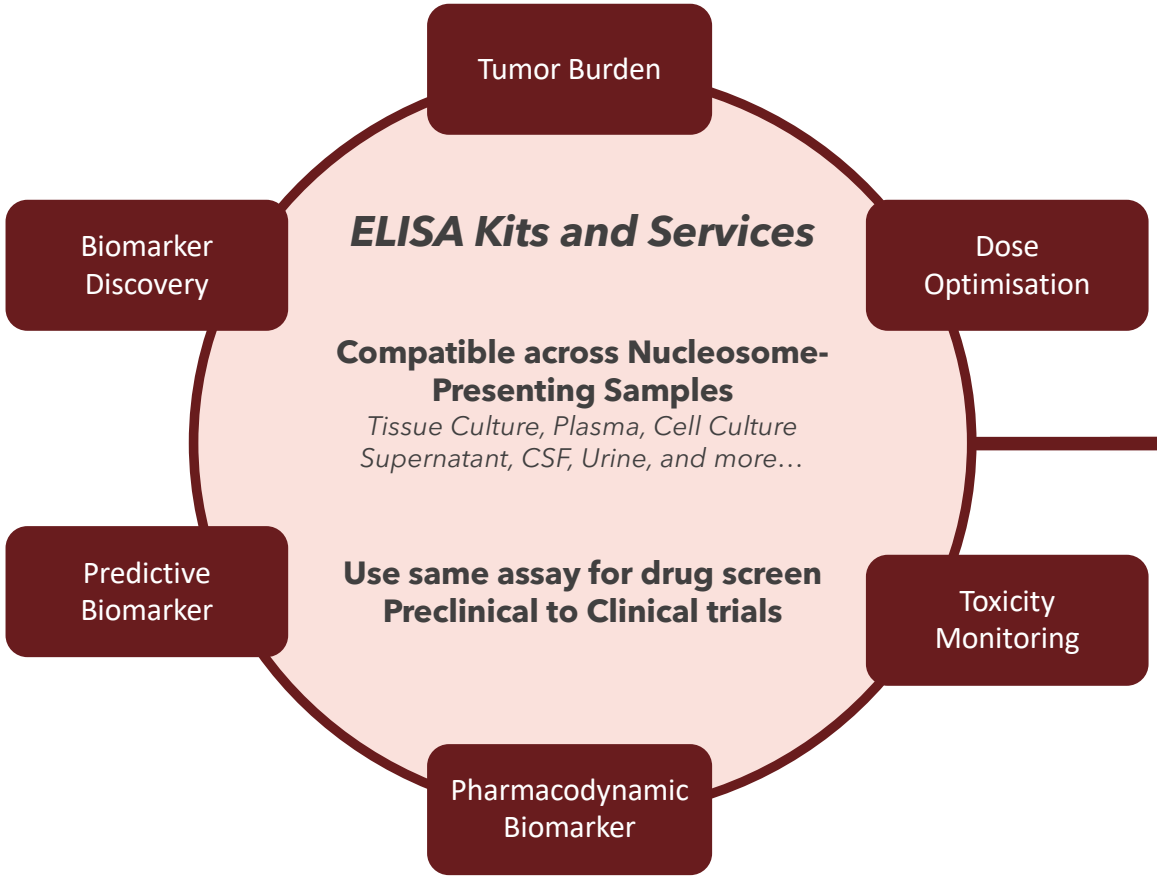
nu·Q discover

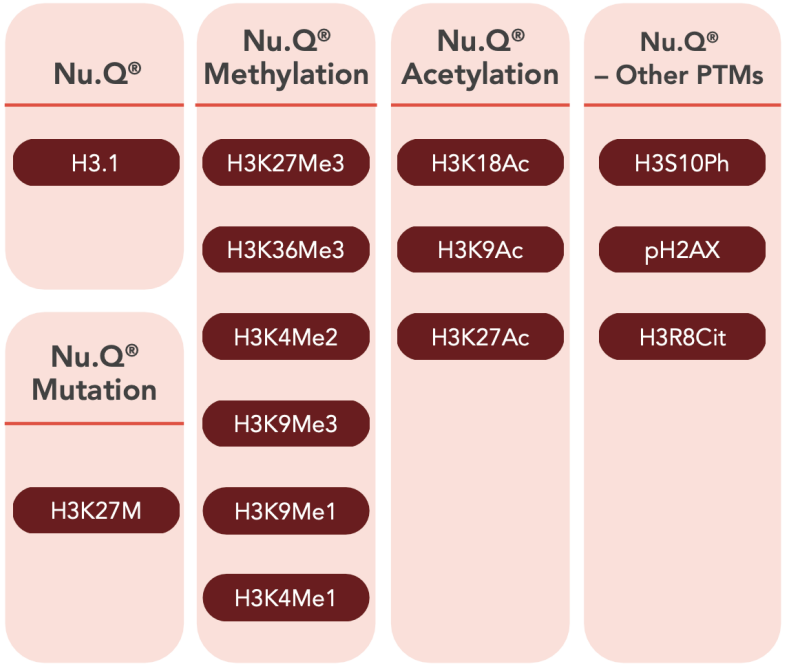
Streamlining Drug Development with Non-Invasive, Real-Time, Quantitative, Liquid Biopsy Immunoassays.



"Empowering drug developers and scientists through a range of assays for rapid epigenetic profiling in disease model development, preclinical testing, and clinical studies from discovery to market ready.

Volition

Nu.Q® Discover Assays*.



*Contact us for custom assay development at asknu.qdiscover@volition.com

Convenience:

- cf-nucleosome quantification technology run manually and on fully automated magnetic bead-based sandwich immunoassay ChLIA platform.
- No assay development required, assays ready to run.
- Easy to interpret report.
- Assays compatible with multiple animals (murine, lapine, porcine, canine and human) and cell models to provide constancy and confidence in results.

Sensitivity & Specificity:

- Low sample volumes. Use with EDTA plasma, cell culture extract, supernatant.
- Antibodies screened extensively to ensure antibodies have limited cross reactivity to non-targeted histone PTMs.
- Detection antibodies recognize a nucleosome specific epitope ensuring detection of only intact nucleosomes.
- Typical reproducibility:
  - Precision for Nu.Q® H3.1 intra-run less than 5%CV.
  - Precision for Nu.Q® H3.1 inter-run less than 10%CV.
- Lower limit of quantification: 3ng/ml for Nu.Q® H3.1.

Quality:

- Assays developed based on CLSI guidelines.
- Expert support for your histone PTM research needs.

