

*Maryland  
Cancer  
Collaborative*



# Maryland Cancer Collaborative Annual Meeting

September 26, 2017  
Anne Arundel Community College  
101 College Parkway  
Arnold, MD 21012

*Maryland  
Cancer  
Collaborative*



***Welcome!***

**Dr. Ken Lin Tai**  
**Director, Center for Cancer Prevention and Control**  
**Maryland Department of Health**

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# **MCC Purpose and 9 Habits of Successful Comprehensive Cancer Control Coalitions**

**Elizabeth A. Platz, ScD, MPH  
Chair, Maryland Cancer Collaborative  
September 26, 2017**

# What is the Maryland Cancer Collaborative?

- The Maryland Cancer Collaborative (MCC) is a statewide coalition of volunteers who implement the Maryland Comprehensive Cancer Control Plan.



# Background

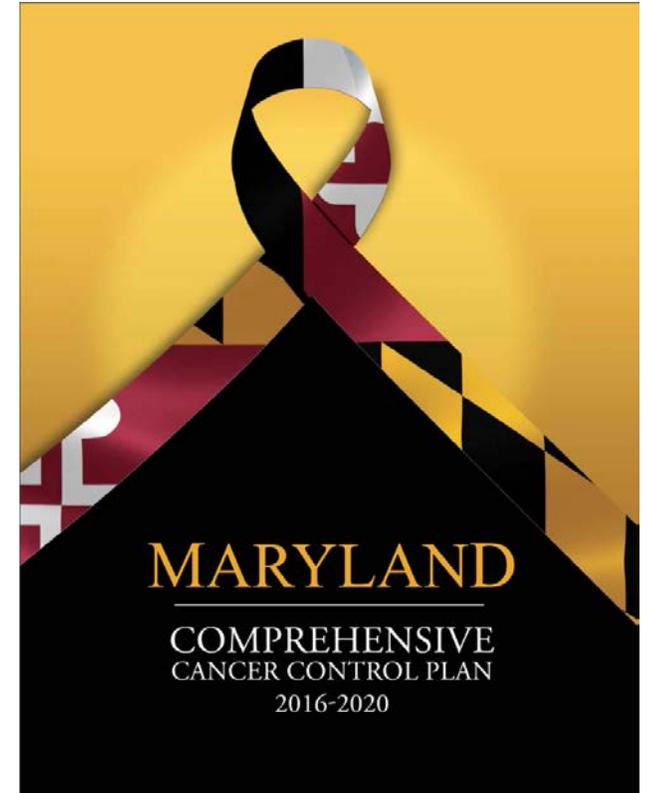
- As part of the US cancer control effort, the Centers for Disease Control and Prevention's (CDC) National Comprehensive Cancer Control Program supports US states, tribes, and territories to develop a **comprehensive cancer control plan**.
- Per CDC “*Comprehensive cancer control* is a strategic approach to preventing or minimizing the impact of cancer in communities”.

# Background

- The plans are tailored to the cancer problems experienced by the residents of those areas.
- The plans typically describe the cancer problems in their community and include goals, objectives, and strategies to achieve those objectives.
- As a requirement for receipt of CDC funding for cancer plans, recipients assemble **coalitions of stakeholder** to implement the plans.
  - ✓ That's our Maryland Cancer Collaborative!

# Goals of the Maryland Cancer Collaborative

- Work with individuals and organizations throughout the state to implement the Maryland Comprehensive Cancer Control Plan, and
- Bring together existing groups and new partners from across the state to collaborate on a common goal: **reducing the burden of cancer in Maryland.**



# **Maryland Cancer Collaborative Structure**

- Members of the MCC choose priority objectives and strategies from the Cancer Plan, and form workgroups that meet regularly to implement projects in support of those priorities.
- Current MCC workgroups are Access to Care and Services, Communications, HPV Vaccination, Hospice Utilization Data, and Tobacco Cessation Workgroup.
- The MCC is led by a Steering Committee that is composed of chairs of current workgroups and some chairs of workgroups ongoing from the prior cancer plan.

# **Anyone Interested Can Join the MCC!**

- Membership is open to individuals and organizations who are interested in taking action to reduce the burden of cancer in Maryland.
- Benefits of membership include:
  - Collaboration to increase impact and maximize resources
  - Regular updates on cancer control activities
  - Access to educational resources, training opportunities, job openings, and grant opportunities
  - Opportunity to shape MCC activities

# **MCC Members Agree to:**

- Be identified as a member of the Maryland Cancer Collaborative
- Support and utilize the Cancer Plan
- Participate in meetings regularly (except for corresponding members)
- Take specific action to implement the goals, objectives, and strategies of the Cancer Plan
- Support and participate in evaluation of implementation efforts
- Report implementation efforts and progress to MDH
- Report in-kind contributions toward MCC activities, such as student volunteer time, donated meeting space, implementation efforts, etc.
- Abide by and adhere to Approval Procedure for Communicating Beyond the Collaborative
- Abide by and adhere to Policy Ground Rules
- Bring available resources to the table (expertise, specific skills, educational materials, website and/or graphic design services, mailings, meeting rooms, student volunteers, etc.)

# MCC Member Engagement Activities

- A monthly e-update sent to members
- The creation of Cancer Plan implementation awards to highlight and recognize significant contributions to Cancer Plan implementation
- The creation of the organizational membership level within the MCC
- The launch of a Facebook page (<https://www.facebook.com/MarylandCancerCollaborative>)
- <http://phpa.dhmh.maryland.gov/cancer/cancerplan/Pages/collaborative.aspx>



MCC E-Update  
September 2017

Greetings!

Below you will find the September Maryland Cancer Collaborative E-Update.

This update includes information about Maryland Cancer Collaborative (MCC) meetings, progress, and other pertinent information. Please read through the entire e-mail because there are lots of updates. Please forward to your partners and local cancer coalitions!

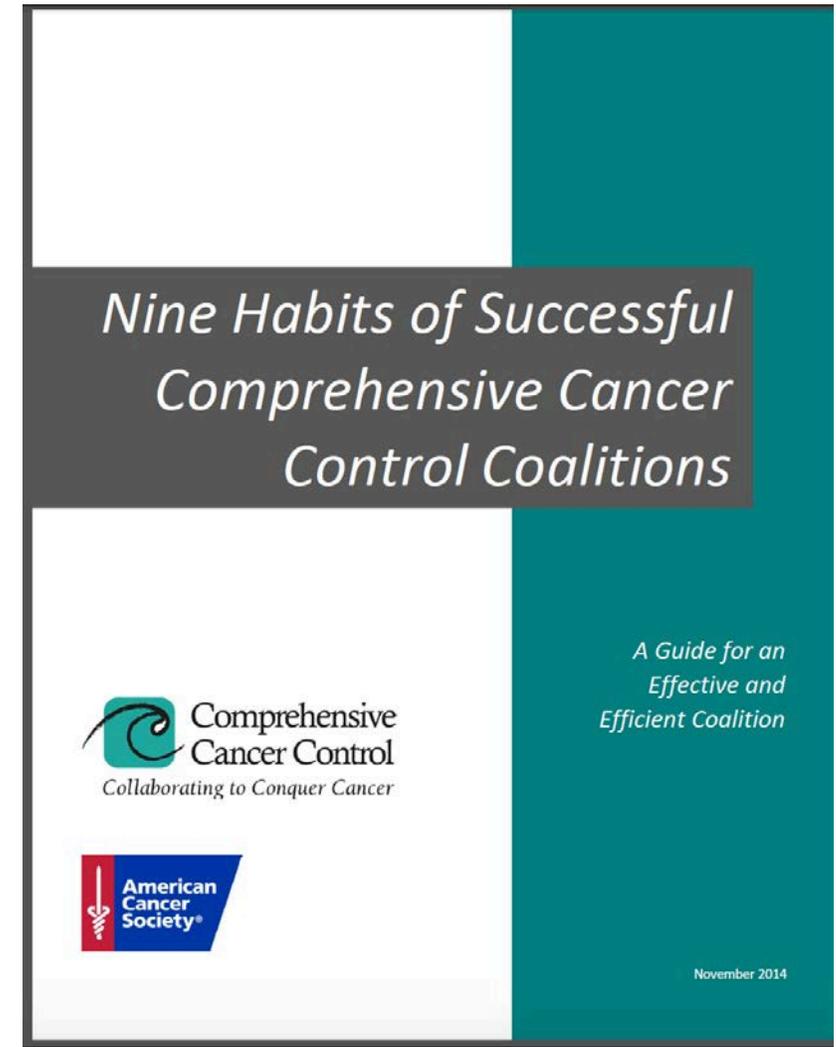
**Reminder: The MCC is on Facebook!**

Don't forget to follow our page for more frequent updates on cancer prevention and control- you don't have to have a Facebook account to view the page! However if you are on Facebook and "like" the MCC, you can post updates to the page and share information with other followers.

A screenshot of the Maryland Cancer Collaborative Facebook page. The page header shows the name "Maryland Cancer Collaborative" and a search bar. The main content is a post from September 13 at 8:44am. The post text reads: "The guidelines for women aged 30 to 65 years were changed because the existing literature shows that screening with cytology alone and hrHPV testing alone "offer a reasonable balance between benefits and harms" in this age group. Modeling and clinical trial evidence also suggest that cotesting nearly doubles the number of follow-up tests and does not lead to increased detection of cervical intraepithelial neoplasia 3+ or cervical cancer as compared with screening with hrHPV testing alone." Below the text is a link to a Medscape article: "http://www.medscape.com/viewarticle/885542". The article image shows a blue cervical brush and a white container labeled "10 ml". The article title is "USPSTF Has New Draft Guidance for Cervical Cancer Screening" and the text below it says "The only major change is that the USPSTF no longer recommends testing in women 30 years and older." The Medscape logo is visible at the bottom right of the article image.

# Increasing MCC Effectiveness in Achieving our Cancer Plan Goals

- “The Nine Habits were developed utilizing information from an evaluation in 2012 that identified the attributes of high-performing CCC Programs and with input from CCC coalition members and many comprehensive cancer control experts throughout the nation.”



# **Habit 1: Empowering Leadership**

- Strong coalition leaders show their leadership by welcoming decision making by their members.
- This empowerment builds trust and encourages accountability among members.

## **Habit 2: Shared Decision Making**

- Shared decision making guides the coalition.
- Steps are put in place so that no one organization overpowers the decisions made by the coalition.

## **Habit 3: Value-added Collaboration**

- Members acknowledge and appreciate the benefits of forging alliances and working on efforts that might not be prioritized without the coalition.

## **Habit 4: Dedicated Staff**

- Because the members of the coalition are volunteers, who often hold leadership positions within their own organizations, the burden of additional work for coalition members needs to be recognized and partially handled by dedicated staff.

# **Habit 5: Diversified Funding**

- Diversified funding can create wider support of and involvement in the coalition's efforts by a greater number of stakeholders and can allow the coalition to remain viable if one source of funding disappears.

# **Habit 6: Effective Communication**

- Coalition communication is a consistent and purposeful dialogue that uses all appropriate channels for discussion and feedback, including email, websites, phone calls, meetings, and newsletters.

# **Habit 7: Clear Roles and Accountability**

- Coalition members understand their roles and feel accountable for accomplishing agreed-upon tasks.
- Members understand the mission of the coalition and how they, as individuals, can help achieve that mission.
- Coalition member roles are defined and communicated both verbally and in written documents.

## **Habit 8: Flexible Structure**

- The coalition structure is flexible, adapts to challenges, and facilitates implementation of the cancer plan.
- The coalition strives to operate in a way that maximizes the effective and efficient work of its coalition members.

# **Habit 9: Priority Work Plans**

- Priorities are chosen and work plans are developed around evidence-based strategies.
- Work plans clearly articulate the expected outcomes, methods to reach those outcomes, responsibilities, and timelines.
- The work plans are used to guide actions and are revised as challenges and opportunities arise.

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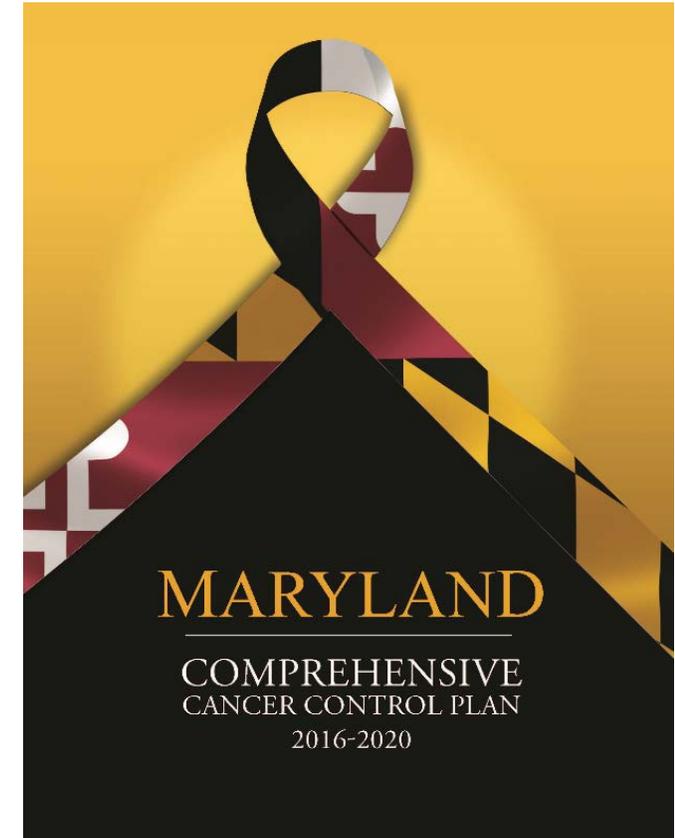


# **The Maryland Cancer Collaborative Member Satisfaction Survey**

**Brian Mattingly  
Director, MCCCCP  
September 26, 2017**

# Maryland Cancer Collaborative

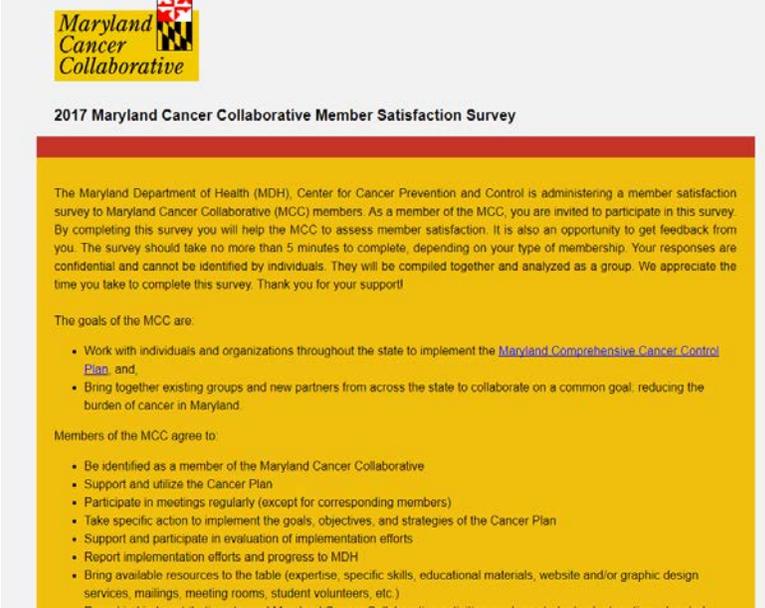
The Maryland Cancer Collaborative (MCC) is a network of volunteers who come together to implement the Maryland Comprehensive Cancer Control Plan.



# MCC Annual Member Satisfaction Survey

## Survey Goals:

- To evaluate the extent to which partners are satisfied with the Collaborative
- To collect feedback to improve member satisfaction and the Collaborative
- To inform the Collaborative Steering Committee
- To provide an opportunity for members to be heard



The screenshot shows the header of the survey with the Maryland Cancer Collaborative logo. Below the header, the survey title is "2017 Maryland Cancer Collaborative Member Satisfaction Survey". The main text explains that the Maryland Department of Health (MDH), Center for Cancer Prevention and Control is administering the survey to MCC members. It states that the survey should take no more than 5 minutes to complete and that responses are confidential. The goals of the MCC are listed as:

- Work with individuals and organizations throughout the state to implement the [Maryland Comprehensive Cancer Control Plan](#) and,
- Bring together existing groups and new partners from across the state to collaborate on a common goal: reducing the burden of cancer in Maryland.

Members of the MCC agree to:

- Be identified as a member of the Maryland Cancer Collaborative
- Support and utilize the Cancer Plan
- Participate in meetings regularly (except for corresponding members)
- Take specific action to implement the goals, objectives, and strategies of the Cancer Plan
- Support and participate in evaluation of implementation efforts
- Report implementation efforts and progress to MDH
- Bring available resources to the table (expertise, specific skills, educational materials, website and/or graphic design services, mailings, meeting rooms, student volunteers, etc.)
- Report in-kind contributions toward Maryland Cancer Collaborative activities, such as student volunteer time, donated

# Result Highlights

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## Description of Respondent Workgroup Representation

Workgroup	%
Access to Care and Services Workgroup	21%
Tobacco Cessation Workgroup	19%
HPV Vaccination Workgroup	14%
Communications Workgroup	11%
Hospice Utilization Data Workgroup	9%
Former Patient Navigation Workgroup Member	5%
Corresponding Member**	37%
Unsure	7%

\*The percentage total is greater than 100% because some members serve on multiple workgroups.

\*\*Corresponding members are those who did not participate in any of the MCC workgroups, however, they received email communications/updates from the MCCCCP.

# Result Highlights

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- The majority (59%) of respondents indicated that they have been with the Collaborative for at least 2 years.
- The top three reasons why the respondents joined the Collaborative were to:
  - Show support for the Maryland Comprehensive Cancer Plan;
  - Collaborate and network with other cancer professionals/agencies/organizations; and
  - Work on the implementation of the Maryland Comprehensive Cancer Control Plan.

# Result Highlights

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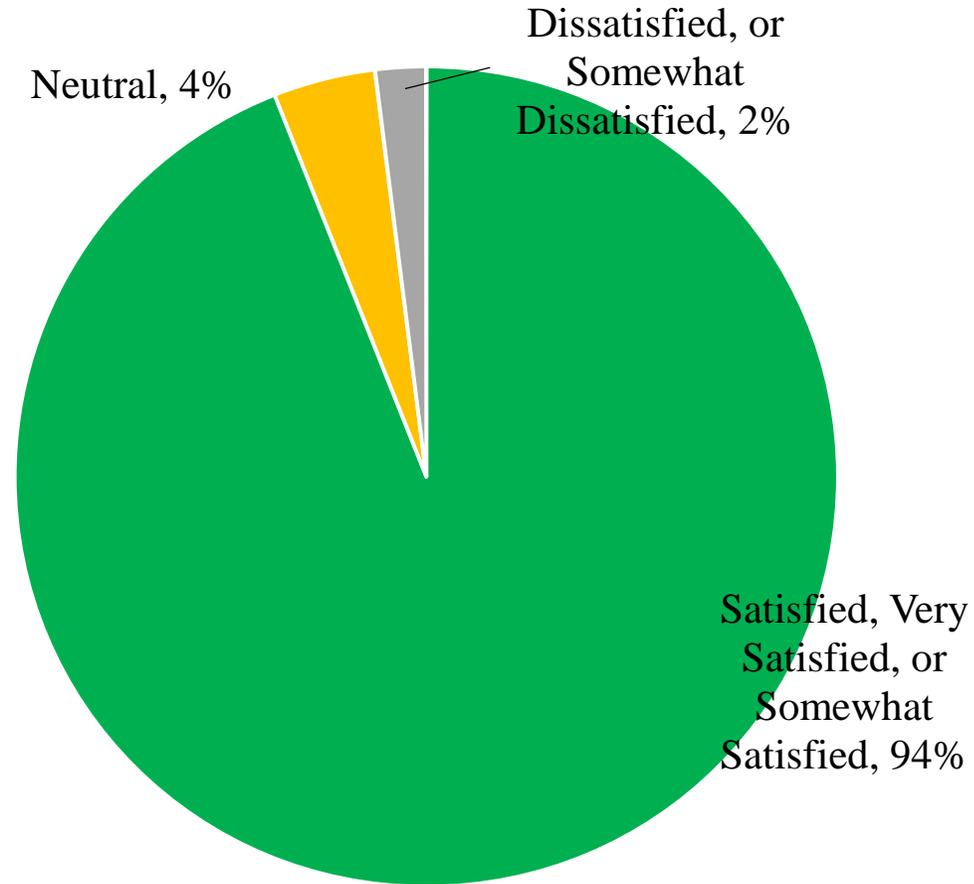
## Benefits of Memberships

<b>Participation in the Collaborative has helped develop relationships and partnerships with other individuals and/or organizations.</b>	79%
<b>Participation in the Collaborative has increased my knowledge of cancer information, and available resources and services for cancer control in Maryland.</b>	79%
<b>Participation in the Collaborative has encouraged sharing of best practices among individuals and organizations.</b>	57%
<b>Other*</b>	7%

# Result Highlights

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- Overall, 94% of the respondents were very satisfied, satisfied, or somewhat satisfied with the Collaborative.



# Result Highlights

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## Comments and Areas for Improvement

- **Distance to meetings is often burdensome**  
*MCC will continue to support the use of teleconference in lieu of in-person meetings, however, when there is an in-person meeting, the MCC will attempt to hold meetings at a centralized location (e.g., at Anne Arundel Community College).*
- **Provide more engagement opportunities**  
*MCC will continue to encourage members to interact with one another via workgroup meetings and communications, the MCC Annual Meeting, the MCC Facebook page, and E-Update.*
- **Members enjoy the MCC E-Update**  
*Contains very timely and relevant information*

# Result Highlights

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## Challenges from the Survey:

- Low Response Rate

Past suggestions include:

- decreasing survey length overall

- decreasing survey length based on type of membership, and

- provide greater explanation.

- Results may not provide an accurate representation of the entire MCC membership base due to low response rate.

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***Thank you!***

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# Update on Cancer Burden in Maryland

Elizabeth A. Platz, ScD, MPH  
Chair, Maryland Cancer Collaborative  
September 26, 2017

# Maryland Demographics, 2016 (US Census Estimates)

**Residents**

**6,016,447**

≥65 years old	14.6%
Female	51.6%
White	59.3%
Black	30.7%
American Indian/Alaska Native	0.6%
Asian	6.6%
Native Hawaiian/Pacific Islander	0.1%
Two or More Races	2.8%
Hispanic or Latino	9.8%

≥High school graduate (≥25 years old)	89.4%
No health insurance (<65 years old)	7.0%
Median household income	\$74,551
Poverty	9.7%
Veterans	403,900
Foreign born	14.5%
Language other English spoken at home (>5 years old)	17.2%
With a disability (<65 years old)	7.1%

<https://www.census.gov/quickfacts/fact/table/MD#viewtop>

## All Cancer Sites Incidence and Mortality Rates by Gender and Race, Maryland and the United States, 2014

<b><i>Incidence 2014</i></b>	<b><i>Total*</i></b>	<b><i>Males</i></b>	<b><i>Females</i></b>	<b><i>Whites</i></b>	<b><i>Blacks</i></b>	<b><i>Other</i></b>
<b>New Cases (count)</b>	29,912	14,673	15,234	20,530	8,043	1,014
<b>MD Incidence Rate</b>	442.0	481.4	416.3	450.6	443.6	247.4
<b>U.S. SEER Rate</b>	428.6	463.5	406.7	437.5	431.8	279.1
<b><i>Mortality 2014</i></b>	<b><i>Total</i></b>	<b><i>Males</i></b>	<b><i>Females</i></b>	<b><i>Whites</i></b>	<b><i>Blacks</i></b>	<b><i>Other</i></b>
<b>Deaths (count)</b>	10,759	5,445	5,314	7,433	3,008	318
<b>MD Mortality Rate</b>	161.8	191.5	141.7	160.6	181.0	85.7
<b>U.S. Mortality Rate</b>	161.3	193.6	137.9	161.9	186.4	N/A

Rates are per 100,000 population and are age-adjusted to 2000 U.S. standard population

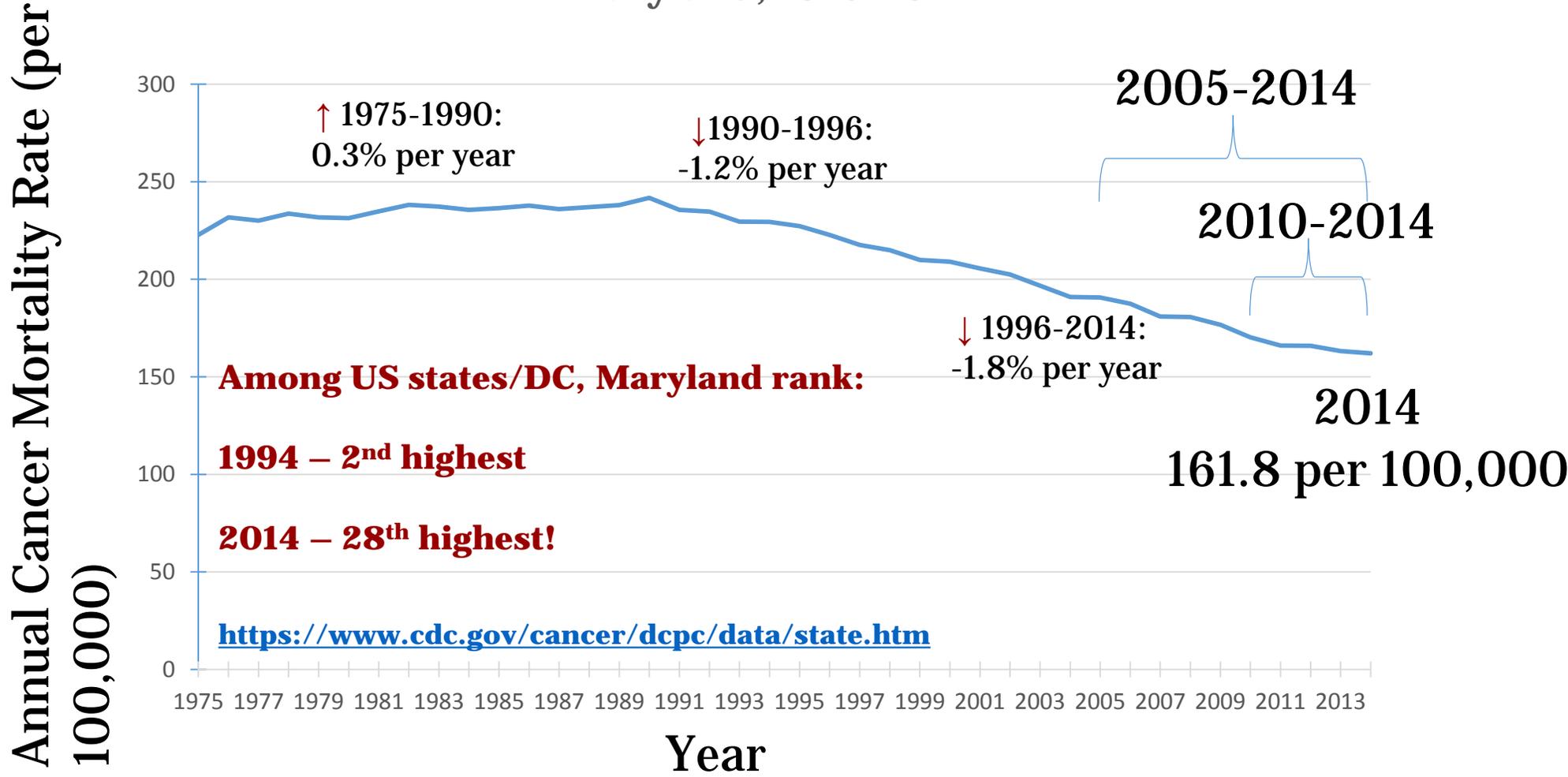
\* Total also includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race, and unknown county

Source: Maryland Cancer Registry  
 U.S. SEER, SEER\*Stat  
 NCHS Compressed Mortality File in CDC WONDER, 2014  
 U.S. SEER, Cancer Statistics Review

