Please find below:

- a summary of recent publications and some associated commentary for Volition's technologies (Nu.Q® NETs, Nu.Q® Lung Cancer and Capture-Seq™).
- a summary of our Intellectual Property portfolio as of May 12th 2026

1. NETosis – specifically Sepsis

A video detailing our clinical and scientific evidence (~10 minutes)
A One-Page PDF showcasing all clinical and scientific evidence

Neutrophil Extracellular Traps were discovered as recently as 2004 and have become an area of significant scientific and clinical interest in the recent years.
Retter A, Singer M, Annane D, "The NET effect": Neutrophil extracellular traps-a potential key component of the dysregulated host immune response in sepsis. *Crit Care* 2025. **Paper**

Sepsis carries a heavy social, economic and health burden worldwide; there are approximately 166 million cases worldwide resulting in 21.4 million deaths in 2021(reference). Moreover, even survivors of sepsis go on to have significant health problems with 33% mortality within one year, 40% of survivors being re-admitted to hospital within 90 days of discharge and one sixth of survivors experiencing significant morbidity such as functional limitations.
The 2026 Surviving Sepsis Campaign (SSC) guideline identifies early recognition and diagnosis of sepsis as a key target to improve outcomes.

Summary scientific rationale
Neutrophil extracellular traps (NETs) are decondensed chromatin structures ejected by activated neutrophils as a key effector component of the innate immune response. They are predominantly composed of nuclear DNA wrapped around a histone core. When excessive or inadequately resolved, NETosis becomes a primary driver of the dysregulated host response, engaging multiple innate-immune and coagulation pathways and providing the molecular substrate of immunothrombosis. The majority of nucleosomes generated during NETosis carry the canonical replication-independent histone variant H3.1. Quantification of plasma H3.1-nucleosomes levels by chemiluminescent immunoassay therefore provides a pathway-specific measure of ongoing NETosis. This specificity is the central rationale for using nucleosomes, rather than total cell-free DNA, as a biomarker of innate immune activation in acute illness.

Professor Djillali Annane, Intensive Care Department, IHU SEPSIS, Raymond Poincaré Hospital (AP-HP) and Scientific Director of DETECSEPS commented:
"Results show that H3.1 accurately distinguishes sepsis from non-infectious systemic inflammation, is highly correlated with disease severity, and provides excellent prognostic utility for outcomes such as organ failure and mortality. The prognostic power of H3.1 measured at ICU admission significantly exceeded existing severity scores such as APACHE II and SOFA scores.

Lieuwe D.J. Bos, PhD, ICU Research, Principle Investigator at the Amsterdam University Medical Center, Amsterdam and Senior Author of the paper commented:
"In this large observational study, we demonstrated that plasma nucleosomes, represented by H3.1 nucleosome concentration, are associated with the presence of sepsis, the severity of organ dysfunction, and a hyperinflammatory host response. Patients with acute kidney injury (AKI), disseminated intravascular coagulation (DIC), and acute respiratory distress syndrome (ARDS) exhibit significantly higher Nu.Q® H3.1 levels compared to those without these conditions. "The implications of our results are that NETosis, and H3.1 nucleosomes in particular, play at the intersection of infection, organ failure and inflammation and is not simply a surrogate marker of these conditions.

"This in turn opens up the opportunity of how excessive NETosis can be treated in patients with evidence of a high NETosis phenotype as measured by Nu.Q® H3.1."

Professor Michael Bauer, Chair of the Department of Anaesthesiology and Intensive Care Medicine, Jena University Hospital, Germany commented:
"Our study establishes H3.1 nucleosomes as a biomarker delineating organ dysfunction in sepsis, particularly for early mortality and RRT. The clear stratification of risk and independence from conventional markers suggests clinical utility. Being able to predict a sepsis patient's clinical course early, by using Nu.Q® NETs in clinical practice, could significantly enhance sepsis management, enabling physicians more time to intervene and improve patient outcomes."

Lateral Flow Assay – Point-of-Care Finger-Prick Test in Sepsis Patients
We have demonstrated correlation of the lateral flow prototype assay and our established CE marked automated Nu.Q® NETs assay in samples of critically ill, confirmed sepsis patients in the Intensive Care Unit.
The ability to rapidly identify high-risk patients at the Point-of-Care by quantifying their nucleosome levels using a finger-prick sample and simple lateral flow device aims to enable quicker clinical decision making and consequently better patient outcomes.

