
THE

University of Vermont

C A N C E R C E N T E R

Strategic Plan

January 2, 2019

INTRODUCTION

This Strategic Plan has been developed to identify requirements, establish priorities, map out timelines with metrics and provide a disciplined approach to achieving Cancer Center research and clinical goals that align with the National Cancer Institute (NCI) expectations for cancer centers. The goal is to credential the University of Vermont Cancer Center (UVMCC) for reestablishing NCI comprehensive cancer center designation. The strategic plan addresses broad cancer center objectives and institutional commitments that support: programmatic goals; partnerships of laboratory and behavioral scientists with physician-investigators pursuing transdisciplinary mechanistic, translational and clinical investigation; maximal institutional engagement; enhanced shared resource capabilities; scientific discovery; responsiveness to the unique challenges of our rural catchment area; leadership for regional collaboration; administration; communications and development; member expectations and contributions; and, is consistent with the cancer service line strategic plan. The UVMCC strategic plan incorporates the NCI's six essential cancer center characteristics as a framework.

BACKGROUND STATEMENT

The UVMCC was established in the 1970's as the Vermont Regional Cancer Center, then later the Vermont Cancer Center. At that time the Cancer Center's principle focus was drug development, with complementary programs in cancer biology and population health science. In 1979 the Center successfully competed for a Cancer Center Support Grant and attained NCI designation as a comprehensive cancer center. Initially, the Cancer Center was primarily a component of the UVM College of Medicine, with engagement of the clinical system, Fletcher Allen Health Care, now called the University of Vermont Medical Center (UVMHC), for support of Cancer Center clinical research and clinical trials. A series of leadership changes at the University, the College of Medicine, and the clinical system and loss of expertise in developmental therapeutics and medicinal chemistry resulted in decreased institutional support for the Cancer Center that led to the decision in 2008 to delay submission of the renewal application for Cancer Center NCI designation.

There is now a strong institutional commitment, reinforced by the newly recruited Dean of the University of Vermont Larner College of Medicine, Richard Page, MD, to provide the state of Vermont with a nationally recognized cancer center that offers the highest quality of cancer care and cutting-edge cancer research. In 2012, under the collective vision of Frederick Morin III, MD, Dean of the UVM Larner College of Medicine (LCOM), and leadership at both the UVMHC and University of Vermont, **Gary Stein**, PhD, was recruited to direct the UVMCC, with the institutional goal of reestablishing NCI cancer center designation at UVM. The UVMCC is governed by a leadership team that includes associate directors, program leaders and cancer type-specific transdisciplinary team leaders. A Cancer Service Line director at UVMHC was appointed, reporting dually to the UVMCC Director and the President/Chief Executive at the UVM Health Network Medical Group, to consolidate all branches of cancer care and facilitate clinical cancer research under the umbrella of UVMCC. The UVMCC is staffed by an administrative core including: an associate director for administration; communications and development professionals; a research administration staff; shared resource managers; and professionals experienced in management of cancer clinical trials. UVMCC programs are organized to facilitate translation of discoveries from innovative basic science and translational investigation to clinical trials. The ultimate goal is to introduce innovative improvements to cancer patient care. Through partnerships of researchers in our UVMCC programs with physician-investigators in our transdisciplinary teams (TDTs), our programs focus on the biological continuum of cancer initiation and progression, and cancer control and population health sciences, with emphasis on leveraging laboratory discovery to reduce the burden of cancer. The UVMCC is an institutional priority. The Cancer Center is a transdisciplinary program that engages partnerships of scientists, physician-investigators, and behaviorists from the LCOM, the College of Nursing and

Health Sciences, other UVM colleges, and the UVM Medical Center in productive collaborations. Support for the UVMCC is derived from multiple sources that include an allocation from the LCOM, sponsored research, clinical trials funds, and charitable gifts. There is recognition and appreciation for alignment of mechanistic, behavioral and translational cancer research throughout our biomedical research and health care enterprise with pursuit of clinical trials that impact on patient care. Strategic initiatives are being developed for UVM scientists and physician-investigators to focus on optimally investigating the biological continuum of cell transformation and tumor progression with dedication to translating innovative discovery into novel capabilities for cancer prevention, diagnosis, treatment and survivorship of cancer.

