



Steven D. Leach, MD

# The ROAD AHEAD

## STEVEN LEACH SHARES HIS VISION for a DARTMOUTH-WIDE CANCER CENTER

Dartmouth's Norris Cotton Cancer Center recently began a new era of leadership with the hiring this summer of its new director Steven D. Leach, MD (whose introduction to the Dartmouth community included participating in the 36th Annual Prouty).

A noted physician-scientist, Leach most recently served as chair and director of the Rubenstein Center for Pancreatic Cancer Research at Memorial Sloan Kettering Cancer Center in New York City, where he led a large team of scientists and clinicians focused on improving the lives of pancreatic cancer patients.

Leach recently sat down with *Dartmouth Medicine* to talk about his vision for the Cancer Center and the pivotal role it will play in helping Geisel, Dartmouth College, and Dartmouth-Hitchcock meet their missions of education, research, community engagement, and patient care.

### Q: YOU WERE ABLE TO PARTICIPATE IN THIS YEAR'S PROUTY—WHAT WAS THAT EXPERIENCE LIKE?

**Leach:** I was really excited that we were able to announce in time for the Prouty that I would be moving to Dartmouth. I came up for the weekend and rode in the 50-mile event. Next year, I'm targeting the Ultimate!

It was a great way for me to be introduced to the whole Prouty phenomenon, which generates so much energy, support, and goodwill within the community, and to meet with donors, participants, and volunteers.

I got started on my ride early and returned just in time to beat the rain. I went over to One West, the inpatient chemotherapy ward at the hospital, and was able to witness the Indoor Prouty, where our patients take laps around the unit, often toting their IV poles. Talk about inspiring—seeing this made my effort on the road look pretty trivial compared to what they were doing.

### Q: WHAT ATTRACTED YOU TO DARTMOUTH?

**Leach:** There were several factors that made this institution especially attractive to me. Dartmouth and Dartmouth-Hitchcock, I think, are unique in that they occupy a "sweet spot" in terms of a combination of relatively small size yet broad scope, have an unsurpassed commitment to academic and clinical excellence, and reside in an extremely unique geographic region.

Dartmouth is one of the smallest of the 49 institutions in the country that host NCI-designated comprehensive cancer centers, and this offers some very distinct advantages. There is a unique sense of place and culture in the Upper Valley that lends itself to high levels of collegiality and collaboration.

And because of our distinctly human scale, we're able to benefit from highly productive, spontaneous interactions between investigators and physicians from different dis-

ciplines, in a manner that often sparks creativity and new ways of thinking about complicated problems.

At the same time, being the only comprehensive cancer center north of Boston and east of Buffalo provides us with the opportunity to significantly impact the health of a largely rural and often underserved population—a chance to do much good for people who are in need. Dartmouth is also a place where patients and families come first, a principle that will always serve us well.

**Q: WHAT IS YOUR VIEW OF THE CANCER CENTER'S ROLE, IN TERMS OF SUPPORTING OR IMPACTING THE EDUCATIONAL MISSIONS OF DARTMOUTH AND GEISEL?**

**Leach:** I firmly believe that the best research, scholarship, and patient care are all done in the context of active teaching, and that the best learning occurs in an arena of active research and a spirit of discovery. As a Dartmouth-wide cancer center, we can provide unparalleled opportunities for integrated teaching, learning, and discovery in a uniquely interdisciplinary environment.

Importantly, this includes interdisciplinary scholarship across not just the sciences but also in the liberal arts. The Cancer Center is a major source of training for Geisel medical students, residents and fellows, and we provide distinctive educational opportunities for Dartmouth undergraduate, graduate, and post-doctoral students.

For example, we recently held the academic year's first gathering of our Cancer Scholars program—a wonderful program that accommodates about 30 undergraduate students each year. It's a year-long program, where our undergrads have dedicated didactic sessions, shadow clinicians, work in Cancer Center research labs, and get broadly introduced to the problem of cancer as an interdisciplinary challenge that crosses the biological sciences, the social sciences, and the liberal arts. The program also gives our students a glimpse of the unique relationship that oncologists share with their patients.

**Q: WHAT'S YOUR VISION FOR THE CANCER CENTER? WHERE WOULD YOU LIKE TO SEE IT IN FIVE YEARS?**

**Leach:** My vision for the Cancer Center is to extend it as a truly Dartmouth-wide comprehensive cancer center that elevates all aspects of the Dartmouth and Dartmouth-Hitchcock missions, including research, teaching, community engagement, and improving the health of patients, not only in the Upper Valley but across the globe. In order to solve the problem of cancer, we will need a cancer center that extends to every corner of Dartmouth College, Thayer, Tuck, Geisel, and Dartmouth-Hitchcock.

We want to use the combined talents of these incredible institutions to do two things. One is to spark truly trans-disciplinary cancer-related research across the biologic and social sciences, the humanities, and all of clinical medicine. We also want our Cancer Center to be known as the institution that has most perfected truly patient- and family-centered multidisciplinary cancer care.

