



Michigan Cancer Atlas 2019:

Risk Factors, Screening, Incidence, and Mortality



Overview

Background

Cancer is the second leading cause of death in Michigan and the number one cause of death for people over the age of 80. Cancer incidence and mortality rates vary by age, sex, race/ethnicity, geographic area, and cancer site.

Cancer is not one single disease but a term used to describe more than 100 different diseases. Cancer is due to abnormal cell growth, however the speed of growth and the reaction to treatment varies by cancer type. A substantial portion of cancer can be prevented. About one-third of cancer deaths in the U.S. are attributed to cigarette smoking. However, the primary cause of many cancers still remains unknown. The cause of cancer is complex and is most likely due to the interaction of numerous factors such as: demographics (e.g. age, race, sex), social determinants (e.g. education, income, food insecurity, access to care, discrimination), health behaviors (e.g. tobacco, alcohol, obesity, inactivity), genetics (e.g. genetic mutations, family history), and environmental factors (e.g. infectious agents, radon, radiation). There are several different types of cancer screening methods that can help prevent or diagnose some cancers early. When cancer is diagnosed early, survival rates improve.

This report presents the geographic patterns of cancer rates and associated factors across the state of Michigan.

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Data and Methods

Risk Factors and Detection

Risk factors and screening data were obtained from the Michigan Behavioral Risk Factor Survey. This survey is representative of the current Michigan adult population. Prevalence estimates were calculated using SAS-Callable SUDAAN. Risk factor data (smoking, alcohol, etc.) contains data from survey years 2016-2017. Cancer screening data is only asked during even survey years. The estimates for these measures are from survey years 2014 and 2016.

Source: Michigan Behavioral Risk Factor Survey

Cancer Incidence

Cancers are coded to the International Classification of Diseases for Oncology, Third Edition (ICD-O-3). Incidence rates include invasive cancers only, with the exception of *in situ* bladder cancers being included in the overall cancer rates. This is consistent with the methodology of the Surveillance, Epidemiology, and End Results Program (SEER). Age-adjusted rates are computed by the direct method, and are age-adjusted to the 2000 U.S. population.

Source: Michigan Cancer Surveillance Program (MCSP) 2012-2016

Cancer Staging

Stage at diagnosis is characterized using staging method: SEER Summary Stage 2000. Late stage refers to diagnoses at the regional and distant stages.

Source: Michigan Cancer Surveillance Program (MCSP) 2012-2016

Cancer Mortality

Cancer mortality refers to deaths in which the underlying death reported was cancer (ICD-10= C00-C97). Age-adjusted rates are computed by the direct method, and are age-adjusted to the 2000 U.S. population.

Source: Michigan Resident Death Files 2013-2017

Outliers

In this report, an outlier is any county or prosperity region with a measure that is abnormally high. Counties and regions are considered to be outliers if the measure is greater than the outlier cutoff of $Q3 + (1.5 * IQR)$, where Q3 refers to the third quartile and IQR refers to the interquartile range (Q3-Q1). These counties and regions are outlined in red in the maps.

Michigan's Counties



Other Regions

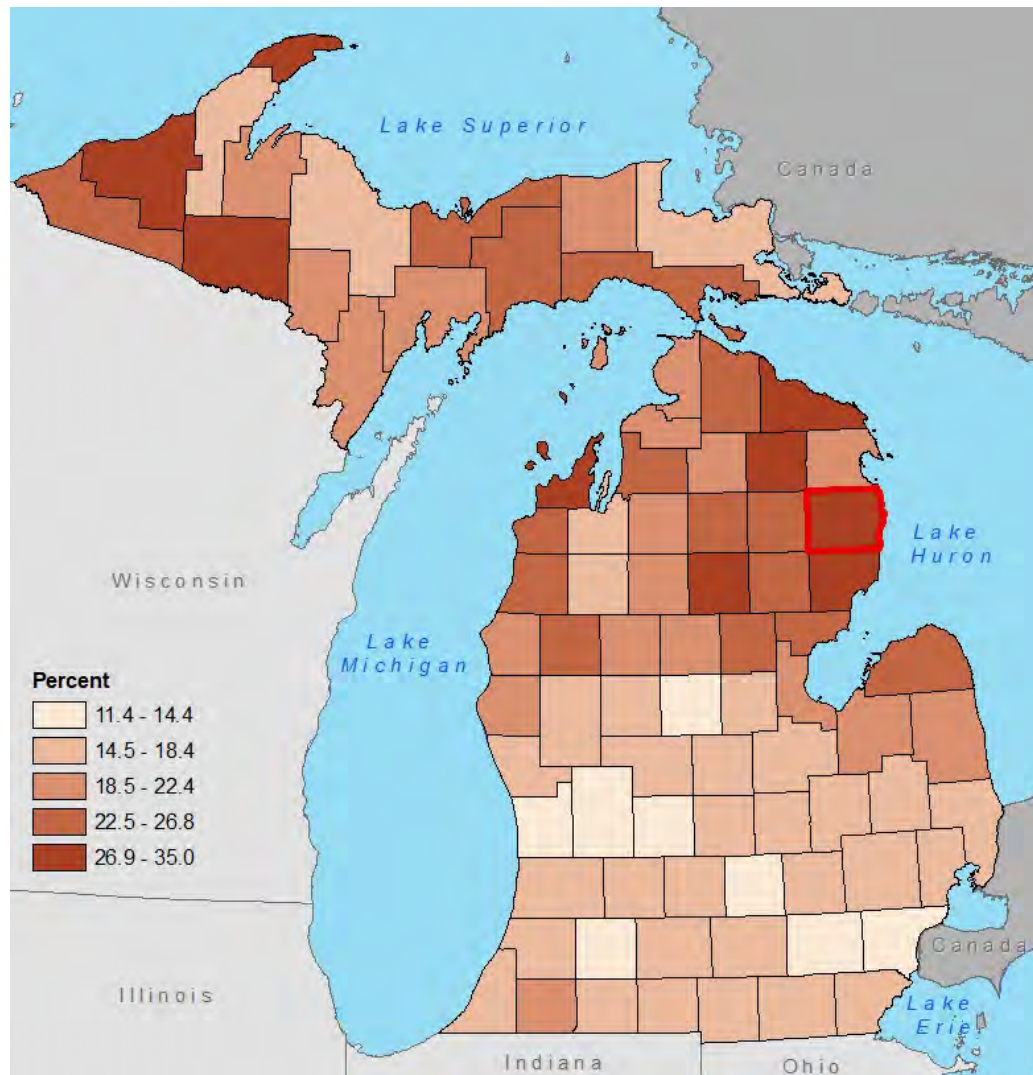
Select analyses will be shown by prosperity regions to minimize data suppression



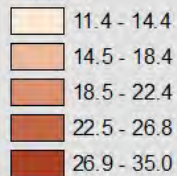
Incidence and mortality for the Native American population will be shown by tribal service region