MISSION, VISION AND VALUES

As national leaders in cancer research, our mission is to improve the lives of cancer patients through an integrated and innovative approach to research, education, and compassionate patient care.. The UVM Cancer Center leadership, membership and staff are dedicated to:

- Eradicating cancer through transdisciplinary research collaborations engaging laboratory and behavioral scientists, physicians and physician investigators throughout the University and Clinical System
- Embracing transformative, mechanistic, translational and clinical research as well as health services and health policy investigation
- Maximizing opportunities for partnerships between cancer biologists, population health scientists and physician investigators to link tumor biology and human behavior with the prevention, early detection and treatment of cancer as well as survivorship
- Providing state-of-the-art cancer diagnosis and treatment
- Breaking new ground in cancer research to deliver compassionate care to maximize the quality of life for the patient and family throughout the disease
- Fostering and sustaining innovative research in the laboratory that optimizes capabilities in the clinic to improve the human condition as it is affected by cancer
- Offering the most advanced clinical trials to deliver cutting edge cancer care of the future locally, regionally and as a destination Cancer Center globally
- Accelerating cancer prevention, control and early detection through education and research programs within the Cancer Center's catchment area and beyond
- Making cancer a treatable disease
- Advocacy, effectiveness and capabilities in health services, health outcomes and health policy

SIX ESSENTIAL CHARACTERISTICS

The expectation for NCI designated cancer centers is a tangible demonstration of strengths in six essential characteristics. The objective is to ensure that the Cancer Center organization, research and administrative infrastructure, as well as operating principles strategically maximize scientific potential and produce a whole that exceeds the sum of its components. The six expectations of the NCI are:

1. **Physical Space:** Facilities that are dedicated to appropriate and adequate support for cancer focused research, shared resources and administration.
2. **Organizational Capabilities:** The center maximally utilizes institutional capabilities in cancer research, engaging in planning and evaluation of center strategies and activities. There is a process for integrating education and training of biomedical researchers and healthcare professionals,

including those from underserved populations, into programmatic research that addresses broadly applicable research questions. There is an expectation to utilize resources to address cancer research within the catchment area.

3. **Transdisciplinary Collaboration and Coordination:** Substantial coordination, interaction and collaboration, both among center members from a spectrum of disciplines and between Cancer Center members and investigators in other institutions. Centers are encouraged to facilitate transition of scientific findings through the translational continuum, by coordinating research across NCI and other funding mechanisms and through collaborations with other partners.
4. **Cancer Focus:** The center members' grants and contracts, as well as the structure and objectives of its formal research programs, demonstrate a clearly defined cancer research focus.
5. **Institutional Commitment:** The center is a formal organizational component of the institution, with sufficient space, positions and discretionary resources to ensure stability and fulfillment of Cancer Center objectives. The center director has authorities appropriate to manage the center and further its scientific mission. The institution recognizes team science in its promotion and tenure policies.
6. **Center Director:** The center director is a highly qualified scientist and administrator with leadership experience and expertise appropriate for establishing a vision for the center, advancing scientific goals, and managing a complex organization. The director effectively utilizes institutionally designed authorities to manage the center and advance its scientific objectives.

STRATEGIC ANALYSIS

The UVMCC engaged in a comprehensive strategic analysis to evaluate strengths, weaknesses, opportunities and challenges. The analysis involved broad participation by Cancer Center leadership and membership to assess the Cancer Center on these six essential characteristics. The strategic plan was implemented in 2017. Following our June 2018 External Advisory Board meeting, and guidance from the NCI, the UVM Cancer Center leadership systematically evaluated progress towards meeting the 2017 strategic objectives. This updated strategic plan refines expectations and processes for moving forward with UVM Cancer Center initiatives in cancer research, education and patient care.

Strategic Plan Goal	Essential Characteristic	Strategic Plan/Goals
1	1, 5, 6	<p>Drive Thematic Programmatic Growth</p> <ul style="list-style-type: none"> • Refine programmatic themes to align with current strengths, capabilities, and priorities in Cancer Biology and Cancer Control <ul style="list-style-type: none"> ○ Identify new initiatives and existing programs aligned with institutional priorities to maximize institutional participation and investments ○ Emphasize innovation ○ Guide intramural funding and recruitments for programs to align with themes ○ Seek out investigators who bridge population health and basic science or clinical research to develop thematic areas

