Cancer in Michigan

An Assessment of the Cancer Burden in Michigan

November 2018

MDHHS

Michigan Department OF Health & Human Services

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Introduction

Cancer is the second leading cause of death in Michigan, contributing to significant economic and social costs. In 2018, an estimated 56,590 people in Michigan were diagnosed with cancer and 21,380 were projected to die from cancer. To maximize impact on population health, interventions will continue to target breast, cervical, colorectal, prostate, and lung cancers due to the burden of and strategies available to address these cancers. Related risk factors for these and other cancers will be addressed through an emphasis on policy and system change.

The Michigan Department of Health and Human Services (MDHHS) is the recognized public health agency for the state of Michigan and has a long history of implementing successful cancer control programs.

These programs include the:
- Breast and Cervical Cancer Control Program
- Cancer Genomics Program
- Cancer Surveillance Program
- Cancer Survivorship Program*
- Colorectal Cancer Early Detection Program
- Comprehensive Cancer Control Program
- Implementation of Policy and Environmental Cancer Control Interventions*
- Lung Cancer Early Detection Program
- Well-Integrated Screening and Evaluation for Women Across the Nation Program

The partnership between these internal cancer programs, as well as external cancer programs, such as the Inter-Tribal Council of Michigan, makes it possible to address the cancer control continuum which includes prevention, detection, diagnosis, treatment, and survivorship.

Programs denoted with an * are no longer active.

Introduction

The focus of Michigan's Cancer Programs is to enhance initiatives, capacity, and infrastructure in order to work towards the reduction of cancer morbidity, mortality, and related health disparities.

Uninsured patients and those from minority populations are much more likely to be diagnosed with cancer at a later stage when treatment is more extensive, debilitating, and costly. And, since cancer is more prevalent among older adults, priority populations continue to be older, underserved minority populations.

Quality data is a critical component in evaluating the success made towards all parts of the cancer care continuum. Data from the Behavioral Risk Factor Survey (BRFS) and the Cancer Registry provide insight into current rates and disparities in all parts of the continuum. These data provide the basis for state and local strategic planning and evaluation.
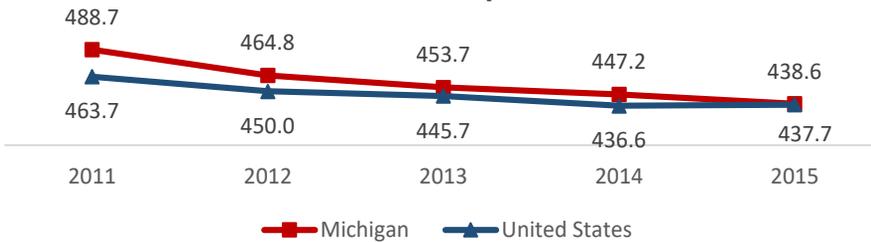
This burden report presents the most recently available data at the time of publication. Due to the lengthy process for data collection and validation to ensure the data is of high quality, the data available for analysis lags a few years behind the current calendar year.
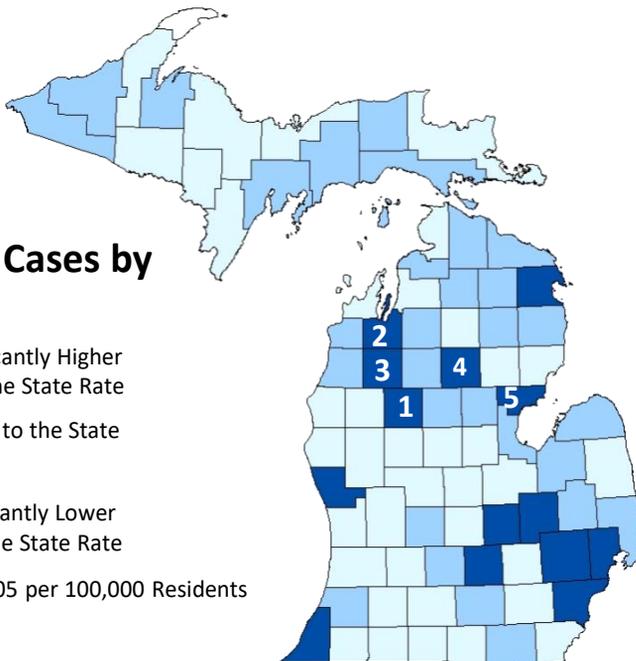
Michigan's Cancer Burden

56,590 Michiganders are estimated to be diagnosed with cancer and

21,380 Michiganders are estimated to die from cancer in 2018. [1]

New Cancer Cases per 100,000 [2]

	2011	2012	2013	2014	2015
Michigan	488.7	464.8	453.7	447.2	438.6
United States	463.7	450.0	445.7	436.6	437.7

— Michigan — United States

In 2015 Michigan had a similar new cancer case rate to that of the US.

Counties with the Highest New Cancer Rate, 2011-2015

1. Osceola
2. Grand Traverse
3. Wexford
4. Roscommon
5. Arenac

To see the rates for all counties please visit the Michigan Cancer Surveillance Program

New Cancer Cases by County [2]

Legend:
- Significantly Higher than the State Rate
- Similar to the State Rate
- Significantly Lower than the State Rate

State Incidence = 464.05 per 100,000 Residents

Cancer Mortality per 100,000 [2]

— Michigan — United States

In 2015 Michigan had a higher cancer mortality rate compared to that of the US

	2011	2012	2013	2014	2015
Michigan	176.9	174.4	170.7	173.1	166.6
United States	168.7	166.3	163.1	161.3	158.7

Michigan's Cancer Burden

Stage at Diagnosis in 2015 [3]

In Situ	**Localized**	**Regional**	**Distant**
Abnormal cells are present but have not spread to tissue	Cancer remains in the place where it started (early-stage cancer)	Cancer has spread to nearby lymph nodes, tissues and organs	Cancer has spread through-out the body (metastatic or advanced cancer)
7,604	23,037	10,938	13,846
(12.7%)	(38.5%)	(18.3%)	(23.1%)

Cancer Risk Factors among Michigan Adults [4]

20.4% Report being a **current smoker**.

32.5% Report being **obese**.

6.9% Report drinking more than **two alcoholic drinks per day for men or more than one per day for women** in the previous month.

Cancer Screening Rates [4]

74.0% Of women over 40 had a **mammogram** in the past two years.
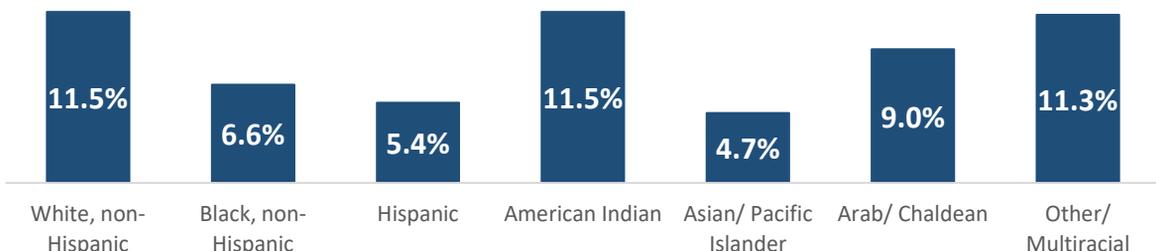
69.7% Of Michigan Adults 50 years and older had **appropriate colorectal cancer screening**.

72.5% Of women over 18 had a **Pap test** in the past three years.

Survivorship among Michiganders [5]

10.7% of all Michigan Residents report being a **cancer survivor**. Racial and ethnic differences exist among cancer survivors in Michigan.

White, non-Hispanic	Black, non-Hispanic	Hispanic	American Indian	Asian/ Pacific Islander	Arab/ Chaldean	Other/ Multiracial
11.5%	6.6%	5.4%	11.5%	4.7%	9.0%	11.3%

References

1. American Cancer Society. Cancer Statistics Center: Michigan at a Glance 2018. Retrieved at: http://cancerstatisticscenter.cancer.org./#/state/Michigan

2. Michigan Cancer Surveillance Program. Invasive Cancer Incidence and Mortality Trends Michigan Residents, 2010-2014. Michigan Department of Health & Human Services., Division for Vital Records & Health Statistics. Retrieved at: http://www.mdch.state.mi.us/osr/index.asp?id=13

3. Michigan Cancer Surveillance Program. Single Year Cancer Incidence by Stage at Diagnosis, 2014. Michigan Department of Health & Human Services. Division for Vital Records & Health Statistics. Retrieved at: http://www.mdch.state.mi.us/osr/Cancer/STAGING2002.ASP?CDxID=TrendsOfStageTotal

4. Michigan Behavioral Risk Factor Surveillance System. Prevalence Estimates for Risk Factors and Health Indicators. Michigan Department of Health and Human Services. Lifecourse Epidemiology and Genomics Division. Retrieved at: https://www.michigan.gov/documents/mdhhs/2016_MiBRFS_Standard_Tables_FINAL_599753_7.pdf

5. Michigan Behavioral Risk Factor Surveillance System. Crude and Age Adjusted Estimates for Chronic Health Conditions, Risk Factors, Health Indicators, and Preventive Health Practices by Expanded Race/Ethnicity, 2014-2016. Michigan Department of Health and Human Services. Lifecourse Epidemiology and Genomics Division. Retrieved at: https://www.michigan.gov/documents/mdhhs/2014-2016_MiBRFSS_Expanded_Race_Tables_608876_7.pdf

Lung and Bronchus Cancer in Michigan

Lung cancer is the leading cause of cancer death among men and women. Each year, more people die from lung cancer than of colon, breast, and prostate cancers combined. Lung cancer mainly occurs in older people. Smoking causes the vast majority of lung cancers.

Age adjusted	Number of Cases	Rate per 100,000 People
New Cases (2015)	7,839	62.6
Deaths (2016)	5,548	43.8

What increases risk?

✔ The majority of lung cancers could be prevented by not smoking
✔ Exposure to secondhand smoke
✔ Exposure to radon gas
✔ Other substances such as asbestos
✔ Personal or family history of lung cancer

Health Disparities

Among Native American Indians, 49% report being a current smoker. Native American men and women have higher rates of lung cancer compared to all other races.
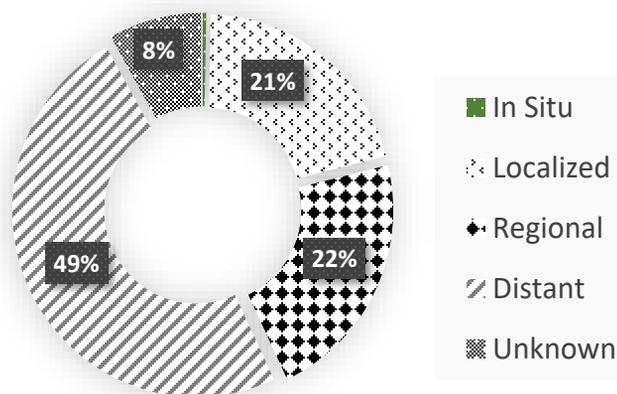
When is it Diagnosed?

- 8%
- 21%
- 22%
- 49%

Legend:
- In Situ
- Localized
- Regional
- Distant
- Unknown

Who should be screened?

People who are, or have been, heavy smokers and are **55–80** years of age should talk with their health care provider.

56.3%

Five year relative survival rate when lung cancer is detected early.

Lung Cancer in Michigan

Updated November 2018

➤ **Lung cancer is the leading cause of cancer deaths in Michigan. [1]**

➤ In 2018, it is estimated that there will be **8,780** new cases of lung cancer and **5,860** deaths from lung cancer in Michigan.[1]
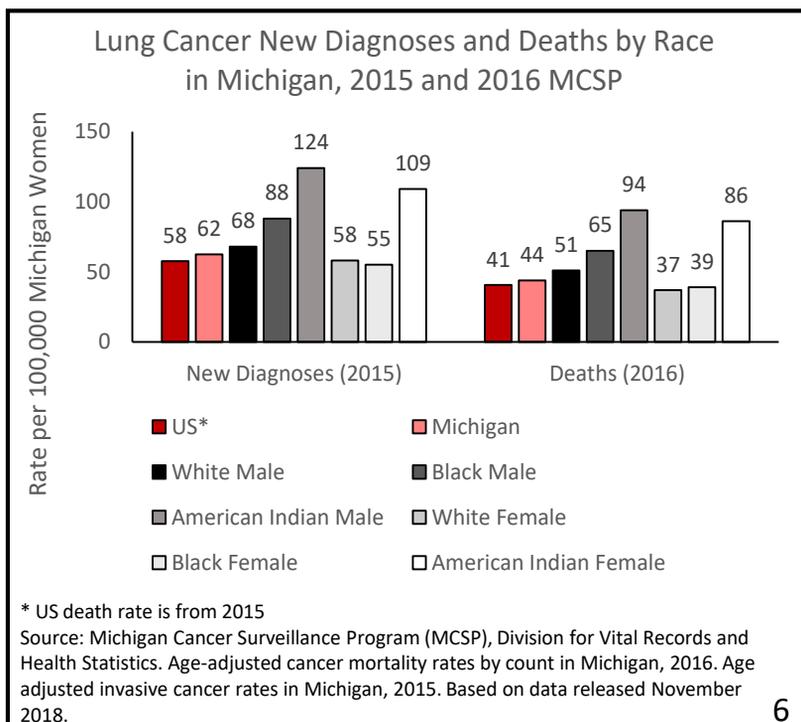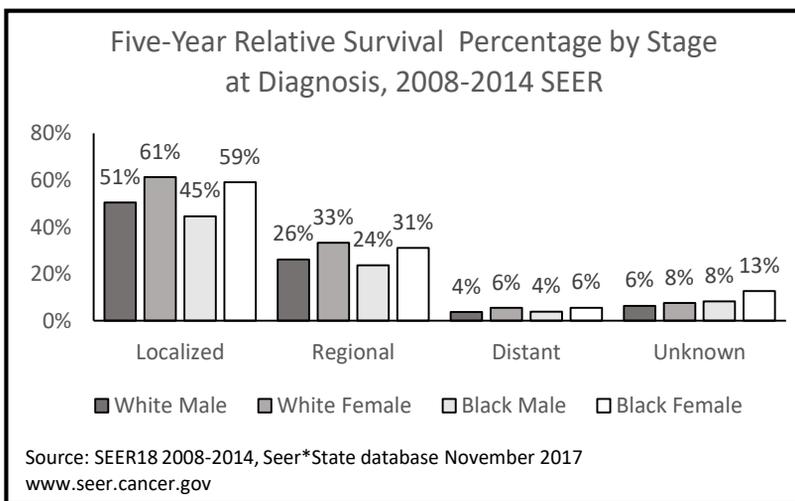
Lung Cancer Screening

