

Cancer Control in Maryland

The Sidney Kimmel Comprehensive Cancer Center

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Bloomberg Distinguished Professor
of
Oncology and Epidemiology



JOHNS HOPKINS
M E D I C I N E

Disclosure Information

Dr. Otis W. Brawley

I have the following financial relationships to disclose:

Genentech/Roche, Grail, PDS Biotech, Lyell Immunopharma, Agilent, Incyte, and EQRX

– and –

I will not discuss off label use and/or investigational use in my presentation.

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December 7, 2022

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Brief History

1968

First formal cancer research program



AH Owens

1973

Authorized by the Trustees of the University and Hospital



MD Abeloff

1976

NCI Comprehensive Cancer Center

2001

\$153.9M naming gift from Sidney Kimmel

2008

William G. Nelson, MD, PhD, named Director

2021

60th year of NCI support for cancer research

No. 9032 APRIL 9, 1966

NATURE

PRODUCTION OF GRAFT-VERSUS-HOST DISEASE IN THE RAT AND ITS TREATMENT WITH CYTOTOXIC AGENTS

By PROF. G. W. SANTOS* and PROF. A. H. OWENS, jun.
Department of Medicine, Johns Hopkins University, School of Medicine, and Oncology Service, Department of Medicine, Baltimore City Hospitals, Baltimore, Maryland

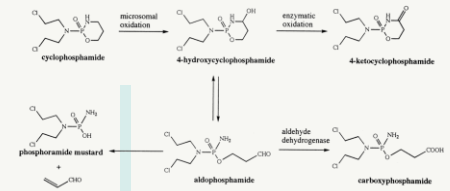
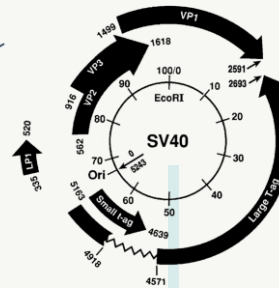
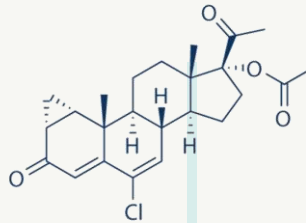
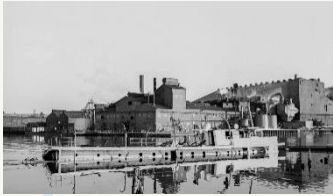
THE NEW ENGLAND JOURNAL OF MEDICINE

Dec. 18, 1975

ELEVATED HISTAMINASE (DIAMINE OXIDASE) ACTIVITY IN SMALL-CELL CARCINOMA OF THE LUNG

STEPHEN B. BAYLIN, M.D., MARTIN D. ABELOFF, M.D., KATHLEEN C. WIEMAN, J. WALTON TOMFORD, B.A., AND DAVID S. ETTINGER, M.D.

Legacy of Impactful Scientific Contributions



1940's
Anna M Baetjer
ScD reported
association of
chromium
exposure and
cancer risk



1960's
Pioneering studies of
graft-versus-host
disease (GVHD) by
Abert H Owens MD
and George W Santos
MD



1960's
Development
of first oral
anti-
androgen by
William W
Scott
MD/PhD



1970's
Restriction
mapping of
SV40 by
Daniel
Nathans MD



1970-80's
Pharmacology of
cyclophosphamide
by O Michael
Colvin MD and
Catherine Fenselau
PhD

SKCCC Membership (updated since submission)

Cancer Focus

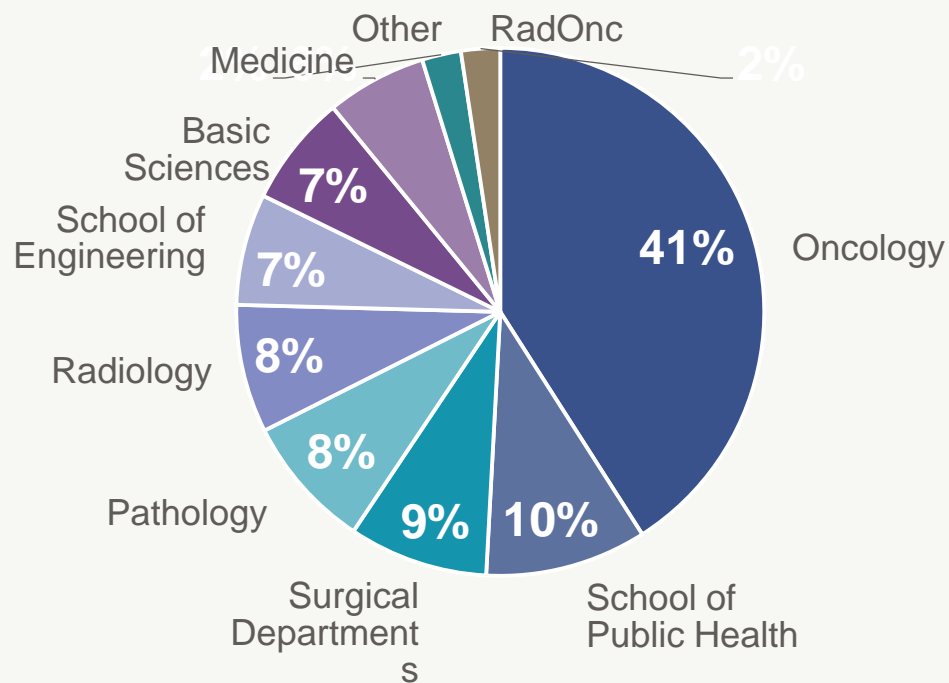
293 SKCCC members
35 Johns Hopkins Departments
5 Schools

