Dear Valued Partner:

Effective November 26, 2012, Solstas Lab Partners® announced the availability of testing for methylmalonic acid (MMA) at our Greensboro, NC reference laboratory. This testing will be performed by liquid chromatography-tandem mass spectrometry (LC-MS/MS) to assist in the assessment of patients with signs and symptoms associated with cobalamin (Vitamin B12) deficiency leading to methylmalonic acidemia. Several studies have suggested that the determination of serum or urinary methylmalonic acid may be a more reliable marker of cobalamin deficiency than direct cobalamin determination. (2)

Clinical Information

Serum MMA is elevated primarily in patients with a nutritional deficiency of cobalamin (vitamin B12) or folic acid. Of the two, nutritional deficiencies are much more common and can be due to intestinal malabsorption, impaired digestion or poor diet. Elderly patients with cobalamin deficiency may present with peripheral neuropathy, ataxia, loss of position and vibration senses, memory impairment, depression, and dementia in the absence of anemia. Other conditions such as renal insufficiency, hypovolemia and bacterial overgrowth of the small intestine have been related to methylmalonic acidemia and aciduria.

Methylmalonic acidemia can also be caused by a variety of inborn errors of metabolism resulting in specific enzyme deficiencies leading to abnormal MMA concentration. Since the first reports of this disorder in 1967, hundreds of cases have been diagnosed worldwide. Newborn screening identifies approximately 1 in 30,000 live births with methylmalonic acidemia. The most frequent clinical manifestations are neonatal or infantile metabolic ketoacidosis, failure to thrive, and developmental delay. Excessive protein intake may cause life-threatening episodes of metabolic decompensation and remains a life-long risk unless treatment is closely monitored, including serum and urine MMA levels.

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Order Code</th>
<th>CPT Code</th>
<th>Reference Range</th>
<th>NC Medicare Reimbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylmalonic Acid (Quantitative, Serum or Plasma)</td>
<td>86923</td>
<td>83921</td>
<td>&lt; 0.4 umol /l</td>
<td>$23.31</td>
</tr>
<tr>
<td>Methylmalonic Acid (Quantitative, Random urine)</td>
<td>86922</td>
<td>83921, 82570</td>
<td>&lt; 3.6 mmol / mol creatinine</td>
<td>$23.31+$7.33</td>
</tr>
</tbody>
</table>

Results should always be interpreted in conjunction with patient presentation, clinical history, diet, nutritional status, and age. If you have any questions, please call your dedicated Solstas Client Relationship Specialist directly, or contact our Customer Service Department at 1-888-664-7601. Thank you for choosing Solstas Lab Partners to serve the needs of you and your patients.

Janice J. Hessling, MD PhD
Corporate Medical Director

Clinical Reference