



Technically Speaking

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& Laboratory Medicine

October 2013: Vol. 7, No. 9

Reducing Unnecessary Methylmalonic Acid Tests

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Methylmalonic acid (MMA) is generally ordered in the workup of vitamin B₁₂ deficiency and in the workup of pernicious anemia. It is also ordered to monitor methylmalonic academia, a rare inherited metabolic disorder.

Vitamin B₁₂ levels greater than 400 ng/L imply that no vitamin B₁₂ deficiency is present; methylmalonic acid testing is not indicated.

Vitamin B₁₂ levels less than 150 ng/L imply that vitamin B₁₂ deficiency is present; methylmalonic acid testing is not indicated.

Methylmalonic acid testing is most useful in patients with vitamin B₁₂ levels in the 150-400 ng/L range. For these patients, MMA levels ≤ 0.4 nmol/mL imply that there is no deficiency of vitamin B₁₂ at the cellular level. If MMA levels are >0.4

nmol/mL, or if a patient's serum vitamin B₁₂ level is <150 ng/L, testing for intrinsic factor blocking antibody levels is indicated to determine if a patient has pernicious anemia. Studies have shown testing for intrinsic factor blocking antibody is highly confirmatory for the diagnosis of pernicious anemia, with a sensitivity of 50-70% and a specificity approaching 100%.

Beginning in October 2013, clinicians will receive a faxed letter notifying them of cancelled methylmalonic acid orders in patients that do not meet the criteria of vitamin B₁₂ levels between 150-400 ng/L, as recommended in the Mayo Medical Laboratory Pernicious Anemia Testing Cascade. The test can be reordered within 7 days if it is believed to be necessary for clinical decision making.

Reducing Unnecessary 1,25-Dihydroxyvitamin D Tests

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The analyte 1,25-Dihydroxyvitamin D is frequently mistakenly ordered to assess vitamin D stores and vitamin D sufficiency.

25-Hydroxyvitamin D is the correct test to assess vitamin D stores.

1,25-Dihydroxyvitamin D testing plays a legitimate role in patients with renal failure. It is also a second-order test in the assessment of vitamin D status, especially for patients with uncommon disorders such as those with hypercalcemia and suppressed PTH, and patients with vitamin D-dependent rickets due to hereditary deficiency of renal 1-alpha hydroxylase or due to end-organ resistance to 1,25-Dihydroxyvitamin D.

It is recommended that only endocrinologists and nephrologists order 1,25-Dihydroxyvitamin D.

Beginning on 10/1/13, clinicians other than endocrinologists and nephrologists who order 1,25-Dihydroxyvitamin D tests will be faxed a letter asking them if they want to change the test to 25-Hydroxyvitamin D.

CD4 Only and Lymphocyte Enumerations Testing Change in Flow Cytometry

Single platform CD4 only and Lymphocyte Enumeration tests are performed in the Flow Cytometry area of the laboratory. Patient reports no longer include the WBC and lymphocyte absolute counts. The single platform test will automatically calculate the absolute counts for CD3, CD4 and CD8.

Specimen requirement for the testing: one EDTA tube kept at room temperature and delivered to the laboratory.

Questions may be directed to Flow Cytometry at 203-739-7578.

New Supply Requisitions

New, revised requisitions are available for ordering specimen collection supplies. Please contact Sandra Smith at 203-739-7300 for information.