➤ Lung cancer screening with low-dose spiral Computed Tomography Scan has been shown to decrease mortality. Lung cancer screening is recommended for people who:
   ➤ Have a 30 or more pack-year smoking history **AND**
   ➤ Currently smoke or have quit in the past 15 years **AND**
   ➤ Are between 55 and 80 years old. [2]
➤ In Michigan, about 7 out of 100 adults meet the recommendations and should be screened with a low-dose spiral CT. [3]

Early Detection is key!
➤ Five year relative survival for lung cancer patients diagnosed in the localized stage is 56.3%; however, in Michigan only 21% of people are diagnosed at this stage. [4,5]

Lung Cancer Disparities
➤ In Michigan, 49% of American Indians report being a current smoker. [3]
➤ American Indian males and females have the highest amount of new cases of and deaths from lung cancer compared to other races.
➤ Black males are 37% more likely to develop lung cancer than White males. [6]
➤ Black males are more likely to choose menthol cigarettes due to targeted advertisements. [6]
   ➤ Research suggests the chemical difference of menthol cigarettes may be associated with more severe levels of addiction.
➤ Other factors that may contribute to the higher rates of lung cancer in American Indians and Black males include: limited access to health care, increased exposure to environmental toxins from nearby industrial sources, and cultural practices.
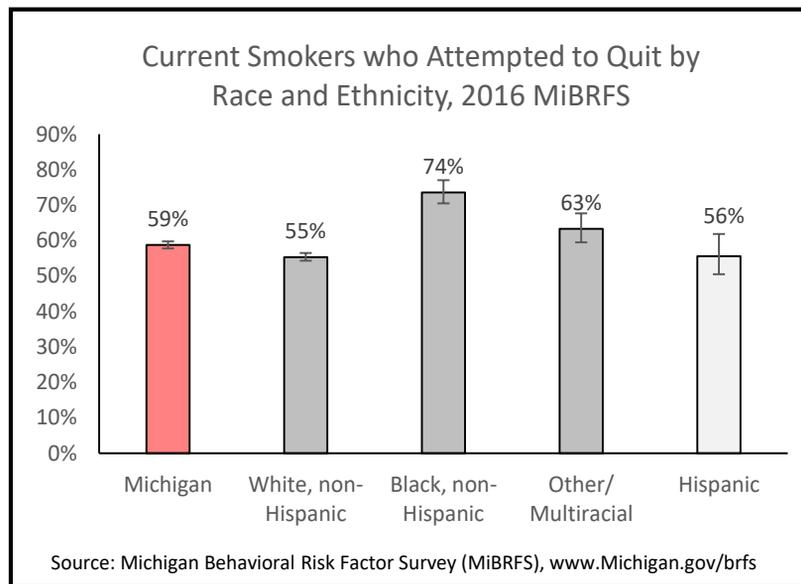

Five-Year Relative Survival Percentage by Stage at Diagnosis, 2008-2014 SEER

Source: SEER18 2008-2014, Seer*State database November 2017
www.seer.cancer.gov

Lung Cancer New Diagnoses and Deaths by Race in Michigan, 2015 and 2016 MCSP

* US death rate is from 2015
Source: Michigan Cancer Surveillance Program (MCSP), Division for Vital Records and Health Statistics. Age-adjusted cancer mortality rates by count in Michigan, 2016. Age adjusted invasive cancer rates in Michigan, 2015. Based on data released November 2018.

What puts people at high risk for lung cancer? [7]

➢ **Smoking**: About 90% of lung cancers are associated with smoking.
➢ **Second hand smoke exposure**
➢ **Radon exposure**: Radon exposure is the leading cause of lung cancer in non-smokers.
➢ **Exposure to certain chemicals**: Asbestos, arsenic, diesel exhaust, silica, and chromium are the most commonly associated with lung cancer.

➢ **Family history of lung cancer**
➢ **Prior diagnosis with lung cancer**
➢ **Radiation therapy to the chest**: Cancer survivors who had chest radiation have higher risk of developing lung cancer.

Tobacco Cessation

➢ Evidence shows that cancer patients benefit from smoking cessation. Quitting can improve the effectiveness of treatment, prolong survival, improve quality of life, and reduces the risk of developing a secondary cancer. [8]

➢ From the Michigan Behavioral Risk Factor Survey (MiBRFS), Black respondents were more likely to report they were attempting to quit compared to other races.

➢ Talk to patients about the health consequences of smoking and second-hand smoke exposure.

➢ Refer patients to tobacco dependence treatment resources like the Michigan Tobacco Quit Line:1-800-quit-now (1-800-785-8669) or http://michigan.quitlogix.org.

➢ The MDHHS Tobacco Control Program offers resources for health care professionals and the public at www.michigan.gov/tobacco.

Current Smokers who Attempted to Quit by Race and Ethnicity, 2016 MiBRFS

Michigan	White, non-Hispanic	Black, non-Hispanic	Other/ Multiracial	Hispanic
59%	55%	74%	63%	56%

Source: Michigan Behavioral Risk Factor Survey (MiBRFS), www.Michigan.gov/brfs

Radon Exposure [9]

➢ Radon is a colorless, odorless, radioactive gas that can cause lung cancer.
➢ To avoid long term exposure, encourage patients to get **their homes tested for radon.**
➢ Radon test kits can be obtained from county and city health departments. For a complete listing on where to obtain a kit, please visit: http://www.michigan.gov/documents/deq/whm-rps-radonwhere-to-get-a-radon-testkit_261816_7.pdf
➢ For more information about radon and how to obtain radon test kits please visit www.michigan.gov/radon or email radon@michigan.gov.

References: 1) American Cancer Society. Cancer Statistics Center: Michigan at a Glance 2017. Retrieved at: http://cancerstatisticscenter.cancer.org./#/ 2) The National Lung Screening Trial Research Team. Reduced lung-cancer mortality with low-dose computed tomographic screening. NEJM. 2011; 365(5): 395-409. 3) Michigan Behavioral Risk Factor Survey: State of Michigan. 2016. www.Michigan.gov/brfs 4)Michigan Cancer Surveillance Program. Invasive lung Cancer Incidence by stage, 2015. Michigan Department of Health & Human Services., Division for Vital Records & Health Statistics. Accessed June 2018 5) Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2017 Sub (2000-2015) , National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2018, based on the November 2017 submission. 6) Too Many Cases, Too Many Deaths: Lung Cancer in African Americans. American Lung Association. Retrieved at: http://www.lung.org/assets/documents/research/ala-lung-cancer-in-african.pdf . 7)Centers for Disease Control and Prevention. What are the risk factors for lung cancer? Retrieved at http://www.cdc.gov/cancer/lung/basic_info/risk_factors.htm. 8) Cataldo JK, Dubey S, Prochaska JJ. Smoking Cessation: an integral part of lung cancer treatment. Oncology. 2010; 78 (5-6): 289-301 9) American Cancer Society. Radon and Cancer. Retrieved at https://www.cancer.org/cancer/cancer-causes/radiation-exposure/radon.html

Breast Cancer in Michigan

Breast cancer is the second leading cause of cancer death and, excluding skin cancers, the most frequently diagnosed cancer in the U.S. among women. It is estimated that 266,120 new cases of breast cancer will be diagnosed in the U.S. in 2018.

	Number of cases: Michigan	Rate per 100,000 Females: Michigan
New Cases (2015)	7,560	119.7
Deaths (2016)	1,390	20.6

The two biggest risk factors are being **Female** and **Increased Age**.
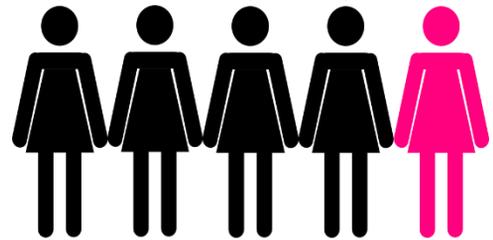
98.7%

National five year survival rate when breast cancer is detected at the localized stage.

Health Disparities

African American women have the lowest 5-year survival rate at **79.5%.**

Screening

At **40**, women should discuss their risk for breast cancer and when to begin mammography screening with their provider. Women should undergo regular screening mammography at intervals based on risk factors (**every 1-2 years**).

When is it Diagnosed?

- 2%
- 4%
- 20%
- 22%

- In Situ
- Localized
- Regional
- Distant
- Unknown

Breast Cancer in Michigan
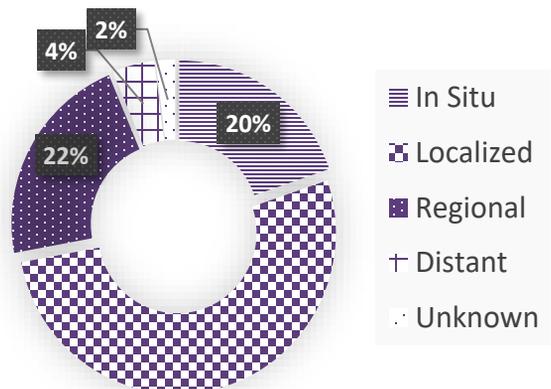
> ➢ **Among Michigan women, breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer death. [1]**
>
> ➢ In 2018, it is estimated that there will be **8,730 new cases** of breast cancer and **1,400 deaths** from breast cancer in Michigan women. [1]

Breast Cancer Screening [2]

➢ Beginning at age 40, women should discuss with their providers their risk for breast cancer and when to begin mammography screening.

➢ Women should undergo regular **screening** mammography for the early detection of **breast cancer at intervals based on risk factors (every one to two years)**.

➢ This discussion about risk factors should include questions about personal and family history of breast cancer and familial mutations.

➢ Women identified at **high risk** may require a MRI and mammogram annually. Age to begin screening with both MRI and mammogram is determined by the woman's provider.

➢ Women who are identified as having poor mental health are significantly less likely to be up to date on their mammography screening (61%) compared to Michigan as a whole (69%).

Mammography in the Past Two Years among Women Aged 40 and Older by Health Status, 2016 MiBRFS
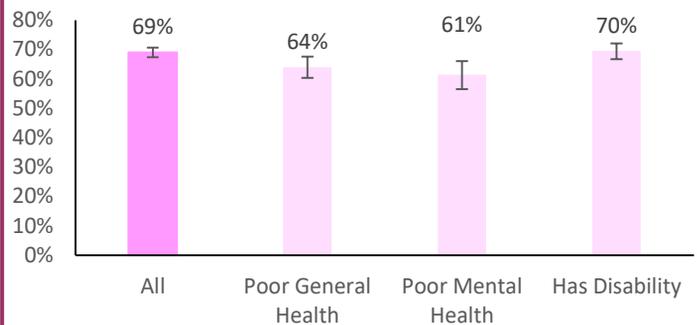
Category	Percent
All	69%
Poor General Health	64%
Poor Mental Health	61%
Has Disability	70%

Source: Michigan Behavioral Risk Factor Survey (MiBRFS) Race and Ethnicity tables, www.Michigan.gov/brfs

Early detection of breast cancer increases the effectiveness of available treatments.[2]

➢ 52% of breast cancers diagnosed in Michigan are diagnosed at the localized stage and 4% are at the distant stage.[3]

➢ Of those who were diagnosed at the localized stage, 99% of White women and 95% of Black women survived 5 years. [4]

➢ Of those diagnosed at the distant stage, 28% of White women and 20% of Black women survived 5 years. [4]

Five-Year Relative Survival Percentage by Stage at Diagnosis, 2008-2014 SEER

Stage	White	Black
Localized	99%	95%
Regional	86%	77%
Distant	28%	20%
Unknown	52%	50%
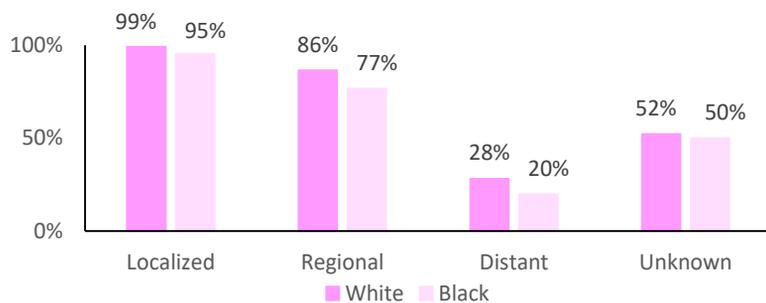
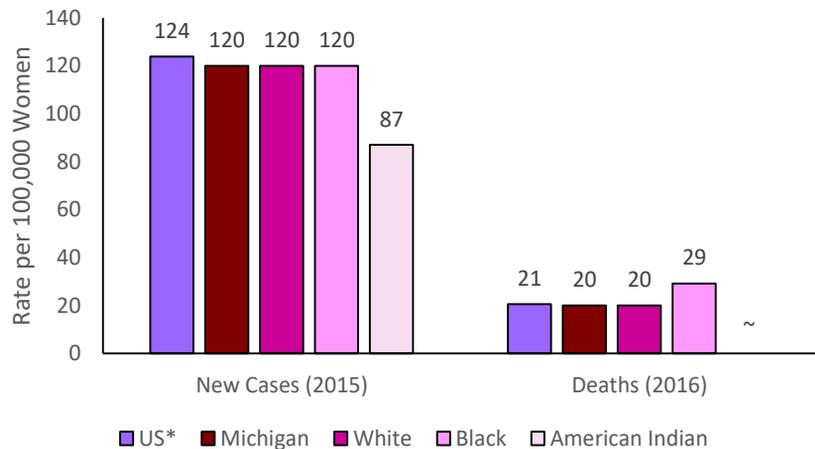Source: SEER18 2008-2014, Seer*State database November 2017 www.seer.cancer.gov

> ## Know someone who needs help getting screened for breast cancer or navigating the health system?
>
> The Breast and Cervical Cancer Control Navigation Program (BCCCNP) **provides free breast and cervical cancer screening to low-income women between the ages of 21 and 64 and also assists insured women in scheduling mammograms if needed**. For more information about the BCCCNP, please call toll free 844-446-8727 or visit www.michigancancer.org/bcccp.

