What is the Massey Cancer Center?

• **NCI-designated cancer center**
  - One of two in Virginia
  - Top 4% nationwide/1,500 cancer centers in the US
  - 70 have earned an NCI designation
  - This designation makes us eligible for federal funding, information-sharing and resources reserved for the most elite institutions
What is the Massey Cancer Center?

- Continuously funded for 44 years
  - demonstrate superior research capabilities
  - Massey received a planning grant from the NCI in 1974 to establish a cancer center at VCU
  - awarded NCI designation in 1975. We have retained that prestigious designation ever since.
What is the Massey Cancer Center?

- 205 faculty from 38 departments in 7 colleges/schools
- 15,000 individual patients
  - Goal: 90,000 out patient visits per year after opening new Adult Outpatient Facility
- $38.4M sponsored research awarded 2018
- $12M in philanthropy FY19
- $12.5M per year from the Commonwealth
Integration of Massey research resources across VCU

<table>
<thead>
<tr>
<th>Cancer Center directed</th>
<th>VPRI Office directed</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Biostatistics</td>
<td>• Center for High Performance Computing</td>
</tr>
<tr>
<td>• Cancer informatics Core</td>
<td>• Chemical and Proteomic Mass Spectromtery Core Lab</td>
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<td>• Flow Cytometry Core Laboratory</td>
<td>• Microscopy Core Lab</td>
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<tr>
<td>• Structural Biology Core Laboratory</td>
<td>• Nanomaterials Characterization Core Lab</td>
</tr>
<tr>
<td>• Tissue, Data Acquisition and Analysis Core</td>
<td>• VCU Genomics Core Lab</td>
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<tr>
<td>• Transgenic Mouse Core Laboratory</td>
<td>• Molecular pathology Research Services</td>
</tr>
<tr>
<td>• Cancer Mouse Models Shared Resource</td>
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<tr>
<td>• VCU Lipidomics/Metabolomics Shared Resource</td>
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Signature Research Programs

• **Cancer Cell Signaling** – identifying key signaling pathways that contribute to cancer

• **Cancer Molecular Genetics** – investigating genetic and epigenetic changes that underlie the molecular and cellular events contributing to cancer development and progression, and using this information to develop new target-based therapies for cancer

• **Cancer Prevention and Control** – developing basic and applied research programs in behavioral, social and population sciences to create or enhance interventions that reduce cancer risk, incidence, morbidity and mortality, and enhance quality of life

• **Developmental Therapeutics** – exploring cancer therapeutics, identifying molecular targets, assessing the molecular genetic profiles of tumors and translating these findings into the development of novel therapeutic strategies for the treatment of cancer
Cancer Specialties

• Breast cancer
• Lung and respiratory cancer
• Prostate and other urologic cancers
• Hematologic malignancies (lymphomas, leukemias and multiple myeloma)
• Colorectal and other gastrointestinal cancers (stomach, esophagus, liver, pancreas)
• Ear, nose, throat, head and neck cancers
• Cancers of the brain and nervous system
• Gynecologic cancers
• Pediatric cancers
New Senior Level Faculty

Azeddine Atfi, PhD
Professor and Chair,
Division of Cellular and
Molecular Pathogenesis
Department of Pathology

CMG/CCS
Molecular determinants of GI
cancer progression and
cachexia

Suyun Huang, MD, PhD
Professor,
Department of Human
and Molecular Genetics

CMG
Epigenetic mechanisms
and targets of primary
CNS and metastatic breast
cancer
New Senior Level Faculty

Patrick Nana-Sinkam, MD
Professor and Chair,
Division of Pulmonary Disease and Critical Care Medicine
Department of Internal Medicine

CCS/CPC
Molecular biomarkers and therapeutic targets of lung cancer

Greg Hundley, MD
Director, VCU Heart Pauley Heart Center
Professor, Department of Internal Medicine

CPC
Metabolic basis and preventative therapeutics of cancer treatment induced cardiovascular damage

Total NCI research grant funding of new senior level faculty: $3,242,555
New Senior Level Faculty

Bernard Fuemmeler, PhD, MPH
Professor,
Department of Health Behavior and Policy
Associate Director, Cancer Prevention and Control
CPC
Environmental tobacco smoke exposure, adolescent smoking, childhood obesity epidemiology, AYA cancer survivor health, HPV vaccination uptake

Said Sebti, PhD
Professor,
Department of Pharmacology and Toxicology
Associate Director, Basic Research
Drug discovery, GI oncology, Malignant hematology
New Senior Level Faculty

Vanessa Sheppard, PhD
Professor and Chair,
Department of Health Behavior and Policy
Associate Director, Disparities Research
Program Co-Leader, Cancer Prevention and Control

CPC
Gaps in care for minority populations, cancer outcomes

Jordyn Griffin, MD, FAAP
Assistant Professor,
Department of Pediatrics
Division of Pediatric Oncology

Bone marrow transplant
AYA clinical research
Increasing Interdisciplinary and Transdisciplinary Collaborations

• 334 cancer-related publications in 2018:
  • 66% were inter-institutional
  • University of Virginia, Old Dominion University, Virginia Tech, Eastern Virginia Medical School, George Mason University, American College of Radiology
  • Johns Hopkins, University of Michigan, MD Anderson, University of North Carolina, University of California Los Angeles, Dana Farber, Duke University, University of Pittsburgh, Emory University, Harvard, Arizona State University, Stanford University, Ohio State University
Growth in NCI-Recognized, Peer-Reviewed Funding

62% of new funding is NCI
Work underway in support of Massey’s application to NCI for comprehensive designation

- Hire Massey Cancer Center director
- Reduce time to clinical trial activation
- Recruitment activation
- Massey Cancer Center strategic plan (4 Themes)
- NCI Application submit May 2021
  Notification 2022
Opportunity to Achieve Comprehensive Status

- We demonstrate commitment
  - A new Director
  - A new outpatient Massey Cancer Center about to open
  - A new inpatient Massey Cancer Center underway
  - Massey Cancer Center as part of the Virginia Authority that established VCU Health
  - Steadfast support of the Commonwealth of Virginia
- We have the talent
  - Increase in funding and publications
  - Increase in partnerships with CTSA and other cancer centers across the nation
  - Increasing impact of publications in the scientific world
- We make unique contributions
  - Pharmaceutical engineering and innovation
  - Addressing health disparities in cancer
  - Addressing the needs of underserved populations