

THE University of Vermont CANCER CENTER

INNOVATIONS

RESEARCH / EDUCATION / COMMUNITY OUTREACH / CLINICAL CARE

SPRING 2025



RURAL HEALTH

UVM Cancer Center
Hits the Road

DIRECTOR'S MESSAGE

Dear UVM Cancer Center community,

The rate of people dying from cancer has been decreasing for more than 30 years. And yet, nationally, rural cancer patients are up to 17% more likely to die from their disease—a staggering difference.

The University of Vermont Cancer Center's catchment area is 78% rural. As such, we are working across our research, clinical, education, and outreach initiatives to leverage the assets of our rural communities as a way to tackle the disparate cancer burden.

In this issue of *Innovations*, you'll learn about our new rural oncology fellowship, which will both address the oncology workforce shortage in rural communities and provide clinical care closer to home for rural patients. It's a win-win when we consider the host of challenges our rural residents face when trying to access care.

This spring, the UVM Cancer Center is hitting the road in our new van. Fueled by philanthropy, this dual-use vehicle will support our Community Outreach and Engagement team's initiatives to educate about cancer risks, promote cancer screenings, and facilitate cancer research across our catchment area. When it's not out and about in all corners of the community, the van will transform into a 'lab on wheels' that is scheduled to bring cancer biology curriculum and mentorship to five rural schools in the 2025/2026 school year.

While we work to implement best practices like reducing barriers to care, increasing screening rates, and inspiring interest in STEM through K-12 programs, there's still so much we don't yet know. Research-informed health care policies, like those being studied through Erika Ziller, Ph.D.'s new Northeast Rural Health Research Center (NeRHRC)—a consortium between UVM and the University of Southern Maine—are the best hope for dissolving barriers to care that rural communities face.

Rural cancer care delivery is a cross-cutting area of focus for the UVM Cancer Center, and we will continue to work innovatively and collaboratively to improve outcomes for all our community members.



Randall F. Holcombe

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HITS THE ROAD (PAGE 2)

HEMATOLOGY-ONCOLOGY FELLOWSHIP TO ADD FOCUS ON RURAL CANCER CARE

Julian Sprague, M.D., a hematologist-oncologist with the UVM Cancer Center, empathizes with his rural cancer patients, many of whom drive three hours for a 15-minute check-in session with him. "I always joke with them and say, 'I hope you guys had something else to do,'" he says.

But it's the patients who don't make the trip that worry him.

"Sometimes people say, 'That's too much trouble; it's just a little bump,'" he says. "When they finally do come in, tumors are larger than they should be, and things have gone further than we would like."

Research from the Centers for Disease Control bears out Sprague's concern about the effects of delayed care. Rural Americans contract cancer at lower rates than their urban counterparts but die from the disease at significantly higher rates.

A new focus on rural cancer care in the UVM Cancer Center's Hematology/Oncology fellowship—a three-year program that gives post-residency medical school graduates comprehensive oncology training, which Sprague directs—aims to close the care gap between urban and rural patients in Vermont and northern New York, the Cancer Center's catchment area.

Beginning next fall, when the program's enrollment expands from six to nine, Sprague and his colleagues will be designing new ways to give fellows "the opportunity to learn more about rural cancer patients and how they're cared for."

Sprague envisions fellows gaining rural experience in two ways.

First, they will have the option of rotating through rural hospitals in the UVM Health Network—like Central Vermont Medical Center—that have oncologists on staff and a cancer clinic.

The experience would expose fellows to more types of cancers than they would see in his hematology/oncology clinic, Sprague says, and, crucially, deepen their knowledge of the challenges rural cancer patients face.

"It's really good training to see more cancers and be able to communicate awareness of how to navigate the complicated treatment process," he says.

Sprague and his colleagues are also collaborating with UVM's rural-focused Master's in Public Health (MPH) program to implement graduate level public health courses. In this model, after the three-year fellowship, UVM Cancer Center fellows would leave with a certificate of public health, one half of the way to an MPH degree.

IT'S THE PATIENTS WHO DON'T MAKE THE TRIP THAT WORRY HIM.

