

THE University of Vermont CANCER CENTER

INNOVATIONS

COMMUNITY OUTREACH / RESEARCH / EDUCATION / CLINICAL CARE

FALL 2023

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Cover Up



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THE
University of Vermont
CANCER CENTER

vermontcancer.org

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30

SUN SAFETY

Combatting skin cancer
in our community

DIRECTOR'S MESSAGE

Dear UVM Cancer Center community,

The University of Vermont Cancer Center (UVMCC) is based in Burlington, Vermont but serves a vast, largely rural area encompassing the State of Vermont and six counties in northern New York. It is the population in this broad catchment area, and indeed across northern New England, that we serve as we strive to reduce the burden of cancer.

The catchment area is the catalyst for our community outreach and engagement (COE) programs and also informs our research priorities. In addition to breast, prostate, lung, and colon cancer—malignancies that occur at high rates across our area—our population experiences high rates of melanoma, especially in Vermont which has the second-highest per-capita rate of new melanoma cases in the nation.

Melanoma is a deadly form of skin cancer, and over the summer the COE team collaborated with Vermont's statewide cancer coalition on targeted efforts to promote sun safety. This fall, the UVM dermatology team will provide skin checks at multiple community events and wellness fairs. The reasons for this high incidence are not clear, so ongoing fundamental laboratory studies by UVMCC researchers is especially relevant. An analysis of the cancer burden in the UVMCC catchment area is highlighted in this issue of *Innovations*.

Also in this issue are profiles of two early career investigators who are participating in the Vermont E3 (Emerging EAB Experience) program. This program is designed to afford individuals from backgrounds underrepresented in biomedical research and cancer center leadership across the country the opportunity to participate in the UVMCC external advisory board. We hope that this program will inspire individuals from diverse backgrounds to be the cancer research and cancer care leaders of the future.

Exciting things are happening in research, education, clinical care, and community outreach at the UVM Cancer Center, and I continue to be amazed by the dedication of our faculty and staff.



Randall F. Holcombe, M.D., M.B.A.

J. Walter Juckett Chair in Cancer Research
 Director, University of Vermont Cancer Center
 Associate Dean for Cancer Programs, Larner College of Medicine
 Chief, Division of Hematology & Oncology



ON THE COVER:
SUN SAFETY CAMPAIGN



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THE
University of Vermont
 CANCER CENTER

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VERMONT 'E3'

EMERGING EAB EXPERIENCE PROGRAM

THE University of Vermont CANCER CENTER

EMERGING EXTERNAL ADVISORY BOARD (EAB) EXPERIENCE PROGRAM

The UVM Cancer Center launched the "E3" program (Emerging EAB Experience program) to create an opportunity for early career faculty to participate in leadership-related activities within a cancer center. Uniquely, this opportunity is designed for future leaders from groups underrepresented in biomedical science and in cancer center leadership positions across the country.

This year, the UVM Cancer Center selected two inaugural participants for the "E3" program, **Emily Hallgren, Ph.D.**, and **Tianxiang "Sean" Hu, Ph.D.** Drs. Hallgren and Hu will join the UVM Cancer Center's external advisory board in Burlington, Vermont this fall for an on-site visit, and participate as program reviewers with assignments based on their individual qualifications.

Emily Hallgren, Ph.D.

ASSISTANT PROFESSOR,
 UNIVERSITY OF ARKANSAS
 FOR MEDICAL SCIENCES
 (UAMS) - NORTHWEST

ASSOCIATE MEMBER,
 WINTHROP P. ROCKEFELLER
 CANCER INSTITUTE



Dr. Hallgren's research focuses on unmet social needs among cancer patients, survivors, and caregivers, with an emphasis on rural cancer disparities and financial toxicity. She is currently developing effective financial navigation interventions for patients and caregivers in persistent poverty areas and has a long-term goal to develop and implement effective interventions to meet the social needs (e.g., financial, food security) of cancer patients to improve outcomes and overall flourishing for patients and their caregivers.

EAB ASSIGNMENTS

- COMMUNITY OUTREACH AND ENGAGEMENT
- CANCER HOST AND ENVIRONMENT
- CANCER POPULATION SCIENCES
- PLAN TO ENHANCE DIVERSITY

Tianxiang "Sean" Hu, Ph.D.

