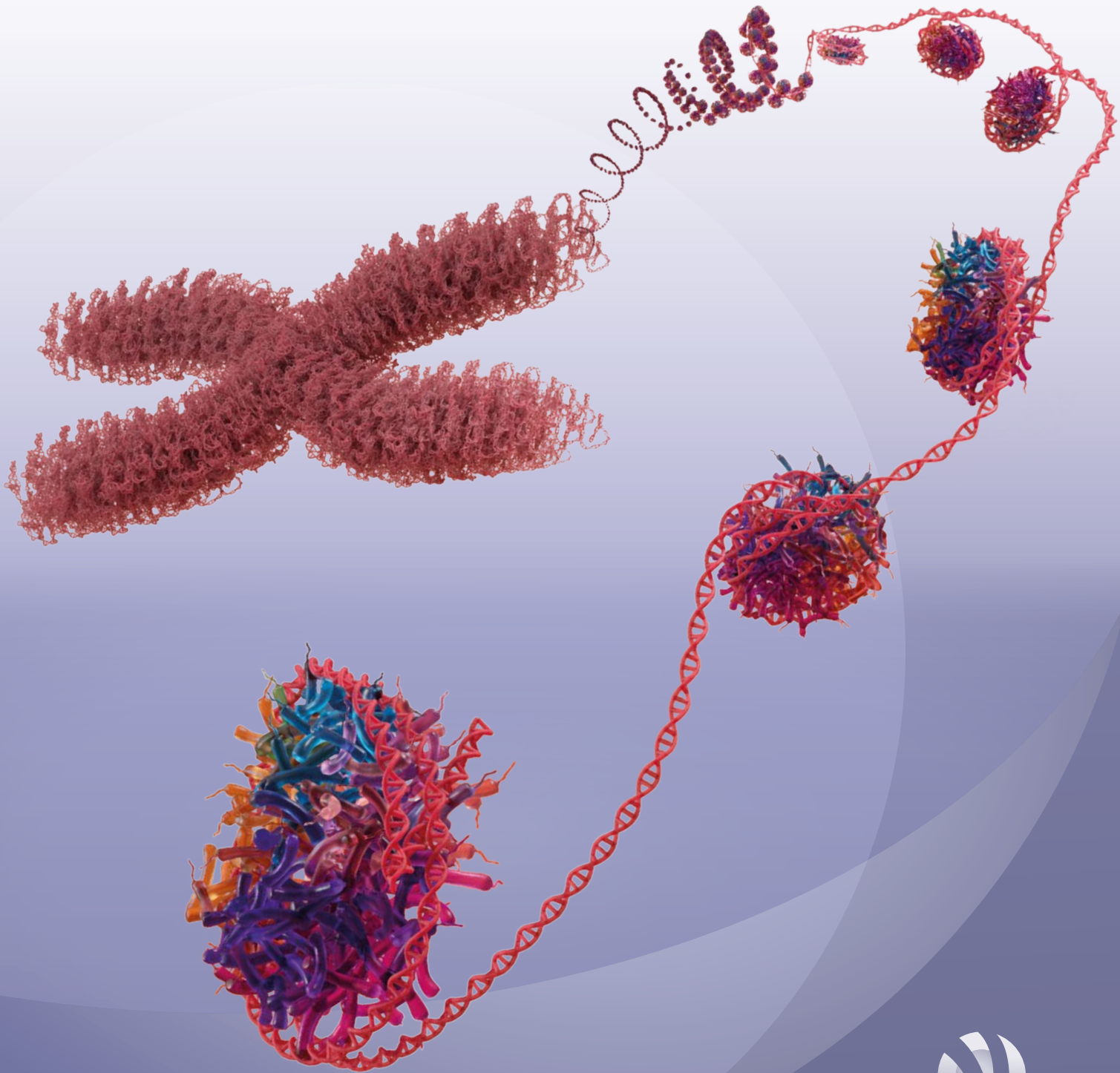


Introducing
nu•Q
cancer

Detecting cancer early to save lives.