Breast Cancer Disparities

➢ Black women are more likely to die from breast cancer compared to White women.

➢ Factors that may contribute to the higher death rate in Black women include: [2]
   - ➢ Lack of medical coverage
   - ➢ Barriers to early detection and screening
   - ➢ Unequal access to clinical trials
   - ➢ More likely to be diagnosed with a more aggressive form of cancer known as Triple Negative Cancer

Breast Cancer New Diagnoses and Deaths by Race, 2015 and 2016 MCSP

Rate per 100,000 Women

New Cases (2015):
- US*: 124
- Michigan: 120
- White: 120
- Black: 120
- American Indian: 87

Deaths (2016):
- US*: 21
- Michigan: 20
- White: 20
- Black: 29
- American Indian: ~

Legend: ■ US* ■ Michigan ■ White ■ Black □ American Indian

* US death rate is from 2015
~ Data suppressed due to too few cases.
Source: Michigan Cancer Surveillance Program (MCSP), Division for Vital Records and Health Statistics. Age-adjusted cancer mortality rates by count in Michigan, 2016. Age adjusted invasive cancer rates in Michigan, 2015. Based on data released November 2018.

What puts women at higher than average risk for Breast Cancer? [2]

➢ Increasing age
➢ Personal history of breast or ovarian cancer
➢ Family history of breast or ovarian cancer
➢ Specific genetic mutations
➢ Dense breast tissue

➢ Starting menstruation at a young age
➢ Never giving birth or having first pregnancy after age 30
➢ Drinking two or more alcoholic drinks a day

Risk of Developing Breast Cancer by Age and Race, 2013-2015 SEER
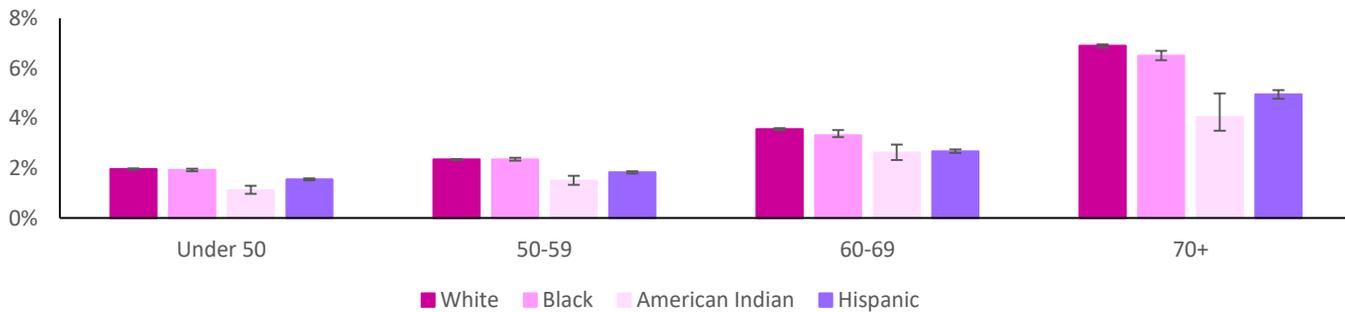
Legend: ■ White ■ Black □ American Indian ■ Hispanic

Categories: Under 50, 50-59, 60-69, 70+

Source: Probability of Developing or Dying of Cancer Software, Version 6.7.6. Surveillance Research Program 2018. http://surveillance.cancer.gov/devcan

Men can get breast cancer too!
Male breast cancer accounted for about 1% of new cases of invasive breast cancer from 2010 through 2014. About 1% of the overall breast cancer mortality for the same period can be attributed to male cases.[2]
Family history and genetic mutations are both important risk factors for male breast cancer.[5]

References: 1) American Cancer Society. Cancer Statistics Center: Michigan at a Glance 2017. Retrieved at: http://cancerstatisticscenter.cancer.org./#/state/Michigan. 2)American Cancer Society. Breast Cancer Risk and Prevention. Retrieved athttps://www.cancer.org/cancer/breast-cancer/risk-and-prevention.html 3) Michigan Resident Cancer Incidence File. Updated with cases processed through Nov 30 2017. Division for Vital Records & Health Statistics, Michigan Department of Health & Human Services. Retrieved at: http://www.mdch.state.mi.us/pha/osr/Cancer/Stateinc.asp?CDxID=IncTrendsBreast. Accessed June 2018 4) Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2017 Sub (2000-2015) , National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2018, based on the November 2017 submission. 5) K. J. Ruddy and E. P. Winer Male breast cancer: risk factors, biology, diagnosis, treatment, and survivorship Ann Oncol (2013) 24 (6): 1434-1443 first published online February 20, 2013 doi:10.1093/annonc/mdt025 .
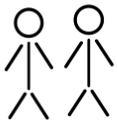
Prostate Cancer in Michigan

Prostate cancer is the most commonly diagnosed cancer in men, besides skin cancer, and is the second leading cause of cancer death in men. It is estimated that a total of 5,400 new cases of prostate cancer will be diagnosed in 2018.

	Number of cases: Michigan	Rate per 100,000 Males: Michigan
New Cases (2015)	6,356	103.6
Deaths (2016)	1,000	19.47

What increases risk?

✔ Increasing age

✔ African ancestry

✔ Family history of prostate cancer

Health Disparities

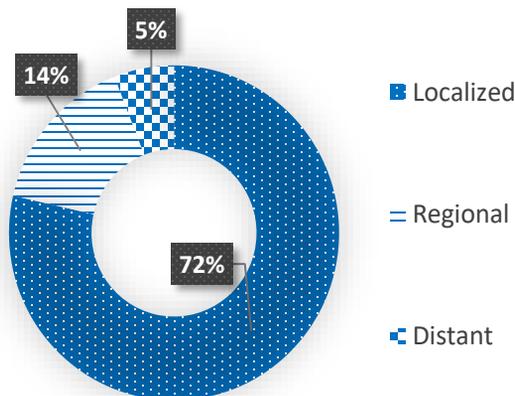African American men will die from Prostate Cancer for every White man.

98.2%

National five year survival rate when prostate cancer is detected early.

When is it Diagnosed?

5%

14%

72%

- Localized
- Regional
- Distant

Screening

Beginning at age 50, men who are at average risk should have a discussion with their provider to decide if testing is appropriate.

Prostate Cancer in Michigan

Updated November 2018

➢ **Among Michigan men, prostate cancer is the most commonly diagnosed cancer and the second leading cause of cancer death.** [1]

➢ In 2018, it is estimated that there will be **5,400 new cases** of prostate cancer and **940 deaths** from prostate cancer in Michigan men. [1]
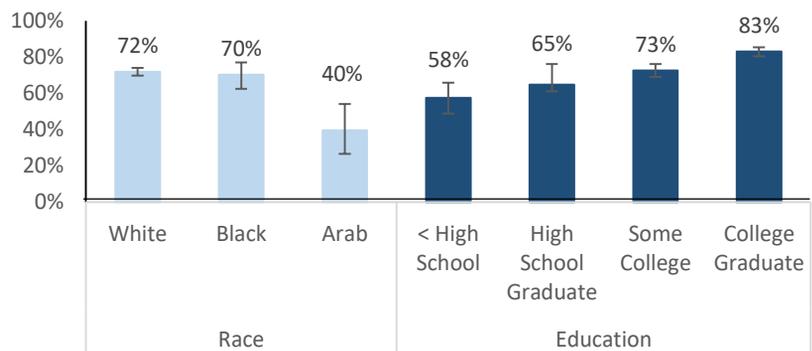
Prostate Cancer Screening

➢ The Prostate-Specific Antigen (PSA) test is the most common screening test for prostate cancer. [2]

➢ The United States Preventive Services Task Force (UPSTF) recommends for men aged 55-69 to discuss with their provider the potential benefits and harms of screening. [2]

➢ Most prostate cancers grow very slowly and never cause health problems. [2]

➢ It is not clear if PSA screening can help men live longer. [2]

➢ Harms of screening include: false-positive results, over diagnosis, and overtreatment. [2]

Early Detection

➢ In 2015, about 90% of prostate cancers were diagnosed at either the localized or regional stage. [3]

➢ The five year survival rate for prostate cancer at the localized or regional stage is almost 100%. [4]

➢ The five year survival rate for prostate cancer diagnosed at the distant stage falls to 30%. [4]
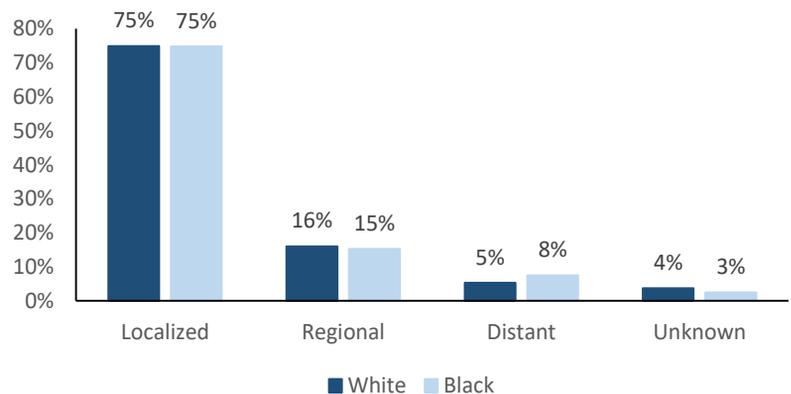
Men Aged 50 or Older Who Have Ever Discussed Advantages of the PSA Test with a Health Professional, 2016 MiBRFS

Race: White 72%, Black 70%, Arab 40%
Education: < High School 58%, High School Graduate 65%, Some College 73%, College Graduate 83%

PSA: Prostate-specific antigen
Source: Michigan Behavioral Risk Factor Survey (MiBRFS) Race and Ethnicity tables, www.Michigan.gov/brfs

Prostate Cancer by Stage of Diagnosis, 2015 MCSP

Localized: White 75%, Black 75%
Regional: White 16%, Black 15%
Distant: White 5%, Black 8%
Unknown: White 4%, Black 3%

■ White ■ Black

Source: Michigan Cancer Surveillance Program (MCSP), Division of Vital Records and Health Statistics. Stage at diagnosis in Michigan, 2015. Based on data released July 2018.

## Treatment Options for Prostate Cancer [5]

There are three standard treatments for **early stage** prostate cancer: observation, surgery, and radiation. **Active Surveillance** and **Watchful Waiting** are two forms of observation. Active surveillance usually includes doctor visits with a PSA test every 6 months. Watchful waiting is less intensive and relies on changes in a patient's symptoms. **Surgery** and **radiation** are also treatment options, and while they may be effective, these options may also cause side effects such as incontinence and erectile dysfunction.

Prostate Cancer Morbidity, Mortality, and Disparities

➤ New diagnoses of prostate cancer have significantly decreased from 182 cases per 100,000 men in 1995 to 103 cases per 100,000 men in 2015. [3]

➤ Deaths from prostate cancer have significantly decreased from 37 deaths per 100,000 men in 1996 to 19 deaths per 100,000 men in 2016. [3]

➤ Black men have a significantly higher rate for new diagnoses and deaths compared to White men.

➤ However, the rate of new diagnoses among Black men has significantly decreased from 300 cases per 100,000 men in 1995 to 153 cases per 100,000 men. [3]

Prostate Cancer New Diagnoses and Deaths by Race, 2015 and 2016 MCSP
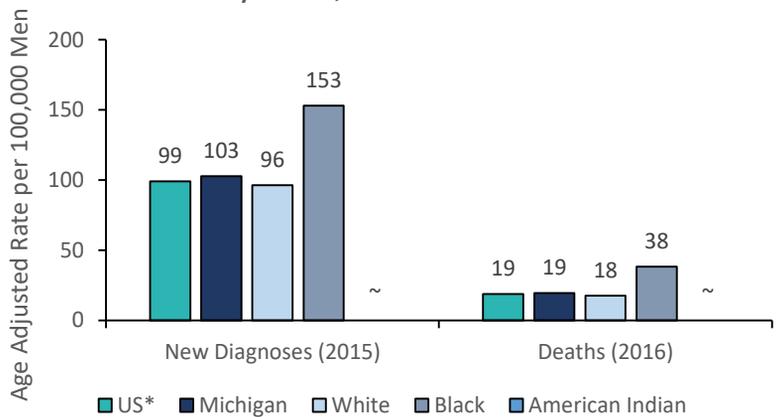

*US death rate is from 2015
~ Data suppressed due to too few cases
Source: Michigan Cancer Surveillance Program (MCSP), Division for Vital Records and Health Statistics. Age-adjusted cancer mortality rates by count in Michigan, 2016. Age adjusted invasive cancer rates in Michigan, 2015. Based on data released July 2018.

