SPECTRUM HEALTH

Laboratory News

[Volume 2 Issue 6 June 2015] Updates and information from Spectrum Health Regional Laboratory

In this issue:

Laboratory Call Center & Specimen Pick Up:
616.774.7721

Archived Newsletters

Laboratory Compliance

Transitioning to ICD-10 – Is your office prepared?

The compliance deadline for transitioning to ICD-10 is **October 1st, 2015**. This is a national change to diagnostic coding that will affect all areas of medical care, including physician office visits, radiology and laboratory. To ensure continuity in patient care for standing and future laboratory orders, valid ICD-10 codes are required to support documentation, quality, safety and coordination of care.

Spectrum Health Laboratory recommends that you think about how the change from ICD-9 to ICD-10 will affect your office. Will you be prepared to handle requests for diagnosis codes on October 1st, 2015? How do you wish to be contacted during this time to ensure accurate coding? Please let Laboratory Client Services know how we can help you!

All standing and one-time future orders that extend beyond September 30th must have ICD-10 coding in order to be valid after October 1st. An order that specifies the ICD-9 code will still be accepted through September 30th, 2015. For a seamless transition, we recommend that you please provide **both ICD-9 and ICD-10** codes on all new orders until October 1st.

As a reminder, all Spectrum Health employed and credentialed and privileged providers need to complete ICD-10 training by **Wednesday, July 1st, 2015.** All other providers are invited to participate in this training using the Spectrum Health discount code mailed in early January. If you have any questions or inquiries please send an email to LaboratoryServices@spectrumhealth.org.

Advanced Technology Laboratory (ATL) News

Lung Cancer Panel

In mid-June the Molecular Diagnostics and Cytogenetics Laboratories will be launching the Lung Cancer Panel. This panel was designed with input from Clinicians and follows the NCCN recommended guidelines for non-small cell lung (NSCL) cancer. This testing will replace the current order of EGFR with reflex to ALK FISH. The Lung Panel utilizes next generation sequencing (NGS) technology to detect mutations in targeted regions of EGFR, BRAF, KRAS and ERBB2 (HER2) genes. The panel also includes testing for gene rearrangements in ALK, ROS1 and RET as well as amplification in MET by FISH. Results will be reported in a combined Molecular/Cytogenetics report. Additionally, ROS1 and RET gene rearrangement, or MET amplification will be available as stand-alone tests.

Questions regarding the Lung Panel can be directed to Molecular Diagnostics at 616.486.6280 or Cytogenetics at (616) 486-6254.

ATL News *(continued)*

Adenovirus PCR Quantitative

The Adenovirus PCR Quantitative test by the Molecular Diagnostics Department is now available. This test is performed on plasma specimens and will replace the current send out test Adenovirus Quantitative PCR by ViraCor-IBT on plasma and/or whole blood specimens collected in an EDTA tube.

Although generally mild in healthy persons, adenoviral infection may cause severe morbidity and mortality in immunocompromised individuals including bone marrow transplant and solid organ transplant patients. Early detection and monitoring by quantitative real-time PCR are critical in selecting patients for preemptive treatment and assessing treatment response.

Adenovirus PCR Quantitative tests are reported in copies per milliliter (c/mL). The lower quantitative sensitivity was validated to 200 c/mL. To facilitate longitudinal tracking, if no viral DNA is detected, the result is reported as 0 (zero). Low positive results, below 200 c/mL, will be reported, but should be interpreted with caution. Viral loads greater than the upper limit of the assay are reported as >10 million.

Due to the lack of international standards for adenovirus quantitation, patients should be monitored using the same assay during disease progression and treatment. The Spectrum Health Referrals Laboratory is facilitating this transition by sorting adenovirus testing based on each patient's clinical history.

Any questions concerning the new Adenovirus PCR Quantitative may be directed to Dr. Cong Liu via email at Cong.Liu@spectrumhealth.org.

Chemistry Department News

Spectrum Health Regional Laboratory has renamed C-Reactive Protein, Ultrasensitive to C-Reactive Protein, High Sensitive to reflect vendor designated nomenclature and to be consistent throughout the Spectrum Health System.

