IMMUNOTHERAPY

"Philanthropic support for cancer research is critical at a time when federal funding for research has diminished. Your generosity can provide the spark that generates significant advances in immunotherapy research to improve outcomes and directly impact the lives of our patients."

- David C. Linehan, MD

DIRECTOR OF CLINICAL OPERATIONS AND
CO-DIRECTOR, WILMOT CANCER INSTITUTE
CHAIR OF SURGERY,
UNIVERSITY OF ROCHESTER MEDICAL CENTER

Dr. Linehan is an internationally renowned researcher and clinician known for bringing innovative therapies to patients with difficult-to-treat cancers. He has conducted an early clinical trial for pancreatic cancer showing that an experimental immune-stimulating drug can control tumors well enough to make some patients eligible for surgery.



GETTING A SECOND CHANCE

Denny Stratton has been given a second chance. He is responding well to groundbreaking immunotherapy treatment that harnesses his own immune system to fight a cancer recurrence.

In 2014, a biopsy of a mass the size of a baseball near Stratton's elbow revealed he had Merkel cell carcinoma, a rare, aggressive skin cancer. Stratton, 77, of Penfield, N.Y., spent 45 years working outdoors, climbing utility poles and making repairs for the Rochester Telephone Company. The cancer on his elbow was the same arm that used to hang out the open window of his utility truck.

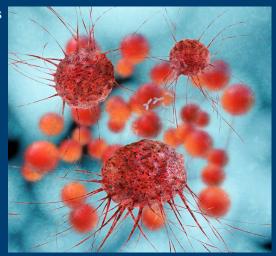
After surgery and 26 radiation treatments, he was ready to move on, cancer-free. However, in early 2016, a routine imaging scan showed the cancer had returned, this time with tumors on his pancreas and prostate gland. Stratton's care team at the Wilmot Cancer Institute cautioned that metastatic cancer can't be cured, but they suggested immunotherapy as a promising way to extend his life.

Since taking the drug—known as pembrolizumab—the retiree and former Marine is seeing incredible results. After four infusions, his pancreas tumor disappeared completely and only a speck remained on the prostate gland. Stratton visits Wilmot every three weeks for treatment and experiences almost no side effects. It is the same drug that wiped out former President Jimmy Carter's metastatic melanoma. "Me and Jimmy Carter—hopefully we'll live long!" says Stratton. "And most importantly, this drug is helping a lot of other people, too."

Stratton is living life to the fullest. He hunts and fishes, meets his friends for breakfast twice a week, and spends time with his children and grandchildren. He and his wife also took their RV to Florida (during the winter of 2016-17), and Wilmot physicians arranged for him to receive checkpoint inhibitor infusions while there. "I know how lucky I am," Stratton says.

How Immunotherapy Works

Immunotherapy comes in many forms, from bone-marrow transplants to newer drugs such as pembrolizumab, and including the more radical CAR T-cell therapy that re-engineers a person's own immune cells to attack cancer. The common thread is that immunotherapy boosts, restores, or improves the body's own natural defenses against cancer. At Wilmot Cancer Institute, our scientists are developing new approaches while also participating in some of the nation's most important clinical trials, ensuring that our patients have access to the latest immunotherapies.



One key area of investment at Wilmot, for example, is the study of the tumor microenvironment and the immune system's response to cancer. The microenvironment is the "neighborhood" surrounding cancer cells consisting of the tissue, molecules and blood vessels that feed cancer. A tumor can change its microenvironment and the microenvironment can affect how a tumor grows and spreads. Wilmot scientists are investigating whether the cells in the microenvironment can be rallied to eliminate cancer with treatments that either block cell signals or stimulate immune cells, or both. Another big initiative is to figure out how to outsmart relapsing cancer cells with immunotherapy.

Cancer immunotherapy is the American Society of Clinical Oncology's 2016 Advance of the Year. "These new therapies are not only transforming patient's lives, they are also opening intriguing avenues for further research," said Julie M. Vose, president of the Society. Wilmot scientists are poised to play an important role in this revolutionary approach to cancer care.



"Cancer touches the lives of most of us, including myself, having lost my wife of 40 years and a number of friends to this disease. I am happy to support immunotherapy research at Wilmot because it offers hope of a better cure across many types of cancer."

-KEITH YEATES

