Health Care Providers Newsletter

November 2019

Changes to Erythrocyte Sedimentation Rate Testing

Dr. Ayesha Vawda, MD, FRCPC, Hematopathologist

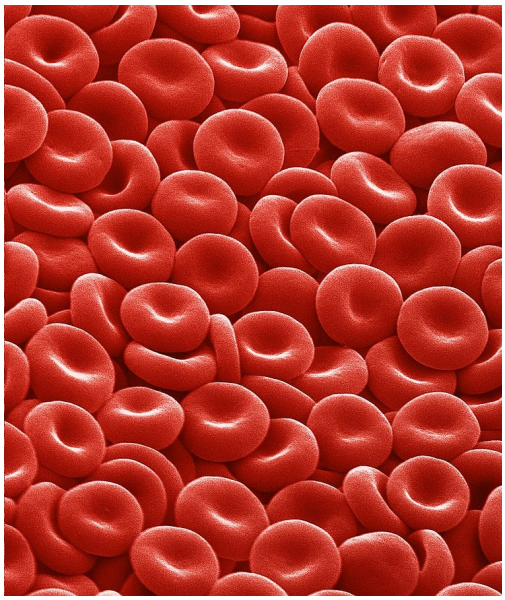

Photo credit: John kalekos of Massachusetts image distribution for Science and Learning

LifeLabs is pleased to announce the introduction of the Test1 analyzer for erythrocyte sedimentation rate (ESR) testing in Kamloops and the Roller 20 analyzer in Prince George and Terrace, starting Monday November 18, 2019. The ESR reference range will be adjusted with the new analyzers and has been validated at 2-30 mm/hr. Consequently, we recommend that clinicians begin with a new baseline for monitoring patients.

The Test1 and Roller 20 analyzers by Alifax are automated systems that determine the ESR by optical density analysis of RBC aggregation. This will improve turnaround time while maintaining excellent correlation with the conventional Westergren method. The Lower Mainland, Vancouver Island, Dawson Creek and Quesnel have been reporting this methodology since May 2015 and will remain unchanged.

Please contact the LifeLabs Client Information Centre 1-800-431-7206 for any inquiries.

Critical Value Reporting

Dr. Michael T. Kelly MD, PhD, FRCPC, B.C. Medical Director and Medical Lead, Molecular Diagnostics

Best practice indicates that laboratories expedite reporting of results that demonstrate critical values – those requiring prompt clinical decisions to prevent patient morbidity or mortality. In doing so, laboratories must communicate critical results directly to the ordering Health Care Provider, even if this is outside of normal office hours. This is a patient safety issue to ensure that potentially life-threatening abnormalities are dealt with quickly, and is a requirement through the Diagnostic Accreditation Program of British Columbia (DAP).

Most Health Care Providers do provide us with after-hours contact information, but recently we have seen an increase in critical results that cannot be communicated due to a lack of accurate contact information. LifeLabs does have on-call physicians who will convey results directly to the patient when we are unable to reach the Health Care Provider. However, it is most appropriate for the patient's own Health Care Provider to give advice to the patient. We also realize that alternative arrangements may be in place, such as on-call coverage as part of a call group or through a local emergency department - it is still important for us to have this contact information on file.

LifeLabs would appreciate your help in ensuring the best patient care when critical test values become available after office hours. We ask all Health Care Providers ordering lab tests to please ensure that LifeLabs has an up-to-date after-hours contact number. If we do not currently have this information, please contact Client Services BC at ClientService@lifelabs.com, call the Client Information Centre at 604-431-7206 or fax the information to 604-412-4445.

Thyroid Function Testing Protocol Updated

Dr. Cheryl Tomalty, PhD, FCACB, Clinical Biochemist

On November 25, 2019 LifeLabs will be implementing the latest BC guidelines for thyroid testing, as published by the Guidelines and Protocol Advisory Committee. Highlights of the changes to the current 2010 guideline include:

- Expanded scope to include pediatric and pregnant patients
- Laboratory algorithm added with changes to the reflex testing of TSH to FT4/FT3 and the revision of the Special Clinical Indications for not following the approved algorithm
- Pregnancy trimester-specific reference intervals for all women of child-bearing age

There are four **Specific Clinical Indications** for not following the approved algorithm:

1) Suspicion of pituitary/hypothalamic insufficiency – If you suspect either pituitary or hypothalamic insufficiency, write one of the following words or terms in the '*Diagnosis and indications for guideline protocol and special test'* or "*OTHER TESTS'* sections of the laboratory requisition: **pituitary, hypothalamic, hypothalamus, secondary hypothyroidism, tertiary hypothyroidism.**
2) Patient age <1 year at time of sample collection.
3) Previous TSH inconsistent with patient presentation - this requires prior consultation with a BC laboratory physician, pathologist or clinical biochemist before giving the patient a new requisition for testing. **The laboratory requisition must indicate that a BC laboratory physician, pathologist, or clinical biochemist was consulted and approved the request.**
4) Query analytical interference – To follow up on any suspected analytical error or interference in patient results, **the laboratory requisition must indicate that a BC laboratory physician, pathologist, or clinical biochemist was consulted and approved the request.**

In all other cases, testing will follow the approved algorithm.

