Improving Test Utilization

Changes in Reflex Criteria for Urinalysis, do Culture if Indicated

On September 1, 2015, Spectrum Health Regional Laboratory, in conjunction with Infectious Disease, Infection Prevention and Pharmacy, adjusted reflex criteria for urine culture based on urinalysis finding (Urinalysis, Do Culture if Indicated – Test #115, Epic #LAB348, UA CX DO IF). The adjustment involved an increase in the number of WBCs per HPF considered positive (from ≥3 to ≥10).

URINE CULTUREs will be performed if 2 of the following 3 criteria are positive:
- positive leukocyte esterase,
- positive nitrite
- ≥ 10 WBCs/HPF (previously ≥3 WBCs/HPF)

URINE CULTUREs will NOT be performed if there are 10 or more squamous epithelial cells per high power field (>10 sq epith/HPF).

A Laboratory/Pharmacy review of one month’s UA CX DO IF requests with WBC between 4 and 9 WBCs/HPF) and at least one other positive criteria (leukocyte esterase and/or positive nitrite) (108 patients selected at random from 833 possible) revealed that no urinary tract infections were missed by raising the WBC cutoff from ≥3 WBCs/HPF to ≥10 WBCs/HPF. In addition, there would have been a 70% drop in the number of urine cultures performed. Furthermore, a number of institutions and commercial laboratories are already using ≥10 WBCs/HPF as their WBC cutoff.

Any questions concerning the change in reflex criteria for urine culture may be directed to Dr. David Alter in the Pathology department at David.Alter@spectrumhealth.org.

References:
Chemistry

Cardiac Marker Testing
Cardiac marker (Troponin) testing should only be ordered for Inpatient or Emergency Department patients. This test is not clinically appropriate for outpatient testing due to long outpatient test turnaround time (specimen collection to result). In cases of acute/urgent medical conditions, please have the patients evaluated at an Urgent Care center or the Emergency Department.

- **Troponin T** *(Test #8048, Epic #LAB139) – Performed at Spectrum Health Regional Laboratory (SHRL), Gerber Memorial Laboratory (SHGM) and Zeeland Community Laboratory (SHZCH)*
- **Troponin I** *(Test #8038, Epic #7470) – Performed at Spectrum Health United Laboratory (SHUH), Kelsey Laboratory (SHKH), Reed City Laboratory (SHRC) and Big Rapids Laboratory (SHBR).*

In addition, **CK-MB** and **CK-Isoenzymes** test orderables will be inactivated and will no longer be available. Requests for either test will no longer be honored.

Cytology

Important Information Regarding Thyroid Fine Needle Aspirations
In recent years, liquid based cytology has been recognized as an alternative to conventional cytology smears in evaluating fine needle aspirates of the thyroid gland. Liquid based cytology has many advantages over conventional thyroid smears, including excellent cellular preservation allowing better visualization of nuclear detail and less background material, such as blood, which decreases the number of inadequate diagnoses. The more frequent problems we encounter with conventional smears are air drying of the alcohol fixed smears, obscuring blood and thick smears. These technical issues would be avoided with the use of liquid based cytology preparations.

In an attempt to make thyroid FNA biopsy diagnoses more efficient and accurate we are asking that the submission of cytology specimens be changed. Each separate thyroid lesion aspirated should be submitted as a separate specimen. We request you submit one air dried smear and one alcohol fixed smear per lesion and place the rest of the material in a Thin Prep cytolyt vial. We are anticipating that this will improve diagnostic accuracy as well as improve laboratory efficiency and lessen the number of inadequate specimens.

We are now offering patients access to the Afirma Gene Expression Classifier (GEC), a molecular test that helps diagnose thyroid nodules from the first fine needle aspiration biopsy. By using the Afirma GEC, 50% of thyroid FNA’s diagnosed as atypia of uncertain significance and suspicious for follicular neoplasm can be reclassified as benign and unnecessary surgery can be avoided. The American Thyroid Association guidelines include this test as an option for classification of atypia of uncertain significance and suspicious for follicular neoplasm.