Percent of Residents 65 and Older



Percent

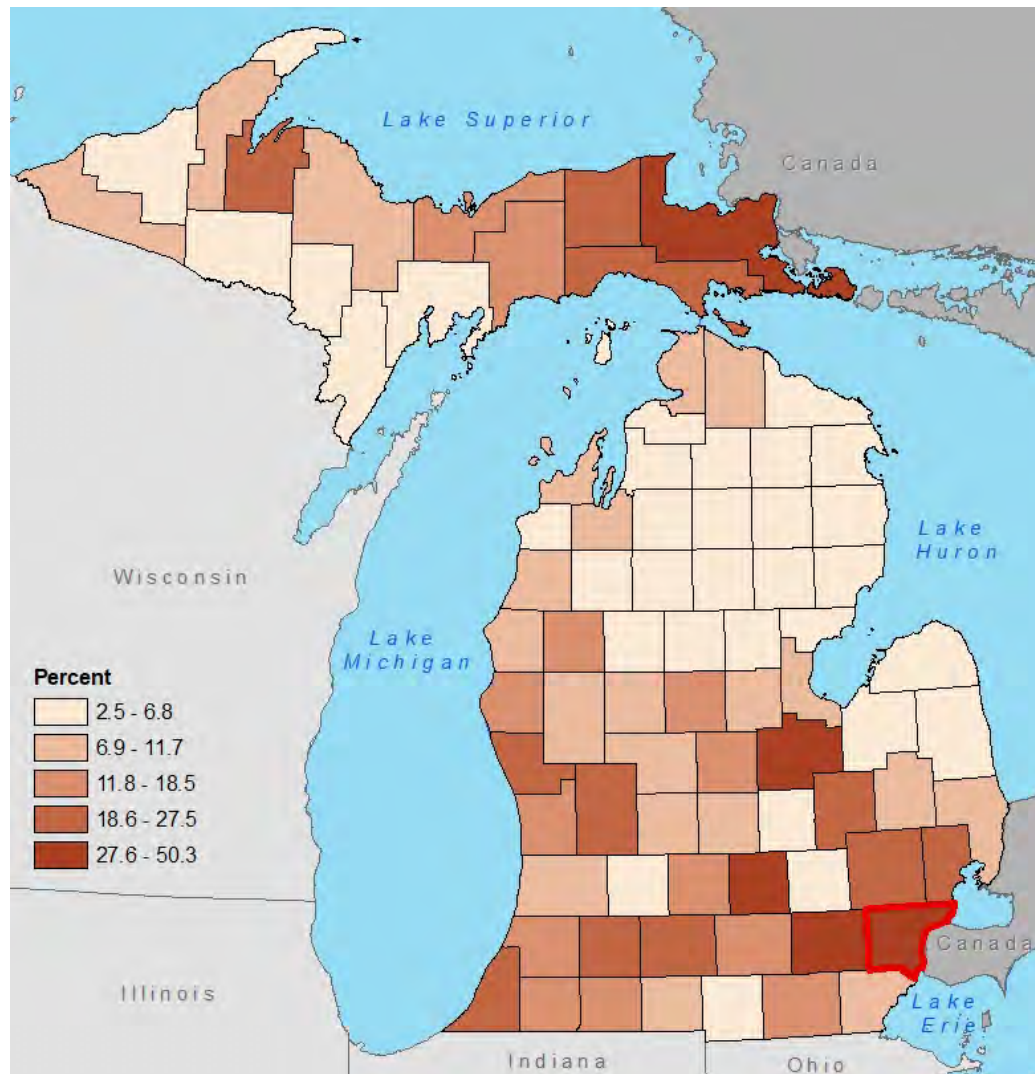


Percent of Residents 65 and Older ^{a, b}			
County	Percent	County	Percent
Alcona	35.0 *	Lake	26.8
Alger	23.6	Lapeer	16.5
Allegan	15.1	Leelanau	28.0
Alpena	22.0	Lenawee	17.2
Antrim	25.7	Livingston	15.3
Arenac	23.2	Luce	20.6
Baraga	20.0	Mackinac	25.8
Barry	17.4	Macomb	15.9
Bay	18.8	Manistee	23.9
Benzie	24.5	Marquette	17.1
Berrien	18.4	Mason	21.7
Branch	17.2	Mecosta	17.4
Calhoun	16.5	Menominee	22.2
Cass	19.4	Midland	16.9
Charlevoix	22.2	Missaukee	19.5
Cheboygan	25.3	Monroe	16.3
Chippewa	16.7	Montcalm	16.3
Clare	22.4	Montmorency	30.1
Clinton	15.5	Muskegon	15.5
Crawford	24.0	Newaygo	18.0
Delta	22.0	Oakland	15.5
Dickinson	21.0	Oceana	19.8
Eaton	16.9	Ogemaw	24.4
Emmet	20.2	Ontonagon	33.3
Genesee	16.1	Osceola	19.7
Gladwin	25.4	Oscoda	26.2
Gogebic	24.2	Otsego	19.7
Grand Traverse	17.8	Ottawa	13.8
Gratiot	16.3	Presque Isle	29.3
Hillsdale	17.9	Roscommon	30.5
Houghton	16.3	Saginaw	17.7
Huron	23.8	St Clair	17.2
Ingham	12.4	St Joseph	16.8
Ionia	13.5	Sanilac	20.0
Iosco	28.4	Schoolcraft	24.7
Iron	28.9	Shiawassee	16.9
Isabella	11.4	Tuscola	18.8
Jackson	16.3	Van Buren	16.5
Kalamazoo	13.9	Washtenaw	12.5
Kalkaska	19.4	Wayne	14.4
Kent	12.6	Wexford	17.8
Keweenaw	31.3	State of Michigan	15.9

Data Notes:

^a Data is taken from the 2013-2017 American Community Survey 5-year estimates ^b Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Percent of Non-White Residents

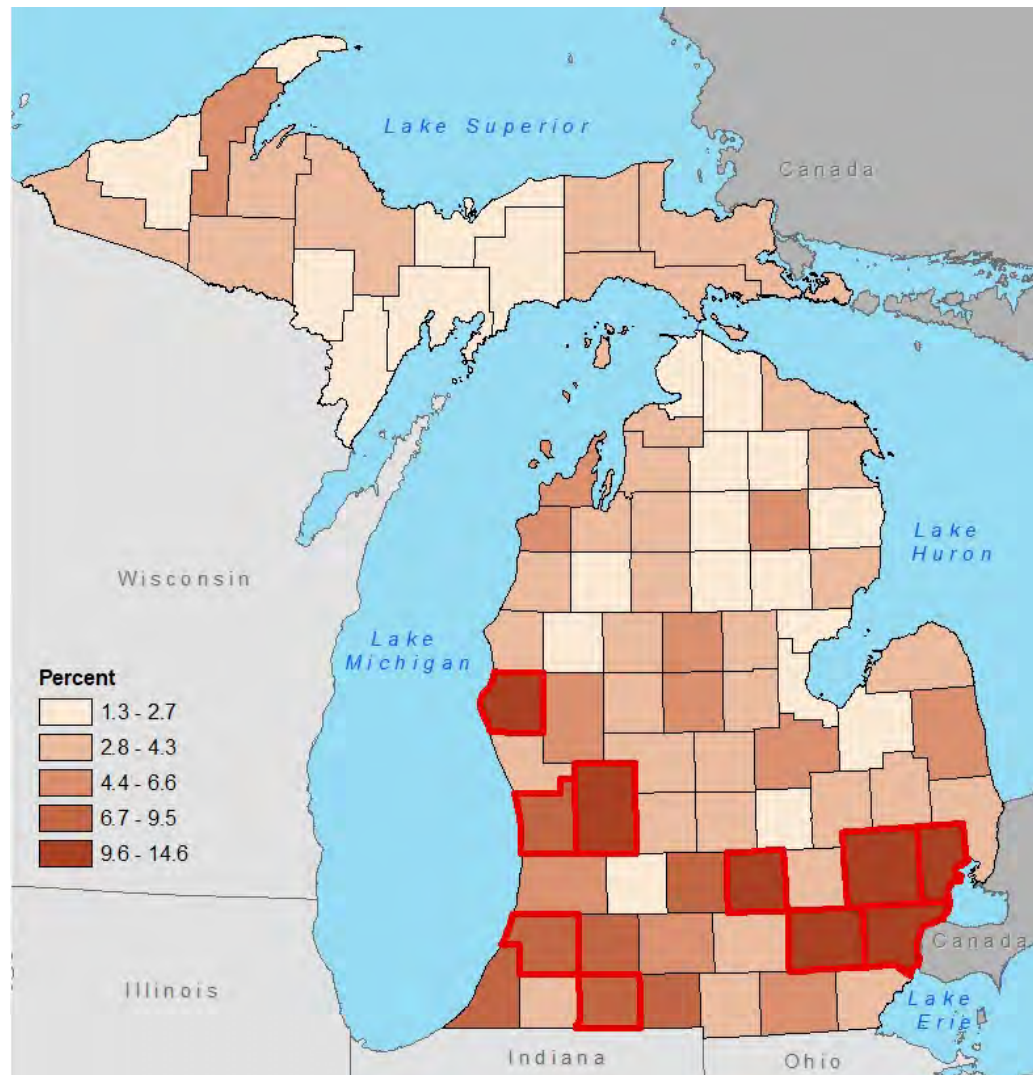


Percent of Non-White Residents ^{a, b}			
County	Percent	County	Percent
Alcona	4.0	Lake	15.2
Alger	15.8	Lapeer	8.0
Allegan	11.3	Leelanau	9.8
Alpena	4.0	Lenawee	13.0
Antrim	5.0	Livingston	5.4
Arenac	5.1	Luce	21.8
Baraga	26.9	Mackinac	26.2
Barry	5.4	Macomb	19.8
Bay	9.6	Manistee	10.6
Benzie	6.1	Marquette	7.6
Berrien	24.9	Mason	8.3
Branch	9.1	Mecosta	8.5
Calhoun	21.7	Menominee	6.7
Cass	13.6	Midland	8.3
Charlevoix	6.0	Missaukee	5.6
Cheboygan	7.8	Monroe	8.5
Chippewa	29.9	Montcalm	8.0
Clare	4.9	Montmorency	3.8
Clinton	9.8	Muskegon	23.5
Crawford	5.0	Newaygo	9.3
Delta	6.8	Oakland	27.1
Dickinson	4.4	Oceana	17.8
Eaton	16.6	Ogemaw	5.0
Emmet	8.6	Ontonagon	4.8
Genesee	27.5	Osceola	5.1
Gladwin	3.8	Oscoda	4.3
Gogebic	10.4	Otsego	5.3
Grand Traverse	7.4	Ottawa	15.7
Gratiot	13.5	Presque Isle	4.2
Hillsdale	4.9	Roscommon	4.7
Houghton	7.6	Saginaw	30.3
Huron	4.5	St Clair	8.7
Ingham	29.4	St Joseph	13.2
Ionia	11.7	Sanilac	5.9
Iosco	5.7	Schoolcraft	14.1
Iron	5.0	Shiawassee	5.7
Isabella	14.2	Tuscola	6.3
Jackson	15.0	Van Buren	18.5
Kalamazoo	22.0	Washtenaw	29.4
Kalkaska	5.3	Wayne	50.3 *
Kent	25.6	Wexford	5.2
Keweenaw	2.5	State of Michigan	24.5

Data Notes:

^a Data is taken from the 2013-2017 American Community Survey 5-year estimates ^b Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Percent whose Primary Language is not English