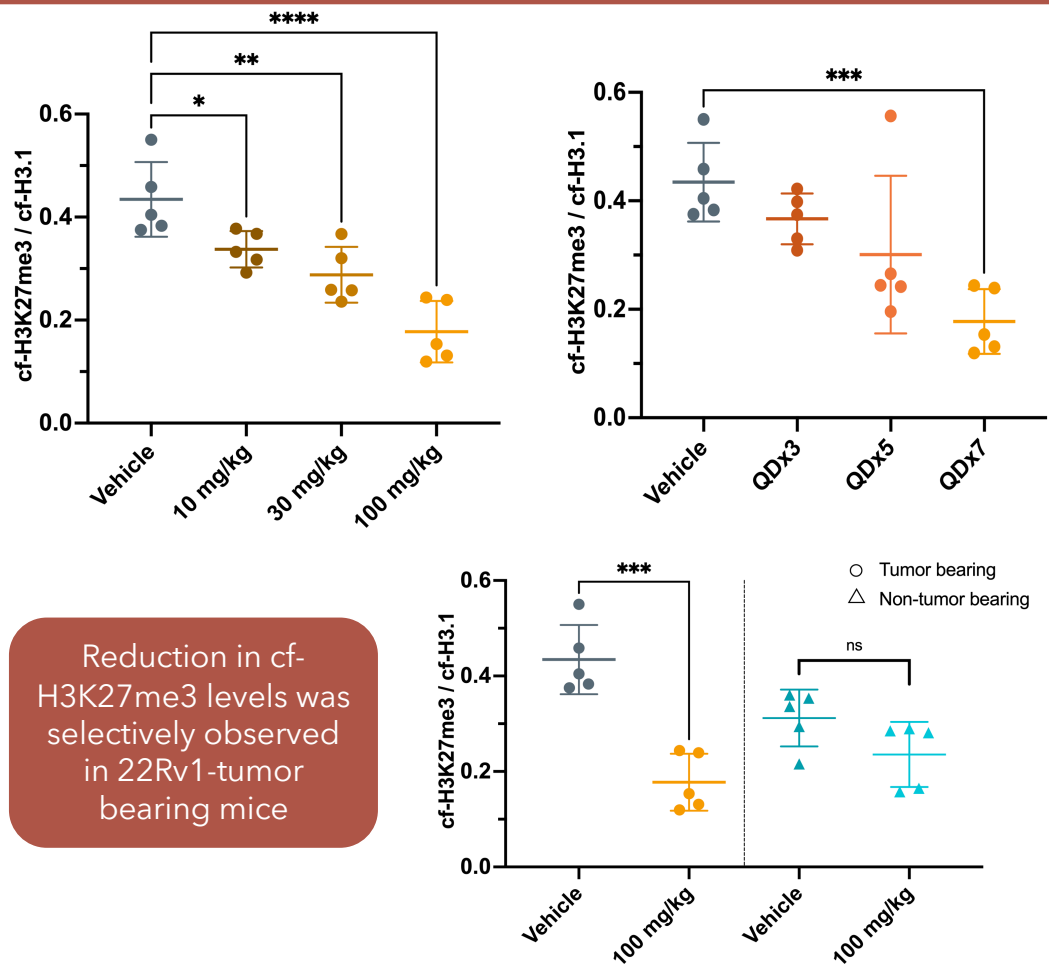
Abbreviations: cf, cell-free, ChLIA, chemiluminescence immunoassay; CLSI, Clinical and Laboratory Standards Institute; CV, coefficient of variation; EDTA, ethylenediaminetetraacetic acid; PTM, post-translational modifications.

Case Study - PD Biomarker.

Volition's Nu.Q® Discover cell-free (cf)-nucleosomal assays such as H3K27me3 enable robust, quantitative analysis of histone modifications in circulating cf-nucleosomes.

- **Quantitative & Robust:** A method of choice for quantification of plasma cf-nucleosome H3K27me3 levels.
- The assay has shown small molecule inhibition of PRC2 in a manner that is:
  - **Dose dependent**
  - **Time dependent**
  - **Tumor selective**
- **Non-Invasive Methodology**: The assay is non-invasive, and allows for serial sample collection from patients
- **No Extra Optimization Needed:** No requirements for further optimization by the investigator/sponsor of the trial
- **Rapid Turnaround:** Once samples have arrived at Volition, the turn-around-time for results is fast < 1 week

cf-H3K27me3 levels normalized to cf-H3.1 levels were assessed in plasma using to serve as a PD biomarker of PRC2 inhibitors.