Prostate Cancer Risk Factors

➤ **Age** is the biggest risk factor with the majority of cases being diagnosed in men older than 65. [5]

➤ **Black men** are more often diagnosed with prostate cancer than men of other races and are also more likely to die from prostate cancer. [5]

➤ **Having a father or brother with prostate cancer** increases a man's risk for developing the disease. [5]

Risk of Developing Prostate Cancer by Age and Race, 2013-2015 SEER
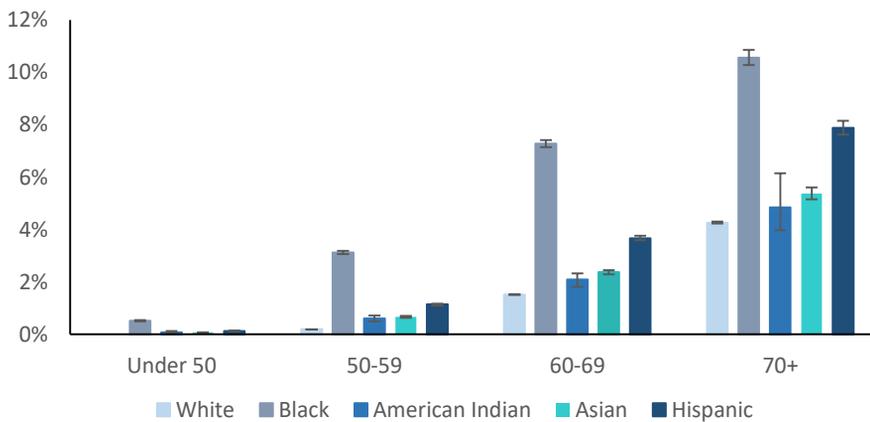
Source: Probability of Developing or Dying of Cancer Software, Version 6.7.6. Surveillance Research Program 2018. http://surveillance.cancer.gov/devcan

Resources

For more information about prostate cancer or other topics related to cancer please visit the following websites:
www.michigan.gov/cancer
www.michigancancer.org

References: 1) American Cancer Society. Cancer Statistics Center: Michigan at a Glance 2017. Retrieved at: http://cancerstatisticscenter.cancer.org./#/state/Michigan. 2) *Final Recommendation Statement: Prostate Cancer: Screening*. U.S. Preventive Services Task Force. May 2018. https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/prostate-cancer-screening1 3)Michigan Cancer Surveillance Program. Invasive Prostate Cancer Incidence and Mortality Trends Michigan Male Residents, 1985-2015. Michigan Department of Health & Human Services., Division for Vital Records & Health Statistics. Retrieved at: http://www.cancer-rates.info/mi/index.php. Accessed June 2018 4) Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2017 Sub (2000-2015) , National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2018, based on the November 2017 submission. 5)American Cancer Society. Prostate Cancer Risk and Prevention. Retrieved at https://www.cancer.org/cancer/prostate-cancer.html

Colorectal Cancer in Michigan

Colorectal cancer (CRC) is the third most common cancer in both men and women. It is estimated that 140,250 cases of colorectal cancer will be diagnosed in the US in 2018.
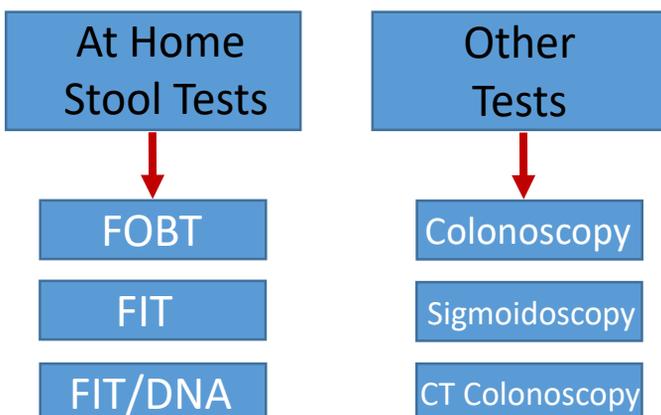
	Number of cases: Michigan	Rate per 100,000: Michigan
New Cases (2015)	4,530	37.5
Deaths (2016)	1,757	14.0

Health Disparities

Arab Americans have the lowest CRC screening rate with **64.1%** receiving appropriate screening in **2016.**

Screening Options
At intervals appropriate to risk factors

At Home Stool Tests
→
- FOBT
- FIT
- FIT/DNA

Other Tests
→
- Colonoscopy
- Sigmoidoscopy
- CT Colonoscopy

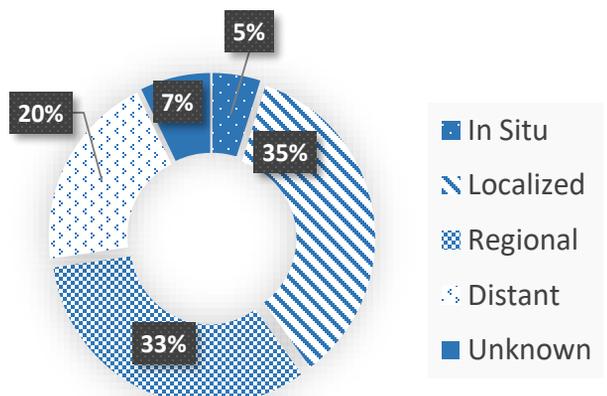## What increases risk?

✔ Being over the age of 50
✔ Personal or family history of colorectal cancer or polyps
✔ Smoking
✔ Obesity
✔ Low physical activity
✔ Poor diet

90%

National five year survival rate when colorectal cancer is detected early.

When is it Diagnosed?

- 5%
- 7%
- 20%
- 35%
- 33%

Legend:
- In Situ
- Localized
- Regional
- Distant
- Unknown

Colorectal Cancer in Michigan

![MDHHS - Michigan Department of Health & Human Services]
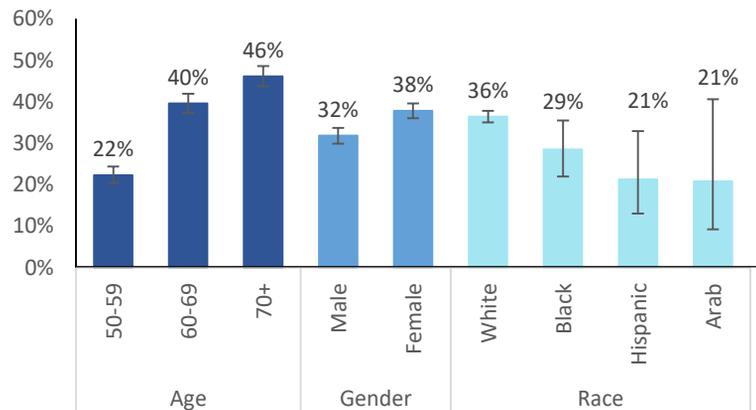
Updated November 2018

> **Colorectal cancer is the fourth most commonly diagnosed cancer and the second leading cause of cancer deaths in Michigan.** [1]

> It is estimated that there will be **4,510 new cases** of colorectal cancer and **1,670 deaths from colorectal cancer** in Michigan in 2018. [1]
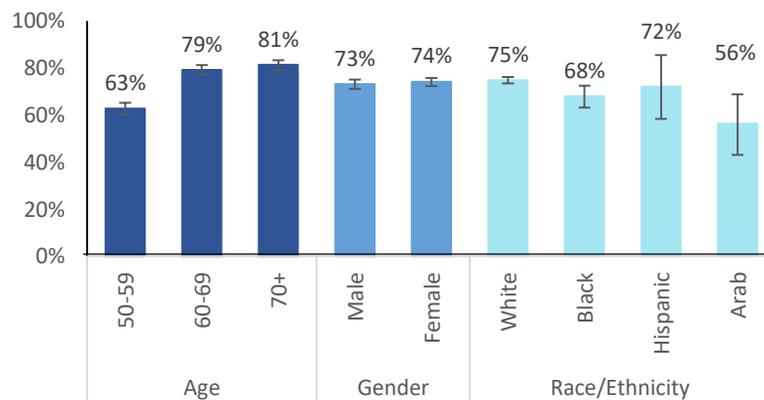
Colorectal Cancer Screening

> Colorectal cancer is often without symptoms in the earliest and most treatable stage.

> Regular screening can **prevent** colorectal cancer. [2]

> **Starting at age 50,** men and women at **average risk** should get screened. [2]
> > Health providers should discuss screening before the age of 50 when certain risk factors are present.

> Only 70% of Michigan adults are getting screened at the appropriate time (data not shown). [3]

> **A provider recommendation is the most important predictor of appropriate screening.** [4]

> There are several effective screening options available: [2]
> > Yearly (sample collected at home): Fecal occult blood test (FOBT), fecal immunochemical test (FIT), **OR** FIT-DNA (Cologuard).
> > Every Five Years: Flexible sigmoidoscopy **OR** CT colonography.
> > Every Ten Years: Colonoscopy **OR** flexible sigmoidoscopy with FIT every year.

> A **Digital Rectal Exam (DRE) is <u>NOT</u>** a **recommended** screening option. DREs miss up to 90% of cancers. [2]

Ever Had a Blood Stool Test among Adults Aged 50 Years and Older, 2016 MiBRFS

Age: 50-59 22%, 60-69 40%, 70+ 46%
Gender: Male 32%, Female 38%
Race: White 36%, Black 29%, Hispanic 21%, Arab 21%

Source: 2016 Michigan Behavioral Risk Factor Survey (MiBRFS), www.Michigan.gov/brfs

Ever had a Sigmoidoscopy or Colonoscopy among Adults Aged 50 Years and Older, 2016 MiBRFS

Age: 50-59 63%, 60-69 79%, 70+ 81%
Gender: Male 73%, Female 74%
Race/Ethnicity: White 75%, Black 68%, Hispanic 72%, Arab 56%

Source: 2016 Michigan Behavioral Risk Factor Survey (MiBRFS), www.Michigan.gov/brfs

Signs and Symptoms [5]

Colorectal cancer may cause one or more of these symptoms: diarrhea or constipation that lasts for more than a few days, rectal bleeding, blood in the stool, cramping or abdominal pain, weakness and fatigue, or unintended weight loss. Any patient, regardless of age, who is experiencing any of these signs or symptoms should be referred for diagnostic evaluation.

What factors put a person at increased risk? [5]

- Being age 50 or older
- Family History of colorectal cancer
- Smoking
- Having Type 2 Diabetes
- African American race
- Ashkenazi Jewish heritage

- Being male
- Being overweight or obese
- Eating diet high in red meat
- Lynch Syndrome or Familial Adenomatous Polyposis
- Chronic inflammatory bowel disease

Early Detection is key!

- In Michigan, **24%** of Black adults and **20%** of White adults were diagnosed with colorectal cancer at the **distant stage.**[6]
- **Five-year relative survival** for colorectal patients diagnosed in the **localized** stage is **90%.** [7]
- For colorectal patients diagnosed at the **regional** stage, five-year relative survival is **71**%. [7]
- Five-year survival for colorectal patients diagnosed at a **distant stage falls to 14%.** [7]
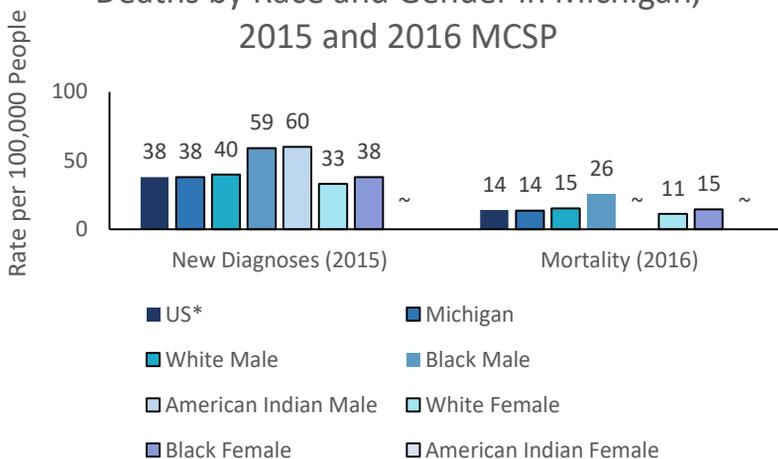
Colorectal Cancer Disparities

- Both new diagnoses and deaths from colorectal cancer have been decreasing since 1985; however, **significant disparities exist** (data not shown). [6]
- **Black men** and **Black women** are more likely to be **diagnosed** with and **die** from colorectal cancer compared to White men and White women, respectively.
- Factors that may contribute to the higher death rate in Black adults include **inequities** in **screening, diagnostic follow-up, and treatment**. [2]

Five-Year Relative Survival Percentage by Stage at Diagnosis, 2008-2014 SEER

Localized 90%, Regional 71%, Distant 14%, Unknown 35%
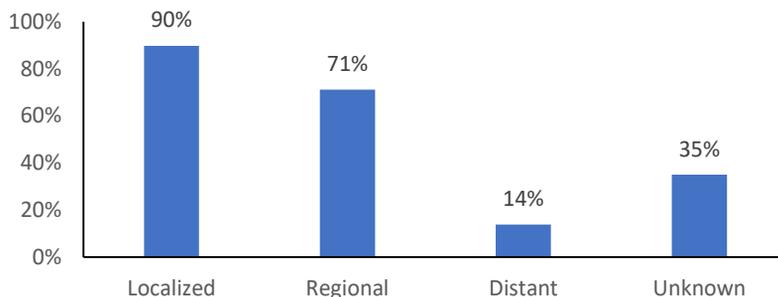
Source: SEER18 2008-2014, Seer*State database November 2017
www.seer.cancer.gov

Colorectal Cancer New Diagnoses and Deaths by Race and Gender in Michigan, 2015 and 2016 MCSP

Rate per 100,000 People

New Diagnoses (2015): 38, 38, 40, 59, 60, 33, 38
Mortality (2016): 14, 14, 15, 26, 11, 15

Legend:
- US*
- Michigan
- White Male
- Black Male
- American Indian Male
- White Female
- Black Female
- American Indian Female

*US death rate is from 2015
Source: Michigan Cancer Surveillance Program (MCSP), Division for Vital Records and Health Statistics. Age-adjusted cancer mortality rates by count in Michigan, 2016. race and sex adjusted invasive cancer rates in Michigan, 2015. Based on data released July 2018.