		<ul style="list-style-type: none"> • Align themes with specific clinical research engaging Transdisciplinary Teams (TDTs) to maximize opportunities for translational research <ul style="list-style-type: none"> ○ Incentivize collaborative transdisciplinary team science within and between UVMCC Programs and TDTs, engaging centers and programs throughout the University and clinical system ○ Increase ties to health services research, health department/policy makers, smoking/addiction group, integrative medicine ○ Link population health to biology; increase inter-programmatic initiatives and collaboration with TDTs • Expand regional collaborations that complement thematic programs <ul style="list-style-type: none"> ○ Expand regional collaboration by emphasizing complementarity ○ Maximize development and expansion of regional expertise for ongoing and potential projects ○ Expand collaborative investments in instrumentation to enhance capabilities and utilization while minimizing duplication and expense ○ Explore data collection for regional collaborations
2	1, 4, 5, 6	<p>Grow Cancer Center Research Enterprise</p> <ul style="list-style-type: none"> • Increase research funding base within the UVM Cancer Center <ul style="list-style-type: none"> ○ Increase NCI funding base ○ Expand coordination and integration of program and TDT initiatives ○ Increase communication about research resources <ul style="list-style-type: none"> ▪ Utilize website effectively with other communications tools to connect members with resources ○ Develop a process to support Pre-review of grant letters of intent and applications before submission ○ Develop strategies that encourage/incentivize multi-PI grants that combine complementary expertise, experience and credentials • Increase research funding base by extension and inclusion of new collaborations <ul style="list-style-type: none"> ○ Expand collaborations between the UVMCC and other Centers (e.g., Cardiovascular, aging, lung) ○ Expand collaborations with Biotech and Pharmaceutical Industry (e.g., R01 and SBIR grants, contracts, blanket research agreements, PCORI grants, in collaboration with Office of Technology Commercialization) ○ Maximize participation in NNE-CTR to support clinical and translational investigation in our catchment area and rural northern New England

		<ul style="list-style-type: none"> ○ Encourage UVMCC membership from throughout the University by outreach to investigators who are not currently pursuing cancer research ○ Increase communication about resources and membership benefits by inviting program meeting speakers from throughout UVM and the Medical Center to showcase membership benefits ○ Expand regional collaborations with Albany College of Pharmacy and Health Sciences, Dartmouth and Maine Medical Center ○ Extend and enhance capabilities of global cancer research initiatives
3	1, 3, 4, 5, 6	<p>Increase Clinical Trial Accruals</p> <ul style="list-style-type: none"> ● Rebalance clinical trial portfolio <ul style="list-style-type: none"> ○ Identify most appropriate trial(s) for patient population ○ Close non-accruing trials ● Improve clinical trial operations functionality and accrual <ul style="list-style-type: none"> ○ Support the necessity for UVM/UVM Medical Center to acquire and implement a Clinical Trials Management System ○ Develop strategies to align and integrate UVMHC network with respect to clinical trial participation ○ Maintain and grow Clinical Trials Office (CTO) infrastructure to ensure necessary support for the Cancer Research portfolio ○ Work collaboratively with Human Resources to secure required positions/personnel to develop and operationalize clinical trials ○ Invest in IT and Quality Officer/Audit positions ○ Build public awareness of clinical research at UVMCC ○ Develop a balanced clinical trial portfolio that provides excellent access clinical research and new cutting-edge care and treatment in our catchment area/community ● Improve investigator-initiated trial (IIT) development and execution <ul style="list-style-type: none"> ○ Grow CTO infrastructure to nurture IITs ○ Develop educational/training plan to engage TDTs and researchers, with an emphasis on investigator-initiated research ○ Enhance research mentoring – identify and mobilize mentors with specific expertise in investigator-initiated research activities ○ Increase external funding for IITs ● Develop trials that engage catchment area <ul style="list-style-type: none"> ○ Expand regional/inter-institutional clinical trials to increase patient recruitment ○ Develop/participate in clinical trials that will engage the catchment area and primary care/community hospitals