ASSISTANT PROFESSOR, AUGUSTA UNIVERSITY
 FACULTY, GEORGIA CANCER CENTER



Dr. Hu's research focuses on investigating molecular mechanisms driving leukemia initiation and progression, especially the role of leukemia cell-intrinsic signaling in modulating antitumor immunity. The Hu Lab has developed transgenic AML and CML mouse models, as well as bone marrow transduction and transplantation

models to characterize the origin and function of myeloid-derived suppressor cells, tumor-associated neutrophils, and macrophages during leukemogenesis, with the hope of revealing mechanisms of immune evasion during leukemia progression. The lab is also actively exploring the correlation between immune aging and leukemia outcomes.

EAB ASSIGNMENTS

- CANCER RESEARCH TRAINING, AND EDUCATION COORDINATION
- CANCER CELL
- CANCER HOST AND ENVIRONMENT
- PLAN TO ENHANCE DIVERSITY

NEW CENTER FOR HEALTH SERVICES RESEARCH DIRECTOR SEES “TRANSFORMATIVE” SYNERGY WITH CANCER CENTER

RESEARCH

ERIKA ZILLER, Ph.D., has had a “thread of concern” for cancer patients’ access to care since her first job serving as a social worker in rural Maine. The block grant funding program she referred clients to enabled uninsured women to be screened for breast and cervical cancer, but the funding stopped short if further diagnostics or treatment were needed.

“The last thing in the world you want when something might be going on in your body that’s potentially fatal,” said Ziller, the new director of UVM’s Center for Health Services Research, “is to not know how you can afford the next step.”

Personal experience cemented Ziller’s passion for improving healthcare access.

For the first five years of her son’s life, Ziller’s low salary as a social worker then as a graduate assistant, placed her in a category health policy experts call the “gap group,” earning too much to qualify for Medicaid but not enough to afford health insurance through her employer, which was double the cost of rent for her family’s three-bedroom house.

Rather than accept the status quo, she channeled her frustration into far-reaching scholarship, making the plight of uninsured children like her son the subject of both her Masters and Ph.D. theses.

Her analysis and recommendations were so compelling they contributed to the case the Obama administration made for the Affordable Care Act and won a national award from the National Rural Health Association.

Ziller arrived at UVM in August, after spending 25 years at the Maine Rural Health Research Center at the University of Southern Maine, most recently as its director. She was drawn to the quality of the health services research work being done at UVM, she says.

But the opportunity to build was also key.

“There are clusters of people across the Larner College of Medicine and within UVM as well as external partners who are doing excellent health services research. The chance to help pull all of that together in a way that makes sense was just so exciting.”

Transformative synergy

Ziller comes to UVM with a career-long interest in cancer, particularly prevention and access to care. While cancer hasn’t been the primary focus of her research, “It’s impossible to focus on rural health without consistently observing the role of cancer in rural health disparities, particularly in Maine where cancer is the leading cause of death,” she says.

Her vision for the Center for Health Services Research is still unfolding, but she sees strong synergies between the Cancer Center and her focus on access and rural health equity.

“I bring a passion for rural healthcare access and an understanding of the influences of that access on how rural patients and rural communities work. Bring that together with the Cancer Center’s expertise in cancer and there is the potential to transform the lives of rural families grappling with a cancer diagnosis.”

Ziller’s vision for the Center for Health Services Research is strongly collaborative.

“We want to be a hub for people who are doing this type of work to connect with each other and to help disseminate and tell the story of all the great health-services related work that is going on at UVM.”

She’s eager for partners. “Anyone interested in affiliating with the Center should reach out.” ■



ERIKA ZILLER, Ph.D.

NEW DRUG GIVES QUALITY-OF-LIFE BOOST TO CANCER PATIENTS WITH DEADLY BLOOD CLOTS

UVM CANCER CENTER CLINICAL TRIAL SHOWED DRUG’S EFFECTIVENESS

FOR THE FIVE to 25 percent of cancer patients who develop a potentially fatal condition called venous thrombosis, which causes clots to form in the blood that can lodge in the lungs or other vital organs, the anxiety of a cancer diagnosis comes with an unpleasant added chore—the need to inject themselves once or twice a day with a blood thinner called heparin.

