FALL 2016

Lab Link

THE NEWSLETTER OF MAIN LINE HEALTH LABORATORIES

PA Act 87

Mandatory Hepatitis C Screening

PA Hepatitis Screening Act 87 was enacted July 20, 2016 and has been in effect since September 20, 2016.

Requirement: Each individual born between the years of 1945 and 1965 who receives health services as an inpatient in a hospital or who receives primary care services in an outpatient department of a hospital, health care facility or physician's office shall be offered a hepatitis C screening test or hepatitis C diagnostic test unless the health care practitioner providing the services reasonably believes at least one of the following:

(1) The individual is being treated for a life-threatening emergency.

(2) The individual has previously been offered or has been the subject of a hepatitis C screening test.

(3) The individual lacks capacity to consent to a hepatitis C screening test.

The regulation also states: "The offering of the hepatitis C screening test shall be culturally and linguistically appropriate."

Follow-up health care: If an individual accepts the offer of a hepatitis C screening test and the screening test is reactive, the health care provider shall either offer the individual follow-up health care or refer the individual to a health care provider who can provide follow-up health care. The follow-up health care shall include a hepatitis C diagnostic test.

Hepatitis C is one of the most common blood-borne infections in the United

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Hematology Update

Last year, Main Line Health Laboratories (MLHL) performed nearly 50,000 blood counts, 15,000 glycosylated hemoglobin tests (Hgb A1C), 12,000 prothrombin times (PT/INR)and 11,000 urinalyses. To meet the challenge of delivering such a volume of high-value diagnostic testing rapidly and with critical accuracy, MLHL has endeavored to maintain a state-of–the–art Hematology section, allowing us to provide the highest quality test results in the most efficient manner.

In addition to "routine" or frequently ordered tests, MLHL performs many highly specialized tests in the Hematology and Coagulation labs that support Cardiology and the Lankenau Heart Institute, recognized as one of the top-performing cardiovascular medicine and surgery programs in the country.

Our high-throughput **Sysmex XN 9000 Blood Cell Counting System** consists of a fully-automated specimen processing track into which is integrated two XN Cell Counters, a slide maker/stainer, a specimen storage area, and a Biorad Variant II system for measuring Hgb A1C.

Using bar-codes, the system maintains positive specimen ID and rack position throughout the specimen analysis and archiving process. The powerful mathematical algorithms and extensive decision tree that are utilized for specimen analysis enable the instruments to rapidly determine which specimens are exhibiting questionable results, and then immediately perform a repeat test.

The highly advanced technology incorporated into these instruments enable them to provide three new FDA-approved parameters that promise to be very clinically useful: The **Immature Granulocyte Count** (IG) for infection surveillance, the **Reticulocyte Hemoglobin** (Retic-He) for anemia management and the **Immature Platelet Fraction** (IPF) for Thrombopoeisis Management (assessing need for blood products).[1]

If you have any questions, please contact Dr. Pradeep Bhagat at 484.476.3521 or Laura O'Shea, Hematology Supervisor, at 484.476.2531. ■

1. Utility of The Immature Platelet Fraction In Predicting Recovery With *www.bloodjournal.org/content/122/21/3546* by RJ Klaassen — 2013 476-2531.

A Patient's Experience

I recently had to take my son for blood work that we have been avoiding for several weeks. So long, in fact, that his doctor had called to find out why the blood work had not been done. The reason was that my 13-year-old son has a needle phobia and becomes a total wreck when he has to get a shot, and blood work makes him go nuts. It's all, of course, in his head—but that's what phobias are. This kid takes flying lessons but can't deal with needles. So we had been avoiding it, but it was no longer avoidable.

I brought him in extra early in hopes he'd be too tired to fight much. I alerted the staff and met a phlebotomist I had talked to in the past named Bert. She ended up taking my son. She quickly set about distracting him and locating the vein that would be the quickest, easiest for success. She knew she had one shot. She was fast but calm. I could tell that my son trusted her immediately. Also the newness and pristine look of the new lab made a difference. It was so clean and fresh and he was looking around, and I could tell he thought it was nice. Bert told him to make a fist and take a breath. He was about to object and say something to me when I told him—she's done. He looked at me—what?!? Done? He saw two tubes of blood and his mouth dropped open. "But I barely felt anything!" he told us. Bert asked him what type of juice he liked and she was back in five seconds with crackers and juice and some water for me. I seriously don't think my kid knew what to do with himself; he was so prepared to hyperventilate, get nauseous, cry, and he did none of those things. Bert was exceptional. I will never go to anyone else. She's a find. I hope someone at Lankenau will let her know.

Thank you,
A very grateful mom

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Fecal Immunochemistry Test (FIT):
A New, Improved Test For Stool Occult Blood

A new automated test, **Fecal Blood Immunochemistry Test** (**FIT**®) is now being routinely performed in our LMC Hematology Lab to screen for colorectal cancer and gastrointestinal bleeding. This immunocytochemical test system utilizes specific anti-HgbAO, for more accurate detection of fecal occult blood than the conventional card test (guaic test). An added advantage of the FIT test is that it largely eliminates the need for patient dietary restrictions. The American Cancer Society, US Preventive Task Force and American College of Gastroenterology (ACG) recommend this test to be performed once a year for colorectal cancer screening. FIT testing is the preferred annual screening method for colorectal cancer of the ACG.[1]

If you have any questions, please call Dr. Bhagat at 484.476.3521 or Laura O'Shea, hematology supervisor at 484.476.2531. ■

1. *American College of Gastroenterology Guidelines for Colorectal Cancer Screening 2008*, Douglas K. eRx , MD A ,FCG 1 , David A. o Jhnson , MD A ,FCG 1 o s,Jeph C. Anderson , MD1 , Phillip S. Schoenfeld , MD , MSEd , MSc (Epi) A ,FCG 1 , Craol A. uBrke , MD A ,FCG 1 and John M. n Iadomi , MD A ,FCG 1

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States. About four million people are infected with hepatitis C. Unfortunately, half of the people who have hepatitis C have not been diagnosed. Hepatitis C is the leading cause of liver cancer as well as liver transplants.