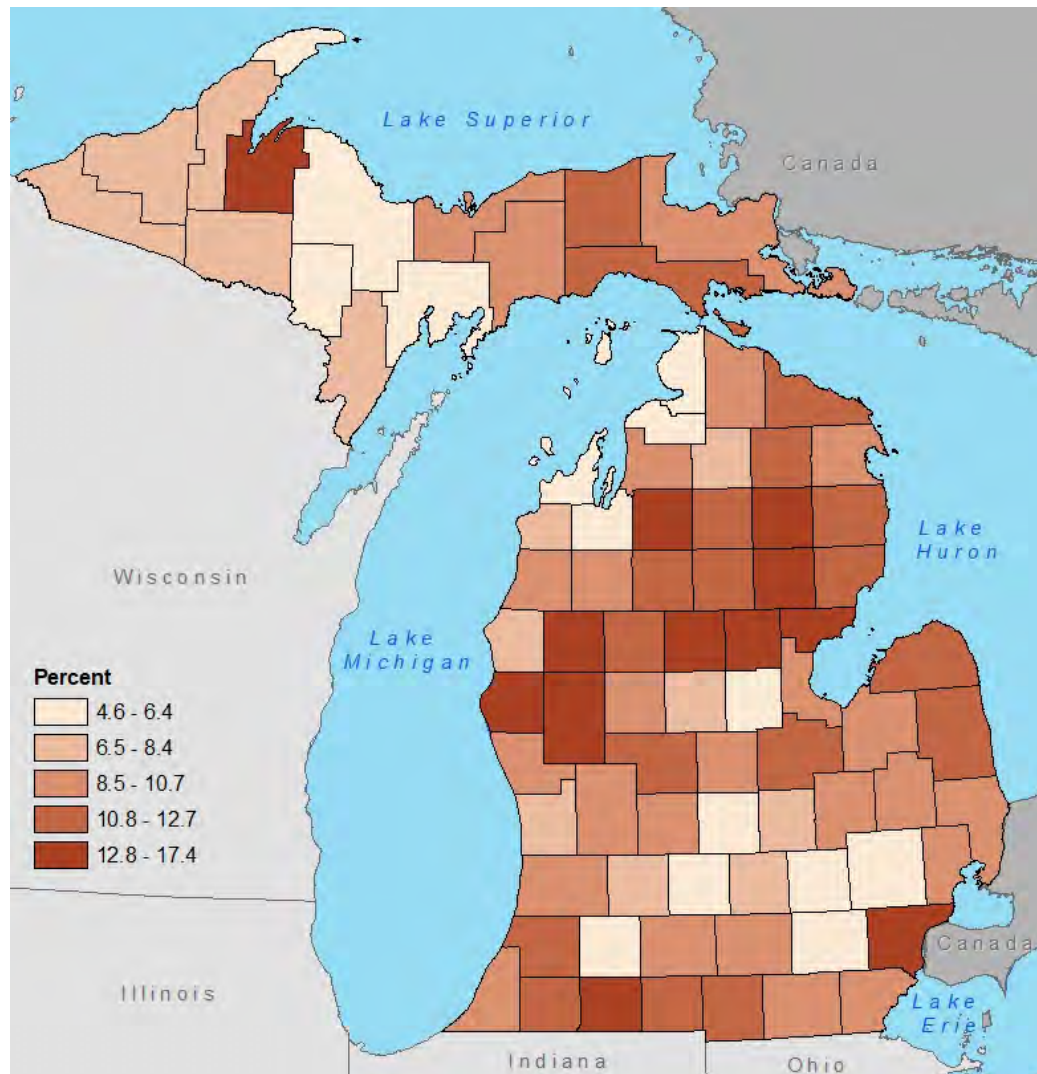
Percent whose Primary Language is not English ^{a, b}

County	Percent	County	Percent
Alcona	2.2	Lake	2.7
Alger	2.0	Lapeer	4.0
Allegan	5.5	Leelanau	4.8
Alpena	3.1	Lenawee	4.5
Antrim	2.8	Livingston	3.0
Arenac	1.8	Luce	4.1
Baraga	3.4	Mackinac	4.3
Barry	2.4	Macomb	14.0 *
Bay	2.3	Manistee	4.0
Benzie	4.5	Marquette	3.3
Berrien	7.7	Mason	3.8
Branch	7.5	Mecosta	3.2
Calhoun	5.8	Menominee	2.1
Cass	3.0	Midland	4.2
Charlevoix	3.0	Missaukee	3.3
Cheboygan	2.4	Monroe	3.2
Chippewa	3.4	Montcalm	3.5
Clare	4.8	Montmorency	2.1
Clinton	4.1	Muskegon	3.5
Crawford	1.7	Newaygo	5.4
Delta	2.0	Oakland	14.6 *
Dickinson	1.7	Oceana	12.1 *
Eaton	7.2	Ogemaw	1.9
Emmet	2.5	Ontonagon	2.6
Genesee	3.7	Osceola	4.0
Gladwin	4.2	Oscoda	6.6
Gogebic	3.3	Otsego	1.9
Grand Traverse	4.1	Ottawa	9.5 *
Gratiot	3.1	Presque Isle	4.3
Hillsdale	3.8	Roscommon	1.4
Houghton	6.1	Saginaw	4.8
Huron	3.3	St Clair	3.3
Ingham	12.2 *	St Joseph	9.2 *
Ionia	2.9	Sanilac	5.5
Iosco	3.6	Schoolcraft	2.4
Iron	2.8	Shiawassee	1.8
Isabella	6.2	Tuscola	2.3
Jackson	3.0	Van Buren	9.0 *
Kalamazoo	7.1	Washtenaw	14.4 *
Kalkaska	2.8	Wayne	14.0 *
Kent	12.0 *	Wexford	2.4
Keweenaw	1.3	State of Michigan	9.4

Data Notes:

^a Data is taken from the 2013-2017 American Community Survey 5-year estimates ^b Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Percent of Population Aged 18 and Over with Less than a High School Education



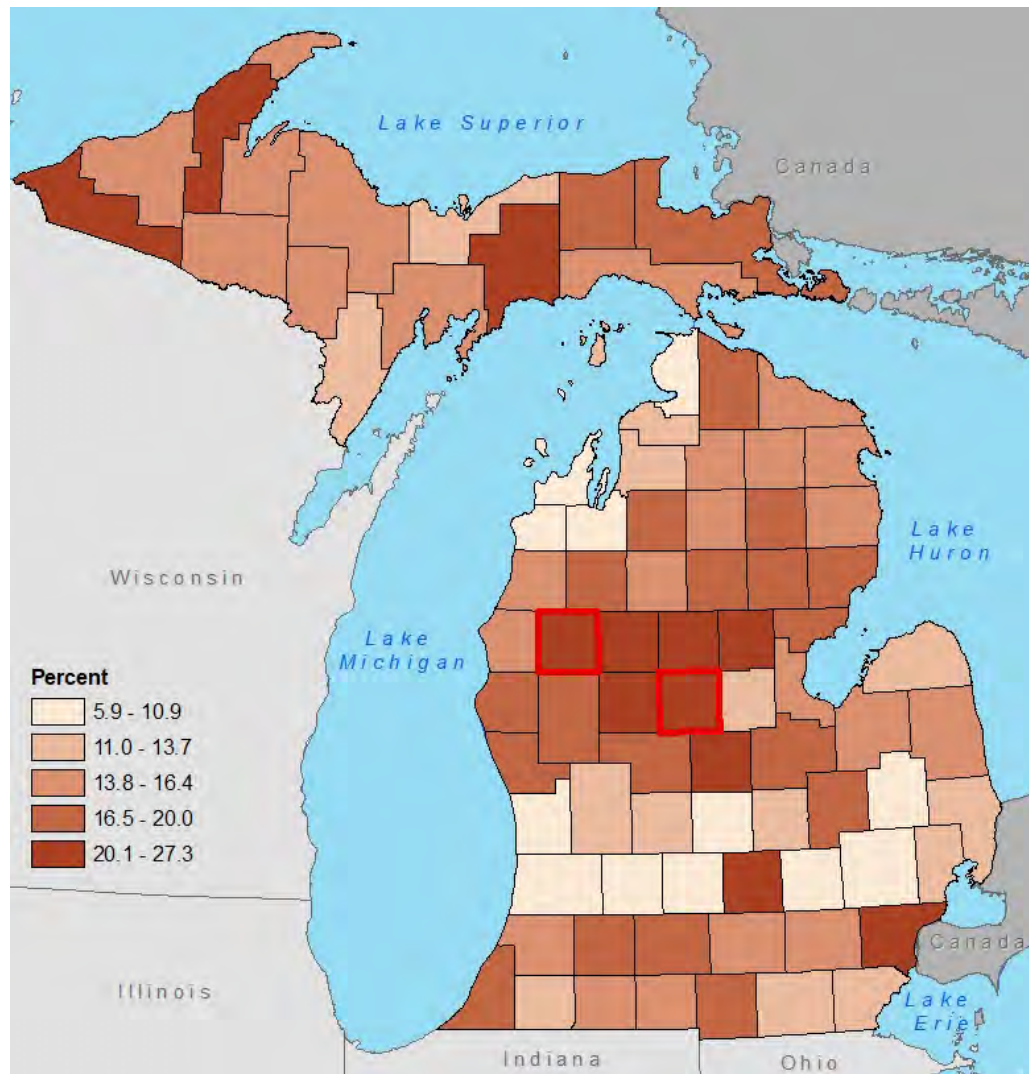
Percent of Population Aged 18 and Over with Less than a High School Education ^a

County	Percent	County	Percent
Alcona	11.6	Lake	17.4
Alger	10.7	Lapeer	9.3
Allegan	9.3	Leelanau	4.8
Alpena	9.0	Lenawee	9.2
Antrim	9.0	Livingston	4.6
Arenac	13.3	Luce	11.5
Baraga	13.7	Mackinac	11.1
Barry	8.0	Macomb	10.7
Bay	10.3	Manistee	9.4
Benzie	7.5	Marquette	5.4
Berrien	10.5	Mason	8.1
Branch	11.1	Mecosta	10.3
Calhoun	9.0	Menominee	7.8
Cass	12	Midland	6.3
Charlevoix	6.4	Missaukee	11.9
Cheboygan	9.4	Monroe	9.5
Chippewa	10.1	Montcalm	11.9
Clare	15.3	Montmorency	12.4
Clinton	5.8	Muskegon	10.1
Crawford	11.6	Newaygo	13.4
Delta	6.4	Oakland	6.3
Dickinson	6.2	Oceana	13.6
Eaton	6.4	Ogemaw	15.0
Emmet	6.0	Ontonagon	7.3
Genesee	10.0	Osceola	12.5
Gladwin	14.2	Oscoda	17.2
Gogebic	7.7	Otsego	8.4
Grand Traverse	5.3	Ottawa	7.8
Griot	10.1	Presque Isle	11.5
Hillsdale	12.2	Roscommon	11.3
Houghton	8.0	Saginaw	11.2
Huron	11.3	St Clair	9.9
Ingham	7.6	St Joseph	13.6
Ionia	9.9	Sanilac	12.2
Iosco	12.1	Schoolcraft	10.3
Iron	8.1	Shiawassee	7.8
Isabella	8.0	Tuscola	10.7
Jackson	9.6	Van Buren	12.7
Kalamazoo	6.2	Washtenaw	4.9
Kalkaska	13.4	Wayne	14.4
Kent	10.2	Wexford	10.7
Keweenaw	5.3	State of Michigan	9.8

Data Notes:

^a Data is taken from the 2013-2017 American Community Survey 5-year estimates.

