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We are one of the largest laboratory providers in New England

UMass Memorial Laboratories has opened a Patient Service Center (phlebotomy draw station) at 22 Main Street, Salem, New Hampshire.

The vision of UMass Memorial Laboratories is:

- To be a leading provider of laboratory services throughout New England, meeting the needs of patients and providers in the region, and
- To be one of the top ten academic medical center-based laboratories in the United States



Photo: Kevin Vance

Salem PSC 22 Main Street Salem, New Hampshire

Salem PSC is located at 22 Main Street, Salem, New Hampshire. The hours are Monday through Friday 8:00am–5:00pm. The phone number at Salem PSC is 603-890-1031.



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Flow Cytometry Laboratory Announces Implementation of New FLAER PNH Test

Paroxysmal nocturnal hemoglobinuria (PNH), is a rare hematopoietic stem cell disorder characterized by a somatic mutation in the PIGA gene, leading to a deficiency of proteins linked to the cell membrane via glycosylphosphatidylinositol (GPI) anchors. Testing for PNH is extremely important as 35% of patients die in the first five years and the median survival is 15 years⁽²⁾. Although PNH is rare, screening of appropriate patients and correct diagnoses are important, because PNH is a chronic disease that persists for many years and has a profound impact on quality of life and survival for any individual patient.

The UMMHC Flow Cytometry laboratory, is pleased to announce the implementation of a high sensitive PNH test modified according to the recommendations of the International Clinical Cytometry Society published in their 2010 Guidelines. The Flow Cytometry lab is one of the few labs in New England to use the new FLAER reagent for the diagnosis of PNH and is recognized as a dedicated leader in delivering high quality PNH testing in the world of innovative diagnostics.

The newly modified assay uses FLAER reagent, a fluorochrome-conjugated inactive variant of the bacterially derived channel-forming protein, aerolysin. The FLAER molecule reacts with all GPI-linked proteins on the white blood cells and is the most reliable reagent to diagnose PNH because it is both specific and sensitive. FLAER is combined in multicolor combinations with CD15 and CD24 on granulocytes, and CD33 and CD14 on monocytes for the detection of PNH clones as small as 0.1%



hemolytic anemia⁽⁴⁾. Thrombosis with unusual features, unusual sites such as hepatic veins (Budd-Chiari syndrome), other intra-abdominal veins (portal, splenic, splanchnic), cerebral sinuses, dermal veins, with signs of accompanying hemolytic anemia, with unexplained cytopenia⁽⁴⁾. Evidence of bone marrow failure such as suspected or proven aplastic anemia or hypoplastic anemia, refractory cytopenia with unilineage dysplasia, and other cytopenias of unknown etiology after adequate workup⁽⁴⁾.

Patients with established diagnoses of PNH should have their PNH clone size monitored at regular intervals. If the disease is stable, annual monitoring may be sufficient, but any change in clinical or hematologic parameters requires more frequent monitoring; this is true whether these changes show worsening or improvement of disease, as changes in clone size in either direction may reflect the changing clinical picture⁽⁴⁾.

The UMMHC Flow Cytometry Lab performs PNH testing Monday-Friday. Peripheral blood should be drawn in EDTA and kept at room temperature. Bone marrow is not an adequate specimen for PNH testing. The Flow Cytometry laboratory can be reached at 508-793-6230 with any further questions or inquiries.

References:

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in this high sensitive assay. With multiparameter gating strategies the definition of cell populations is very precise. Analysis of the red blood cells using Glycophorin (CD235a), and CD59 is performed in our laboratory when a white blood cell clone is identified. The goal of RBC analysis is to reliably identify and quantify cells lacking expression of GPI-linked proteins (Type III cells), and to distinguish them from normal RBC's (Type I cells). The RBC analysis also recognizes and quantifies cells that are partially deficient (Type II cells) if they are present. Testing for RBC's alone is not adequate for evaluation of PNH patients, because hemolysis and transfusion may greatly underestimate the size of the PNH clone. For these reasons, WBC clones are frequently detected when RBC clones are not⁽⁴⁾.

The clinical indications for PNH testing are as follows: Intravascular hemolysis as evidenced by hemoglobinuria or elevated plasma hemoglobin, unexplained hemolysis with accompanying iron deficiency, or abdominal pain or esophageal spasm, or thrombosis, or granulocytopenia and/or thrombocytopenia, other acquired coombs negative, non-schistocytic, non-infectious



Photo: Kevin Vance

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