RECENT News

1. Volition Demonstrates Utility of Rapid, Point-of-Care Finger-Prick Test in Sepsis Patients **(**full press release**)**
2. Volition Advances Nu.Q® NETs Platform Towards Commercialization **(**full press release**)**
3. Inclusion of its Nu.Q® NETs Assay as Innovative Biomarker in France's Real-World Evaluation of Early Detection of Sepsis **(**full press release**) 3 minute** video**.**
4. Volition Announces Breakthrough Finger-Prick Detection of Nucleosomes; Expanding Global Market Potential for Sepsis Testing **(**full press release**)**.
5. VolitionRx Files New Patent Protecting its Nu.Q® NETs Test for Ebola Triage and Treatment Monitoring **(**full release**).**

Publications

"Clinical"

- Filippini, D.F.L., *et al.* Plasma H3.1 nucleosomes as biomarkers of infection, inflammation and organ failure. *Crit Care*, 2025. Paper
- Haem Rahimi M, et al. Association of pronounced elevation of NET formation and nucleosome biomarkers with mortality in patients with septic shock. Ann Intensive Care, 2023. Paper
- Morimont, L., et al. NETosis and Nucleosome Biomarkers in Septic Shock and Critical COVID-19 Patients: An Observational Study. Biomolecules, 2022. Paper
- Neumann C. et al, Prognostic value of admission H3.1 nucleosome levels in sepsis-associated acute kidney injury: a secondary analysis of the SISPCT randomised clinical trial. Preprint

"Scientific"

- Cayord J. et al., Understanding NETosis Priming and Induction through Nucleosome Changes and Real-Time Monitoring in Isolated Neutrophils and in an Ex-Vivo Model. Blood, 2023 Paper
- Zukas K. et al., Rapid high-throughput method for investigating physiological regulation of neutrophil extracellular trap formation. Journal of Thrombosis and Haemostasis, 2024 Paper
- Atteberry B. et al., Understanding the complex chromatin dynamics in primary human neutrophils during PMA-induced NET formation. Front. Immunol., 2024 Paper
- Cayford J. et al., Chromatin changes associated with neutrophil extracellular trap formation in whole blood reflect complex immune signaling. Front. Immunol., 2025 Paper

- Wargnies M, et al., Quantification of H3.1-nucleosomes using a chemiluminescent immunoassay: A reliable method for neutrophil extracellular trap detection. PLoS One, 2025 **Paper**
- Cayford et al., Cytokine-induced chromatin accessibility in whole blood neutrophils links to sepsis transcriptional states. Front. Immunol., 2026 **Paper**
- Lateral Flow Test for Point-of-Care is the first report of a bedside lateral flow test to quantify nucleosomes, a marker of NETosis. It is not simply a positive/ negative test but provides a quantitative readout to facilitate clinical decision-making. **Poster**

Evidence also emerging in other NETosis related conditions such as Trauma and Hidradenitis Suppurativa

- Volition Announces Mayo Clinic Study Demonstrates Nu.Q® Concentrations are Elevated in Trauma Patients **(press release) (paper).**
- New clinical study demonstrating the use of its Nu.Q® NETs assay in patient management for a chronic disease, Hidradenitis Suppurativa (HS) **(press release) (preprint paper).**

Ongoing Studies

- **RHU Records** (rapid detection of corticosteroid sensitivity or resistance in sepsis), Prospective, multi-center, placebo controlled, bio-marker-guided, adaptive Bayesian design basket trial in France. Approximately 1000 subjects. Study completed. Data Analysis ongoing. Results anticipated 2026/7.
- **U.S. Study** Prospective single-site observational study involving cancer patients with solid tumors and those presenting with clinical sepsis and or septic shock. Approx 120 subjects. Study completed. Publication in preparation.
- **DETECSEPs** Real-world evaluation of Early Sepsis Detection using NEWS2 and Nu.Q® NETs. First patient in expected Sept 2026.
- **Mayo Clinic** Prospective single-site Validation study in preparation for Trauma / VTE. Approx 200 patients. First patient anticipated Q4 2026/ Q1 2027. An automated i10 is being installed in Q3 2026 as a first step into getting the Nu.Q® NETs product into the Mayo Clinic's laboratories.

2. Lung Cancer Patient Management (Prognostication, Treatment Selection and Minimal Residual Disease Detection)

Video with Dr Andrew Retter detailing key paper(s). Approx 10mins

Reimbursement Application

With the active support of HCL, we are working towards the submission of our reimbursement dossier in the coming months, under the framework of the "Innovative Procedures Outside the Nomenclature" (RIHN-référentiel des actes innovants hors nomenclature). Once the dossier is classified as admissible, we understand that determination of eligibility for reimbursement coverage is mandated to take no more than five months.

