

## **Acupath Labs on the Vital Diagnostic Partnership Between Pathologists and ENT Specialists for Cancer Diagnosis**

*ENT doctors are often faced with conditions for which clinical evaluation is not sufficient to sustain a diagnosis and sophisticated tests must be performed. Dr. Zsuzsanna Vegh-Goyarts of Acupath Labs on flow cytometry for diagnosing blood cancers.*

Plainview, NY ([PRWEB](#)) September 06, 2011 -- Otolaryngology is the oldest medical specialty in the United States. These physicians, generally known as ear, nose and throat (ENT) specialists, are trained in the medical and surgical management and treatment of patients with diseases and disorders not only of the ear, nose and throat but also of related structures of the head and neck. They treat some of the most common disorders that afflict us, young and old, including chronic ear infection, sinusitis, snoring and sleep apnea, hearing loss, allergies and hay fever, swallowing disorders, nosebleeds, hoarseness and dizziness, however, they also evaluate and treat patients with more serious conditions such as head and neck cancer. As with all physicians, ENT doctors are often faced with conditions for which clinical evaluation is not sufficient to sustain a diagnosis and sophisticated tests must be performed.

One example from the ENT practice is the common symptom we often refer to as “swollen glands”. They are actually swollen or enlarged lymph nodes – the medical term is lymphadenopathy – most often found in the neck or under the chin. Lymph nodes, an important component of the body's immune system, may become swollen for many reasons, including simple infections such as the common cold, and can often be easily treated or resolved without treatment. However, enlarged lymph nodes may elude a straightforward diagnosis and the physician, taking into account other symptoms and indications, may order laboratory tests.

“There are over 600 lymph nodes in the human body that are part of our immune defense system. In the case of an infection, the lymphocytes or white blood cells that reside in the lymph nodes get activated and multiply and the lymph nodes become swollen. If there is no obvious infection, such as a sore throat or ear infection present, the case is considered an unexplained lymphadenopathy,” –says Dr. Zsuzsanna Vegh-Goyarts, assistant director of flow cytometry at Acupath Laboratories, a leader in cancer diagnostics. The physician examines the location, size, and consistency of the node. If a localized node without infection persists, it is usually re-examined after 3-4 weeks. The results may raise the suspicion of a more serious condition, blood cell malignancy or lymphoma, and a biopsy and/or fine needle aspirate (FNA) sample is extracted and sent to the laboratory for testing.

One of the most important tools available for the examination of an FNA sample is multiparametric flow cytometry, combined with histology. “Flow cytometry allows the examination of the quality and quantity of the various white blood cells. This method determines the cell surface characteristics of each individual cell,” explains Dr. Vegh-Goyarts. A single cell suspension is prepared and the cells are tagged with antibodies labeled with fluorescein dyes. In the flow cytometer laser light activates the dyes, the emitted light of each individual cell is detected and the data is analyzed by the computer. After a statistical analysis based on the cell surface characteristics is performed, normal cells can be distinguished from malignant cells, and cell maturity and cell type can be determined. The percentage of abnormal cells can also be calculated. Fifty to a hundred thousand cells can be analyzed in a few minutes with this method. In most cases the results of this test can identify the cancer type, help establish the stage of the disease, and determine targets for therapy, which is invaluable to the physician in deciding on the best course of treatment. “Flow cytometry is an indispensable diagnostic tool in distinguishing between lymphoma and benign or reactive cases,” Dr. Vegh-Goyarts concludes.



Specimens other than lymph nodes can also be used for flow cytometry such as solid tissue samples obtained from surgical biopsies of the tonsils, adenoids, thymus or thyroid glands and more. These specimens can also be used for cytological studies via microscopic examination.

Flow cytometry and histology/cytology are just a few of the techniques available from a highly qualified laboratory such as Acupath which specializes in cancer diagnostics. Immunohistology, cytogenetics and molecular studies can also be performed from the tissue specimens sent by ENT or other specialists.

Acupath Laboratories, Inc. located in Plainview, New York, is an anatomic pathology and cancer genetics laboratory. Acupath's mission is to deliver fast, accurate anatomic pathology, flow cytometry, molecular and cytogenetic analysis in a way that enhances the quality of medical care provided by practitioners while minimizing the risk of error. The research and development team continuously innovates, designing up to date methodologies for testing and new ways for doctors to access, exchange, record and analyze medical information. Acupath is committed to improving efficiencies of practice, superior service and greater patient knowledge and satisfaction. Acupath is accredited by the College of American Pathologists (CAP), the Occupational Safety and Health Administration (OSHA), the Joint Commission, and certified by the New York State Department of Health (DOH). <http://www.acupath.com>.

Zsuzsanna Vegh-Goyarts, PhD, has extensive experience in the field of tumor biology and immunology and currently serves as the assistant director of Acupath's flow cytometry department and as a member of the research and development team. Prior to Acupath, she worked as an assistant professor in immunology research at the State University of New York (SUNY) at Stony Brook and served as a consulting assistant director of flow cytometry at Enzo Clinical Laboratories, Inc. She spent her post-doctoral years in prestigious research institutes, including the Immunology Department of Albert Einstein College of Medicine in New York and the Tumor Biology Department of the Karolinska Institute in Stockholm, Sweden. Dr. Vegh-Goyarts' research has appeared in an extensive list of peer-reviewed publications in various scientific journals, including Cancer Research, Cancer Immunology and Immunotherapy, Molecular Immunology and Cellular Immunology. In addition, she currently holds a Certificate of Qualification in Oncology-Sera and Soluble Tumor Markers, Diagnostic Immunology and all four areas of Cellular Immunology from the New York State Department of Health (NYSDOH). Dr. Vegh-Goyarts received her Ph.D. in Medical Science and Immunology in Budapest, Hungary.

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**Contact Information**

**MELISSA CHEFEC**

M CPR

(203) 968-6625

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