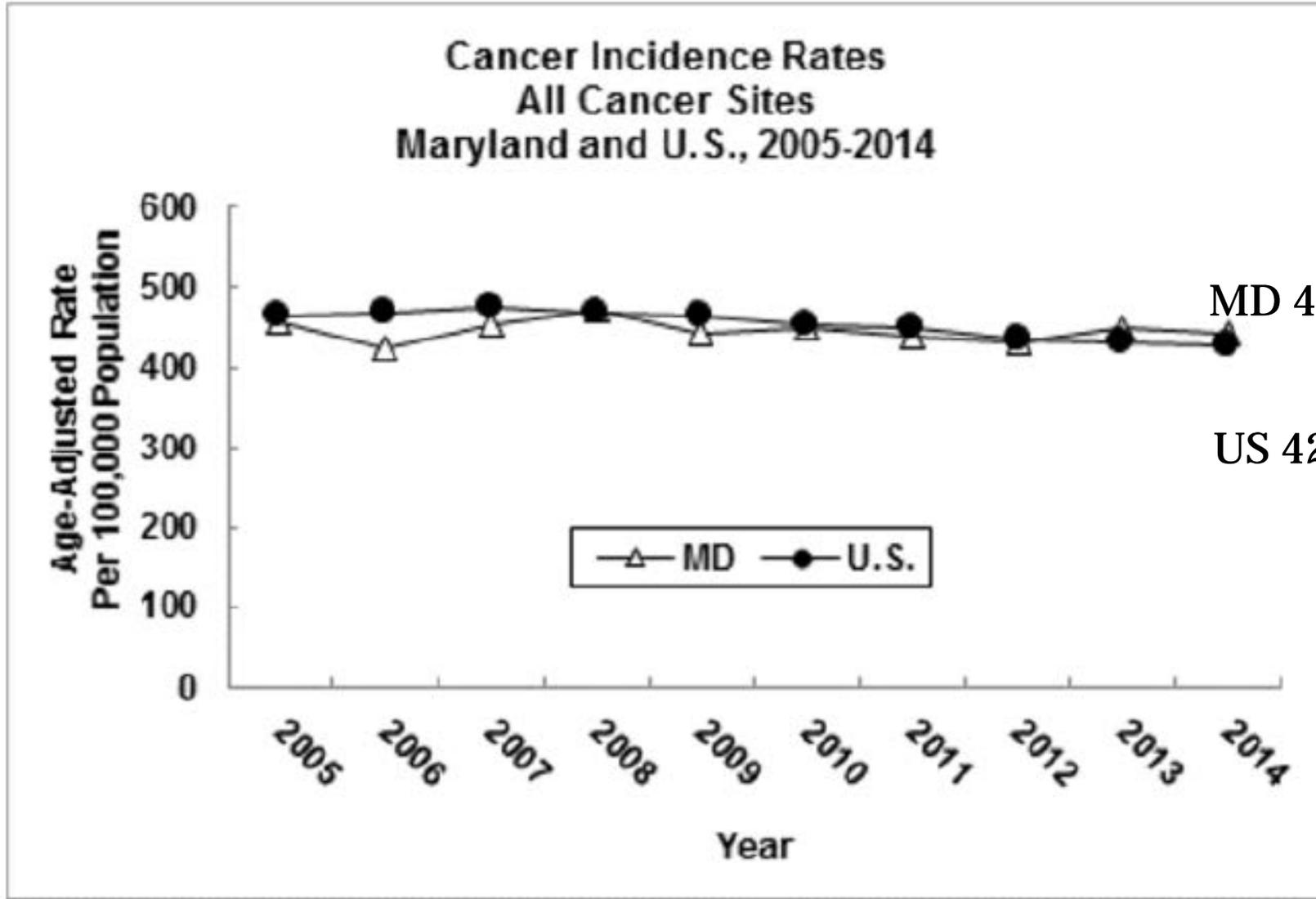


# 40-Year Maryland Cancer Mortality Rate Trends are Remarkable!

Annual Cancer Mortality Rate  
Maryland, 1975-2014



# Maryland Cancer Incidence Rates have Decreased More Slowly than the US Rates, 2005-2014



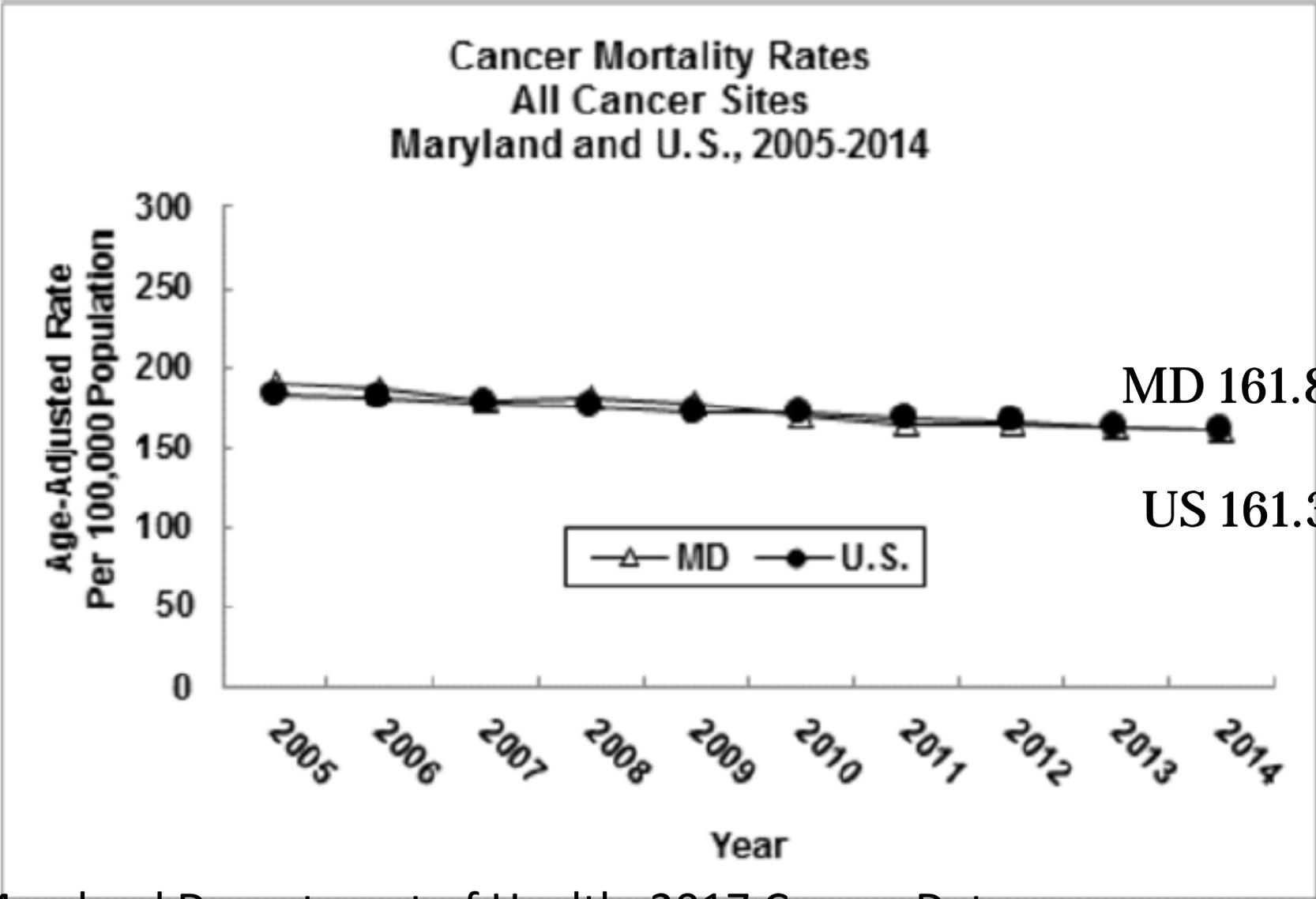
10-year, cancer incidence rates **2005 to 2014:**

MD - decreased 0.2% per year

US - decreased 1.2% per year

Source: Maryland Cancer Registry  
U.S. SEER, SEER\*Stat

# Maryland Cancer Mortality Rates have been Similar to the US and have Decreased, 2005-2014



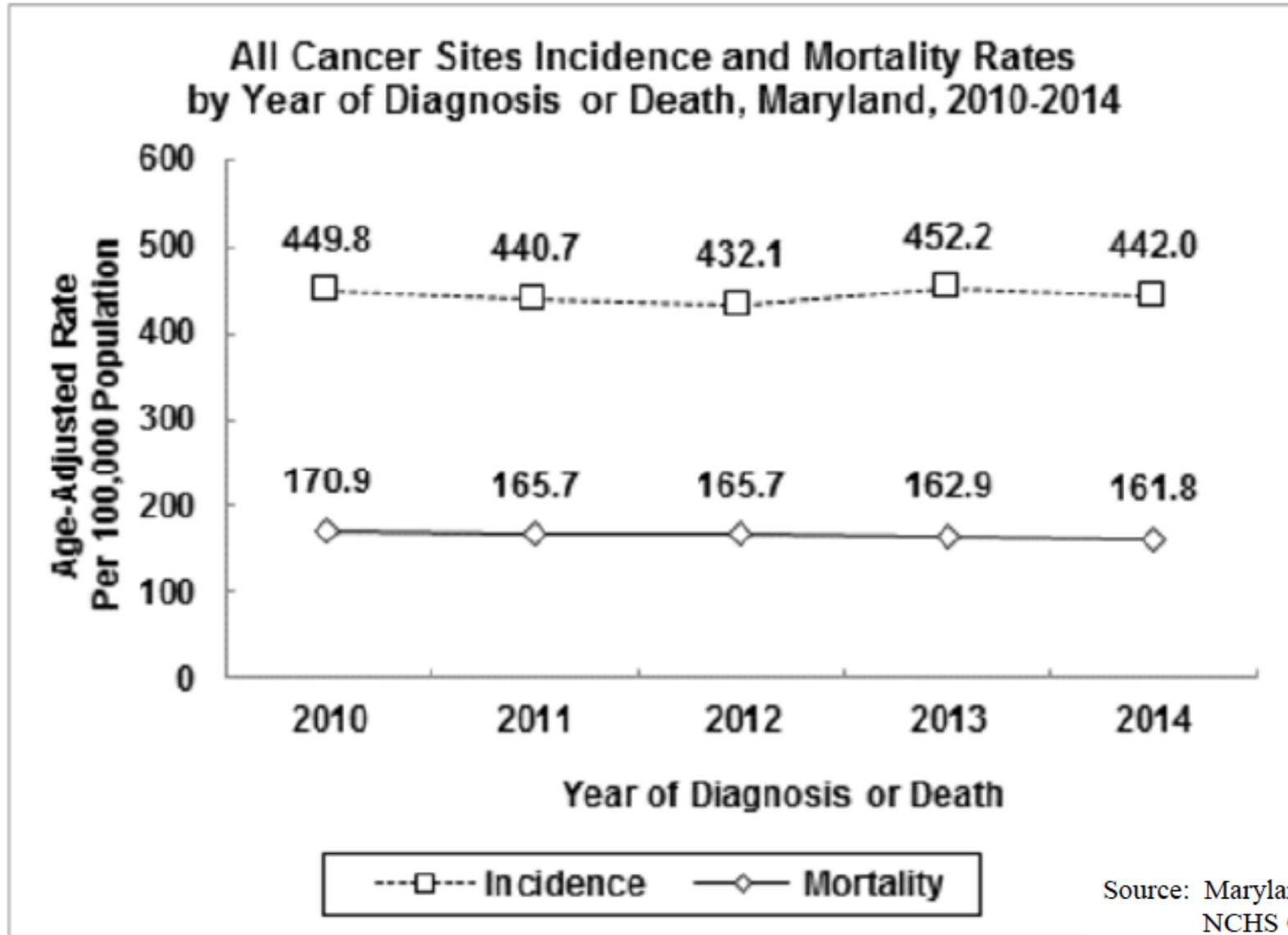
10-year, cancer mortality rates **2005 to 2014:**

MD - decreased 1.9% per year

US - decreased 1.4% per year

Source: NCHS Compressed Mortality File in CDC WONDER, 2005-2007, 2012-2014 (MD)  
Maryland Vital Statistics Administration from MATCH, 2008-2010 (MD)  
Maryland Vital Statistics Administration, 2011 (MD)  
NCHS Compressed Mortality File in CDC WONDER, 2005-2008 (U.S.)  
U.S. SEER, Cancer Statistics Review, 2009-2014 (U.S.)

# We Need to Bend 2010-2014 Cancer Rates Downward!



5-year, cancer incidence rate **2010 to 2014:**

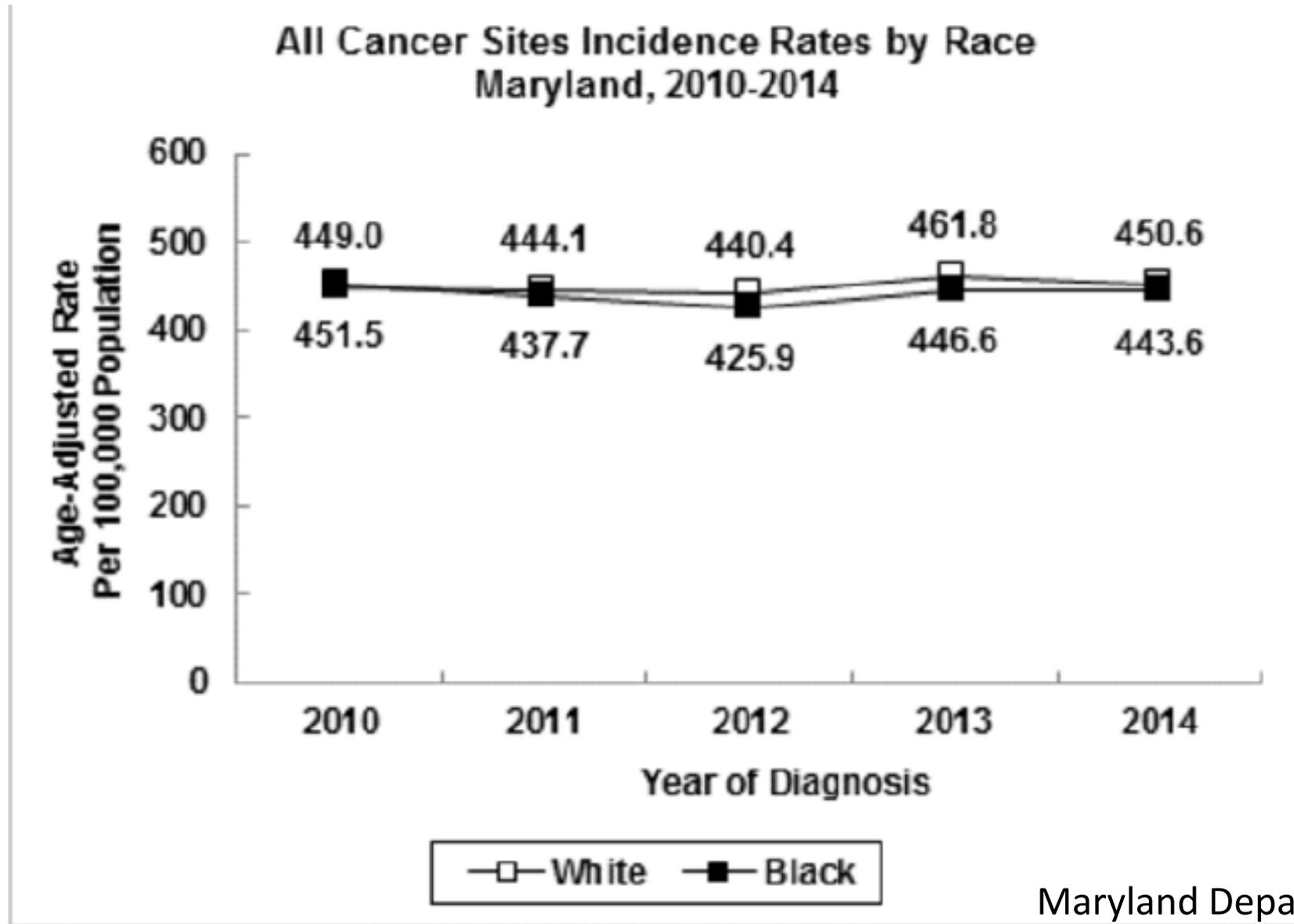
MD - decreased 0.1% per year

5-year, cancer mortality rate **2010 to 2014:**

MD - decreased 1.3% per year

Source: Maryland Cancer Registry  
NCHS Compressed Mortality File in CDC WONDER, 2012-2014  
Maryland Vital Statistics Administration from MATCH, 2010  
Maryland Vital Statistics Administration, 2011

# Cancer Incidence Rates are Similar in Black and White Maryland Residents



**5-year, cancer incidence rate, 2010 to 2014, by race:**

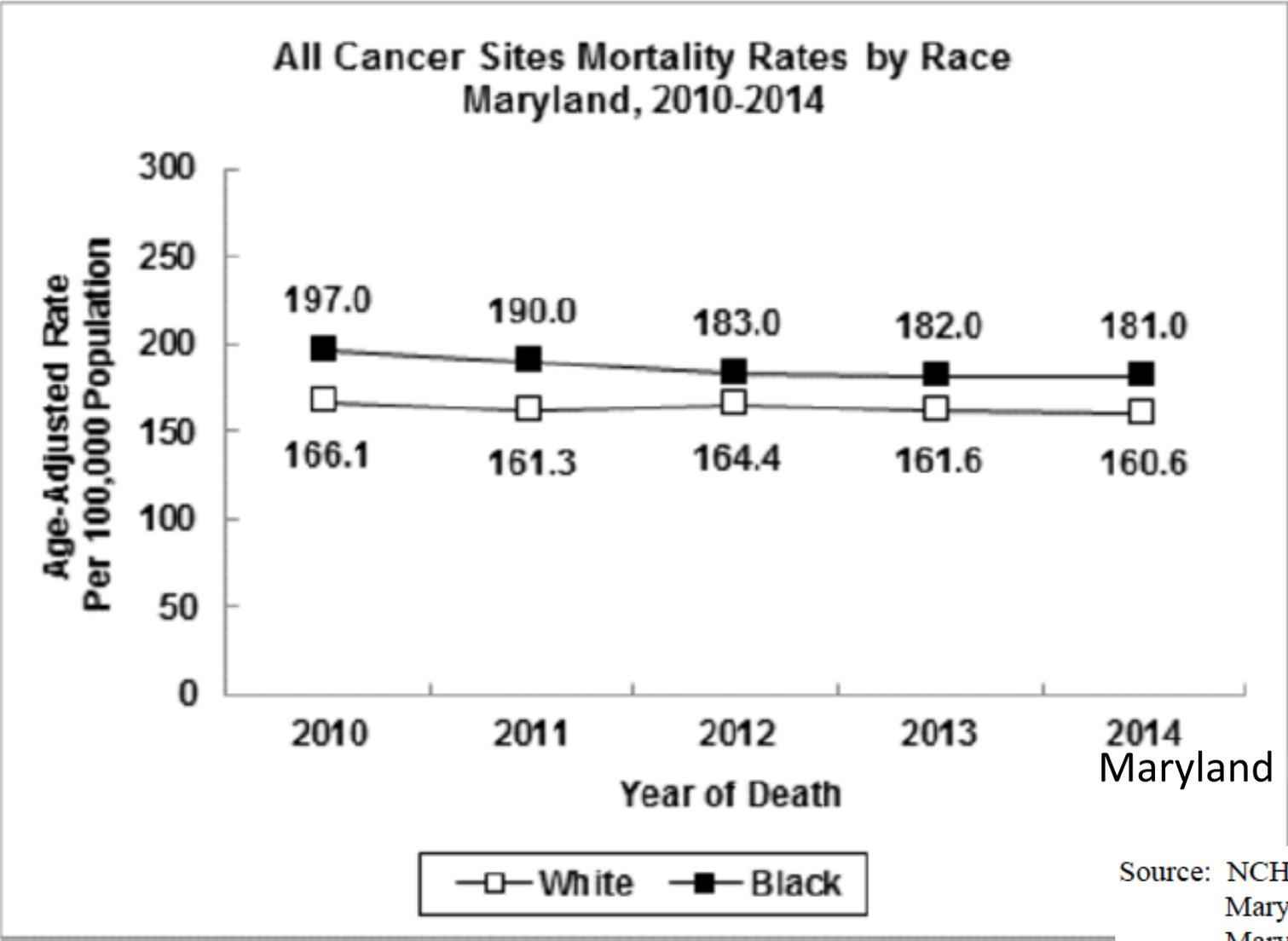
White - increased 0.5% per year

Black - decreased 0.2% per year

Source: Maryland Cancer Registry

Maryland Department of Health, 2017 Cancer Data

# Cancer Mortality Rates are Higher in Black than White Maryland Residents, but the Disparity Gap is closing!



5-year, cancer mortality rate, 2010 to 2014, by race:

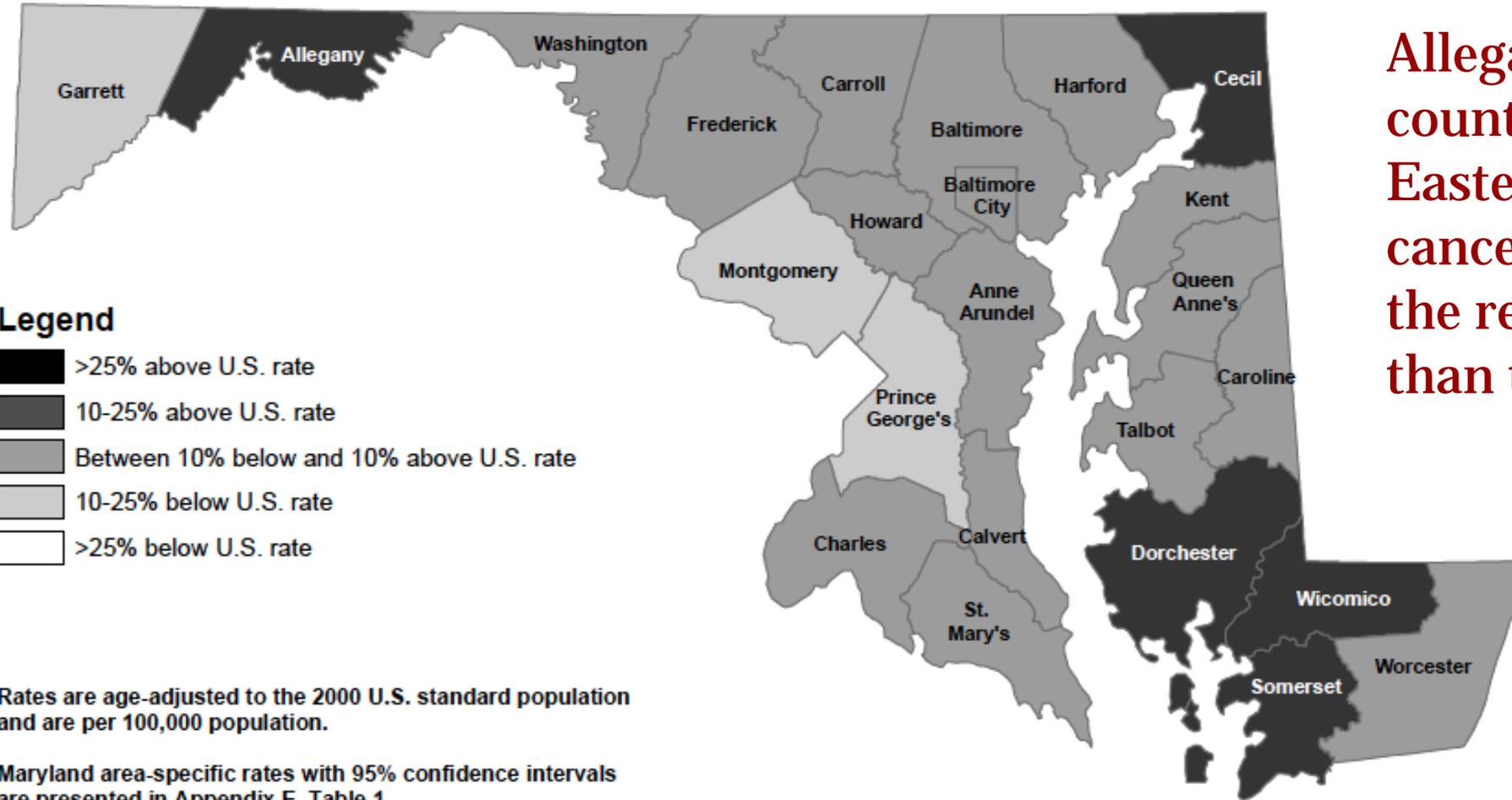
White - decreased 0.7% per year

Black – decreased 2.1% per year

Maryland Department of Health, 2017 Cancer Data

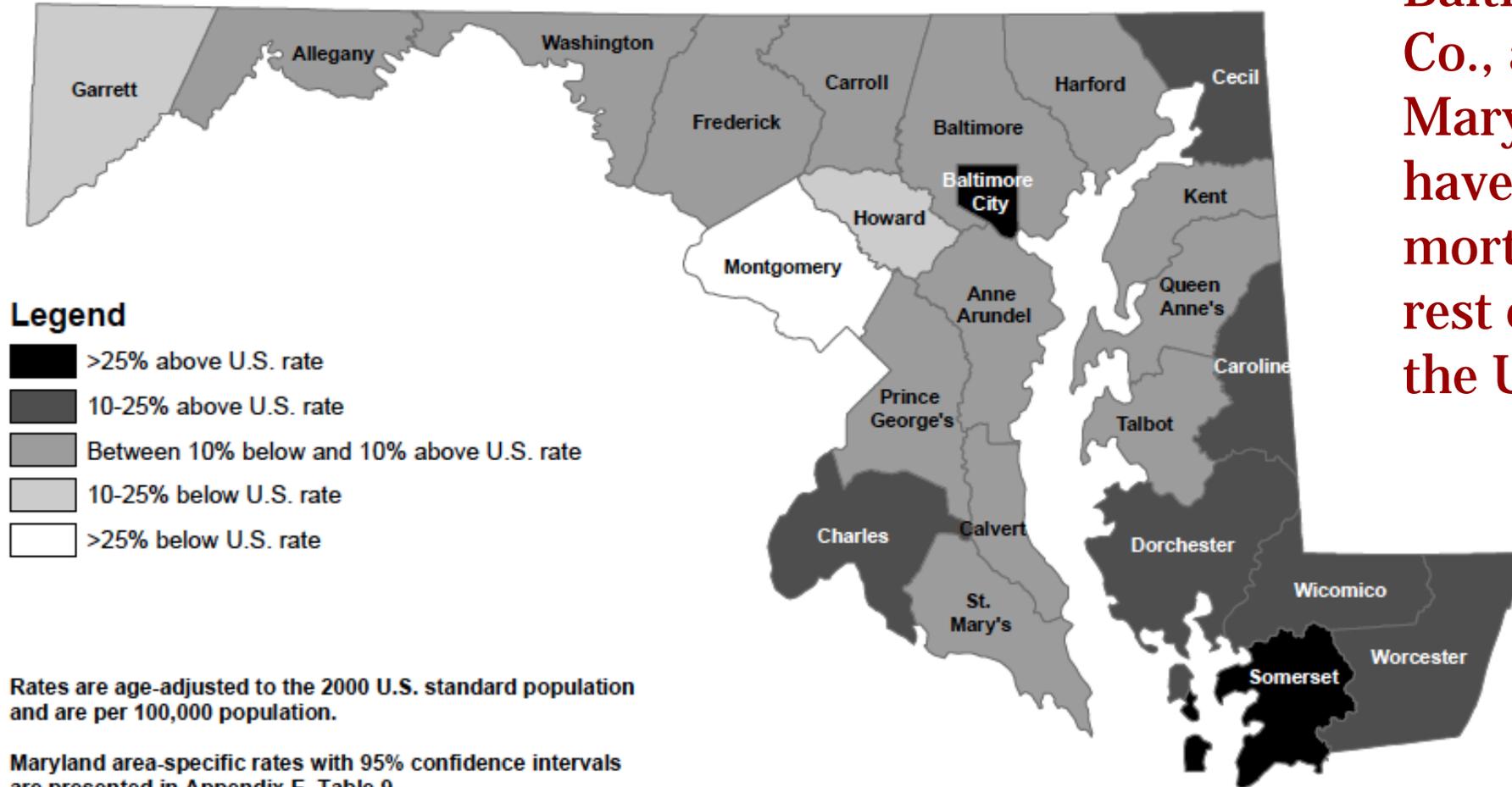
Source: NCHS Compressed Mortality File in CDC WONDER, 2012-2014  
Maryland Vital Statistics Administration from MATCH, 2010  
Maryland Vital Statistics Administration, 2011

# Maryland All Cancer Sites Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2010-2014



**Allegany Co, and some counties on Maryland's Eastern Shore have higher cancer incidence rates than the rest of Maryland and than the US.**

## Maryland All Cancer Sites Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2010-2014



Baltimore City, Charles Co., and some counties on Maryland's Eastern Shore have higher cancer mortality rates than the rest of Maryland and than the US.

Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 population.

Maryland area-specific rates with 95% confidence intervals are presented in Appendix E, Table 9.

U.S. all cancer sites mortality rate, 2010-2014: 166.1 / 100,000

Maryland all cancer sites mortality rate, 2010-2014: 165.4 / 100,000

Source: NCHS Compressed Mortality File in CDC WONDER  
U.S. SEER, Cancer Statistics Review

Maryland Department of Health, 2017 Cancer Data

# Maryland - 23 counties and Baltimore City

All Cancer Sites  
All Races, Both Sexes

	Above US Rate	Similar to US Rate	Below US Rate
Rising Trend	Priority 1: rising ↑ and above ↑ [none]	Priority 2: rising ↑ and similar = [none]	Priority 3: rising ↑ and below ↓ [none]
Stable Trend	Priority 4: stable → and above ↑ <div style="border: 2px solid red; padding: 2px; display: inline-block;">Baltimore City</div>	Priority 6: stable → and similar = [none]	Priority 7: stable → and below ↓ Garrett County
Falling Trend	Priority 5: falling ↓ and above ↑ Cecil County Charles County Dorchester County Somerset County Wicomico County  <div style="text-align: center; font-size: 1.5em; font-weight: bold; color: blue;">Good news!</div>	Priority 8: falling ↓ and similar = Maryland Allegany County Anne Arundel County Baltimore County Calvert County Caroline County Carroll County Frederick County Harford County Kent County Prince Georges County Queen Annes County St. Marys County Talbot County Washington County Worcester County  <div style="text-align: center; font-size: 1.5em; font-weight: bold; color: blue;">Good news!</div>	Priority 9: falling ↓ and below ↓ Howard County Montgomery County  <div style="text-align: center; font-size: 1.5em; font-weight: bold; color: blue;">Good news!</div>

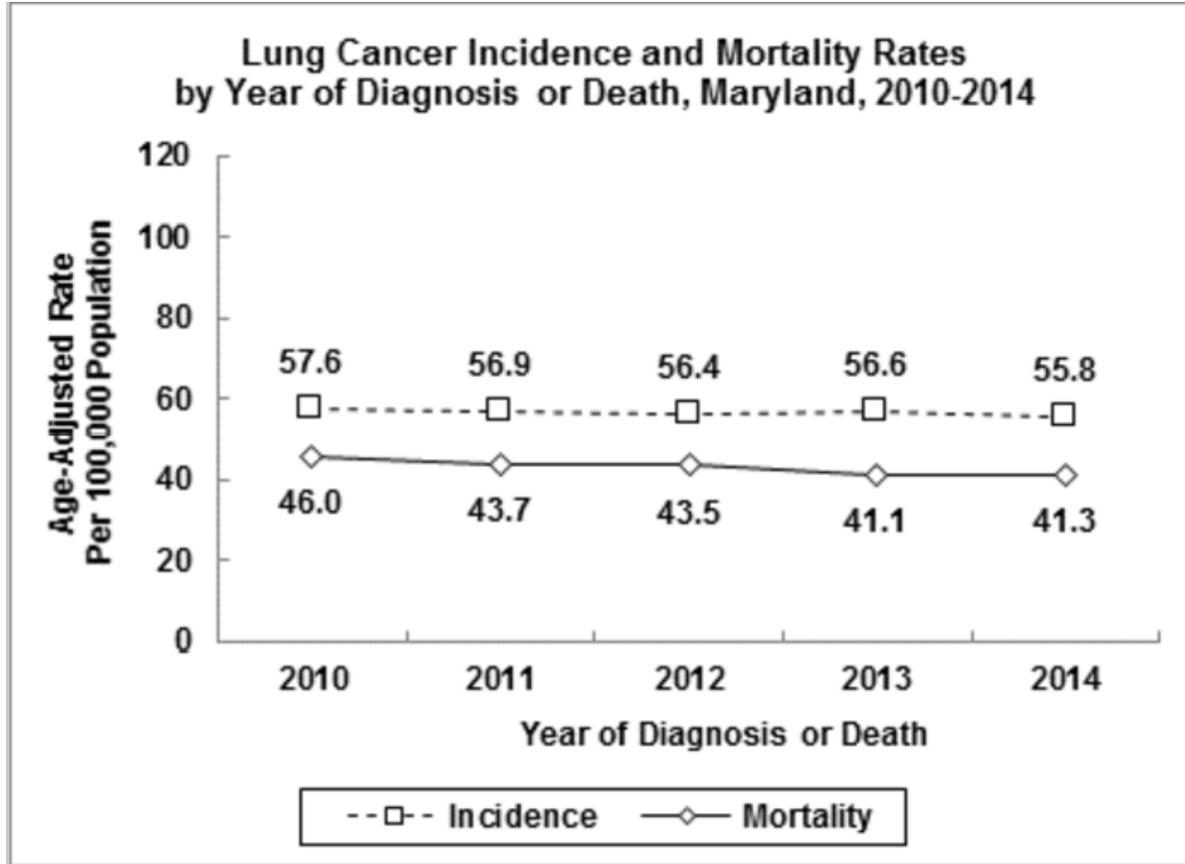
**Notes:**

Created by statecancerprofiles.cancer.gov on 09/24/2017 8:47 am.

# **High burden cancers and cervical cancer**

- 2010-2014 data
- Think about opportunities for implementing the Cancer Plan to reduce the burden of these cancers.