More Resources

For more information about Colorectal cancer or for other information related to cancer please visit
www.michigancancer.org/colorectal

References: 1) American Cancer Society. Cancer Statistics Center: Michigan at a Glance 2017. Retrieved at: http://cancerstatisticscenter.cancer.org./#/ 2) *Final Recommendation Statement: Colorectal Cancer: Screening*. U.S. Preventive Services Task Force. June 2017. https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/colorectal-cancer-screening2 3) Michigan Behavioral Risk Factor Survey. www.Michigan.gov/brfs 4)American Cancer Society. Cancer Facts and Figures 2016. Retrieved at: http://www.cancer.org/acs/groups/content/@editorial/documents/document/acspc-044552.pdf 5) American Cancer Society. Colorectal Cancer Causes, Risk Factors, and Prevention. Retrieved at: https://www.cancer.org/cancer/colorectal-cancer/causes-risks-prevention.html. 6)Michigan Cancer Surveillance Program. Invasive Cancer Incidence and Mortality Trends Michigan Residents, 1985-2015. Michigan Department of Health & Human Services., Division for Vital Records & Health Statistics. Retrieved at: http://www.cancer-rates.info/mi/index.php 7) Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 9 Regs Research Data, Nov 2017 Sub (1973-2015), National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2018, based on the November 2017 submission.

Cervical Cancer in Michigan

In 2018, an estimated 13,240 cases of invasive cervical cancer will be diagnosed in the US. Cervical cancer can be prevented through routine screening and a vaccine is available that can protect against the types of Human Papillomavirus (HPV) that cause 90% of cervical cancers.
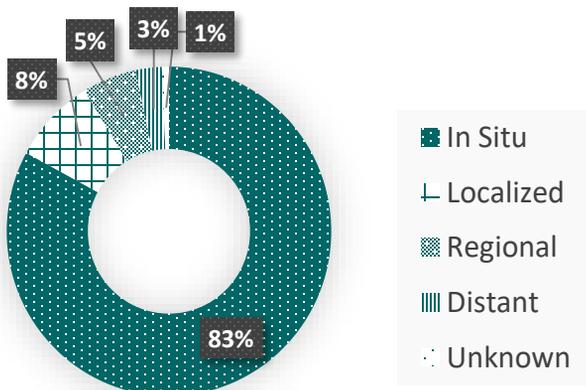
	Number of cases: Michigan	Rates per 100,000 Females: Michigan
New Cases (2015)	382	7.2
Deaths (2016)	114	2.02

What increases risk?

✔ Infection with one or more strains of HPV
✔ Smoking
✔ Multiple sex partners
✔ Initiation of sex at age 16 or younger
✔ 3 or more pregnancies
✔ Long term use of contraceptives

Health Disparities

Black, Hispanic, and Arab women were significantly less likely to report ever having a Pap test.

91.7%

National five year survival rate when cervical cancer is detected early.

When is it Diagnosed?

5% 3% 1%
8%
83%

- In Situ
- Localized
- Regional
- Distant
- Unknown

### Screening

For women ages 21-29, a Pap Test should be done ever 3 years. For women ages 30-65, a Pap Test should be done every 3 years or an HPV test every 5 years, or a Pap Test, and HPV Co-test every 5 years.

Cervical Cancer in Michigan

MDHHS — Michigan Department of Health & Human Services

- **Cervical cancer is most commonly diagnosed cancer in women between the ages 35 and 54. [1]**
- Cervical cancer usually has **very few to no signs or symptoms. [1]**
- In 2018, it is estimated that there will be **370** new cases of cervical cancer and **110 deaths** from cervical cancer in Michigan women. [2]
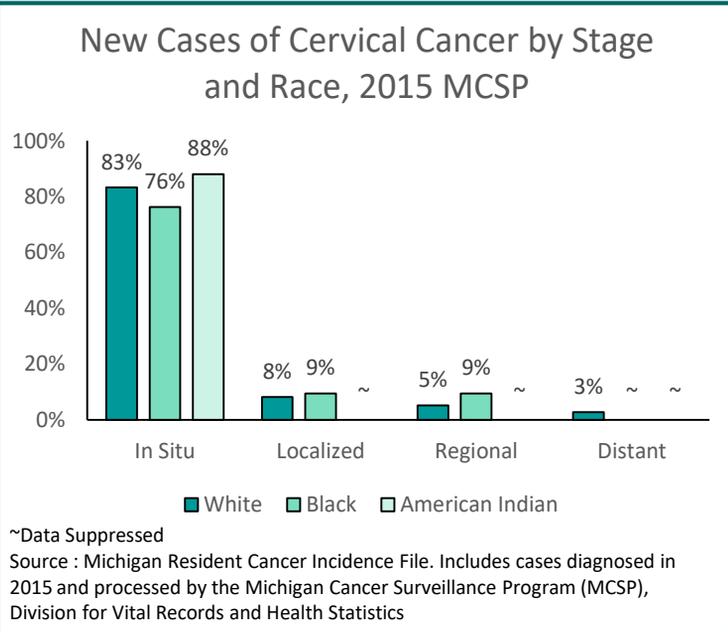
Cervical Cancer Screening [3]

- Screening is recommended for women of average risk between the ages 21-65.
- For women aged 21-29**, Pap tests** should be administered **every three years**.
- For women aged 30 to 65 it is recommended to be screened every **three years** with a **Pap test**, <u>OR</u> **every five years** with **high-risk human papillomavirus (hrHPV) testing alone**, <u>OR</u> **every five years** with **hrHPV testing** in **combination** with a **Pap test**.
- Women should discuss their risk for cervical cancer and the appropriate screening with their health provider.
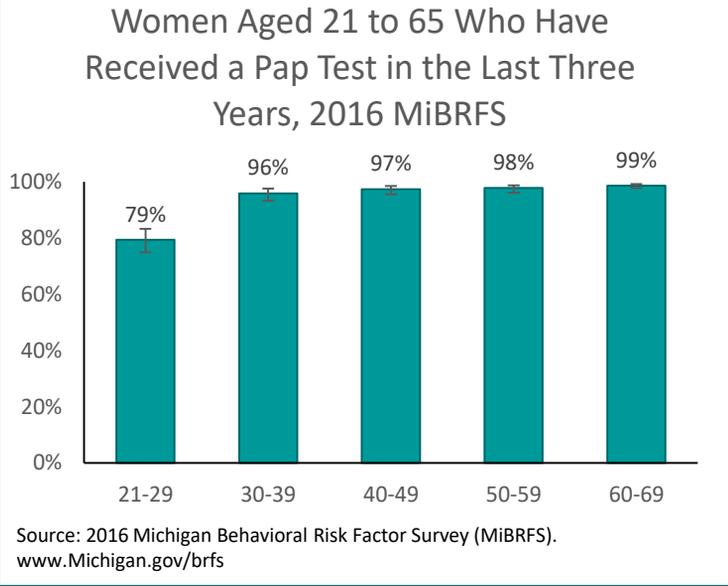
Early Detection is Key!

- Most cases of cervical cancer in Michigan are diagnosed In Situ (non-invasive).
- There are significant differences in stage at diagnosis by race, with 76% of Black women being diagnosed In Situ compared to 83% of White women and 88% of Native American women. [4]
- For cases that become invasive, it is important to detect the cancer early to improve the chances for successful treatment.
- 92% of US women diagnosed in the local stage will survive five years, compared to only 17% of women diagnosed in the distant stage. [5]
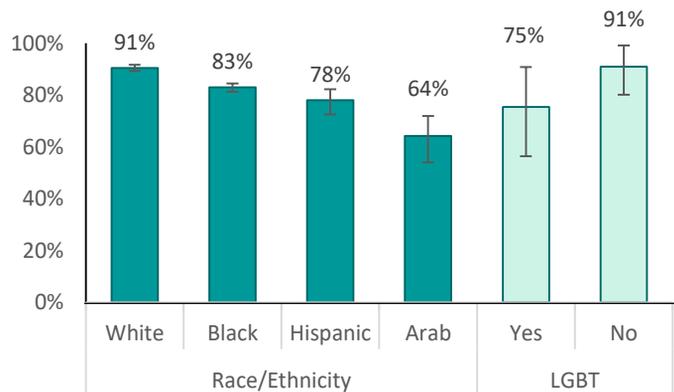
Women Aged 21 to 65 Who Have Received a Pap Test in the Last Three Years, 2016 MiBRFS

Age group	Percent
21-29	79%
30-39	96%
40-49	97%
50-59	98%
60-69	99%

Source: 2016 Michigan Behavioral Risk Factor Survey (MiBRFS). www.Michigan.gov/brfs

New Cases of Cervical Cancer by Stage and Race, 2015 MCSP

Stage	White	Black	American Indian
In Situ	83%	76%	88%
Localized	8%	9%	~
Regional	5%	9%	~
Distant	3%	~	~

~Data Suppressed

Source : Michigan Resident Cancer Incidence File. Includes cases diagnosed in 2015 and processed by the Michigan Cancer Surveillance Program (MCSP), Division for Vital Records and Health Statistics

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Know someone who needs help getting screened for cervical cancer or navigating the health system?

The Breast and Cervical Cancer Control Navigation Program (BCCNP) **provides free breast and cervical cancer screening to low-income women between the ages of 21 and 64.** For more information about the BCCNP, please call toll free 844-446-8727 or visit www.michigancancer.org/bcccp.

Cervical Cancer Disparities

- New diagnoses of invasive cervical cancer have declined in Michigan from 12 per 100,000 women in 1985 to 7 per 100,000 women in 2015. [4]
- The decrease can be, in part, attributed to more access to and wide spread use of Pap and Human Papilloma Virus (HPV) testing per national guidelines.
- However, disparities still exist preventing women from getting cervical cancer screening.
- Black, Hispanic, and Arab women were significantly less likely to report ever having a Pap test (83%, 78%, and 64% respectively) compared to White women (91%). [6]
- Lesbian, Gay, Bisexual, and Trans (LGBT) women were significantly less likely to report ever having a Pap test (75%) compared to non-LGBT women (91%). [6]

What increases risk of cervical cancer? [7,8]

- Infection with one or more strains of **HPV** cause the greatest increased risk for cervical cancer.
    - Seven strains of HPV cause about 90% of cervical cancers.
    - The current HPV vaccination prevents infection of these seven strains of HPV.
- Risk of cervical cancer is **two times higher** in women who **smoke cigarettes** compared to women who don't (data not shown).
- Multiple sex partners (regardless of sexual orientation).
- Initiation of sex at age 16 or younger.
- First term pregnancy before age 17.
- Having three or more pregnancies.
- Not using condoms.
- Long-term use of oral contraceptives.

Women Aged 18 or Older Who Have Ever Received a Pap Test, 2016 MiBRFS
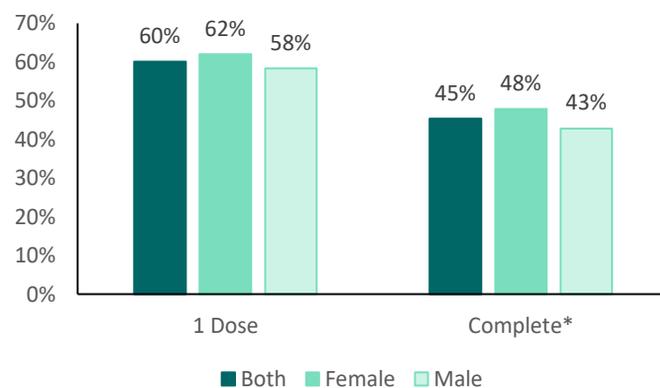

LGBT= Lesbian, Gay, Bisexual, and/or Transgender
Source: Michigan Behavioral Risk Factor Survey (MiBRFS).
www.Michigan.gov/brfs

HPV Vaccination Rates in Michigan among Children Aged 13-17, June 2018 MCIR

*Complete with 2 or 3 HPV doses
Source : Michigan Care Improvement Registry (MCIR). Prepared by the Michigan Department of Health and Human Services

Human Papilloma Virus (HPV) Vaccination [9]

The Centers for Disease Control and Prevention recommends that girls and boys between 11 and 12 years old get the HPV vaccine. However, vaccination can start as early as 9 years old and continue to age 26, depending upon the patient's situation and risk. Discuss the appropriate vaccination schedule with your healthcare provider.