Percent Living Below the Poverty Line

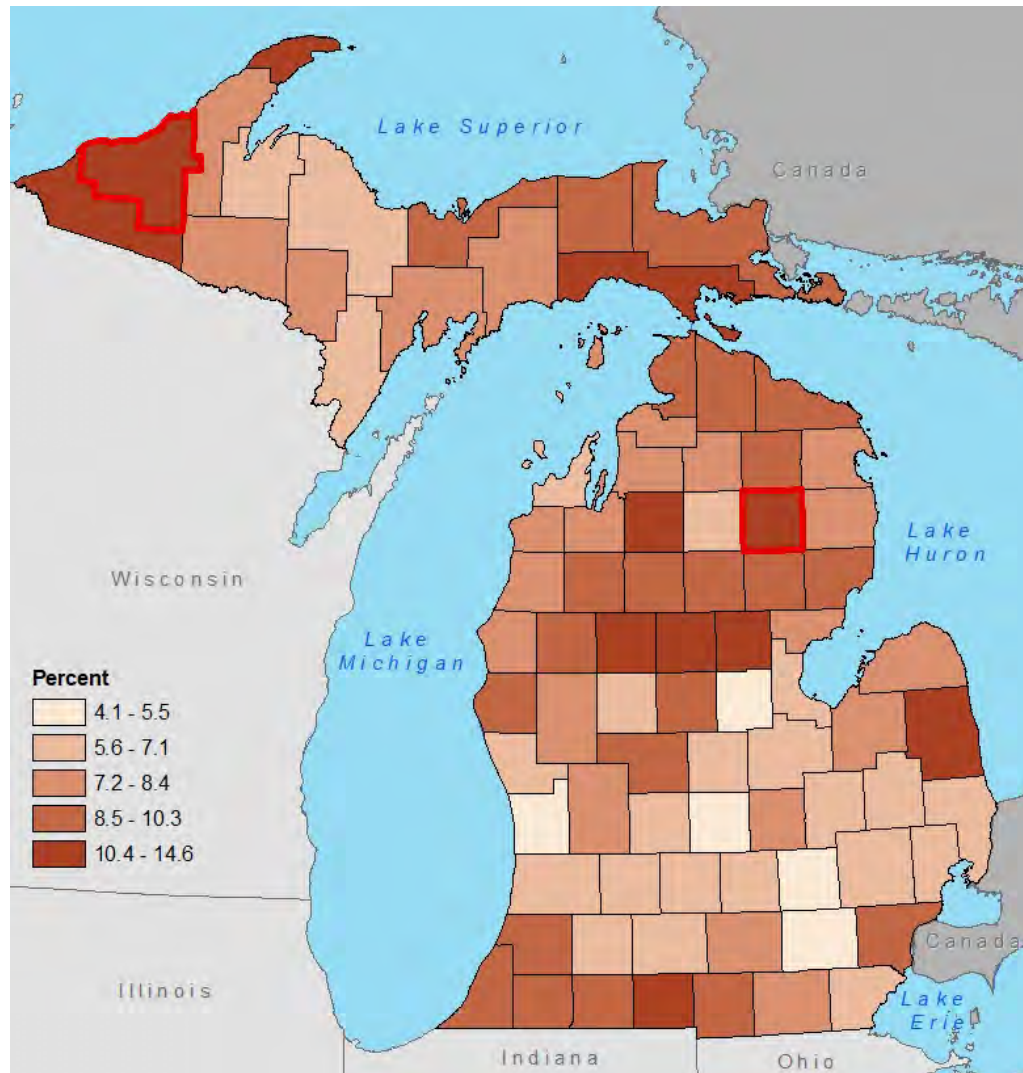


Percent Living Below the Poverty Line ^{a, b}			
County	Percent	County	Percent
Alcona	14.9	Lake	25.0 *
Alger	13.0	Lapeer	9.7
Allegan	10.8	Leelanau	7.7
Alpena	15.0	Lenawee	13.7
Antrim	12.6	Livingston	5.9
Arenac	18.5	Luce	19.4
Baraga	14.4	Mackinac	15.4
Barry	9.3	Macomb	11.8
Bay	16.3	Manistee	14.7
Benzie	10.0	Marquette	16.4
Berrien	17.2	Mason	16.0
Branch	15.9	Mecosta	22.5
Calhoun	17.4	Menominee	13.5
Cass	13.6	Midland	11.3
Charlevoix	11.6	Missaukee	15.9
Cheboygan	16.8	Monroe	11.2
Chippewa	17.1	Montcalm	17.5
Clare	23.6	Montmorency	15.1
Clinton	10.1	Muskegon	18.5
Crawford	16.4	Newaygo	17.8
Delta	14.4	Oakland	9.0
Dickinson	15.2	Oceana	17.5
Eaton	10.9	Ogemaw	18.7
Emmet	10.7	Ontonagon	15.5
Genesee	20.0	Osceola	20.7
Gladwin	20.2	Oscoda	18.1
Gogebic	20.4	Otsego	14.9
Grand Traverse	9.7	Ottawa	9.5
Gratiot	20.5	Presque Isle	14.9
Hillsdale	17.0	Roscommon	19.8
Houghton	21.4	Saginaw	17.7
Huron	13.6	St Clair	13.3
Ingham	20.9	St Joseph	15.7
Ionia	13.1	Sanilac	15.0
Iosco	16.9	Schoolcraft	21.4
Iron	14.2	Shiawassee	13.1
Isabella	27.3 *	Tuscola	15.9
Jackson	15.2	Van Buren	15.8
Kalamazoo	16.7	Washtenaw	14.5
Kalkaska	18.5	Wayne	23.7
Kent	13.4	Wexford	17.3
Keweenaw	14.5	State of Michigan	15.6

Data Notes:

^a Data is taken from the 2013-2017 American Community Survey 5-year estimates ^b Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Percent Uninsured



Percent Uninsured ^{a, b}			
County	Percent	County	Percent
Alcona	8.3	Lake	8.8
Alger	9.2	Lapeer	6.9
Allegan	6.1	Leelanau	6.0
Alpena	7.6	Lenawee	7.2
Antrim	7.9	Livingston	4.6
Arenac	8.4	Luce	9
Baraga	6.8	Mackinac	12.3
Barry	5.8	Macomb	6.8
Bay	6.4	Manistee	8.3
Benzie	8.4	Marquette	6.5
Berrien	8.7	Mason	8.0
Branch	10.9	Mecosta	6.9
Calhoun	6.9	Menominee	6.3
Cass	8.7	Midland	5.5
Charlevoix	7.3	Missaukee	9.4
Cheboygan	10	Monroe	5.8
Chippewa	8.7	Montcalm	9.0
Clare	12.3	Montmorency	9.2
Clinton	4.1	Muskegon	6.5
Crawford	6.9	Newaygo	7.8
Delta	7.5	Oakland	5.8
Dickinson	7.7	Oceana	9.9
Eaton	6.1	Ogemaw	8.7
Emmet	8.7	Ontonagon	13.2 *
Genesee	6.6	Osceola	11.5
Gladwin	11.4	Oscoda	14.6 *
Gogebic	10.6	Otsego	7.4
Grand Traverse	7.4	Ottawa	4.8
Gratiot	7.1	Presque Isle	9.5
Hillsdale	8.9	Roscommon	9.0
Houghton	8.0	Saginaw	6.6
Huron	7.6	St Clair	6.7
Ingham	6.8	St Joseph	9.1
Ionia	6.6	Sanilac	11.2
Iosco	8.8	Schoolcraft	8.1
Iron	8.2	Shiawassee	7.6
Isabella	9.5	Tuscola	7.4
Jackson	7.4	Van Buren	9.8
Kalamazoo	7.0	Washtenaw	4.7
Kalkaska	10.9	Wayne	8.8
Kent	7.4	Wexford	10.3
Keweenaw	10.9	State of Michigan	7.2

Data Notes:

^a Data is taken from the 2013-2017 American Community Survey 5-year estimates ^b Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Percent of Women Uninsured among those with an Income between 138% and 250% of the Poverty Level ^a