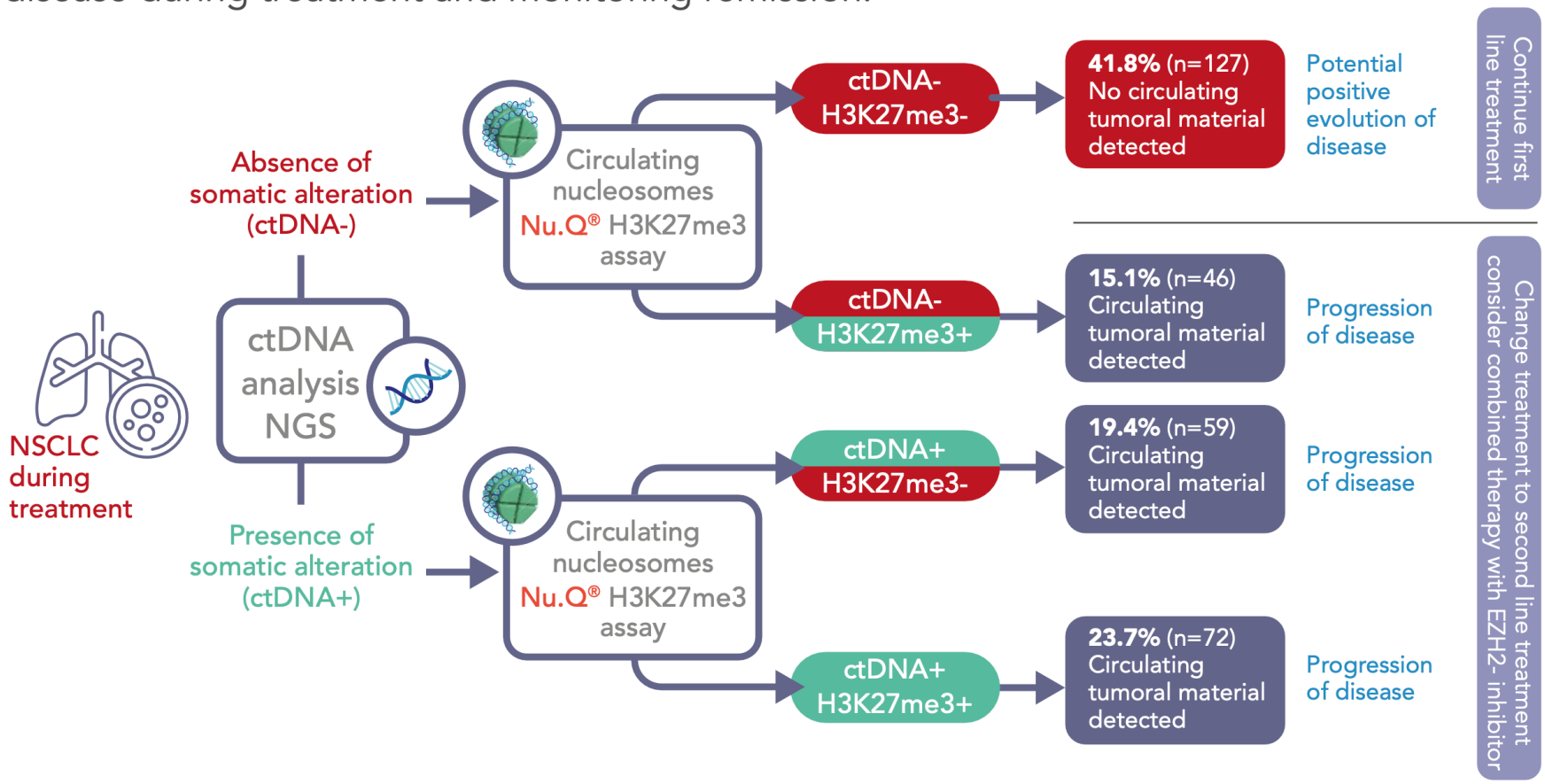


Reduction in cf-H3K27me3 levels was selectively observed in 22Rv1-tumor bearing mice

Reference: Daemen A et al. Biomarker strategy for a phase 1 study of ORIC-944, a potent and selective allosteric PRC2 inhibitor, in patients with metastatic prostate cancer [abstract]. In: Proceedings of the American Association for Cancer Research Annual Meeting 2023; Part 1 (Regular and Invited Abstracts); 2023 Apr 14-19; Orlando, FL. Philadelphia (PA): AACR; Cancer Res 2023;83(7_Suppl):Abstract nr 2791.

Potential applications of epigenetic biomarker testing in lung cancer treatment.

Improves accuracy of ctDNA molecular testing at diagnosis, detecting minimal residual disease during treatment and monitoring remission.