Given the seriousness of cancer-related venous thrombosis—the recurrence of a clot after the first can be lethal—the injection regimen is an absolute necessity.

But the discomfort the life-saving treatment causes should not be underestimated, says **Chris Holmes, M.D., Ph.D.**, associate professor of hematology/oncology, and a hematologist who specializes in cancer at the University of Vermont Cancer Center.

“You have to inject yourself in your abdomen or your leg, and the more you weigh, the more medicine you need,” Holmes said. “The injection can create large bruises or

knots you must avoid next time. If you hit an artery and bleed, you need to come to the clinic or hospital. And for 10 percent to 20 percent of patients, the injection hurts; they can feel the medication spread.”

Pill as effective as shot

Thanks to the positive results generated by a new pragmatic clinical trial, many more patients will no longer need to endure this distress.

The trial demonstrated conclusively that an orally administered pill—a DOAC, or direct oral anticoagulant—was as effective in preventing the recurrence of blood clots as injected heparin and did not increase the risk of bleeding.

“It’s a huge improvement in quality of life,” said Holmes, both for patients and for caregivers like spouses and children, who are often saddled with the job of injecting their loved one, Holmes said.

“IT’S A HUGE IMPROVEMENT IN QUALITY OF LIFE.”

— CHRIS HOLMES, M.D., Ph.D.

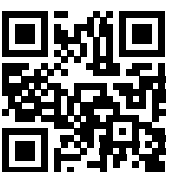


MARIE A. LACOURSE

Marie A. LaCourse of Newark, Vermont was one of 22 UVM Cancer Center patients enrolled in the trial. A school bus driver for 30 years in the Northeast Kingdom, LaCourse was diagnosed five years ago with a brain tumor. With surgery, the tumor was removed, but six months later she was hospitalized again with a potentially life-threatening blood clot in her lungs. She started treatment with injectable blood thinners.

“My husband did the shot, and I held the skin. He was a very kind person,” recalls LaCourse. It was her doctor, **Alissa Thomas, M.D.**, associate professor of neurological sciences and a neuro-oncologist at the UVM Cancer Center, who told her about the clinical trial. “I was skeptical at first, but the pills were much easier,” said LaCourse. “I am thankful to Dr. Thomas for making my life easier. Hopefully someone will learn from my experience and seek out support.” ■

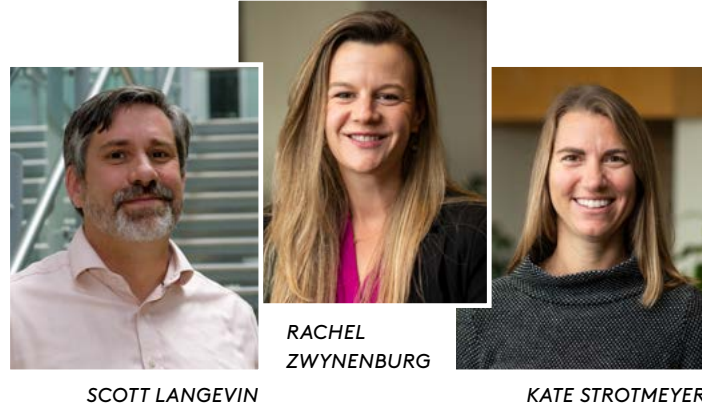
The results of the pragmatic trial were published in *The Journal of the American Medical Association*, a top-five medical journal. ➔



CLINICAL CARE

COMMUNITY OUTREACH AND ENGAGEMENT (COE) INITIATIVES

THE COE TEAM is led by **Scott Langevin, Ph.D., M.H.A., CT (ASCP)** who serves as the Associate Director for Community Outreach and Engagement. Dr. Langevin is a cancer epidemiologist and Associate Professor at the Larner College of Medicine. COE activities are planned and supported by **Kate Strotmeyer, M.Ed.**, Director of Communications and Community Outreach Programs, and **Rachel Zwynenburg**, Assistant Director for Community Outreach and Engagement.



SCOTT LANGEVIN

RACHEL ZWYNEBURG

KATE STROTMEYER

As part of the University of Vermont Cancer Center's dedication to mitigating the cancer burden in Vermont and northern New York state, the COE component is committed to serving the greater community through action related to the following goals:

GOAL 1: Assess the cancer burden and define the catchment area in Vermont and northern New York, including for vulnerable groups and subpopulations, and collaborate with community stakeholders to identify key cancer issues in the area.