Increasing diversity among new members
60% are non-white or female
9 are under-represented minorities

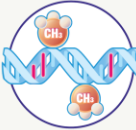





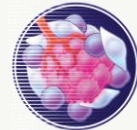
Membership Criteria

1. PI/Project Leader of a peer-reviewed grant
2. Co-PI of a peer-reviewed, cancer-relevant grant
3. Critical contributor to cancer clinical trial development and execution

Associate Members are new investigators with promise of meeting criteria for Full Membership within three years



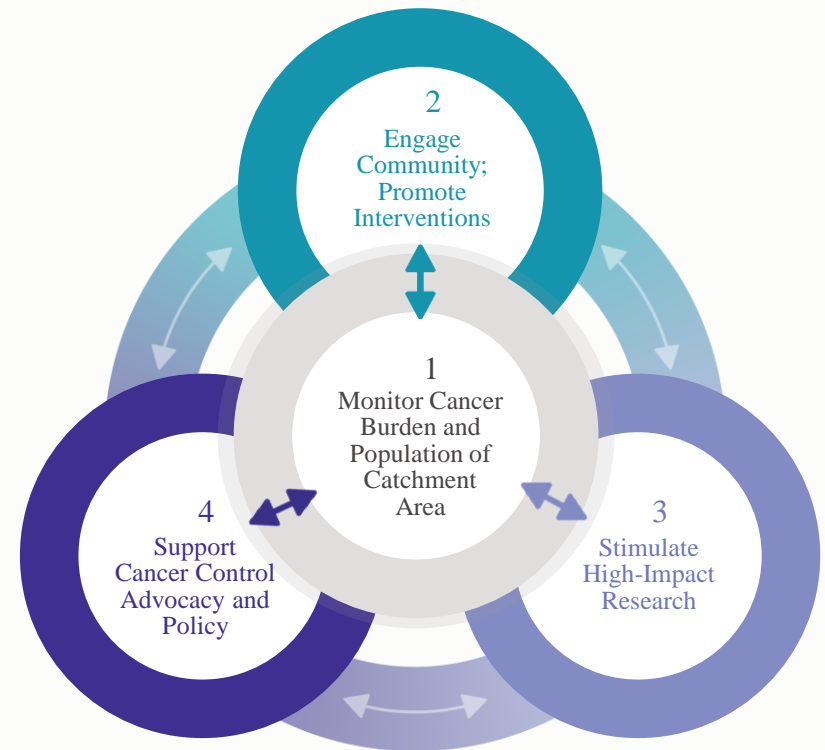
Research Programs

Discovery	Translation to the Clinic	Translation to the Population
 <p>Cancer Genetics and Epigenetics (CGE)</p> <p>38 FULL</p> <p>6 ASSOCIATE</p> <p>\$10.4 PEER-REVIEWED FUNDING (DC)</p>	 <p>Hematologic Malignancies and BMT (HMBMT)</p> <p>29 FULL</p> <p>11 ASSOCIATE</p> <p>\$4.1 PEER-REVIEWED FUNDING (DC)</p>	 <p>Cancer Prevention and Control (CPC)</p> <p>40 FULL</p> <p>13 ASSOCIATE</p> <p>\$12.5 PEER-REVIEWED FUNDING (DC)</p>
 <p>Cancer Chemical and Structural Biology (CCSB)</p> <p>28 FULL</p> <p>3 ASSOCIATE</p> <p>\$9.2 PEER-REVIEWED FUNDING (DC)</p>	 <p>Cancer Immunology (CI)</p> <p>32 FULL</p> <p>8 ASSOCIATE</p> <p>\$8.6 PEER-REVIEWED FUNDING (DC)</p>	
 <p>Cancer Invasion and Metastasis (CIM)</p> <p>31 FULL</p> <p>12 ASSOCIATE</p> <p>\$13.1 PEER-REVIEWED FUNDING (DC)</p>	 <p>Cancer Molecular and Functional Imaging (CMFI)</p> <p>22 FULL</p> <p>9 ASSOCIATE</p> <p>\$7.3 PEER-REVIEWED FUNDING (DC)</p>	

