GroundBreaking Lung Cancer Breath Test Trial Successful

Cloud based real-time desk-top breath assay for lung cancer for primary care physicians office use

Toronto, Aug 29, 2019 (Issuewire.com) - Toronto and Annapolis Royal, Nova Scotia 29, August 2019 | nGageIT Digital Health through its AirostotleLC Breath Diagnostics platform announce they have developed and tested a prototype for the world’s first integrated real-time portable desktop breath diagnostic device that is designed to screen for lung cancer using raw exhaled breath air. The test can also screen for COPD from healthy patients. The simple to use breath test has 'potential to revolutionize' cancer detection, diagnosis by non-invasive delivery of real-time results through its digital cloud-based technology to any primary care physician. Larger clinical trials with strategic partners are being developed worldwide.

The best-in-class real-time breath diagnostic test (RTBDT) for screening for lung cancer is called AirostotleLC™ G2. The device underwent its initial human verification breath clinical trials by the company where the device was able to successfully detect and differentiate lung cancer and COPD (Chronic Obstructive Pulmonary Disease) from healthy patients with high accuracy. The company is also collaborating with its industrial design partners at SmartShape in Cleveland, Ohio to create a version for professional use at the primary care level and later a consumer version. It is expected that the new desktop breath tests will be made commercially available to primary care doctors in the near future after further larger trials.

The development has seen nGageIT Digital Health develop the cloud-based breath assay for lung cancer, for which nGageIT Digital Health has created calibrated, fully integrated breath test devices. The resulting single-use Breath test and NanoSensor platform called AirostotleLC™ will offer
unmatched performance and ease-of-use for point of care testing at the primary physician’s office for a low cost. The company is also working on a consumer at home test version.

“We urgently need to develop new tools, like this breath test, which could help to detect and diagnose cancer earlier at the primary care level or specialist level, giving patients the best chance of surviving their disease,” Ken Bucholz, MD, Rural Family and Emergency Physician in Nova Scotia. “Through further larger clinical trials, we hope to find signatures in breath needed to detect cancers earlier. It is the crucial next step in developing this technology.”

The rapid breath tests detect the presence or absence of telltale Volatile Organic Compound (VOC) patterns in a single 3-minute digital breath test sample using raw exhaled breath obtained in normal room temperature with no pre-processing or sending out of samples required. It is essentially a “lab in the cloud”. The ergonomic handheld test device – with integrated nanosensor self-calibrating cartridges and unique real-time digital data delivery feature – has been designed to meet the needs of untrained lay or primary care physician office staff users. The test gives a result in minutes and is ideally suited for screening programs aimed at improving detection and facilitating access to care.

Having recently completed laboratory and in-field trials including primary care physician office evaluation – nGageIT Digital Health is now discussing with potential distribution partners to support worldwide larger clinical trials and commercialization of the breath tests for the research use only market and clinical trial market initially. Following this a commercial launch to primary care physicians and key specialists are contemplated.

Dedicated to the prevention and early diagnosis of diseases such as cancer, nGageIT Digital Health is planning on developing rapid breath diagnostic tests for the detection of a range of diseases, including inflammatory diseases, and solid tumours such as breast cancer and colon cancer.

“We are very pleased to have a strong clinical team that was able to carry out the trial of the rapid breath testing device for lung cancer and COPD in a primary clinic setting,” said Raj Reddy, President, and CEO and Inventor of the nGageIT rapid breath testing technology. “The need for new and better non-invasive low cost real-time rapid breath tests for Lung cancer detection, including future self-tests, has been widely acknowledged. Through further larger trials with strategic partners, we will introduce a reliable rapid breath lung cancer test for primary care physicians and specialists desk-top office use that will help identify Lung Cancer patients at the earliest stages for life-saving treatment not only in high income countries but also in low- and middle-income countries, including sub-Saharan Africa.”

Dr. Jennifer Murdoch, Chief of Health System Transformation for nGageIT said, “We are delighted to have worked with courageous patients and clinicians on this tremendously exciting project. The lack of effective early lung cancer screening to date along with errors which are common with standard, low dose CT scanning techniques often lead to needless expensive biopsies, radiation exposure and are not practical as a broad pro-active screening tool. Additionally, up to 60% of the people who get lung cancers in the US do not fit the current guidelines for CT scanning and only 15% of Lung Cancers are caught early when they are most curable. By the time someone presents to a doctor coughing up blood or losing weight, the disease has almost always spread. As a result, lung cancer is aper than other cancers to be deadly: The five-year survival rate is a mere 18%. It is clear we need simpler, less-invasive ways to detect when people are on their way to developing lung cancer - which is exactly what AirostotleLC rapid breath tests are designed to deliver.”

According to the World Health Organization, Lung cancer is the leading cause of cancer-related deaths globally claiming 1.59 million lives annually. It is typically silent in its early stages as a result of which
84% of the cases are diagnosed in later stages (3 or 4) when treatment is ineffective and can no longer provide a cure. The five-year survival rate increases dramatically from 10 to 80% if the disease is discovered in stage 1. Therefore, the holy grail of lung cancer treatment is early detection.

ABOUT nGageIT Digital Health

nGageIT is a world leader in developing rapid real-time breath testing at the point of care based in Toronto. The company specializes in creating integrated real-time rapid breath diagnostic test (RBDT) platforms for breath-based testing of cancer and inflammatory disease. The recipient of multiple awards for innovation, nGageIT’s all-in-one Airostotle™ handheld devices make it easy to test and screen for a range of diseases such as cancer and chronic inflammatory diseases. Unlike standard, multi-component blood tests, Airostotle™ platforms integrate features and deliver an easy to use non-invasive breath test with results in real-time at the point of care without the need to ship out samples.

Early non-invasive detection of lung cancer, the leading cause of cancer-related death has tremendous societal and financial value. Lung cancer cells generate and out-gas unique volatiles that exit the body through breath, providing an olfactory signature. nGageIT is developing a breath analysis system that enables a completely non-invasive, low-cost diagnosis of lung cancer. Using nGageIT’s Airostotle breath sensor system the company has completed a study showing high accuracy screening of lung cancer from breath compared to healthy patients. Further larger trials are planned to resolve sub-stratification of the disease.

As well as commercializing products in its own brand, nGageIT is developing strategic partnerships to provide OEM product development services to specialist diagnostic companies worldwide.

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Source : nGageIT Digital Health
