
- Luteal Phase: 1.5 - 9.1 mIU/mL
- Pregnant: < 0.3 mIU/mL
- Postmenopausal: 23.0 - 116.3 mIU/mL

LH (LUTEINIZING HORMONE)

LH (LUTEINIZING HORMONE) 9.2  
*SEE BELOW  mIU/mL

Female Normal Ranges:
- Follicular Phase: 1.9 - 12.5 mIU/mL
- Midcycle Peak: 8.7 - 76.3 mIU/mL
- Luteal Phase: 0.5 - 16.9 mIU/mL
- Pregnant: <0.5 - 1.5 mIU/mL
- Postmenopausal: 15.9 - 54.0 mIU/mL
- Contraceptives: 0.7 - 5.6 mIU/mL

PROLACTIN (PRL)

PROLACTIN 6.9  
2.8-29.2  ng/mL

Female Normal Ranges:
- Non-Pregnant: 2.8 - 29.2 ng/mL
- Pregnant: 9.7 - 208.5 ng/mL
- Postmenopausal: 1.8 - 20.3 ng/mL

CORTISOL AM

CORTISOL AM 8.4  
4.3-25.0  ug/dL

DHEA SULFATE

DHEA-SULFATE 163.2  
23-266  ug/dL
**ENDOCRINOLOGY (Continued)**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADIPONECTIN</td>
<td></td>
<td></td>
<td>14</td>
<td>mcg/mL</td>
</tr>
</tbody>
</table>

Reference Ranges for Adiponectin:

<table>
<thead>
<tr>
<th>Body Mass Index</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25 kg/meters-squared</td>
<td>4-26</td>
<td>5-37</td>
</tr>
<tr>
<td>25-30 kg/meters-squared</td>
<td>4-20</td>
<td>5-28</td>
</tr>
<tr>
<td>&gt;30 kg/meters-squared</td>
<td>2-20</td>
<td>4-22</td>
</tr>
</tbody>
</table>

This test was performed using a kit that has not been cleared or approved by the FDA. The analytical performance characteristics of this test have been determined by Quest Diagnostics Nichols Institute San Juan Capistrano. This test should not be used for diagnosis without confirmation by other medically established means.

Test performed by:
Quest Diagnostics Nichols Institute
33608 Ortega Highway
San Juan Capistrano, California 92690
Medical Director: Irina Maramica MD

**IMMUNOLOGY/SEROLOGY**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLIADIN DEAMIDATED AB, IGG</td>
<td>&lt;7</td>
<td>Negative</td>
</tr>
<tr>
<td>Gliadin, Deamidated Peptide</td>
<td>0-7</td>
<td>U/ml</td>
</tr>
<tr>
<td>IgG&lt;0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;7</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>7-10</td>
<td>Equivocal</td>
<td></td>
</tr>
<tr>
<td>&gt;10</td>
<td>Positive</td>
<td></td>
</tr>
</tbody>
</table>

GLIADIN DEAMIDATED AB, IGA
<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IMMUNOLOGY/SEROLOGY (Continued)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gliadin, Deamidated Peptide IgA4.2</td>
<td>0-7</td>
<td></td>
<td>Reference</td>
<td>U/ml</td>
</tr>
<tr>
<td>&lt;7</td>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-10</td>
<td>Equivocal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;10</td>
<td>Positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANA/DS DNA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANA Screen (Symphony)</td>
<td>0.1</td>
<td>0-0.7</td>
<td>Ratio</td>
<td></td>
</tr>
<tr>
<td>&lt;0.7</td>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.7-1.00</td>
<td>Equivocal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;1.00</td>
<td>Positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dsDNA</td>
<td></td>
<td>&lt;0.5</td>
<td>IU/ml</td>
<td></td>
</tr>
<tr>
<td>&lt;0.5</td>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-15</td>
<td>Equivocal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;15</td>
<td>Positive</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ANA IFA SCR W/REFL TITER**:

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ANA SCREEN, IFA</td>
<td>Negative</td>
<td>Negative</td>
</tr>
</tbody>
</table>

ANA IFA is a first line screen for detecting the presence of up to approximately 150 autoantibodies in various autoimmune diseases. A negative ANA IFA result suggests ANA-associated autoimmune diseases are not present at this time.