References: 1) American Cancer Society. Cervical Cancer Causes, Risk Factors, and Prevention. Retrieved at: https://www.cancer.org/cancer/cervical-cancer/causes-risks-prevention.html. 2) American Cancer Society. Cancer Statistics Center: Michigan at a Glance 2017. Retrieved at: http://cancerstatisticscenter.cancer.org./#/state/Michigan. 3) *Final Recommendation Statement: Cervical Cancer: Screening*. U.S. Preventive Services Task Force. March 2012. 4) Michigan Cancer Surveillance Program. Invasive cervical Cancer Incidence and Mortality Trends Michigan Female Residents, 1985-2015. Michigan Department of Health & Human Services., Division for Vital Records & Health Statistics. Retrieved at: http://www.cancer-rates.info/mi/index.php Accessed June 2018 5) Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2017 Sub (2000-2015) , National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2018, based on the November 2017 submission 6) Michigan Behavioral Risk Factor Survey 2016. Retrieved at www.Michigan.gov/brfs 7)American Cancer Society. Cervical Cancer Causes, Risk Factors, and Prevention. Retrieved at: https://www.cancer.org/cancer/cervical-cancer/causes-risks-prevention.html. 8) Saraiya M et al. US Assessment of HPV Types in Cancers: Implications for Current and 9-valent HPV Vaccines. J Natl Cancer Inst. 2015 Jun; 107(6). 9) Centers for Disease Control and Prevention. Human Papillomavirus Vaccination: Recommendations of the Advisory Committee on Immunization Practices. Morbidity and Mortality Weekly Report. 29 August 2014. Retrieved at: https://www.cdc.gov/mmwr/volumes/65/wr/mm6549a5.htm Accessed 30 May 2018

Cancer among Michigan's Racial and Ethnic Minorities

Cancer does not affect all races equally; different races experience cancer differently, from diagnosis to treatment. For instance, of all racial and ethnic groups in the United States, African Americans have the highest death rate and shortest survival time for the majority of cancer types.

Race	Number of New Cases	Number of Deaths
American Indian or Alaskan Native	341	136
Asian or Pacific Islander	558	192
Black	6,408	2,759
Hispanic	648	340

Michigan residents, regardless of ethnicity, who reported being

Black

had the

highest rate of new cases

of cancer and

the highest rate of deaths

from cancer.

Overall Michigan Population by Race

- White
- Black
- American Indian and Alaskan Native
- Asian
- Multiracial
- Hispanic

75%
14%
1%
3%
2%
5%

What increases risk for all populations?

✔ Obesity
✔ Smoking
✔ Binge Drinking
✔ Physical inactivity
✔ Poor nutrition

20%

Of all cancers diagnosed in the US are related to obesity, physical inactivity, excess alcohol consumption, and/or poor nutrition, and thus could be prevented.
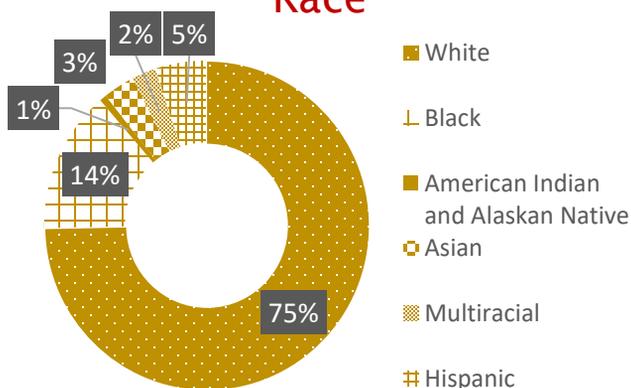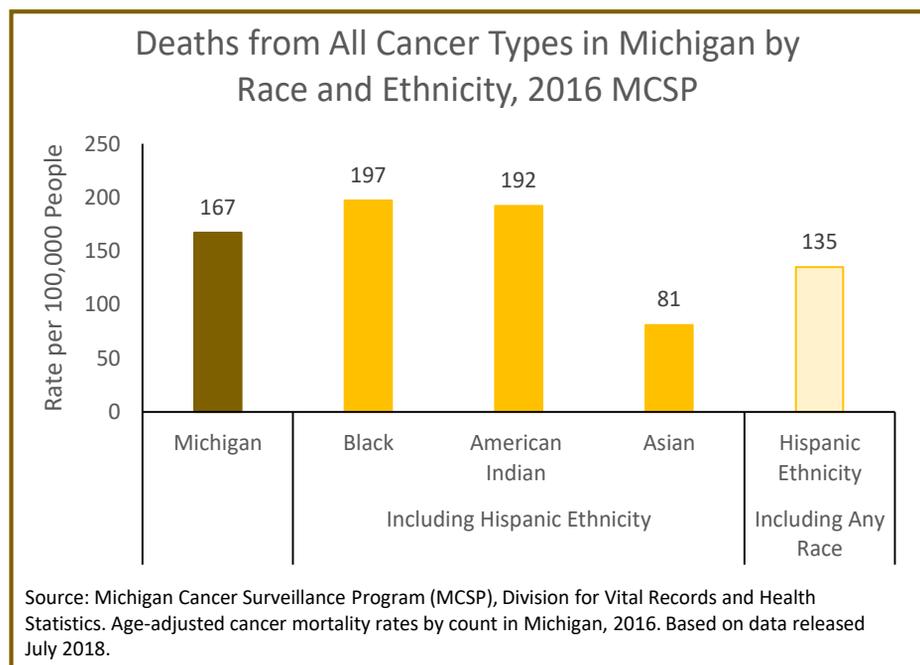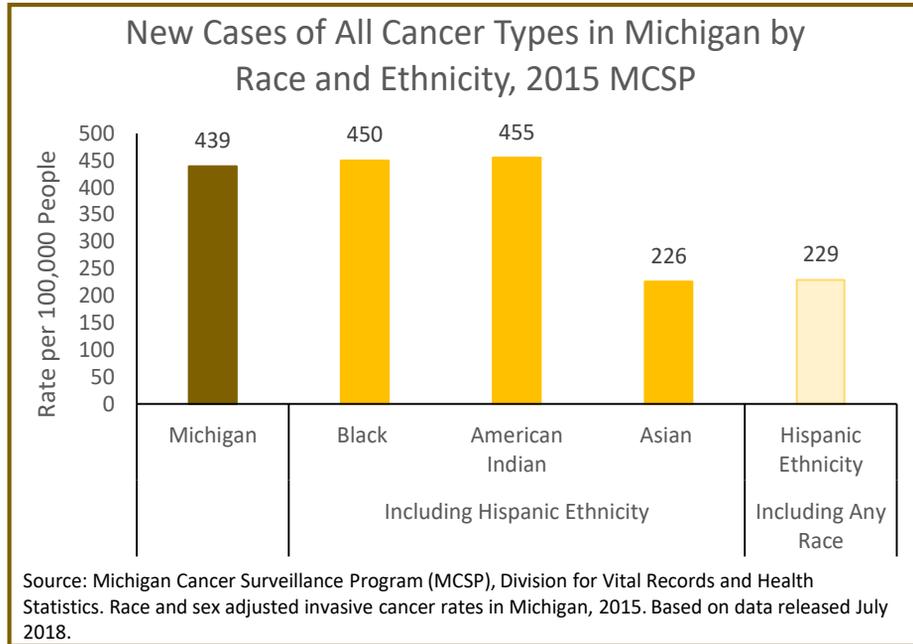
Adequate **physical activity** was **significantly lower** in Arab, Non-Hispanics compared to Michigan overall.

Cancer among Michigan's Racial and Ethnic Minorities

MDHHS
Michigan Department of Health & Human Services

➢ About **24%** of Michigan's population identifies as a racial or ethnic minority, with **14% identifying as Black or African American and 5% identifying as Hispanic or Latino**.[1]

➢ Cancer does not affect all races equally. **African American women are more likely to be diagnosed with triple negative breast cancer** which is more difficult to treat. **American Indians and Alaskan Natives have the highest rates of kidney cancer and liver cancer.**[2]

Cancer Disparities [3]

➢ Michigan residents, regardless of ethnicity, who reported being **American Indian** had the **highest rate of new cases** of cancer (455 per 100,000 residents).

➢ **Black** residents had the **highest rate of deaths** from cancer (197 per 100,000 residents).

➢ Michigan residents, regardless of ethnicity, who reported being **Asian or Pacific Islander** had the **lowest rate** of **new cancer diagnoses** (226 per 100,000 residents).

> ➢ **Asian or Pacific Islander residents** also had the **lowest rate of deaths** from cancer (81 per 100,000).

➢ Regardless of race, those who reported **Hispanic ethnicity** had **a lower rate** of cancer compared to all of Michigan (229 per 100,000 residents).

> ➢ Those who reported **Hispanic ethnicity** also had **a lower death rate** compared to all of Michigan (135 per 100,000 residents).

New Cases of All Cancer Types in Michigan by Race and Ethnicity, 2015 MCSP

Rate per 100,000 People

	Including Hispanic Ethnicity			Including Any Race
Michigan	Black	American Indian	Asian	Hispanic Ethnicity
439	450	455	226	229

Source: Michigan Cancer Surveillance Program (MCSP), Division for Vital Records and Health Statistics. Race and sex adjusted invasive cancer rates in Michigan, 2015. Based on data released July 2018.

Deaths from All Cancer Types in Michigan by Race and Ethnicity, 2016 MCSP

Rate per 100,000 People

	Including Hispanic Ethnicity			Including Any Race
Michigan	Black	American Indian	Asian	Hispanic Ethnicity
167	197	192	81	135

Source: Michigan Cancer Surveillance Program (MCSP), Division for Vital Records and Health Statistics. Age-adjusted cancer mortality rates by count in Michigan, 2016. Based on data released July 2018.

Cancer Preventive Behaviors

➤ The World Cancer Research Fund estimates that about 20% of all cancers diagnosed in the US are related to high adiposity, physical inactivity, excess alcohol consumption, and/or poor nutrition, and thus could be prevented.[4]

➤ It is recommended for adults to do a physical activity for at least 150 minutes at moderate intensity or 75 minutes at vigorous intensity each week.[4]

➤ Adequate physical activity was significantly lower in Arab, Non-Hispanics (8%) compared to Michigan overall.

➤ People who stated their race as Black, Non-Hispanic reported they consumed significantly less vegetables (35%) compared to Michigan overall (25%) (Data not shown). [5]

### Receiving Adequate Physical Activity by Race and Ethnicity, 2015 MiBRFS and 2016 ABRFS
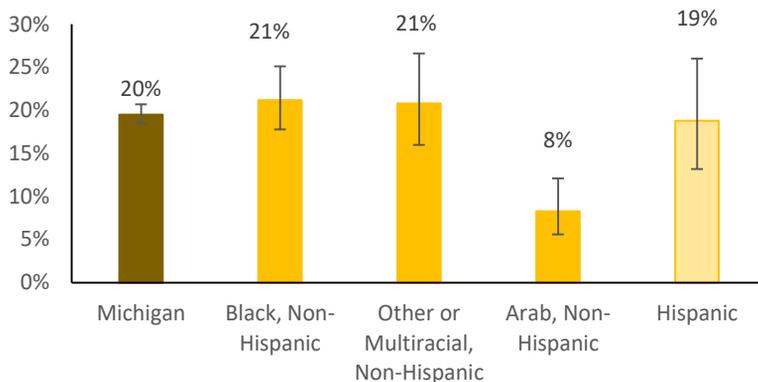
Source: 2015 Michigan Behavioral Risk Factor Survey (MiBRFS), www.Michigan.gov/brfs and 2016 Arab Behavioral Risk Factor Survey (ABRFS)

Lifestyle Risk Factors for Cancer [5]

➤ **Obesity** was highest among people who reported their race or ethnicity as Black, Non-Hispanic (38%) and Hispanic (40%). Both are significantly higher than the percent for Michigan overall (32%).

➤ **Current use of cigarettes** was highest among people who identified as American Indian (49%) and as other or multiracial (31%). Both are significantly higher than the percent for Michigan overall (22%).

➤ **Binge drinking**, defined as having five or more drinks in one sitting at least once in the last month, was highest among Hispanics (21%). This was not significantly higher than the percent for Michigan overall (20%).

Lifestyle Risk Factors by Race and Ethnicity, 2014-2016 MiBRFS
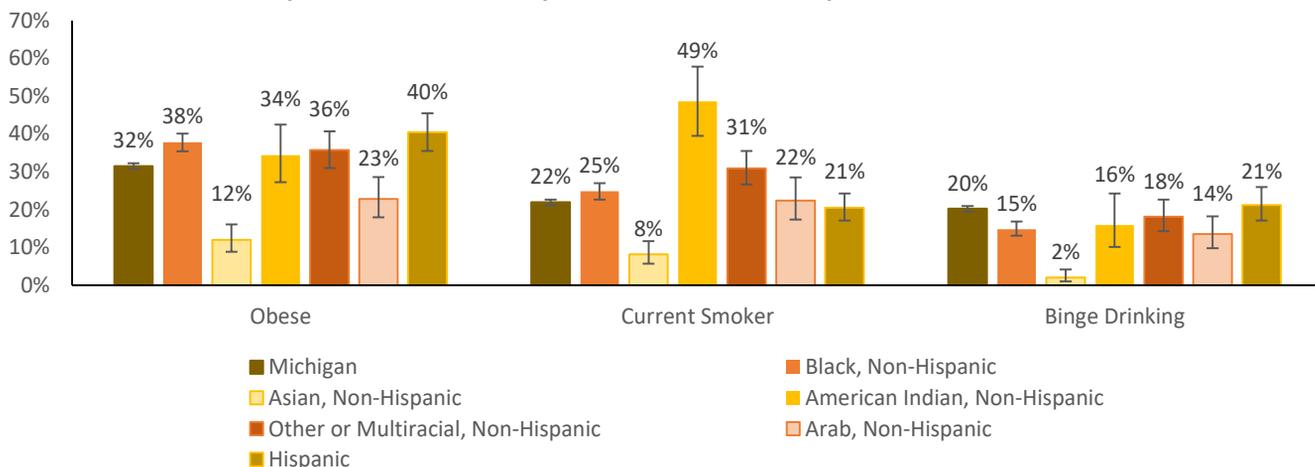
Source: 2014-2016 Michigan Behavioral Risk Factor Survey Extended Race Tables, www.Michigan.gov/brfs

References: 1) US Census Bureaus, 2011-2015 American Community Survey 5-Year Estimates, tables B02001 and B03002. Date Accessed August 2018 2) What are Cancer Disparities? National Cancer Institute. www.cancer.gov/cancer-disparities 3) Michigan Cancer Surveillance Program. Invasive cervical Cancer Incidence and Mortality Trends Michigan Female Residents, 1985-2015. Michigan Department of Health & Human Services., Division for Vital Records & Health Statistics. 4) Summary of the ACS Guidelines on Nutrition and Physical Activity. American Cancer Society. https://www.cancer.org/healthy/eat-healthy-get-active/acs-guidelines-nutrition-physical-activity-cancer-prevention/summary.html 5) Michigan Behavioral Risk Factor Survey: Michigan Department of Health and Human Services. 2016. www.michigan/.gov/brfs

Cancer Disparities among the LGBT Community

The health disparities that the LGBT community face are due to a combination of behavioral, social, and economic factors which not only impact cancer diagnoses but also impact treatment and quality of life during and after treatment.

