

## HEMATOLOGY FLOW CYTOMETRY

### Inside the Hematology Flow Cytometry Lab

The Hematology Flow Cytometry Lab in the Department of Pathology and Laboratory Medicine at Nationwide Children's Hospital provides clinical flow cytometry services with a focus on hematological malignancies such as lymphoma and leukemia. These include both diagnosis of new or relapsed diseases and monitoring of treatment effect such as minimal residual disease (MRD) measurement. We offer cutting-edge 10-color assay for lymphoma/leukemia immunophenotyping. The lab is one of the few clinical flow cytometry labs certified by Children's Oncology Group (COG) to run MRD analysis by flow cytometry with B lymphoblastic lymphoma/leukemia (B-ALL) using a COG standardized protocol and functions as a reference lab for outside institutes.

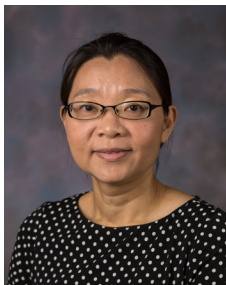
In addition to immunophenotyping and B-ALL MRD, our test menu includes:

- EMA binding assay (or Band3 test) for diagnosis of hereditary spherocytosis or pyropoikilocytosis
- CD34 stem cell count for stem cell transplant program
- DNA ploidy analysis for neuroblastoma and B lymphoblastic lymphoma/leukemia
- Diagnosis of immunological diseases including RORA, autoimmune lymphoproliferative disorders (ALPS panel), oxidase burst assay for chronic granulomatous disease and leukocyte antigen detection for diagnosis of leukocyte adhesion deficiency.

The lab section is led by Dr. Huifei Liu, Director of the Hematology Flow Cytometry Lab. She is board certified in Anatomic/Clinical Pathology and Hematopathology, and has over 20-years of experience with flow cytometry. This includes more than 8-years of experience in clinical flow cytometry.

We are committed to providing an accurate diagnosis as quickly as possible. Results are generally reported on the same day we receive the specimen and will be faxed or securely emailed as soon as they are signed out. If you have any questions, feel free to contact us by phone or email.

We would love the opportunity to serve you and your patients.



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# INFORMATION TO KNOW

## Cold Weather Specimen Storage Reminder

With the changes in weather temperatures, keep an eye out for those days and evenings when outside temperatures dip below freezing. It is important that samples placed in a lockbox outdoors prior to transport to the laboratory be maintained at the appropriate temperature. If refrigerated samples are stored in the lockbox, a **non-frozen gel pack** stored at room temperature should be placed in the lockbox to prevent the samples from freezing while left outside during the winter. The cold pack should not be frozen, since you do not want refrigerated whole blood samples to freeze.

Many laboratory tests require adequate refrigeration of specimens. By following this lockbox practice, you will help insure the integrity of the samples and ultimately obtain reliable laboratory results.

## Check Your Lab Supplies' Expiration Dates!

As we begin a new year, we would like to take the opportunity to remind you to always check the expiration dates of your collection containers prior to collecting samples. Such containers include blood collection tubes, blood culture media, swabs, blood spot filter paper cards and all transport media (e.g., O&P, and Cary Blair media, viral transport media, ThinPrep and Protocol 10% formalin media). It is good practice to check expiration dates of your collection supplies to avoid sample rejections, time taken to recollect the specimen, and delay of treatment by incorporating 'Supply Expiration Date' checks into your monthly checklists.

## Signature Requirements for Clinical Laboratory Test Requisitions

As a reminder, test requisitions for clinical laboratory testing must include an authorized provider's signature. Stamped signatures, printed signatures, printed signatures with the RN or other staff's initials next to it are not considered authorized signatures. Test requisitions received without an authorized provider's signature will be treated as a verbal order and a request will be sent to the ordering provider requesting a signature.

Electronic orders are exempt from this requirement due to the unique sign-on required for individuals who can order lab tests electronically. Additionally, orders that have been entered electronically and possess an electronic signature are acceptable.

Both Centers for Medicare and Medicaid (CMS) and CLIA '88 require validation that the clinical laboratory tests are ordered by an authorized individual. Test requisition requirements are referenced in CLIA 493.1241 Standard: test requisition and CMS CodeMap® Compliance Briefing: 7/1/2010.

## On-Call Coverage for Pathology and Laboratory Medicine

Nationwide Children's Laboratory Services welcome provider calls related to patient's laboratory testing and pathology services. Outside of normal business hours, there are Pathologists on call for urgent or emergent consultation.

- Anatomic Pathologist On-Call: Covers anatomic pathology services including frozen sections, biopsies, and autopsies.
- Hematology/Clinical Pathologist On-Call: Covers clinical laboratory services including blood smears, bone marrow biopsies/smears, and cytology (CSF and BAL).