Visit Physician FAQs for interpretation of all antibodies in the cascade, prevalence, and association with diseases at [http://education.QuestDiagnostics.com/faq/FAQ177](http://education.QuestDiagnostics.com/faq/FAQ177)

**RHEUMATOID FACTOR IGG/IGM**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RHEUMATOID FACTOR IGG/IGM</td>
<td>7.60</td>
<td>0.00-14.00</td>
</tr>
</tbody>
</table>

**DNASE-B AB**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DNASE-B AB</td>
<td>287</td>
<td>&lt; 301</td>
</tr>
</tbody>
</table>

This test performed by:
Quest Diagnostics Nichols Institute
27027 Tourney Road
Valencia, CA 91355-5386
IMMUNOLOGY/SEROLOGY (Continued)

TISSUE TRANSGLUTAM(IGG,A)

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Celikey tTG IgA</td>
<td>0.7</td>
<td>0–7</td>
<td>U/ml</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;7</td>
<td>Negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7–10</td>
<td>Equivocal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>Positive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celikey tTG IgG</td>
<td>&lt;0.6</td>
<td>0–7</td>
<td>U/ml</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;7</td>
<td>Negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7–10</td>
<td>Equivocal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>Positive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ALLERGY

IGE SERUM

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Level</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL IGE</td>
<td>8.02</td>
<td>0–25.0 kU/L</td>
</tr>
<tr>
<td>Specific IgE(kU/L)</td>
<td>Level</td>
<td>Class</td>
</tr>
<tr>
<td>&lt;0.10</td>
<td>Normal</td>
<td>0</td>
</tr>
<tr>
<td>0.10–0.34</td>
<td>Equivocal/Borderline Clinical relevance undetermined</td>
<td>0/1</td>
</tr>
<tr>
<td>0.35–0.70</td>
<td>Low</td>
<td>1</td>
</tr>
<tr>
<td>0.71–3.50</td>
<td>Moderate</td>
<td>2</td>
</tr>
<tr>
<td>3.51–17.5</td>
<td>High</td>
<td>3</td>
</tr>
<tr>
<td>17.6–50.0</td>
<td>Very High</td>
<td>4</td>
</tr>
<tr>
<td>51.0–100.0</td>
<td>Very High</td>
<td>5</td>
</tr>
<tr>
<td>&gt;100.0</td>
<td>Very High</td>
<td>6</td>
</tr>
</tbody>
</table>

TRACE ELEMENTS

COPPER, SERUM

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Level</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPPER</td>
<td>1206.29</td>
<td>700–1750 ug/L</td>
</tr>
</tbody>
</table>

This test was developed and its performance characteristics determined by Empire City Laboratories. It has not been cleared or approved by the US Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research. The results are not intended to be used as the sole means for clinical diagnosis or patient management decisions. This laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88) as qualified to perform high complexity clinical laboratory testing.

COPPER, RBC

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Level</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPPER,RBC</td>
<td>85</td>
<td>mcg/dL</td>
</tr>
</tbody>
</table>

Reporting Limit: 44 mcg/dL
### Trace Elements (Continued)

NMS Labs derived data for 2.5th - 97.5th percentile range is 59 - 91 mcg/dL (n=1999).

The RBC sample used for analysis was measured by weight and multiplied by the density of human RBC (1.10 g/mL) to obtain mcg/dL units.

Analysis by Inductively Coupled Plasma/Optical Emission Spectrometry (ICP/OES)

Disclaimer: Specimens for elemental testing should be collected in certified metal-free containers. Elevated results for elemental testing may be caused by environmental contamination at the time of specimen collection and should be interpreted accordingly. It is recommended that unexpected elevated results be verified by testing another specimen.

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZINC, RBC</td>
<td>1100 mcg/dL</td>
<td>*1</td>
<td></td>
<td>mcg/dL</td>
</tr>
</tbody>
</table>

Test performed by:
NMS LABS
3701 Welsh Road P.O. Box 433A
Willow Grove, PA 19090-0437
<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZINC, SERUM</td>
<td>774.82</td>
<td>600-1300</td>
<td></td>
<td>ug/L</td>
</tr>
</tbody>
</table>

This test was developed and its performance characteristics determined by Empire City Laboratories. It has not been cleared or approved by the US Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research. The results are not intended to be used as the sole means for clinical diagnosis or patient management decisions. This laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88) as qualified to perform high complexity clinical laboratory testing.