48.0% of LGBT men reported discussing the benefits of prostate-specific antigen (PSA) testing, compared to **71.1% of all men**

The LGBT community tends to get less routine health care because of:
- low rates of health insurance
- fear of discrimination
- negative health care experiences.

In Michigan, **27%** of people report having no routine care in the past year compared to **33%** of LGBT people.

41%
Of those surveyed reported current use of cigarettes.

The LGBT Community has **Higher Rates** of

✔ Obesity
✔ Smoking
✔ Heavy Drinking
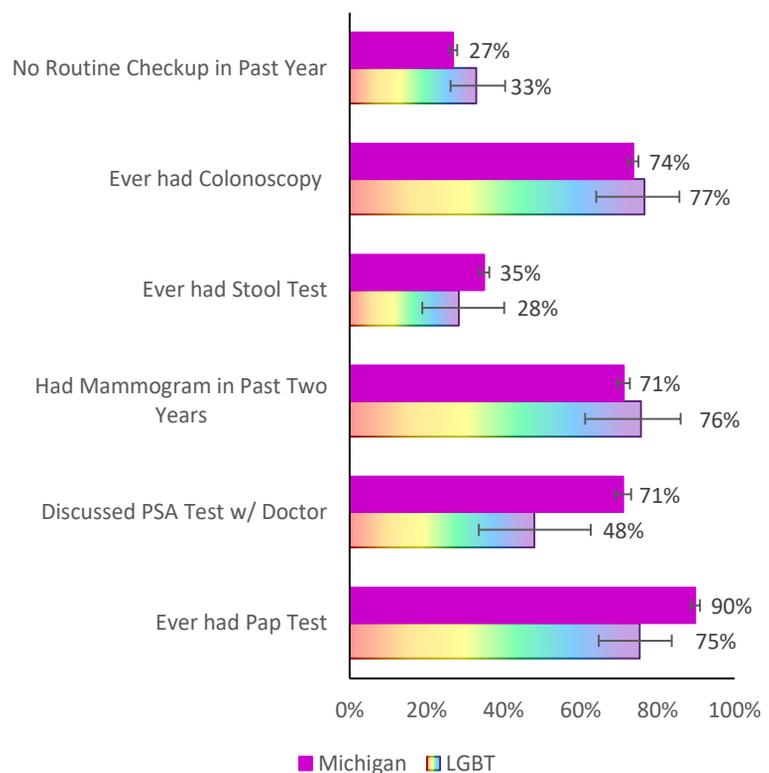
Which **Increase Risk for cancer.**

MDHHS
Michigan Department of Health & Human Services

- About **4%** of people in Michigan identify as lesbian, gay, bisexual, or transgender (LGBT) with 64% reporting their race as White and 16% as Black. [1]

- Because large cancer registries do not collect sexual orientation or gender identity, it is not possible to know precisely how prevalent cancer is among the LGBT community. However, there is reason to believe people within the LGBT community carry a **disproportionate cancer burden**. [2]
  - In Michigan, the age adjusted rate of cancer is 11% compared to seven percent for LGBT Michiganders. This difference is not statistically significant. [3]

- The health disparities that the LGBT community face are due to a combination of behavioral, social, and economic factors and do not only impact cancer diagnoses but also impact treatment and quality of life during and post-treatment. [4]

Health Care and Cancer Screening

- Studies have shown that people within the LGBT community **get less routine health care compared to those who are not.** Some reasons for this include: low rates of health insurance, fear of discrimination, and negative health care experiences. [2]
  - Overall in **Michigan, 27%** of people report having no routine checkup in the past year compared to 33%of LGBT people. [3]
- Some surveys have found **lower-than-average cancer screening rates** among the LGBT population despite some LGBT members having a higher risk for certain cancers. [5]
- Lesbian and bisexual women are at an increased risk for breast cancer because they are less likely to experience childbirth and breastfeeding. [5]
  - In 2016, **75.7% of LGBT** women reported having a mammogram in the past two years compared to **71.2% of all women**. [3]
- In 2016, **45.2% of LGBT men** reported discussing the benefits of prostate-specific antigen (PSA) testing with their physician, compared to **71.1% of all men**. [3]

Healthcare and Cancer Screening among the LGBT Community, 2016 MiBRFS

Category	Michigan	LGBT
No Routine Checkup in Past Year	27%	33%
Ever had Colonoscopy	74%	77%
Ever had Stool Test	35%	28%
Had Mammogram in Past Two Years	71%	76%
Discussed PSA Test w/ Doctor	71%	48%
Ever had Pap Test	90%	75%

■ Michigan   □ LGBT

Source: 2016 Michigan Behavioral Risk Factor Survey (MiBRFS). www.Michigan.gov/brfs

- In 2016, **75.4% LBT** women reported ever having a **pap test** to screen for cervical cancer compared to 89.8% of all women. [6]
- Transgender individuals should receive screening for cancers associated with their sex assigned at birth. [6]
  - Breast cancer risk among transgender women may be similar or less than that of cisgender women.
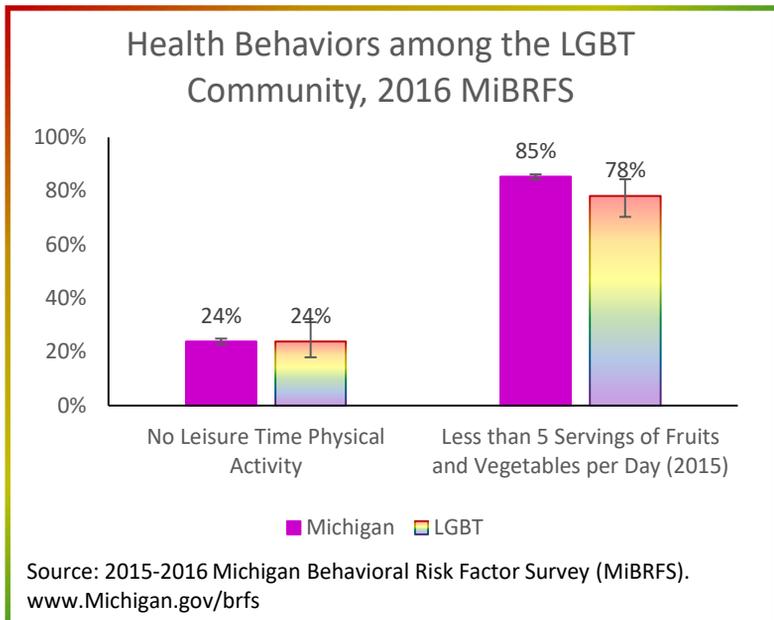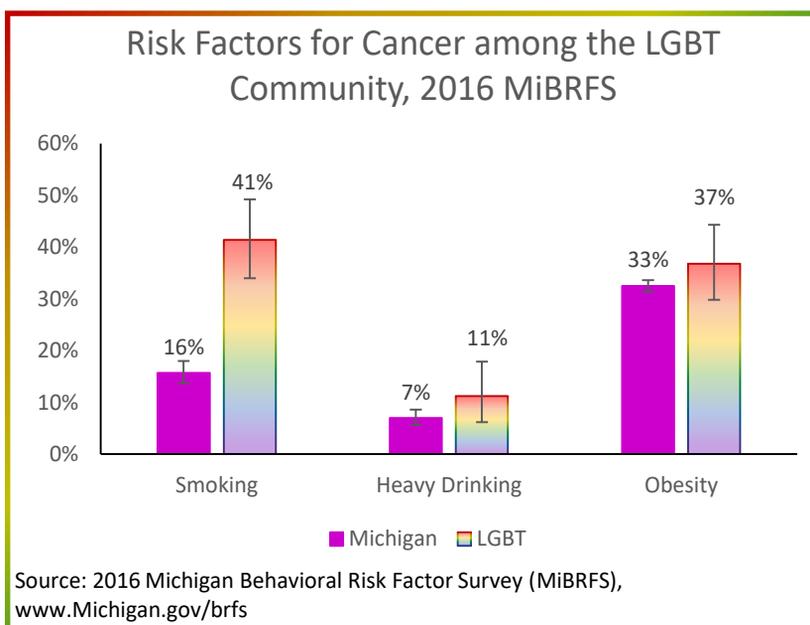 - It is unknown if hormone therapy increases one's risk of cancer. [6]

Cancer Preventive Behaviors

- ➤ The World Cancer Research Fund estimates that about 20% of all cancers diagnosed in the US are related to high adiposity, physical inactivity, excess alcohol consumption, and/or poor nutrition, and thus could be prevented. [6]
- ➤ 24% of people in the LGBT community reported having no leisure time physical activity. This was not significantly different from Michigan overall. [3]
- ➤ 78% of people in the LGBT community reported eating less than the recommended five servings of fruits and vegetables per day. This was not significantly lower than Michigan overall. [3]

Health Behaviors among the LGBT Community, 2016 MiBRFS

Source: 2015-2016 Michigan Behavioral Risk Factor Survey (MiBRFS). www.Michigan.gov/brfs

Lifestyle Risk Factors for Cancer

- ➤ Current use of cigarettes was significantly higher among the LGBT community (41%) compared to the overall smoking rate in Michigan (16%). [3]
- ➤ Among the LGBT community, 11% report heavy drinking which is defined as having two or more drinks per day. This was not significantly higher than the percent for Michigan overall. [3]
- ➤ Among the LGBT community, 37% are classified as obese compared to 33% of the overall Michigan population. This was not significantly higher than the percent for Michigan overall. [3]

Risk Factors for Cancer among the LGBT Community, 2016 MiBRFS

Source: 2016 Michigan Behavioral Risk Factor Survey (MiBRFS), www.Michigan.gov/brfs

Disparities within the LGBT Community [2]

It is important to note that the term LGBT encompasses a very broad community. Often people will identify with other minority groups, and many people will self-identify with one or more of the populations included within the LGBT community. To further learn about the LGBT community, each of the four groups should be analyzed separately due to each group facing its own unique set of health and cancer risk factors. The Michigan Behavioral Risk Factor Survey began asking respondents about sexual orientation in 2011 and added transgender as a response option in 2015. There is limited data available for people identifying as transgender and therefore at this time it is not possible to analyze the four populations individually. As this question is asked yearly, future analyses will be performed to examine each of the four groups individually.

1) Characteristics of LGBT People: Michigan. The Williams Health Institute. May 2016. https://williamsinstitute.law.ucla.edu/visualization/lgbt-stats 2) The National LGBT Cancer Action Plan: A White Paper of the 2014 National Summit on Cancer in the LGBT Communities. Burkhalter JE, et al. LGBT Health. 2016. https://www.liebertpub.com/doi/pdf/10.1089/lgbt.2015.0118 3) Michigan Behavioral Risk Factor Survey 2016. Retrieved at www.Michigan.gov/brfs 4) Cancer Facts for Lesbians and Bisexual Women. American Cancer Society. Cancer.org 5) LGBT Task Force Finds Disparities in Cancer Screening and Care. UCDavis. 2012. http://www.ucdmc.ucdavis.edu/synthesis/issues/fall2012/lgbt-task-force-tackles-disparities-in-cancer-screening-and-care.html 6) Trans Individuals and Cancer. LGBT HealthLink: The Network for Health Equity. 7) Summary of the ACS Guidelines on Nutrition and Physical Activity. American Cancer Society. https://www.cancer.org/healthy/eat-healthy-get-active/acs-guidelines-nutrition-physical-activity-cancer-prevention/summary.html

Cancer among those with a Disability or Poor Mental Health

Cancer affects people of all ability. Research has shown people with physical and intellectual disabilities often have inadequate attention to care needs, inadequate focus on preventive behavior, and inadequate access to quality health care. Additionally, cancer survivors are often faced with new physical and mental challenges after cancer treatment has finished.

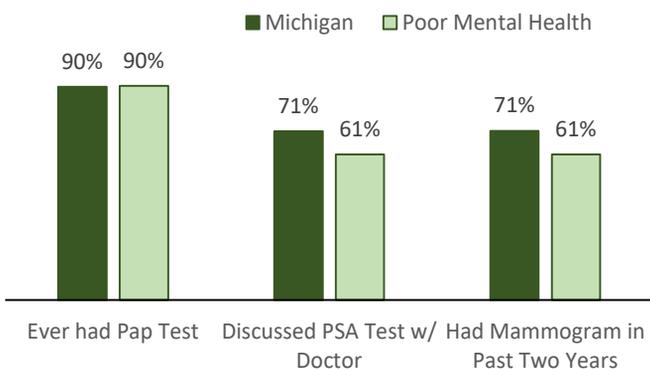| Type of Disability	% reporting poor mental health
Cognitive Disability	45.9%
Hearing Disability	29.1%
Mobility Disability	37.0%
Vision Disability	36.9%

What increases risk for all populations?