For any questions, please email Dr. David Alter at david.alter@spectrumhealth.org

Hematology Department News

Retic Count with Reticulocyte Hemoglobin

On May 12, 2015, the Hematology Department began offering a new Reticulocyte Count profile including Reticulocyte Hemoglobin.

Reticulocyte Hemoglobin (which may also be referred to as Retic Hemoglobin or RET-He) is a direct measurement of the incorporation of iron into the erythrocyte hemoglobin and indicates functional availability of iron. Decreased RET-He levels are considered to be indicative of iron deficiency. This test is one of the earliest markers of iron deficiency. This test can also be used to monitor patients on iron and erythropoietin therapy. RET-He rises within 48 hours after appropriate iron therapy. Unlike some traditional parameters such as ferritin, RET-He is not an acute phase reactant and is not elevated in inflammatory states.

The Reticulocyte Hemoglobin test will be offered **only** as part of a new "Retic Count with Retic Hemoglobin" orderable. This orderable also includes the components included as part of the present Retic count orderable (Retic Absolute, Retic Percent, and Retic RBC). Reticulocyte Hemoglobin will not be individually orderable as a test by itself. The existing Retic count order (without Retic Hemoglobin) will continue to be available.

Reticulocyte Hemoglobin will be reported in pg (picogram) units. The reference range for this test in the Spectrum Health Laboratory will be **28.0-36.0 pg**. This reference range applies to all ages and both sexes. This reference range is similar to other ranges reported in the literature, such as the KDOQI (Kidney Disease Outcomes Quality Initiative) guidelines and American Academy of Pediatrics (AAP) and CDC recommendations for a screening threshold for iron deficiency in infants and toddlers.

Any questions concerning the Reticulocyte Hemoglobin test may be directed to Dr. Jennifer Stumph in the Pathology Department at (616) 267-2660.

Unexpected or clinically discordant results?
Contact the Laboratory as soon as possible so that we can investigate in real time: **616.774.7721**

Hemostasis Department News

Laboratory Testing for Heparin Induced Thrombocytopenia (HIT)

The Hemostasis Department has recently made the following changes in Heparin Dependent Antibody testing for heparin induced thrombocytopenia:

1. Hours of availability for the Heparin Dependent Antibody test have been expanded. Specimens for this test received in the Laboratory by 12:00 noon will now have this test completed and results reported the same day.

2. All Positive or Borderline results for the Heparin Dependent Antibody test are now being called to the ordering location. If the test result was not called, it can be assumed that the result was negative. All Heparin Dependent Antibody results will be available in the Cerner system as soon as the test is completed.

The Serotonin Release Assay should be ordered for further evaluation of all patients with Positive or Borderline results on the Heparin Dependent Antibody screening test. This test is now available as an orderable test in the Cerner system. The test is sent out to the Blood Center of Wisconsin. In the near future the Serotonin Release Assay will be defined as an automatic mandatory reflex test for Positive or Borderline Heparin Dependent Antibody test results. A further announcement will be sent out in this laboratory newsletter once this automatic reflex is implemented.

The following items should be noted in relation to ordering and specimen collection for the Heparin Dependent Antibody test:

1. Patients should be evaluated using the 4T Score before the Heparin Dependent Antibody test is ordered. Click on this link to see the 4T Score table.

A 4T Score of 3 or less is considered indicative of a low probability of heparin induced thrombocytopenia (HIT). The Heparin Dependent Antibody test should NOT be ordered in such patients. A 4T Score of 4 or higher should be considered indicative of intermediate or high probability of HIT. The Heparin Dependent Antibody test should be ordered only in patients with a 4T Score at or above this level.

2. It is recommended that patients be off heparin for at least 24 hours before the Heparin Dependent Antibody test is drawn. It is also recommended that specimens by this test be collected by venipuncture, and not through an intravenous line from which potential contamination by residual heparin may occur.

Any questions concerning Heparin Dependent Antibody testing for heparin induced thrombocytopenia may be directed to Christina Kleibusch in the Hemostasis laboratory at (616) 267-2740 or to Christopher (CJ) Michaud in the Pharmacy department at (616) 391-2043.

