



Powering Oncology Research with Simoa® Technology

The ability to measure oncology biomarkers at ultra-low levels using Simoa® technology holds great promise for cancer research and clinical practice. Simoa® immunoassays can potentially serve as tools aiding in a range of critical functions in oncology, from early detection and risk assessment to distinguishing between benign and malignant tumors. Additionally, oncology biomarkers also have the potential to be used prognostically, providing insights into disease outcomes and progression-free survival, while also facilitating the monitoring of cancer recurrence and sensitivity to therapy. In essence, Simoa® technology has the potential to transform the landscape of oncology by offering precise and ultrasensitive measurements of cancer-related biomarkers, which may lead to earlier detection, more personalized treatment approaches, and improved patient outcomes.

Neurofilament light chain (NfL) holds promise as a significant biomarker in the realm of chemotherapy induced peripheral neuropathy (CIPN) research. CIPN is a common and debilitating side effect of cancer treatment, affecting a substantial number of patients. Simoa® technology's ability to detect and quantify blood NfL levels, a marker for nerve damage and neurodegeneration, has the potential to be invaluable in assessing the impact of chemotherapy on the nervous system. By closely monitoring blood NfL levels, researchers can gain insights into the severity and progression of neuropathy, potentially enabling the early identification of patients at risk. This data may contribute to the development of targeted interventions and treatment strategies to mitigate or prevent CIPN, ultimately improving the quality of life for cancer patients undergoing chemotherapy.

Solutions to Advance Your Research

OPTIONS OF SIMOA®:

- Purchase assays for use on the Quanterix SR-X™, or Simoa HD-X™ Analyzer platform
- Submit samples to our **Accelerator Laboratory** for analysis
- Choose between *singleplex and multiplex assay options to measure biomarkers of interest*

BENEFITS OF SIMOA®:

- Access biomarker data with *unparalleled sensitivity and accuracy*
- Study health and disease with a *less invasive approach*
- Transform the way we detect diseases
- Advance scientific understanding of *physiological effects, prognosis, and management of disease*

SR-X™ Biomarker Detection System
The first benchtop instrument to offer true multiplex detection at both acute and baseline levels.



HD-X™ Analyzer
Delivering fully-automated ultra sensitive biomarker detection you can count on.



Simoa® Technology Enables Best-in-Class Research to Advance Scientific Breakthroughs in Oncology

Below represents a curated list of peer-reviewed publications where the Quanterix Simoa® assays were used as part of oncology studies.

Changes in leukoencephalopathy and serum neurofilament after (neo)adjuvant chemotherapy for breast cancer

Transl Oncol. 2023

<https://doi.org/10.1016/j.tranon.2023.101769>

Serum neurofilament levels correlate with electrodiagnostic evidence of axonal loss in paclitaxel-induced peripheral neurotoxicity

J Neurol. 2023

<https://doi.org/10.1007/s00415-022-11377-4>

Studies to Assess the Utility of Serum Neurofilament Light Chain as a Biomarker in Chemotherapy-Induced Peripheral Neuropathy

Cancers (Basel). 2023

<https://doi.org/10.3390/cancers15174216>

Integrated pipeline for ultrasensitive protein detection in cancer nanomedicine

RSC Adv. 2023

<https://doi.org/10.1039/d3ra02092d>

Monitoring Melanoma Responses to STING Agonism and Focused Ultrasound Thermal Ablation Using Microneedles and Ultrasensitive Single Molecule Arrays

Adv. Funct. Mater. 2023

<https://doi.org/10.1002/adfm.202301659>

Serum neurofilament light chain levels as biomarker of paclitaxel-induced cognitive impairment in patients with breast cancer: a prospective study

Support Care Cancer. 2022

<https://doi.org/10.1007/s00520-021-06509-x>

Cerebrospinal fluid neurofilament light chain as a potential prognostic biomarker for leptomeningeal metastasis

Oncol Lett. 2022

<https://doi.org/10.3892/ol.2022.13548>

Single-molecule array assay reveals the prognostic impact of plasma LRIG1 in ovarian carcinoma

Acta Oncol. 2022

<https://doi.org/10.1080/0284186X.2022.2140016>

Soluble PD-L1 as an early marker of progressive disease on nivolumab

J Immunother Cancer. 2022

<https://doi.org/10.1136/jitc-2021-003527>

Phase 1 study of the liposomal formulation of eribulin (E7389-LF): Results from the breast cancer expansion cohort

Eur J Cancer. 2022

<https://doi.org/10.1016/j.ejca.2022.03.004>

Fast quantification of extracellular vesicles levels in early breast cancer patients by Single Molecule Detection Array (SiMoA)

Breast Cancer Res Treat. 2022

<https://doi.org/10.1007/s10549-021-06474-3>

Reverse Transcriptase Inhibition Disrupts Repeat Element Life Cycle in Colorectal Cancer

Cancer Discov. 2022

<https://doi.org/10.1158/2159-8290.CD-21-1117>



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