Reduce the Burden of Cancer in Maryland and Beyond

Aims

- 1 **Monitor** cancer burden and population characteristics of **catchment area**
- 2 **Engage community members and organizations** to understand their needs and concerns, and promote adoption of evidence-based cancer control interventions
- 3 **Stimulate high-impact research** addressing problems of greatest concern to community
- 4 **Support cancer control advocacy and policy development** by explaining problem and evidence base to reduce the cancer burden



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Disparities in Health

- The concept that some populations (however defined) do worse than others.
- Populations can be defined or categorized by:
 - Race
 - Ethnicity and Culture
 - Area of geographic origin
 - Socioeconomic Status
 - Area of Residence

Disparities in Health

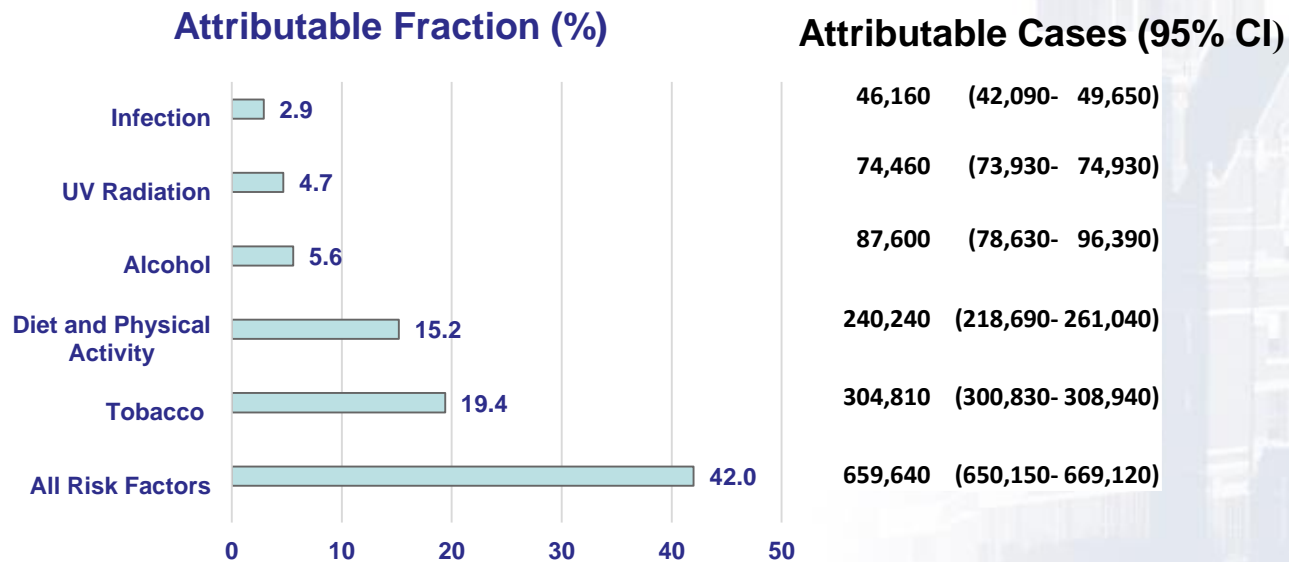
- The concept that some populations (however defined) do worse than others.
- The measure can be:
 - Incidence
 - Mortality
 - Survival
 - Quality of life

How to Reduce the Cancer Death Rate

The Spectrum of Cancer Control

Prevention/Risk Reduction → Screening → Diagnosis → Treatment

Estimated Proportion and Number of Cancer Cases Attributable to Risk Factors (U.S. Both Sexes)



Islami et al, CA 2018

The Most Important Question in Cancer Control

How can we provide adequate high-quality care (to include preventive services) to populations that so often do not receive it?