**NUTRITION**

**FOLATE SERUM (FOLIC ACID)**

FOLATE SERUM 19.3 >=5.38 ng/mL

Adult Ranges:
- Deficient serum folate: 0.35-3.37 ng/mL
- Indeterminate serum folate: 3.38-5.38 ng/mL
- Normal serum folate: >5.38 ng/mL

**VITAMIN B12**

VITAMIN B12 352 211-911 pg/mL

**VITAMIN D 25-HYDROXY**

VITAMIN D 25-HYDROXY 29.43 L 33.00-100.00 ng/mL

< 10 ng/mL  Severe Deficiency
10-29 ng/mL  Mild to Moderate Deficiency
33-100 ng/mL  Optimum Levels
> 100 ng/mL  Toxicity Possible

**VITAMIN D 1.25-DIHYDROXY**

VITAMIN D 1.25 51.1 19.9-79.3 pg/mL

**OTHER**

OMEGACHECK *1
Increasing blood levels of long-chain n-3 fatty acids are associated with a lower risk of sudden cardiac death (1). Based on the top (75th percentile) and bottom (25th percentile) quartiles of the CHL reference population, the following risk categories were established for OmegaCheck: A cut-off of \( \geq 5.5\% \) by wt defines a population at low relative risk, \( 3.8-5.4\% \) by wt defines a population at moderate relative risk, and \( \leq 3.7\% \) by wt defines a population at high relative risk of sudden cardiac death. The totality of the scientific evidence demonstrates that when consumption of fish oils is limited to 3 g/day or less of EPA and DHA, there is no significant risk for increased bleeding time beyond the normal range. A daily dosage of 1 gram of EPA and DHA lowers the circulating triglycerides by about 7-10% within 2 to 3 weeks. (Reference: 1-Albert et al. NEJM. 2002; 346: 1113-1118). This test is performed by a Liquid Chromatography-Tandem Mass Spectrometry (LC/MS/MS) method. This test was developed and its performance characteristics determined by the Cleveland HeartLab. It has not been cleared or approved by the U.S. FDA. The Cleveland HeartLab is regulated under Clinical Laboratory Improvement Amendments (CLIA) as qualified to perform high-complexity testing. This test is used for clinical purposes. It should not be regarded as investigational or for research.

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA+DPA+DHA</td>
<td>5.5</td>
<td>&gt;5.4</td>
<td>% by wt</td>
<td></td>
</tr>
</tbody>
</table>

Cleveland HeartLab measures a number of omega-6 fatty acids with AA and LA being the two most abundant forms reported.

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARACHIDONIC ACID/EPA RATIO</td>
<td>10.0 H</td>
<td>&lt;5.0</td>
<td>% by wt</td>
<td></td>
</tr>
<tr>
<td>OMEGA-6/OMEGA-3 RATIO</td>
<td>7.6 H</td>
<td>&lt;4.5</td>
<td>% by wt</td>
<td></td>
</tr>
<tr>
<td>ARACHIDONIC ACID</td>
<td>11.0 H</td>
<td>&lt;9.0</td>
<td>% by wt</td>
<td></td>
</tr>
<tr>
<td>LINOLEIC ACID</td>
<td>27.8 H</td>
<td>&lt;20.0</td>
<td>% by wt</td>
<td></td>
</tr>
</tbody>
</table>

Test performed at:
Cleveland HeartLab, Inc
6701 Carnegie Ave
Textual content available in the image:

**Phys:** NATURAL BALANCE WELLNESS MEDICAL CENTER

1310 SOUTH MAIN ST
ANN ARBOR, MI 48104
(734) 929-2696

**Patient:**

BOGGE, TONY

Accession: 1810172467  Coll. Date: 10/15/18  Recv. Date: 10/17/18
Chart#:  Coll. Time: 19:00  Recv. Time: 15:42
First reported on: 10/17/2018 22:29  Final report date: 10/27/2018 19:51

**Test Name** | **In Range** | **Out of Range** | **Reference** | **Units**
---|---|---|---|---
OTHER (Continued)

**MAILOUT SUMMARY**

*1) QUEST DIAGNOSTICS INC, ONE MALCOLM AVE, TETERBORO, NJ, 07608*