

Committee Minutes

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

August 28, 2023

Committee Members Present: Carrie Chenery (chair), Brad Hobbs, Don Horsley. Additional board members present: Ed Baine, Dave Calhoun, Sandy Davis, Nancy Dye, Bill Holtzman, Anna James, Tish Long, Chris Petersen, Jeff Veatch.

Constituent Representatives Present: Emily Tirrell (graduate and professional student representative), Janice Austin (A/P faculty representative), Will Storey (undergraduate student representative), Joe Merola (faculty representative), and LaTawnya Burleson (staff representative).

Guests: Mac Babb, Callan Bartel, Laura Belmonte, Lynsay Belshe, Leanna Blevins, Bob Broyden, Brock Burroughs, Lynn Byrd, Cyril Clarke, Al Cooper, Corey Earles, Jeff Earley, Alisha Ebert, Ron Fricker, Mike Friedlander, Rachel Gabriele, Luisa Havens Gerardo, Dan Givens, Alan Grant, Ellington Graves, Suzanne Griffin, Rebekah Gunn, Chelsea Haines, Kay Heidbreder, Tim Hodge, Rachel Holloway, Frances Keene, Chris Kiwus, Sharon Kurek, Lee Learman, Lu Liu, Nancy Meacham, Scott Midkiff, Ken Miller, Laurel Miner, Justin Noble, Kim O'Rourke, Charlie Phlegar, Ellen Plummer, Jon Porter, Julie Ross, Saonee Sarker, Brennan Shepard, Paul Skolnick, Dan Sui, Aimee Surprenant, John Tarter, G. Don Taylor, Jon Clark Teglas, Mary Trigiani, Rob Viers, Tracy Vosburgh, Melinda West, Chris Yianilos.

OPEN SESSION

1. Welcome. C. Chenery, chair of the committee, welcomed attendees to the meeting. Committee members Brad Hobbs and Don Horsley introduced themselves to the committee. The chair invited provost's office administrators who support the committee to introduce themselves.

2. Review and Approval of Open Session Agenda.

3. Consent Agenda Items. Approval of June 5, 2023, Meeting Minutes; Report of Reappointments to Endowed Chairs, Professorships, and Fellowships; Resolution to Ratify 2023 – 2024 Faculty Handbook; Resolution for Exclusion of Certain Officers/Directors.

The committee voted unanimously to approve the Open Session Agenda as presented including approval of all Consent Agenda items.

4. Provost's Update. C. Clarke, executive vice president and provost, provided updates to the committee. Virginia Tech is compliant with the U.S. Supreme Court's ruling in June 2023 that excludes race from consideration in admissions decisions. Virginia Tech requires short essays in which applicants describe their activities and commitments to service, leadership, integrity, perseverance through personal challenges or adversity, and

making a positive impact on others and the community. Essays are scored by two different, blinded readers who do not see the applicant's identifying information. Graduate and professional admissions are managed at the departmental and college levels, and the imperative of not using race or ethnicity as a factor in admissions has been communicated to academic units.

Graduate assistant compensation continues to be a top priority. In the spring of 2022, a task force made eight recommendations regarding graduate assistant compensation. The university continues to improve graduate assistant compensation by building on successive 5% increases in stipends over the last few years, actions taken by academic programs to further increase minimum stipends and ensuring that external grant applications include appropriate funding for graduate assistants. Effective this academic year, the minimum level of an assistantship was raised to \$2,400 per month for the 50% work commitment. The Graduate School provided 30 students, most in the final stages of their degree, with \$7,500 of full summer support and the provost's office committed approximately \$200,000 in one-time funding to help bridge the gap for externally funded students in tuition and health insurance subsidies. Some of the recommendations are not feasible (e.g., waiving the comprehensive fee, which would result in undergraduate students funding services provided to graduate students). The Graduate School dean will include and prioritize compensation among the critical need requests submitted each year for consideration by the university. Other recommendations are serving as goals for future development, such as increasing extramural and summer support.

In July, the university welcomed two college deans. Lu Liu began his tenure as dean of Architecture, Arts, and Design, and Saonee Sarker began her tenure as dean of the Pamplin College of Business.

The Innovation Campus and Tech Talent Investment program continue to make progress in Northern Virginia. The Virginia Tech Research Center – Arlington (VTCR-A) has a strong representation of programs related to national security. Progress continues on transitioning the Falls Church Northern Virginia Center (NVC) to a center for smart construction in partnership with an industry partner. Faculty members are being repositioned from the NVC to the Innovation Campus Academic Building 1. J. Ross, dean of the College of Engineering, is leading the implementation of a support structure to extend the university's administrative services to the entire Northern Virginia region.

Launched in 2017, the university's Destination Areas (DAs) are Virginia Tech's nine areas of research and learning designed to enhance the university's global reputation. An initiative implemented in 2022, and termed DA 2.0, invited project development proposals from across the university. Four projects were selected for multi-year funding including those focused on human systems integration in health care, invasive species, public interest technology, and pandemic prediction and prevention. Two future projects are focused on pediatric neurooncology, and quantum navigation.

The Association for General and Liberal Studies awarded Virginia Tech the 2023 Exemplary General Education Program award. This award recognizes the university's excellence in undergraduate general education.

5. Top-100 Global University: Virginia Tech's Cancer Research Initiatives. D. Sui, senior vice president for research and innovation, M. Friedlander, executive director Fralin Biomedical Research Institute and vice president for health sciences and technology, and C. Clarke, executive vice president and provost led a discussion on the university's cancer research initiatives. Virginia Tech is poised to compete successfully to be a top-100 global university. Cancer research is one area in which Virginia Tech can capitalize on federal funding and the national focus on the treatment of cancers. Faculty members across colleges and institutes have secured funding for cancer research using a whole-health model. Markers of continued success include increased productivity in translational research, award-winning scholarship, and additional opportunities for student research and experiential learning.

6. Agenda Items for Committee Meeting. Committee members are encouraged to contact the chair with any possible future agenda items.