Professor Léa Payen, Professor in Toxicology and Biochemistry, Claude Bernard University of Lyon I and Hospices Civils de Lyon, France commented:
"We have worked closely with the Volition team over several years to develop the strong scientific and clinical evidence to support the use of Nu.Q® in the management of cancer patients. Our results indicate that measuring methylated nucleosome biomarker levels at Non-Small Cell Lung Cancer diagnosis can provide valuable information about survival, progression-free survival and, crucially, enhance the identification of patients who may benefit from curative care.
"We are delighted to place this first order of the Nu.Q® Cancer assays to complete the internal certification process ahead of introducing the test into **routine clinical practice** in our hospital network for cancer management."
Two clinical papers undergoing peer review, currently available as preprint 1, and preprint2.

Dr. Pei-Hsing Chen, Institute of Biomedical Engineering, National Taiwan University (NTU), Taipei City, Taiwan, said:
"A key finding from this study was that measuring preoperative H3K27Me3-nucleosomes using Volition's simple blood test allows us to identify which Non-Small Cell Lung Cancer patients are most likely to benefit from closer follow-ups or secondary cancer treatment. While high H3K27Me3-nucleosome levels predicted poorer recurrence-free and overall survival outcomes, low H3K27me3 levels indicated significantly better outcomes. High H3K27Me3-nucleosome levels may also flag micro-metastatic disease, guiding systemic-therapy decisions in high-risk patients.
The Nu.Q® Cancer technology supports a practical approach to empower clinicians to make more informed treatment decisions and provides valuable new monitoring capabilities throughout the patient journey."
Poster at ELCC Conference. Manuscript in preparation

Screening
Principal Investigator and Author **Professor Jin-Shing Chen, Department Chief, Department of Surgery, National Taiwan University Hospital, said:**
"Results from our study, published on March 7th 2025 in the 2nd Edition of Cancer Epigenetic Biomarkers, indicate that Nu.Q® Cancer can accurately identify malignant nodules, including small ones, with high sensitivity. The validation study 'Epigenetic Nucleosomes in Plasma for Pulmonary Nodule Differentiation' is underway with results anticipated in 2026. Should the findings align with previous results, the Nu.Q® test may be considered for use in combination with any national lung cancer screening programs, such as in Taiwan. More accurate screening could lead to greater uptake of screening by patients and greater adoption of screening programs by governments. This should, in turn, lead to lung cancer being diagnosed earlier, saving many, many lives."
Validation study ongoing, recruitment a little slower than planned, study close anticipated 2026 with analysis and publication thereafter.

Publications

- Grolleau E. et al. Circulating H3K27 Methylated Nucleosome Plasma Concentration: Synergistic Information with Circulating Tumor DNA Molecular Profiling. Biomolecules. 2023;13(8):1255. https://doi.org/10.3390/biom13081255
- Couraud S. et al Baseline values of circulating nucleosomes in Lung Cancer: NUCLEO-LUNG study. ELCC 2024 Poster
- Piecyk M. et al., "H3K27Me3-nucleosome is a strong prognostic biomarker in Non-Small Cell Lung Cancer: interim results from the analysis of up to 832 patients at baseline" Poster 395 ELCC 2025
- Piecyk M. et al., "Prognostic Value of Circulating H3K27Me3-Nucleosomes In Newly Diagnosed Lung Cancer Patient" Poster at NACLC 2025
- Chen PS. et al., "Pre-operative nucleosome liquid biopsy for risk stratification of lung cancer" Poster at NACLC 2025
- Kotronolas A. et al., Prognostic value of circulating H3K27Me3-nucleosomes in newly diagnosed lung cancer patients **PrePrint**
- Piecyk M. et al., Prognostic value of baseline circulating trimethylated H3K27 nucleosomes in treatment-intent cohorts of non-small cell lung cancer. **PrePrint**
- Chen PS. et al., "Preoperative Nucleosome Liquid Biopsy for Prognostic Stratification in Lung Cancer With Treatment Correlation Poster at ELCC 2026

3. Multi-Cancer Early Detection

Volition has developed Capture-Seq™, a novel liquid biopsy method to isolate pure circulating tumor-associated DNA from blood, generating sequencing datasets with significantly higher tumor signal.

11 minute explainer video

Published Clinical Paper

Pamart et al., Direct analysis of transcription factor protected cfDNA in plasma by ChIP-seq: Measurement of altered CTCF binding in cancer is a novel biomarker for liquid biopsy.

This is the world's first isolation of transcription factor-DNA and the first preparation of pure circulating tumor-associated DNA sequence data sets.

Most current liquid biopsy methods involve deep sequencing of plasma DNA and bioinformatic analysis of the data produced to identify the presence of cancer in a patient.

The biggest problem facing all liquid biopsy methods worldwide is that the vast majority of circulating DNA in blood plasma samples from cancer patients comes from healthy cells, not from the cancer.

Volition's new technology employs an entirely novel approach to liquid biopsy that has overcome this hurdle and produced >99% pure cancer associated plasma DNA sequence sets for liquid biopsy.

