



Northwestern OncoSET

SEQUENCE ➡ EVALUATE ➡ TREAT



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Personalized Cancer Care Based on Genomics Analysis of Tumors

With the exciting vision and leadership of new director Leonidas Platanius, MD, PhD, the Robert H. Lurie Comprehensive Cancer Center of Northwestern University is on a bold path to establish Northwestern as a global leader in developing and providing effective personalized cancer treatment and to establish Chicago as an international hub for such care. Through **Northwestern OncoSET** (Sequence, Evaluate, Treat), the Lurie Cancer Center will become the first academic cancer center in the Chicago area and one of a handful of cancer centers in the nation to couple oncology and genomics to provide personalized medicine to patients with tumors, especially those tumors that are resistant to currently available therapies. This breakthrough program targets tumors from any type of cancer that is considered refractory or not responsive to current standard forms of treatment. Genomic profiling of individual tumors will be used to guide the selection of therapy. Therapies will be chosen from a very broad spectrum of novel agents that are available at Northwestern through clinical trials. This approach takes advantage of tumor-defined targets to develop individually tailored treatments.

OncoSET not only offers a new avenue of hope for patients and their families, but also has the potential to harness the power of genomic information and analysis with a goal to ultimately deliver effective cancer care to patients who currently have very limited options. OncoSET is an umbrella program that will be driven by three integral steps:

1) **Sequence** by determining the genomic make-up of a tumor (genomic analysis); 2) **Evaluate** and discuss this sequencing through a sophisticated new Molecular Tumor Board at the Lurie Cancer Center; and 3) **Treat** the patient in “pilot” Tumor Clinics with novel agents to target genomic abnormalities or with novel immune-oncology approaches should no currently actionable target be identified.

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“We are very excited about the creation of Northwestern OncoSET, which will establish Chicago as the national and international leader in personalized cancer care. In the context of clinical research, Northwestern OncoSET will allow us to offer never-before-realized personalized cancer treatment.”

Leonidas Platanius, MD, PhD, Director of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University and Jesse, Sara, Andrew, Abigail, Benjamin and Elizabeth Lurie Professor of Oncology



To accelerate the **Sequence** stage of OncoSET, the Lurie Cancer Center has developed research alliances with molecular diagnostic leaders, including Foundation Medicine, NeoGenomics Laboratories, Trovogene, and Perthera. Working with these collaborators and our Northwestern Medicine Developmental Therapeutics Institute, we will define unique genomic features of individual tumors. We also will have the capability to analyze proteins in the tumors (proteomics). Through the Developmental Therapeutics Institute, we are developing the range of studies that provide access to the necessary pipeline of drugs. Thus, we will be able to offer these novel agents as part of clinical trials to the relevant patients. For some patients, the OncoSET program may identify targets that may be addressed with agents that are already approved by the Food and Drug Administration, but are now repurposed for this use.

Central to the **Evaluate** step of OncoSET, we have assembled a new Molecular Tumor Board at the Lurie Cancer Center that meets regularly to evaluate and discuss the optimal treatment options for our patients based on specific molecular abnormalities in their tumors. This group of experts comprises the traditional disciplines of pathology, medical oncology, surgical oncology, and radiation oncology, along with the additional expertise of colleagues who are cancer geneticists, genome biologists, molecular scientists, bio-ethicists, and bioinformaticists. **Treat** is the crucial last step in OncoSET, which entails matching combinations of approved and investigational agents for pathway-driven treatment.



At the Lurie Cancer Center, our goal is to use the OncoSET program to redefine cancer care. With a focus on patients and their personalized care, OncoSET may provide new options. In addition to this precision therapy, OncoSET advances education throughout the cancer field to medical students, residents, and fellows at Northwestern, as well as for all levels of our faculty colleagues. We will offer a Personalized Cancer Therapy Fellowship and ultimately plan to restructure our clinical oncology training programs to align with OncoSET. As a National Cancer Institute-designated Comprehensive Cancer Center, the Lurie Cancer Center has the expertise, state-of-the-art technologies, and commitment to change how cancer care is delivered nationally and across the globe. Northwestern OncoSET is a key component in delivering on that core mission.



THROUGH NORTHWESTERN MEDICINE, WE ARE CREATING A NATIONAL EPICENTER FOR HEALTHCARE, EDUCATION, RESEARCH, COMMUNITY OUTREACH, AND ADVOCACY.

NORTHWESTERN MEDICINE

Northwestern Memorial HealthCare and Northwestern University Feinberg School of Medicine are seeking to impact the health of humankind through Northwestern Medicine. Our commitment to transform healthcare and to be among the nation's top academic medical centers will be accomplished through innovation and excellence. At the Lurie Cancer Center, we recognize that every positive contribution we have made to cancer care, research, and education has been made possible by generous donors who have entrusted us with their philanthropic support. We invite loyal donors and interested friends to join us in advancing our OncoSET vision. Your gifts of outright support and endowment will provide the resources we need to introduce breakthroughs that will improve the diagnosis and treatment of people living with cancer today and in the future.

About the Lurie Cancer Center

- The Robert H. Lurie Comprehensive Cancer Center of Northwestern University—one of 50 National Cancer Institute-designated Comprehensive Cancer Centers in the nation—is committed to being a national leader in the battle to overcome cancer.
- Recognized as a national leader in cancer treatment, the Lurie Cancer Center supports care for a broad range of cancer types through comprehensive research; distinguished and dedicated faculty and staff; a world-class teaching program; and ongoing advances in medical, surgical, radiation, and interventional oncology.
- We are a founding member of the National Comprehensive Cancer Network (NCCN): an alliance of 27 of the nation's leading cancer centers dedicated to improving the quality, effectiveness, and efficiency of cancer care so that patients can live better lives.
- Northwestern's Lurie Cancer Center is a founding member of the Big Ten Cancer Research Consortium, which collaborates on oncology clinical trials that leverage the scientific and clinical expertise of the Big Ten universities.
- The Lurie Cancer Center has established major research strengths in breast, genitourinary, gastrointestinal, aerodigestive, neurologic, and gynecologic cancers; hematologic malignancies, sarcoma, melanoma, cutaneous lymphoma, and pediatric oncology.
- Our research programs in hormone action/signal transduction, angiogenesis, gene regulation, biologic therapies, mathematical modeling, and nanotechnology are nationally and internationally recognized.
- Our outstanding basic, translational, and clinical research complements a full range of prevention, early detection, treatment, rehabilitation, and palliative care programs for all types of cancer.
- Our nationally recognized supportive oncology programs and survivorship specialty clinics include fertility preservation services for young adult cancer survivors.



Learn more about the Lurie Cancer Center's patient care, services and programs, research and education, clinical trials, and faculty at cancer.northwestern.edu.