8. Adjournment.

Open Session Agenda

ACADEMIC, RESEARCH AND STUDENT AFFAIRS COMMITTEE

Fralin Biomedical Research Institute, 102 A/B Roanoke VA

Monday, August 28, 2023

3:30 – 5:00 p.m.

| <u>Agenda Item</u> | <u>Reporting Responsibility</u> |
|--|--------------------------------------|
| 1. Welcome | C. Chenery |
| 2. Review and Approve Open Session Agenda | C. Chenery |
| 3. Consent Agenda | C. Chenery |
| A. Approval of June 5, 2023 Meeting Minutes | |
| B. Report of Reappointments to Endowed Chairs, Professorships, and Fellowships | |
| *C. Resolution to Ratify 2023-2024 Faculty Handbook | |
| *D. Resolution for Exclusion of Certain Officers/Directors | |
| 4. Provost's Update | C. Clarke |
| 5. Top-100 Global University: Virginia Tech's Cancer Research Initiatives | C. Clarke, D. Sui, M. Friedlander |
| 6. Agenda Items for Future Committee Meetings | C. Chenery |
| 7. Adjourn | C. Chenery |

* Requires Full Board Approval

Discusses Enterprise Risk Management topic(s)

Closed Session Agenda
ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE
Tuesday, August 29, 2023
8:45 – 9:15 a.m.

| <u>Agenda Item</u> | <u>Reporting Responsibility</u> |
|---|--|
| 1. Motion to Begin Closed Session | C. Chenery |
| * 2. Resolutions to Approve Appointments to Emeritus/a Status (2) | C. Clarke |
| * 3. Resolution to Approve Appointments Endowed Chairs, Professorships, or Fellowships (24) | C. Clarke |
| * 4. Resolution to Approve Appointments with Tenure (18) | C. Clarke |
| * 5. Resolution to Approve Faculty Research Leaves (3) | C. Clarke |
| * 6. Ratification of Personnel Changes Report <i>(shared with Finance and Resource Management Committee)</i> | C. Clarke |
| 7. Motion to End Closed Session | C. Chenery |
| 8. Report of Closed Session Action items | C. Chenery |

*Requires Full Board Approval

REPORT

Reappointments to Endowed Chairs, Professorships, or Fellowships (2)

August 28, 2023

The president and executive vice president and provost have confirmed the reappointment of the following faculty to endowed chair, professorship, or fellowship appointments with a salary and/or operating supplement provided by the endowment.

College of Engineering (2)

Stefan Duma

Harry C. Wyatt Professorship

John Little

Charles E. Via, Jr. Professorship in
Civil and Environmental Engineering



Cancer Research and Top 100 Global

Academic, Research, and Student Affairs Committee

Dan Sui

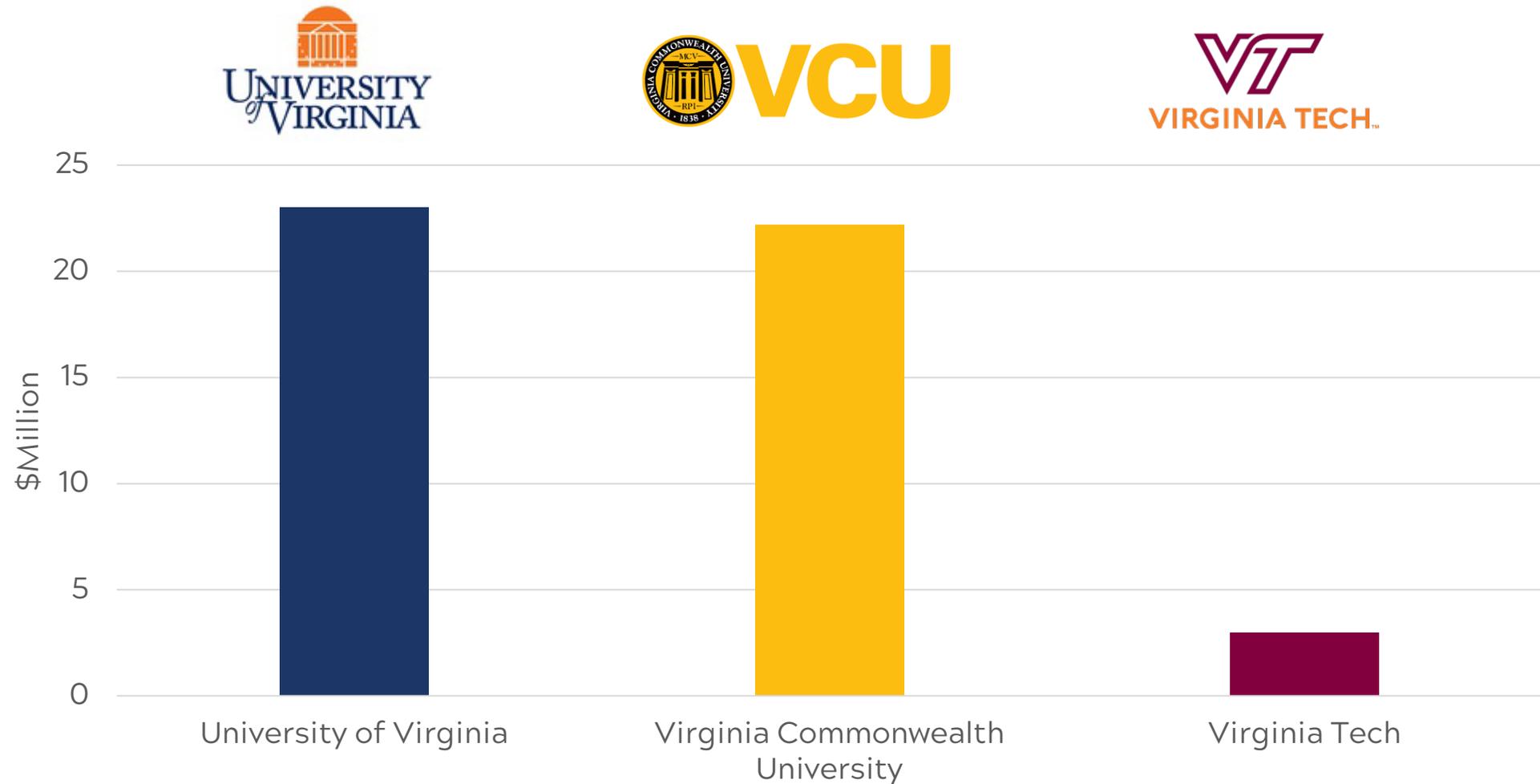
Senior Vice President,
Office of Research and Innovation

August 2023



RESEARCH AND INNOVATION
VIRGINIA TECH.