Volition

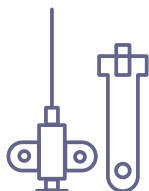
Current challenges in cancer diagnosis and monitoring.



Low-dose computed tomography (LDCT) recommended for screening but often results in false-positives leading to further, more invasive tests



Use of ctDNA is promising but clinical interpretation of ctDNA negative results is challenging and may miss Minimal Residual Disease



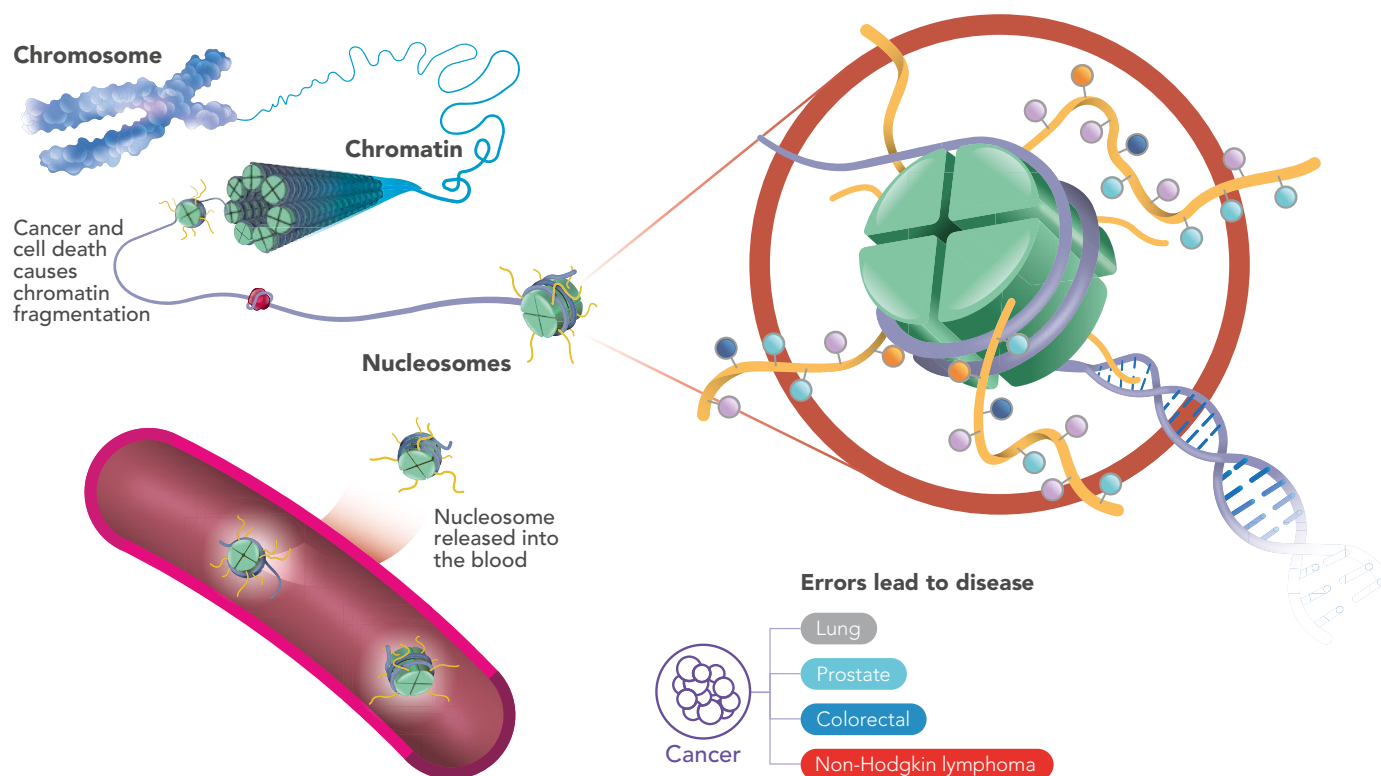
Biopsies are invasive, time-consuming, expensive and have potential to cause harm



