

ACTION PROGRAM

APPALACHIAN CAREER TRAINING IN ONCOLOGY

Training the next generation of oncology professionals



The Markey Cancer Center

Founded in 1983, Markey Cancer Center is Kentucky's only NCI-designated cancer center and is a dedicated matrix cancer center established as an integral part of the UK HealthCare enterprise. Markey Cancer Center's mission is to reduce cancer mortality in our region through a comprehensive program of cancer research, treatment, education, and community engagement with a particular focus on the underserved population of Appalachian Kentucky.

About the Program

The ACTION Program is specifically designed to focus on the training of the next generation of cancer researchers, education/prevention experts, and health care professionals in Kentucky, preparing them to incorporate the new, state-of-the-art techniques learned during their training period into successful cancer-focused careers.

The program is housed in the NCI-Designated Markey Cancer Center and benefits from the experience and collegiality of participating mentors who have worked for many years to train cancer researchers, education/prevention experts, and health care professionals. The primary mentors are composed of basic, clinical, population and behavioral scientists who are collegial, collaborative and multidisciplinary; each primary faculty mentor is a recognized expert in his or her field and has a long record of research productivity and training.

We are passionate, motivated and committed to training the next generation of cancer researchers, education/prevention experts, and health care professionals.

The University of Kentucky

Founded in 1865 as the "flagship" institution of higher education for the Commonwealth of Kentucky, UK is one of only seven U.S. institutions having a major academic medical center with all six biomedical colleges as well as the Colleges of Agriculture, Engineering, and Law on one central campus. UK has also earned over 80 national rankings for academic and research excellence.

The ACTION Program is supported by the National Cancer Institute (R25 CA221765).

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About the program

Program Goals

- To develop participants' cancer research knowledge and skills through cross-disciplinary faculty-mentored research training experiences.
- To enhance students' cancer-focused career preparation by providing didactic cancer education and career development mentoring through faculty-led courses, workshops, seminars, and career coaching and mentoring.
- To conduct outreach activities in participants' communities to increase the understanding of the research and clinical aspects of cancer and the importance of science education among universities; primary and secondary school groups; civic organizations; health care providers; and the families and communities of our student participants.
- To evaluate program progress and impacts, focusing on longitudinal participant data (including tracking progression of participants through their academic and professional careers) and outreach activity efficacy.

To accomplish this, participants are paired with both a research faculty mentor who will provide an enriching research experience and a clinical faculty mentor who will provide a clinical perspective on cancer. Participants will obtain didactic cancer education and participate in outreach activities. Ultimately, we are creating an atmosphere of career development, lifelong learning, and sustained mentorship that will be focused on training the next generation of cancer researchers, education/prevention experts, and health care professionals.

Trainees will have the opportunity to:

- Participate and take the lead in building and developing ground-breaking biomedical research
- Observe cancer clinicians in their clinics and in the operating room
- Be mentored in preparing abstracts, scientific papers, presentations, and writing successful grant proposals
- Attend regularly scheduled courses, workshops, seminars and lectures
- Submit abstracts and present posters of their work at Markey Cancer Center's Research Day
- Travel to present their work at regional and national meetings
- Participate in cancer outreach activities in the community

Eligibility

To be eligible for the program, students must:

1. Be a native of one of the 54 Appalachian Kentucky counties.
2. Be enrolled in a high school within Appalachian Kentucky as an incoming freshman, sophomore, or junior or be a current University of Kentucky freshman, sophomore, or junior.
3. Be a member of our target population (underrepresented minority, female, from a low income family, first generation college student, or otherwise underserved student).

How to Apply

- All applications are due by 5pm EST on Friday, March 1, 2019
- Physical copies of the application can be requested by emailing the ACTION Program Coordinator, Chris Prichard, at chris.prichard@uky.edu

Inquiries may be sent to Dr. Nathan Vanderford at nathan.vanderford@uky.edu or to Chris Prichard at chris.prichard@uky.edu

To learn more, visit us online at <https://ukhealthcare.uky.edu/action>.

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Program faculty

The breadth and depth of the research available with the various faculty mentors will allow the participants to become familiar with and adept at the application of state-of-the-art techniques to conduct research that will ultimately enhance the comprehensive care of the cancer patient. A sample of the program faculty is shown below.