National Cancer Institute Funding – FY23



Cancer Moonshot Reignited

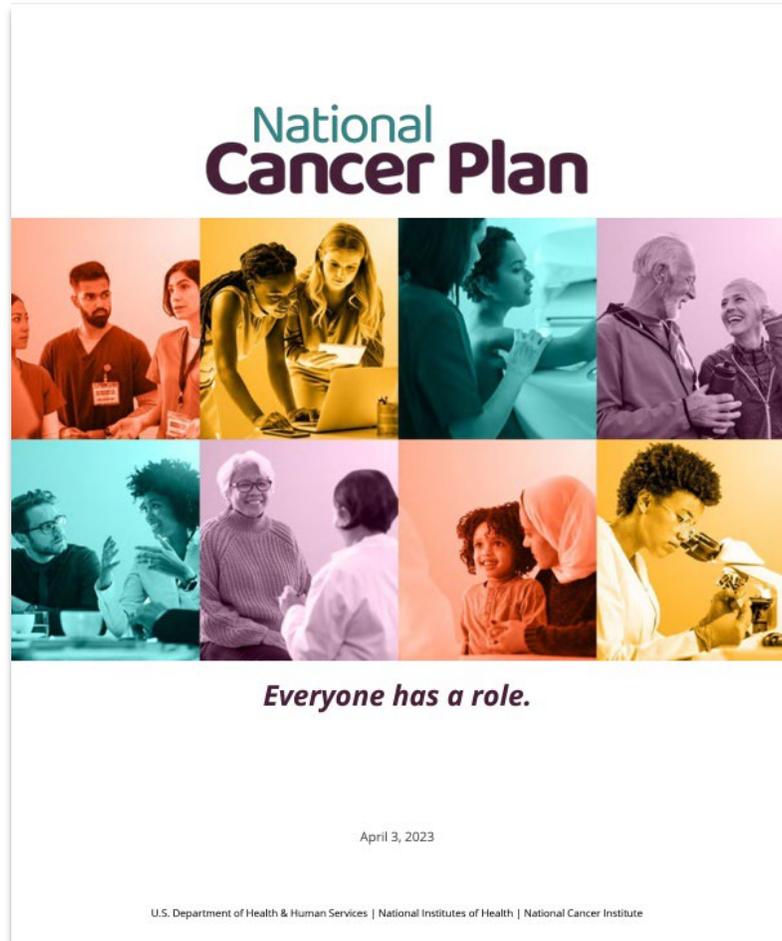
MARCH 09, 2023

FACT SHEET: President Biden's Budget Accelerates Progress Toward the Goal of Ending Cancer as We Know It

 [OSTP](#) [NEWS & UPDATES](#) [PRESS RELEASES](#)

- \$2.8 billion for Cancer Moonshot activities at Department of Health and Human Services, Environmental Protection Agency, Department of Veteran Affairs, Department of Agriculture, Department of Defense, and NASA
- More than \$10 billion at the Department of Health and Human Services for research and translational innovation

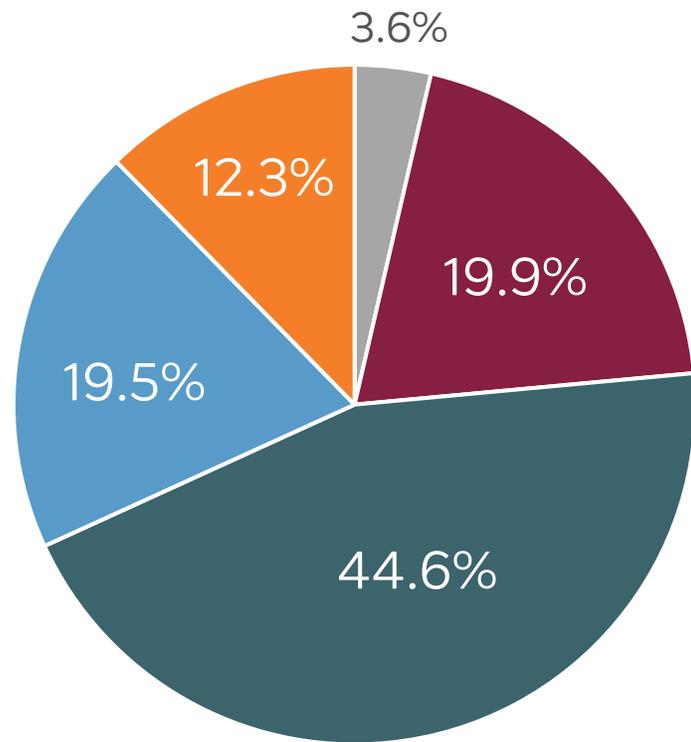
National Cancer Plan: Research is the backbone