Early detection using a routine blood test could enhance screening, diagnosis and treatment monitoring strategies

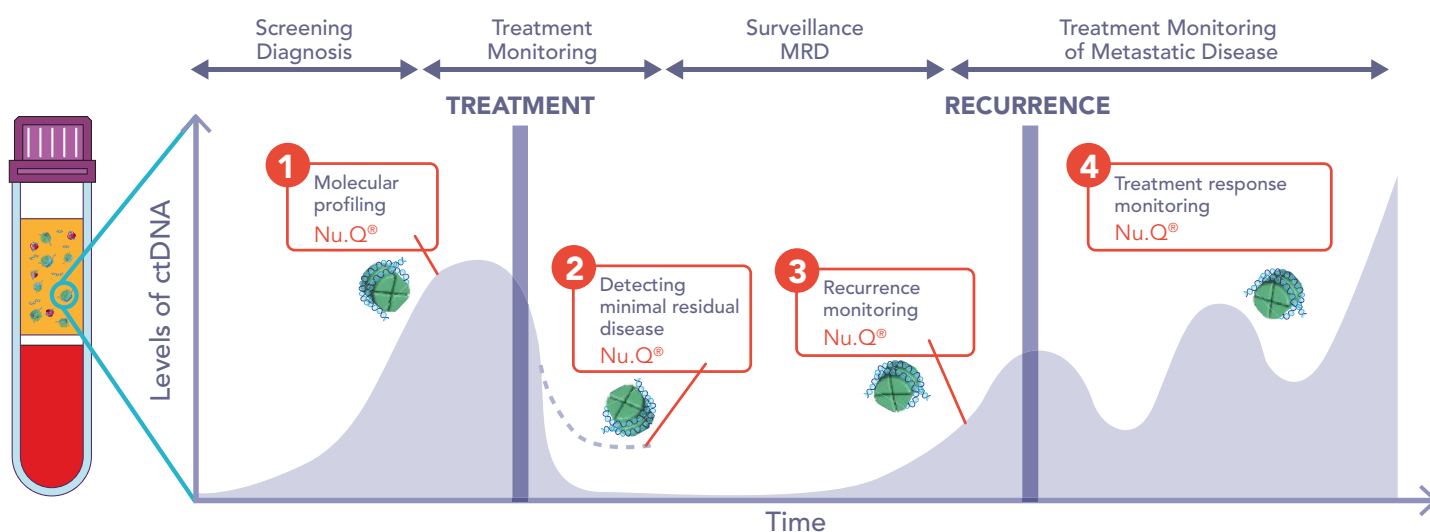
Epigenetics in cancer.

Measuring and monitoring nucleosome levels and modifications in circulating blood has the potential to aid diagnosis, prognosis and monitoring of cancer.



Li X and Li XD. Integrative Chemical Biology Approaches to Deciphering the Histone Code: A Problem-Driven Journey. *Acc Chem Res* 2021 54(19), 3734-3747; Regnier FE, Kim J. Proteins and Proteoforms: New Separation Challenges. *Anal Chem* 2018 Jan 2;90(1):361-373

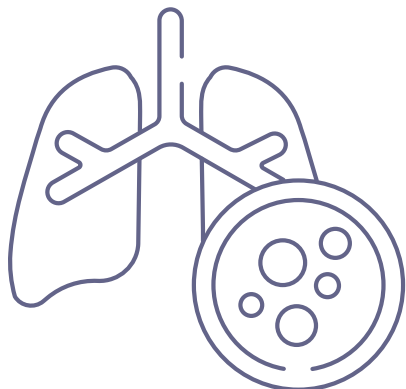
Potential applications of epigenetic biomarker testing in cancer screening and treatment.