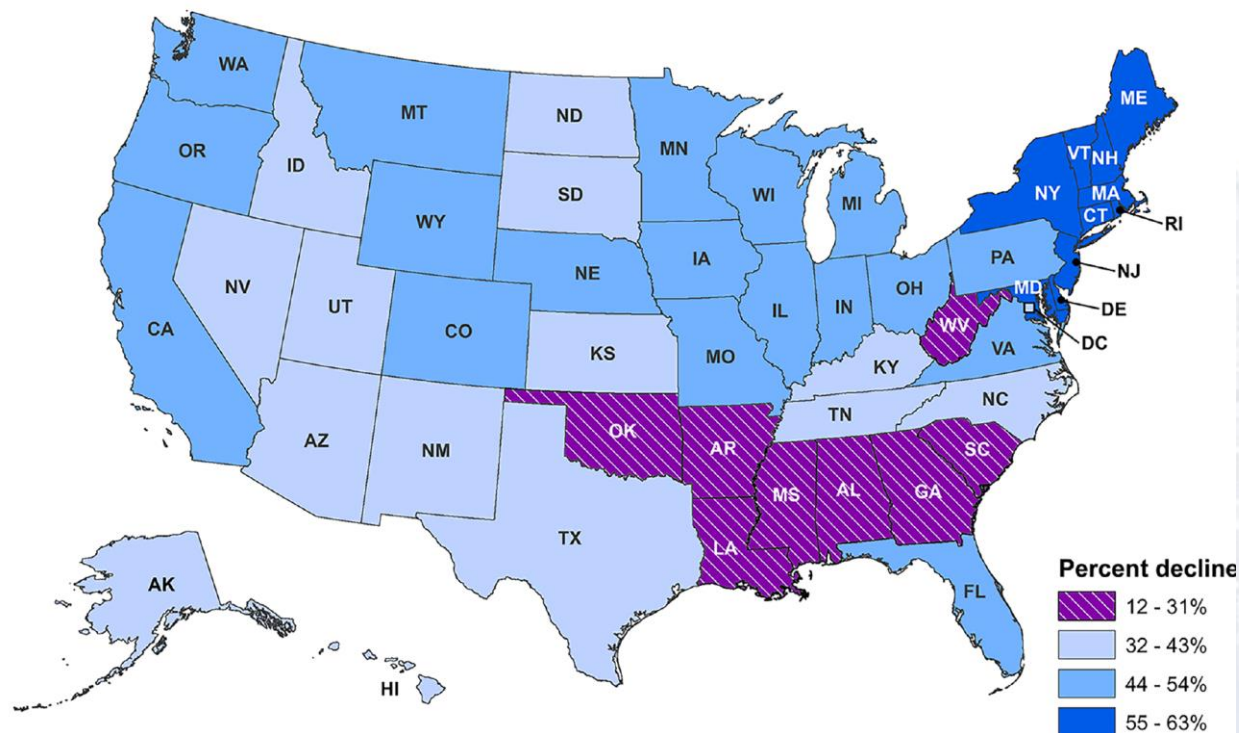
- Unnecessary care interferes with abilities to provide necessary care.
- Many get care in resource poor settings, meaning the provision of unnecessary care is a cause of health disparities.

Colon and Rectal Cancer: United States

In 2020,

- Diagnosed: 101,400 colonic and 44,200 rectal
- 51,000 Americans will die of colon and rectal cancer.
- Among the US Population as a whole, there has been a 50% decline in age-adjusted death rate since 1980.
- Screening is attributed with about 2/3 of the decline.