Age 40 to 49

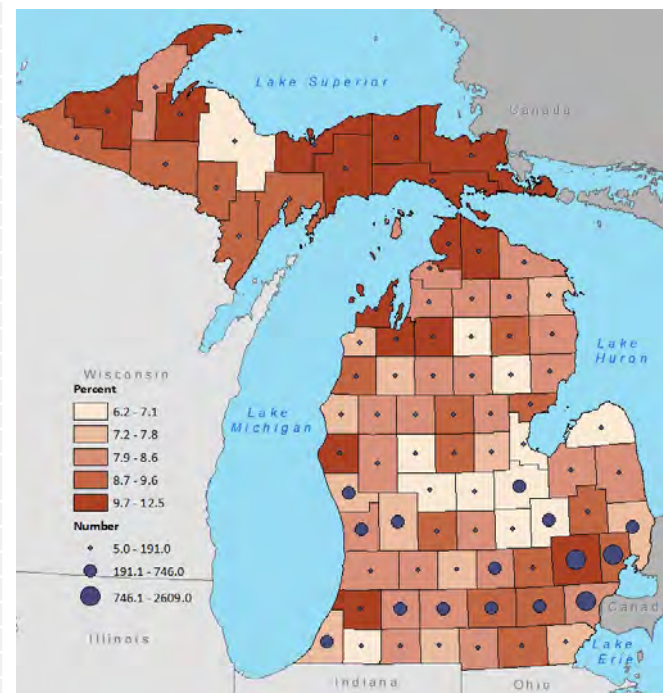
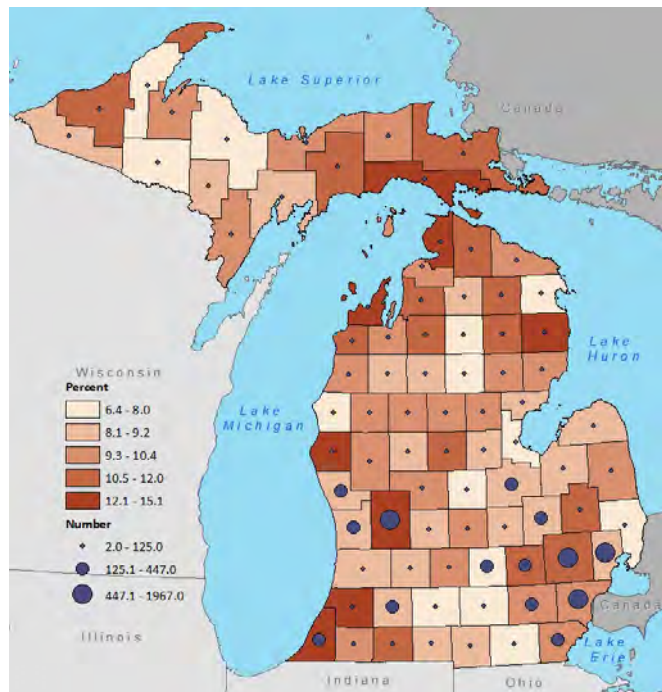
This Age group makes up 41% of the eligible population for BCCNP ^a

Percent of Women Uninsured among those with an Income between 138% and 250% of the Poverty Level ^{a,b}

County	40-49	50-65	County	40-49	50-65
Alcona	12.1	8.1	Lake	9.4	8.1
Alger	9.9	9.9	Lapeer	10.7	9.6
Allegan	8.5	7.9	Leelanau	13.0	10.9
Alpena	8.0	7.2	Lenawee	7.5	9.1
Antrim	10.8	8.3	Livingston	11.6	8.8
Arenac	8.5	8.9	Luce	10.0	10.4
Baraga	10.3	10.7	Mackinac	15.1	11.6
Barry	8.9	8.3	Macomb	8.4	8.8
Bay	7.6	7.0	Manistee	9.5	9.4
Benzie	11.1	7.7	Marquette	8.0	6.8
Berrien	13.1	7.7	Mason	7.7	7.6
Branch	8.7	7.7	Mecosta	8.3	7.1
Calhoun	7.7	8.2	Menominee	9.9	8.7
Cass	9.8	6.9	Midland	8.5	7.4
Charlevoix	9.6	8.2	Missaukee	8.4	8.3
Cheboygan	10.9	10.0	Monroe	9.8	7.8
Chippewa	10.8	11.1	Montcalm	10.3	6.7
Clare	9.2	8.7	Montmorency	10.5	8.4
Clinton	9.3	8.3	Muskegon	8.2	7.4
Crawford	7.8	6.7	Newaygo	9.8	8.4
Delta	9.0	8.9	Oakland	11.4	10.2
Dickinson	8.4	8.8	Oceana	12.8	9.9
Eaton	9.5	7.6	Ogemaw	10.2	6.7
Emmet	12.3	11.3	Ontonagon	11.7	12.5
Genesee	8.7	6.2	Osceola	10.2	8.3
Gladwin	10.4	8.0	Oscoda	11.8	9.2
Gogebic	8.8	9.0	Otsego	8.3	8.0
Grand Traverse	9.9	10.9	Ottawa	9.0	8.2
Gratiot	6.4	6.5	Presque Isle	9.4	8.0
Hillsdale	8.1	8.3	Roscommon	8.0	8.5
Houghton	7.7	8.1	Saginaw	8.8	6.5
Huron	9.2	7.1	St Clair	7.0	7.4
Ingham	7.6	8.3	St Joseph	11.1	8.6
Ionia	9.1	8.9	Sanilac	9.5	8.1
Iosco	10.3	8.4	Schoolcraft	11.3	10.2
Iron	7.8	8.8	Shiawassee	8.4	7.0
Isabella	11.4	9.1	Tuscola	8.7	8.3
Jackson	7.9	8.6	Van Buren	12.4	10.2
Kalamazoo	8.1	8.2	Washtenaw	9.5	9.4
Kalkaska	12.0	10.1	Wayne	9.6	8.1
Kent	12.1	7.8	Wexford	8.3	7.4
Keweenaw	11.1	10.4	State of Michigan	9.6	8.3

Age 50 to 65

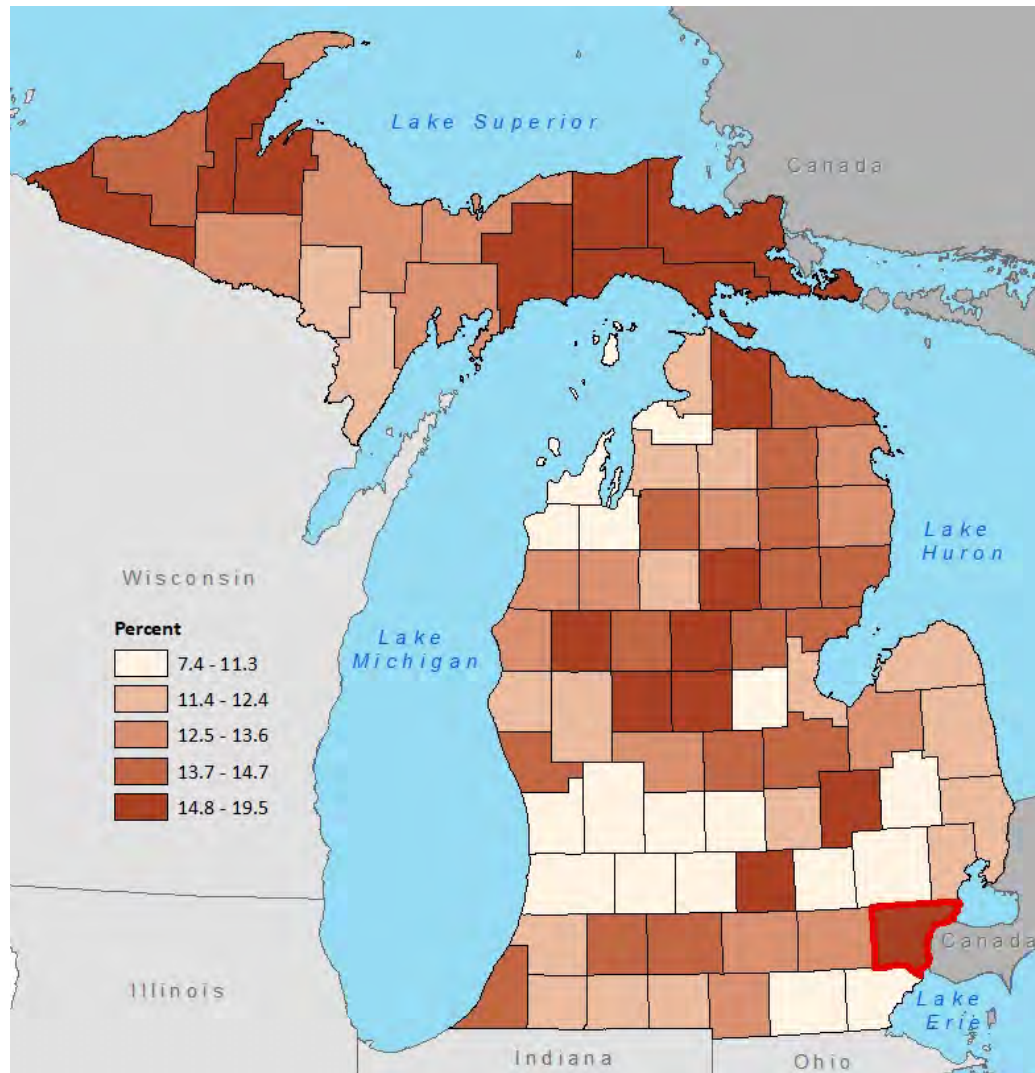
This Age group makes up 59% of the eligible population for BCCNP ^a



Data Notes:

^a Eligibility for the Breast and Cervical Cancer Control Navigation Program in Michigan requires women to have an income under 250% of the Federal Poverty Level. Women under 138% have been excluded due to being eligible for Healthy Michigan Plan. ^b Data is taken from the 2017 Small Area Health Insurance Estimates (SAHIE) dataset

