



Sema4 Announces Nationwide Expansion of Disparity Study to Deliver Precision Oncology Care to Underserved Communities

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- *The REPRESENT Study Will Create One of the Most Diverse and Comprehensive Clinico-genomic Datasets to Uncover and Address Disparities in Cancer Care*
- *Sema4's Chief Medical Science Officer Will Discuss the Study at the Community Oncology Alliance's Annual Conference*

Stamford, CT – March 16, 2022 – [Sema4](#) (NYSE: SMFR), a patient-centered artificial intelligence (AI)-driven genomic and clinical data platform company, today announced the nationwide expansion of its disparities in cancer care study. The study, launched in 2021, enables access to comprehensive genetic and genomic testing for advanced cancer patients in underserved communities. It will also create one of the most diverse clinical-genomic datasets to help resolve racial, ethnic, and socioeconomic disparities in clinical trials, research, and therapeutics. [William Oh](#), MD, Chief Medical Science Officer at Sema4, will discuss the study at the Community Oncology Alliance's upcoming conference in Florida on March 18th.

The **RE**search to advance **PRE**ciSiOn medicine and health **E**quity in **o**Ncology Treatment ([REPRESENT](#)) study, which is already enrolling patients at five locations across two sites, will run nationally in collaboration with community oncologists caring for patients with advanced cancer in diverse and traditionally understudied and underserved populations. Disparities in healthcare access and a lack of diversity in clinical trials have led to significant disparities in the standard of oncology care. For example, Black and African American individuals have [higher mortality rates](#) than all other racial and ethnic groups for many cancer types. Sema4's study aims to better understand the factors contributing to cancer care disparities in underserved populations, including socioeconomic and genetic considerations, by creating a diverse and comprehensive patient registry and biobank.

"Sema4 is committed to partnering with community-based oncologists to democratize access to somatic and germline testing in underserved communities," said [Eric Schadt](#), PhD, Founder and Chief Executive Officer, Sema4. "We aim to break the cycle of inequity whereby underserved communities do not have access to precision oncology testing, and thus experience poorer outcomes, and are often excluded from clinical trials, research, and approved therapeutics. The question underlying the REPRESENT study is whether increased uptake of precision oncology testing in underserved populations will reduce disparities in health outcomes. The first step to answering this question is to create a dataset and biobank that reflect the United States' true diversity."

Most information in current clinical-genomic datasets comes from patients of European descent. Similarly, many clinical trials are underrepresented by certain racial and ethnic groups, limiting understanding of drug efficacy and toxicity in certain populations. As a result, many drugs and treatment plans are designed around information from the European population, further contributing to disparities in cancer care and outcomes for underserved groups.

Sema4 aims to uncover insights into cancer biology and treatment relevant to these underserved populations by recruiting and offering advanced genomic testing to diverse patient populations. This information may open up new genetically tailored treatment options for participating patients in the immediate term. In the longer term, this information will be used to guide future drug development and clinical trials for underserved populations, potentially leading to better health outcomes.

"This is an unprecedented era in novel cancer therapies, but, unfortunately, precision oncology treatment is not delivered uniformly to all patients," said [William Oh](#), MD, Chief Medical Science Officer, Sema4. "By better understanding the genomic landscape of cancer in underserved populations, we hope to enable personalized care and uncover treatment patterns within these communities and ensure patient diversity in the development of cancer research, trials, and therapeutics."

REPRESENT is a prospective observational study that will enroll up to 5,000 advanced-stage cancer patients (up to 500 at each of a maximum of ten national trial sites). Two sites are currently operating in North and South Carolina, with 226 patients enrolled, and nine other sites are in discussion. As part of the study's criteria, at least 30% of enrolled patients at each site must be part of an underserved minority community. Data and samples gathered from consenting patients will be used to establish a clinical-genomic patient registry and biobank. Registries are used to collect standardized patient information. Similarly, biobanks, which are essential resources in the development of targeted therapies in oncology, contain clinical data, biological specimens, and additional associated information for future use in research and clinical testing.

"The REPRESENT study will generate one of the most comprehensive repositories of clinical-genomic information available as a result of the range of molecular profiling techniques, clinical data, and diverse racial backgrounds involved," said Kashyap Patel, MD, President of the Community Oncology Alliance and CEO of the Carolina Blood and Cancer Care and study co-principal investigator. "Furthermore, by incorporating information on social determinants of health into our dataset, we have the opportunity

to better understand the role of social support, education, housing, and other socioeconomic factors in contributing to cancer outcomes.”

“Through the REPRESENT study, Sema4 is delivering best-in-class standard of care to those in need while simultaneously creating one of the most diverse and racially comprehensive datasets for clinicians, researchers, payors, and pharma alike,” said [Michelle Zimmerman](#), Chief Strategy & Transformation Officer, Sema4.

Sema4 will leverage its [Sema4 Signal](#)[®] precision oncology portfolio of next generation sequencing assays to uncover actionable insights from the dataset. Patient samples will be analyzed using Sema4 Signal Whole Exome Sequencing (WES)/Whole Transcriptome Sequencing (WTS) along with the company’s Hereditary Cancer, liquid biopsy, and pharmacogenomics testing. Sema4 researchers will use the resulting sequencing data, registry, and biobank to assess the prevalence of actionable biomarkers, driver mutations, germline alterations, and social determinants of health in these diverse populations. In addition, patients in the registry and biobank will be contacted if appropriate treatment options or clinical trials come available.

“Sema4’s REPRESENT study will facilitate access to precision oncology testing in underserved communities and increase the availability of diverse clinico-genomic data and biospecimens for the research community,” said Robert Winn, MD, Director of the VCU Massey Cancer Center and a Sema4 Oncology Advisory Board member. “The resulting dataset will enable Sema4 to leverage real-world data to uncover disparities and discover ways to better identify, treat, and monitor patients of all populations. The future of informed disparities work in the community begins today with initiatives like these.”

About Sema4

Sema4 is a patient-centered health intelligence company dedicated to advancing healthcare through data-driven insights. Sema4 is transforming healthcare by applying AI and machine learning to multidimensional, longitudinal clinical and genomic data to build dynamic models of human health and defining optimal, individualized health trajectories. Centrellis[®], our innovative health intelligence platform, is enabling us to generate a more complete understanding of disease and wellness and to provide science-driven solutions to the most pressing medical needs. Sema4 believes that patients should be treated as partners, and that data should be shared for the benefit of all.

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