LabWire
Laboratory News and Analysis for Clinicians February 2020

Why You Should Stop Testing for Vitamin D

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The national campaign Choosing Wisely has identified Vitamin D as an over-utilized laboratory test that has little to no impact on patient well-being (ref 1). Based on our laboratory volumes of over 3,000 tests per month, it may be the most over-utilized test on our menu. The interesting thing about Vitamin D is that low levels are associated with poor health and increased risks of infections, heart disease and cancer, but supplements for vitamin D do nothing to improve these risks. In a recent publication from Harvard (ref 2) a randomized controlled study showed that Vitamin-D and Omega-3 fatty acids given for a whole year did nothing to improve inflammatory biomarkers. In another randomized controlled study from the National Heart Lung and Blood Institute (ref 3) critically ill patients that were given early high dose vitamin D supplementation showed no improvement in morbidity or mortality even when they were proven to be Vitamin-D deficient to begin with. There is a growing belief that Vitamin-D levels are a surrogate marker of good health; if you eat well, exercise and get outdoors your Vitamin-D levels are going to reflect a healthy lifestyle. But if you are out of shape, eat poorly and stay indoors, taking all the Vitamin-D supplements in the world will not change your poor health.

When might it be appropriate to test for Vitamin-D?

It is not appropriate to test Vitamin-D levels in otherwise healthy adults. It may be appropriate if they have osteoporosis or specific diseases that predispose to vitamin deficiencies such as inflammatory bowel disease, celiac disease, liver cirrhosis or pancreatitis. In this case, be sure to order 25-Hydroxy-Vitamin-D as it has a half-life of 3 weeks and is the best means of assessing nutritional status.

What about 1,25 Dihyroxy-Vitamin D?

You should probably never order this as a test for Vitamin-D. It is the active form of the vitamin that has been converted in the kidneys, but it has a very short half-life of 4-6 hours and is not indicative of nutritional status. When reviewing test orders for 1,25 Dihyroxy-Vitamin D, we and others have concluded that most are by mistake. Rarely specialists in endocrinology or kidney disease may order it in conjunction with parathyroid hormone.

References

1. Choosing wisely. Vitamin D Tests: When you need them—and when you don't http://www.choosingwisely.org/patient-resources/vitamin-d-tests/

2. Effects of One Year of Vitamin D and Marine Omega-3 Fatty Acid Supplementation on Biomarkers of Systemic Inflammation in Older US Adults. Clinical Chemistry 65:12 1508–1521 (2019)

3. Early High-Dose Vitamin D3 for Critically Ill, Vitamin D–Deficient Patients. The National Heart, Lung, and Blood Institute PETAL Clinical Trials Network. N Engl J Med 2019;381:2529-40.

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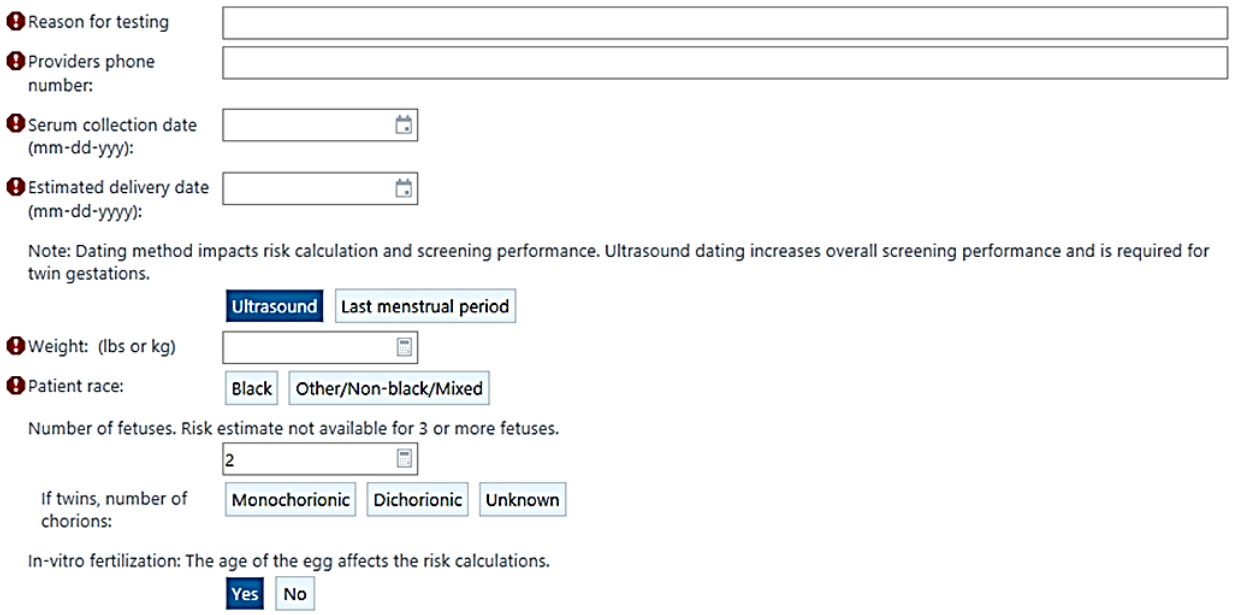
Prenatal Test Form Available in Epic, Effective February 18, 2020