Please contact your local Afirma representative, Howie Niskar, (249-496-5626), **Howie@veracyte.com** for more details. To learn more, you can also visit **www.Afirma.com/physicians.**
**Immunochemistry**

**Methodology Change – Rheumatoid Factor Quantitative (SHRL)**

As of June 21, 2016 the SHRL Immunochemistry department changed methods for Rheumatoid Factor, Quantitative (Test #8522, Epic #LAB206). In terms of interpretations, both methods compared well; however, the actual numerical results between methods are not interchangeable and a reference range change was required. The new ranges are listed below:

**Interpretative ranges:**
- Negative: <3.5 IU/ml
- Equivocal: 3.5-5.0 IU/ml
- Positive: >5.0 IU/ml

This is only in effect at the Spectrum Health Regional Laboratory; Spectrum Health Gerber Laboratory is still performing using the immunoturbidimetric assay.

**Microbiology Department**

**Trichomonas Update**

In September of 2015, the Microbiology department rolled out the eSwab™ (single swab) collection device. With the new swab in place, we have updated the methodology for Trichomonas (Test #4201, Epic #LAB252) to the OSOM® Trichomonas Rapid Antigen Test. This specimen is now stable for up to 24 hours ambient (room temperature) and up to 36 hours refrigerated, so there is no need to call for a STAT pick up when using the eSwab™ Trichomonas collection.

**FIT (Fecal Immunochemical Test) Reminder**

In March of 2015, the Microbiology department announced new testing for Occult Blood Stool. We now offer Occult Blood, Immunoassay, Screening (Test #4315, Epic #LAB3110) and Occult Blood Immunoassay, Diagnostic (Test #4316, Epic #LAB3093) using the Hemosure® one-step iFOB Test. This technology has improved specificity, sensitivity, accuracy and cost-effectiveness. This test replaced the Guaiac-based test as the recommended test.

The specimen requirements are a sterile container, so patients will no longer be mailing or dropping off cards. Guaiac-based testing is still available but cards are no longer supplied.

Please review this **Orderable Spotlight** for more information.

**Supply Change Notification – Blood Culture Bottle (repeat)**

Please review this **Supply Change Notification** regarding New BacT/ALERT FAN® Plus Blood Culture Media Bottles. Please refer to the **Laboratory Specimen Collection Catalog** or PolicyTech for information on specimen collection.

Questions regarding this supply change may be directed to Mary Coram, Manager of the Microbiology Department via email to Mary.Coram@spectrumhealth.org.
Genital Culture with Gram Stain Discontinuation (repeat)

On July 1st, 2016, the Spectrum Health Laboratory Microbiology Departments discontinued Genital Culture with Gram Stain (Test #165, Epic #LAB465). Alternative test methods are available and should be ordered specifically for individual pathogens. Please use one of the tests listed in the chart on the following page, in replacement of Genital Culture with Gram Stain.

<table>
<thead>
<tr>
<th>Test name</th>
<th>Specimen type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group B Streptococcus (GBS), PCR</td>
<td>Vaginal/Rectal eSwab Collection</td>
</tr>
<tr>
<td>Group B Streptococcus (GBS), Penicillin Allergy, PCR</td>
<td>Vaginal/Rectal eSwab Collection</td>
</tr>
<tr>
<td>Group A Streptococcus, Culture</td>
<td>Cervix/Vaginal eSwab Collection</td>
</tr>
<tr>
<td>Trichomonas, OSOM (eswab)</td>
<td>Cervix/Vaginal eSwab Collection</td>
</tr>
<tr>
<td>Gram Stain (for bacterial vaginosis and yeast)</td>
<td>Cervix/Vaginal eSwab Collection</td>
</tr>
<tr>
<td>Fungal Culture (for yeast)</td>
<td>eSwab Collection</td>
</tr>
<tr>
<td>Wound Culture with Gram Stain (for lesions)</td>
<td>eSwab Collection</td>
</tr>
<tr>
<td>Herpes Simplex PCR for Lesions</td>
<td>Viral Transport Media (UTM)</td>
</tr>
<tr>
<td>Chlamydia Gonococcus, PCR, Genital Swab</td>
<td>Abbott multi-collect specimen collection kit</td>
</tr>
</tbody>
</table>