Colorectal Cancer Mortality Decline from 1980-82 to 2013-2015 by State

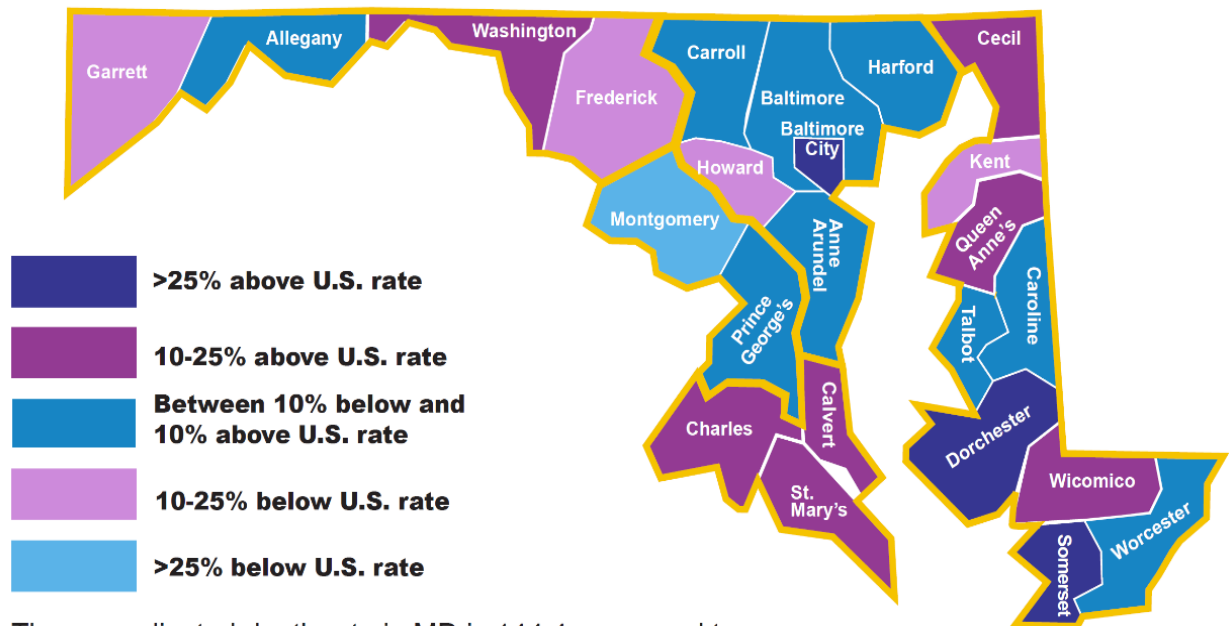


Siegel, et al. CA 2018;68:329-339

Cancer Mortality in Maryland

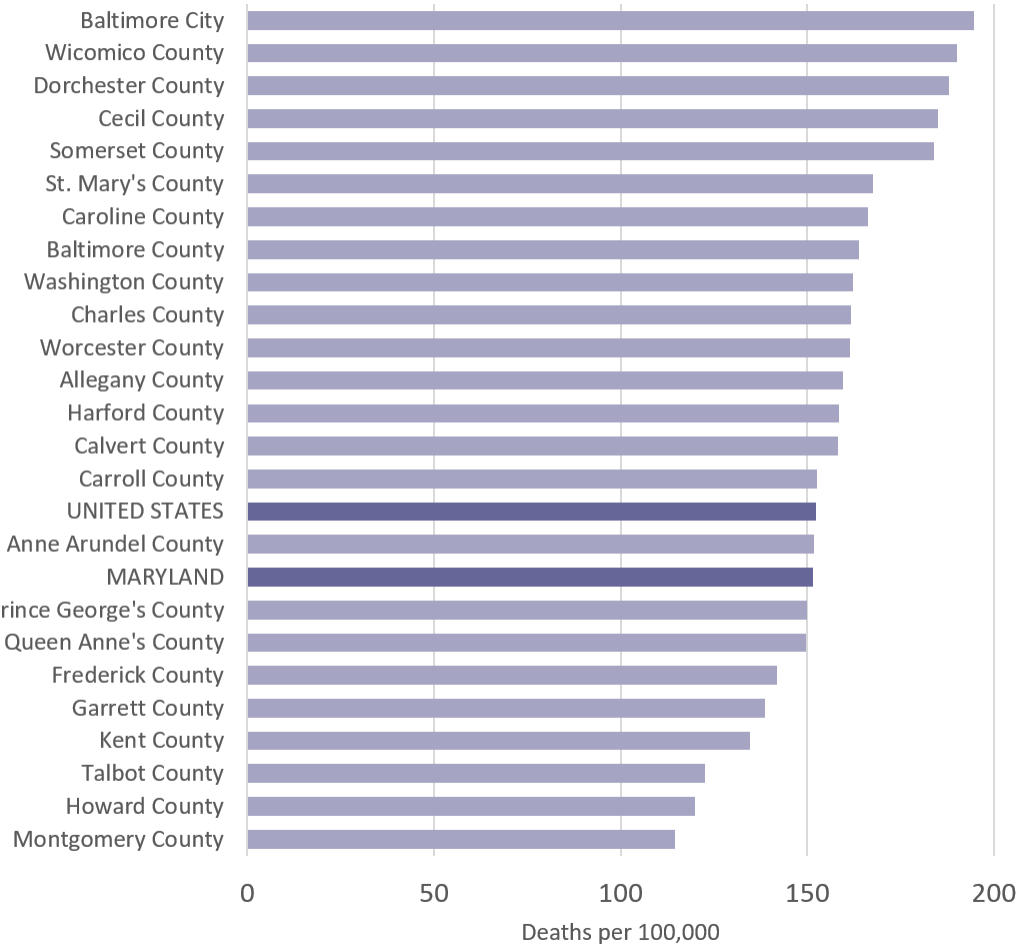
All Sites Cancer Age-Adjusted Mortality Rates by Maryland Jurisdiction in Comparison to the U.S. Rate, 2019

Date Source: CDC WONDER, NCHS underlying cause of death



The age-adjusted death rate in MD is 144.4 compared to 146.2 in the U.S. as a whole.