**Lowell Anthony, MD**

Medical Oncology, Internal Medicine
GI oncology with special interest in neuroendocrine neoplasms

**Teresa Fan, PhD**

Toxicology and Cancer Biology
Applying NMR & mass spectrometry-based metabolite profiling techniques to health issues

**Kathleen O'Connor, PhD**

Molecular and Cellular Biology
*Cancer Education Director
Integrins and integrin-mediated signaling in carcinoma progression*

**Susanne Arnold, MD**

Hematology and Oncology
Early phase clinical trials, develop drugs from preclinical to clinical stage

**Yvonne Fondufe-Mittendorf, PhD**

Molecular & Cellular Biochemistry
Chromatin structural changes modulated to elicit gene regulatory programs in transcription & splicing

**Vivek Rangnekar, PhD**

Radiation Medicine
Cancer cell & molecular biology, cell signaling & apoptosis in prostate & lung cancer

**Jessica Blackburn, PhD**

Molecular and Cellular Biochemistry
Genetic control of acute lymphoblastic leukemia using a zebrafish model

**Tianyan Gao, PhD**

Molecular and Cellular Biochemistry
PI3K signaling pathway regulating mammalian cell proliferation and survival

**Nancy Schoenberg, PhD**

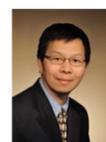
Behavioral Science
Health behavior decision-making and cancer prevention

**Sabine Brouxhon, MD**

Surgery
How post-translational processing of E-cadherin induces the shedding of a biologically active E-cadherin fragment

**Ellen Hahn, RN, PhD**

Nursing
Smoke-free policy and prevention research

**Qing-Bai She, PhD**

Pharmacology & Nutritional Sciences
Biochemical and biologic consequences of gene mutations in cell signaling pathways

**Jessica Burris, PhD**

Clinical Psychology
Psychological adjustment and smoking cessation after diagnosis of a tobacco-related cancer

**Andrew James, MD**

Surgical Oncology
Specializes in urologic oncology and is a member of the Genitourinary and Prostate Cancer Team

**Bill St. Clair, MD, PhD**

Internal Medicine, Medical Oncology
Radiation Oncology

**John D'Orazio, MD, PhD**

Pediatrics
Mechanisms by which UV radiation promotes mutagenesis & carcinogenic transformation of melanocytes

**Andrew Lane, PhD**

Toxicology and Cancer Biology
Non-small cell lung cancer v. normal lung and how cancer cells interact with the microenvironment within the tumor

**Daret St. Clair, PhD**

Toxicology and Cancer Biology
Redox Injury and Repair, RNS and ROS contribution to cancer formation

**Mark Dignan, PhD**

Internal Medicine
Behavioral intervention research and outreach to primary health care providers

**Eun Lee, MD**

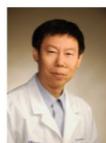
Toxicology and Cancer Biology
A surgical pathologist in GI pathology And as a collaborator for clinical and basic cancer research

**Jamie Studts, PhD**

Behavioral Science
Decision-making research related to tobacco-related malignancies

**Jean Edward, PhD, RN**

Center for Health Services Research
Social Determinants of Health; Health Disparities; Healthcare Access; Health Literacy; Health Insurance Literacy

**Chunming Liu, PhD**

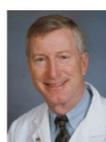
Cellular and Molecular Biochemistry
Wnt/ β -catenin signaling in human cancers and collaboration to develop β -catenin inhibitors

**Peter Zhou, MD, PhD**

Cellular and Molecular Biochemistry
Role and regulation of Snail/Slug transcription factors in the control of epithelial-mesenchymal transition

**B. Mark Evers, MD**

Surgery
*Markey Cancer Center Director
Surgical problems related to GI oncology, endocrinology, and soft tissue tumors*

**Patrick McGrath, MD**

Surgical Oncology
Surgical oncologist specializing in breast cancer and gastrointestinal oncology

KENTUCKY CANCER CONSORTIUM



July 2017 - June 2018 KCC Evaluation Report

In order to learn what works well and what could be improved, the Kentucky Cancer Consortium (KCC) selects a few areas each year to evaluate in depth. This report provides a brief overview of what we have learned this year.



PARTNERSHIP

What have we learned about how to work better together this year?

Kentucky Cancer Consortium, Kentucky Cancer Program and the University of Kentucky College of Public Health are collectively implementing the *Lung Cancer Prevention and Survivorship is Good Business* initiative in Casey, Christian, Clay, McCracken, Ohio, Perry and Warren counties. Our overall goal with this initiative is to reduce lung cancer disparities among male populations in Kentucky through prevention, early detection and survivorship support. Within each of the counties, worksites with mostly male employees were recruited to participate in two roundtable meetings.

The first 8 roundtable meetings were held between February and May of 2017, with a focus on understanding the lung cancer burden, gathering feedback on health information and reaching men.