		<ul style="list-style-type: none"> ○ Increase development of App-base/telehealth capabilities as well as distance learning ○ Increase community awareness and education regarding research and clinical trials
4	5, 6	<p>Engage our Cancer Center Catchment Area</p> <ul style="list-style-type: none"> ● Define the unique needs of the Cancer Center catchment area <ul style="list-style-type: none"> ○ Identify unique needs of rural, urban and suburban populations in our catchment area ○ Develop community regional needs committee to identify requirements and disparities as well as approaches for accommodating requirements ○ Ongoing review of patient demographics and characteristics, areas of funded (applied) research interest ● Define priorities for addressing the cancer center catchment area <ul style="list-style-type: none"> ○ Expand and coordinate prevention, screening and education programs ○ Identify priorities for action in: <ul style="list-style-type: none"> ▪ Clinical Research ▪ Prevention ▪ Treatment ○ Expand community and regional education programs in prevention and screening as well as survivorship ○ Expand programs providing cancer research laboratory experience for high school students and educators ○ Expand opportunities for high school student cancer research internships ○ Increase engagement with lawmakers and regional thought leaders ○ Expand engagement of primary care practices ○ Expand collaboration with American Cancer Society, Vermont Department of Health, and community advocacy groups for education and prevention programs
5	1, 2, 4, 5	<p>Increase Faculty with Cancer Focus</p> <ul style="list-style-type: none"> ● Recruit and retain faculty with cancer focus <ul style="list-style-type: none"> ○ Synergize recruitment strategies across the College of Medicine (COM) and medical center with a focus on cancer ○ Recruit well credentialed and/or funded cancer-focused faculty and support staff in the following areas <ul style="list-style-type: none"> ▪ Cancer mechanisms

		<ul style="list-style-type: none"> ▪ Epidemiology with genomic and epigenetic perspectives/research programs ▪ Prevention and control ▪ Clinical trials ▪ Target of opportunity hires ▪ Survivorship ▪ Palliative care ▪ Health services and outcomes research ▪ Health policy investigation ▪ Neuro oncology ▪ Pediatric oncology ▪ Integrated medicine <ul style="list-style-type: none"> • Develop and mentor faculty with cancer focus <ul style="list-style-type: none"> ○ Provide multiple and varied mentoring and engagement opportunities as well as expectations for trainees, new investigators and physician/scientists in the Cancer Center, COM and university-wide programs ○ Enhance and utilize existing COM programs and resources for mentoring and evaluation ○ Emphasize programs for mentoring at all stages of career development to increase and sustain investigator capabilities ○ Investigate and implement novel co-appointment strategies and opportunities both within the institution and across the region ○ Support new and renewal applications for extramurally funded cancer research that receives favorable peer review ○ Increase “prestige identity” of cancer center among members
6	1, 3, 4, 5	<p>Expand Research Resources</p> <ul style="list-style-type: none"> • Advocate for use of existing data resources <ul style="list-style-type: none"> ○ Facilitate access to data sources/resources <ul style="list-style-type: none"> ▪ Genomic databases ▪ Electronic medical records ▪ State databases and registries, both Vermont and regional databases ○ Provide staffing with appropriate research background to educate and support navigation of databases • Expand research navigation <ul style="list-style-type: none"> ○ Use shared resources as a model for assistance/mentorship with research design ○ Recruit staff to assist with development of pilot proposal -- genomics design meetings as a template

		<ul style="list-style-type: none"> ○ Provide support to identify and secure patient samples from the Cancer Center Biobank and “privately developed” collections <ul style="list-style-type: none"> ○ Improve communications about funding opportunities (e.g., eAlert, Pivot) ○ UVM Cancer Center to provide guidance and assistance to members for IRB and IACUC protocol development <ul style="list-style-type: none"> ● Increase intramural funding <ul style="list-style-type: none"> ○ Institutional/philanthropy support ○ Pilot projects ○ Bridge funding ○ Collaborative, transdisciplinary, translational ○ Post-doctoral fellowship support ○ Graduate trainee support ● Shared resources <ul style="list-style-type: none"> ○ Support for research design, particularly with emerging technologies ○ Expand capabilities in instrumentation and expertise for genomic, epigenomic, informatic and flow cytometry analyses
7	2, 4, 5, 6	<p>Refine and Strengthen Leadership Structure and Pipeline</p> <ul style="list-style-type: none"> ● Develop and deploy new leadership positions as appropriate ● Articulate roles/responsibility/expectations for leadership ● Provide resources to increase support for leadership ● Ensure leadership mentoring of upcoming leaders within the Cancer Center

Key Areas of Requirements:

Expanded Philanthropy

- Coordinated institutional fundraising
- Increased unrestricted funds for cancer research
- Endowed professorships and chairs for cancer research throughout the university
- Development of an annual UVM Cancer Center signature event
- Increased community and regional fundraising

Enhanced Operational Capabilities

- Administrative support for cancer center membership and leadership aligned with strategic growth
- Guidance and assistance with development, pre-review and submission of extramural funding applications