# Lung Cancer Incidence and Mortality Rates

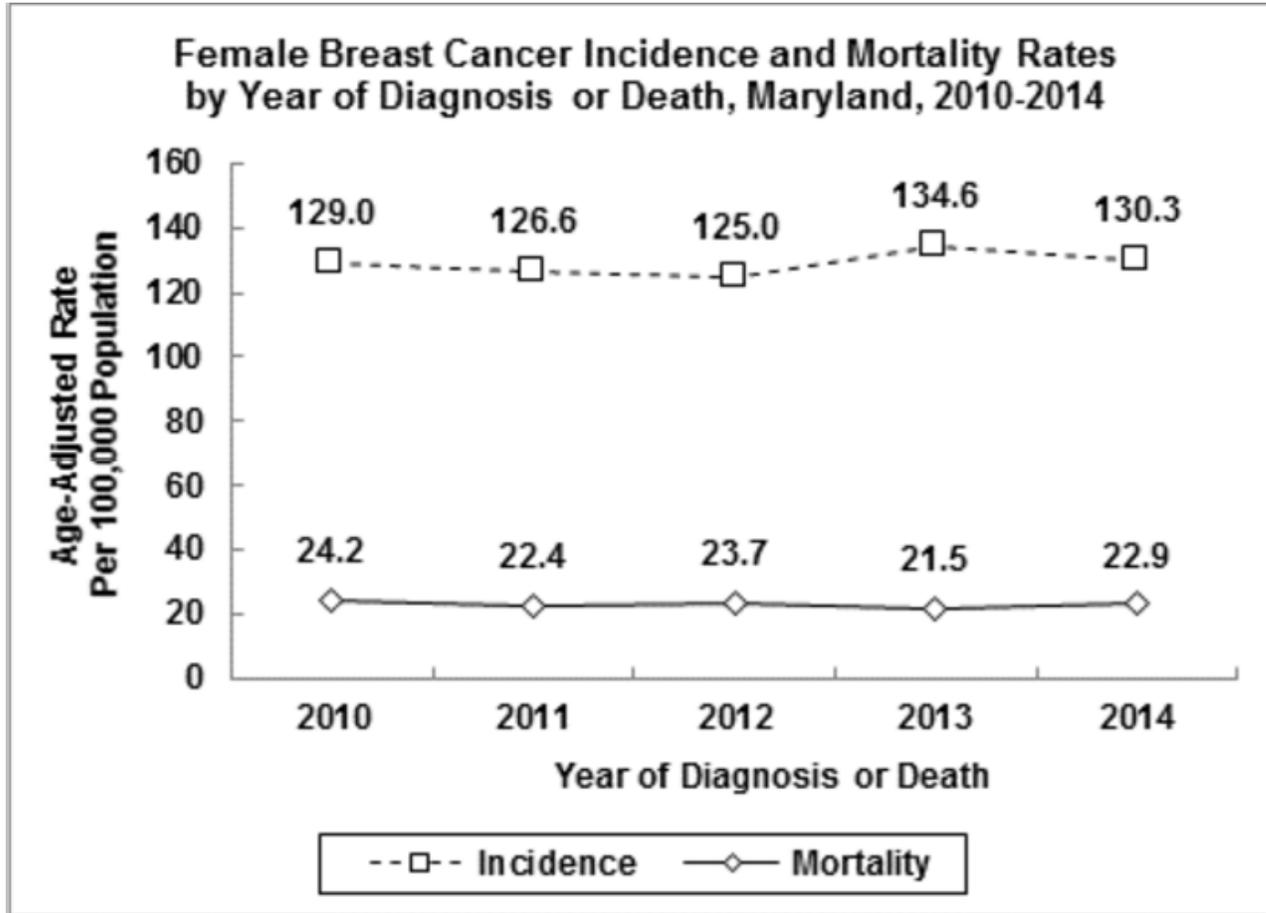


- 5-year, lung cancer incidence rate, **2010 to 2014:**
- MD - ↓ 0.7% per year
- 5-year, lung cancer mortality rate, **2010 to 2014:**
- MD - ↓ 2.7% per year

Source: Maryland Cancer Registry  
NCHS Compressed Mortality File in CDC WONDER, 2012-  
2014 Maryland Vital Statistics Administration from MATCH,  
2010 Maryland Vital Statistics Administration, 2011



# Female Breast Cancer Incidence and Mortality Rates



**5-year, breast cancer incidence rate, 2010 to 2014:**

MD -  $\uparrow$  0.8% per year

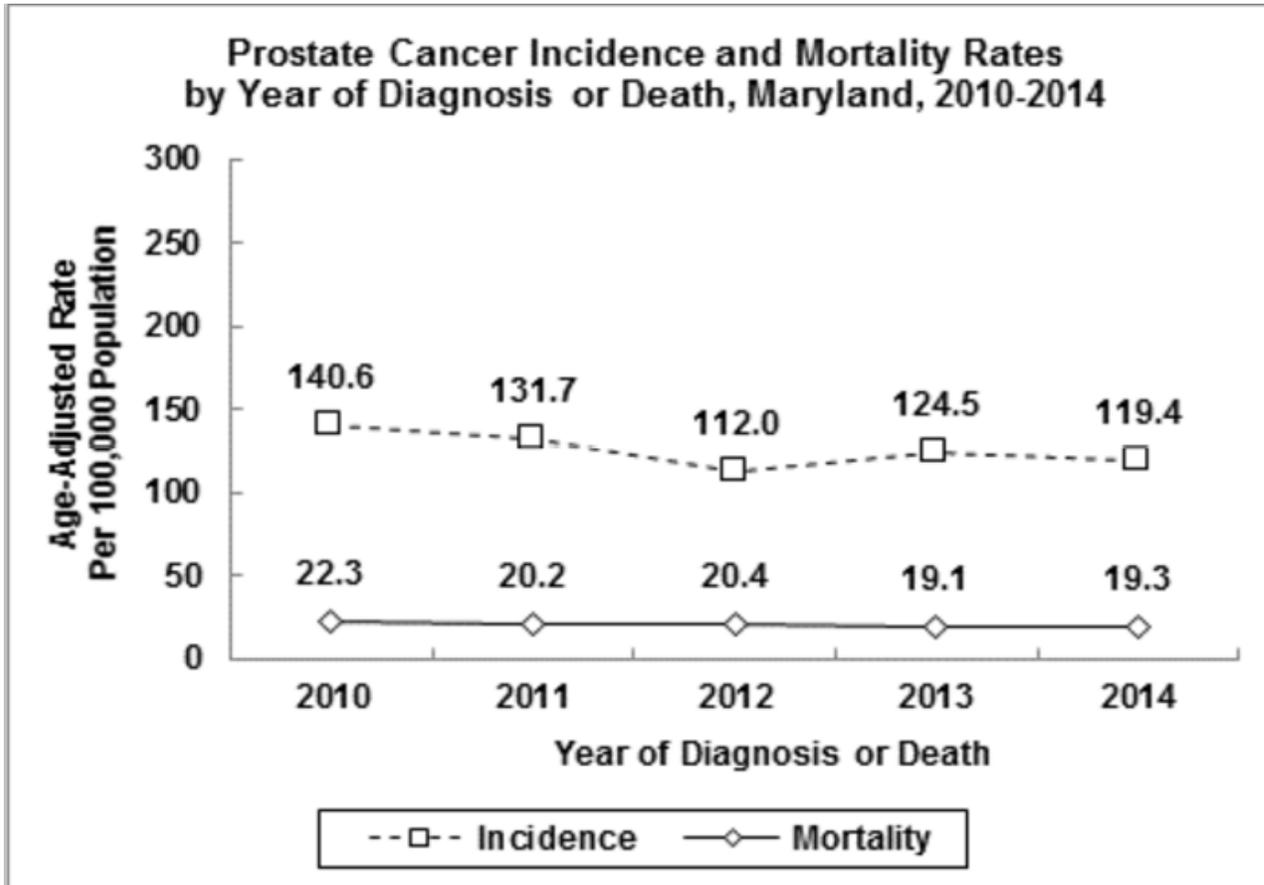
**5-year, breast cancer mortality rate, 2010 to 2014:**

MD -  $\downarrow$  1.5% per year

Maryland Department of Health, 2017 Cancer Data

- Source: Maryland Cancer Registry  
NCHS Compressed Mortality File in CDC WONDER, 2012-2014  
Maryland Vital Statistics Administration from MATCH, 2010 Maryland Vital Statistics Administration, 2011

# Prostate Cancer Incidence and Mortality Rates

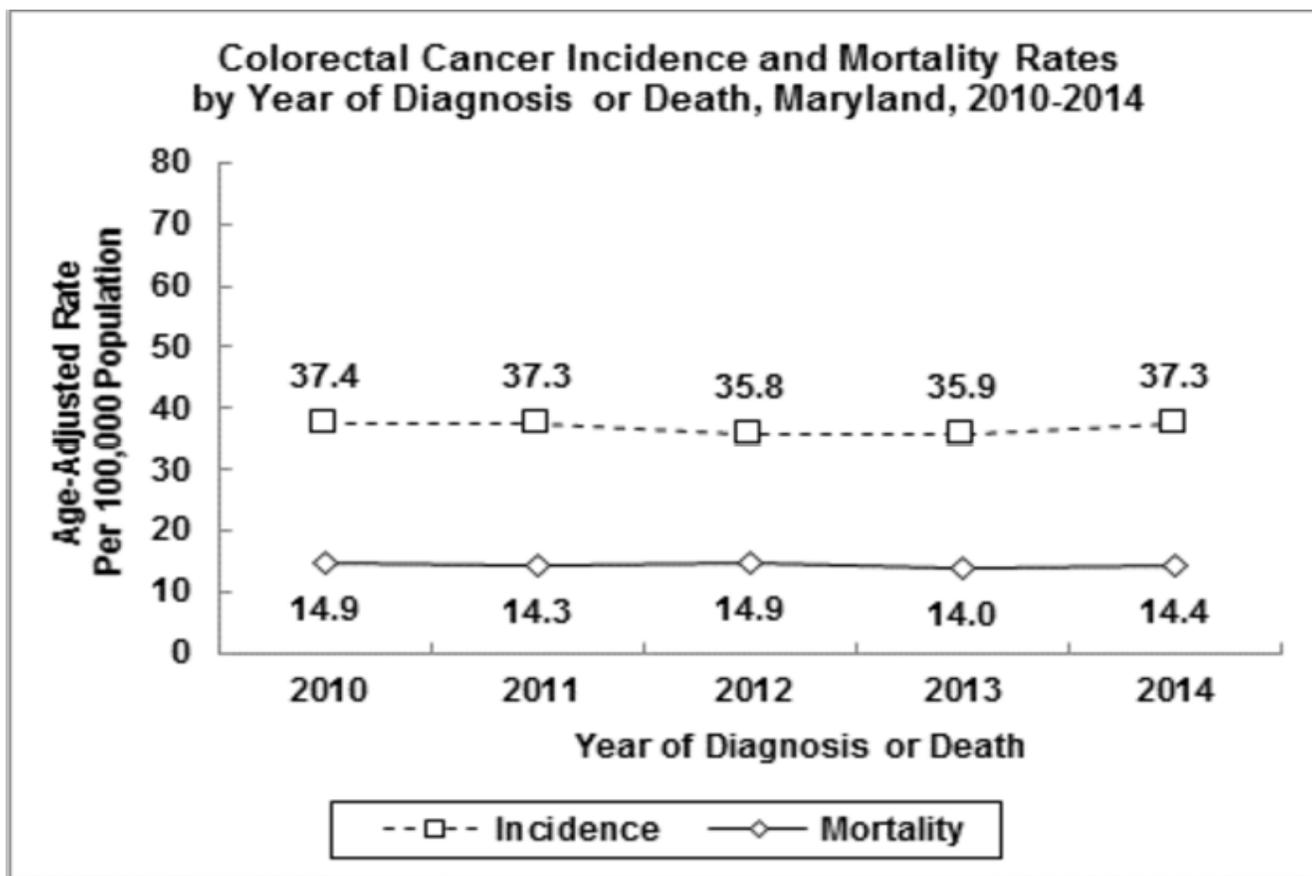


- **5-year, prostate cancer incidence rate, 2010 to 2014:**
- MD - ↓ 3.8% per year
- **5-year, prostate cancer mortality rate, 2010 to 2014:**
- MD - ↓ 3.4% per year

Source: Maryland Cancer Registry  
NCHS Compressed Mortality File in CDC WONDER, 2012-2014  
Maryland Vital Statistics Administration from MATCH, 2010  
Maryland Vital Statistics Administration, 2011

Maryland Department of Health, 2017 Cancer Data

# Colorectal Cancer Incidence and Mortality Rates



**5-year, colorectal cancer incidence rate, 2010 to 2014:**

MD - ↓ 0.74% per year

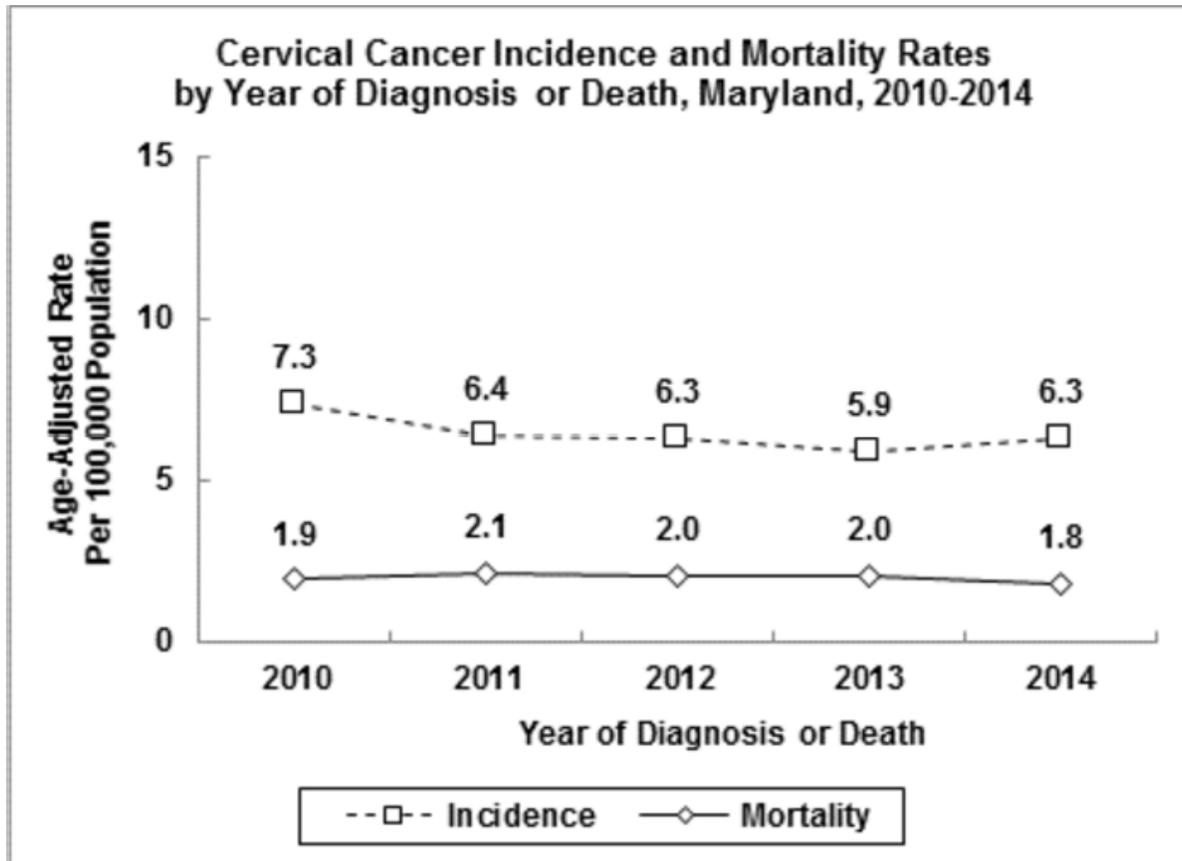
**5-year, colorectal cancer mortality rate, 2010 to 2014:**

MD - ↓ 0.9% per year

**In 2014, 955 residents died of colorectal cancer.**

- Source: Maryland Cancer Registry  
NCHS Compressed Mortality File in CDC WONDER, 2012-2014 Maryland Vital Statistics Administration, 2010-2011

# Cervical Cancer Incidence and Mortality Rates



**5-year, cervical cancer incidence rate, 2010 to 2014:**

MD – ↓ 3.7% per year

**5-year, cervical cancer mortality rate, 2010 to 2014:**

MD - ↓ 1.6% per year

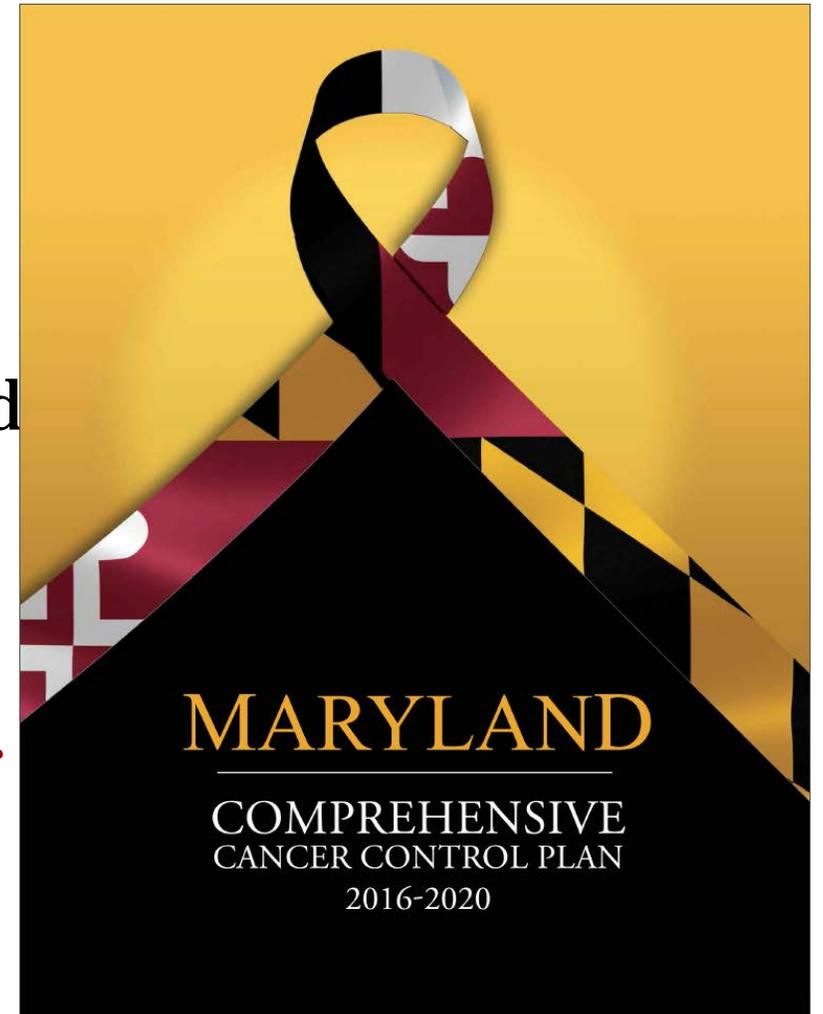
**In 2014, 63 women died of cervical cancer.**

- Source: Maryland Cancer Registry  
NCHS Compressed Mortality File in CDC WONDER, 2012-2014  
Maryland Vital Statistics Administration from MATCH, 2010 Maryland  
Vital Statistics Administration, 2011

Maryland Department of Health, 2017 Cancer Data

# 2016-2020 Maryland Comprehensive Cancer Control Plan

- Released September 15, 2016
- “The updated plan has a focus on goals, objectives, and strategies, and consolidates content into cross-cutting sections and topics. The plan’s goal is to encourage collaboration and cohesiveness among stakeholders as they work towards reducing the burden of cancer in Maryland.”
- **Are we on target for meeting our overarching goal of reducing the burden of cancer in Maryland?**



# Are we on target for reducing cancer incidence?

## Legend:



Meets target



On trend to meet target



Not on trend to meet target



No change from baseline

## GOAL 1. REDUCE THE BURDEN OF CANCER IN MARYLAND.

	Baseline	Target	Update	Trend
<b>Objective 1.</b> By 2020, reduce age-adjusted cancer incidence rates to reach the following targets:				
All Cancer Sites: 391.5 per 100,000	432.1	391.5	452.2	442.0
Cervical: 4.4 per 100,000	6.3	4.4	5.9	
Colorectal: 20.5 per 100,000	35.8	20.5	35.9	
Female Breast: 121.2 per 100,000	125.0	121.2	134.6	
Lung: 41.6 per 100,000	56.4	41.6	56.6	
Melanoma (Skin): Not > 20.7 per 100,000	20.7	≤20.7	22.3	
Oral: 9.6 per 100,000	10.5	9.6	10.8	
Prostate: 87.3 per 100,000	112.0	87.3	124.5	
Source:	2012 MCR		2013 MCR	2014 MCR

# Are we on target for reducing cancer mortality?

## Legend:



Meets target



On trend to meet target



Not on trend to meet target



No change from baseline

## GOAL 1. REDUCE THE BURDEN OF CANCER IN MARYLAND.

	Baseline	Target	Update	Trend
<b>Objective 2.</b> By 2020, reduce age-adjusted cancer mortality rates to reach the following targets:				
All Cancer Sites: 135.6 per 100,000	165.7	135.6	162.9	161.8
Cervical: 1.7 per 100,000	2.0	1.7	2.0	
Colorectal: 9.0 per 100,000	14.9	9.0	14.0	
Female Breast: 17.6 per 100,000	23.7	17.6	21.5	
Lung: 30.1 per 100,000	43.5	30.1	41.1	
Melanoma (Skin): 2.6 per 100,000	2.7	2.6	2.6	
Oral: 1.8 per 100,000	2.1	1.8	2.5	
Prostate: 11.2 per 100,000	20.4	11.2	19.1	
	2012		2013	2014
Source:	CDC WONDER		CDC WONDER	CDC Wonder

# MCC Workgroups and Strategies: Implementation to Achieve Cancer Plan Targets

- **Access to Care and Services Workgroup:** The strategy is to ensure cultural, financial, and geographic access and provide information to underserved populations on how to access healthcare and supportive services.
- **Communications Workgroup:** The strategy is to use media outlets such as websites and social media outlets; print, radio, and television PSAs; billboards; and press releases to provide public health messages related to cancer.
  - a. Educate the public on the relationship between **family history**, inherited genetic mutations, and cancer risk, and the importance of genetic counseling prior to genetic testing.
  - b. Promote an annual awareness campaign around National Cancer Survivors Day to educate cancer survivors, the general public, policymakers, media, and healthcare providers about the **needs of cancer survivors** (including access to care, psychosocial needs, long-term survivorship, financial issues, and palliative care/pain management)
  - c. Develop an awareness campaign to educate Maryland citizens about **palliative care**.

# Are we on target for reducing cancer mortality disparities?

## GOAL 1. REDUCE THE BURDEN OF CANCER IN MARYLAND (continued).

	Baseline	Target	Update	Trend
<b>Objective 4 (continued).</b> By 2020, reduce disparities in cancer incidence and mortality to reach the following targets:				
<b>All Cancers</b> - Ensure that each jurisdiction-level 5-year cancer mortality rate is no more than 10% above the U.S. 5-year cancer mortality rate, or no more than 164.2 per 100,000.	20 jurisdictions	0*	19 jurisdictions	
Source:	2008-2012 CDC WONDER		2009-2013 CDC WONDER	
<b>Cervical:</b>				
White: 1.6 per 100,000	1.6	1.6	1.9	
Black: 2.0 per 100,000	3.0	2.0	2.7	
<b>Colon and Rectum:</b>				
White: 7.4 per 100,000	13.5	7.4	12.8	
Black: 13.6 per 100,000	20.1	13.6	18.2	
<b>Female Breast:</b>				
White: 16.4 per 100,000	23.1	16.4	19.8	
Black: 19.8 per 100,000	26.5	19.8	28.1	
<b>Oral:</b>				
White: 1.7 per 100,000	2.0	1.7	2.3	
Black: 2.0 per 100,000	2.7	2.0	2.9	
<b>Prostate:</b>				
White: 10.0 per 100,000	17.4	10.0	16.4	
Black: 13.5 per 100,000	35.5	13.5	32.8	
Source:	2012 CDC WONDER		2013 CDC WONDER	

\* Target is to have 0 jurisdictions in Maryland whose 5-year cancer mortality rate is more than 10% above the U.S. 5-year cancer mortality rate.

Legend:

- Moving toward target
- Moving away from target
- No change from baseline

**GOAL 1** High Burden Cancers Goals, Objectives, and Strategies  
**REDUCE THE BURDEN OF CANCER IN MARYLAND**

**Objective 4**

By 2020, reduce disparities in cancer incidence and mortality to reach the following targets\*:

Target Setting Method: Trend Analysis  
Source: Maryland Cancer Registry

\*Targets reflect disparities that are statistically significant in Maryland; however it is important to reduce rates of all cancers in all racial and ethnic groups.

**Cancer Disparities Targets: Incidence (age-adjusted)**

- All Cancers**  
Ensure that each jurisdiction-level 5-year cancer incidence rate is no more than 10% above the U.S. 5-year cancer incidence rate, or no more than 484.8 per 100,000. (Target represents 10% above the 2020 projected U.S. 5-year incidence rate of 440.7 per 100,000. Refer to the map on page 54 for jurisdiction-level cancer incidence rates.)
- Cervical**  
White: 4.2 per 100,000 (2012 baseline: 5.9 per 100,000)  
Black: 4.8 per 100,000 (2012 baseline: 7.6 per 100,000)
- Colon and Rectum**  
White: 20.2 per 100,000 (2012 baseline: 34.5 per 100,000)  
Black: 22.6 per 100,000 (2012 baseline: 40.1 per 100,000)
- Lung**  
White: 42.1 per 100,000 (2012 baseline: 58.5 per 100,000)  
Black: 39.5 per 100,000 (2012 baseline: 55.9 per 100,000)
- Oral**  
White: Not greater than 11.7 per 100,000 (2012 baseline: 11.7 per 100,000)  
Black: 5.5 per 100,000 (2012 baseline: 8.3 per 100,000)
- Prostate**  
White: 68.7 per 100,000 (2012 baseline: 97.5 per 100,000)  
Black: 130.9 per 100,000 (2012 baseline: 159.7 per 100,000)

MARYLAND COMPREHENSIVE CANCER CONTROL PLAN  
Section Two | 67

**GOAL  
1**

*Cancer Survivorship, Palliative Care, and Hospice Care Goals, Objectives, and Strategies*

**INCREASE THE QUALITY OF LIFE  
OF CANCER SURVIVORS IN MARYLAND**

**Objective 1**

By 2020, increase the proportion of cancer survivors who report that during the past 30 days, poor physical or mental health did not keep them from doing usual activities on any days to 76.3%. (2013 baseline 69.4%)

Target Setting Method: 10% Increase  
Source: BRFSS

**Strategies**

- Educate patients upon diagnosis about the availability of support and survivorship groups.
- Utilize patient navigators to link cancer survivors with available financial resources and insurance options available through the Maryland Health Benefit Exchange (MHBE).
- Offer self-management workshops to cancer survivors.
- Educate cancer survivors about the importance of healthy behaviors to reduce cancer recurrence risk (see section 1).
- Promote an annual awareness campaign around National Cancer Survivors Day to educate cancer survivors, the general public, policymakers, media, and healthcare providers about the needs of cancer survivors (including access to care, psychosocial needs, long-term survivorship, financial issues, and palliative care/pain management).
- Implement systems changes to ensure that all newly diagnosed patients receive a copy of the Maryland Cancer Collaborative's Guide to Cancer Survivorship Care and Resources for Cancer Patients.

**Objective 2**

By 2020, increase the proportion of cancer survivors who report that their pain is currently under control to 76.3%. (2013 baseline 69.4%)

Target Setting Method: 10% Increase  
Source: BRFSS

**Strategies**

- Improve the assessment and treatment of pain and other symptom management by including pain assessments at each follow-up visit.
- Increase clinician education and awareness of pain management and assessment by providing seminars, grand rounds, and other opportunities for education at cancer centers.
- Collaborate with pharmacies and policymakers to ensure that pain medicine is adequately stocked in all communities.
- Ensure that pain medicine coverage policies are easily accessible to patients considering health plans available through the MHBE.

# Are we on target for increasing the quality of life of cancer survivors?

**GOAL  
1**

*Cancer Survivorship, Palliative Care, and Hospice Care Goals, Objectives, and Strategies*

**INCREASE THE QUALITY OF LIFE  
OF CANCER SURVIVORS IN MARYLAND**

**Objective 3**

By 2020, increase the proportion of cancer survivors who report receiving a written summary of all cancer treatments received and written instructions about where to return or whom to see for routine cancer check-ups after completing treatment to 50.2%. (2013 baseline 45.6%)

Target Setting Method: 10% Increase  
Source: BRFSS

**Strategies**

- Promote the use of survivorship care plans in standard practice by healthcare providers.
- Increase awareness about care plans, including the Institute of Medicine recommended elements, among healthcare providers and cancer survivors.
- Promote systems changes to integrate survivor care plans into systems of care (e.g. using electronic medical records to populate care plans).

## Legend:



### GOAL 1. INCREASE THE QUALITY OF LIFE OF CANCER SURVIVORS IN MARYLAND.

	Baseline	Target	Update	Trend
<b>Objective 1.</b> By 2020, increase the proportion of cancer survivors who report that during the past 30 days, poor physical or mental health did not keep them from doing usual activities on any days to 76.3%.	69.4% 2013 MD BRFSS	76.3%	68.5% 2015 MD BRFSS	
<b>Objective 2.</b> By 2020, increase the proportion of cancer survivors who report that their pain is currently under control to 76.3%.	69.5%* 2013 MD BRFSS	76.3%	78.4% 2015 MD BRFSS	
<b>Objective 3.</b> By 2020, increase the proportion of cancer survivors who report receiving a written summary of all cancer treatments received and written instructions about where to return or whom to see for routine cancer check-ups after completing treatment to 50.2%.	45.0%** 2013 MD BRFSS	50.2%	35.3% 2015 MD BRFSS	

\* Percentage (69.4%) was incorrect in the Cancer Plan due to minor errors with data analysis. It has been corrected (69.5%).

\*\* Percentage (45.6%) was incorrect in the Cancer Plan due to errors with data analysis. It has been corrected (45.0%).

# MCC Workgroups and Strategies: Implementation to Achieve Cancer Plan Targets

- **HPV Vaccination Workgroup:** The strategy is to implement systems changes within healthcare practices to:
  - Check teenage patients' vaccination status and offer all indicated vaccines at each visit;
  - Schedule the next HPV vaccination dose before the end of the current appointment; and,
  - Utilize reminder and recall strategies.
- **Hospice Utilization Data Workgroup:** The strategy is to create partnerships to develop and implement a plan to collect cancer patient hospice utilization data.
- **Tobacco Cessation Workgroup:** The strategy is to educate Maryland hospitals about the importance of and encourage adoption of policies to provide inpatient counseling and treatment for patients who use tobacco.

# Are we on target for cancer prevention behaviors?

GOAL  
1

Primary Prevention Goals, Objectives, and Strategies

## INCREASE CANCER PREVENTION BEHAVIORS IN MARYLAND

**Objective 1 – Tobacco Use and Exposure**

By 2020, reduce the prevalence of current cigarette smoking among adults to 15.6%.\* (2013 baseline 16.4%)

Target Setting Method: 5% reduction per goals of DHMH CTPC  
Source: BRFSS

\*Targets for other tobacco products are not included because the prevalence of use among adults is very low.

