Northwestern Medicine

Northwestern International Health

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Lurie Comprehensive Cancer Center Earns 'Exceptional Rating' with a Near-Perfect Impact Score from the National Cancer Institute

Lurie Comprehensive Cancer Center will receive nearly $31.5 million in funding, a dramatic 36 percent increase

In addition to receiving the highest rating (an overall exceptional) for the excellence of its research programs and patient care, the Lurie Comprehensive Cancer Center received a near-perfect impact score of 12. Numerical scores are assigned on a scale from 10 to 90, with 10 being a perfect score.

This is the fourth renewal of the Cancer Center Support Grant for the Lurie Comprehensive Cancer Center. We will further enhance our translational capabilities in cancer immunotherapy, epigenetics and metabolomics across Northwestern University," said Leonidas C. Platanias, MD, PhD, Director of the Lurie Comprehensive Cancer Center. "We are also expanding our precision medicine capabilities and cutting-edge clinical trials across the rapidly growing Northwestern Medicine network."

"The success of our cancer center reflects the innovation and remarkable achievements of our talented clinicians, scientists and staff," said Platanias. "We are now positioned among an elite group of top cancer centers in the country and poised for the next phase of growth. We look forward to expanding our capabilities and intensifying our efforts to defeat cancer as a disease."

For patients, an NCI Comprehensive Cancer Center provides innovative, research-based approaches to detecting and treating cancer. The five-year renewal of the Lurie Comprehensive Cancer Center's status as one of only 49 NCI-designated Comprehensive Cancer Centers in the United States follows a rigorous peer-review process that includes more than a year of preparation, a site visit and analysis by leading scientists from across the country.

- *Ranked as "exceptional" with a near-perfect impact score of 12*
- *Highest possible rating and big funding boost for the Lurie Cancer Center*
- *Recruited 93 new faculty members since last renewal*

Northwestern Memorial Hospital, the Lurie Comprehensive Cancer Center's primary teaching affiliate and clinical home, was recognized by U.S. News & World Report in its 2017-18 "Best Hospitals" rankings as one of the top hospitals in the country and ranked first in cancer care in the Chicago Metro Area and Illinois for the sixth consecutive year.

"We are now positioned among an elite group of cancer centers in the country and poised for the next phase of growth. We look forward to expanding our capabilities and intensifying our efforts to defeat cancer as a disease," said Leonidas C. Platanias, MD, PhD, Director of the Lurie Comprehensive Cancer Center.

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Prostate Cancer Therapy Improves Outcomes for Patients with Castrate-Resistant Prostate Cancer by 71%

Patients with non-metastatic castration-resistant prostate cancer (CRPC) who were treated with enzalutamide plus androgen deprivation therapy (ADT) had significantly improved metastasis-free survival compared with those treated with ADT only according to final results from a multinational, randomized Phase III clinical trial. The results show that the use of enzalutamide and ADT reduced the risk of developing metastases or death by 71 percent compared to ADT alone. The data will be presented at the 2018 Genitourinary Cancers Symposium in San Francisco, February 8-10.

"In patients with non-metastatic CRPC, there is a high unmet need to delay development of metastases and the progression to advanced prostate cancer. There are currently no approved systemic therapies for patients with non-metastatic CRPC in the U.S," said Maha Hussain, MD, Deputy Director of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University, who will present the data. "In the PROSPER trial, treatment with enzalutamide plus ADT delayed the development of metastases compared to standard of care ADT alone and, if approved, may provide men with non-metastatic CRPC an important new treatment option."

Prostate cancer is the second leading cause of cancer death among American men. Castration-resistant prostate cancer (CRPC) refers to the subset of men whose prostate cancer progresses despite hormone therapy.

Dr. Maha H. Hussain, Deputy Director, is responsible for the development and oversight of clinical research in the Lurie Cancer Center, including the coordination of all cancer-related clinical research services throughout the Lurie Comprehensive Cancer Center and Northwestern Medicine.

$25 Million Gift will Help Northwestern Medicine Develop Artificial Intelligence to Treat Heart Disease

Dr. McCarthy, Executive Director of Northwestern Medicine's Bluhm Cardiovascular Institute and Chief of Cardiac Surgery said artificial intelligence offers new ways to research and treat heart disease. Real estate developer Neil Bluhm has donated $25 million to support AI work at Northwestern.

Northwestern Medicine will use a new $25 million gift from real estate developer Neil Bluhm to develop artificial intelligence as a tool in the fight against heart disease.

The donation will help fund "a first-of-its-kind center that utilizes artificial intelligence and machine learning to advance the study and treatment of cardiovascular disease," Northwestern Medicine announced recently.

"Cardiovascular disease remains the number one killer of Americans," Dr. Patrick McCarthy, executive director of the Northwestern Medicine Bluhm Cardiovascular Institute and Chief of Cardiac Surgery, said in a news release. "Artificial intelligence offers an abundance of new ways to research and treat this pernicious disease."

