

SPRING 2016

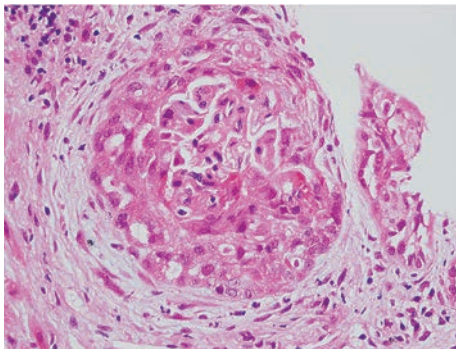
Lab Link

THE NEWSLETTER OF MAIN LINE HEALTH LABORATORIES



Anti-Neutrophil Cytoplasmic Antibodies (ANCA)

By Anne Marie Brewer
MLHL Immunology Supervisor



Histopathology image showing antineutrophil cytoplasmic antibody vasculitis. Renal biopsy showing glomerulus with circumferential cellular crescent. ©Hazel Lote, Ethna Mannion, Terence Cook, Thomas Cairns and Philip Savage.

ANCA-associated vasculitis is characterized by inflammation and lesion of the small blood vessels. They are a heterogeneous group with different preferences of organ involvement. Anti-Neutrophil Cytoplasmic Antibodies (ANCA) against neutrophil proteinase 3 and myeloperoxidase occur often in these diseases.

ANCA-associated vasculitides are comprised of granulomatosis with polyangiitis (GPA, formerly Wegener's granulomatosis), microscopic polyangiitis (MPA) and Churg-Strauss syndrome, now also referred to by its medically more accurate term—eosinophilic granulomatosis with polyangiitis (EGPA).

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Medical Laboratory Professionals Week April 25–30, 2016

This week we turn our attention to celebrating medical laboratorians. It is the one week out of the year when we highlight the very important role played by those of us who practice in the laboratory.

Although the information we provide is so vital to healthcare, we are largely invisible. Arguably we provide the majority of the concrete data used in the diagnosis, treatment and monitoring of diseases. By the nature of our work and the technology used, we increasingly also help to rule out illnesses and advance wellness. Most laboratory professionals work long hours outside the attention and consciousness of the patient, day in and day out, with little public recognition.

Clinical scientists account for over 325,000 jobs. About half of these are in hospitals; the remainder are in clinics, doctors' offices, blood banks, and independent clinical, forensic, and research laboratories, or with the government (such as the Public Health Service).

Despite changes in the field, including technological advances that can automate some tasks, the need for laboratory professionals is expected to grow much faster than the average employment, by 22% between 2012 and 2022. With population growth and aging, increased coverage of screening tests resulting from federal health care reform and the development of new tests, the volume of laboratory tests is expected to increase.

However, there is a documented shortage of working laboratory professionals in the U.S. According to a survey performed each year by the American Society for Clinical Pathology (ASCP), laboratory professions are seeing an average vacancy rate of 5-6%. The number of working lab personnel has declined for a number of reasons, including retirement. At the same time, many educational programs are at capacity and cannot expand, limiting the number of new graduates each year.

Each laboratory must be staffed by a sufficient number of personnel who meet the qualifications to perform the functions needed for the volume and complexity of testing performed at that lab. They are Laboratory Directors, Technical and General Supervisors, Medical Laboratory Scientists, Medical Laboratory Technicians, Pathologists, Pathology Assistants, Cytotechnologists, Histotechnologists and Histotechnicians, Phlebotomists and Specimen Processors. These are the key people who will be handling your sample, performing the tests, and ensuring that the results they provide are accurate, reliable, and timely. They are a crucial part of the health care team. ■



MLH Laboratory Management Update

Judy Ann Gilbert has been promoted to **System Director for Main Line Health Laboratories** (MLHL). She previously served as the Division Director and was responsible for managing and directing general operations of the clinical and specialty labs at the Lankenau Medical Center (LMC) Campus as well as support services, System Point of Care testing program and the Laboratory Information Services.

Judy was the driving force in leading MLHL into cutting-edge technologies and advancements in laboratory medicine. The implementation of laboratory robotics and automation in the core lab showcased MLHL as a premier provider of laboratory services for our community. Judy holds Bachelor's degrees in Biology and Chemistry with a specialty certification in Hematology from the ASCP. She completed an Executive Management Scholarship Program sponsored by CLMA at Notre Dame University. She is a member of LMC New Program Development Committee and MLH Policy and Procedure Committees as well as many other hospital and laboratory committees. Judy received the Superior Patient Experience Award in 2014. In her new role, Judy will be responsible for the vision, leadership and development of MLH Laboratory Services.