GOAL 2: Engage in evidence-based education and outreach efforts in collaboration with community stakeholders to reduce the cancer burden within the catchment area.

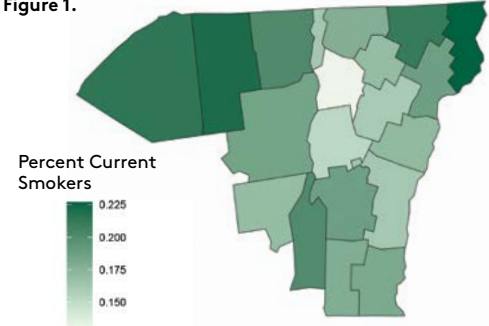
GOAL 3: Promote research across the UVM Cancer Center that addresses key cancer issues within the catchment area, including encouragement and facilitation of bi-directional collaboration with community stakeholders. ■

Cancer in the Catchment Area

The UVM Cancer Center serves a population of over 1 million residents across Vermont and six counties in northeastern New York state. The median age of

residents in the region is comparatively higher than that of the United States, with Vermont's population being the 5th oldest among the states. This is notable since cancer risk increases with age.

Figure 1.



Cigarette use, which is known to cause cancer, is concerning in the region with 17.6% of adults reporting that they currently smoke and rates reaching above 20% in several counties (Figure 1). This is significantly higher than the current smoking rate reported for the United States (14.4%).

The leading sites of new cancers in the region according to biological sex are listed in Table 1. While prostate and breast cancer are the most common new cancers in males and females, respectively, the lung cancer rates are significantly higher than for the United States, even after accounting for the older population. The incidence of melanoma of the skin is also substantially higher in the region, especially for Vermont which had the highest rate of new cases of all of the states from 2016 – 2020.

Table 1. Most common new cancers in Vermont and Northeastern New York state by biological sex, 2016 – 2020

Incidence Rate*	% of New Cancers	Site	Male	Female	Site	% of New Cancers	Incidence Rate*
158.6	23.6%	Prostate			Breast	28.2%	176.3
95.0	14.2%	Lung & Bronchus			Lung & Bronchus	15.1%	94.2
52.5	7.8%	Urinary Bladder			Uterine Corpus	7.3%	45.4
49.8	7.4%	Colon & Rectum			Colon & Rectum	7.0%	44.0
46.8	7.0%	Melanoma of the Skin			Melanoma of the Skin	5.6%	35.2
670.7	100%	All Cancers			All Cancers	100%	652.2

*Incidence rates are new cases per 100,000 at-risk individual per year

SUMMERTIME SUN SAFETY

SKIN CANCER IS the most prevalent cancer in Vermont, and Vermont has the nation's second-highest per-capita rate of new melanoma cases in the nation. This summer, the UVM Cancer Center's Community Outreach and Engagement team partnered with a number of local organizations to spread the word about sun safety. ■



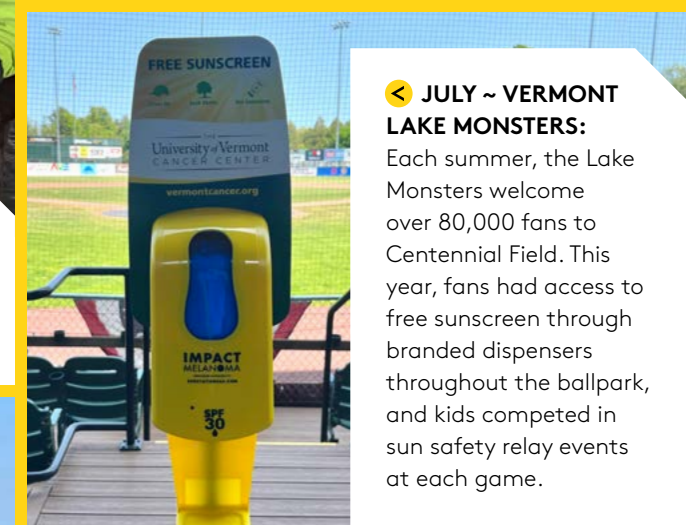
MAY ~ PC CONSTRUCTION/BETA TECHNOLOGIES SITE: Over 150 construction workers, who have an increased risk of melanoma due to sun exposure, received free sun screen at this event.