A second series of 8 roundtable meetings were held between November 2017 and February 2018, with a focus on sharing resources and developing a Resource Kit to use with employees.

ROUNDTABLE #1

60
worksites

ROUNDTABLE #2

50
worksites

44 worksites & 6 key informant interviews participated.
22 of the 50 were new.



PARTNERSHIP CONTINUED

What have we learned about how to work better together this year?

In the process of recruiting businesses and worksites with mostly male employees to participate in these county-level roundtable meetings, we have learned a lot of lessons about engaging non-traditional community partners who typically do not focus on lung cancer prevention, early detection, and especially survivorship.

What Worked Well	What Did Not Work Well	Common Concerns
<ul style="list-style-type: none"> • Existing relationships in the counties • Referrals and contacts from community partners, particularly respected leaders • Forming new connections with interested people • Offering lunch (with ACS and Patient Advocate Foundation support) • Posting the meeting on the Chamber of Commerce calendar • For roundtable #2, already participating in roundtable #1 and familiarity with the project • Businesses that had an existing worksite wellness program • Meeting with the business/organization prior to the roundtable to fully explain the project and answer questions • Connection to free radon kits as part of the project 	<ul style="list-style-type: none"> • Not being able to “cold call” (per IRB requirements) • Rescheduling due to weather, work conflicts and short notice for the meetings • Providing too much or not enough information created misunderstanding of project or requirements and reluctance to participate • Some businesses that did not have employee wellness programs struggled with understanding how they could benefit from the project • Closed community • Small businesses not staffed enough to attend meetings • Difficulty finding businesses with mostly male employees • Lack of public awareness of the significance of lung cancer • Lack of existing relationships with coalitions or community groups (for new staff) • Connecting with the correct person at a worksite to participate • Economy is struggling; many layoffs in mostly male-employed companies and some have completely closed 	<ul style="list-style-type: none"> • Intimidation or uncertainty about discussing health issues, particularly lung cancer (Appalachian counties) • Concern by some employers about an emphasis on men and lack of equality (non-Appalachian counties) • Businesses didn’t understand why this project required such a long process. Wanted to gather information, share ideas and quickly take action (all counties–Appalachian and non-Appalachian)

PROGRAM

How are we making an impact on the cancer burden in Kentucky?

We have made a significant impact in increasing colon cancer screening and reducing incidence and mortality as a result of a strong network of entities sharing similar goals and hundreds of partners devoting time, resources, funding and energy for more than 16 years.

ORGANIZATIONS WORKING TOGETHER TO INCREASE COLON CANCER SCREENING

TYPE OF ORGANIZATION	NAME OF ORGANIZATION
Academia	Brown Cancer Center (U of L) College of Medicine, Family and Community Medicine (UK) Kentucky Cancer Registry (UK) Markey Cancer Center (UK) Prevention Research Center (UK) Rural Cancer Prevention Research Center (UK) Rural Extension Center (UK)
Academia / Community-Based organizations	Kentucky Cancer Program (UK) Kentucky Cancer Program (U of L) Kentucky Homeplace (UK)
Health Systems	Area Health Education Centers Federally Qualified Health Centers and Community Health Centers Humana Primary Care Association Veterans Administration
Non-profit / Foundation	American Cancer Society Colon Cancer Prevention Project (C2P2) Kentuckiana Health Collaborative Kentucky Cancer Foundation Kentucky CancerLink
State and Local Government	Kentucky Department for Public Health Chronic Disease Branch Kentucky Colon Cancer Screening Program Kentucky Behavioral Risk Factor Surveillance Program Kentucky Department of Insurance Local and District Health Departments
Policy	American Cancer Society Cancer Action Network Limestone Group
Professional Associations	American College of Surgeons Kentucky Hospital Association Kentucky Medical Association