Maryland's Cancer Mortality Rates by Jurisdiction

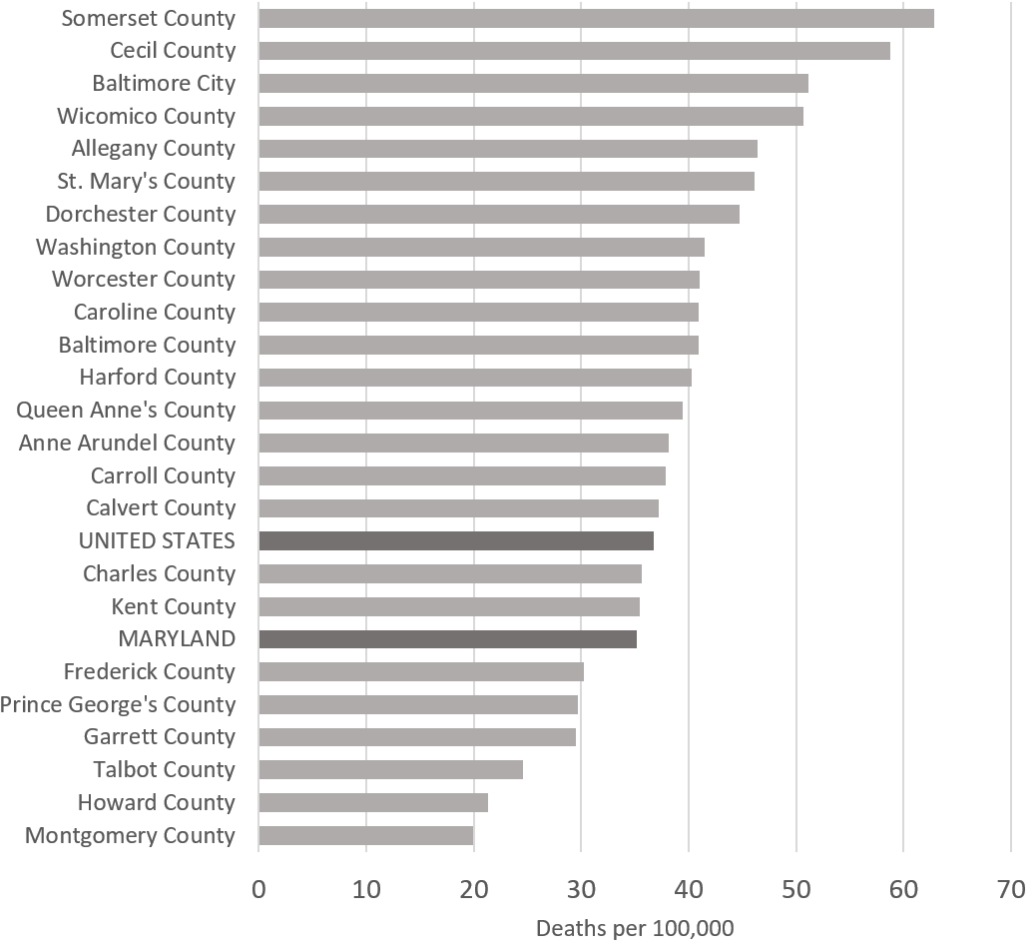


All Sites

- Baltimore City: 194.7 per 100,000
- Montgomery County: 114.6 per 100,000

Source: CDC, 2015-2019 age-adjusted rates

Maryland's Lung Cancer Mortality Rates by Jurisdiction



Lung & Bronchus Cancer

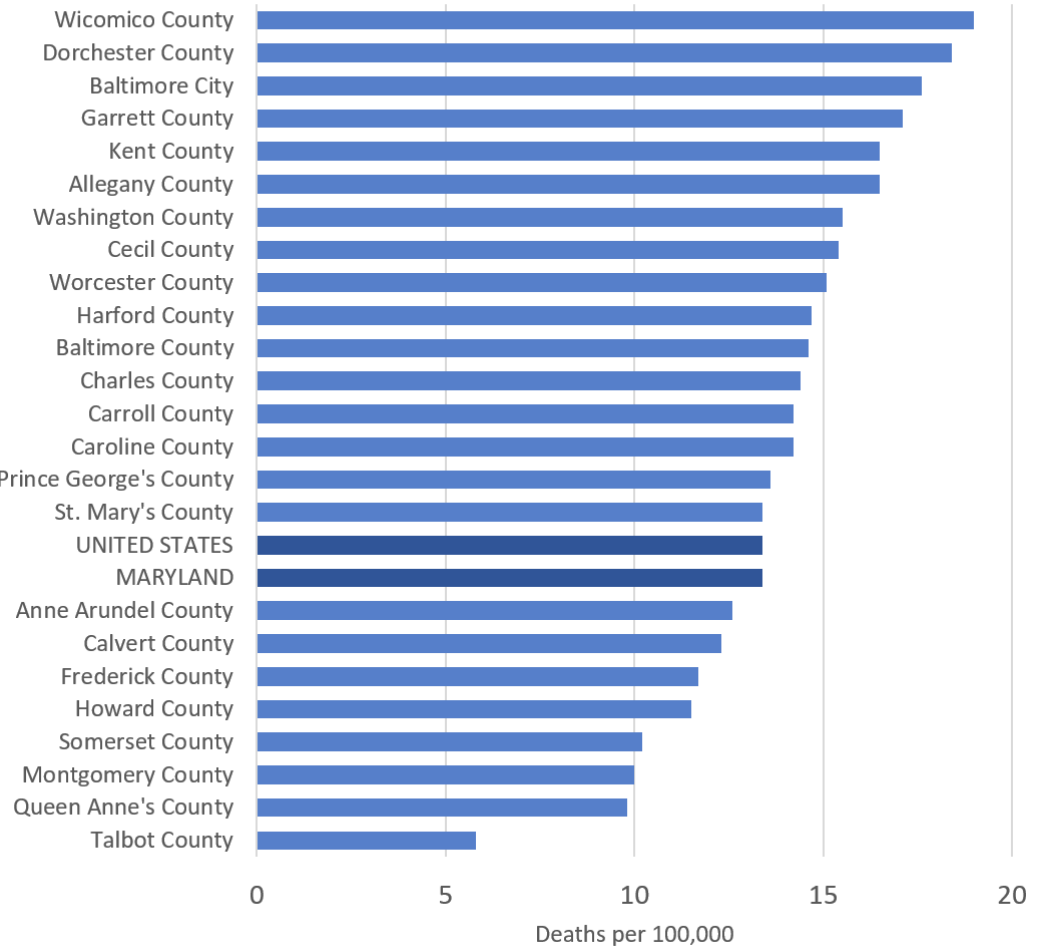
- Somerset County: 62.8 per 100,000
- Montgomery County: 19.9 per 100,000