**Strategies**

- Support and implement CDC-recommended evidence-based interventions that reduce tobacco use and increase the demand for tobacco cessation, including:
  - ◆ Explore an increase in the price of tobacco products;
  - ◆ Enact comprehensive smoke-free policies;
  - ◆ Fund mass-media campaigns; and
  - ◆ Make cessation services fully accessible to tobacco users.
- Implement the ten recommendations from the U.S. Department of Health and Human Services Public Health Service Clinical Practice Guidelines on Treating Tobacco Use and Dependence, including but not limited to:
  - ◆ Identify and document tobacco use status and treat every tobacco user;
  - ◆ Offer individual, group, and/or telephone counseling;
  - ◆ Encourage use of effective medications;
  - ◆ Encourage all individuals making a quit attempt to use both counseling and medication; and
  - ◆ Promote use of the Maryland Tobacco Quitline.
- Educate the public about the availability of and promote the use of comprehensive tobacco cessation services. Educate payers about the availability of and encourage referrals to cessation services.
- Educate Maryland hospitals about the importance of and encourage adoption of policies to provide inpatient counseling and treatment for patients who use tobacco.
- Educate Maryland college and university administrators about the importance of and encourage adoption of policies to ensure that campuses are tobacco-free at all times, and that tobacco use by youth and adults is prohibited while they are engaged in all school-related activities.

MARYLAND COMPREHENSIVE CANCER CONTROL PLAN  
Section One | 35

GOAL  
1

Primary Prevention Goals, Objectives, and Strategies

## INCREASE CANCER PREVENTION BEHAVIORS IN MARYLAND

**Objective 10 – Cancer Vaccines**

By 2020, increase coverage rates for HPV vaccine to reach the following targets\*:

- Girls age 13-17 that have received one dose to 80% (2013 baseline 50%)
- Girls age 13-17 that have received three doses to 80% (2013 baseline 33.4%)
- Boys age 13-17 that have received one dose to 80% (2013 baseline 34.2%)

Target Setting Method: HP 2020 Targets  
Source: NIS

\*baseline data and HP 2020 target for boys age 13-17 that have received three doses are not available at the time of publication.

**Strategies**

- Increase awareness of HPV infection as a cancer risk factor among Maryland residents.
- Educate healthcare providers on the importance of making a strong and timely HPV vaccination recommendation, with a focus on cancer prevention.
- Encourage cancer experts and leaders to provide peer education to immunization providers about cancer prevention and the role of HPV vaccine.
- Educate parents and/or guardians about the availability and importance of HPV vaccination for adolescent girls and boys, with a focus on cancer prevention.
- Implement systems changes within healthcare practices to:
  - ◆ Check teenage patients' vaccination status and offer all indicated vaccines at each visit;
  - ◆ Schedule the next HPV vaccination dose before the end of the current appointment; and
  - ◆ Utilize reminder and recall strategies.

MARYLAND COMPREHENSIVE CANCER CONTROL PLAN  
40 | Section One

## GOAL 1. INCREASE CANCER PREVENTION BEHAVIORS IN MARYLAND.

	Baseline	Target	Update	Trend
<b>Objective 1.</b> By 2020, reduce the prevalence of current cigarette smoking among adults to 15.6%.	16.4% 2013 MD BRFSS	15.6%	15.1% 2015 MD BRFSS	
<i>Behavioral Risk Factor Surveillance System</i>				
<b>Objective 2.</b> By 2020, reduce the prevalence of tobacco use among high school youth as measured by YTRBS to reach the following targets:				
Cigarette use: 11.3%	11.9%	11.3%	8.7%	
Cigar use: 8%	12.5%	8.0%	10.3%	
Smokeless tobacco use (chewing tobacco or snuff): 6.9%	7.4%	6.9%	5.8%	
Any type of tobacco (cigarettes, cigars, or smokeless tobacco): 16.1%	16.9%	16.1%	16.4%	
Source:	2013 YTRBS		2014 YTRBS	
	<i>Youth Tobacco and Risk Behavior Survey</i>			

### Legend:



Meets target



On trend to meet target

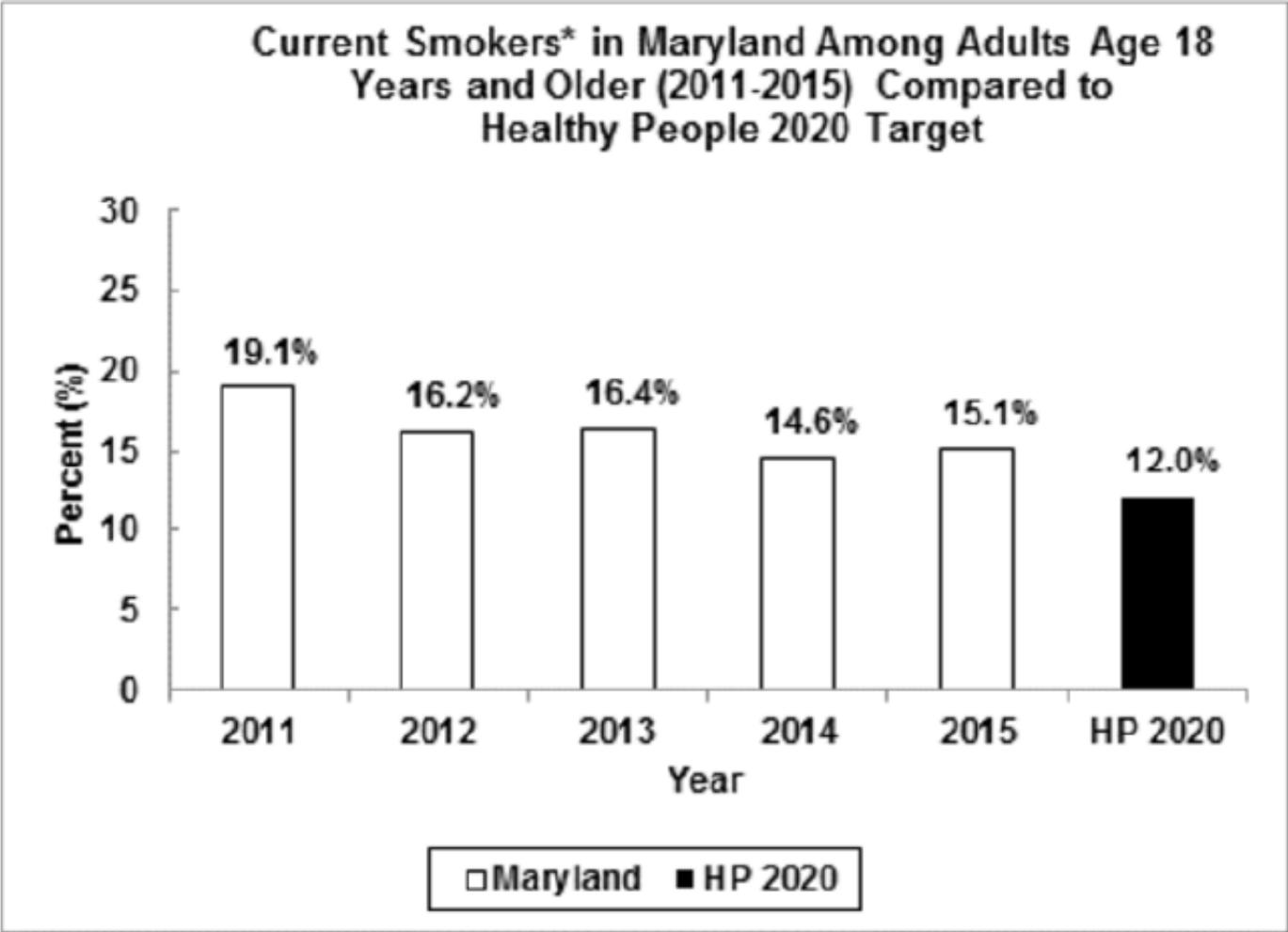


Not on trend to meet target



No change from baseline

**We have had major success in adult smoking cessation in Maryland, but need to keep going!**



Maryland Department of Health, 2017 Cancer Data

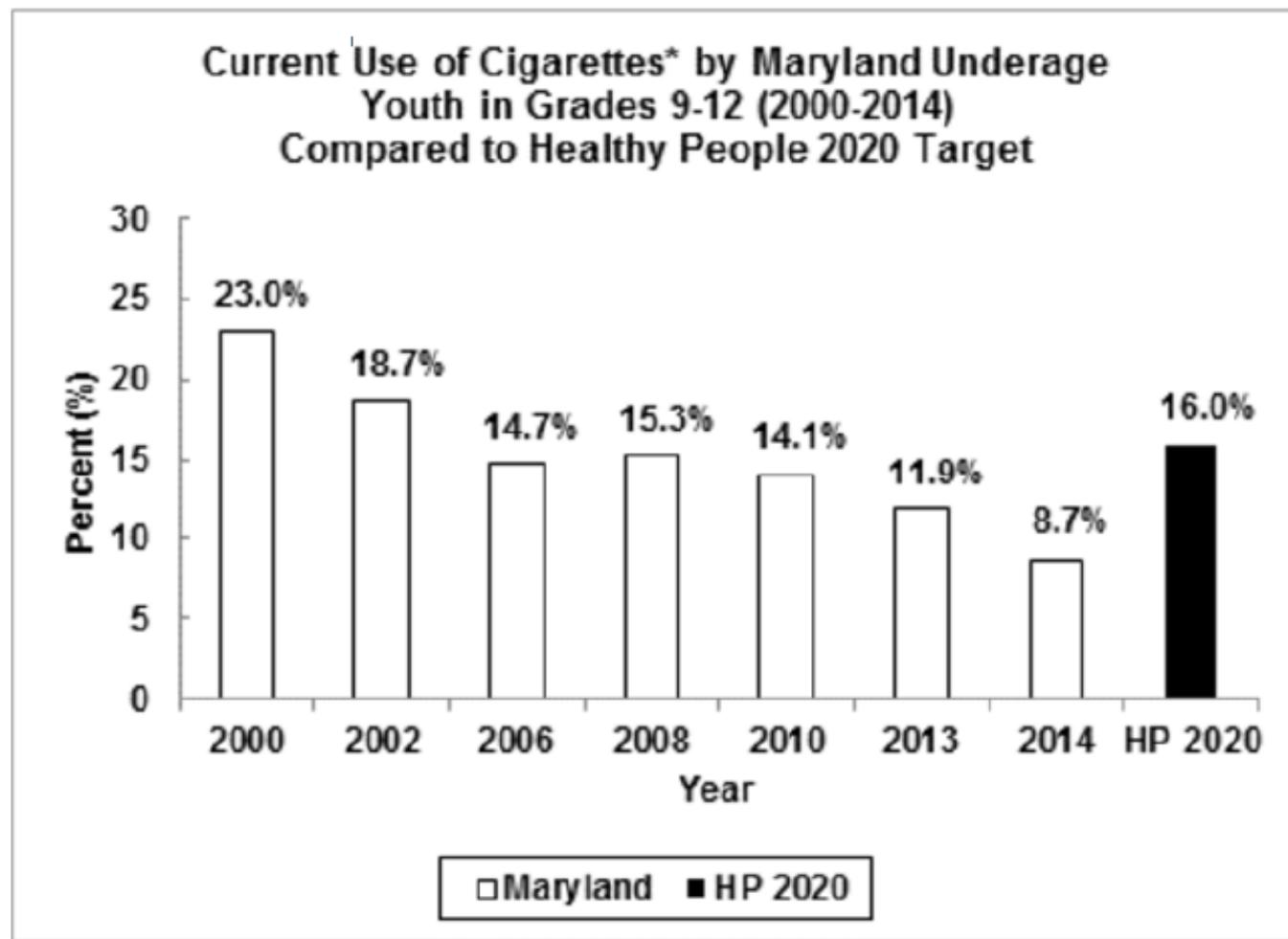
\* Current smoker is defined as a person who smokes cigarettes every day or some days.

Source: Maryland BRFSS, 2011-2015

Healthy People 2020, U.S. Department of Health and Human Services

**Amazing declines in youth cigarette smoking in Maryland.**

**Need to keep on it so the prevalence doesn't rise again.**



Maryland Department of Health, 2017 Cancer Data

\* Current use of cigarettes is defined as smoking cigarettes on 1 or more days in the previous 30 days.

Source: Maryland Youth Tobacco Survey (2000, 2002, 2006, 2008, 2010)

Maryland Youth Tobacco and Risk Behavior Survey (2013, 2014)

Healthy People 2020, U.S. Department of Health and Human Services

# We are going in the right direction for uptake of HPV vaccination, but we have long way to go!

## GOAL 1. INCREASE CANCER PREVENTION BEHAVIORS IN MARYLAND (continued).

	Baseline	Target	Update	Trend
<b>Objective 10.</b> By 2020, increase coverage rates for HPV vaccine to reach the following targets:				
Girls age 13-17 that have received one dose to 80%	50.0%	80.0%	57.9%	
Girls age 13-17 that have received three doses to 80%	33.4%	80.0%	39.4%	
Boys age 13-17 that have received one dose to 80%	34.2%	80.0%	46.9%	
Source:	2013 NIS		2014 NIS	

### Legend:



Meets target



On trend to meet target



Not on trend to meet target

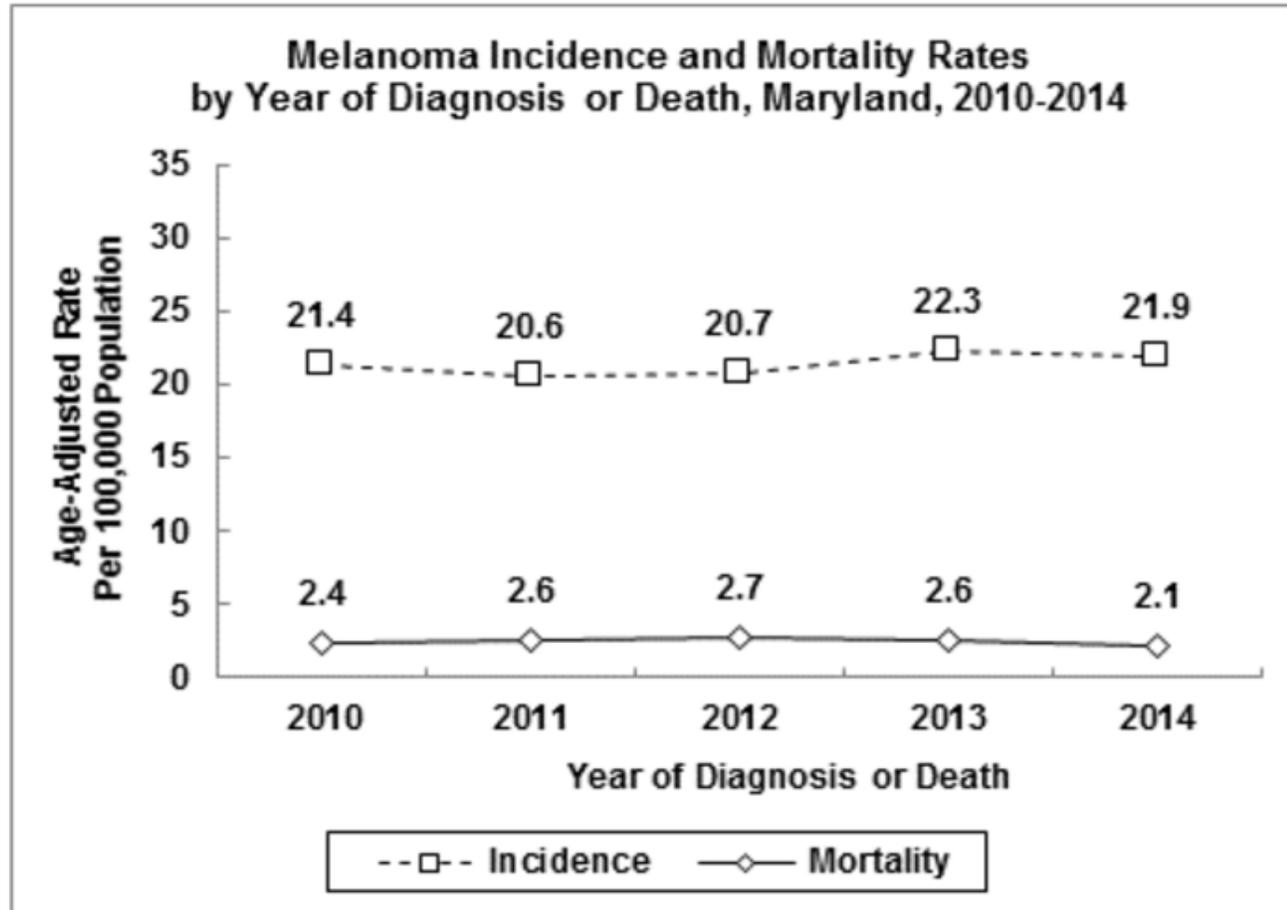


No change from baseline

# Summary

- We continue to make progress toward achieving the goals Maryland Comprehensive Cancer Control Plan – reducing the burden of cancer – but more work is needed.
- ***What about cancers with rising rates?***

# Melanoma Incidence and Mortality Rates

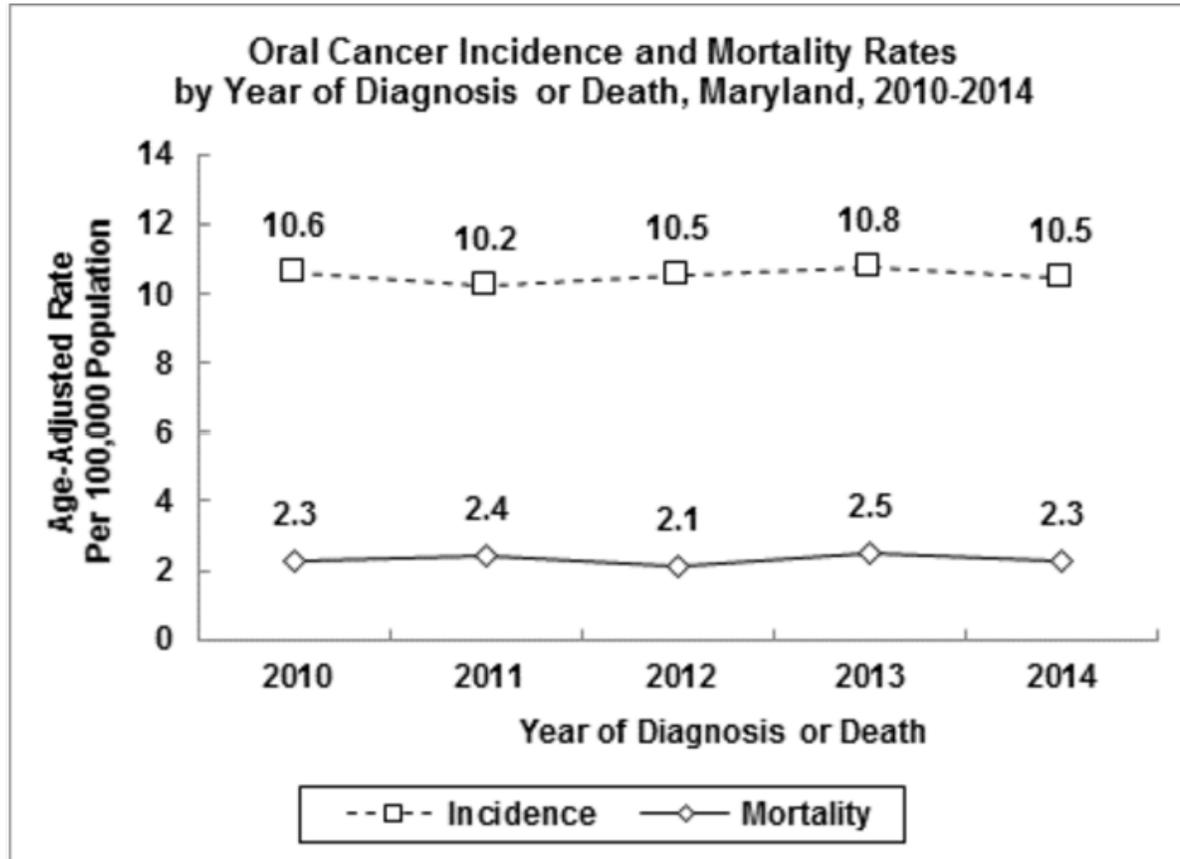


- 5-year, melanoma incidence rate, **2010 to 2014:**
- MD - ↑ 1.3% per year
- 5-year, melanoma mortality rate, **2010 to 2014:**
- MD - ↓ 2.6% per year

Source: Maryland Cancer Registry  
NCHS Compressed Mortality File in CDC WONDER, 2012-2014 Maryland  
Vital Statistics Administration from MATCH, 2010 Maryland Vital  
Statistics Administration, 2011

Maryland Department of Health, 2017 Cancer Data

# Oral Cancer Incidence and Mortality Rates



- **5-year, oral cancer incidence rate, 2010 to 2014:**
  - MD -  $\uparrow$  0.4% per year
- **5-year, oral cancer mortality rate, 2010 to 2014:**
  - MD -  $\uparrow$  0.4% per year

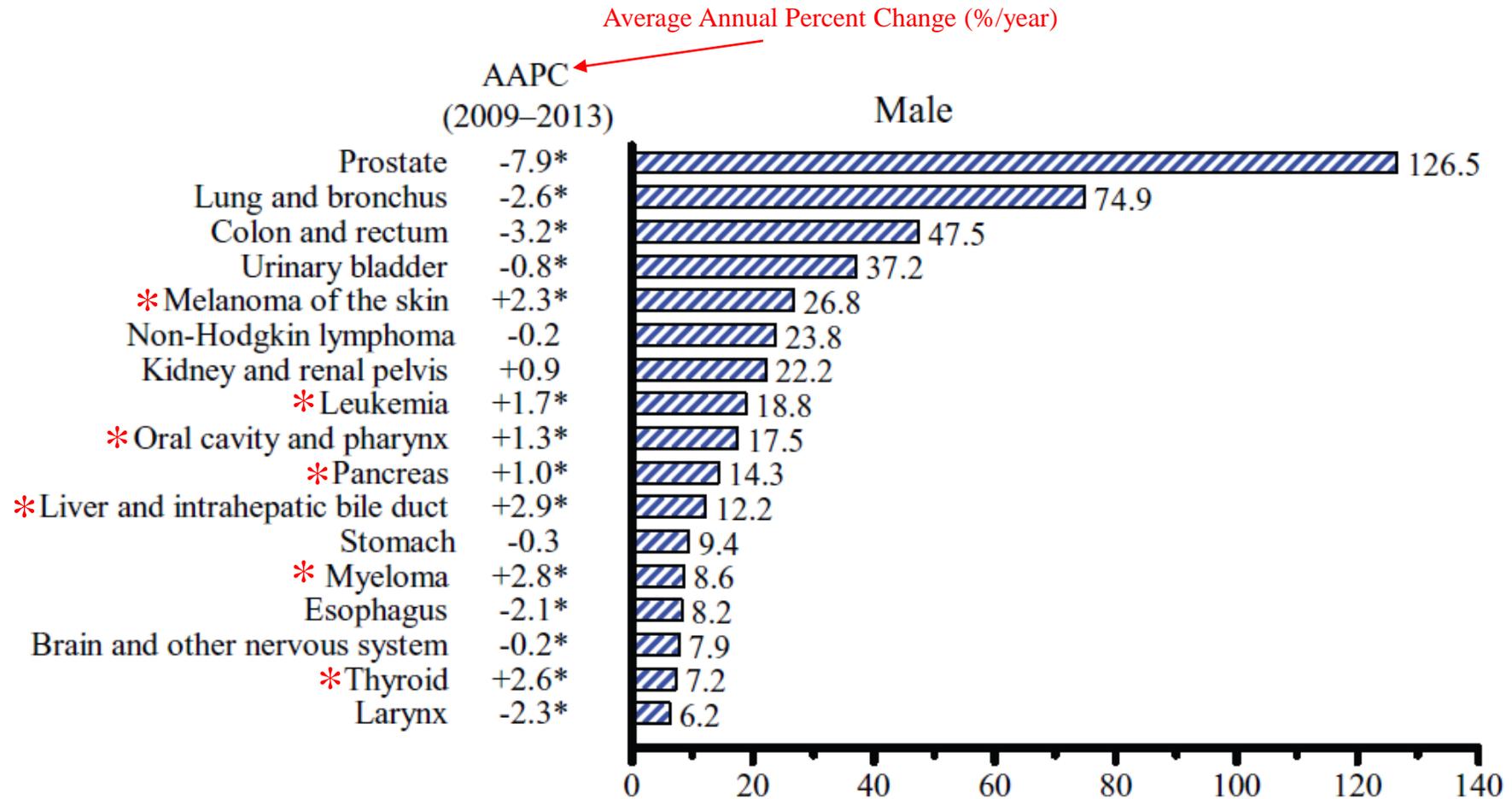
Source: Maryland Cancer Registry  
NCHS Compressed Mortality File in CDC WONDER, 2012-2014 Maryland  
Vital Statistics Administration from MATCH, 2010 Maryland Vital  
Statistics Administration, 2011

# Cancers with Rising Rates in Maryland, Potential Etiologies, and Interventions

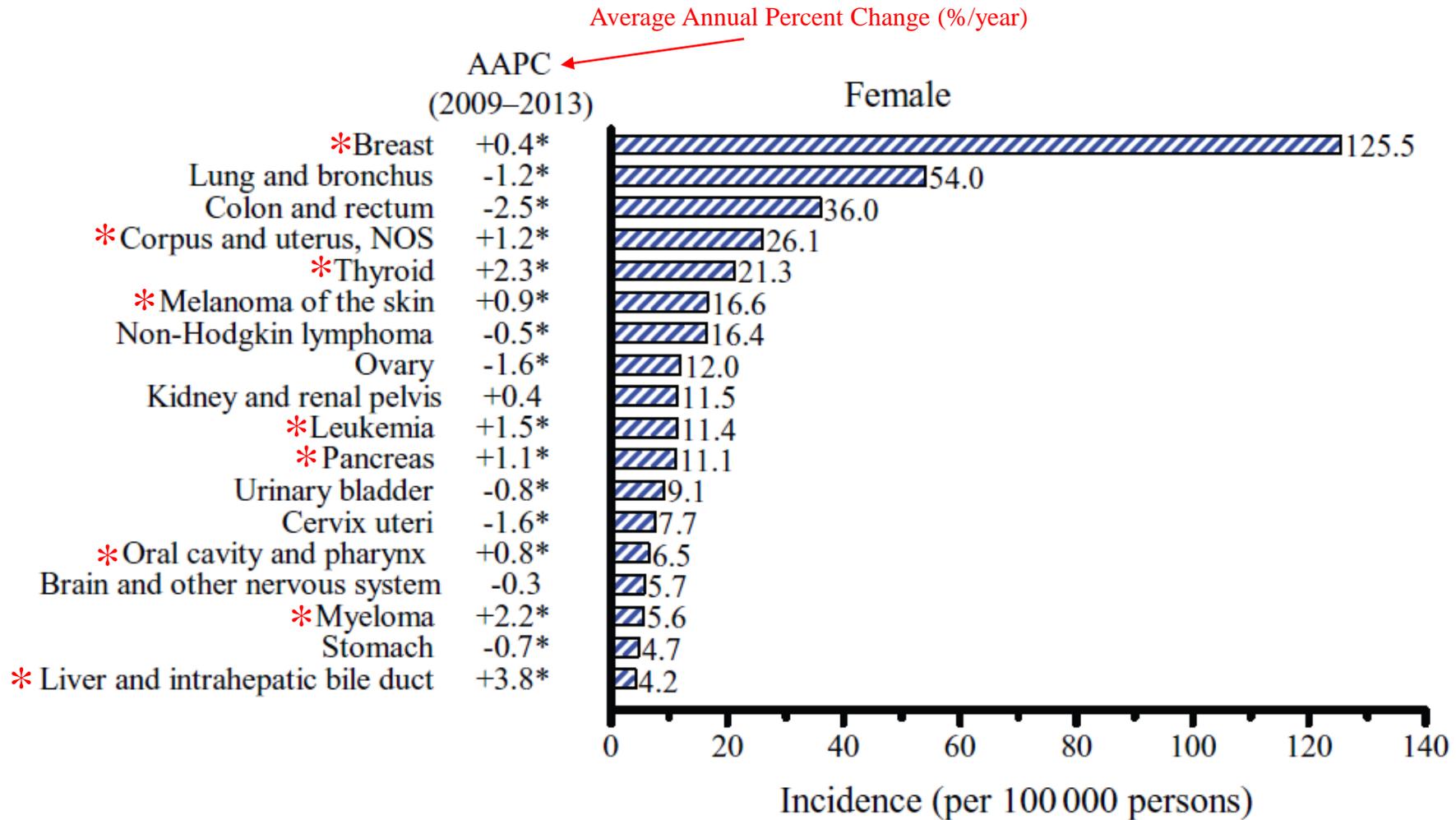
*Meredith S. Shiels, Ph.D.*

*Infections and Immunoepidemiology Branch  
Division of Cancer Epidemiology and Genetics  
National Cancer Institute*

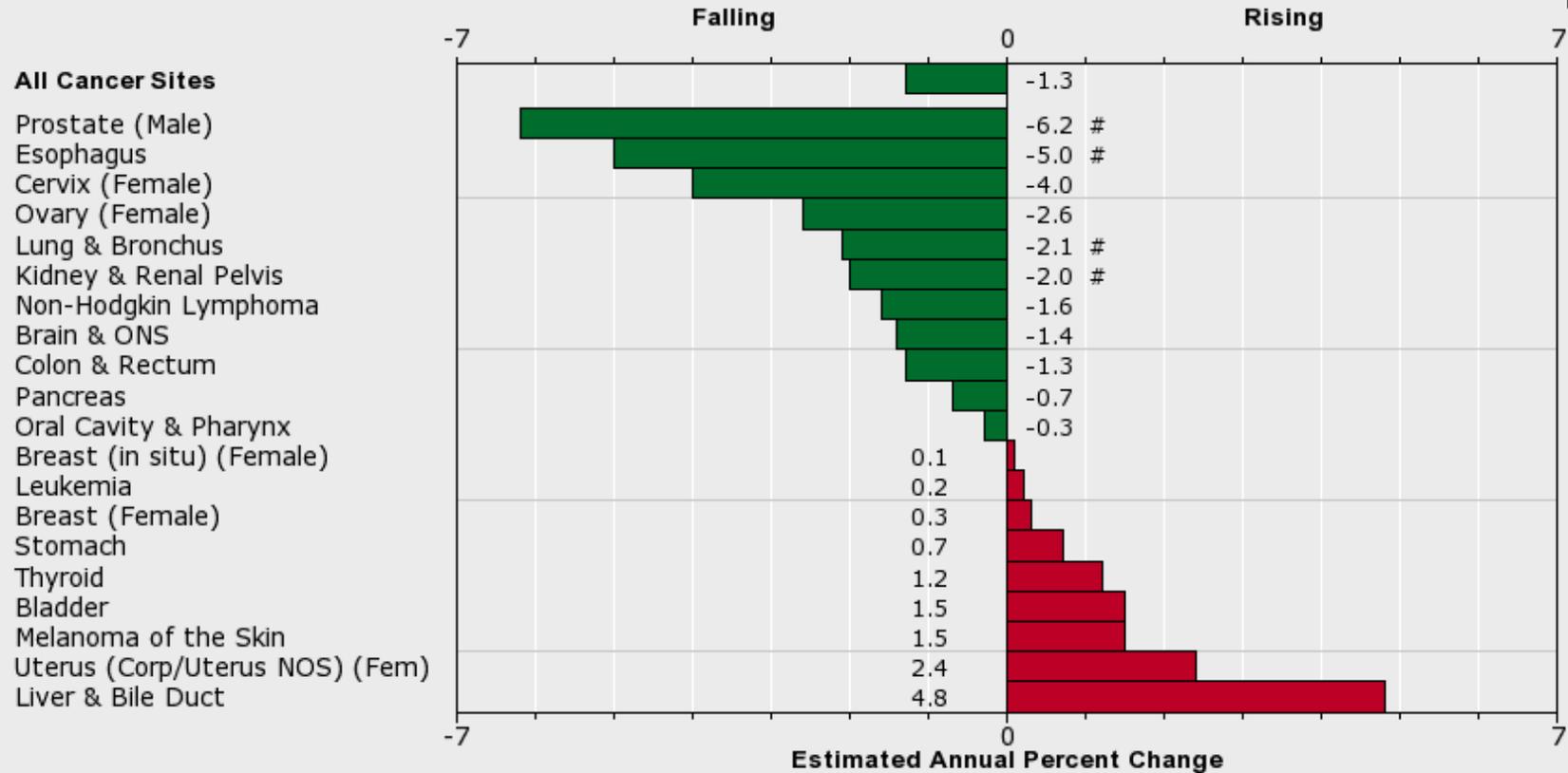
# Age-standardized Rates and Recent Trends in Men