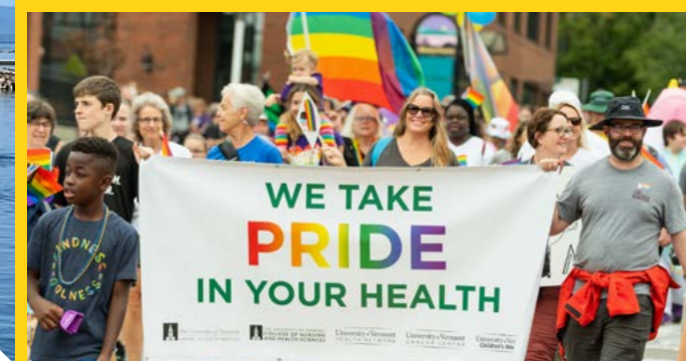
AUGUST ~ DRAGON BOAT FESTIVAL: Dragonheart Vermont strives to strengthen and empower breast cancer survivors and supporters through the challenging sport of dragon boating. Their annual festival on Lake Champlain brings together hundreds of paddlers and spectators and the cancer center supplies the sunscreen.



JUNE ~ ABENAKI WELLNESS EVENT: The cancer center along with UVM's Schweitzer Fellows were invited to join the Abenaki Nation of Missisquoi in Swanton, Vt. for their annual wellness event, which included blood pressure and blood sugar checks alongside cancer prevention and screening information.



JULY ~ VERMONT LAKE MONSTERS: Each summer, the Lake Monsters welcome over 80,000 fans to Centennial Field. This year, fans had access to free sunscreen through branded dispensers throughout the ballpark, and kids competed in sun safety relay events at each game.



SEPTEMBER ~ PRIDE PARADE: LGBTQIA+ Vermonters have a higher cancer burden. As co-sponsors of this year's Pride parade, the UVM Cancer Center joined partners across the University of Vermont to provide screening and prevention information along with bucket hats and sun screen at the parade.

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THREE QUESTIONS FOR “LADY GLAUCOMFLECKEN”

This year’s Women’s Health and Cancer Conference keynote speaker, **Kristin Flanary, M.A.**, aka “Lady Glaucomflecken,” likes to make people laugh. But when she’s done ribbing her husband Will, aka “Dr. Glaucomflecken”—an ophthalmologist who doubles as a medical satirist with millions of social media followers—on the couple’s podcast, she turns serious.

Since Will nearly died of cardiac arrest next to her in bed three years ago, prompting her to perform 10 terror-filled minutes of CPR on him before medics arrived, she has used her growing celebrity to spread the word that the needs of traumatized caretakers like herself, whom she calls “co-survivors,” are being woefully neglected by the

healthcare establishment.

When Flanary arrived at the hospital with her husband she was isolated in a room without cell service, re-traumatized by an oblivious doctor delivering statistics on Will’s low chances of survival, and eventually asked to leave the hospital by staff zealously following Covid protocols when she periodically walked down the hall in search of a signal. The ordeal left her in a desolate, glassy-eyed state she calls the “quiet place,” unable to speak a full sentence for weeks. Flanary received similarly insensitive treatment from doctors after her husband was twice diagnosed with testicular cancer.



Why do you use the term “co-survivor”?

Language is incredibly important because it frames how we conceptualize things. And that affects how we act and what we do. The healthcare system is set up to focus on the person whose body has disease. The patient gets a lot of attention, and rightly so, but where it falls off is that there are actually other “patients” involved. It’s not that you need to put them a hospital bed. But it’s very important for the system to recognize that those people are going through something that is medical trauma.

What should we do about it?

Understanding, first, that these other people exist. And taking this idea of trauma-informed care, which we’re applying to patients, and saying, actually this person connected with the patient is also in need of care. And it may not be the physician’s job, but there should be something somewhere, ideally in the hospital, where they can get that care.

Advice for medical practitioners?

Before you are a doctor or a nurse, you are a human being treating other human beings. Remember the shared humanity that you have with your patients and their families.