Source: CDC, 2015-2019 age-adjusted rates

Cigarette Smoking in Maryland (2017)

- United States 16.1%
- Maryland 12.6%
- Western Maryland 20.1%
- Central Maryland 15.5%
- Baltimore City 22.3%
- Eastern Shore 19.7%
- Southern Maryland 16.9%
- Nat Capital Area 9.3%

Maryland's Colorectal Cancer Mortality Rates by Jurisdiction

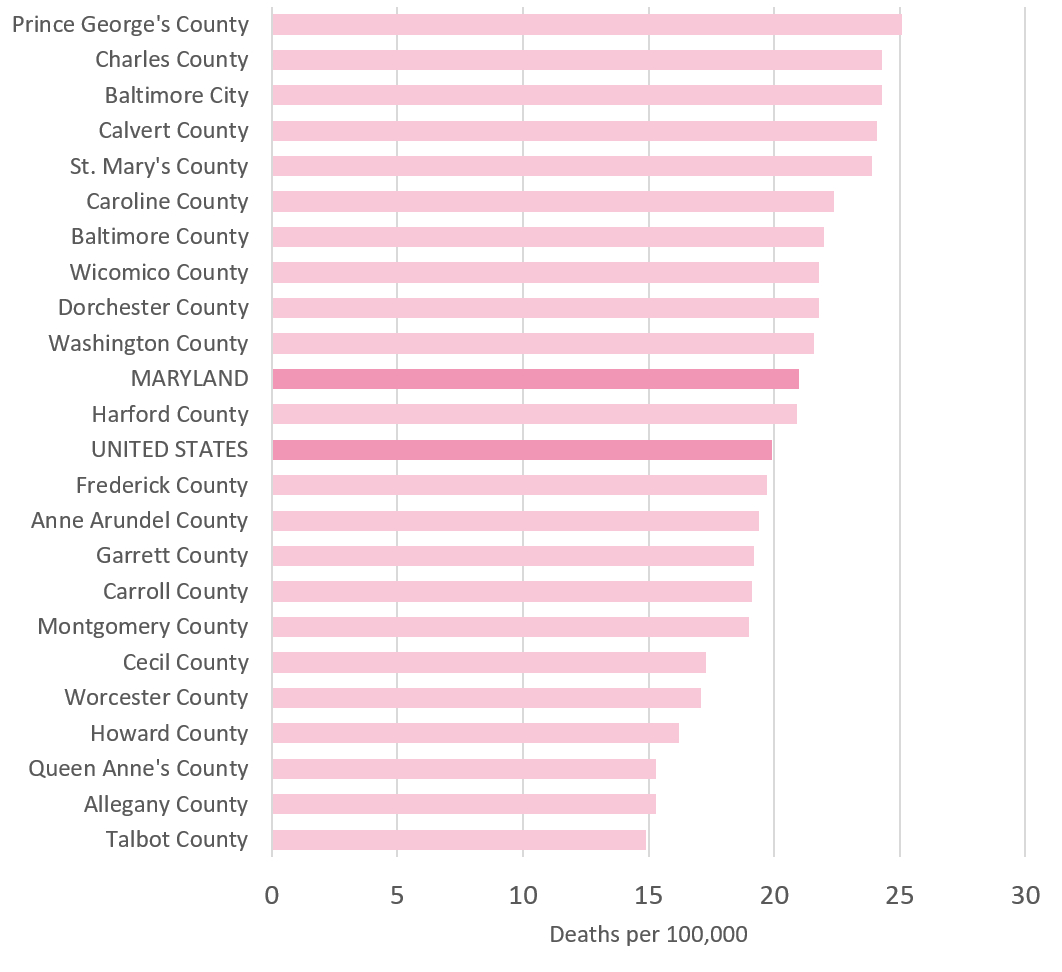


Colon & Rectum Cancer

- Wicomico County: 19.0 per 100,000
- Talbot County: 5.8 per 100,000

Source: CDC, 2015-2019 age-adjusted rates

Maryland's Breast Cancer Mortality Rates by Jurisdiction

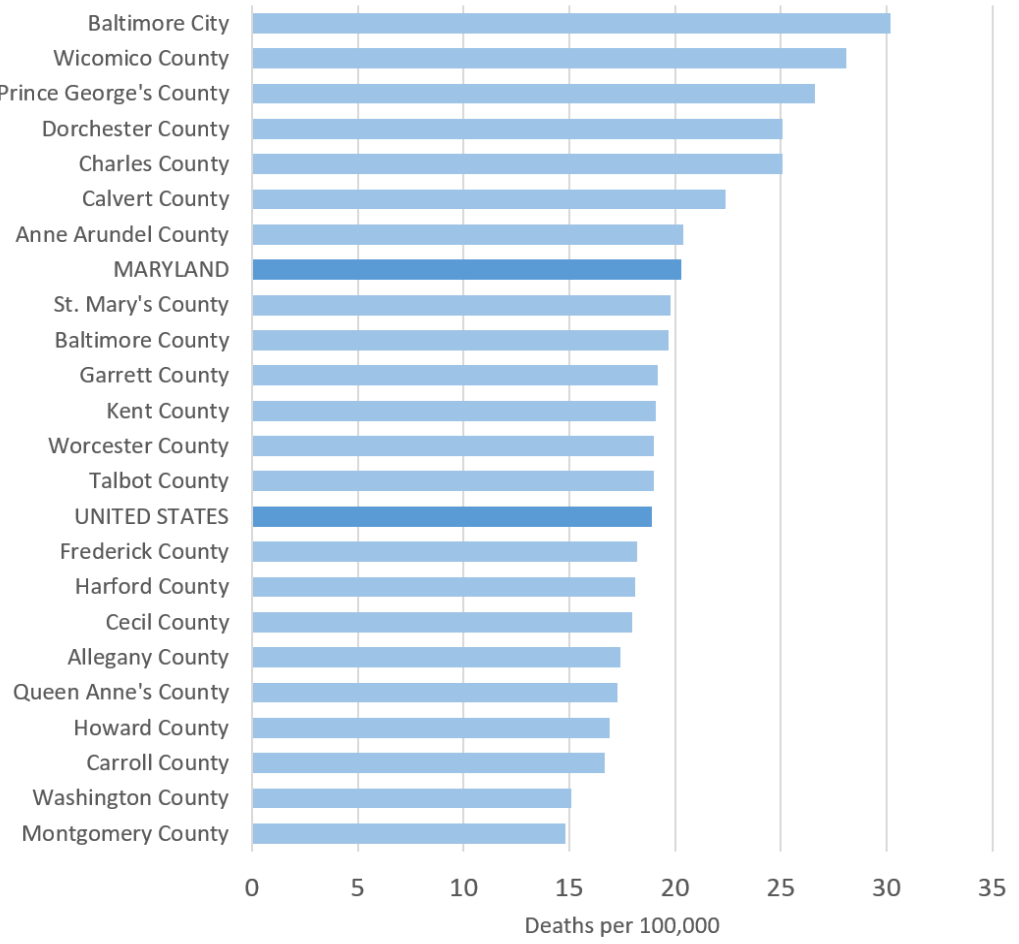


Female Breast Cancer

- Prince George's County: 25.1 per 100,000
- Talbot County: 14.9 per 100,000

Source: CDC, 2015-2019 age-adjusted rates
Data suppressed/not available for Kent and Somerset counties

Maryland's Prostate Cancer Mortality Rates by Jurisdiction



Prostate Cancer

- Baltimore City: 30.2 per 100,000
- Montgomery County: 14.8 per 100,000

Source: CDC, 2015-2019 age-adjusted rates
Data suppressed/not available for Caroline and Somerset counties