Rowena Burrows has accepted the position of **Division Manager, Core Laboratory** at Lankenau Medical Center. She has been with LMC for almost 23 years. For 10 years, she was the Core Lab Supervisor responsible for the daily operations of the chemistry and hematology departments and IMSB hematology lab. Previously, she served as the Evening/Night shift supervisor for the Rapid Response Lab for 8 years. In addition, Rowena managed the statistics and reports for the Clinical Pathology Quality Management and Patient Lab Safety programs for the system.

She currently serves as an Advisory Board member for the Harcum College MLT Program. Rowena has a BS in Neurobiology from Temple University, an MBA from Villanova University with a specialization in E-Commerce as well as certificates in Lean Six Sigma and Six Sigma Green Belt.

Erin Tretter, MT (ASCP) has been promoted to **Division Manager, Rapid Response Laboratory, Bryn Mawr Hospital**. Erin will be responsible for the technical and administrative leadership of the clinical laboratory at BMH. She formally starts on May 9.

Currently, Erin is the Supervisor for the Rapid Response Laboratory at Paoli Hospital where she is responsible for the technical operations and quality management of the Hematology, Chemistry, Coagulation and Urinalysis

sections of the laboratory. Prior to joining MLH, Erin was the Point of Care Manager for St. Christopher's Hospital in Philadelphia and the Supervisor for the *stat* Laboratory at Penn Presbyterian Medical Center. Erin holds a Bachelors Degree from California University of PA. She earned her MBA with a specialization in Healthcare Management in 2011 from Florida Institute of Technology and earned membership to the National Honor's Fraternity Phi Kappa Phi.

Josephine Baiocchi will assume the role of **MLHL System Quality Manager** in addition to her current position as Supervisor of the Rapid Response Laboratory at BMH. In her new role, Josephine will have responsibility for managing the laboratory's quality management and patient safety programs to ensure a high quality work environment necessary for excellent patient care.

Josephine also manages the chemistry quality control for the system and has been a long-standing member of the Lab Nursing Committee. She holds a BS degree from Temple University and received her MBA from St. Joseph's University.

Kim Straub has assumed the **Supervisor position for Cytology**.

Kim will manage the technical and quality management of the Cytology Laboratory for the system which was consolidated at LMC.

Kim began her studies at Bloomsburg University from 2004-2007. In 2009, she graduated from Thomas Jefferson University with a BS/MS in Bioscience Technologies with a concentration in Cytotechnology. Prior to joining MLHL, she was a cytotechnologist at Tenet Hahnemann University Hospital. She continues to serve as a hospital Safety Coach at Lankenau Medical Center.

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ANCA

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Effective January 19, 2016, Main Line Health Laboratories began offering Fluoro-enzymatic-immunoassay EliA direct measurement of Proteinase 3 (PR3) and Myeloperoxidase (MPO) antibodies. These assays replace the current method of screening for ANCA by indirect immunofluorescence (IFA).

SENSITIVITY

The sensitivity of a clinical test refers to the ability of the test to correctly identify those patients with the disease.

SPECIFICITY

The specificity of a clinical test refers to the ability of the test to correctly identify those patients without the disease.

In a study from Villata et al (2004), serum samples were tested with different methods for ANCA detection. Both PR3 and MPO performed very well and exhibited a higher clinical specificity and comparable sensitivity as ANCA by IFA. This higher specificity allows for better diagnostic accuracy. Positive ANCA by IFA test results were often confirmed by measurement of PR3 IgG & MPO IgG antibodies.

ANCA-PR3 and ANCA-MPO are available to order in the Hospital Information System, NextGen™ and e-Clinical Works. ANCA by IFA can be ordered as miscellaneous test.

Please forward any questions you may have to Dr. Pradeep Bhagat, Medical Director, Main Line Health Laboratories, at 484.476.3521, or BhagatP@mlhs.org. ■

Reference: Villalta D, Tonutti E, Tampoia M, Bizzaro N, Papisch W, Tozzoli R, Stella S (2004) Analytical and diagnostic accuracy of the EliA automated enzyme fluoroimmunoassay for antineutrophil cytoplasmic autoantibody detection

Clin Chem Lab Med 42 (10):1161-1167

The FIT Test—Colon Cancer Screen

The fecal immunochemical test (FIT) is based upon the immunochemical detection of human hemoglobin as an indicator of blood in the stool. Up to now, the Guaiac-based Fecal Occult Blood Test (gFOBT) has been the standard and uses chemical Guaiac (a reagent derived from wood resin of Guajacum trees) to detect heme in stool. Heme is the iron-containing component of the blood protein hemoglobin. Heme contains pseudoperoxidase, a chemical which converts Guaiac to the color blue. Dietary peroxidases can cause false-positive results.