Percent who are Food Insecure

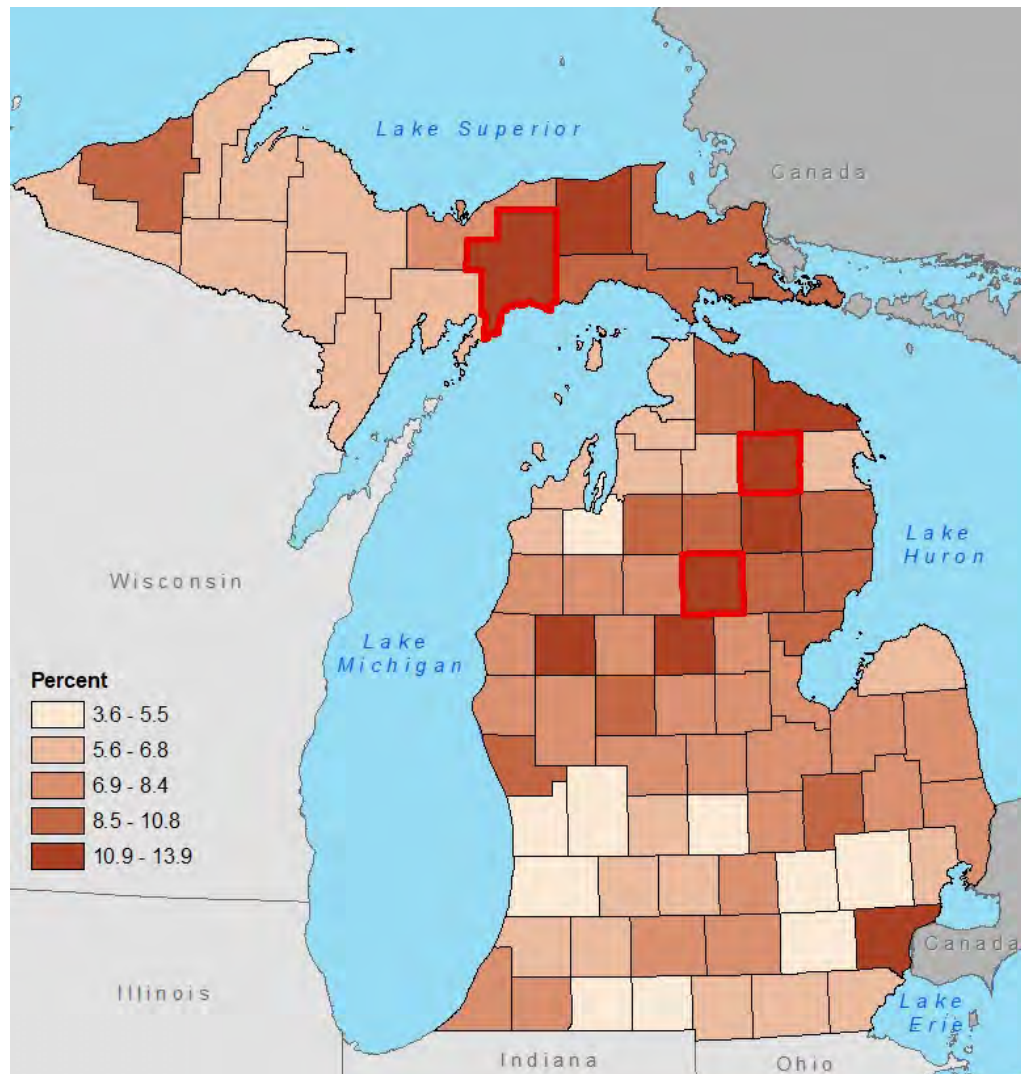


Percent who are Food Insecure ^{a, b}			
County	Percent	County	Percent
Alcona	12.6	Lake	16.9
Alger	13.4	Lapeer	10
Allegan	9.1	Leelanau	8.7
Alpena	12.8	Lenawee	10.9
Antrim	11.6	Livingston	7.4
Arenac	14.3	Luce	14.8
Baraga	14.9	Mackinac	15.6
Barry	9.5	Macomb	12.1
Bay	12.4	Manistee	12.7
Benzie	10.5	Marquette	3.6
Berrien	14.5	Mason	12.5
Branch	12.1	Mecosta	15
Calhoun	14.2	Menominee	11.7
Cass	11.6	Midland	10.9
Charlevoix	11.2	Missaukee	12.4
Cheboygan	15.1	Monroe	10.5
Chippewa	15.5	Montcalm	12.7
Clare	15.2	Montmorency	14.4
Clinton	9.4	Muskegon	14.5
Crawford	13.3	Newaygo	11.9
Delta	12.6	Oakland	10.9
Dickinson	12.1	Oceana	11.8
Eaton	11.2	Ogemaw	14.2
Emmet	12.1	Ontonagon	13.7
Genesee	16.5	Osceola	14
Gladwin	13.9	Oscoda	13.8
Gogebic	14.8	Otsego	12.4
Grand Traverse	10.1	Ottawa	8.4
Gratiot	14.2	Presque Isle	13.7
Hillsdale	12.6	Roscommon	15.2
Houghton	15.2	Saginaw	14.7
Huron	11.5	St Clair	11.7
Ingham	15.4	St Joseph	11.6
Ionia	11	Sanilac	12.2
Iosco	13.7	Schoolcraft	15.7
Iron	12.5	Shiawassee	11.7
Isabella	16.4	Tuscola	12.5
Jackson	13	Van Buren	11.7
Kalamazoo	14	Washtenaw	13.2
Kalkaska	13.9	Wayne	19.5*
Kent	11.3	Wexford	13.2
Keweenaw	13.5	State of Michigan	13.7

Data Notes:

^a Data is taken from 2017 Map the Meal Gap, Feeding America ^b Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Percent of Workforce, Aged 16 or Older, who are Unemployed



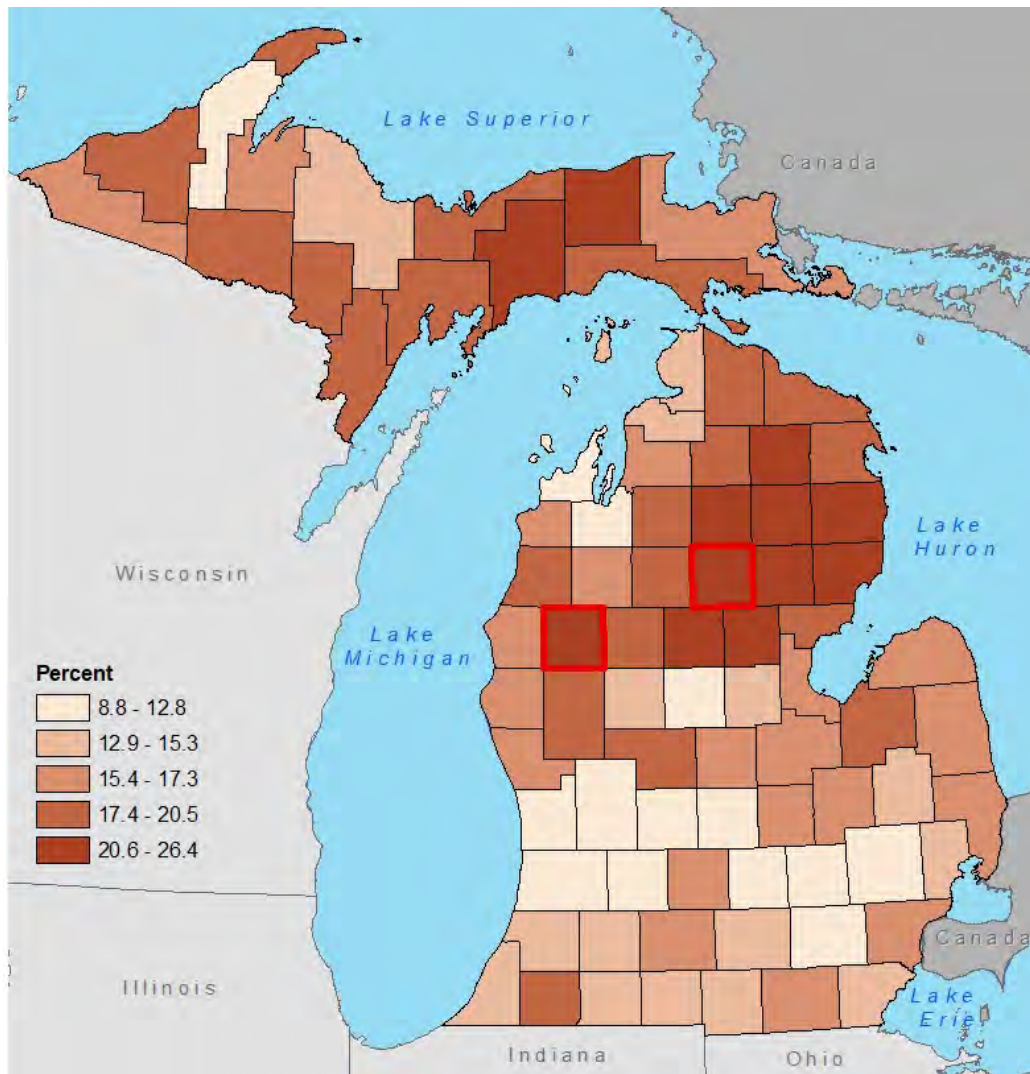
Percent of Workforce, Aged 16 and Older, who are Unemployed ^{a, b}

County	Percent	County	Percent
Alcona	9.3	Lake	11.6
Alger	6.9	Lapeer	7.4
Allegan	3.6	Leelanau	6.3
Alpena	6.4	Lenawee	5.9
Antrim	6.1	Livingston	4.6
Arenac	9.6	Luce	11.8
Baraga	6.0	Mackinac	10.5
Barry	6.2	Macomb	6.6
Bay	7.4	Manistee	8.0
Benzie	6.5	Marquette	6.3
Berrien	7.3	Mason	7.6
Branch	4.6	Mecosta	8.7
Calhoun	7.4	Menominee	5.9
Cass	7.8	Midland	7.0
Charlevoix	6.2	Missaukee	7.0
Cheboygan	10.7	Monroe	5.9
Chippewa	9.0	Montcalm	7.0
Clare	11.5	Montmorency	12.7 *
Clinton	4.3	Muskegon	8.9
Crawford	10.4	Newaygo	7.7
Delta	6.5	Oakland	5.3
Dickinson	6.0	Oceana	7.7
Eaton	5.8	Ogemaw	10.0
Emmet	6.1	Ontonagon	10.0
Genesee	10.8	Osceola	7.2
Gladwin	7.4	Oscoda	11.9
Gogebic	6.7	Otsego	6.4
Grand Traverse	5.4	Ottawa	4.4
Gratiot	7.4	Presque Isle	11.4
Hillsdale	6.1	Roscommon	13.0 *
Houghton	6.8	Saginaw	8.2
Huron	5.8	St Clair	7.6
Ingham	8.1	St Joseph	5.3
Ionia	6.2	Sanilac	7.7
Iosco	9.6	Schoolcraft	13.9 *
Iron	5.7	Shiawassee	7.1
Isabella	8.4	Tuscola	7.4
Jackson	7.6	Van Buren	6.6
Kalamazoo	6.6	Washtenaw	5.4
Kalkaska	8.7	Wayne	11.6
Kent	5.4	Wexford	7.2
Keweenaw	5.5	State of Michigan	7.4