Grolleau et al. (2023). Circulating H3K27 Methylated Nucleosome Plasma Concentration: Synergistic Information with Circulating Tumor DNA Molecular Profiling. Biomolecules, 13(8);1255.

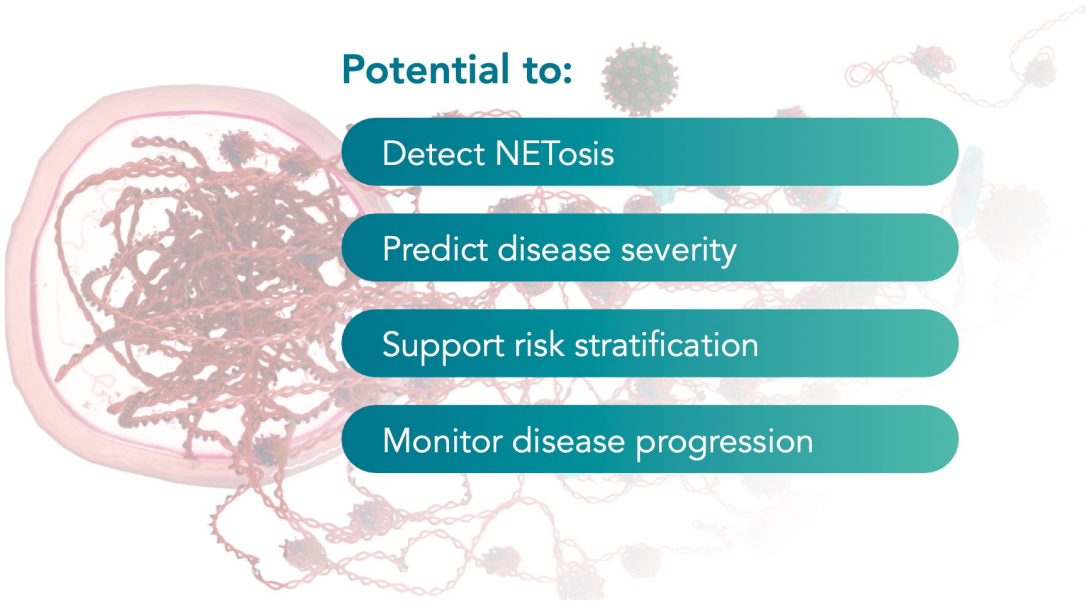
Quantifying the release of Neutrophil Extracellular Traps

Nu.Q® NETs Assay:

Simple, routine blood test

Correlates with SOFA[3], APACHE II

The only analytically validated assay to quantify the level of NETs



Potential to:

- Detect NETosis
- Predict disease severity
- Support risk stratification
- Monitor disease progression

CAR-T Cytokine Release Storm

Novel Ex-vivo – synthetic Sepsis™ HTS platform

- **Advanced Screening Capabilities:** Utilizes whole blood with precision liquid handling for a thorough evaluation of NETosis modulators and activators
- **Comprehensive Biomarker Panel:** Screens an extensive array of interleukins and molecules pivotal to immune response and inflammation, delivering critical data for First-In-Human (FIH) studies
- **Biologically Relevant Induction:** Harnesses the natural interplay of cytokines and chemokines to induce NETosis, reflecting true human physiology
- **Combinatorial Analysis:** Employs a tailored approach to identify crucial molecular interactions that trigger NET formation
- **Insightful Disease Understanding:** Provides new perspectives on the pathogenesis of inflammatory diseases, opening doors to novel therapeutic interventions

Volition

Volition is a multinational epigenetics company, powered by Nu.Q®, our proprietary nucleosome quantification platform. Our Nu.Q® Discover program enables drug developers and scientists access to a range of state-of-the-art assays for rapid epigenetic profiling in disease, model development, preclinical testing, and clinical studies.

Our expert team are on hand to offer guidance and support.

Get in touch for more information:

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volition.com

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For research use only. Not for use in diagnostic procedures.

CLSI

Developed based on CLSI standard