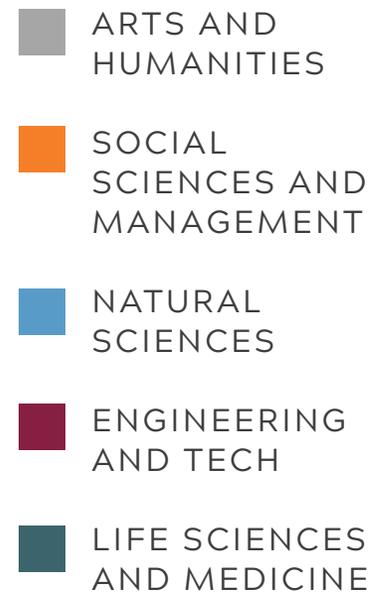
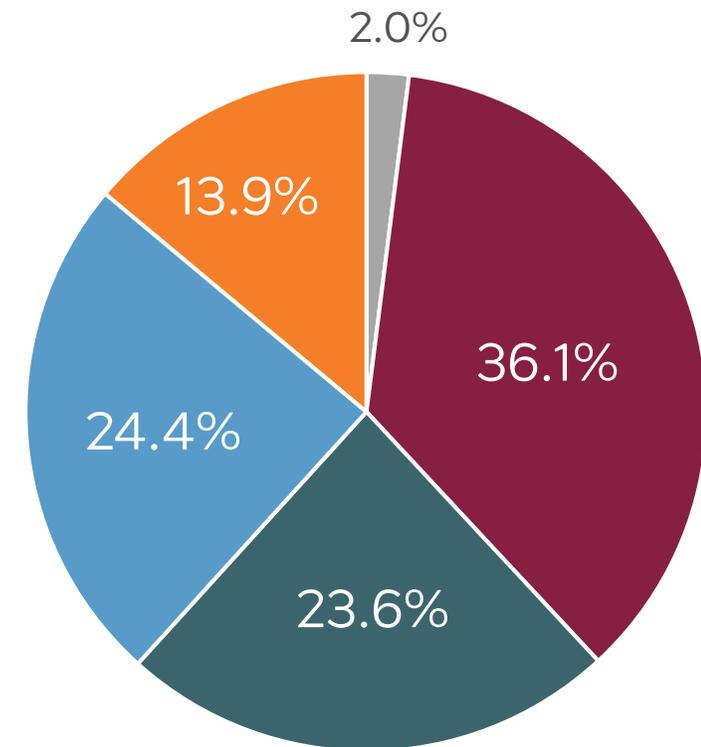
- The second component of the National Cancer Plan is a set of strategies associated with each goal, describing essential research directions and implementation activities necessary to maximize benefits for everyone.
- The National Cancer Institute and the National Institutes of Health lead this component by supporting a comprehensive research portfolio to achieve each goal.

Publications by field of science

AAU UNIVERSITIES PUBLICATIONS

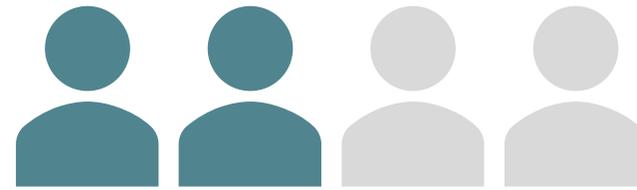


VIRGINIA TECH PUBLICATIONS



Research talent is nationally dominated by those in health and biomedical areas

- 50% of postdocs nationally are in health and biosciences, compared to 25% at Virginia Tech

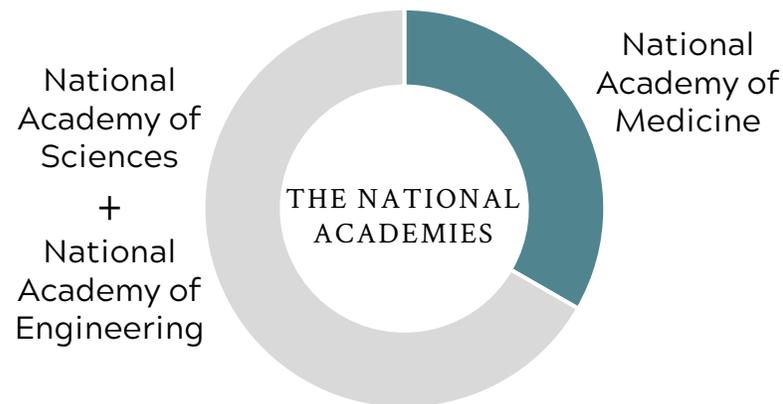


NATIONALLY

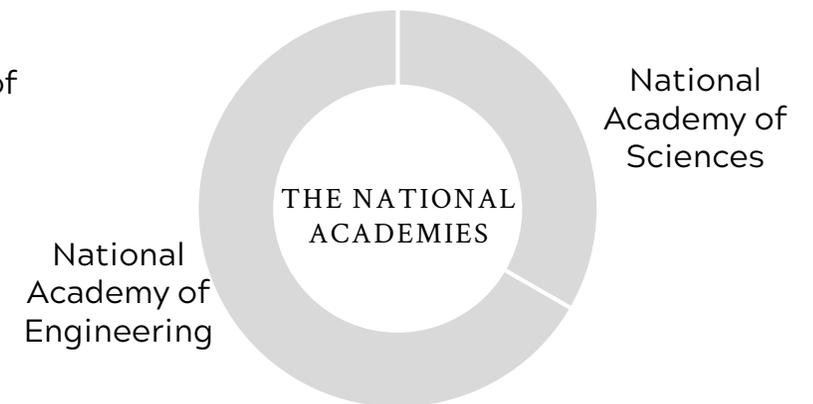


VIRGINIA TECH

- National Academy of Medicine members comprise 1/3 of the National Academies membership nationally. Virginia Tech has 0 members in the National Academy of Medicine.