The end goal of the program is not just to train fellows in rural cancer care but to persuade them to stay in the area and establish practices in rural Vermont and northern New York.

Given the positive momentum of the UVM Cancer Center and the region's many attractions, that's not such a heavy lift, Sprague says. Half the physicians in his hematology/oncology group are made up of fellows who stayed in-state.

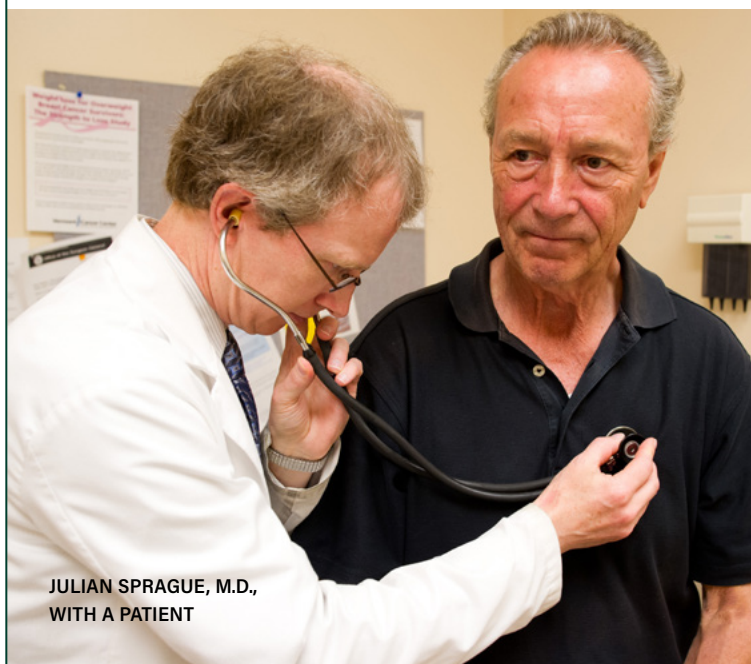
The vision for an expanded fellowship program is recruiting and retaining more oncologists in the region.

Sprague would also like to use the refocused fellowship program to bring a key component of modern cancer treatment—the clinical trial, where "patients can get their most optimal care," he says—much closer to home for rural patients. Participating in a trial hours away is too time-consuming and expensive for most rural cancer patients.

Managing the infrastructure of clinical trials, with their large teams and many protocols, is a complicated business, Sprague says. "I want fellows to learn how you deliver a clinical trial in a setting where you don't have as many resources as you would like."

As awareness of the fellowship's rural focus begins to spread, it should launch a virtuous cycle, Sprague says, attracting fellows interested in rural medicine who are more likely to stay in the area.

"When we start to do this, candidates will hear about it and go, 'That sounds interesting to me. That's where I want to be.'" ■



JULIAN SPRAGUE, M.D.,
WITH A PATIENT

UVM CANCER CENTER'S OUTREACH AND EDUCATION VAN HITS THE ROAD

In the winter of 2024, UVM Cancer Center team members wrapped up a challenging search. They had been looking the perfect outreach vehicle, and their requirements were unique. It had to have all-wheel drive (after all, this is Vermont) and ample room—not for passengers but for high-tech research equipment. An EV would have been on-brand for the University of Vermont, but not for a van traversing remote corners of the state with few charging stations. Rooftop solar charging panels, on the other hand, would come in handy.

The team landed on a 2023 Ford Transit van. Funded by philanthropy, they transformed it into an outreach and education vehicle that will bring cancer clinicians, research, education, and screening to rural communities across Vermont. "A critical part of our mission is to serve our rural catchment area," says Katelyn Queen, Ph.D., a leader of the Cancer Center component, Cancer Research, Training, and Education Coordination (CRTEC). "We can't always do that from our home base, so the van is a way for us to reach rural communities in new and exciting ways."

Taking Outreach Off-Road

Rurality plays a unique role at the UVM Cancer Center, which serves all of Vermont and six counties in northern New York and treats 54% percent of cancer cases from its catchment area. In fact, it is the only cancer center in an area that's more than twice the size of Massachusetts—a state with half a dozen different cancer centers.