# Age-standardized Rates and Recent Trends in Women



**5-Year Rate Changes - Incidence  
Maryland, 2010-2014  
All Ages, Both Sexes, All Races (incl Hisp)**



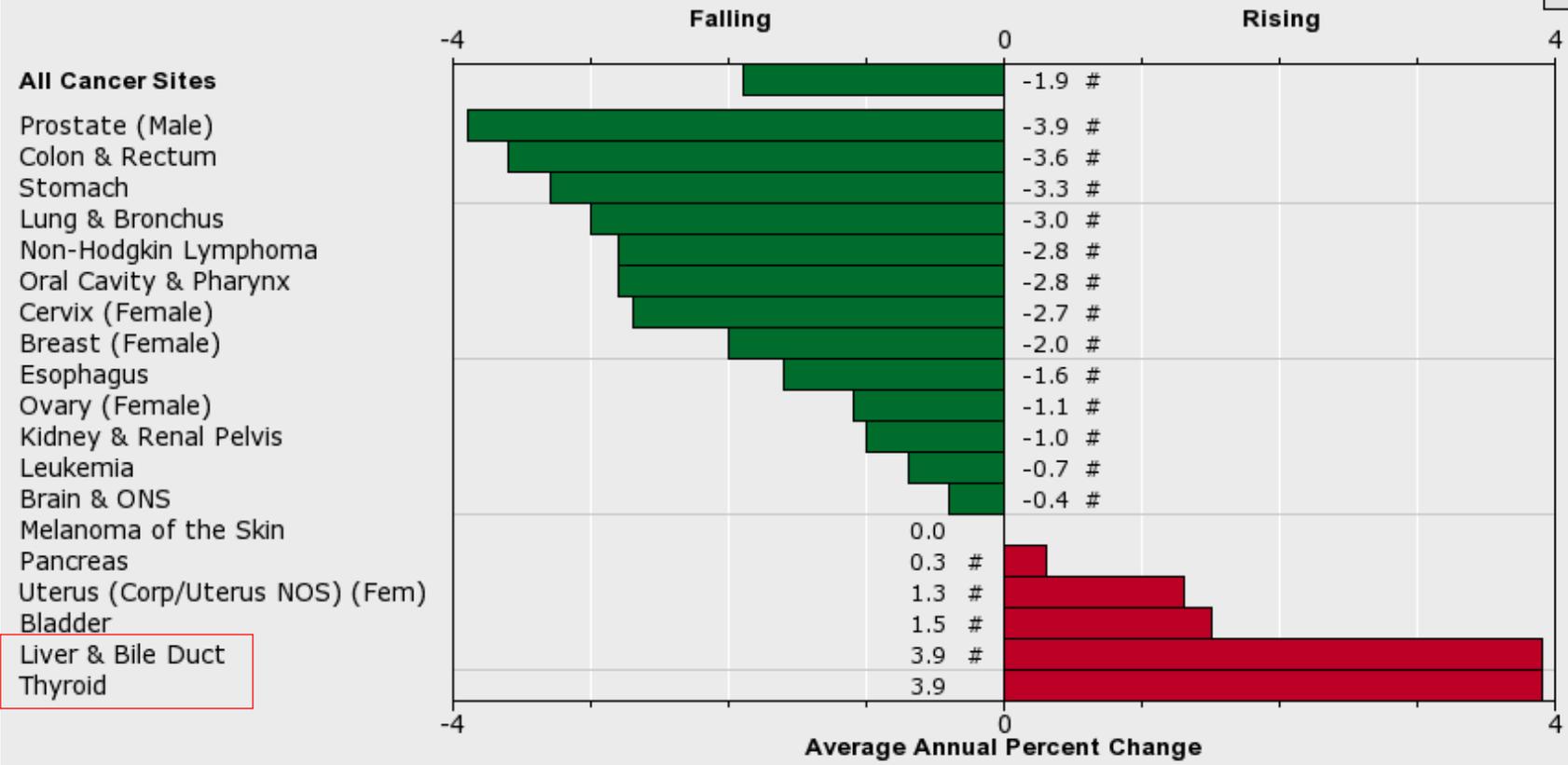
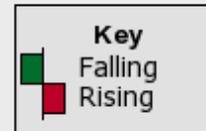
Created by statecancerprofiles.cancer.gov on 09/22/2017 1:01 pm.

Source: Incidence data provided by the [National Program of Cancer Registries \(NPCR\)](#). EAPCs calculated by the National Cancer Institute using [SEER\\*Stat](#). Rates are age-adjusted to the [2000 US standard population](#) (19 age groups: <1, 1-4, 5-9, ..., 80-84, 85+). Rates are for invasive cancer only (except for bladder cancer which is invasive and in situ) or unless otherwise specified. Population counts for denominators are based on Census populations as modified by NCI. The [1969-2015 US Population Data](#) File is used with NPCR November 2016 data.

Please note that the data comes from different sources. Due to [different years](#) of data availability, most of the trends are AAPCs based on APCs but some are EAPCs calculated in [SEER\\*Stat](#). Please refer to the source for each graph for additional information.

# - The annual percent change is significantly different from zero (p<0.05).

**5-Year Rate Changes - Mortality**  
**Maryland, 2010-2014**  
**All Ages, Both Sexes, All Races (incl Hisp)**



Created by statecancerprofiles.cancer.gov on 09/22/2017 1:01 pm.

Source: Death data provided by the [National Vital Statistics System](#) public use data file. Death rates calculated by the National Cancer Institute using [SEER\\*Stat](#). Death rates (deaths per 100,000 population per year) are age-adjusted to the [2000 US standard population](#) (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). Population counts for denominators are based on Census populations as [modified](#) by NCI. The [1969-2015 US Population Data](#) File is used with mortality data. Please note that the data comes from different sources. Due to [different years](#) of data availability, most of the trends are AAPCs based on APCs but some are EAPCs calculated in [SEER\\*Stat](#). Please refer to the source for each graph for additional information.

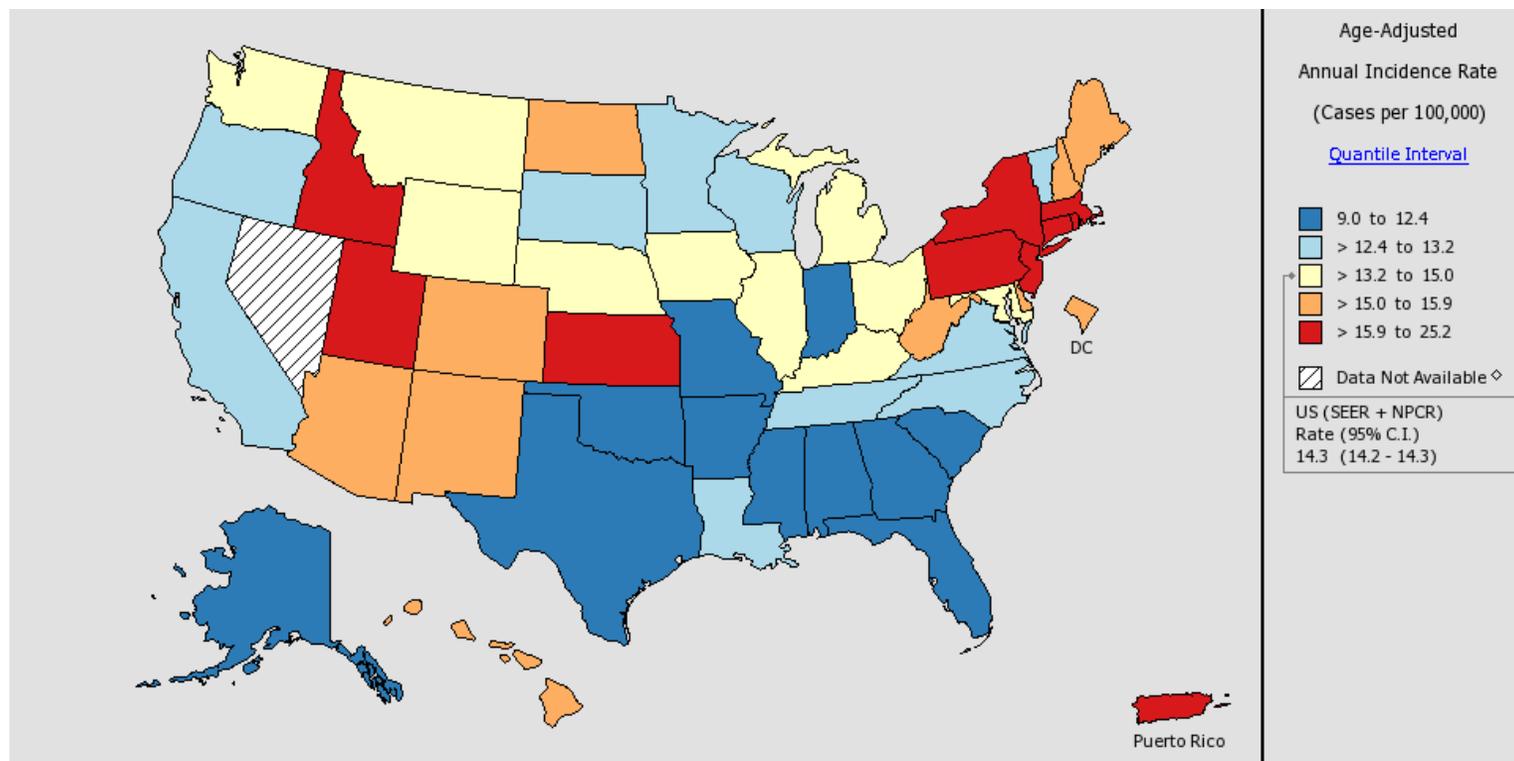
# - The annual percent change is significantly different from zero (p<0.05).



# Thyroid Cancer

# Maryland Statistics

## Thyroid Cancer Rates by State, 2010-2014

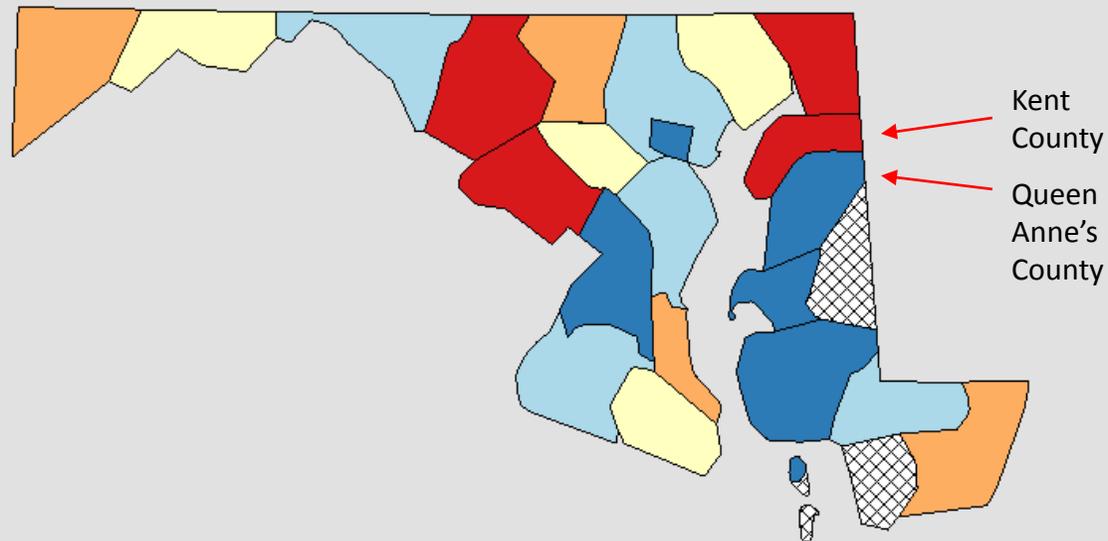


US ASR = 14.3/100,000

MD ASR = 15.0/100,000

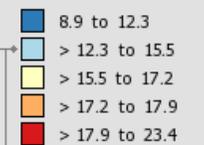
Ranking = 20

**Incidence Rates<sup>†</sup> for Maryland**  
**Thyroid, 2010 - 2014**  
**All Races (includes Hispanic), Both Sexes, All Ages**



Age-Adjusted  
Annual Incidence Rate  
(Cases per 100,000)

[Quantile Interval](#)



Suppressed \* / \*\*

US (SEER + NPCR)  
Rate (95% C.I.)  
14.3 (14.2 - 14.3)

Maryland  
Rate (95% C.I.)  
15.0 (14.6 - 15.5)

**Notes:**

[State Cancer Registries](#) may provide more current or more local data.

Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries ([for more information](#)).

<sup>†</sup> Incidence rates (cases per 100,000 population per year) are age-adjusted to the [2000 US standard population](#) (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). Rates are for invasive cancer only (except for bladder which is invasive and in situ) or unless otherwise specified. Rates calculated using SEER\*Stat. Population counts for denominators are based on Census populations as modified by NCI. The [1969-2015 US Population Data](#) File is used for SEER and NPCR incidence rates.

\* Data have been [suppressed](#) to ensure confidentiality and stability of rate estimates. Data is currently being suppressed if there are fewer than 16 counts for the time period.

\*\* Data have been [suppressed](#) for states with a population below 50,000 per sex combination for American Indian/Alaska Native or Asian/Pacific Islanders because of concerns regarding the relatively small size of these populations in some states.

Data for the United States does not include data from Puerto Rico

# Risk Factors

## Risk Factors for Thyroid Cancer – Could these Explain Rising Rates?

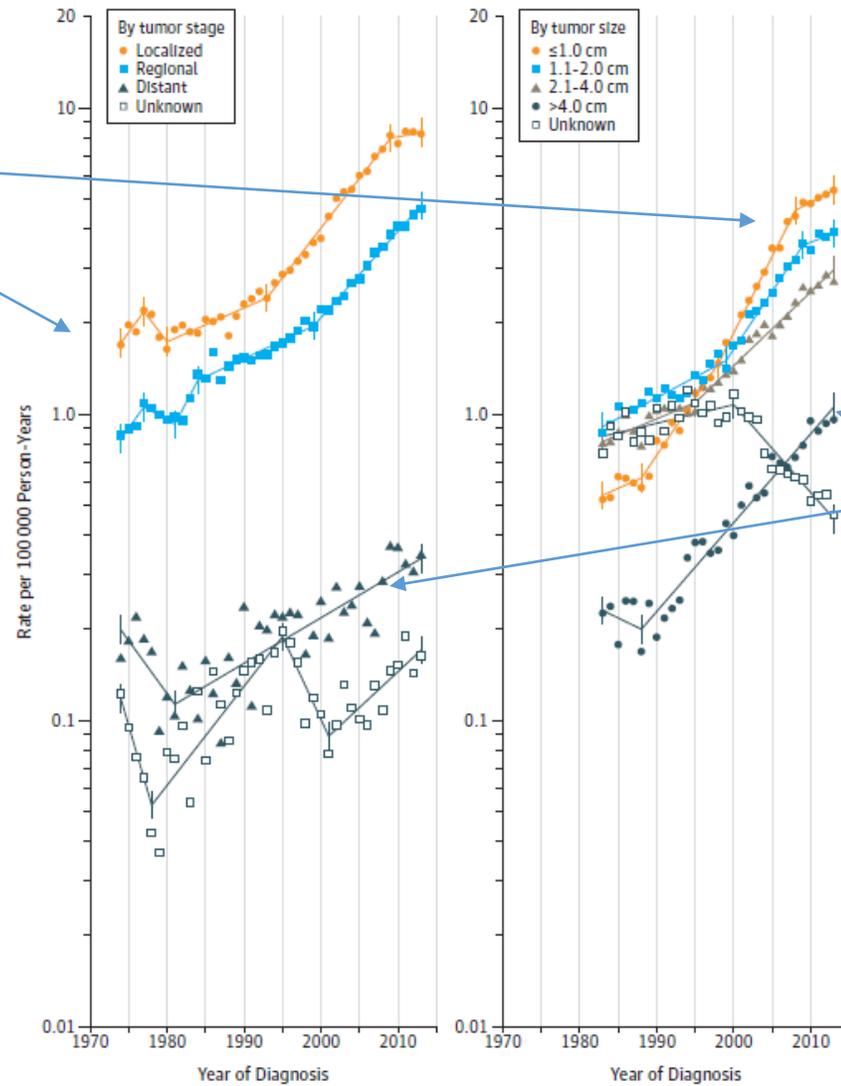
- Age and sex (female predominance)
- Hereditary conditions
- Family history
- Diet low in iodine (Americans are generally not iodine-deficient)
- Radiation
  - Treatment for childhood cancers
  - Radioactive fallout
  - Radiation from imaging – x-rays and CT scans (unclear risk)

## Major Consideration – Increased Detection

- **Overdiagnosis:** Increased incidental detection may have increased diagnosis of small, indolent tumors that would have never been clinically-detected
  - Increasing use of diagnostic ultrasound and other imaging modality
  - Increase biopsy with fine-needle aspiration
  - incidental detection and diagnosis of mostly localized, small (<2 cm) cancers

# Over-detection – the sole explanation for rising rates?

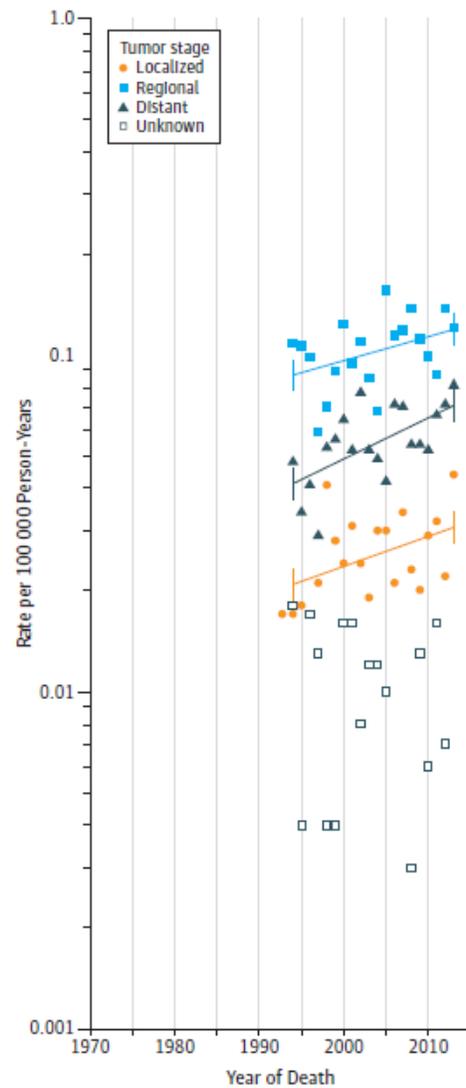
Likely to be over-diagnosis



Unlikely to be over-diagnosis

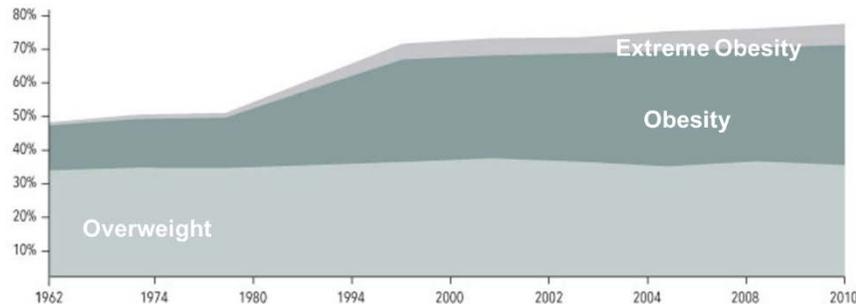
# Papillary Thyroid Cancer Mortality Rates are Also Increasing

**B** Papillary thyroid cancer incidence-based mortality



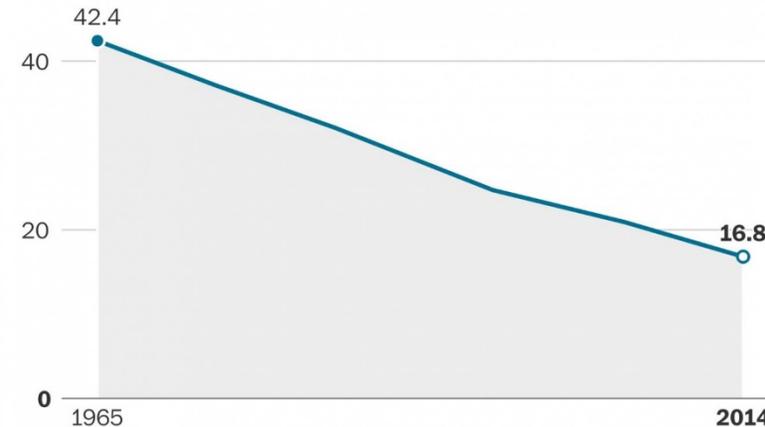
## Other Risk Factors and Thyroid Cancer Risk

- Height and adiposity associated with increased thyroid cancer risk in pooled study of 22 cohorts.



- Current smokers have 40% lower risk of thyroid cancer.

Smoking rate of U.S. adults



Source: CDC  
THE WASHINGTON POST

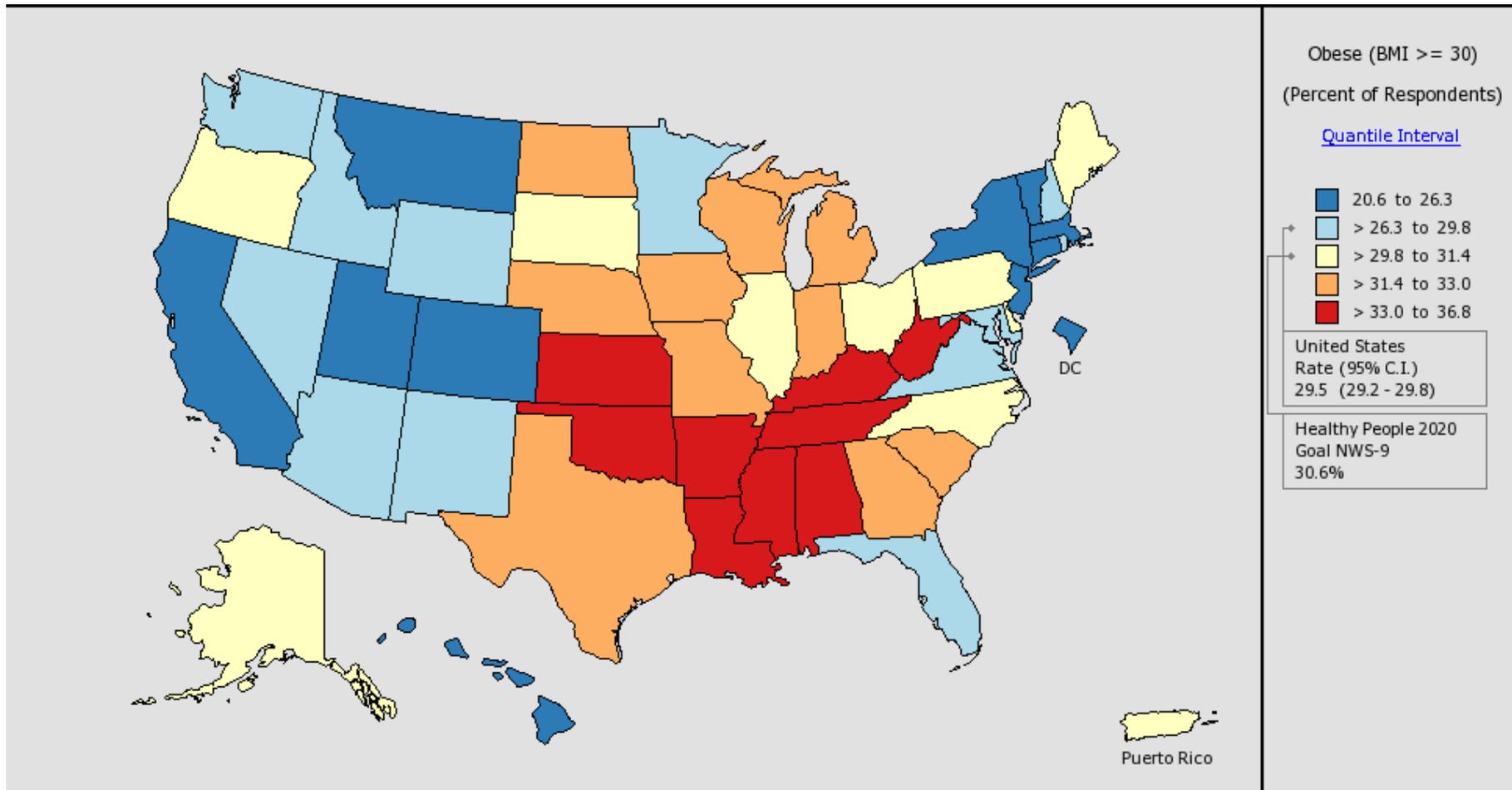
# Prevention

How can thyroid cancer be prevented?

- Few modifiable risk factors
- Unnecessary medical radiation in children should be avoided.
- Maintaining a healthy body weight

# Adult Obesity Prevalence by State

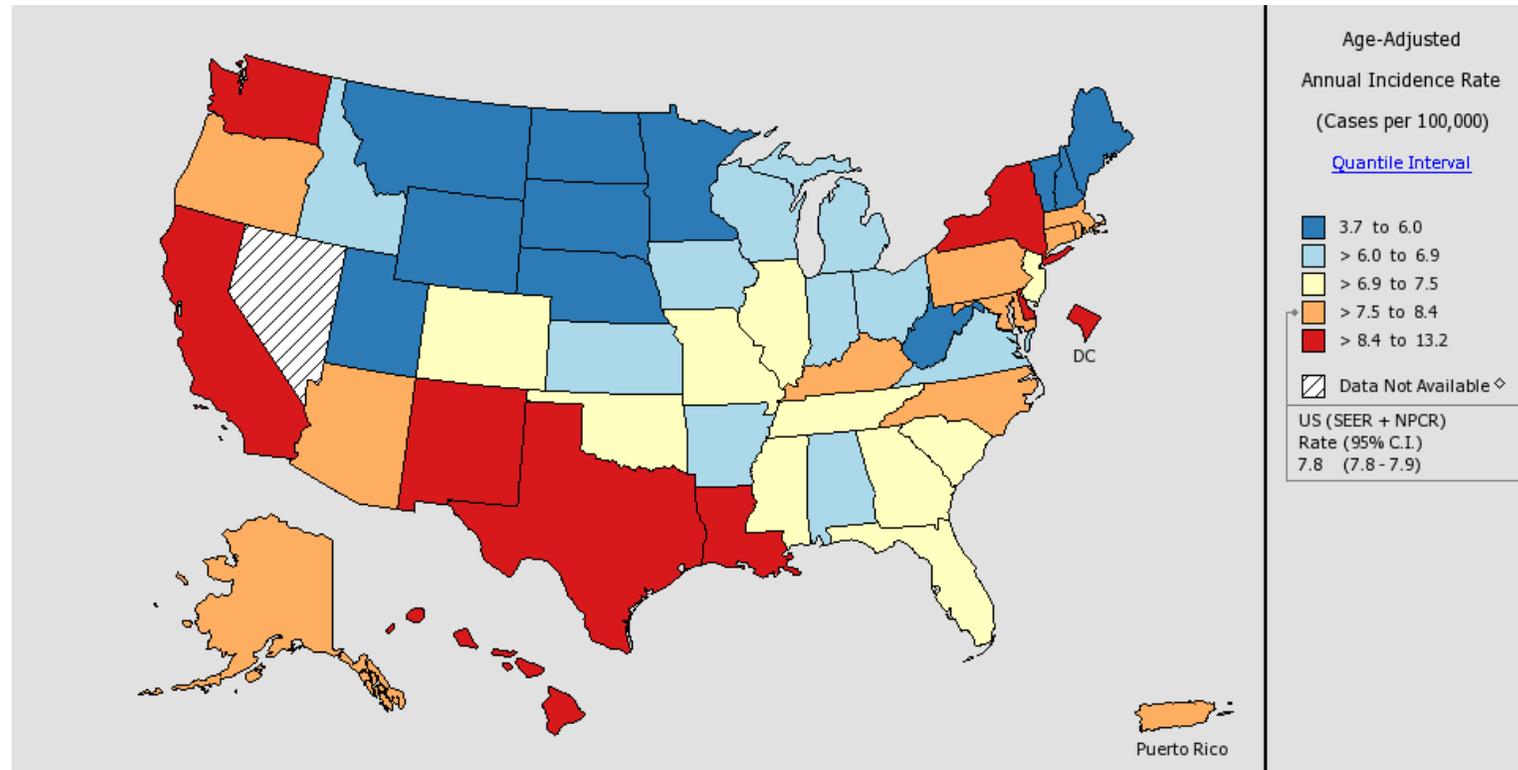
MD: 29.8% (roughly the US average)



# Liver Cancer

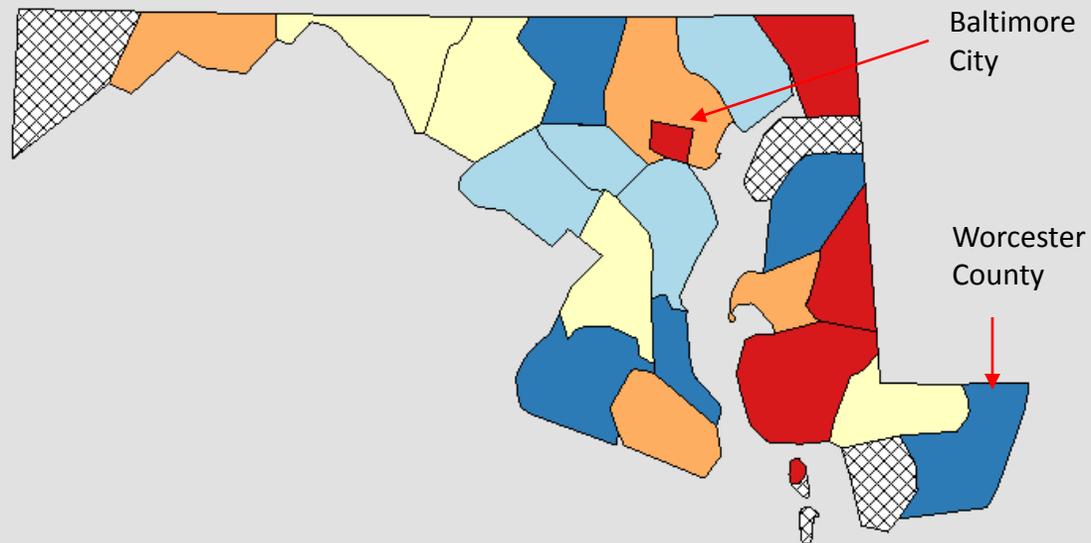
# Maryland Statistics

# Liver Cancer Rates by State, 2010-2014



US ASR = 7.8/100,000  
MD ASR = 7.9/100,000  
Ranking = 13

**Incidence Rates<sup>†</sup> for Maryland**  
**Liver & Bile Duct, 2010 - 2014**  
**All Races (includes Hispanic), Both Sexes, All Ages**



Age-Adjusted  
Annual Incidence Rate  
(Cases per 100,000)

[Quantile Interval](#)

- 4.7 to 5.9
- > 5.9 to 6.8
- > 6.8 to 7.8
- > 7.8 to 8.7
- > 8.7 to 15.5

⊠ Suppressed \* / \*\*

US (SEER + NPCR)  
Rate (95% C.I.)  
7.8 (7.8 - 7.9)

Maryland  
Rate (95% C.I.)  
7.9 (7.6 - 8.2)

**Notes:**

[State Cancer Registries](#) may provide more current or more local data.

Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries ([for more information](#)).

<sup>†</sup> Incidence rates (cases per 100,000 population per year) are age-adjusted to the [2000 US standard population](#) (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). Rates are for invasive cancer only (except for bladder which is invasive and in situ) or unless otherwise specified. Rates calculated using SEER\*Stat. Population counts for denominators are based on Census populations as modified by NCI. The [1969-2015 US Population Data](#) File is used for SEER and NPCR incidence rates.

\* Data have been [suppressed](#) to ensure confidentiality and stability of rate estimates. Data is currently being suppressed if there are fewer than 16 counts for the time period.

\*\* Data have been [suppressed](#) for states with a population below 50,000 per sex combination for American Indian/Alaska Native or Asian/Pacific Islanders because of concerns regarding the relatively small size of these populations in some states.

Data for the United States does not include data from Puerto Rico

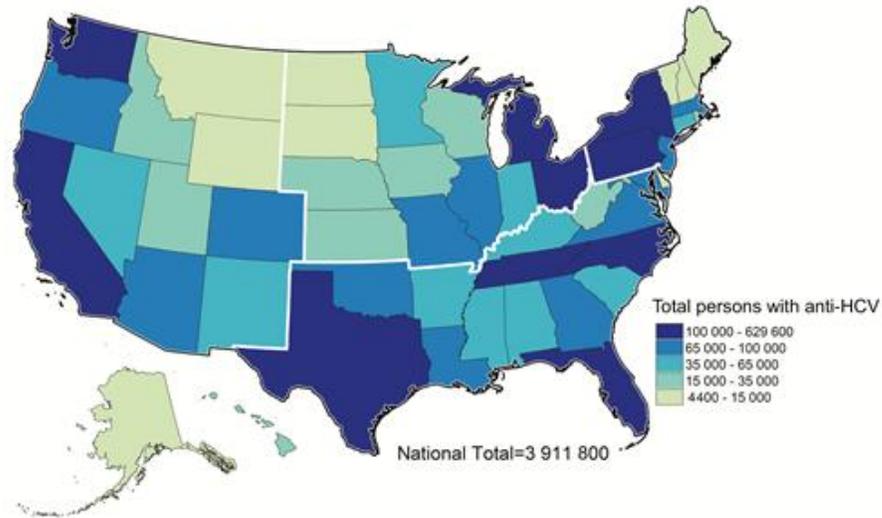
# Risk Factors

## Risk Factors for Liver Cancer – Could these Explain Rising Rates?

- Chronic hepatitis C virus
- Chronic hepatitis B virus
- Cirrhosis
  - Alcohol-related
  - Obesity-related (non-alcoholic fatty liver disease)
  - Primary biliary cirrhosis
  - Inherited metabolic diseases
- Tobacco use
- Aflatoxins
- Arsenic
- Anabolic steroids

# State-specific HCV prevalence

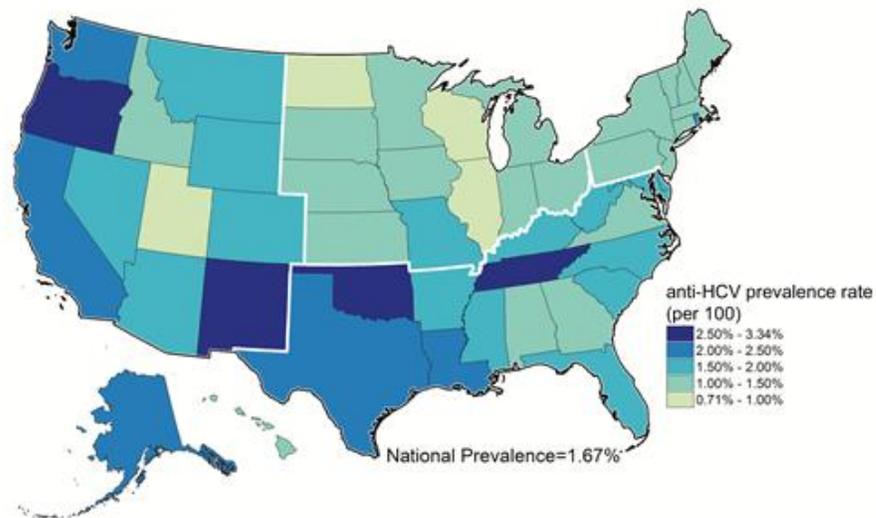
A. Estimated Total Persons with anti-HCV



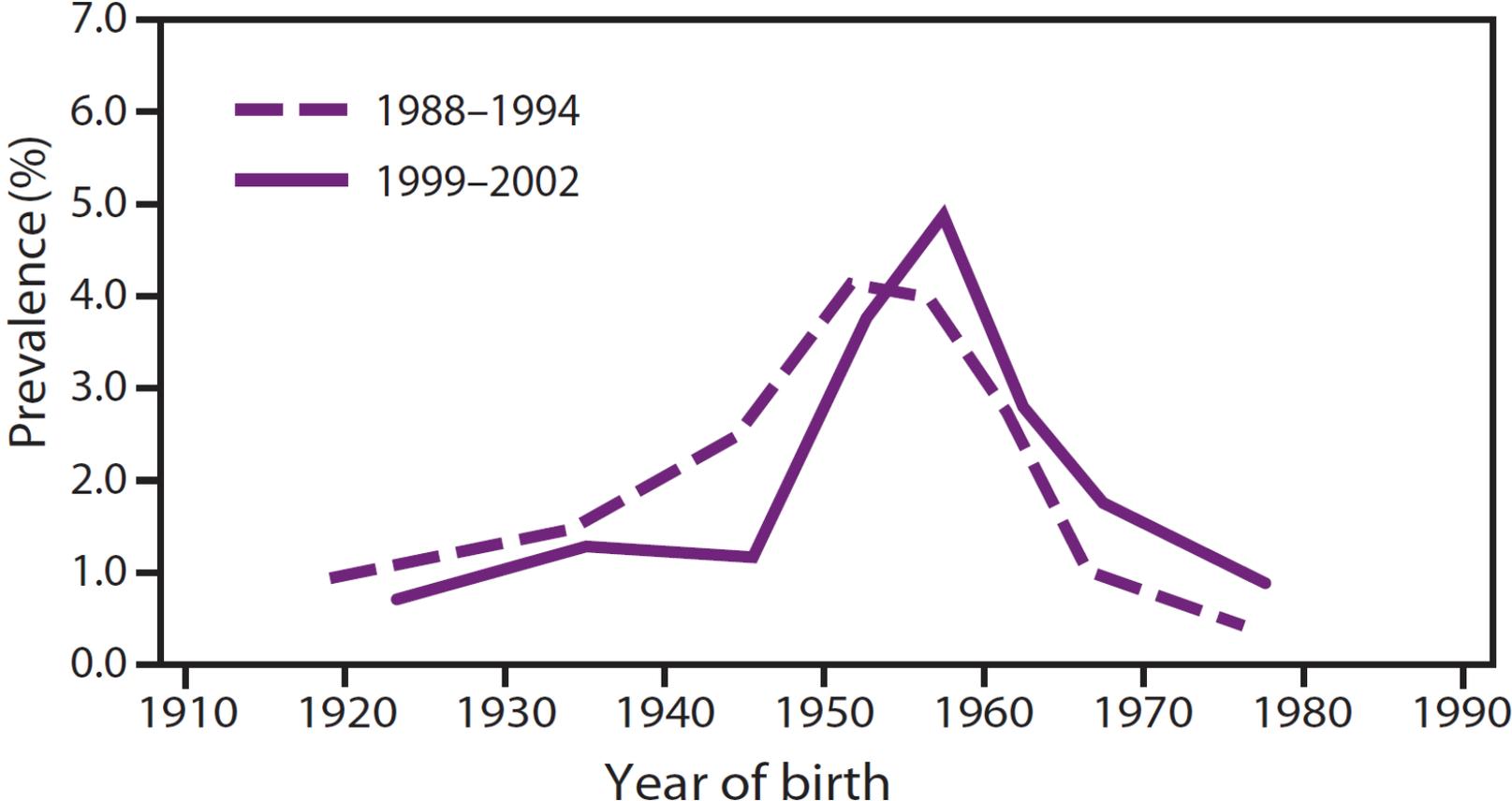
MD Estimates: 82,000 people  
(1.86%) living with HCV infection

National average: 1.67%

B. Estimated anti-HCV Prevalence Rate



# HCV prevalence by year of birth, NHANES



## Time trends in Liver Cancer Risk Factors

- National Health and Nutrition Examination Survey
  - 1988-1994: 0.4%
  - 1999-2006: 0.3%
  - 2007-2012: 0.3%
- Incidence of acute HBV infection decreasing
- Prevalence of NAFLD in the U.S. has risen from 18% in 1988–1991 to 31% in 2011–2012
- Prevalence of alcohol-related liver disease is flat.

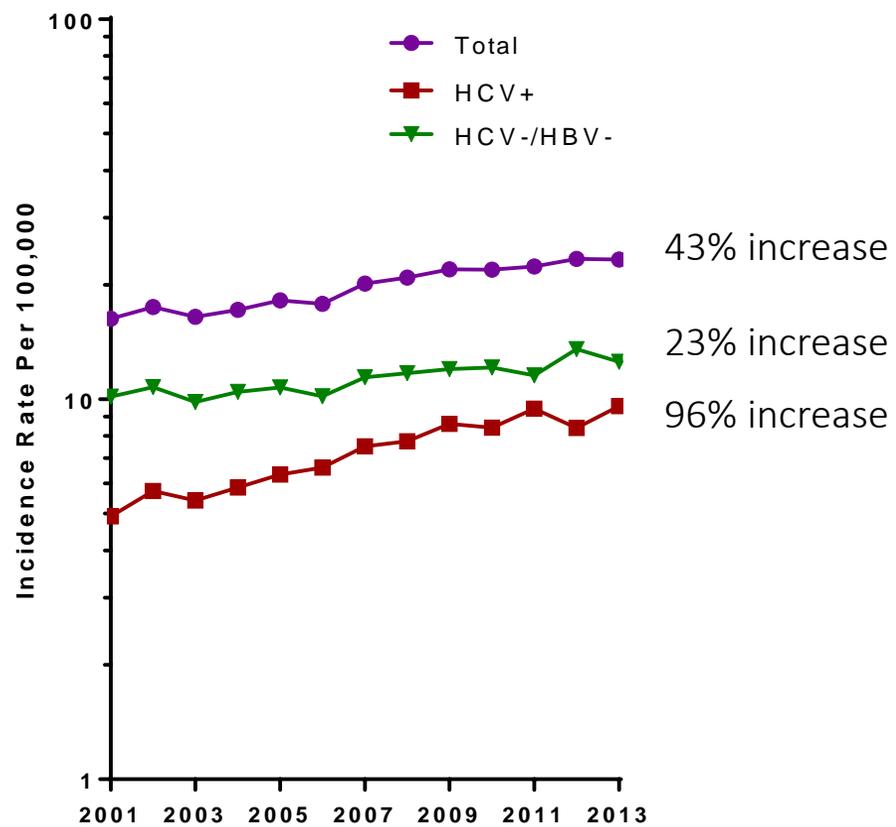
## Risk Factors for Liver Cancer – Could these Explain Rising Rates?

- **Chronic hepatitis C virus**
- Chronic hepatitis B virus
- Cirrhosis
  - Alcohol-related
  - **Obesity-related (non-alcoholic fatty liver disease)**
  - Primary biliary cirrhosis
  - Inherited metabolic diseases
- Tobacco use
- Aflatoxins
- Arsenic
- Anabolic steroids

Is the rising HCV prevalence driving increasing trends?

- Analysis of SEER-Medicare data
- 2001-2013, ages 66+
- Estimated rates of overall and HCV-related hepatocellular carcinoma

### Hepatocellular Carcinoma

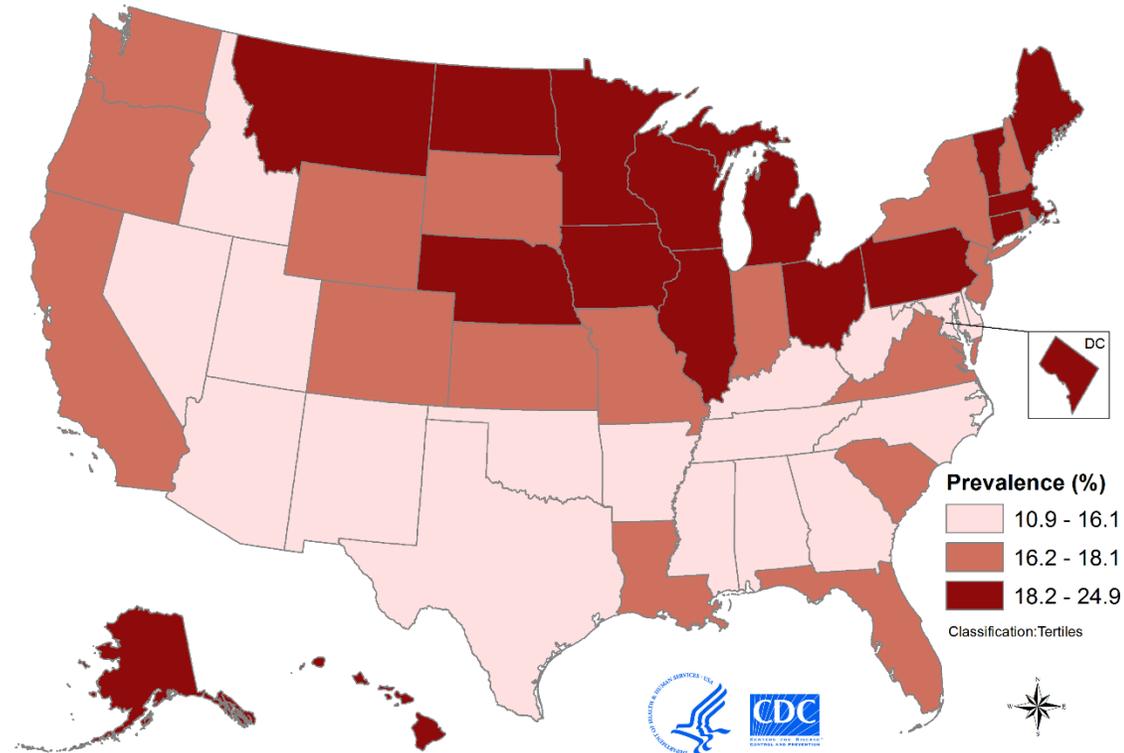


# Prevention

# Liver Cancer Prevention

- Limiting alcohol and tobacco use

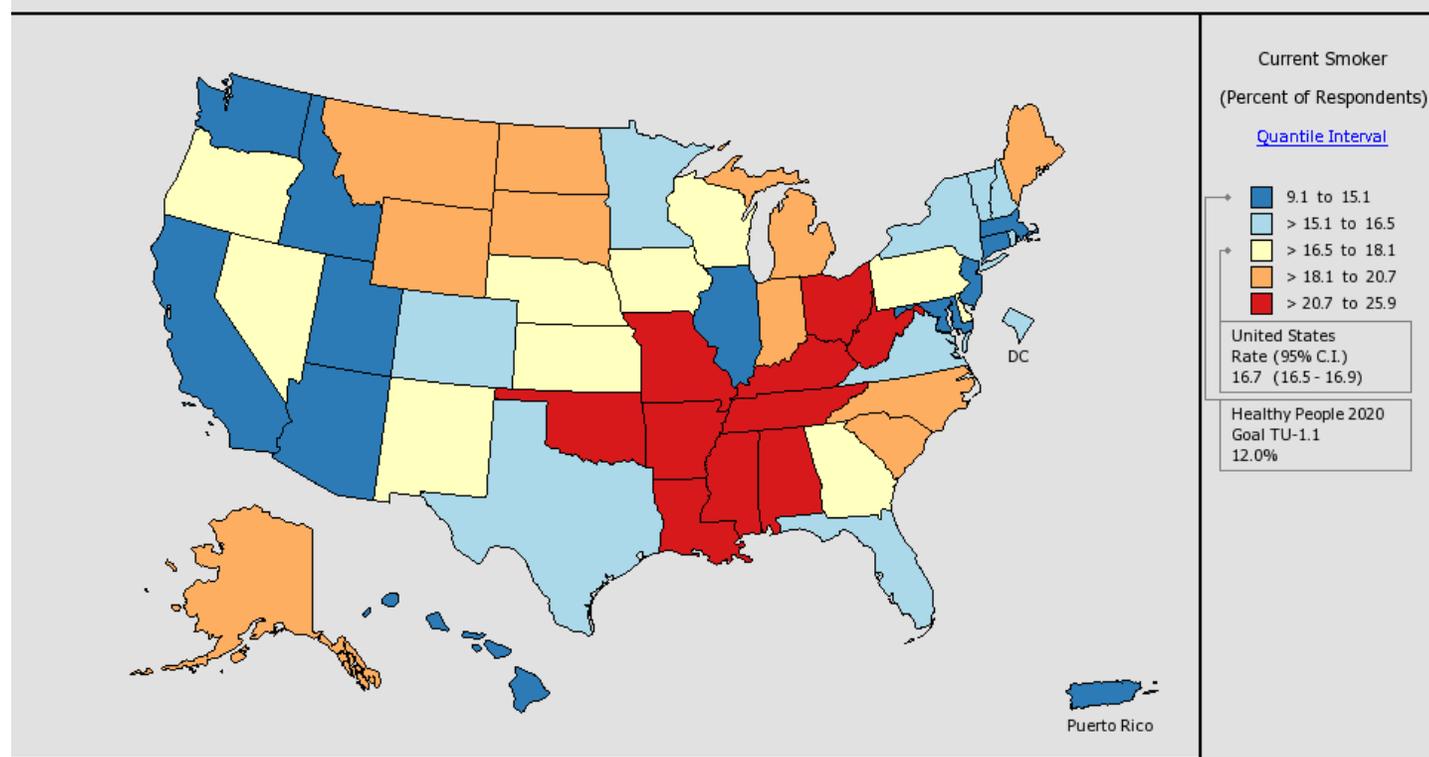
MD: 14.7% binge drinking in adults



# Liver Cancer Prevention

- Limiting alcohol and tobacco use

MD: 15.1% Current smokers



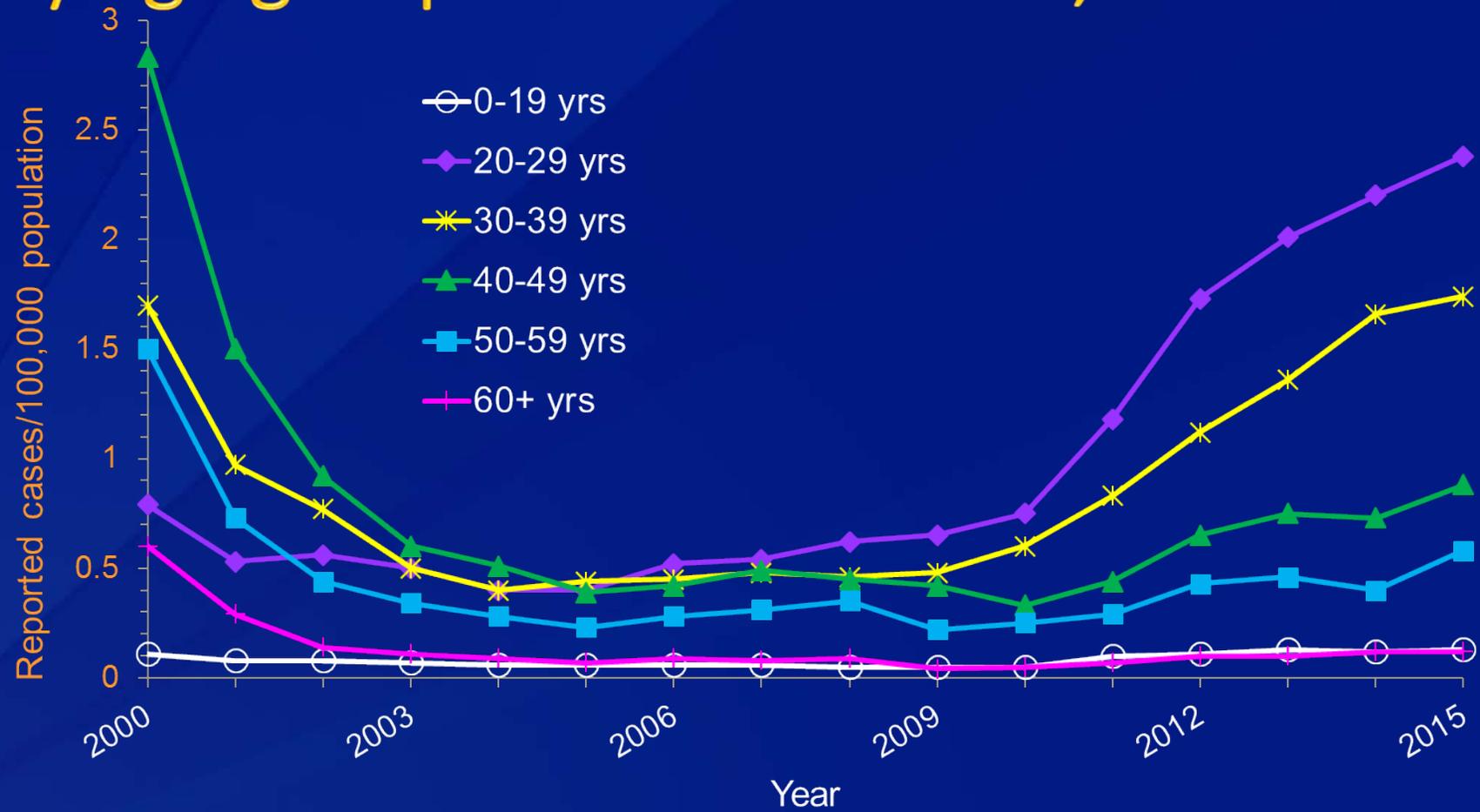
## Liver Cancer Prevention

- **Maintaining a healthy weight**
  - Reduces risk of diabetes and non-alcoholic fatty liver disease
  - General health benefits

## Avoiding, Preventing and Treating Hepatitis Infections

- Routes of transmission
  - Hepatitis B (child birth, sexual intercourse, needle sharing)
  - Hepatitis C (injection drug use, receipt of infected blood products, child birth)
- Prevention
  - Hepatitis B – vaccination introduced 1980s
  - Hepatitis C – no vaccine, interventions focused on injection drug users
- Treatment
  - Hepatitis B – treatment available – suppress viral replication, reduce liver damage
  - Hepatitis C – curative, highly effective drugs introduced in 2011

# Figure 4.2. Incidence of acute hepatitis C, by age group — United States, 2000–2015

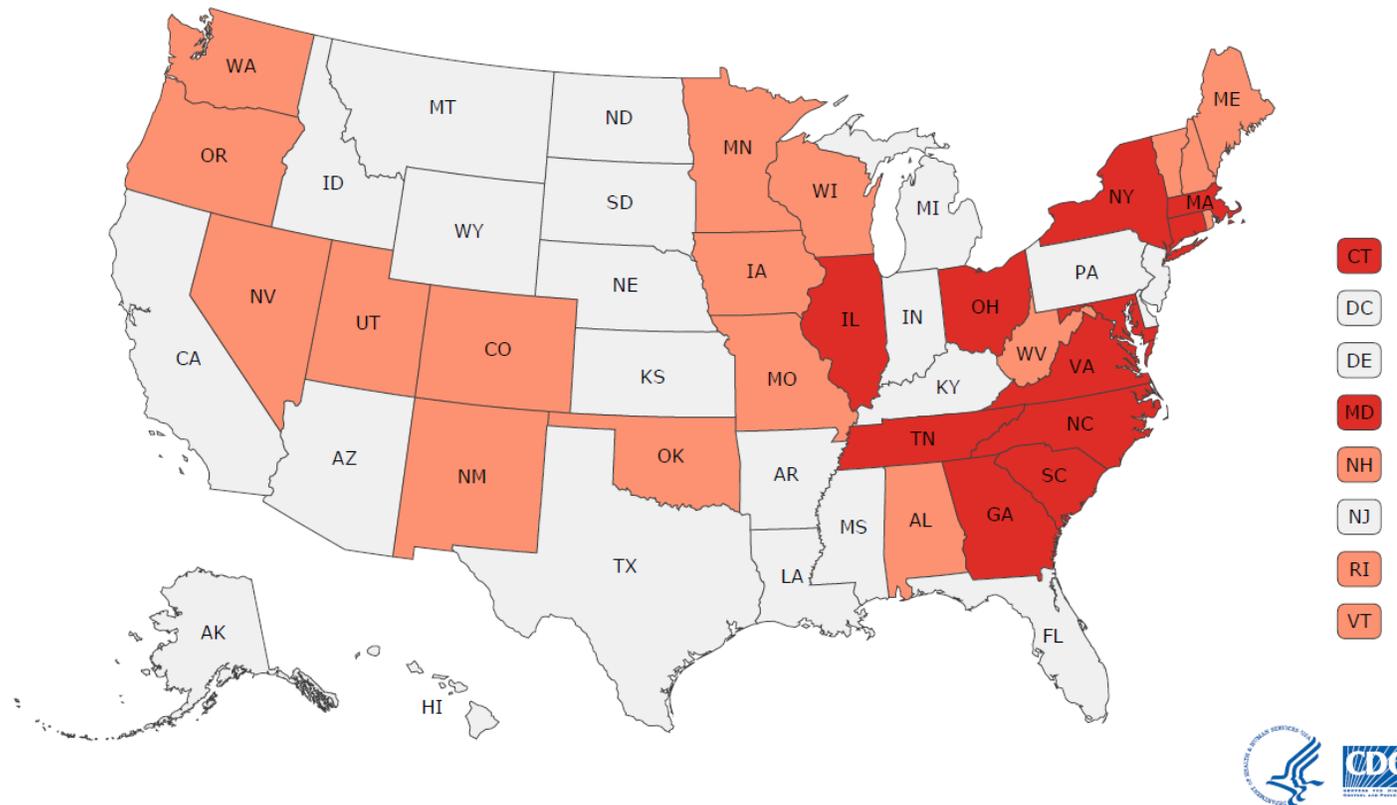


Source: CDC, National Notifiable Diseases Surveillance System (NNDSS)



# Opioid epidemic may be increasing HCV incidence

Change in heroin-related deaths by state, 2014 to 2015



## Conclusions

- In MD, liver and thyroid cancer incidence and mortality rates have trended upwards in recent years.
- These two cancers have very different risk profiles
  - Overdiagnosis vs. modifiable risk factors
- Making progress against obesity may reduce risk of both cancers
- Prevention, early diagnosis and treatment of HBV and HCV infection may also reduce risk of liver cancer.