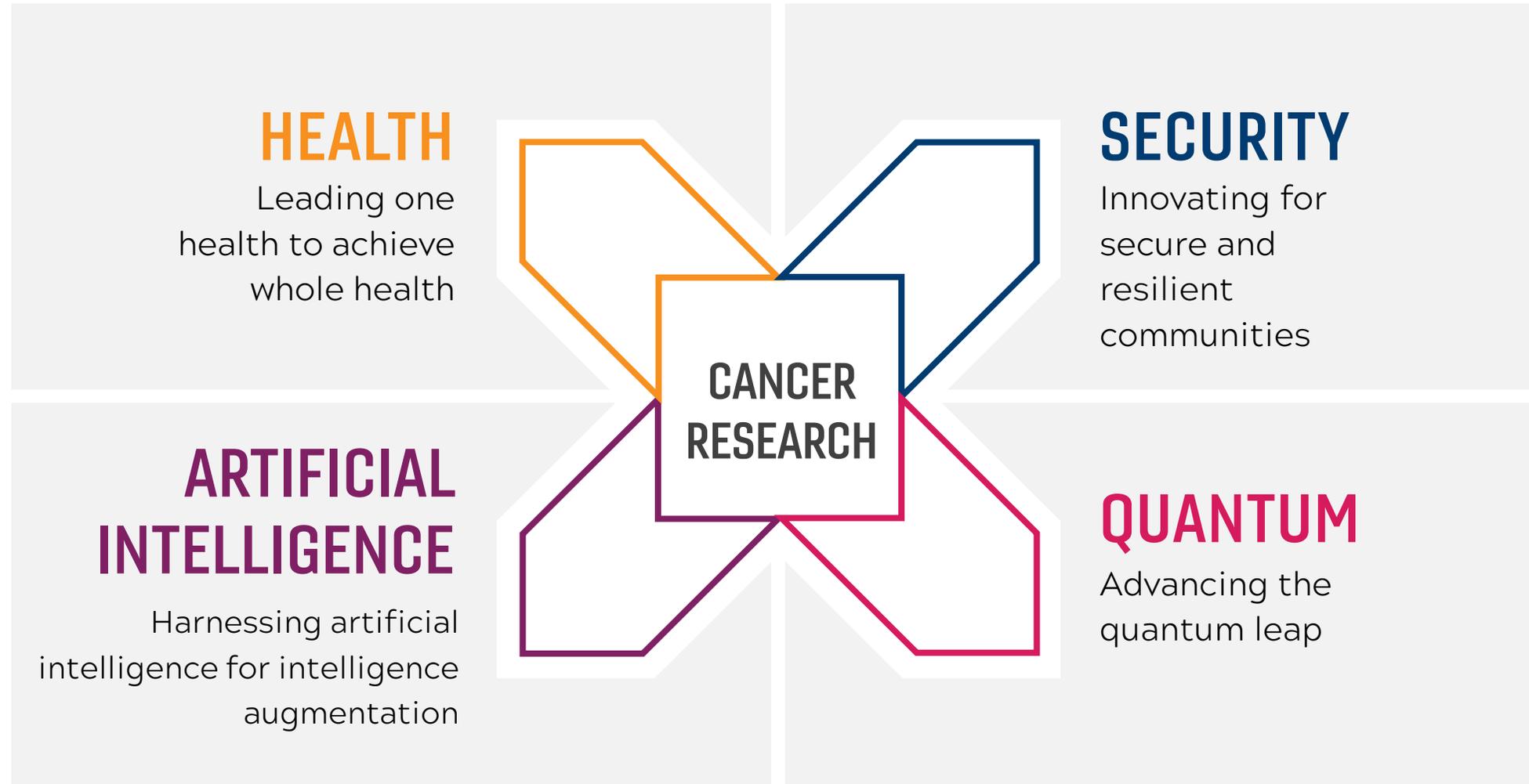


NATIONALLY



VIRGINIA TECH

Research Frontiers



Research Frontiers

HEALTH

The Animal Cancer Care and Research Center will soon celebrate three years since its opening in Roanoke beside Virginia Tech's Fralin Biomedical Research Institute in the Riverside Center for Research and Technology.

Research program 'exceeds expectations' in first two years of Animal Cancer Care and Research Center at Roanoke

November 21, 2022



...tany Ciepluch, clinical assistant professor, surgical oncology, Department of ...ll Animal Clinical Sciences at the Virginia Tech Animal Cancer Care and

TOP

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News Feature | [Published: 30 September 2022](#)

Sick as a dog: how understanding canine diseases will save human lives

[Carrie Arnold](#)

[Nature Medicine](#) 28, 1970–1973 (2022) | [Cite this article](#)

3792 Accesses | 1 Citations | 119 Altmetric | [Metrics](#)

Dogs develop diseases similar to those of humans, and their inbred genetics makes them a useful model for disease biology, allowing the development of new therapies for veterinary and human use.

Tucked into the back of a cul-de-sac in a bustling medical complex in the city of Roanoke, Virginia, the brick walls and dark tinted windows of the cancer center at the Virginia Tech Carilion Health Sciences and Technology campus look like those of any other state-of-the-art clinic. It is only when you look closer that the differences become apparent. A box of dog treats sits on the counter next to the MRI machine, and several muzzles of different sizes hang on the wall. The equipment, explains veterinary oncologist Joanne Tuohy of the Virginia–Maryland College of Veterinary Medicine, with a wry smile, is not for fractious human patients. Instead, the equipment, along with much of the building, is shared between veterinary patients and humans participating in clinical trials.

Research Frontiers

HEALTH

“A whole health approach changes the paradigm from 'what is the matter with you' to 'what matters to you.’”

-- Karen Roberto, University Distinguished Professor and executive director of the Institute for Society, Culture, and Environment.

Whole Health Consortium expands traditional focus of health and well-being research and practices

May 3, 2023



Research Frontiers

ARTIFICIAL INTELLIGENCE

AI for Pediatric Health and Rare Diseases, an inter-institutional meeting of scientists and innovators co-led by Children's National Hospital and the Virginia Tech Sanghani Center for Artificial Intelligence and Data Analytics to discuss the potential of artificial intelligence to understand pediatric health.

Pressing Issue: Tackling diseases, particularly cancer, in children, an area that suffers from limited treatment options and inadequate research compared with diseases affecting adults.

RESEARCH

Children's National Hospital, Virginia Tech unite to advance AI for pediatric health

Expectations are high for combining human and artificial intelligence against health problems.

By *John Pastor*

7 JUL 2023

4 minute read



Research Frontiers

ARTIFICIAL INTELLIGENCE

“Inaccurate prediction may produce life-threatening consequences. These prediction errors could result in miscalculating the likelihood of a patient dying in an emergency room visit or of surviving cancer.”

-- Daphne Yao, the Elizabeth and James E. Turner Jr. '56 Faculty and CACI Faculty fellow in the College of Engineering.

RESEARCH

New AI fairness technique has significant lifesaving implications

By *Jenise L. Jacques*

27 SEP 2022

4 minute read



Research Frontiers

SECURITY

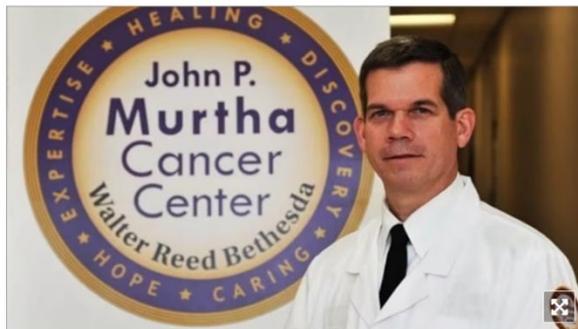
- Cancer moonshot identifies critical intersections with national security, environmental quality, and community resilience.