In contrast to Guaiac-based fecal occult blood tests, FIT uses an antibody to the globin portion of Hemoglobin. Since globin does not survive passage through the upper gastrointestinal tract, the presence

of globin in the stool indicates bleeding in the colon or rectum. FIT tests possess several advantages over traditional Guaiac-based FOBTs:

- Simple, patient-friendly, single-sampling probe replaces multiple, unpleasant fecal collection or smearing;
- No dietary or Vitamin C restriction; fewer false positives;
- More frequent patient compliance over Guaiac-based FOBTs.
- Improved sensitivity over Guaiac-based FOBTs.

Better Compliance + Better Specificity + Sensitivity = Better Outcomes

FIT identifies patients for which the presence of fecal occult blood in stool is associated with gastrointestinal disease. FIT testing has improved sensitivity and specificity over the Guaiac method. This improvement directs more of the “right” patients to colonoscopy, leading to the earlier detection of polyps and colorectal cancer. Published literature has reported that there can be as much as a 30% improvement in detecting early stage cancer when incorporated into an organized screening program (American Cancer Society states 39% of colorectal cancers are detected in the early stage*). ■

*The American Cancer Society colorectal cancer screening guidelines state that fecal occult blood tests or fecal immunochemical tests are to be performed on an annual basis to retain their effectiveness as a screening method.



FIT specimen collection kits are available through MLHL Client Services, 484.580.4200 or by faxing a supply order form to 610.977.0070. FIT is available to order in the Hospital Information System, NextGen™ and e-Clinical Works.

Management Update

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Jack Galamb is rejoining MLHL as the **Outreach Manager**. Prior to returning to Main Line Health, Jack was a Consultant with Ancillary Medical Solutions. Jack is extremely professional with a tremendous knowledge of the laboratory business.

Jack served as the MLHL Outreach Marketing Director for 13 years from October 1997 to July 2011. Prior to his first stint with MLHL, he was a representative for SmithKline Beecham and Roche Biomedical Laboratories. Jack brings great perspective from his past experience to the table and is able to incorporate what he has learned into the development of practical recommendations and solutions. In his new role, Jack will be responsible for the Sales and Marketing of laboratory services as well as managing the MLHL Couriers.

Jack earned his Bachelor's Degree in Biology from Kean University and attended Farleigh Dickinson University for post graduate work in Marketing Management.

Jack will head up the Clinical Liaison team that functions as a valuable resource for MLH health care practitioners and laboratory clients. He can be reached at 484.580.4006.



Your Clinical Liaison Team

With the recent return of **Jack Galamb**, Main Line Health Laboratories now fields a full-time team of expert Clinical Liaisons to assist your practice or facility. Jack joins **Donna Burkhardt** and **Jeanne Annarelli** who offer a wealth of clinical laboratory experience to support you, our referring clinicians and clients by:

- Listening and responding to your needs and concerns;
- Providing information about services;
- Researching answers or solutions as needed and involving MLHL supervisors, managers, or others who can help;
- Providing detailed reports to MLHL upper management;
- Recruiting additional customers and patient referrals to MLHL;
- Reviewing or making changes to client accounts;
- Record details of contacts and actions taken.

Jeanne Annarelli

Jeanne attended Fitzgerald Mercy school of Medical Technology and received an Associate's degree in Liberal Arts from the Delaware County College, graduating with honors. She is a member of the American Society of Clinical Pathologists (ASCP) and performed testing for a number of years in the Rapid Response Laboratory at Lankenau Medical Center. Jeanne later managed the Client Service Center for 15 years.

Jeanne retired in June of 2015 but has recently returned to a part-time role as Clinical Liaison. Her extensive knowledge of clinical laboratory testing and customer service makes her a highly valued resource to MLHL physicians and clients.



Donna Burkhardt

Donna received her bachelor's degree in Biology from Moravian College and a Medical Technology degree from St. Luke's Hospital in Bethlehem. She has performed testing in MLHL's Chemistry and LMC Rapid Response Labs. She was cross-trained in multiple departments and became a Laboratory Generalist.

As part of the Clinical Ladders program, Donna educated new Medical Assistants (MAs) and other professionals on phlebotomy and laboratory specimen collection and preparation procedures. Donna has been credited with a measurable improvement of the overall quality of specimens directed to the lab. She was officially given the title of Clinical Physician Liaison and continues to provide practical instruction and has been skillfully representing MLHL for the past three years. ■

Donna can be reached at **484.580.1341** or email BurkhardtD@mlhs.org.

Jack can be reached at **484.580.4006** or email GalambJ@mlhs.org

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Liz Hallinan, Rapid Response Lab Manager, Paoli 484.565.1412

Judy Smith, Rapid Response Lab Manager, Riddle 484.227.3221

Erin Tretter, Rapid Response Lab Manager, Bryn Mawr 484.337.3545

Jack Galamb, Manager, Outreach 484.580.4006



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