Please click on the links provided for more information regarding specimen collection

Note: This change will go into effect at Ludington Hospital Laboratory in August.

Compliance with CAP (College of American Pathologists) accreditation and guidelines advises that genital culture is not recommended for women of childbearing age. Routine genital culture, with the intent of detecting what is there, rarely has an indication. Cultures ordered for specific pathogens with proper collection and selection media are recommended. The Microbiology Department has validated the Nugent Score (criterion based Gram Stain) for better diagnosis of bacterial vaginosis and determination of overgrowth of yeasts. The aim is better patient care by providing accurate patient results that are in tune with the clinical picture.

Any questions concerning genital cultures should be directed to either Dr. Deborah E. Blue, Technical Director, Microbiology, Deborah.Blue@spectrumhealth.org or Mary Coram, Manager, Microbiology, Mary.Coram@spectrumhealth.org.

Molecular Diagnostic
New Test: MPN Expanded Panel

Effective June 6, 2016, Spectrum Health Regional Laboratory Molecular Diagnostics Department is pleased to announce the addition of the MPN Expanded Panel (Test #7090, Epic #LAB3611).

Myeloproliferative neoplasms (MPN) Expanded panel uses next generation sequencing (NGS) and fragmentation analysis to detect well-defined, recurrent mutations in JAK2 exon 12, MPL and CALR genes, which, in addition to BCR-ABL gene fusion and JAK2 V617F mutation (testing, provides a comprehensive approach to aid in the diagnosis of MPN. The MPN Expanded Panel can be ordered concurrently with JAK2 V617F (Test #9066, Epic #LAB3066) testing or as a reflex order if JAK2 V617F testing is negative (Test #7093, Epic #LAB3612). The same sample can be used for both JAK2 V617F and MPN Expanded Panel testing. This assay has been validated in the CLIA-certified Advanced Technology Laboratory (ATL) for clinical use.

Questions may be direct to Dr. Cong Liu, PHD, FACMG, via email to Cong.Liu@spectrumhealth.org.
General Information

Join us in wishing a happy retirement to Dr. Richard Horvitz!

Dr. Horvitz grew up in the Boston area, graduating from Harvard College in 1966. He received a Master’s degree in biochemistry in 1968 and a Degree of Medicine in 1972, both from the University of Washington. He then completed a postdoctoral fellowship in clinical pharmacology at the University of Rochester in 1974, and subsequently completed his residency training in Laboratory Medicine at Yale-New Haven Hospital in 1977. Dr. Horvitz joined Laboratory Pathologists, PC at Butterworth Hospital in August of 1977 and has been practicing Clinical Pathology as a member of the pathology group serving Butterworth and Blodgett Hospitals and subsequently Spectrum Health System, ever since.

Thank you Dr. Horvitz for your lifelong commitment to our community and to Spectrum Health!

Outpatient Laboratory Summer Hours

In observance of the Labor Day holiday, Outpatient Laboratory Draw Site schedules will be adjusted as follows:

- **CLOSED** – Monday, September 5, 2016

Regular business hours will resume on the following Tuesday. For more information regarding Outpatient Laboratory locations, hours and phone numbers please visit: Laboratory Locations or use our new Find-A-Doc & Location Lookup: findadoctor.spectrumhealth.org/locations.

**Note:** Any questions regarding a serious contagious disease (i.e. Ebola or MERS Co-V), please page Infection Control & Prevention at 616.479.4099.