DOD Reignites Cancer Research Initiative to 'End Cancer as We Know It Today'

May 3, 2022 | By [Janet A. Aker, MHS Communications](#) | [f](#) [t](#) [r](#)

Defense Department health officials will discuss cancer research efforts with the aim of reducing cancer prevalence and cancer-related deaths across the Military Health System.

The DOD component of a reignited [Cancer Moonshot](#), a governmentwide, White House initiative, will be rolled out May 4 at an event sponsored by and hosted at the DOD's Uniformed Services University of the Health Sciences in Bethesda, Maryland.



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[Home](#) / [Health](#) / Reigniting the Cancer Moonshot to beat cancer

Reigniting the Cancer Moonshot to beat cancer

Cancer Moonshot a unifying force with best-in-class cancer care for Veterans

April 20, 2023

By [Linda Torres](#)
Health advisor to the Under Secretary for Health, VA's Cancer Moonshot coordinator

United States Environmental Protection Agency MAIN MENU

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Biden-Harris Administration Proposes to Strengthen Standards for Chemical and Polymers Plants, Dramatically Reduce Cancer Risks from Air Toxics

Proposal would reduce the number of people with elevated cancer risk by 96 percent in communities surrounding chemical plants, cut more than 6,000 tons of toxic pollution per year

April 6, 2023

Contact Information
EPA Press Office (press@epa.gov)

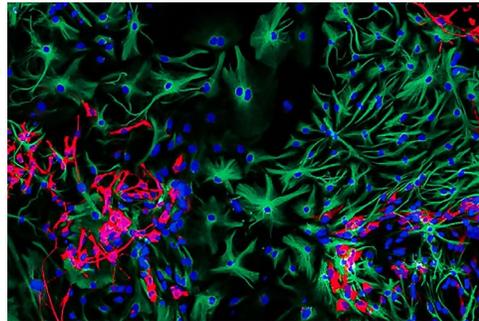
WASHINGTON – Today the U.S. Environmental Protection Agency (EPA) announced a proposal to significantly reduce hazardous air pollutants from chemical plants, including the highly toxic chemicals ethylene oxide (EtO) and chloroprene. The reductions would dramatically reduce the number of people with elevated air toxics-related cancer risks in communities surrounding the plants that use those two chemicals, especially communities historically overburdened by air toxics



RESEARCH AND INNOVATION
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Cancer research at Virginia Tech

**Where we are
where we're going and
how we'll get there**



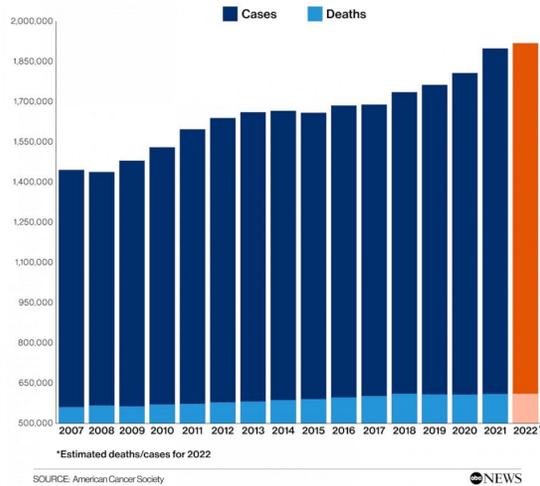
Michael J. Friedlander, Ph.D.
VT Vice President for Health Sciences and Technology
Executive Director, Fralin Biomedical Research Institute at VTC
Senior Dean for Research, VTC School of Medicine

Professor, Biological Sciences, COS
Biomedical Engineering (core faculty), COE
Psychiatry and Behavioral Medicine, SOM

Value proposition

- Cancer as major disease/economic health burden
- Many cancers are result of lifestyle/behavior challenges endemic to our region
- Opportunity for VT to serve the public good
- Interface of human and companion animal cancers
- Environment/climate impact on cancer
- Opportunities for multiple VT units/colleges to engage
- Large unrealized extramural funding opportunities
- Advance global reputation
- VT strengths as differentiators
- Multiple experiential learning opportunities
- Strong partners

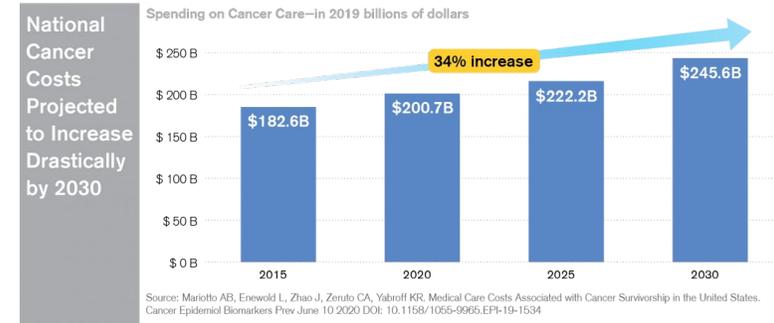
Estimated Cancer Cases and Death in the U.S. SINCE 2007