Most health plans will cover hepatitis C screening. It is advisable for patients to check with their insurance carrier before accepting.

If you have any questions, please contact Pradeep Bhagat, MD, Medical Director, Main Line Health Laboratories, at 484.476.8456 or bhagatp@mlhs.org. ■

Reflex Testing

The following table contains the criteria used for reflex testing at Main Line Health Laboratories. These criteria are established and approved by the Main Line Health Executive Committee. This information is provided on the physician orientation web site and on the Main Line Health Laboratories website for outreach clients at MLHL.org. If you have any questions, please contact Liz Hallinan, Paoli Hospital Laboratory Manager, at 484.565.1412.

Test Requested	Reflex Criteria	Reflex Test Performed
Acid-Fast Bacilli (AFB) Culture	Positive result	AFB Identification
Anti Nuclear Abs (automated: ANAU)	Positive result	IFA ANA Titer, Sjögren's Abs, ENA Abs, Scleroderma Ab, Jo-1 Ab, dsDNA Ab, Centromere Ab, Histone Ab
Anti Nuclear Antibodies by IFA (ANA)	Positive result	ANA Titer
Anti Nuclear Antibodies by IFA, fluid (ANAF)	Positive result	ANA Titer, fluid (ANAFT)
CBC/Automated Differential	Abnormalities detected	CBC Manual Differential
C. difficile Toxin screen (GDH antigen, C. diff toxin by EIA)	Inconclusive	C. difficile toxin by PCR (CDPCR)
Celiac Antibody with Reflex—TTGA	Negative result	Total IgA If Tissue Transglutaminase IgA= Neg and Total IgA <85 reflex Tissue Transglutaminase IgG
CPK, Reflex CKMB Immunoassay	Females >100, males >150	CK MB
Cryptococcal Antigen	Positive result	Cryptococcal Antigen Titer
Fungus Culture	Positive result	Fungus Identification
*Heterophile W/EBV Reflex	Negative result	Epstein Barr Virus Antibodies
Rapid HIV-1/ 2 Ab & p24 Ag	Positive result	Rapid HIV- 1/2Ab→HIV 1,2 Ab & p24 Ag (Abbott Architect)→ HIV ½ AB Differentiation (Multispot) P24 Ag→HIV1 RNA PCR Ultrasensitive (Nucleic Acid Test NAT)
*Lipid Profile with Reflex	Triglycerides > 400 mg/dL	Direct LDL Cholesterol
Lupus Anticoagulant Screen	Abnormal result	Mixing Studies (PT, APTT) If MPTT normal→37PTT(x2) If MPTT abnormal→Hexagonal Phospholipid (Staclot) If DRVT >44.0→DRVV Confirm
Lyme Total Ab (IgG + IgM)	Positive result	Lyme IgM
*Lyme, total Ab reflex to Lyme Ab Western Blot (LYMER)	Lyme IgG/ IgM= Positive result	Lyme IgM *Lyme, total Ab reflex to Lyme Ab Western Blot

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Test Requested	Reflex Criteria	Reflex Test Performed
PF4 Antibody (Heparin Induced Ab)	Positive result	Serotonin Release Antibody
PT/PTT Mixing Studies	Positive mixing PTT	Incubated Mixing PTT
Most Routine Cultures	Positive result	Organism Identification Susceptibility Testing
RPR Syphilis Test	Positive result	RPR Titer, Treponema pallidum Ab (FTATP)
Sickle Cell Screen	Positive result	Hemoglobin Electrophoresis
Strep Antigen, Group A, Throat	Negative result	Beta Strep Screen, Throat Culture
Toxoplasma Antibody (IgG)	Positive result	Toxoplasma Ab IgG & IgM Titers
*TSH reflex to T4, free	Abnormal TSH result <0.35 or >5.50 mIU/L	Thyroxine (T4), free
Urinalysis with Reflex Culture	Abnormalities detected	Urine Culture (see “Most routine cultures”)
Urinalysis, Routine	Abnormalities detected	Urinalysis w/microscopic examination
VDRL (CSF for Syphilis)	Positive result	VDRL Titer

Additional tests of similar nature may be added to this list as necessary.

NOTE: Pathologists may also order special stains (88312, 88313), immunochemical stains (88342, 88360, 88361) or in situ hybridization (88365, 88367) on surgical pathology and cytopathology specimens, when medically necessary and in order to establish a diagnosis.

*Must be ordered as a reflex test. All others reflex automatically.

Take Our Survey

Main Line Health Laboratories regularly conducts a comprehensive survey of physicians, clinicians and clients who utilize our laboratory. We value this information highly. In the past, surveys have been helpful in bringing key issues to our attention. We have worked to address those concerns and made improvements to the quality of service to you and your patients. Follow the link to the electronic version of the survey in MLH Clinician. A paper version is also available.

Please take the time to give us your feedback. If you have not received a survey form, please call Karen Craemer at 484.580.4000 and she will be happy to send you one. We very much appreciate your opinion. As a thank you, MLHL will provide a bagel breakfast to four offices or facilities, selected at random, who return a survey. If you have any questions, please contact Jack Galamb, Outreach Manager, at 484.580.4006.

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