Peng Y, Mei W, Ma K and Zeng C (2021) Circulating Tumor DNA and Minimal Residual Disease (MRD) in Solid Tumors: Current Horizons and Future Perspectives. *Front. Oncol.* 11:763790. doi: 10.3389/fonc.2021.763790

Specific challenges in lung cancer.

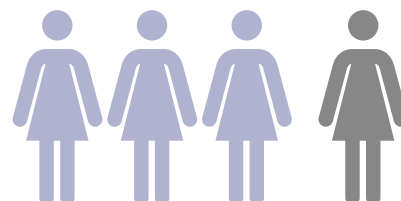
Lung cancer is the most common cause of cancer deaths worldwide, with **1.8 million** cases each year.



Lung cancer kills almost **3 times** as many **men** as prostate cancer worldwide



Lung cancer kills almost **3 times** as many **women** in the US as breast cancer



Use of low dose computed tomography (LDCT) in screening has improved detection but struggles to detect early cancer and has a high false positive rate



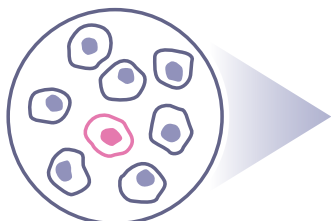
Identifying minimal residual disease (MRD) provides an opportunity to guide clinical decisions about treatment



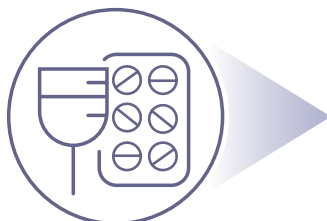
Molecular profiling of ctDNA is helpful at diagnosis and for the early indication of relapse but interpretation of ctDNA negative results is challenging

International Agency for Research on Cancer. GLOBOCAN Lung Cancer Facts Sheet 2020. Retrieved from: <https://gco.iarc.fr/today/data/fact-sheets-cancers>. <https://www.lungcancerresearchfoundation.org/wp-content/uploads/FactSheet-2023.01.pdf>

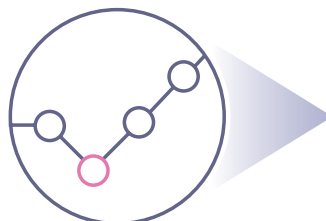
We need a simple, reliable/reproducible and fast method to:



Detect disease early



Provide tailored treatment




Assess response to treatment



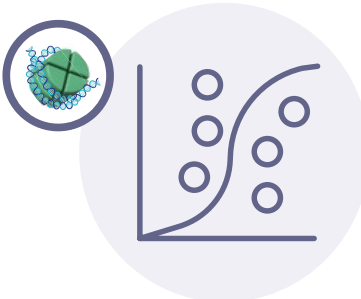
Identify minimal residual disease (MRD) following initial treatment

Evidence to support use of epigenetic landscape assessment to support lung cancer diagnosis and treatment monitoring.


Predictive, diagnostic and prognostic value of Nu.Q® assays



- Epigenetic nucleosome features in blood plasma showed opportunity to identify Cancer/Pre-cancer and may reduce the false-positive rate of LDCT.