✔ Obesity
✔ Smoking
✔ Binge Drinking
✔ Physical inactivity
✔ Poor nutrition

Female Michigan residents who have a disability report

Higher Rates
of
Cancer
compared to Male Michigan residents with a disability.

10%
Of people reporting a disability are also cancer survivors.

Cancer Surveillance among People with Poor Mental Health

■ Michigan   □ Poor Mental Health

- 90% 90% — Ever had Pap Test
- 71% 61% — Discussed PSA Test w/ Doctor
- 71% 61% — Had Mammogram in Past Two Years

Obesity
was
significantly higher
among those with
poor metal health
compared to Michigan overall.

MDHHS
Michigan Department of Health & Human Services

- From the 2016 Michigan Behavioral Risk Factor Survey (MiBRFS), it is estimated that **29%** of Michiganders have some type of **disability**. [1]
  - Disability was defined as being limited in any activities because of a mental, physical, or emotional problem.
- Approximately 50% of **American Indians and Alaskan Natives** reported having a disability. This is significantly higher compared to Whites (28%) and Blacks (33%)**.** [2]
- About **14%** of people report **a cognitive** disability, **6%** a **hearing** disability, **14%** a **mobility** disability, and **5%** a **vision** disability. [2]
- Approximately **13%** of Michiganders report having **poor mental health**. [2]
  - Poor mental health was defined as having reported 14 or more days of poor mental health which included stress, depression, and problems with emotions, over the past 30 days.

Cancer Screening

- Research has shown people with physical and intellectual disabilities often have inadequate attention to care needs, inadequate focus on preventive behavior, and inadequate access to quality health care. [3,4]
- Overall in Michigan, 27% of people report having no routine care in the past year compared to 19% of people with a disability and 29% of people with poor mental health.
- There was no significant differences in cancer screening among people with a disability compared to the overall Michigan population.
- Those with poor mental health were significantly less likely to discuss the Prostate-Specific Antigen (PSA) test with their doctor, nurse or other health professional (61%) or be up to date on mammogram screening (61%).
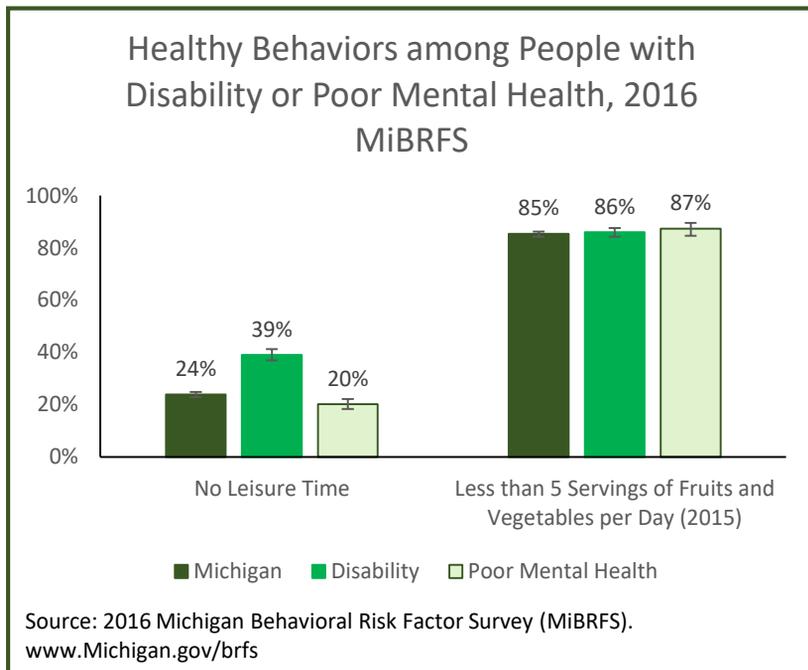- Among those with cancer, 13.2% report poor mental health and 9.9% report a disability. [1]

Healthcare and Cancer Screening among People with a Disability or Poor Mental Health, 2016 MiBRFS

Measure	Michigan	Disability	Poor Mental Health
No Routine Checkup in Past Year	27%	19%	29%
Ever had Colonoscopy	74%	75%	72%
Ever had Stool Test	35%	38%	33%
Had Mammogram in Past Two Years	71%	70%	61%
Discussed PSA Test w/ Doctor	71%	62%	61%
Ever had Pap Test	90%	93%	90%

■ Michigan ■ Disability ☐ Poor Mental Health
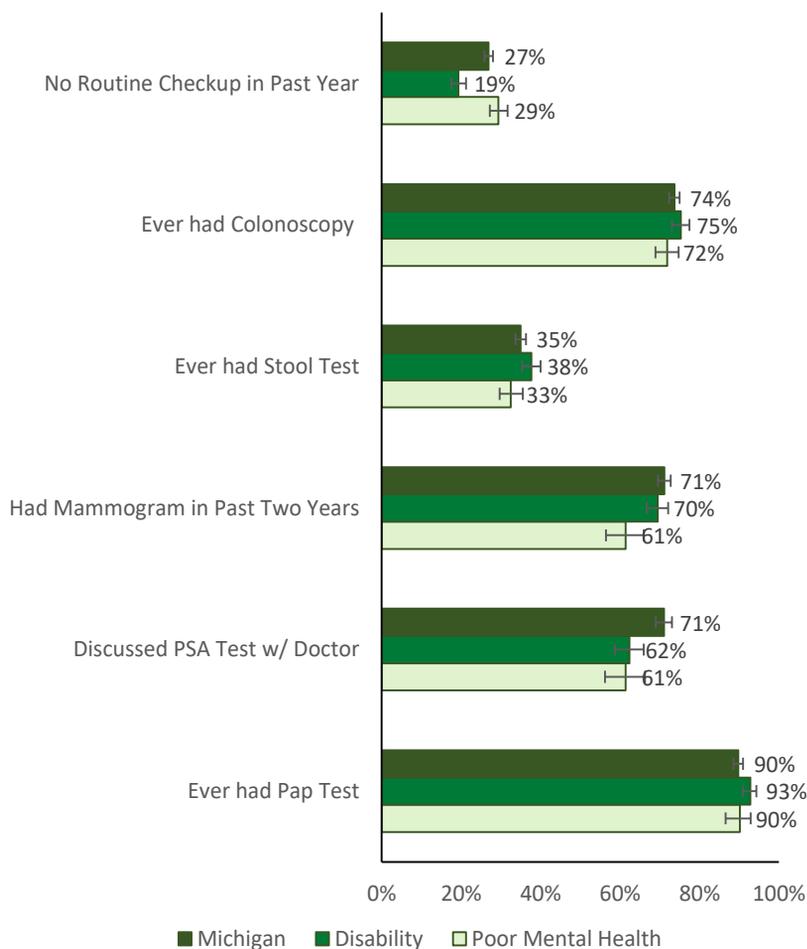
Source: 2016 Michigan Behavioral Risk Factor Survey (MiBRFS). www.michigan.gov/brfs
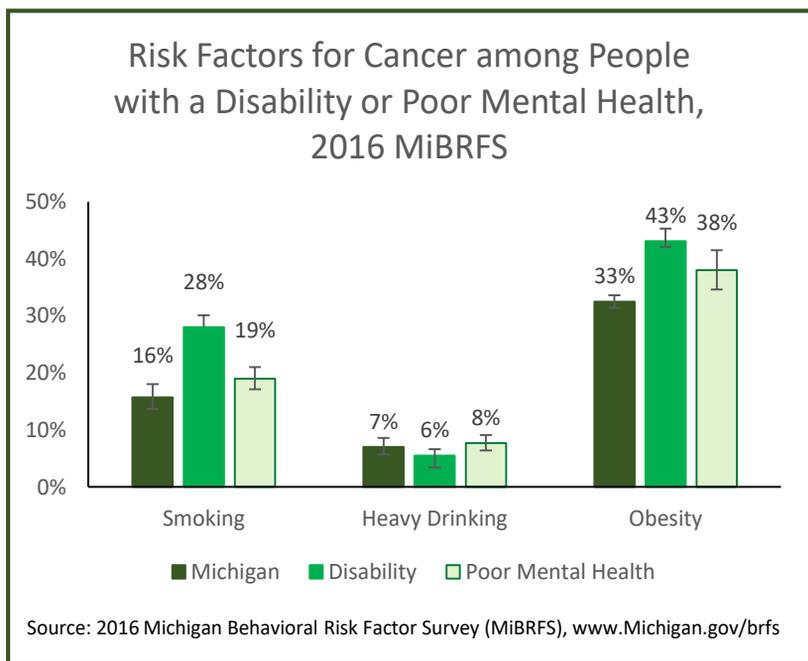
Cancer Preventive Behaviors

➤ The World Cancer Research Fund estimates that about **20% of all cancers** diagnosed in the US are related to **high adiposity, physical inactivity, excess alcohol consumption,** and/or **poor nutrition**, and thus could be prevented. [5]

➤ It is recommended for adults to do a physical activity for at least 150 minutes at moderate intensity or 75 minutes at vigorous intensity each week. [5]

➤ Among those with a disability, 39% reported partaking in no physical leisure activity. This was significantly higher than the overall population (24%).

Healthy Behaviors among People with Disability or Poor Mental Health, 2016 MiBRFS

Source: 2016 Michigan Behavioral Risk Factor Survey (MiBRFS). www.Michigan.gov/brfs

Lifestyle Risk Factors for Cancer

➤ Current use of cigarettes was highest among people with a disability (28%). This was significantly higher than the percent for Michigan overall (16%).

➤ Approximately 6% of people with a disability reported heavy drinking and 8% of people who had poor mental health reported heavy drinking. This was not different from the overall rate for Michigan.

➤ People who reported a disability also reported significantly higher rates of obesity (43%) compared to the overall rate for Michigan (33%).

➤ Those who reported poor mental health also reported significantly higher rates of obesity (38%) compared to the overall rate for Michigan (33%).

Risk Factors for Cancer among People with a Disability or Poor Mental Health, 2016 MiBRFS

Source: 2016 Michigan Behavioral Risk Factor Survey (MiBRFS), www.Michigan.gov/brfs

1) Michigan Behavioral Risk Factor Survey, 2016. www.Michigan.gov/brfs 2) Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities, Division of Human Development and Disability. Disability and Health Data System (DHDS) Data [online]. [accessed Aug 16, 2018]. URL: https://dhds.cdc.gov 3) Krahn, GL A Cascade of Disparities: Health and healthcare access for people with intellectual disabilities. Mental Retardation and Developmental Disabilities Research Reviews. 12: 70-82 (2006). 4) Smeltzer, Suzanne. Preventive Health Screening for Breast and Cervical Cancer and Osteoporosis in Women with Physical Disabilities. Family and Community Health. 29 (1) 25-43. (2006) 5) Summary of the ACS Guidelines on Nutrition and Physical Activity. American Cancer Society. https://www.cancer.org/healthy/eat-healthy-get-active/acs-guidelines-nutrition-physical-activity-cancer-prevention/summary.html

Data Request Process

Requests for cancer incidence and mortality are handled by the Michigan Cancer Surveillance Program (MCSP) within the Michigan Department of Health and Human Services Division for Vital Records and Health Statistics.

Censoring:
- Race is censored for Michigan's 70 rural counties
- ZIP code data cannot be released for populations < 5,000
- Age-adjusted rates are considered statistically unreliable if based on < 20 cases
- Counts are censored if fewer than 6, to avoid inadvertent disclosure of patient-level information
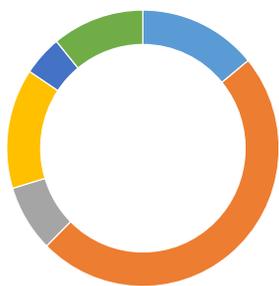
Submit requests to:
> Cancer Incidence and potential cluster concerns:
>> Georgia Spivak / SpivakG@michigan.gov / 517-335-8702
> Environmental exposure concerns:
>> Laura Abington / AbingtonL@michigan.gov / 517-284-9027

Type of Requester

■ Hospitals   ■ MDHHS   ■ Local HD
■ Universities   ■ Citizens   ■ Other

Logs are maintained internally documenting request information such as type of requester, sites of concern and years of diagnosis.

Select statistics can be found on the web site: www.michigan.gov/healthstatistics

Tables and maps can be generated under the "Community" tab of Cancer Statistics, or independently under: www.cancer-rates.info/mi
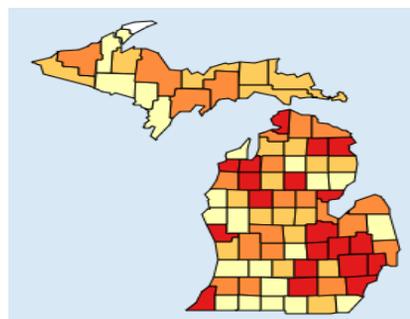
Data Resources

Michigan Comprehensive Cancer Program
www.michigan.gov/cancer

Michigan Cancer Surveillance Program
www.michigan.gov/mcsp

Michigan Behavioral Risk Factor Surveillance System
www.michigan.gov/brfs

Michigan Cancer Consortium
www.michigancancer.org

American Cancer Society: Cancer Statistics
https://cancerstatisticscenter.cancer.org./#!/

NIH State Cancer Profiles
https://statecancerprofiles.cancer.gov/index.html

Surveillance, Epidemiology, and End Results Program (SEER)
https://seer.cancer.gov/statistics/

CDC US Cancer Statistics Visualization
https://gis.cdc.gov/Cancer/USCS/DataViz.html

Disability and Health Data System
https://www.cdc.gov/ncbddd/disabilityandhealth/dhds/index.html

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