2,000,000 new cancer cases

600,000 cancer deaths

American Cancer Society, 2023



**Cancer will cost the world
\$25 trillion over the next 30 years**

Nature

March, 2023

Annual economic impact of cancer in US

\$450 billion

1.8% of US GDP

The Cancer Atlas, 2022

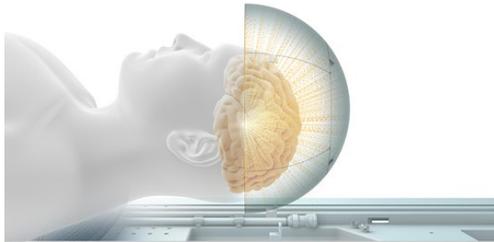
VT CANCER RESEARCH ALLIANCE

32 faculty members

10 departments

4 colleges

2 institutes

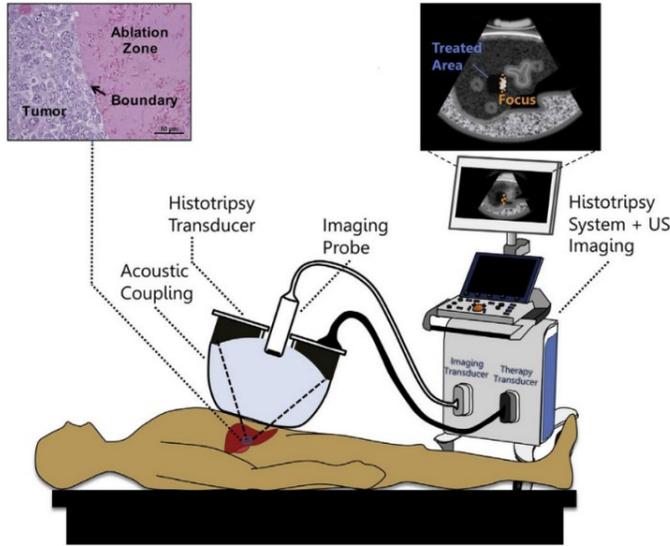


VT Cancer Research Alliance Faculty Research Areas

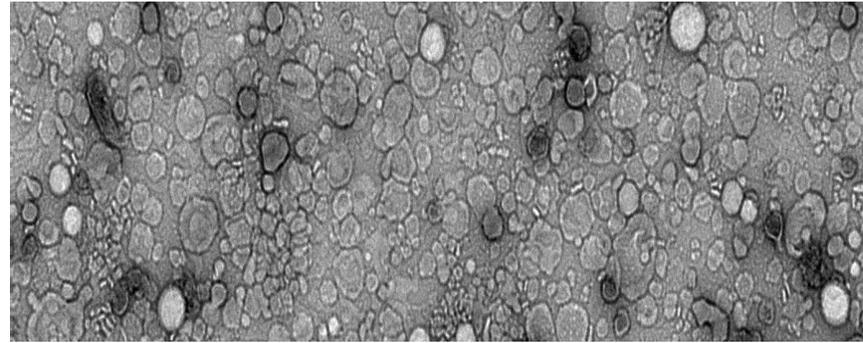
ATTACHMENT F

- Nanotechnology, point of care diagnostics
- Immunotherapy
- Targeted cancer drug delivery
- Cellular therapy
- Chromosome segregation in cancer, aneuploidy
- Microfluidics, cancer therapy
- Cancer genomics
- Clinical trial design
- Tumor microenvironment
- Circadian rhythms and cancer
- Obesity and cancer
- Exercise and cancer
- Nutrition, processed foods and cancer
- Cancer stem cells
- Behavioral interventions for cancer prevention and relapse
- Radiation damage protection in radiotherapy
- Mathematical modeling and metastasis
- Computational analysis of cancer cell signaling
- Tumor targeting bacteria
- Epigenetics of cancer
- AI and cancer diagnostics
- Cancer imaging
- Non-invasive tumor ablation

Virginia Tech's differentiators in cancer research



Engineering



Milk derived exosomes to deliver therapeutics to limit radiation damage in cancer patients



Hi field MRI/PET/FUS



The Lancet: Almost half of global cancer deaths are due to risk factors, with smoking, alcohol use, and high BMI the greatest contributors

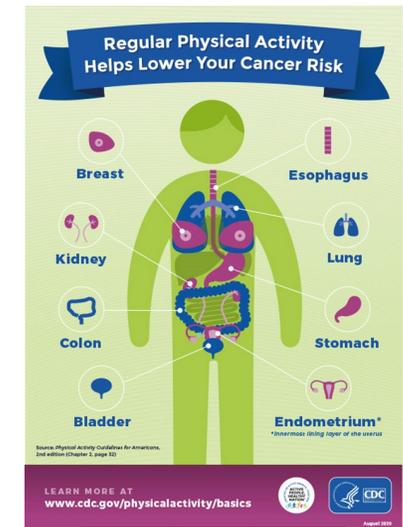
Human behavioral science



SICK AS A DOG: HOW UNDERSTANDING CANINE DISEASES WILL SAVE HUMAN LIVES

Dogs develop diseases similar to those of humans, and their inbred genetics makes them a useful model for disease biology, allowing the development of new therapies for veterinary and human use. By Carrie Arnold **Nature Medicine, October, 2022**