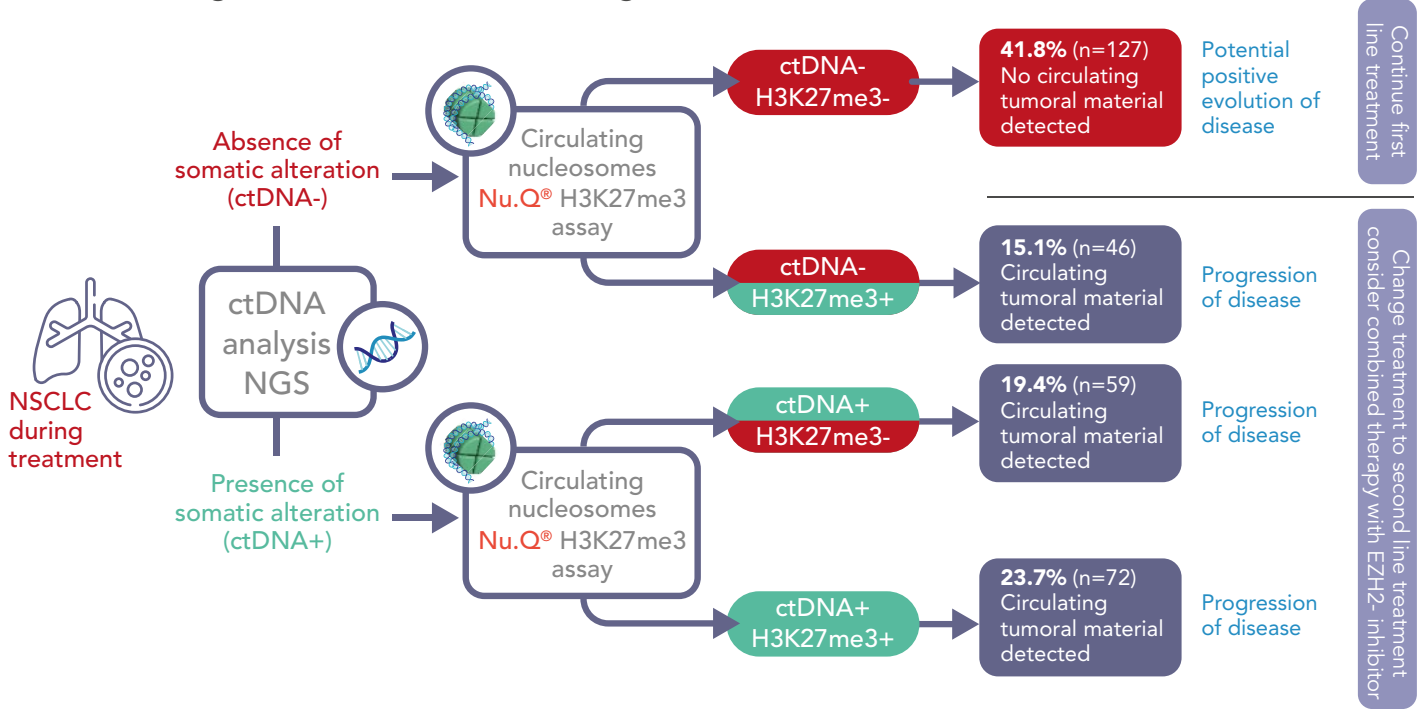
- Epigenetic nucleosome features enable accurate classification of Cancer/Pre-cancer and benign nodules via a combined logistic model, especially for tumors with non-solid part.



- Epigenetic nucleosome features showed superior performance in larger tumors, and had adequate performance in <1cm nodules.

Chen et al. Differentiation of Malignant and Benign Lung Nodules using Epigenetically modified Nucleosomes in Plasma [abstract]. ESMO; 20-24 October 2023; Madrid, Spain

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.



Global ongoing research program.

OncoProLung

Results due:
Q2 2024

Retrospective analysis of 70 lung cancer patients with multiple timepoints to assess the potential value of Nu.Q® assays at diagnosis, during treatment and at relapse

RHU REVEAL

Results due:
Retrospective
analysis 2024
Prospective
analysis 2026

Large-scale retrospective and prospective studies to assess the potential value of Nu.Q® assays in combination with other blood-based mutation agnostics tests to detect Minimal Residual Disease post primary treatment, to predict treatment response and to monitor treatment response

ILYAD

Results due:
Q4 2024

Large (400-800 subjects) lung cancer screening study to assess the potential value of Nu.Q® assays in the detection of cancers in screened individuals

Benefits of Nu.Q® assays.

Low sample volumes using same sample as ctDNA molecular testing

Non-invasive, so less disruptive and stressful for patients

Low cost versus biopsy

Get in touch for more information:



asknu.qcancer@volition.com



<https://volition.com/nu-q>



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