# Cancers with Rising Rates in Maryland, Potential Etiologies, and Interventions

*Meredith S. Shiels, Ph.D.*

*Infections and Immunoepidemiology Branch  
Division of Cancer Epidemiology and Genetics  
National Cancer Institute*

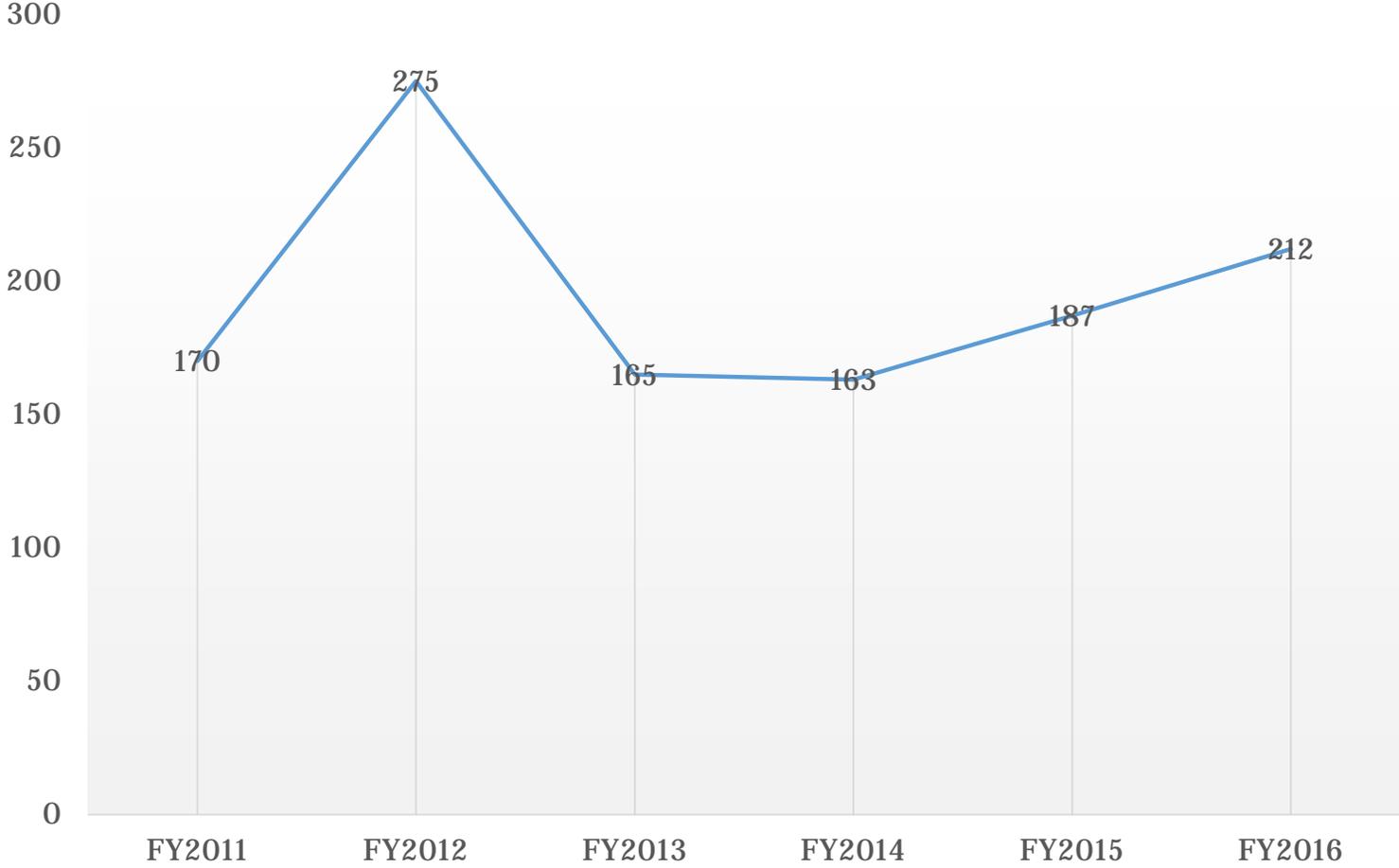
*Maryland  
Cancer  
Collaborative*



# **MCC Accomplishments 2011-2016**

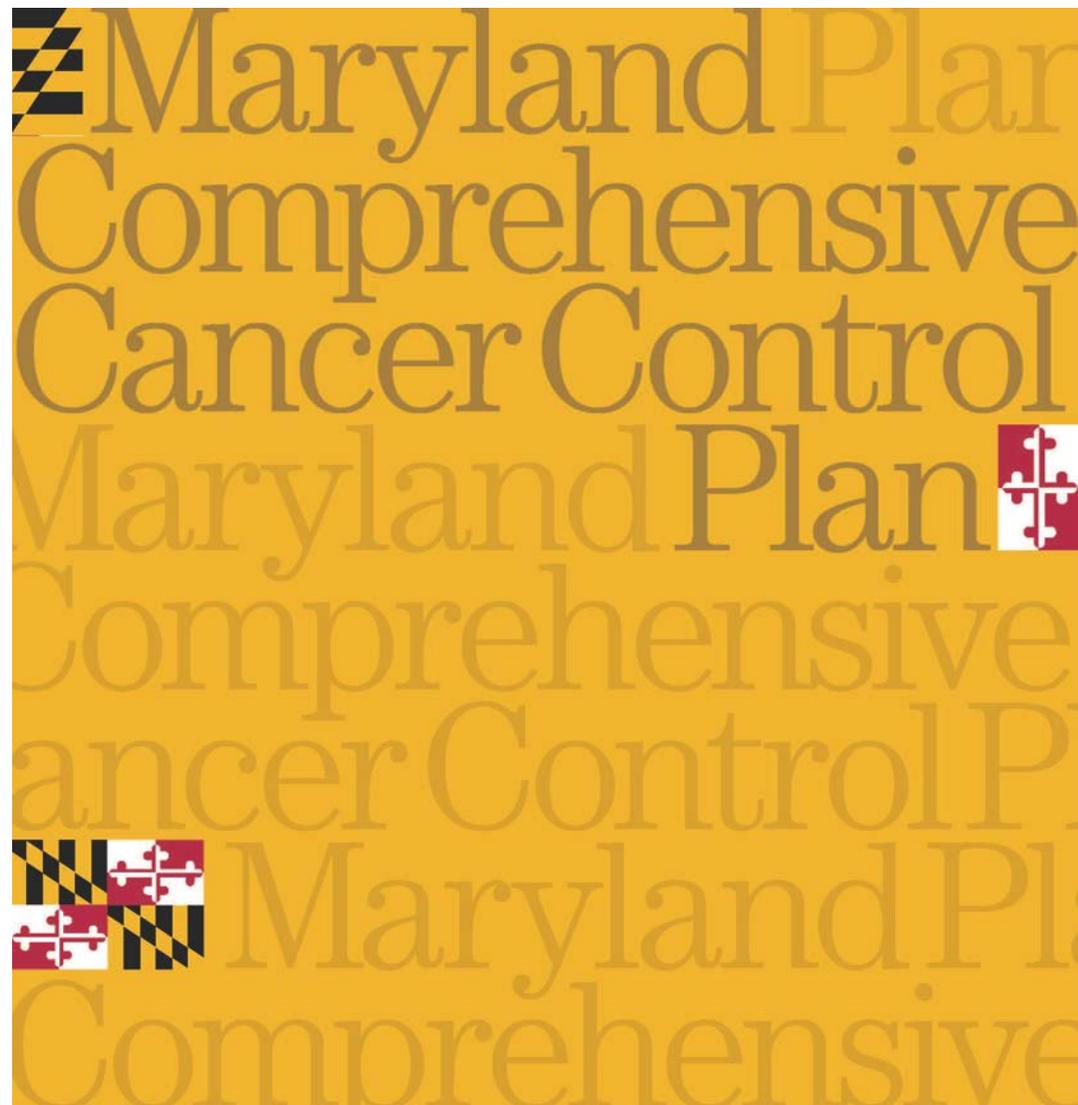
**Brian Mattingly  
Director, MCCCCP  
September 26, 2017**

# MCC Membership Over the Years



- MCC Members are:
- From across the state of Maryland (DC Metro, Baltimore Metro, Western Maryland, Southern Maryland, Eastern Shore, Eastern Maryland)
- From many different organizations (federal/state/local health department, hospital/medical institution/healthcare, foundation/non-profit, academic institution, network/coalition/society, and businesses)
- Advocates, analysts, biostatisticians, CEOs, coordinators, directors, doctors, educators, epidemiologists, executive directors, fellows, health advisors, interns, lawyers, managers, navigators, nurses, nutritionists, patients, professors, program administrators, researchers, social workers, and students





**MCC members  
came together  
beginning in 2011  
to implement the  
2011-2015  
Maryland  
Comprehensive  
Cancer Control  
Plan.**

# MCC Committees and Workgroups

- Cancer Disparities Committee
  - Patient Navigation Workgroup
- Early Detection and Treatment Committee
  - Patient Navigation Workgroup
- Evaluation Committee
- Policy Committee
  - Tobacco Workgroup
- Primary Prevention Committee
- Survivorship Committee
  - Survivorship Workgroup
  - Palliative Workgroup

> 100 meetings  
and countless #  
of email  
exchanges

# **Workgroup Product**

## **Maryland Patient Navigation Network (2012)**

The Maryland Patient Navigation Network (PNN) was formed in 2012 as a result of the MCC Patient Navigation Workgroup's work. The workgroup identified a gap in the ability of those working in patient navigation in Maryland to connect with others in the field to share resources and best practices. To address this gap, DHMH formed the PNN with feedback from members of the Patient Navigation Workgroup, which also initially served as a PNN speakers' bureau. The PNN has evolved to a network of over 200 members, and hosts an annual conference as well as several webinars for members in addition to hosting a Facebook page to facilitate networking: [www.Facebook.com/MDPNN](http://www.Facebook.com/MDPNN).

# Workgroup Product

## **Guide to Cancer Survivorship Care and Resources for Cancer Patients (2014)**

The Survivorship Workgroup created a guide to cancer survivorship care as well as accompanying resource directories. The guide outlines many issues that may impact a patient throughout the cancer survivorship journey and is divided into three phases: Treatment Planning, Active Treatment, and Post Treatment. Each phase links to a comprehensive list of Maryland resources for patients. The guide was posted on the MDH website and shared via social media, professional association meetings (patient navigators and oncology social workers), and local health departments. The guide is available online:

[http://phpa.dhmh.maryland.gov/cancer/cancerplan/Pages/SurvivorshipGuide\\_PatientResources.aspx](http://phpa.dhmh.maryland.gov/cancer/cancerplan/Pages/SurvivorshipGuide_PatientResources.aspx)

# Workgroup Products

## **Palliative Care Survey (2014/2015)**

The Palliative Care Workgroup surveyed Maryland hospitals on palliative care programs and services offered to identify gaps, barriers, and needs. Significant findings include lack of physician buy-in and patient knowledge as major barriers, and networking/best practice sharing opportunities as a useful support for palliative care professionals. The findings were published in the Journal of Pain and Symptom Management in June 2015 and are available online:

<http://www.sciencedirect.com/science/article/pii/S0885392415000391#>.

# Workgroup Product

- **Palliative Care Awareness (2016)**
- The Palliative Care Workgroup developed a palliative care education/resource sheet for primary care providers including information about palliative care, how to find palliative care, and continuing education in palliative care. The information is also appropriate for providers to share with patients. The resource sheet was posted on the DHMH website and shared with several healthcare provider professional associations in the state to distribute to their member networks via newsletters and other communications. The resource sheet is available online:  
<http://phpa.dhmd.maryland.gov/cancer/cancerplan/Pages/Palliative-Care-Resources.aspx>.



# Workgroup Product

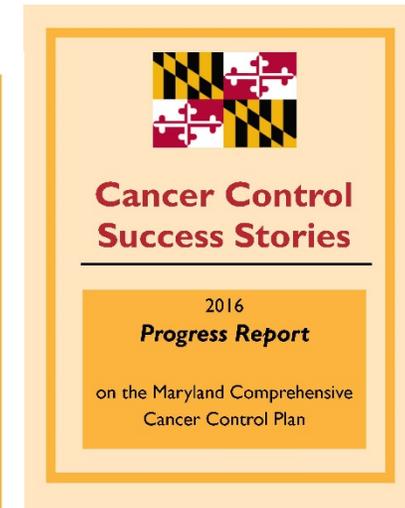
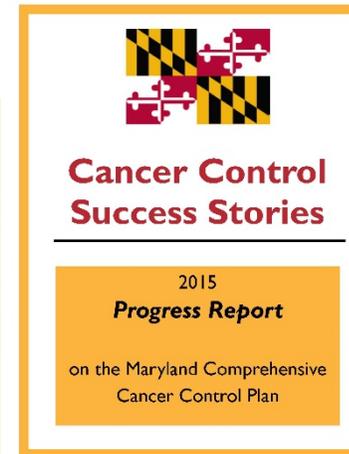
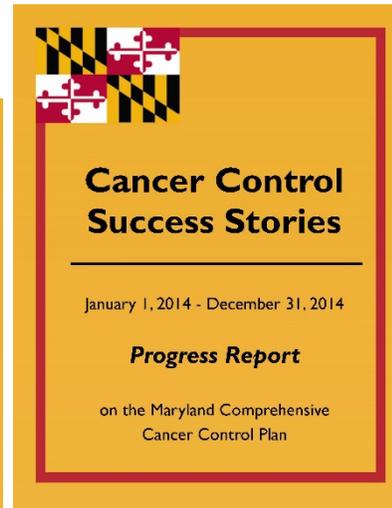
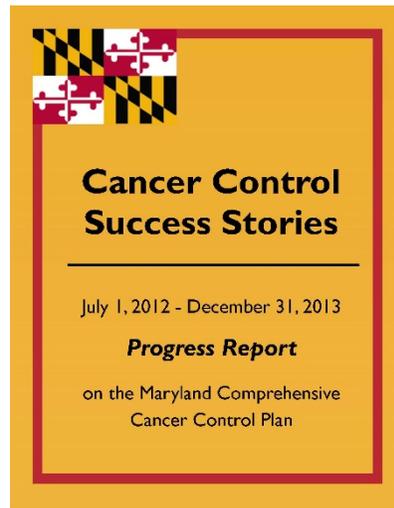
## **Survey of Maryland College and University Tobacco Policies (2016)**

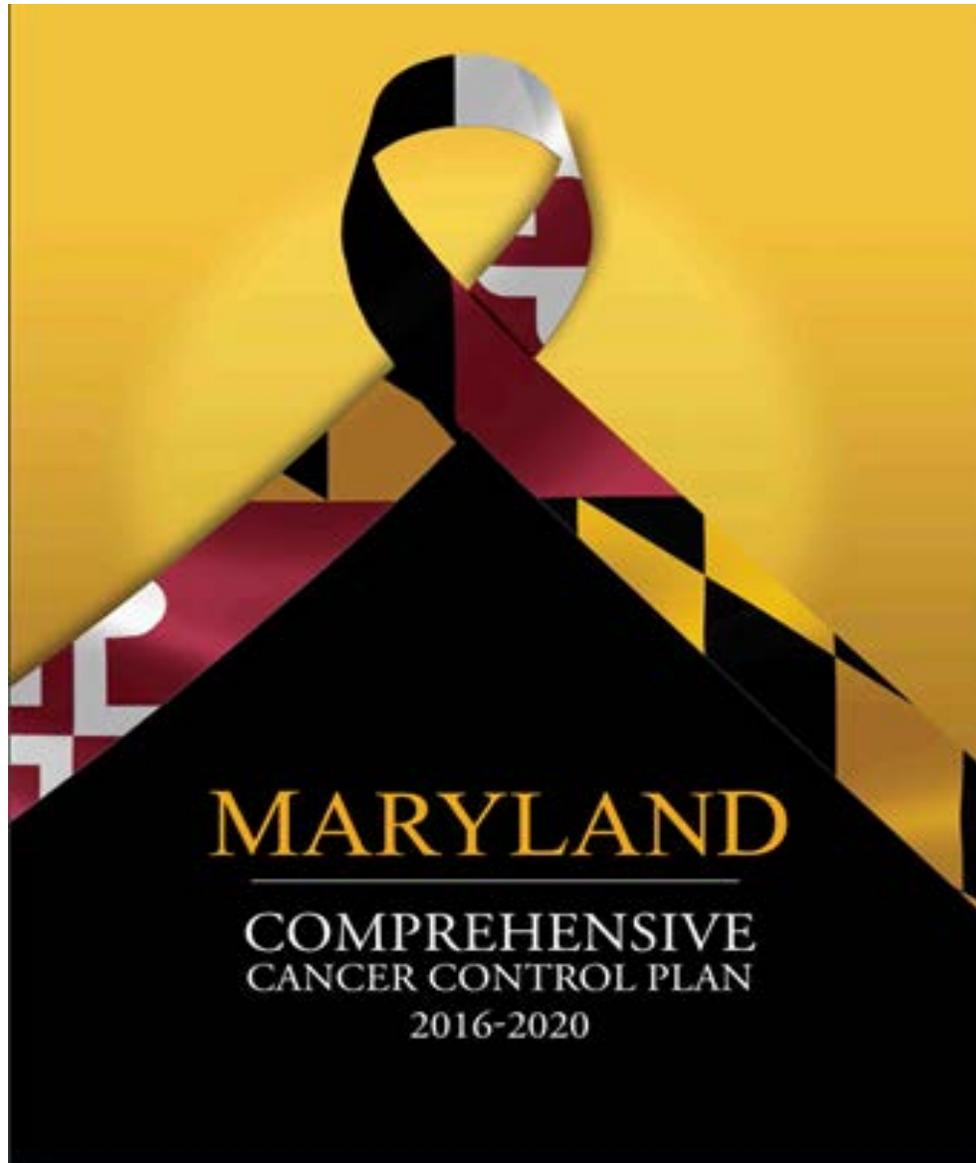
The Tobacco Workgroup surveyed Maryland colleges and universities to collect data about campus tobacco policies, enforcement, and cessation services and resources available.

Significant findings include: more than half of the respondents reported a 100% tobacco-free policy; 2-year community college respondents are exceeding state law requirements for smoking policies; and, most respondents offer cessation services but do not offer nicotine replacement therapies. Tracking student and faculty/staff quit rates may provide data to help campuses focus cessation efforts and maximize resources. The findings have been summarized in a report that is available online, as well as best practices:

<http://phpa.dhmh.maryland.gov/cancer/cancerplan/Pages/mcc-tobacco-workgroup.aspx>.

- Over the years, MCC members share their cancer projects, which contributes to the success of the annual [Progress Report on the Maryland Comprehensive Cancer Control Plan](#).

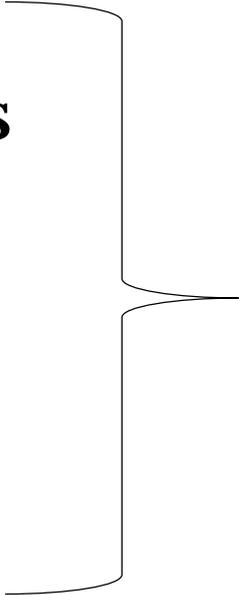




**2015-2016, MCC  
members and  
partners came  
together and  
updated the  
Maryland  
Comprehensive  
Cancer Control  
Plan**

- **New priorities/workgroups 2017-2018**

- Tobacco Cessation
- HPV Vaccination
- Access to Care/Resources
- Hospice Utilization Data
- Communication



**In 2016, MCC members came together to pick new priorities from the updated Cancer Plan and formed new workgroups**

**Thank you so much for your  
contributions to the successes  
of the MCC!**

*Maryland  
Cancer  
Collaborative*



# MCC Implementation Awards

Elizabeth A. Platz, ScD, MPH  
Chair, Maryland Cancer Collaborative  
September 26, 2017

# Implementation Awards

- The award is given in recognition of an organization who exemplifies the use of the Cancer Plan goals and objectives to reduce the burden of cancer in Maryland.

## Categories:

- Collaboration
- Policy/Environmental Change
- Systems Change

# **Exemplary Collaboration Award**

- This award is given to members who have collaborated between two or more organizations or institutions

***Congratulations!***

University of Maryland, Upper Chesapeake Health Kaufman  
Cancer Center

Project: HPV Community Outreach Education: HPV Cancer  
Prevention Vaccination

# **Innovative Policy or Environmental Change Award**

- This award is given to a member contributing to a policy or environmental change to encourage healthy behavior among the population targeted

***Congratulations!***

Calvert County Health Department

Project: Calvert County Fair Smoke Free Youth Day

# **Innovative Systems Award**

- This award is given to a member who contributed to a change in organization processes or procedures intended to improve services delivered and/or health outcomes

***Congratulations!***

MedStar North Integrated Cancer Network

Project: Smoking Cessation Program

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# MCC Workgroup Updates

September 26, 2017

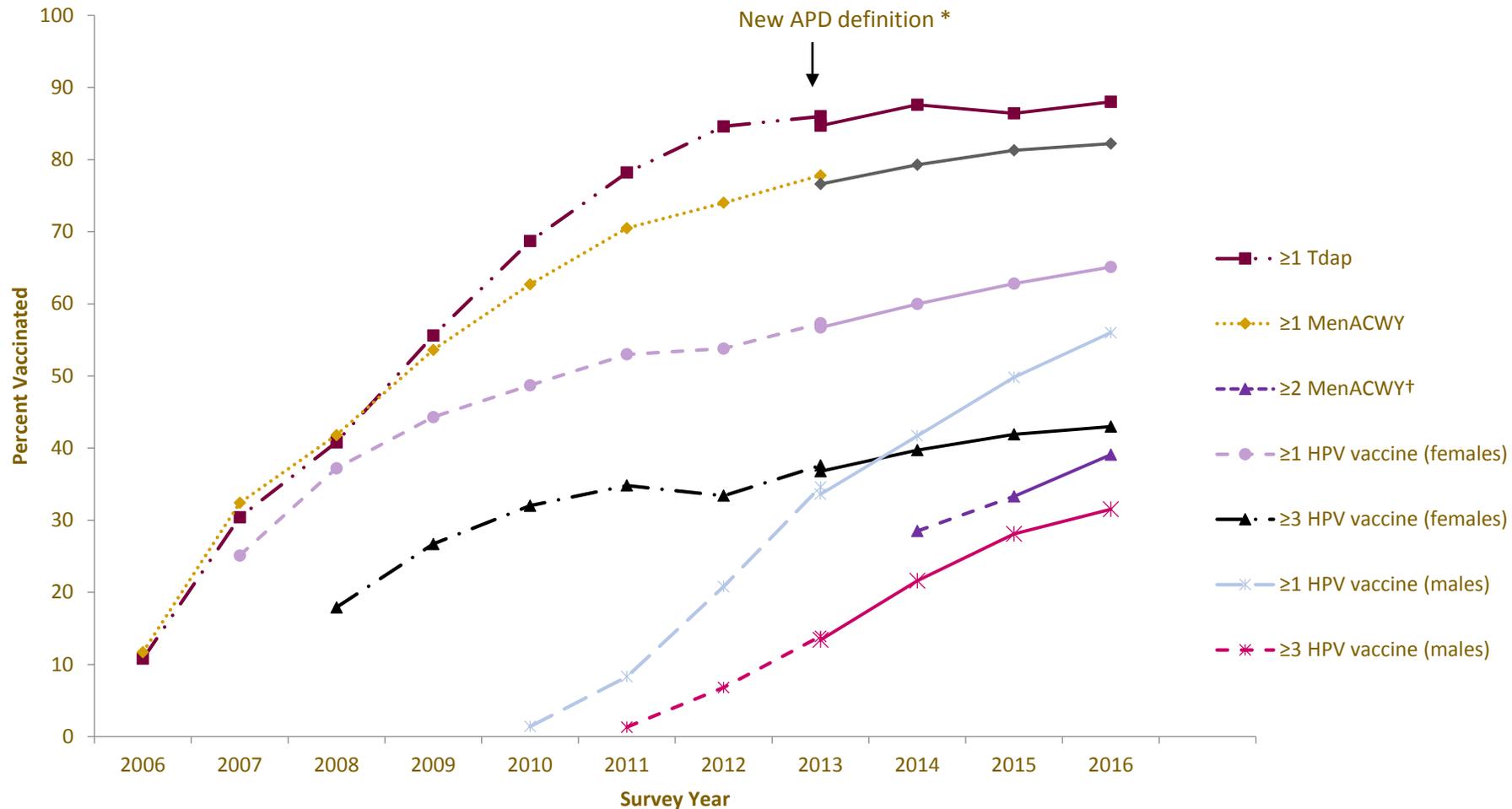
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Cancer  
Collaborative*



# HPV Workgroup

September 26, 2017

# Estimated Vaccination Coverage among Adolescents Aged 13-17 Years, NIS-Teen, United States, 2006-2016

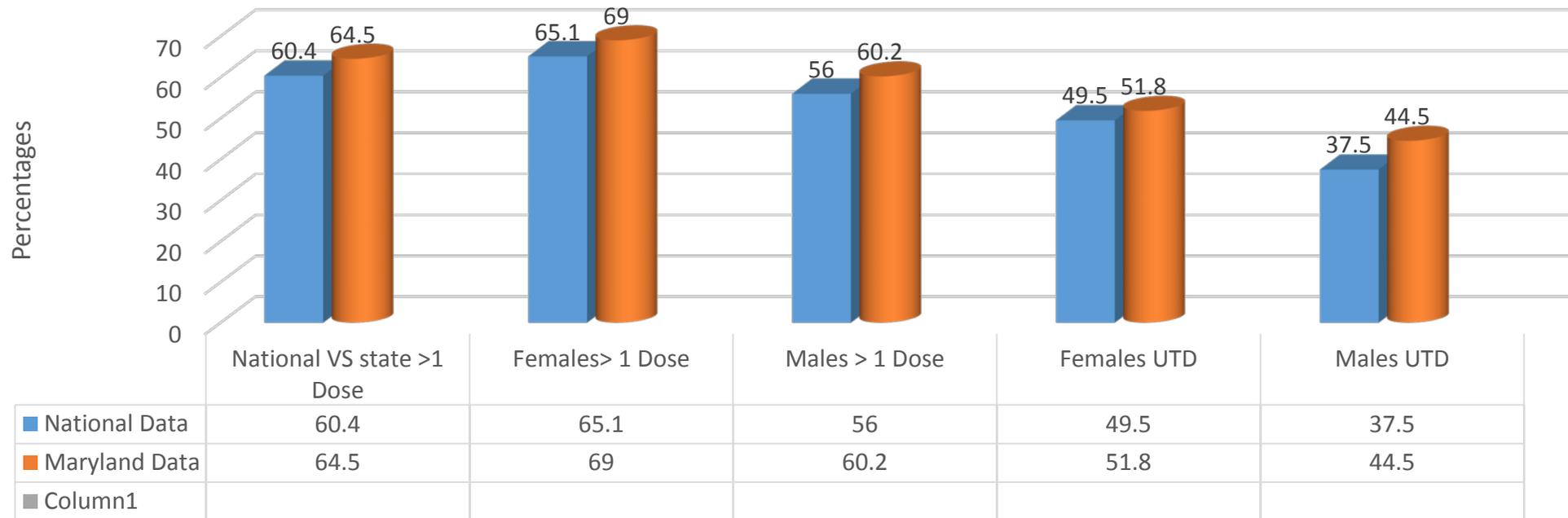


\* APD = Adequate provider data

† ≥2 doses MenACWY among adolescents aged 17 years

# National Immunization Survey - Teen United States 2016

Includes Nine Valent, Quadrivalent and Bivalent HPV vaccine

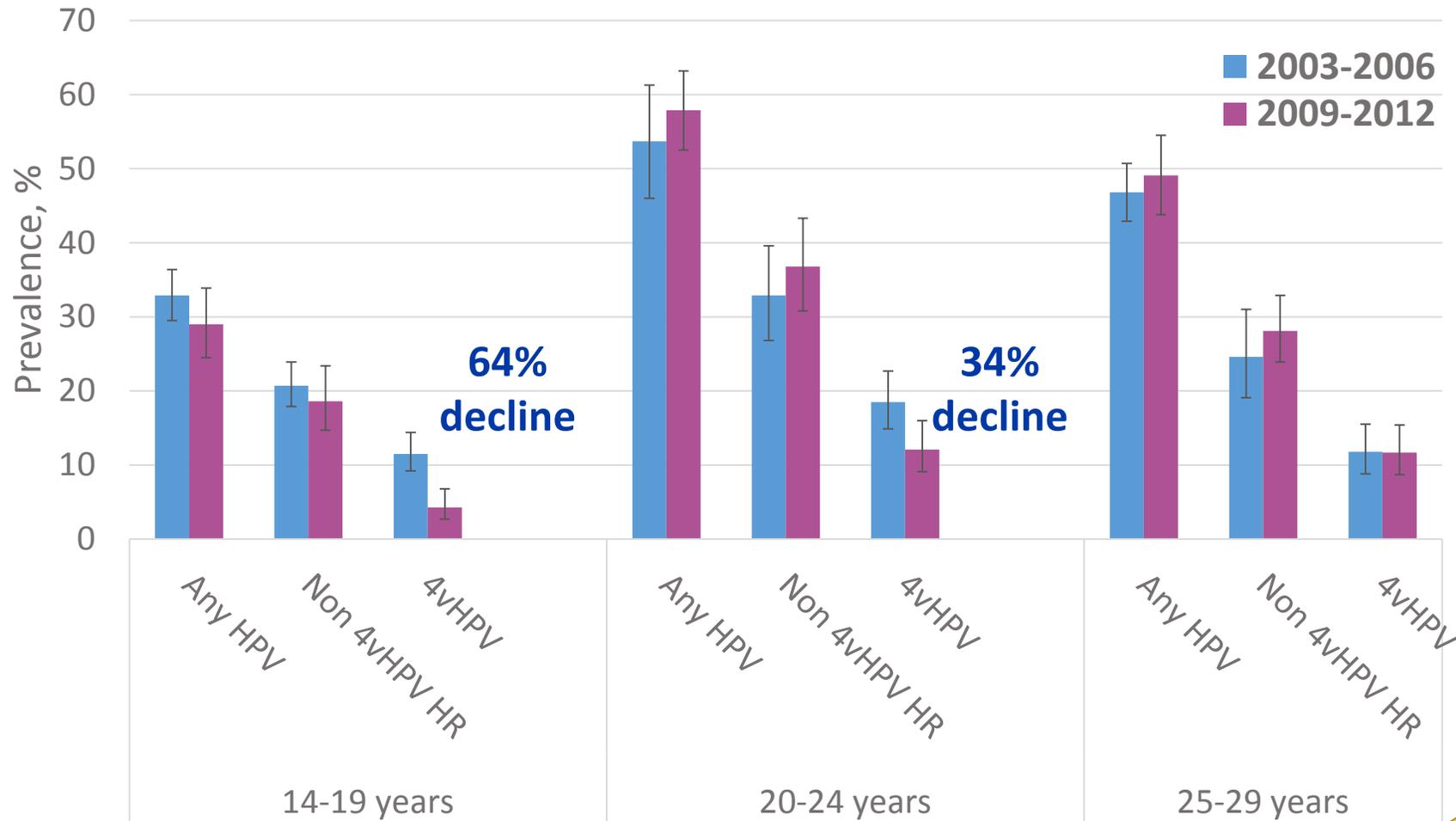


Comparing National vs Maryland Statistics

■ National Data ■ Maryland Data



# Prevalence of HPV before & after introduction of HPV vaccination in the United States



# CDC Suggestions to Help Improve Adolescent HPV Vaccination Rates

- Provide **clear recommendations**<sup>1</sup>
- **Follow the CDC recommendations** to routinely vaccinate 11- or 12-year-old males and females<sup>2</sup>
- Consider **appropriate opportunities** to vaccinate<sup>1</sup>
  - eg, well-child visits, sports physicals
- Make use of **reminder systems** to help ensure series completion<sup>1</sup>
- **BUNDLING OF HPV Vaccine/Meningococcal/Tdap Vaccines - NORMALIZE Vaccination**



# HPV Workgroup Members

Ahmed Elmi – Chair

Dr. Niharika Khanna – Co-Chair

20 members



# Priority Strategy

Implement system changes within healthcare practices to:

- Check pre-teen and teenage patients' vaccination status and offer all indicated vaccines at each visit;
- Schedule the next HPV vaccination dose before the end of the current appointment; and,
- Utilize reminder and recall strategies.



# Workgroup Activities

- HPV Vaccine Uptake Project at a Pediatric Office
- “Catch-Up” Project at a University
- Engage in opportunities to promote HPV Vaccination to family physicians, pediatricians and other healthcare professionals

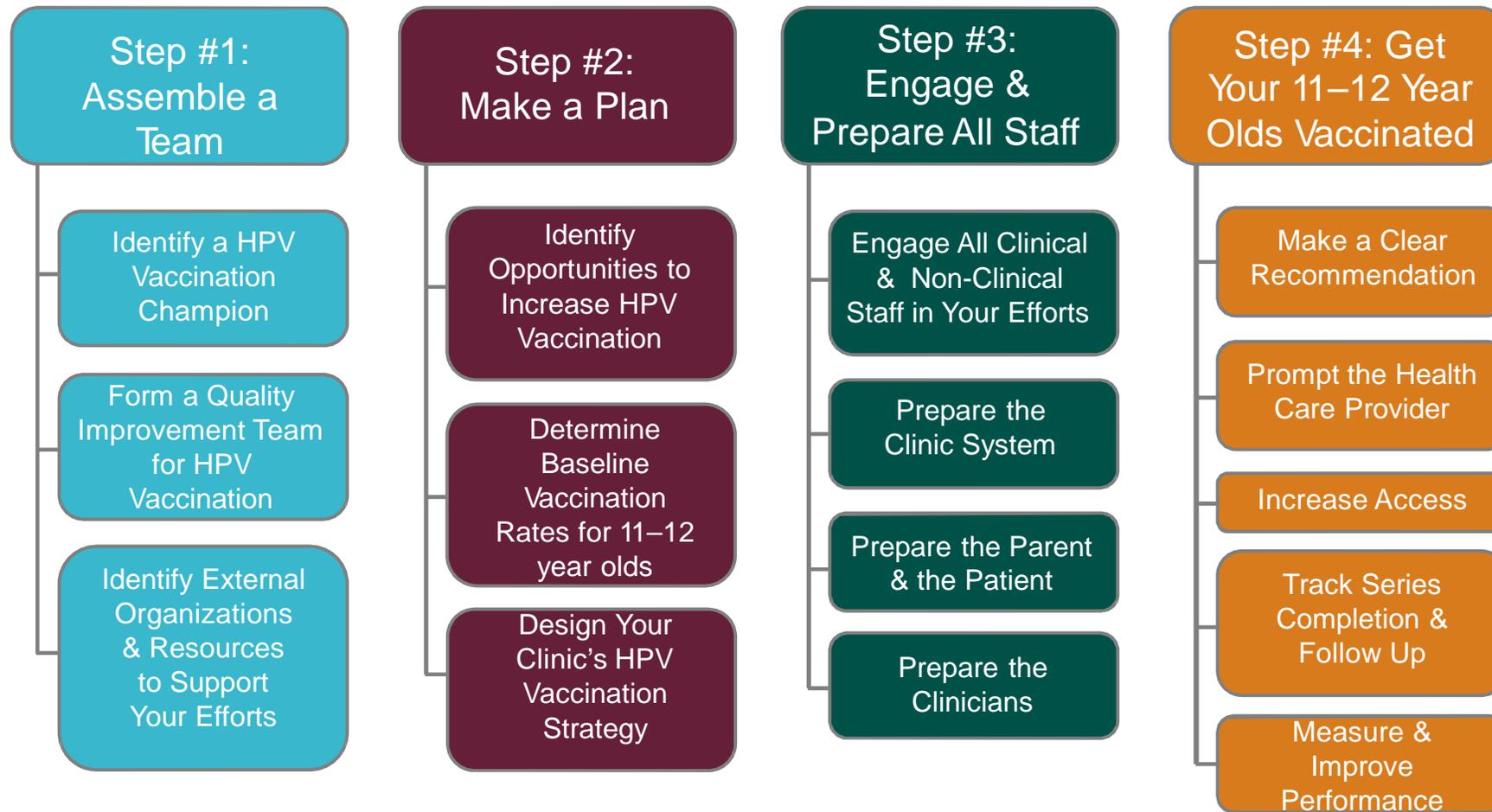


# Uptake Project at a Family Physician Office

- Exploring opportunity with University of Maryland Family Medicine
- Support practice with:
  - Training
  - Quality Improvement
  - Technical Assistance
  - Tools and resources



# American Cancer Society's Steps to Help Increase HPV Vaccination in Your Practice<sup>1</sup>



**Reference: 1.** American Cancer Society. Steps for Increasing HPV Vaccination. [illinoisap.org/wp-content/uploads/Steps-for-Increasing-HPV-Vaccination-in-Practice.pdf](http://illinoisap.org/wp-content/uploads/Steps-for-Increasing-HPV-Vaccination-in-Practice.pdf). Accessed March 28, 2016.