But rurality comes with challenges. "Research tells us that although survival rates improve when cancer is detected early, screenings can be out of reach for many people living in rural communities," says Randall Holcombe, M.D., M.B.A., director of the UVM Cancer Center. "And there are other barriers—shortages of nearby primary care practitioners, steep transportation costs—all of which can exacerbate disparities in health outcomes and leave rural communities with higher rates of cancer, more acute morbidity, and higher rates of mortality, compared to their urban counterparts."

The Cancer Center's Community Outreach and Engagement (COE) team aims to close those gaps by using the van to mobilize screening and education activities that are key to its mission. One is sun safety—a perennial concern

in Vermont, which has one of the highest melanoma rates in the country. The van will travel around the state and northern New York to increase public awareness of the harmful effects of UV rays, educate about the prevention of skin cancer, distribute sun safety resources like sun-screen and SPF ChapStick, and offer community-based skin cancer screening.

It will also address other cancers like breast and lung—which have the highest incidence rate and highest mortality rate in the catchment area, respectively—by distributing critical information about cancer screenings for these diseases. To help people in rural communities better understand their risk profile for these diseases, the Cancer Center plans to send out clinicians to conduct genetic screenings in the future.

A Lab On Wheels

With education being a critical piece of the UVM Cancer Center's mission, the van's itinerary will also include several of Vermont's rural schools. According to a report by the National Rural Education Association, about half the state's





RURality PLAYS A UNIQUE ROLE AT THE UVM CANCER CENTER, WHICH SERVES ALL OF VERMONT AND SIX COUNTIES IN NORTHERN NEW YORK AND TREATS 54% PERCENT OF CANCER CASES FROM ITS CATCHMENT AREA.

students attend a rural school, where college enrollment rates tend to be lower. Many of these rural schools lack access to science facilities and resources commonly available to their suburban and urban counterparts.

Moreover, rural students are less likely to work with science professionals or connect with people who advocate for them to pursue STEM careers. This can make it difficult for them to develop a science identity—that is, the ability to see oneself as a scientist who belongs in the science community. Evidence shows that nurturing a science identity is especially critical during middle and high school; without one, students are less likely to pursue STEM studies and careers.

A passionate advocate of science education, Queen envisioned a solution to these challenges via a customized BioMobile Discovery Lab—a state-of-the-art lab built into the van's interior that brings science education to rural schools. The lab features a high-powered epifluorescence microscope—the kind used in cancer research to observe cell biology across time and space—and tools for understanding how cell components are visualized. With this

equipment, and following a curriculum developed by their teachers in partnership with the Cancer Center, high school students will study cancer drug-cell interactions and other questions relevant to modern cancer research.

But Queen's vision goes beyond lesson planning. "Our goal isn't just to provide a one-off science experience but to create a lasting impact by connecting rural educators through a professional development workshop and supporting students who are interested in pursuing STEM with a near-peer mentoring program," she says. "By introducing them to cancer research early, we hope to inspire students to pursue careers in this field."

Most education activities will start in the 2025/2026 school year. Meanwhile, as summer ramps up, Vermonters can expect to see the Cancer Center van at events and gatherings across the state—from science fairs and sporting events to farmer's markets and county fairs—where its unmistakable brand-wrapping and welcoming staff will share the message: The UVM Cancer Center goes the distance for rural communities. ■



NEW FEDERAL GRANT TO FUND RESEARCH INTO RURAL HEALTH CARE DELIVERY

It's a widely established fact that health care looks different depending on where you live. Cancer prevention and care are no exception: compared to their urban counterparts, rural residents face unique obstacles to accessing potentially life-saving cancer information and services.

Erika Ziller, Ph.D., director of UVM Larner College of Medicine Health Services Center and a UVM Cancer Center member, has analyzed these disparities for her entire career and concluded that research-informed health care policies are the best hope for dissolving them. Her work is about to gain new ground thanks to a \$2.8 million grant to launch the Northeast Rural Health Research Center (NeRHRC)—a consortium between UVM and the University of Southern Maine (USM) focused on rural health care delivery.