"My support of Northwestern's cardiovascular program has always been about sparking transformation and creating one of the top programs in cardiac care in the nation," Bluhm said in the release.

Since creating the institute, Northwestern Medicine's cardiology and heart surgery program went from unranked to top ten in the annual U.S. News & World Report hospital rankings. At the same time, the number of cardiac surgeries performed at the hospital have increased fourfold.

Northwestern Medicine is working with four companies to explore new ways to use AI to treat cardiovascular disease. One such partnership with San Francisco-based medical technology company Bay Labs employs AI to help analyze cardiac ultrasound images for better diagnosis and management of heart disease.

Charles Cadieu, co-founder and CEO of Bay Labs, said the firm is launching studies at Northwestern Medicine in the coming months to make the AI product offerings more widespread and improve the quality of echocardiogram interpretation by physicians.

"Our partnership with Northwestern Medicine has advanced our work faster than we anticipated, and in exciting new directions," Cadieu said in the release.

Northwestern Medicine is anchored by the highest-ranked cardiology and heart surgery program in Illinois, 11 straight years.

- *Bluhm Cardiovascular Institute*
- *Cardiovascular clinical programs*
- *Cardiovascular clinical research*
- *Cardiovascular clinical outcomes*

Northwestern Medicine First in Illinois and Second in the Nation to Complete Robotic Tracheoplasty on Patient with Tracheobronchomalacia

"It's exciting times to be able to offer our patients minimally invasive surgical techniques for complex problems such as tracheobronchomalacia (TBM)," said Ankit Bharat, MD, thoracic surgeon and surgical director of the Lung Transplant Program & ECMO at Northwestern Medicine. "Using our robotic platform we can provide a state-of-the-art surgical technique which results in significantly smaller incisions, avoids muscle damage or rib spreading, substantially improves post-procedure recovery, reduces hospital stay, and leads to fewer complications."

The robotic-assisted surgery allows complex thoracic procedures such as tracheoplasty to be performed through smaller incisions with precise motion control, offering patients improved outcomes.

Dr. Bharat performed the first robotic-assisted tracheoplasty in Illinois and the second in the nation on Susan Harden, a 52-year-old resident of Worth, Ill. For years, Harden dealt with a relentless cough that wouldn't go away. Bouncing around from doctor to doctor, Harden was overwhelmed with misdiagnoses and medications to try and relieve the distinctive "seal-barking" cough. Doctors thought she had severe asthma, prescribed her four different inhalers and steroids as well as gave her an antidepressant and a hallucinogen to combat her anxiety attacks from not being able to breathe.

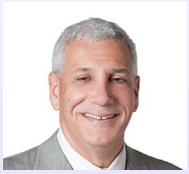
However, her cough persisted.

Harden underwent extensive evaluation and testing to confirm suspicion of TBM including lung function testing, dynamic CT scan, a bronchoscopy to look at the airway and a tracheal stent trial to confirm the diagnosis and predict a good response before undergoing major surgery.

On May 23rd, Harden underwent an eight hour surgery to insert the mesh on the back of the trachea and bronchi to reinforce the airway and ease symptoms. She left Northwestern with minimal pain two days later.

"I couldn't be more grateful to Dr. Bharat and his entire team. He gave me my life back," said Harden.

Tracheobronchomalacia, or TBM, is an underdiagnosed, life-threatening airway disorder that occurs when the walls of the airway (specifically the trachea and bronchi) are weak causing the central airway to become narrow or collapsed according to the Genetic and Rare Diseases Information Center.* There are two forms of TBM; primary TBM where the condition is inherited during infancy or early childhood and secondary TBM usually seen in adults. Roughly 2 million people worldwide are walking around with severe TBM and need surgery.



Message from Dr. Daniel Derman

President, Northwestern International Patient Services
Chief Innovation Officer and Sr. Vice President, Northwestern Memorial Healthcare

As the Chief Innovation Officer for Northwestern Medicine, I am always very happy to see how committed we are as an organization to breakthrough treatments, programs, and research that significantly benefit our patients. This newsletter highlights some of our most recent advances from driving cutting-edge research in which our prostate cancer therapy improved outcomes for patients with castrate-resistant prostate cancer by 71% compared to standard of care to being the second hospital in the country to successfully complete a robotic-assisted minimally invasive tracheoplasty using the da Vinci Xi Surgical System.

In addition, we celebrate being ranked as one of the National Cancer Institute's leading Comprehensive Cancer Centers in the nation on the Competitive Renewal of Its Cancer Center Support Grant! Receiving nearly $31.5 million in funding will continue to help us be among the most elite Comprehensive Cancer Centers in the nation able to provide the best treatment options to our patients. We are also grateful for the $25 million dollar gift to help us build a "first-of-its-kind" center that utilizes artificial intelligence and machine learning to advance the study and treatment of cardiovascular disease.