- Quad Screen (Second Trimester) Maternal, Serum LAB692
- Alpha Fetoprotein, Single Marker LAB3245

Patient Information Form for the above tests will be electronic within Epic on 2/18/20.

Epic will require the form to be completed before the order can be signed.
This process change is to eliminate patient care delays due to missing information.

Epic electronic form example:



Note*: Change applies to Epic orders only*. For all other orders, continue to submit the Mayo Patient Information form available in the Bronson Online Test Catalog under Special Instructions for each test.

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Monoclonal Antibody Screening and Protein Electrophoresis

We wish to remind providers of the most efficient option to screen for monoclonal gammopathy:

Monoclonal Protein Evaluation (Epic LAB2226, Sunquest MPE).

1. The Monoclonal Protein Evaluation begins with a Serum Protein Electrophoresis (SPEP) and Serum Free Light Chain (SFLC) analysis.
2. Immunofixation, Serum (IFES) is ordered reflexively if the SFLC is abnormal or if indicated by pathologist review of the SPEP.

If the results of the MPE are normal and amyloidosis is suspected, a 24 hour Urine Protein Electrophoresis should be ordered. Otherwise, urine testing is not required for screening.

Also, effective 2/11/2020, we are simplifying the urine protein electrophoresis test menu with this consolidation:

- **Protein Electrophoresis, Urine 24 hour** (Epic LAB438, Sunquest UPEP)
  This test will include quantitation of any monoclonal peak (Bence-Jones Protein) if present. If indicated by pathologist evaluation, a Urine Immunofixation will also be performed.
  To reflect these changes, the test description changes to **Protein Electrophoresis, w/monoclonal quant, Urine, 24 Hr.**
- **Bence Jones Protein, Urine 24 hour** (Epic LAB366, Sunquest QBEN)
  This test will no longer be orderable because it is the same test as the revision noted above.

Please visit https://bronsonlab.testcatalog.org/show/MPE for additional details.

New Bronson Lab Draw Site Opens in Marshall

Bronson is extending its family medicine services to the Marshall community and, as a part of that expansion, has also added a new lab draw site in the same building.

The Bronson Lab location in Marshall is located at 212 Winston Drive. This is the same building that already houses Bronson Orthopedic Specialists and Bronson Colon & Rectal Surgery Specialists. For added patient convenience, Bronson will also offer x-ray services at this site.

The new lab location offers no appointment necessary blood draws Monday through Friday from 7:30 a.m. to 4:30 p.m.
For more information, call (269) 245-5464 or visit www.bronsonhealth.com/lab.

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Urine Pregnancy Testing

False negative results for urine pregnancy (UPG) testing may occur with diluted urine samples. The urine pregnancy testing processes performed in both the Laboratory (as of 1/7/2020) and Point of Care (as of 2/17/2020) have been revised to alert clinicians of this potential issue.

In the laboratory, a urine specific gravity is now performed on any sample for UPG. If a sample has negative results and the specific gravity is <1.010, the following comment is appended: *Urine Pregnancy Screen result may be a false negative due to low Specific Gravity of this urine sample. Suggest repeat with either a serum sample or a first morning urine sample.*

For Point of Care testing (POCT) performed outside of the laboratory, the Epic result entry includes a prompt to report the evaluation of the sample for characteristics that could lead to false results (Colorless, Red). Individuals performing the testing have been trained to not perform the test if the sample is colorless or bloody. However, the system for POCT result entry cannot prevent resulting those samples. Therefore, a POCT UPG with a Colorless or Red comment should be interpreted as a possible false negative.