# Catch Up Project

- Support University Health Facilities to promote and provide HPV Vaccination to students who have not been previously vaccinated
- University of Maryland Graduate campus student health center
- University of Maryland at Baltimore County undergraduate Student health
  
- Support practice with:
  - Training
  - Quality Improvement
  - Technical Assistance
  - Tools and resources
  - Awareness campaign

# Opportunities to Promote HPV Vaccine

- Identify and participate in meetings and events to educate health care professionals about HPV and HPV vaccination.
- State Health Interdisciplinary Program
- Anne Arundel Pediatric Services Meeting
- Maryland Academy of Family Physicians Annual meeting in June 23<sup>rd</sup> 2017
- Maryland Academy of Family Physician HPV panel discussion with experts/MDH/survivors Oct 3<sup>rd</sup> 2017
- AOGIN India meeting

# Successes

- Dedicated Group
- Many opportunities to collaborate
- Strong support for activities
- Many stakeholders
- Many good tools and resources

# Challenges

- Risk of taking on too much
- Risk of duplicating efforts of others



# Thank You



{ HPV vaccine is cancer prevention. }



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention



YOU ARE THE KEY TO HPV  
CANCER PREVENTION



MARYLAND  
Department of Health  
and Mental Hygiene

*Maryland  
Cancer  
Collaborative*



# **Maryland Cancer Collaborative: Hospice Utilization Data Workgroup Update**

**Michelle Levin**

# Hospice Utilization Data Update

- Goal: Increase the quality of life of cancer survivors in Maryland
- Objective: By 2020, develop and implement a process to collect Maryland-level data on hospice utilization by cancer patients and average length of stay for cancer patients.
- Strategy: Create partnerships to develop and implement a plan to collect cancer patient hospice utilization data. Partners may include the Maryland BRFSS, Hospice and Palliative Care Network of Maryland, and the National Hospice and Palliative Care Organization, among others.
- Number of members: 15 (includes State of MD staff)
- Number of meetings: 4 thus far (Feb, April, June, Sept)

# Hospice Utilization Data Workgroup Update

- **Activity #1**
- **Activity:** Brainstorm questions to determine data sources, timeliness, meaningfulness and accessibility of data
- **Timeframe:** February – April 2017
- **Members responsible:** All members
- **Measure progress by:** Development of a list of questions to be answered by the workgroup
- **Info/resources needed:** To be determined by the workgroup; representation from Md Hospital Assn, IT

# Hospice Utilization Data Workgroup Update

- **Activity #2**
- **Activity:** Research to determine what data is available, and answer the questions listed in Activity #1
- **Timeframe:** April – September 2017
- **Members responsible:** Peggy Funk, Susanne Tameris, Michele Levin and all members
- **Measure progress by:** Compilation of answers to the list of questions developed
- **Info/resources needed:** Representation from MD Hospital Assn, more than one hospice

# Hospice Utilization Data Workgroup Update

- **Activity #3**
- **Activity:** Review available data and concerns about it
- **Timeframe:** April – September 2017
- **Members responsible:** Peggy Funk and all members
- **Measure progress by:** Creation of a list of resources found
- **Info/resources needed:** Representation from MD Hospital Assn, more than one hospice

# Hospice Utilization Data Workgroup Update

- **Activity #4**
- **Activity:** Update list of questions subsequent to review of research and availability of new data
- **Timeframe:** September 2017
- **Members responsible:** All members
- **Measure progress by:** Compilation of answers and updated list of resources
- **Info/resources needed:** Representation from MD Hospital Assn, more than one hospice

# Hospice Utilization Data Workgroup Update

- **Questions to be answered:**
  - What data is available today? Is it accurate? Who has it?
  - What data is not available today?
  - What data is important/meaningful to collect?
  - For whom is this data important/meaningful?
  - How will we collect data to determine hospice utilization of cancer patients in Maryland?
  - What are some potential challenges in collecting the data?
  - Who will have access to this data?
  - Read only vs edit right?
  - Where will this data be stored?

# Hospice Utilization Data Workgroup Update

- **More questions...**
  - How will progress and outcomes be evaluated?
  - Will this group be responsible for analysis of the data, or will that be left to the other Collaborative workgroups or the end-users?
  - Who will have access to this data?
  - Read only vs edit right?
  - Where will this data be stored?
  - How will progress and outcomes be evaluated?
  - Will this group be responsible for analysis of the data, or will that be left to the other Collaborative workgroups or the end-users?
  - Are there any key partners missing from this group, and if so, who can help recruit them?
  - Is there data on hospice utilization by minorities?

# Hospice Utilization Data Workgroup Update

- **Next steps**
  - **More research on:**
    - CRISP data
    - Limitations on data from MHCC
    - Medicare raw claims data (through 2015)
  - **Compilation of answers and resources**
    - Create a list of available resources, data sets, etc

# Hospice Utilization Data Workgroup Update

- **Challenges & Successes**

- **Challenges:**

- We need representation from MHA and from more than one hospice (working on this)
- We need data on referrals to palliative care and the location of the patient at the time of the referral (inpatient, home-based, etc)

- **Successes:**

- We have done plenty of research and know that the data is out there!
- New members will be joining our workgroup!

# Fatigability and Cancer

What is it? How do we measure it? What are the causes and potential interventions?

Jennifer Schrack, PhD

Department of Epidemiology

# Fatigue

- Fatigue:
  - Subjective lack of physical and/or mental energy perceived to interfere with usual and desired activities
  - Often used interchangeably with tiredness and exhaustion

# Fatigue

- Fatigue:
  - Subjective lack of physical and/or mental energy perceived to interfere with usual and desired activities
  - Often used interchangeably with tiredness and exhaustion
- Usually assessed by asking:

**In the past month, on average how often have you felt unusually tired during the day? All, most, some, or none of the time? GHSX04**

All  3

Most  2

Some  1

None  0

Don't know  8 Refused  7

# Fatigue

- Fatigue:
  - Subjective lack of physical and/or mental energy perceived to interfere with usual and desired activities
  - Often used interchangeably with tiredness and exhaustion
- Usually assessed by asking:

**During the past month, what category best describes your usual energy level, using a scale from 0 to 10, where 0 is no energy at all and 10 is the most energy you have ever had? **GHSX06****

<b>No energy at all</b>										<b>Most energy</b>	<b>DK</b>	<b>Refused</b>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	1	2	3	4	5	6	7	8	9	10	88	77

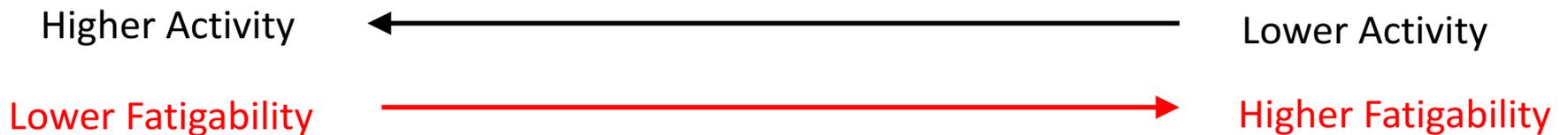
# Why Doesn't Self-reported Fatigue Increase with Age?



**Fatigue: 8/10**



**Fatigue: 8/10**



# Fatigue vs. Fatigability

- Fatigue:

- Subjective lack of physical and/or mental energy perceived to interfere with usual and desired activities
- Used interchangeably with tiredness and exhaustion

- Fatigability:

- Whole-body measure describing fatigue in relation to a standardized task in terms of time, distance, and/or speed
  - Perceived fatigability
  - Performance fatigability

# Measures of Fatigability in the Baltimore Longitudinal Study of Aging

## ➤ Perceived Fatigability:

- Can we use the Borg Rating of Perceived Exertion (RPE) scale to understand fatigability in relation to a standardized task?

## ➤ Performance Fatigability:

- Derived from 400m walk done “as quickly as possible”

6	
7	Very, very light
8	
9	Very light
10	
11	Fairly light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very hard
18	
19	Very, very hard
20	

# Measures of Fatigability in the Baltimore Longitudinal Study of Aging

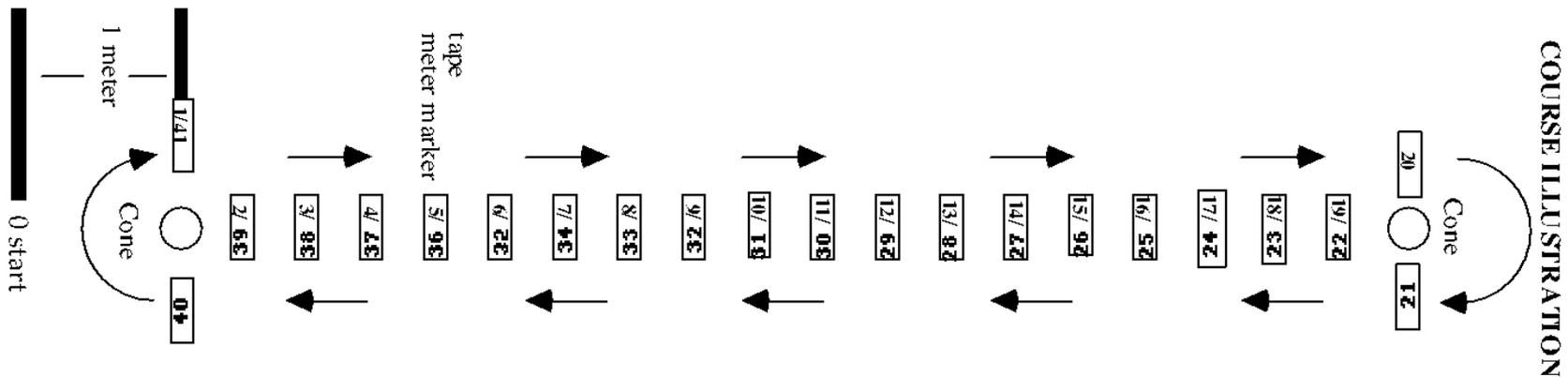
## ➤ Perceived Fatigability:

- 5 min treadmill walk at 1.5 mph (.67 m/s), 0% grade
- Immediately following, participants give their Rating of Perceived Exertion (RPE) from the Borg scale
- Those with a RPE of  $\geq 10$  (e.g., High Fatigability) have been shown to have greater risk of functional decline at follow up

6	
7	Very, very light
8	
9	Very light
10	
11	Fairly light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very hard
18	
19	Very, very hard
20	

# Performance fatigability

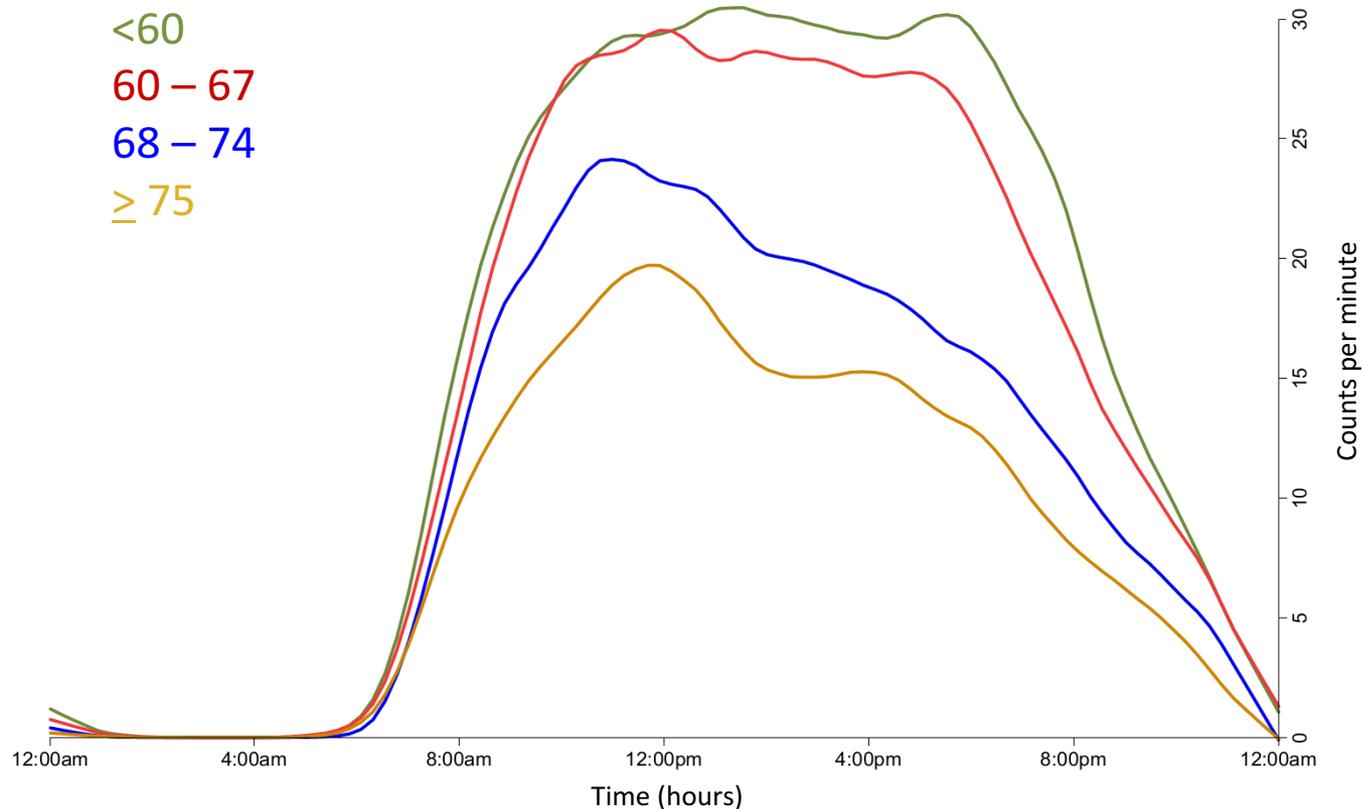
- **Long Distance Corridor Walk** consisting of a **400m** walk “done as quickly as possible without running”
- Total time and **10** lap by lap (**40m**) split times are recorded
  - Inability to walk 400m = mobility disability
  - 6:30– 7:00 min times associated with poor mobility



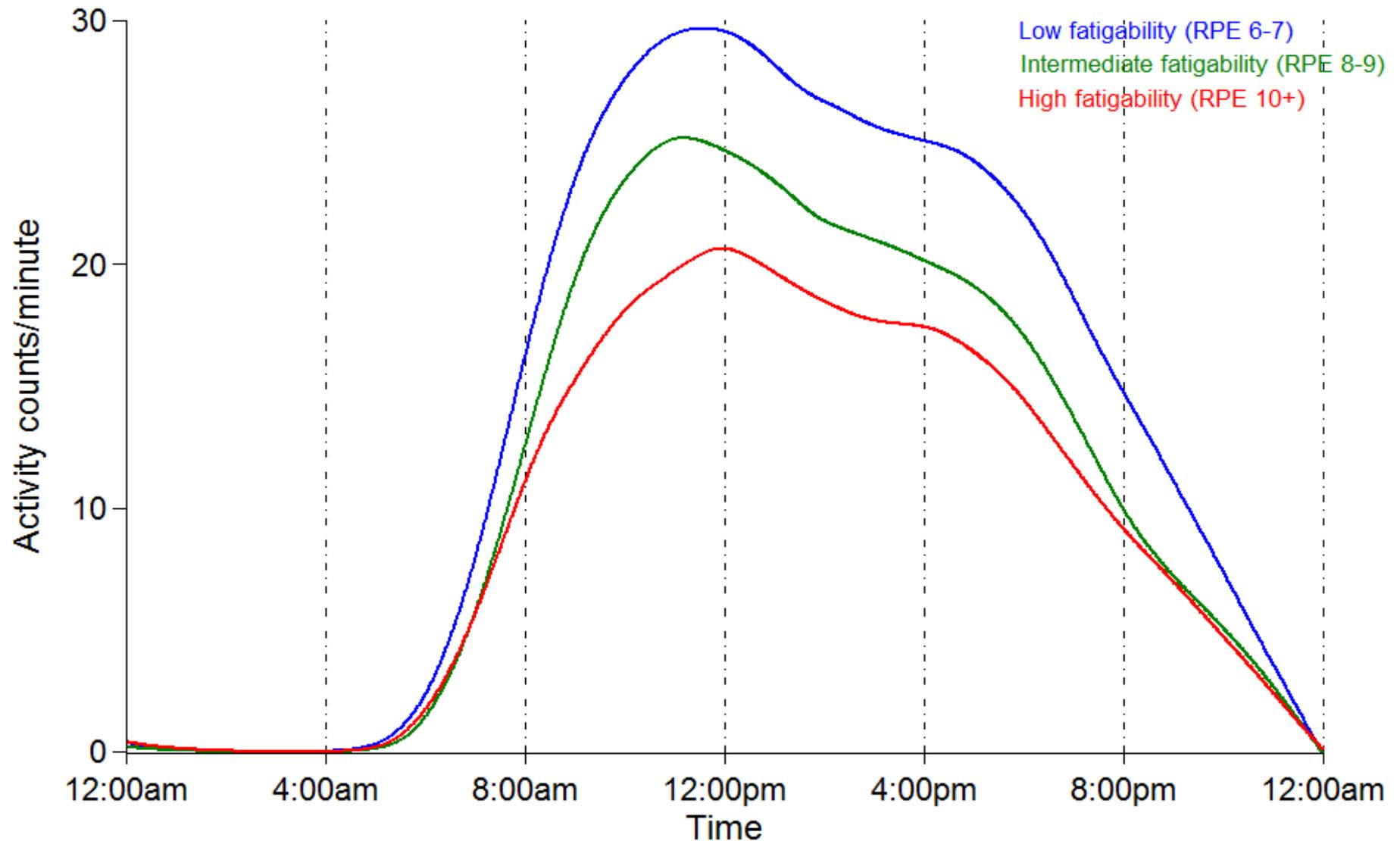
**Slow time to complete > 5 minutes?**

# Assessing the “Physical Cliff”: Detailed Quantification of Age-Related Differences in Daily Patterns of Physical Activity

Jennifer A. Schrack,<sup>1,2</sup> Vadim Zipunnikov,<sup>3</sup> Jeff Goldsmith,<sup>4</sup> Jiawei Bai,<sup>3</sup> Eleanor M. Simonsick,<sup>2</sup>  
Ciprian Crainiceanu,<sup>3</sup> and Luigi Ferrucci<sup>2</sup>

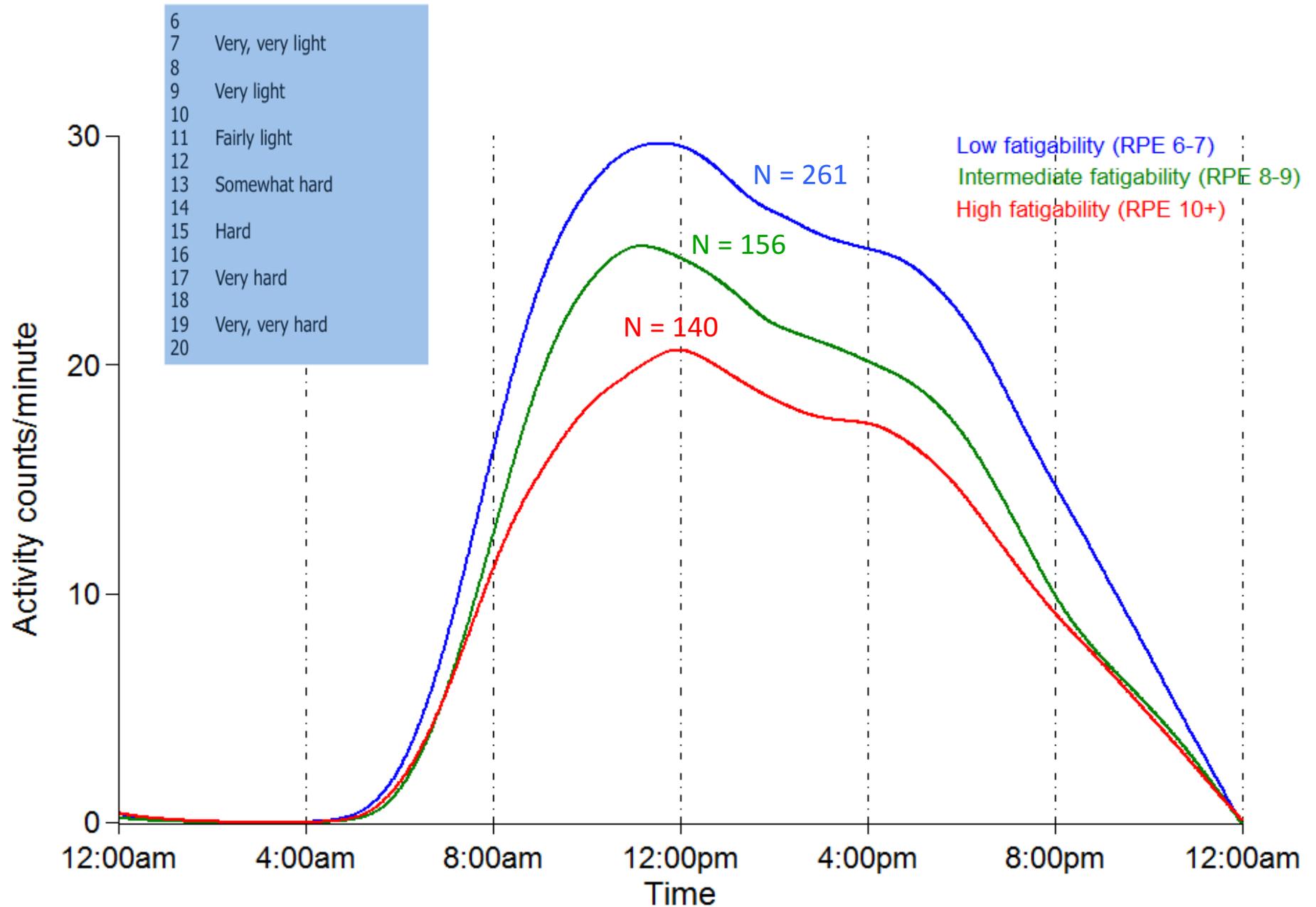


# What Can Diurnal Patterns Tell Us About Fatigability?



Note: RPE – rate of perceived exertion

Wanigatunga, et al, in press

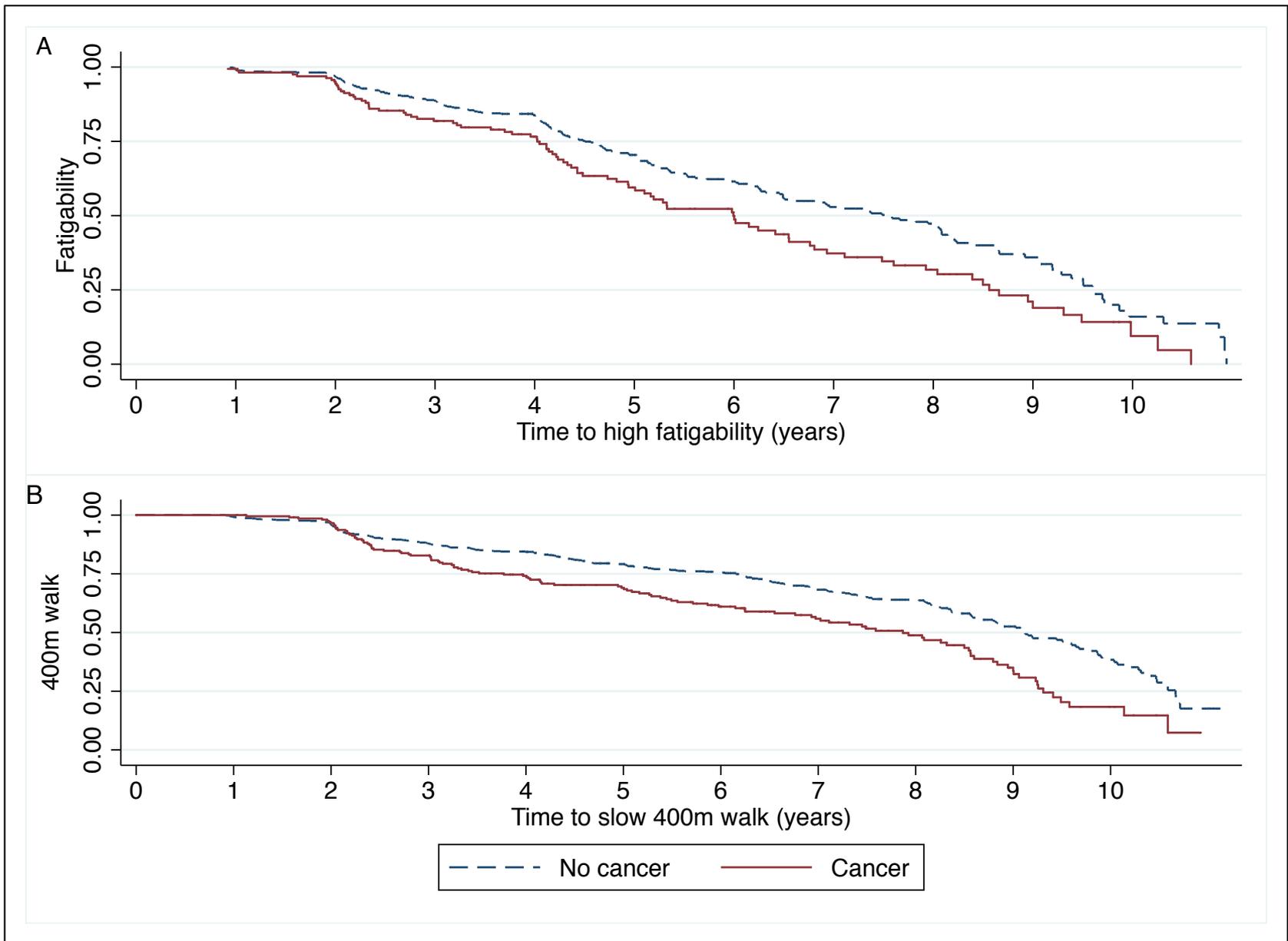


Note: RPE – rate of perceived exertion  
Wanigatunga, et al, in press

# Characterizing Cancer in the BLSA

- Excluded squamous and basal cell skin cancers
- Grouped by general cancer type
- Majority of patients are Prostate and Breast

Cancer Type	N
Breast	53
Prostate	127
GI (Colon/stomach/pancreatic/liver)	24
OB/GYN (Cervical/endometrial/ovarian)	20
Melanoma	42
Lung	11
Lymphoma/Leukemia	19
Other (Bladder/Brain/Thyroid/"Other cancer")	75
Total (excluding non-melanoma skin cancers)	371

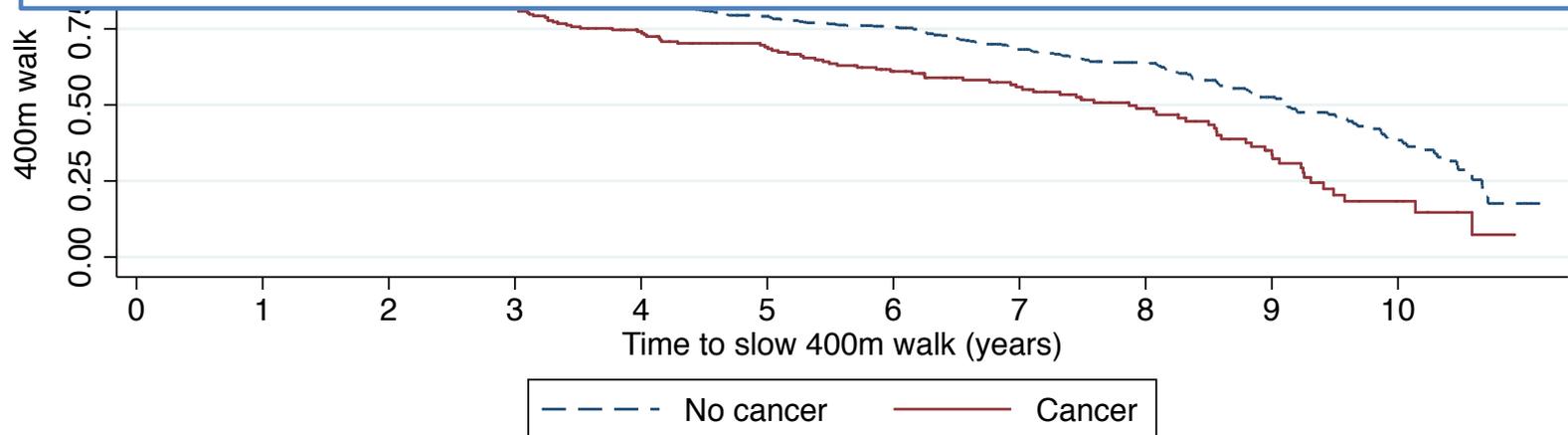


A

## What Does this mean?

- $< 65$  years + cancer = 34% greater risk of high fatigability
- $\geq 65$  years + cancer = 3.0x greater risk of high fatigability

B



A

8

## What Does this mean?

- The combination of cancer survivorship and older age combine to increase risk of high fatigability and poor endurance
- Based on previous research in the general (non-cancer) population, this suggests an increased risk of decline in functional performance and disability with aging

B

0.0

0 1 2 3 4 5 6 7 8 9 10

Time to slow 400m walk (years)

--- No cancer      — Cancer

# Still to be answered...

- How do these results compare to clinical populations?
  - BLSA is a study of “healthy” aging (survivors)
  - Need to compare to cancer patients and/or recent survivors
- How does fatigability differ by type of cancer?
  - Differences by stage of cancer?
- What are the effects of treatment?
  - Are certain types of treatment more damaging long term?
- What is the role of sleep?



# How do we treat fatigability?

- Treatments for fatigability are not well defined
- Differences in fatigability by treatment could inform clinical decision making for immediate survival and long term quality of life
- Physical activity interventions are promising to increase endurance and maintain quality of body composition
  - May be problematic in sicker populations
  - Long term adherence of traditional interventions is questionable
  - Effectiveness of self-paced interventions using wearables is being investigated in various populations



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*Maryland  
Cancer  
Collaborative*



# Maryland Cancer Collaborative Annual Meeting: Wrap-Up

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September 26, 2017