The Most Important Question in Cancer Control

How can we provide adequate high-quality care (to include preventive services) to populations that so often do not receive it?

- Unnecessary care interferes with abilities to provide necessary care.
- Many get care in resource poor settings, meaning the provision of unnecessary care is a cause of health disparities.

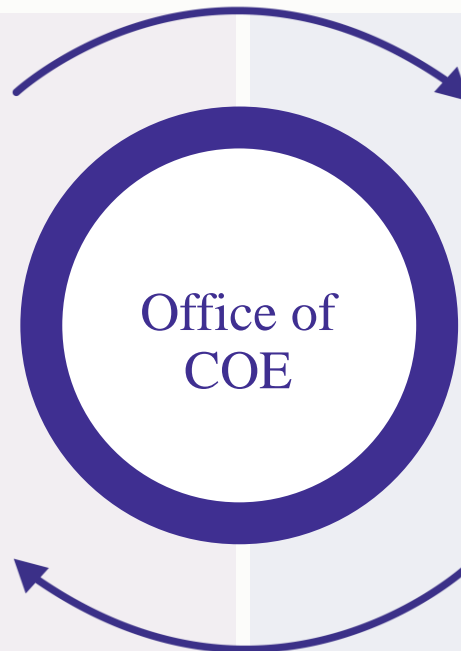
Bidirectional Interaction with Leadership Across SKCCC/JHU and Community

Community

Statewide Community
Advisory Board (CAB)
Three Community Advisory
Groups (CAG)

Maryland Cancer Council
Maryland State Legislature
Maryland Governor

Maryland Department
of Health
County and City
Health Departments
MD Cigarette Restitution
Fund



SKCCC/JHU

JHU Medicine Leaders

JHU Government
Relations

Cancer Center Director

Associate Directors

COE Steering Committee

Seven Research
Program Liaisons

Clinical Trials Office

The Johns Hopkins Medical Institutions



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