Microbiology Department News

Group A streptococcus (Cervical/Vaginal) swab

The Microbiology Department is pleased to announce Group A streptococcus for cervical and vaginal swab is now available. Specimen collection instructions are available in the Laboratory Catalog.

Group B streptococcus by PCR

On June 15th, the Group B streptococcus by PCR will replace Group B streptococcus culture. The PCR will not be a STAT method but the TAT will be approximately 24 hours compared to the 2 – 3 day TAT of the culture.

eSwab™

The current swabs used for collection of microbiology specimens are the red top aerobic and the blue top anaerobic and will be replaced by the eSwab™ System. The eSwab™ contains a flocculated swab that is able to hold more specimen and is easily eluted into the transport media. The flocculated swab goes directly into the Amies liquid which provides a moist environment for preservation and recovery of bacteria. Please use this guide for replacement information.

One collection with the eSwab™ takes care of both aerobes and anaerobes in one container. There will be three different containers but the only difference between them will be the size of the swab. The smallest swab is nasopharyngeal, and it will have a mini tip and a bendable shaft for easier collection of smaller sites and also for pediatric collection.

For any questions please email Microbiology Laboratory Manager, Mary Coram at mary.coram@spectrumhealth.org.

Referral Department News

Order code update

The following tests are no longer to be ordered as Reference Miscellaneous (#8998). Test code and specimen collection information are available in the Laboratory Catalog, please refer to the links below.

- Bullous Pemphigoid, BP 180 and BP 230, IgG Antibodies
- Estrone Serum
- Fragile X Syndrome, Molecular Analysis
- Lacosamide Serum

NMR Lipoprotein Profile Test Discontinued

Mayo Medical Laboratories has recently discontinued the NMR Lipoprotein Profile test. This test is therefore no longer available through the Spectrum Health Laboratory.

This decision was based on the facts that only low density lipoprotein particle (LDL-P) has been validated as a cardiac risk biomarker and that Mayo has established that there is a very close correlation between LDL-P by NMR and Apolipoprotein B (Apo B). Mayo Clinic Preventive Cardiology recommends the use of Non-HDL Cholesterol (a value reported with the routine Lipid Panel) as a risk marker in routine practice and Apo B as an additional marker only in special circumstances where there is concern as to residual risk or where fine tuning of therapy is required.

Any questions concerning the discontinuation of NMR Lipoprotein testing may be directed to Dr. Richard Horvitz in the Pathology department at (616) 267-2785 or richard.horvitz@spectrumhealth.org.

Aspergillus IgG Testing Changes

In mid-June the Spectrum Health Laboratory will begin sending all Aspergillus fumigatus IgG Blood Level and Aspergillus niger IgG Blood Level tests to ViraCor-IBT Laboratories. Pediatric A. fumigatus IgG and A. niger IgG levels will no longer be sent to Quest/Specialty Laboratories, and adult A. fumigatus IgG will no longer be sent to Mayo Medical Laboratories.

This change will also include A. fumigatus IgG levels ordered as part of the Hypersensitivity Pneumonitis Profile. The other two components of this panel (Micropolyspora and Thermoactinomyces) will continue to be sent to Mayo for the present time. At some future time these components will also be transitioned to ViraCor-IBT.

Please note that there will be a reference range change. The new reference ranges will be reported with the ViraCor-IBT results. For specimen requirements and information please use the online laboratory catalog (links above). For questions and inquiries please contact the Referrals Department (616) 267-2753 or Dr. Richard Horvitz at (616) 267-2785 or Richard.Horvitz@spectrumhealth.org.

Toxicology Department News

Beginning June 2, 2015, Everolimus testing is available through the Toxicology Department. The specimen is whole blood EDTA. The testing is available daily and is run along with the immunosuppressant drugs. Please refer to the link above for more information in our Laboratory Catalog.

Please contact Ben Kuslikis, PhD, Toxicology at 616-267-2784 for more information.