Data Notes:

^a Data is taken from the 2013-2017 American Community Survey 5-year estimates ^b Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Percent with a Disability

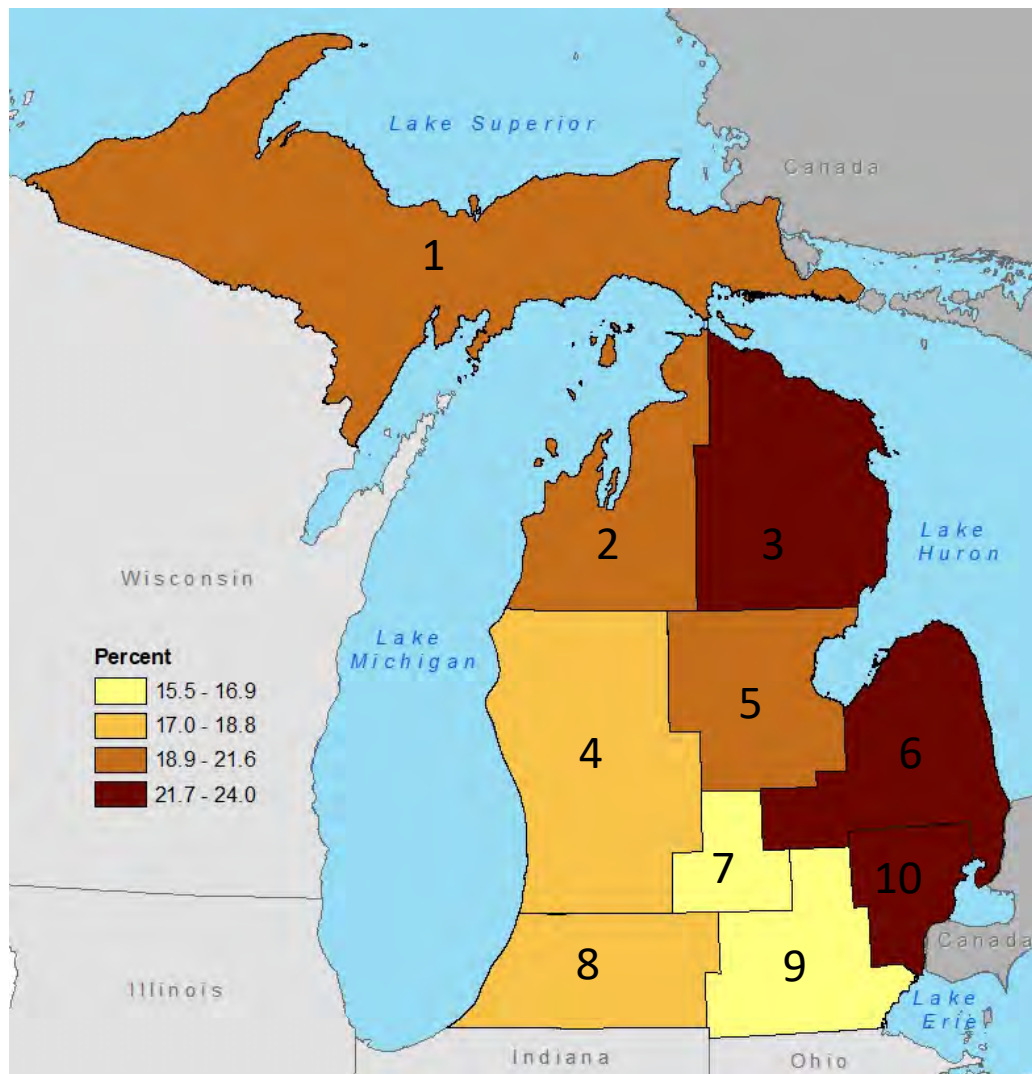


Percent with a Disability ^{a, b}			
County	Percent	County	Percent
Alcona	23.2	Lake	25.2 *
Alger	18.3	Lapeer	14.7
Allegan	10.4	Leelanau	12.1
Alpena	18.8	Lenawee	15.6
Antrim	16.3	Livingston	10.3
Arenac	20.5	Luce	23.4
Baraga	17.2	Mackinac	18.8
Barry	12.6	Macomb	14.0
Bay	16.3	Manistee	18.4
Benzie	16.7	Marquette	14.4
Berrien	14.8	Mason	16.7
Branch	14.1	Mecosta	15.3
Calhoun	16.0	Menominee	18.4
Cass	17.7	Midland	13.6
Charlevoix	14.7	Missaukee	19.1
Cheboygan	19.6	Monroe	13.4
Chippewa	17.3	Montcalm	18.3
Clare	22.9	Montmorency	23.6
Clinton	11.9	Muskegon	15.8
Crawford	21.3	Newaygo	18.3
Delta	18.8	Oakland	11.7
Dickinson	17.6	Oceana	17.0
Eaton	16.1	Ogemaw	22.9
Emmet	14.3	Ontonagon	19.4
Genesee	16.6	Osceola	17.8
Gladwin	21.2	Oscoda	22.6
Gogebic	15.9	Otsego	18.1
Grand Traverse	12.6	Ottawa	10.2
Gratiot	15.5	Presque Isle	20.2
Hillsdale	14.9	Roscommon	26.4 *
Houghton	11.6	Saginaw	16.6
Huron	16.4	St Clair	16.5
Ingham	12.6	St Joseph	15.0
Ionia	12.8	Sanilac	17.1
Iosco	23.3	Schoolcraft	22.1
Iron	17.6	Shiawassee	15.5
Isabella	12.6	Tuscola	18.9
Jackson	15.1	Van Buren	14.7
Kalamazoo	13.1	Washtenaw	8.8
Kalkaska	18.8	Wayne	16.1
Kent	11.8	Wexford	16.0
Keweenaw	18.4	State of Michigan	14.3

Data Notes:

^a Data is taken from the 2013-2017 American Community Survey 5-year estimates ^b Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Currently Smokes Cigarettes

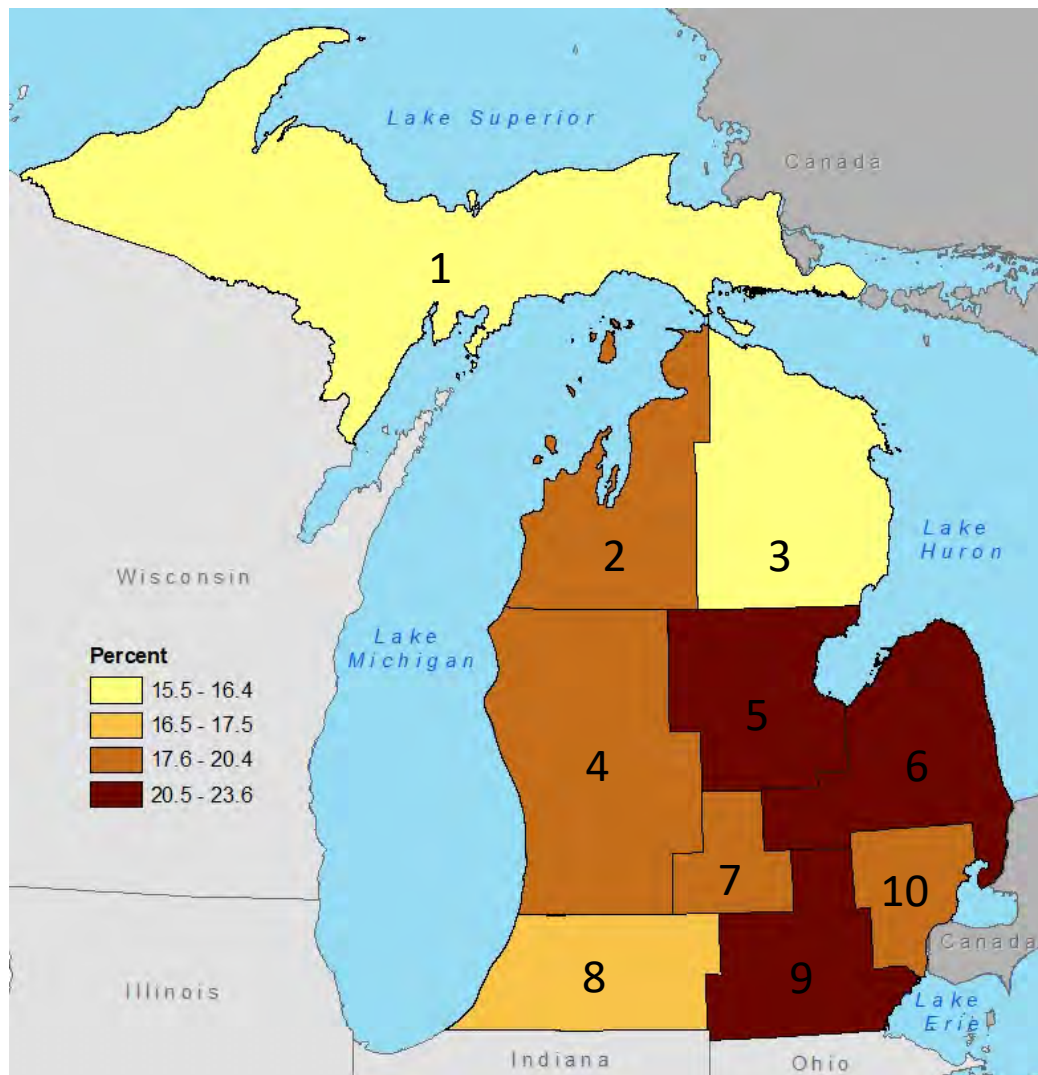


Prevalence of Adult Smokers ^{a,b}	
Prosperity Region	Percent (%)
1 – Upper Peninsula	21.1
2 – Northwest	21.0
3 – Northeast	23.6
4 – West Michigan	18.3
5 – East Central Michigan	21.6
6 – East Michigan	24.0
7 – South Central	15.5
8 – Southwest	18.8
9 – Southeast Michigan	16.9
10 – Detroit Metro	22.5
State of Michigan	20.7