Funded by the Federal Office of Rural Health Policy



"YOU CAN'T DO RURAL HEALTH RESEARCH WITHOUT THINKING ABOUT CANCER."

– ERIKA ZILLER, Ph.D.

(FORHP), the Center will generate a robust body of research around acute rural health care issues such as behavioral health and diseases like cancer, for the edification of FORHP, which advises lawmakers on rural health care policies. "My vision for bringing this grant to UVM was to have it be an anchor for other healthcare-related research focused on rural places, people and health systems," Ziller says.

Doing Good for Rural Communities

Ziller understands firsthand the realities of rural life. Raised in the tiny town of South Paris, Maine, she came from a family without many resources. As a kid, the library was her sanctuary: she spent hours there devouring books that

championed empathy and critical thinking. "I grew up with this fire in my belly to do good," she says.

A career in social work seemed a natural fit, and Ziller focused her efforts on health education and family planning in rural communities. "The people that I was working with had various life challenges, and there were many ways in which social and public policy were making things worse for them," she says. These pain points inspired Ziller's research at USM, where she obtained a Ph.D. in Public Health and directed the university's Maine Rural Health Research Center—an established source of information for FORHP.

After 25 years at USM, an opportunity to direct the UVM Larner College of Medicine Health Services Research Center opened. It was her dream job, she says—not least because of the Center's collaboration with the UVM Cancer Center. "You can't do rural health research without thinking about cancer," Ziller says. "There are many well-

documented cancer disparities for rural communities, who have a series of strengths and weaknesses that affect their risk for cancer in the first place."

Those strengths include strong informal support systems and lower barriers to collaboration between organizations and sectors, which can help maximize impact within the community and for cancer patients specifically. Rural leaders also tend to know their communities well, so a health champion can rally people around an issue.

Still, these strengths can't always overcome the myriad obstacles to accessing cancer care and prevention in rural communities. Take a routine colorectal cancer screening, which is recommended for adults 45 years of age and older via a colonoscopy. Between prep and procedure, a colonoscopy requires at least a day off from work. Yet research shows that people living in rural areas are less likely to hold jobs that offer paid leave for medical reasons, and less likely to be insured at all. Other cancer disparities between rural and urban dwellers abound—from differences in mammography screening and HPV vaccination rates (both lower in rural communities) to higher rates of tobacco use in rural areas, even among teens.

Through NeRHRC, Ziller will collaborate with colleagues at the Cancer Center to map out these fault lines with the aim of advising FORHP on how to avoid them. For Ziller, collaborations like these are essential for aligning policies with the realities of rural living. "Now we have this core funding to build in ways that support both the rural health access mission of the Rural Health Research Center and the Cancer Center's mission around improving cancer prevention, screening, and outcomes for rural people in their catchment area," she says. "Our shared goal is to align resources and get all the oars rowing in the same direction so that we can help each other hit those targets—and that's what I'm really excited about." ■

UVM CANCER CENTER TO HOST INAUGURAL RURAL HEALTH AND CANCER CONFERENCE



The University of Vermont Cancer Center is excited to host the inaugural **Rural Health and Cancer Conference**. The conference will be held June 19–21 at Hotel Champlain in Burlington, Vermont.

The Rural Health and Cancer Conference aims to improve rural cancer outcomes by convening a wide array of experts from across the nation in rural cancer healthcare delivery and building cross-disciplinary collaborations among rural cancer health experts.



Register for the conference using this QR code

Conference sessions include:

- Juneteenth Keynote – **Sharon Lavigne**, RISE St. James Founder
- Keynote – **Marquita Lewis-Thames, Ph.D.**, Northwestern University
- Addressing Challenges in Rural Cancer Care
- Novel Approaches to Increase Rural Cancer Health Outcomes
- Increasing Screening and Prevention Services and Uptake in Rural Communities
- Survivorship in Rural Communities
- Lightning Talks
- Patient/Caregiver Panel
- Policy Plenary

Additional information and a detailed agenda can be found at go.uvm.edu/rhcc