Results Reporting

Reference Ranges for Potassium and ALT
May 19 - 20, 2015

On May 20th, 2015 Spectrum Health Laboratory and Spectrum Health Information Services identified 3200 Potassium (K+) and ALT results that were autoverified with a lack of reference ranges. During an implementation of our Big Rapids locations the reference ranges for these tests were inadvertently removed. This resulted in the elimination of all flags (Critical, Delta, High and Low flags). Please note critical values were not flagged during this time and therefore were not called.

The problem occurred on only one of the three instruments at Spectrum Health Regional Laboratory in Grand Rapids.

Although the correct results were verified at the time, the Chemistry department has generated corrected reports to reflect the appropriate reference ranges. A memo was sent in lieu of calling each provider for each corrected result. Our Laboratory Call Center has informed all providers of any missed critical values as of 13:00, May 20, 2015.

If you have any questions or other laboratory issues, please feel free to contact Dr. Julie Tablante-Blanco or Dr. David Alter at julieta.blanco@spectrumhealth.org or david.alter@spectrumhealth.org, respectively.

Acetaminophen Related Laboratory Interference

Roche Diagnostics has informed all of its clients that due to problems with the TRINDER methodology patients with "elevated levels of N-acetyl-p benzoquinone imine (NAPQI, a metabolite of acetaminophen), N-acetylcysteine (NAC), and/or Metamizole…" (i.e. high levels of acetaminophen) can have FALSELY DECREASED serum/urine levels of the listed analytes:

- Cholesterol
- Creatinine
- HDL
- Lactic Acid
- LDL
- Triglycerides
- Uric Acid

A comment will be added to all acetaminophen results indicating this interference. This interference only affects laboratory testing performed at SH-Grand Rapids, SH-Zeeland Community Hospital and SH-Gerber Hospital.

If you have any questions please contact Dr. David Alter on PerfectServe or via email: david.alter@spectrumhealth.org.

General Information

Outpatient Laboratory Summer Hours *(repeat)*

In observance of the Independence Day and Labor Day holidays, Outpatient Draw Site schedules will be adjusted as follows:

Open (normal business hours) Friday, July 3, 2015
CLOSED – Saturday, July 4, 2015
CLOSED – Monday, September 7, 2015

For more information regarding Outpatient Laboratory locations, hours and phone numbers please visit:

Laboratory Locations

Summer Lockbox Preparation *(repeat)*

Follow these steps for loading your outdoor lockbox during the summer months to prevent overheating of refrigerated and ambient specimens:

1. Place a frozen cool pack in the bottom of the lockbox.
2. Layer 3 – 4 paper towels over the cool pack for insulation.
3. Place refrigerated temperature specimens on top of the paper towels.
4. Layer 3 – 4 paper towels over the refrigerated specimens for insulation.
5. Place ambient temperature specimens on top of the paper towels.

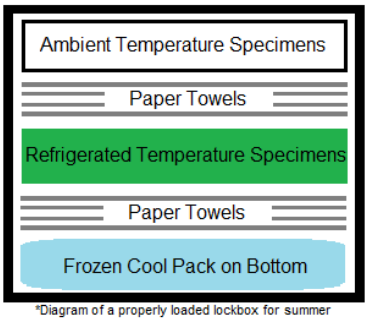

*Diagram of a properly loaded lockbox for summer

Frozen specimen should **not** be left in the lockbox for after-hours pickup. These tests may be better preserved in the office freezer until the next day's courier pickup.

Spectrum Health Laboratory is committed to specimen integrity. The specimen transport integrity guide is available in the online test catalog. If you have further questions please contact Laboratory Services at 616.774.5116.

The Spectrum Health Regional Laboratory is reviewing all test requests not performed on site (i.e. send out/referrals) to determine if there is an available in-house alternative and if the result will significantly alter patient diagnosis, prognosis or treatment. All reviews are being done in collaboration with the ordering providers on a case by case basis. We need your support in this process so that we can improve our service through improved test utilization. If you have a test request to be added to our menu please email LaboratoryServices@spectrumhealth.org and an available Pathologist or Manager will respond to you at their earliest convenience.