Five years from now, I would like the Cancer Center to be known for providing answers to difficult cancer questions

that require the most intensive interdisciplinary collaboration. Those areas include: computational oncology—the analysis of big genomic data sets and their integration with clinical data to help guide patient care, and immuno-oncology where Dartmouth scientists have led the way in developing visionary new ways to harness the immune system to attack cancer.

We're also uniquely poised to generate important new knowledge related to measuring and optimizing cancer care delivery and outcomes in partnership with The Dartmouth Institute for Health Policy and Clinical Practice. And then we have a very robust program in engineering cancer cures involving partnership with world-class engineers at Thayer.

**Q: WILL YOU BE BRINGING YOUR RESEARCH HERE? IF SO, WILL IT COMPLIMENT OR ADD A NEW STRENGTH TO THE CANCER CENTER'S PROGRAMS?**

**Leach:** My first priority is to provide leadership for the Cancer Center, so that will be my focus early on. But we will certainly be continuing our research activities here at Dartmouth. We've most recently focused on pancreatic cancer genomics and trying to understand how the many mutations that arise in pancreatic cancer influence the biology of the disease and provide therapeutic vulnerabilities that we can exploit.

Dartmouth already has an incredibly strong program in gastrointestinal malignancies in general and in pancreatic cancer specifically, and investigators at Dartmouth-Hitchcock have provided remarkable insights into the disease. Dartmouth investigators were the first to describe pre-invasive pancreatic cancer precursor lesions, and have also pioneered the use of "avatar mice," that we can use to identify which drugs are most effective in treating an individual patient's tumor.

But there hasn't been a lot of basic science or genomic-based research in pancreatic cancer, and that's where I think our efforts can compliment and extend already strong clinical programs with another layer of basic and translational work.

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## STEVEN LEACH SHARES HIS VISION for a DARTMOUTH-WIDE CANCER CENTER

### Q: HOW WOULD YOU DESCRIBE THE CHALLENGES OF TODAY'S RESEARCH ENVIRONMENT TO A PERSON WHO IS INTERESTED IN ENTERING THE FIELD?

**Leach:** It's challenging on multiple levels—it's challenging to achieve the level of training needed to even gain entry into the field, and to come up with creative, big ideas necessary to move the field forward. And it's certainly challenging in terms of funding. These days, the reality is that the federal government, which remains our major source of cancer research funding, is going through a period of political and fiscal uncertainty. This certainly makes it less reliable as a source of funding.

That means that we have to diversify our sources of support, which includes increasing our reliance on visionary philanthropy. We are going to be very active in that arena, partnering with donors locally, regionally, and across a nationally disseminated Dartmouth alumni network. We want to spread the news of all of the excitement and accomplishments of the Cancer Center across a wide network of donors.

We are also going to be increasingly forming partnerships with industry. Over the past five to ten years, big pharmaceutical companies have largely jettisoned their research and development activities and are increasingly outsourcing R&D to start-ups and academia. We certainly want to take advantage of those opportunities.

We will also pursue opportunities for entrepreneurship and the generation of valuable intellectual property. Ultimately, this is how Dartmouth discoveries will be made available to the public, and this can also serve as an important revenue stream to fund future discoveries. And especially in the sense that we also want to be a "liberal arts Cancer Center" that engages the arts, humanities and social sciences, we're increasingly pursuing partnerships with large foundations that typically fund activities in the humanities.

While funding can be challenging, this doesn't mean that I would discourage a young person from pursuing a research career. A wise mentor once told me that if you find a job you love, you'll never have to work another day in your life. And I do indeed love my job!

### Q: YOU'VE DESCRIBED THE CANCER CENTER AS A "KEY CONNECTOR" BETWEEN DARTMOUTH AND DARTMOUTH-HITCHCOCK; WHAT DID YOU MEAN BY THAT?

**Leach:** Because cancer cuts across so many human dimensions, and is associated with deep multidisciplinary science, we can actually provide a bridge that brings together people from every nook and cranny of

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the Dartmouth, Geisel, and Dartmouth-Hitchcock campuses. And I think this concept of the Cancer Center as a key bridge extends, in fact, throughout the region as Dartmouth-Hitchcock comes to increasingly be known as a regional health care system.

We think every academic discipline that's represented at Dartmouth has something to add to the conversation about cancer. Sometimes it will be about biology and medicine. Sometimes it will be about computer science and big data solutions as we apply whole genome sequence to analysis of patient tumors.

And sometimes it will be about how we optimally deliver the cures that we discover—by making sure that our treatment plans and delivery systems are in tune with the cultural, economic, political, psychological, and even spiritual dynamics of both individual patients and society at large.

### Q: HOW ARE YOU ADJUSTING TO LIFE IN THE UPPER VALLEY?

**Leach:** I'm loving life in the Upper Valley! I moved from Manhattan, obviously a very different environment, and this has been a really nice change. I'm appreciating both the incredible lifestyle that the area offers—I love to cycle and to fly fish—and also how welcoming and friendly the people are here.

I'm renting a small house just two blocks from the Dartmouth Green, and it's a wonderful place to live. I'm also really enjoying the return to university life—it is such a treat to live in a town with so many interesting people and to be able to learn about all of the fascinating things they're up to.

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TIM DEAN