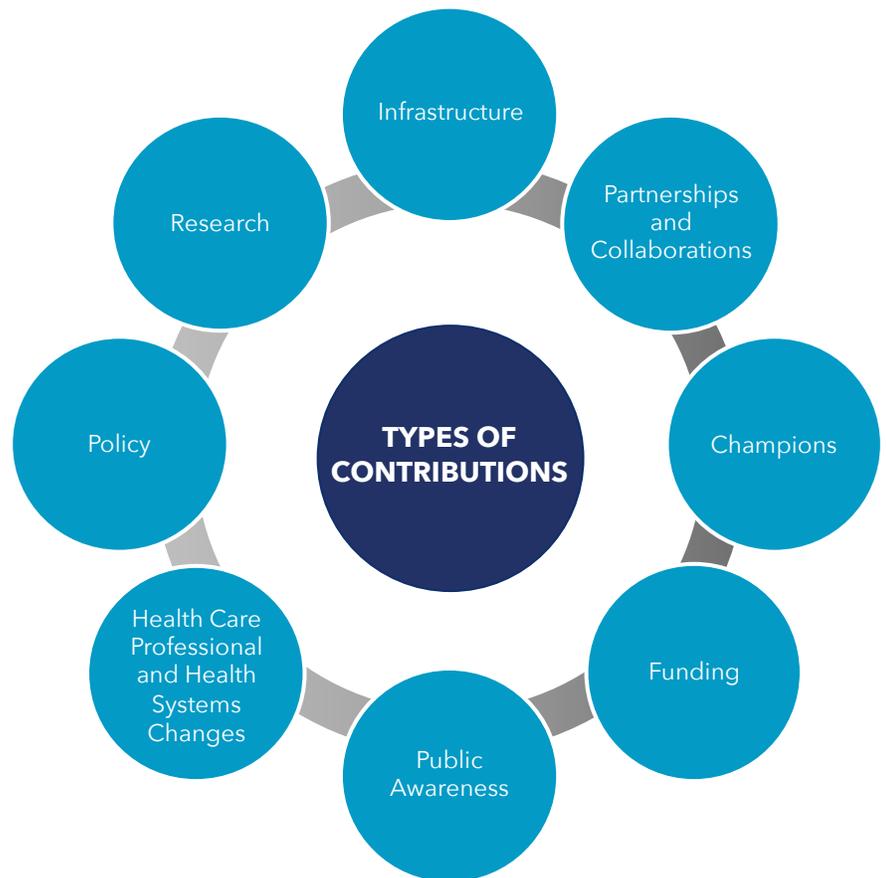
PROGRAM CONTINUED

How are we making an impact on the cancer burden in Kentucky?

We have found that it has been the contributions of many, rather than just one, that have been the most important to us to aid in increasing colon cancer screening, awareness, practice and policy change in Kentucky.

Types of contributions have included:

- Infrastructure
- Partnerships
- Champions
- Funding
- Public Awareness
 - Community outreach
 - One-on-one and Group Education
 - Small Media
- Patient Navigation
- Health Systems Changes
- Policy
- Research



Key components of our successes:

- Convening partners in neutral forums
- Providing consistent, clear and ongoing communication
- Passionate champions who provide energy, vision and perseverance
- Using data to identify the problem and develop goals, objectives and strategies
- Monitoring data, conducting evaluations and making adjustments
- Unifying messages and providing opportunities for partners to co-brand materials with their own organization's logo
- Focusing on health professionals and improving health systems
- Mobilizing partner contributions of staff/funding and people who have a personal connection to colon cancer to support advocacy and lobbying efforts
- Conducting community-based participatory research

PLAN

How are we implementing the Cancer Action Plan as the Kentucky Cancer Consortium?

Kentucky Cancer Consortium member organizations are actively working on all areas of the Kentucky Cancer Action Plan: prevention, early detection, treatment and care, and quality of life. We wanted to better understand the priority areas for our KCC member organizations and find ways to communicate, coordinate and collaborate together. We know that it takes all of us working together to reduce cancer in Kentucky. If you want to check out the current version of our Kentucky Cancer Action Plan, [click here](#).

Number of KCC organizations implementing areas in the Kentucky Cancer Action Plan

Tobacco Prevention	32
Lung Cancer Screening	28
Treatment and Care	26
Survivorship	22
Colon Cancer Screening	22
Nutrition, Physical Activity and Obesity Prevention	21
Breast Cancer Screening	20
Cervical Cancer Screening	18
Environmental Carcinogen Prevention	10
Skin Cancer Prevention	11
HPV Prevention	5
Alcohol Prevention	3

ABOUT THE KENTUCKY CANCER CONSORTIUM

The Kentucky Cancer Consortium is Kentucky's statewide Comprehensive Cancer Control coalition comprised of more than 70 organizations who are committed to working together to reduce the significant cancer burden in our state. Cancer is too big and complex a problem for any one group to address efficiently. Comprehensive Cancer Control offers the power of collaboration as a key approach to reducing cancer.

Contact Us:

- Visit our website at <http://www.kycancerc.org/>
- To learn more about evaluation results, contact Dr. Jennifer Redmond Knight at jredknight@kycancerc.org
- To learn more about how to get involved in the Kentucky Cancer Consortium, contact Katie Bathje at katie@kycancerc.org

Project Support:

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