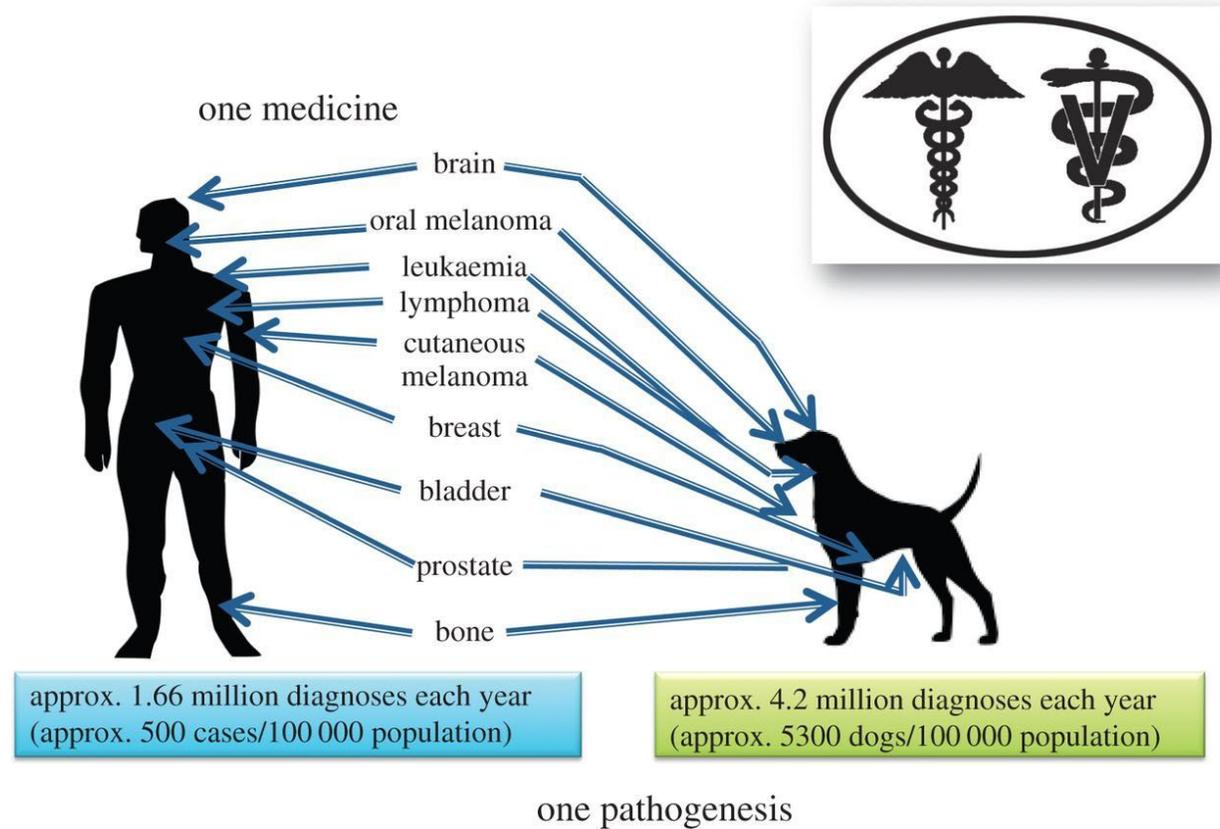
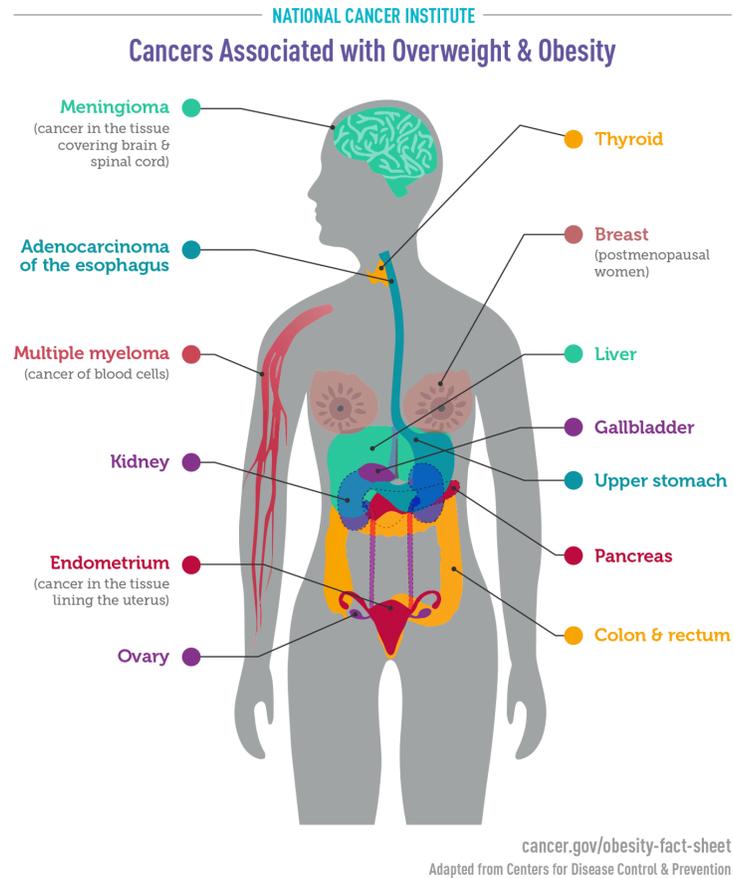
Veterinary medicine



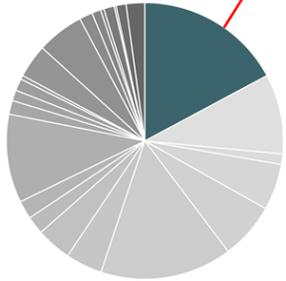
Exercise and diet

VT's Center for Health Behaviors Research has a cancer focus

Humans and our companion animals develop many of the same cancers



National Cancer Institute = \$7.3B (15%) of NIH budget



Major Funding Opportunities



Open Cancer Grand Challenges

- Determine the mechanisms through which obesity and physical activity influence cancer risk

FRALIN BIOMEDICAL RESEARCH INSTITUTE AT VTC



Sumita Mishra

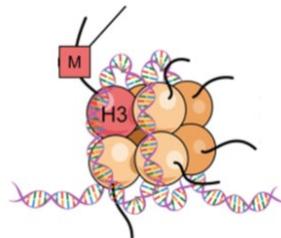


Center for Exercise
Medicine Research



Zhen Yan

- Develop therapeutics to target oncogenic drivers of solid tumors in children



Kathleen Mulvaney



Jia-Ray Yu

**Pediatric brain cancer research at CNRIC in
Washington, DC**



**VT Blacksburg campus
CALs, CLAHS, CNRE, COE,
COS, CVM, FLSI**

VT basic, translational and clinical cancer research network



**FBRI/VTCSOM/ACCRC
VT Health Sciences Campus
Roanoke**



ATTACHMENT F

**VT Innovation campus
Sanghani Center for
AI and data analytics**



**Children's National Research
and Innovation Campus
Washington DC**



**Carilion Clinic
Roanoke**

Experiential Learning Opportunities in Cancer Research



Undergraduate students, Hezekiah Emmanuel and Baylee Reosor working on breast cancer research with manager Tatiana Boluarte, in FBRI lab of Carla Finkielstein



Translational Biology, Medicine, and Health **graduate student** Hanaa Abdelazim working with mentor, Research Assistant Professor Laura Beth Payne at the FBRI.



Associate Professor Jenny Munson and **research fellow**, Caleb Stine spin out new company from the Fralin Biomedical Research Institute to translate science into personalized brain cancer treatments.



VTCSOM **medical student**, Alexis Dowiak working with Dr. Roger Packer, Director of the Brain Tumor Institute at the Children's National Hospital on first in human focused ultrasound therapies to open blood brain barrier in children to treat brain cancer.



Funding support for cancer research program growth

- VT Destination Areas Program
- Extramural grants and contracts
- State appropriations
- Capital equipment fund
- Philanthropy