

Volition, a multi-national company developing simple, easy to use blood-based cancer tests to accurately diagnose a range of cancers.

## Early Diagnosis is Key

As cancer screening programs become more and more widespread, our products can help to diagnose a range of cancers quickly, simply, accurately and cost effectively. Early diagnosis has the potential to not only prolong the life of patients, but also to improve their quality of life.

## Financial Snapshot

Ticker: NYSE AMERICAN: VNRX  
Sector: Healthcare: Diagnostics & Research  
Market Cap: \$69.7m\*  
52 week range: \$2.45-\$5.45\*  
Cash-on-hand: \$13.84m\*

\*As of September 30<sup>th</sup>, 2017

## Rethinking the Approach to Cancer

"Current cancer diagnosis frequently involves expensive, unpleasant and, often, invasive testing. Using our Nu.Q™ technology we aim to make cancer diagnosis as accessible as cholesterol or pregnancy testing"


*Dr. Jake Micallef, Chief Scientific Officer*

Nu.Q™ represents a powerful step change in rethinking the approach to cancer. It is a simple solution to the challenging problem of early cancer diagnosis. **A simple test, with a small amount of blood.**


Nu.Q's™ unique technology looks for very early 'nucleosomic' markers of cancer. Nu.Q™ uses an array of simple, cost-effective, and accurate blood tests. These tests may identify early stage cells before the cancer spreads; providing medical professionals increased diagnostic power. Nu.Q™ can potentially reduce the strain on over-burdened healthcare systems.

## How it Works

Cancer leads to irregular levels of uniquely structured nucleosomes in the blood. A nucleosome is a section of DNA wrapped around a core of proteins. Through a simple test, with a small amount of blood, we are able to detect those unique nucleosomes; and by measuring and analyzing them, our Nu.Q™ tests can establish whether cancer is present in the patient.



Simple and easy  
to use - with a small  
amount of blood



"A blood-based test would offer a much lower cost and more patient-friendly alternative with higher patient uptake for identifying those who must be offered colonoscopy and those where it's not needed"

Professor Hans Jorgen-Nielsen,  
Professor of Surgical Oncology,  
Hvidovre Hospital,  
University of Copenhagen

## Colorectal Cancer

Volition's initial Nu.Q™ products are focusing on colorectal cancer. Colorectal cancer is responsible for over 200,000 deaths in Europe each year, almost 50,000 deaths in the USA and nearly 700,000 deaths worldwide.

- Interim results of a panel of 4 Nu.Q™ assays detected 81% of colorectal cancers at 78% specificity (vs. Healthy) in a cohort of 4,800 symptomatic patients.
- A panel of 4 normalised Nu.Q™ assays detected 67% of high risk adenomas at 80% specificity in a cohort of 530 symptomatic patients.
- A panel of 4 Nu.Q™ assays demonstrated CRC detection accuracy of 74% sensitivity at 90% specificity and detected all stages of the cancer, including 75% of early stage I cancers.
- This study of 58 asymptomatic patients also showed that by using an age adjusted scoring system the accuracy of CRC detection increased to 91% of cancers at 90% specificity.

## Pancreatic Cancer

There is a clear medical need for a reliable, simple, and accurate diagnostic test for pancreatic cancer. Currently, emergency presentation is the most common route to diagnosis, and only 21% of patients survive for more than a year.

- A panel of 4 Nu.Q™ assays plus CA19-9 in a pilot study of 59 patients detected 92% of pancreatic cancers at 90% specificity.
- Interim results of a panel of 2 Nu.Q™ assays plus CEA detected 95% of pancreatic cancers at 84% specificity.

## Lung Cancer

Lung cancer is the most common cancer worldwide. Only 10% of lung cancer patients will survive for five years or more. Current screening methods for lung cancer are widely regarded as too inaccurate and expensive for widespread use.

- A panel of 4 Nu.Q™ assays in a pilot study of 73 patients detected 93% of lung cancers at 91% specificity.

## Ongoing Clinical Trials

Institution	Condition	Sample Collection	Cohort
Early Detection Research Network of the U.S. National Cancer Institute	Colorectal cancer	9000 Prospective 4,600 Retrospective	13,500 screening population
Hvidovre Hospital, University of Copenhagen	Colorectal cancer	Retrospective	4,800 symptomatic
Hvidovre Hospital, University of Copenhagen	Colorectal cancer	Prospective	14,000 screening population
Hvidovre Hospital, University of Copenhagen	Colorectal cancer and other cancers	Prospective, longitudinal	30,000 screening population to provide 3 samples (90,000 samples total)
University of Bonn	27 most prevalent cancers	Prospective	4,700
German Cancer Research Center (DKFZ)	Pancreatic	Retrospective	750

## U.S Colorectal Cancer Screening Trial

Volition is part of a large multi-center clinical study with the renowned U.S. National Cancer Institute's (NCI) Early Detection Research Network (EDRN). The study is aimed to validate Nu.Q™ Colorectal Cancer Screening Test. Volition America will only contribute up to \$3million towards the cost, which is excellent value for money.

## Our Expert Team

Volition was established in 2010 when our team saw a chance to bring together the long-established ELISA diagnostic technology with cutting-edge nucleosome detection and analysis techniques. We have grown over the years and are now a collective force of distinct individuals with a single aim – to save lives by revolutionizing the way cancer is diagnosed.

**Cameron Reynolds MBA**  
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**Jake Micallef PhD MBA**  
Chief Scientific Officer

**Jason Terrell MD**  
Chief Medical Officer & Chief Executive Officer of Volition America, Inc.

**Jasmine Kway PhD**  
Vice President of Asia

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