Our clinical paper detailing this technology has been peer reviewed and published, subsequent to quarter end.

The manuscript describes a new liquid biopsy chemistry for isolating CTCF-DNA from plasma. Our work on CTCF-bound DNA has revealed what we believe to be an unprecedented new discovery; that there is almost no CTCF-bound DNA in healthy plasma and almost all CTCF-bound DNA in the blood of a cancer patient is therefore derived from the cancer – i.e. **it is virtually pure circulating tumor-associated DNA.**

In this published paper we report a new, two-step method for preparing pure circulating tumor DNA data sets for cancer patients:

i. physical enrichment of the sample; and
ii. bioinformatic removal of virtually all background non-tumor cfDNA sequences from the DNA sequence data set.

This new method produced >99% pure cancer sequencing data sets for blood samples from cancer patients and, whilst we capture a subset of the ctDNA (i.e. not all the ctDNA in a sample), it is virtually pure cancer DNA.

These methodological and technological breakthroughs represent a novel liquid biopsy method for a novel class of potentially thousands of liquid biopsy sequence biomarkers. Capture-Seq™ shows potential for both a multi-cancer early detection (MCED) approach, either alone or in combination with other tests, and the detection of Minimal Residual Disease (MRD).

Blinded validation cohort of 81 subjects (colorectal and lung cancer patients = 59, healthy controls = 22) data released:

Cancer Stage	Detection Rate
I	**94%** (17/18)
II	**96%** (26/27)
III	**100%** (2/2)
IV	**91%** (10/11)
Unknown	0% (0/1)
All Stages	Sensitivity= **93%** (55/59)
Controls	Specificity= **95%** (21/22)

Volition IP as of May 12th 2026

Technology Focus

Volition's unique scientific focus is the analysis of plasma chromatin fragments. This differentiates us from other liquid biopsy companies focused on plasma ctDNA and cfDNA. This is important because cfDNA does not circulate as free double helix DNA in the blood, but as chromatin fragments released from dead or dying cells. As numerous companies and medical schools have filed IP in ctDNA, this is an extremely crowded field in which new patents can obtain only narrow grants and may not have freedom to operate. In contrast, Volition is the only company with a focus on chromatin fragment technology and we have been able to develop an extensive patent portfolio with broadly granted claims for the use of chromatin fragments as biomarkers for a range of diseases as well as methods for their analysis.

IP Focus

Volition's IP strategy is to maximize the market protection of each of our products and technologies through multiple patent families in multiple territories. Our portfolio as of the end of Q1 2026 included 52 patent families comprising 200 total patents of which 69 are granted including 14 granted in the United States and 15 granted in Europe with a further 131 pending applications worldwide. Some key patents (with links) are listed below.

Our patent portfolio can be further subdivided to cover our pillars that cover human and veterinary diseases in oncology, sepsis and inflammatory disease areas.

Human and Veterinary Oncology Products and Technologies;

Nu.Q® - patents covering the measurement of plasma nucleosomes as biomarkers in oncology

- WO2013030579A1 (valid and granted in 56 territories including USA and Europe)
- WO2016067029A1 (valid and granted in 20 territories including Europe and pending is USA)
- WO2021110776A1 (valid and granted in 36 territories including Europe and pending in 8 territories including USA)
- WO2024189075A1 (pending in 12 territories including USA and Europe)
- WO2024223947A1 (pending in the USA)

Volition's Nu.Q® Vet Cancer Test is commercially available worldwide as a cancer screening test in dogs.

Capture-PCR™/Capture-Seq™ - patents covering the isolation and analysis of plasma transcription factor-DNA complexes

- WO2022144407A1(valid and granted in 8 territories and pending in 15 territories including USA and Europe)
- WO2022144408A1 (pending in 3 territories including USA and Europe)
- WO2025073909A1 (pending in 4 territories including USA and Europe)
- 2 Unpublished patent applications

Sepsis and Inflammatory Disease Product and Technologies;

Nu.Q®NETs – patents covering the measurement of plasma nucleosomes as biomarkers in sepsis and inflammatory disease

- WO2013030579A1 (valid and granted in 56 territories including USA and Europe)
- WO2021186037A1 (valid and granted in 3 territories and pending in 14 territories including USA and Europe)
- WO2023073179A1 (pending in 4 territories including USA and Europe)
- WO2023194534A1 (pending in 4 territories including USA and Europe)
- WO2024042208A1 (pending in 5 territories including USA and Europe)
- WO2025061853A1 (pending in 11 territories including USA and Europe)

Volition's Nu.Q® NETs test is CE-marked and is registered for use in Europe in an automated ChLIA (Chemiluminescence immunoassay) format.