**For questions about consulting our pathologists or scientific team members about your patient's lab testing or results, or for further clarification regarding signature requirements for clinical test requisitions, please contact Client Services at (800) 934-6575.**

# TEST UPDATES

## Complete Blood Counts Normal Reference Ranges Updated

On January 12, the normal reference ranges for complete blood counts (CBC) and white blood cell differentials (WBC) was adjusted. This update is based on internal studies of our patient population and literature review.

Highlights:

- Absolute values will be reported on all differential parameters as shown on the test report.
- Promyelocyte, myelocyte, and metamyelocyte absolute values will be reported together as absolute immature granulocytes.
- Band and segmented neutrophils will be reported together as absolute neutrophils.
- Reticulocytes will have reduced number of age groups; from 22 to 3.
- Documents containing both the previous and new normal reference ranges can be found on the Nationwide Children's Laboratory Services <https://www.nationwidechildrens.org/-/media/nch/specialties/laboratory-services/live-sitecore-lab-services-documents/hematology-normal-reference-intervals---new-and-old.ashx>

## Sexually Transmitted Infection Testing Returns to Service

On January 19, Nationwide Children's Hospital Laboratory resumed *Chlamydia trachomatis*, *Neisseria gonorrhoeae* and *Trichomonas vaginalis* amplified probe testing on all sources.

Due to a global shortage of APTIMA urine transport kits, unisex swabs, and other laboratory testing supplies, Nationwide Children's Hospital Laboratory was forced to suspend aspects of testing until inventory of collection supplies could be secured.

All previously available *Chlamydia trachomatis*, *Neisseria gonorrhoeae* and *Trichomonas vaginalis* amplified probe testing will be available under previous guidelines as outlined in the Lab Guide to Services. This includes all alternative source selections submitted in viral transport media including conjunctiva, throat, anal, and rectal samples.

Test Name	Test Code	Sources Available for Testing
<i>C. trachomatis</i> , <i>N. gonorrhoeae</i> , <i>T. vaginalis</i> Panel	CTGCTP	urine, cervical, vaginal
<i>Trichomonas vaginalis</i> Amplified Probe	TVAGP	urine, cervical, vaginal
<i>Chlamydia trachomatis</i> and <i>Neisseria gonorrhoeae</i> by Aptima	CTGC	urine, cervical, urethral, vaginal, conjunctival, anal/rectal, throat

\* Refer to Laboratory Guide to Service to recall sample collection requirements

APTIMA multitest and unisex swabs can be ordered using the Nationwide Children's Laboratory Services Website Supply Order Form or contact Laboratory Services at (614) 722-5477 or (800) 934-6575.

## Group A Strep rRNA GenProbe Testing is Available Again

The primary manufacturer of reagents used in Group A Strep rRNA GenProbe testing (GASDRP) suspended production through mid-December 2020 due to shifts in production and supply resources to SARS-CoV-2 testing.

We are happy to inform you that supplies used for primary and confirmatory rRNA Genprobe (Group A strep) testing have been received, and are successfully validated for patient testing. This test is now orderable, and have returned to prior protocols for both primary and confirmatory testing effective immediately.

**For questions about the above test updates, please contact Client Services at (800) 934-6575.**



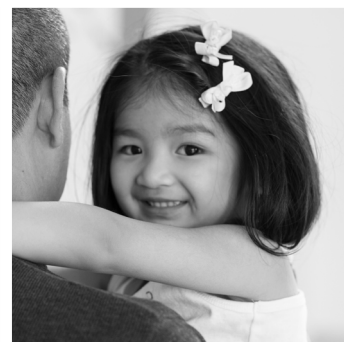
**NATIONWIDE  
CHILDREN'S**

*When your child needs a hospital, everything matters.™*

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700 Children's Drive  
Columbus, Ohio 43205-2664

## **How can Nationwide Children's Laboratory Services help your practice?**

- Pediatric pathologist consults on lab results
- Wide acceptance of insurance plans
- Pediatric reference ranges
- Services to enhance the laboratory process in your practice
- Interface compatibility with provider EMR systems



**If you would like to become a client or learn more information about Nationwide Children's Laboratory Services, contact us at (800)934-6575 or visit our website at [NationwideChildrens.org/Laboratory-Services](http://NationwideChildrens.org/Laboratory-Services).**

**Would you like to receive the Nationwide Children's Laboratory Services Newsletter electronically? Please e-mail us at [LaboratoryServices@NationwideChildrens.org](mailto:LaboratoryServices@NationwideChildrens.org) and let us know!**