Algorithm changes include the following:

- When testing for primary hypothyroidism or primary hyperthyroidism, a TSH ≥10 mU/L and a FT4 within the reference interval will reflex to a FT3. If the TSH is <10 mU/L, FT3 will be not be tested.
- If FT4 and FT3 are ordered without a TSH, **these tests will not be performed** unless a **Special Clinical Indication** is noted on the laboratory requisition. However the sample will be stored for 7 days to allow for adding on these tests when indicated.

In addition to the algorithm changes, pregnancy-specific reference intervals for TSH and FT4 will appear on the report when either of these tests is ordered on a woman of child bearing age (15 to 50 years of age). The FT3 reference interval is the same in pregnant and non-pregnant women. All ranges are specific to the Abbott Architect method used at LifeLabs.

Samples with abnormal TSH results will be stored for 7 days to allow for further testing as required. Samples with a normal TSH will be stored for 3 days.

If you have questions about the new testing protocol, please don't hesitate to contact a member of the chemistry medical/ scientific staff at LifeLabs.

New Glucose Drinks for Glucose Tolerance Testing

Dr. Cheryl Tomalty, PhD, FCACB, Clinical Biochemist

As part of our commitment to continuous improvement and customer care, LifeLabs is replacing the current orange glucose drinks with Azer Simply Pure non-flavored glucose drinks in both 50g and 75g doses. The Simply Pure drinks are both citric acid-free and dye-free, characteristics that have been frequently requested by our patients and health care practitioners.

Previous glucose drink—now discontinued


New Azer Simply Pure drink—dye and citric acid-free

C. difficile testing: Improving Specificity

Dr. Diana Whellams, MD, FRCPC, Medical Microbiologist

Clostridioides difficile (formerly *Clostridium difficile*) is an anaerobic bacterium associated with diarrheal disease, typically after antibiotic exposure. While traditionally associated with hospitalized patients, Canadian surveillance data has shown an increase in community-acquired *C. difficile* in recent years *(1)*.

LifeLabs performs testing for *C. difficile* using the BD Max polymerase-chain-reaction (PCR) test, which detects the presence of the *tcdB* gene that encodes for C difficile toxin B. This testing is sensitive, but other criteria are required to enhance the specificity of the testing, as patients may be colonized with *C. difficile* but remain asymptomatic.

Both British Columbia's C. difficile Infection (CDI) Toolkit and Clinical Management Algorithm *(2)* and the Infectious Disease Society of America (IDSA) 2017 Guidelines on C. difficile Infection *(3)* recommend limiting *C. difficile* testing to patients with 3 or more unformed stools per day (unless ileus is suspected). Patients should have not taken laxatives within 48 hours of sample collection. Furthermore, guidelines recommend that laboratories limit testing to unformed stool – that is, stool that takes the form of the container it is collected in.

What does this mean for you and your patients? We recommend screening patients clinically before ordering *C. difficile* testing to ensure they meet the above criteria. This helps avoid false-positive testing and unnecessary treatment. Stool samples submitted for testing at LifeLabs will be rejected if they are solid since test results will not be valid.

References:

1) L Xia et al. Epidemiology of Clostridioides difficile infection in Canada: A six-year review to support vaccine decision-making. Can Commun Dis Rep. 2019; 45(7-8): 191–211.

2) British Columbia Clostridium difficile Infection (CDI) Toolkit and Clinical Management Algorithm, CDI Working Groups of BC 2013. Available online at https://www.picnet.ca/wp-content/uploads/Toolkit-for-Management-of-CDI-in-Acute-Care-Settings-2013.pdf

3) LC McDonald et al. Clinical Practice Guidelines for Clostridium difficile Infection in Adults and Children: 2017 Update. Clinical Infectious Diseases, 2018; 66(7): e1–e48.

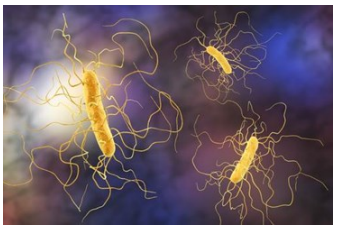
Photo credit: Clincal and Laboratory Standards Institute , 2018

SAVE THE DATE!
Healthcare Providers Conference Returns to Victoria this May

After successful conferences in Victoria in 2018 and Surrey in 2019, LifeLabs will be hosting another Healthcare Providers Conference on the evening of Thursday, May 14th, 2020 at the Oak Bay Beach hotel in Victoria. The conference is an educational event designed to bridge the information gap between laboratory medicine and clinical practice. Speakers from a variety of lab medicine disciplines will be featured.

Stay tuned for further information in our next newsletter in February, 2020.