Data Notes:

^a Data taken from 2016-2017 Michigan Behavioral Risk Factor Survey (MiBRFS) ^b Current smoking defined as the proportion who reported that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

Excessive Drinking

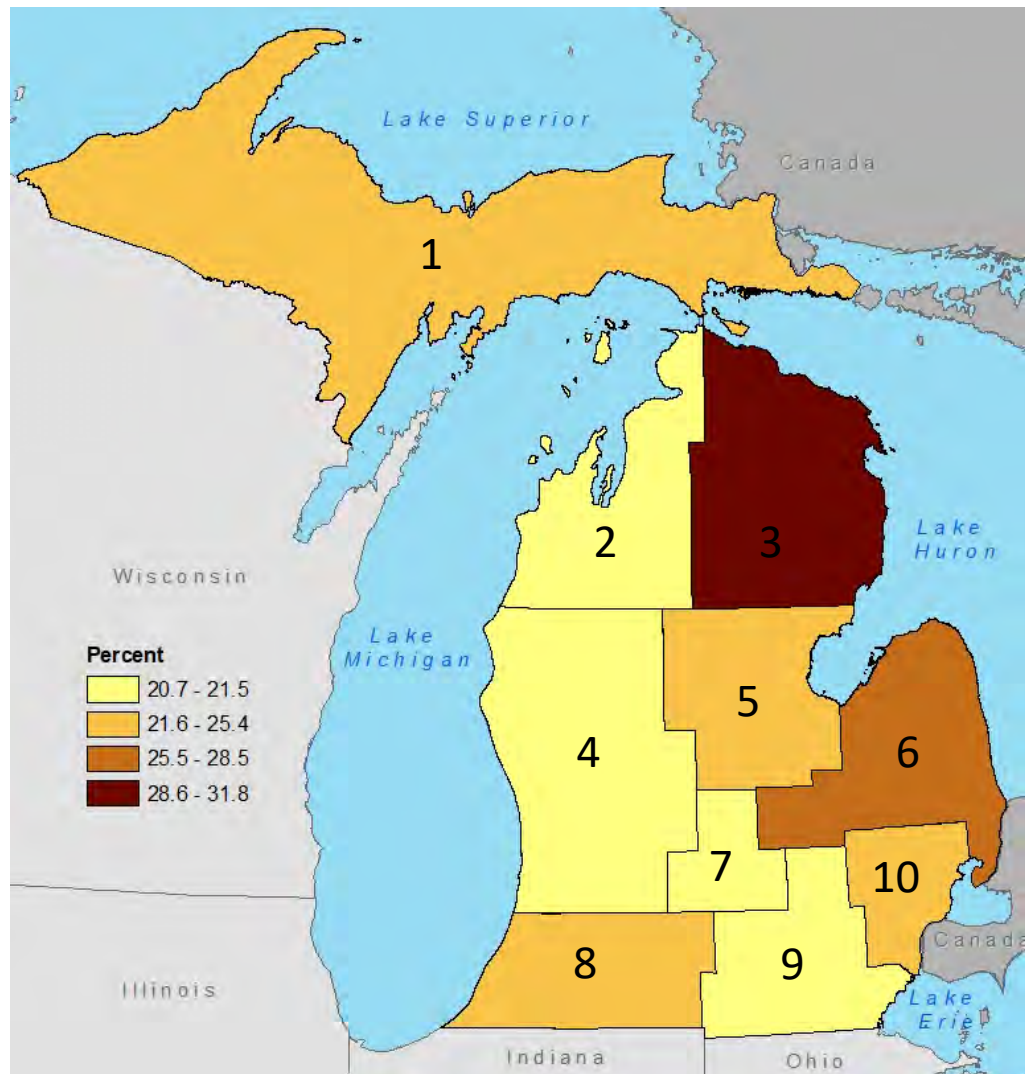


Prevalence of Adult who Report Excessive Drinking ^{a,b}	
Prosperity Region	Percent (%)
1 – Upper Peninsula	16.4
2 – Northwest	20.4
3 – Northeast	15.5
4 – West Michigan	20.0
5 – East Central Michigan	23.6
6 – East Michigan	22.3
7 – South Central	19.5
8 – Southwest	17.5
9 – Southeast Michigan	23.2
10 – Detroit Metro	20.2
State of Michigan	20.4

Data Notes:

^a Data taken from 2016-2017 Michigan Behavioral Risk Factor Survey (MiBRFS) ^b Excessive drinking defined as the proportion who reported consuming an average of more than two alcoholic drinks per day for men or more than one per day for women in the previous month or reported consuming five or more drinks per occasion (for men) or 4 or more drinks per occasion (for women) at least once in the previous month.

Physical Inactivity

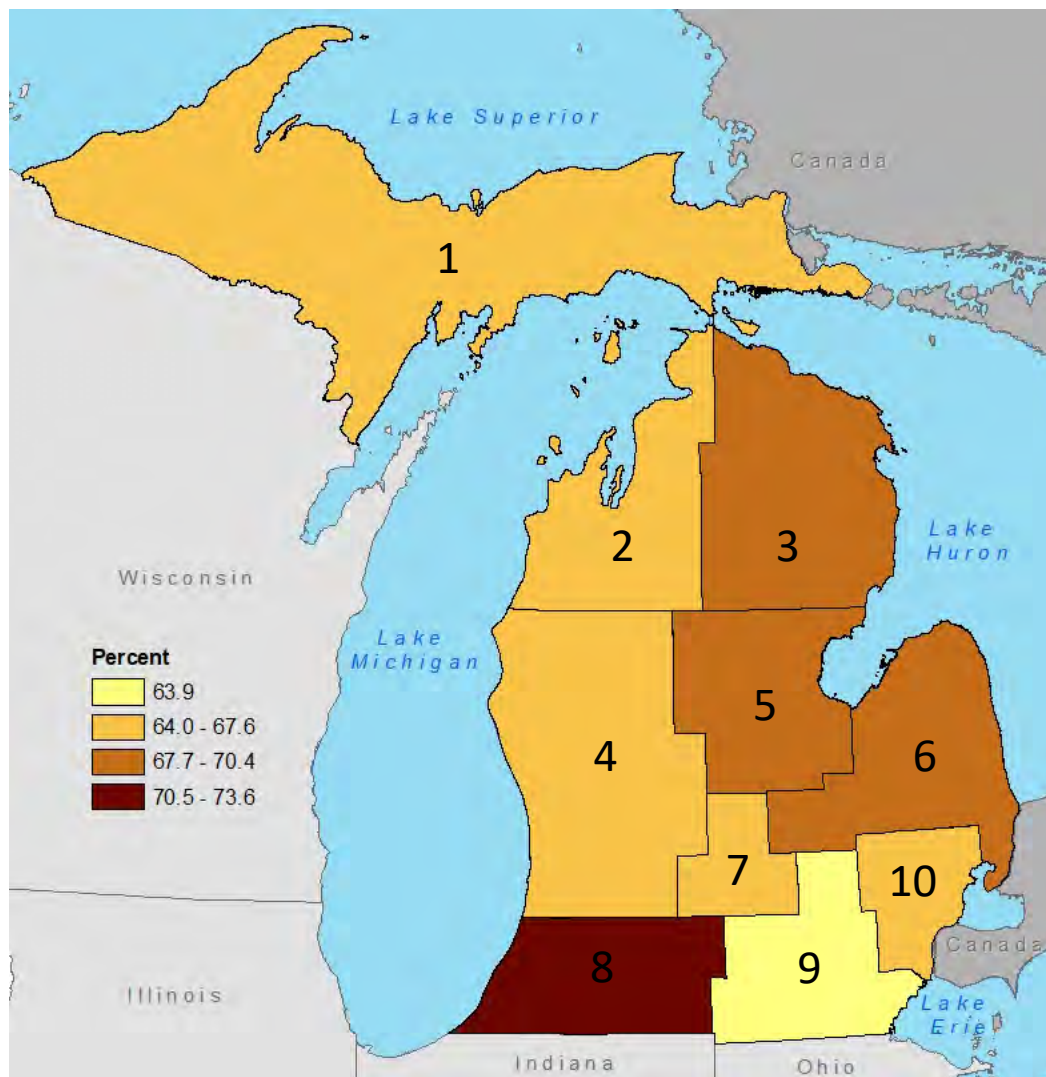


Prevalence of Adults Reporting Physical Inactivity ^{a,b}	
Prosperity Region	Percent (%)
1 – Upper Peninsula	25.4
2 – Northwest	20.7
3 – Northeast	31.8
4 – West Michigan	21.5
5 – East Central Michigan	24.9
6 – East Michigan	28.5
7 – South Central	21.5
8 – Southwest	24.6
9 – Southeast Michigan	21.5
10 – Detroit Metro	24.5
State of Michigan	24.1

Data Notes:

^a Data taken from 2016-2017 Michigan Behavioral Risk Factor Survey (MiBRFS) ^b Physical inactivity defined as the proportion who reported not participating in any leisure time physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise during the past month.

Obese or Overweight

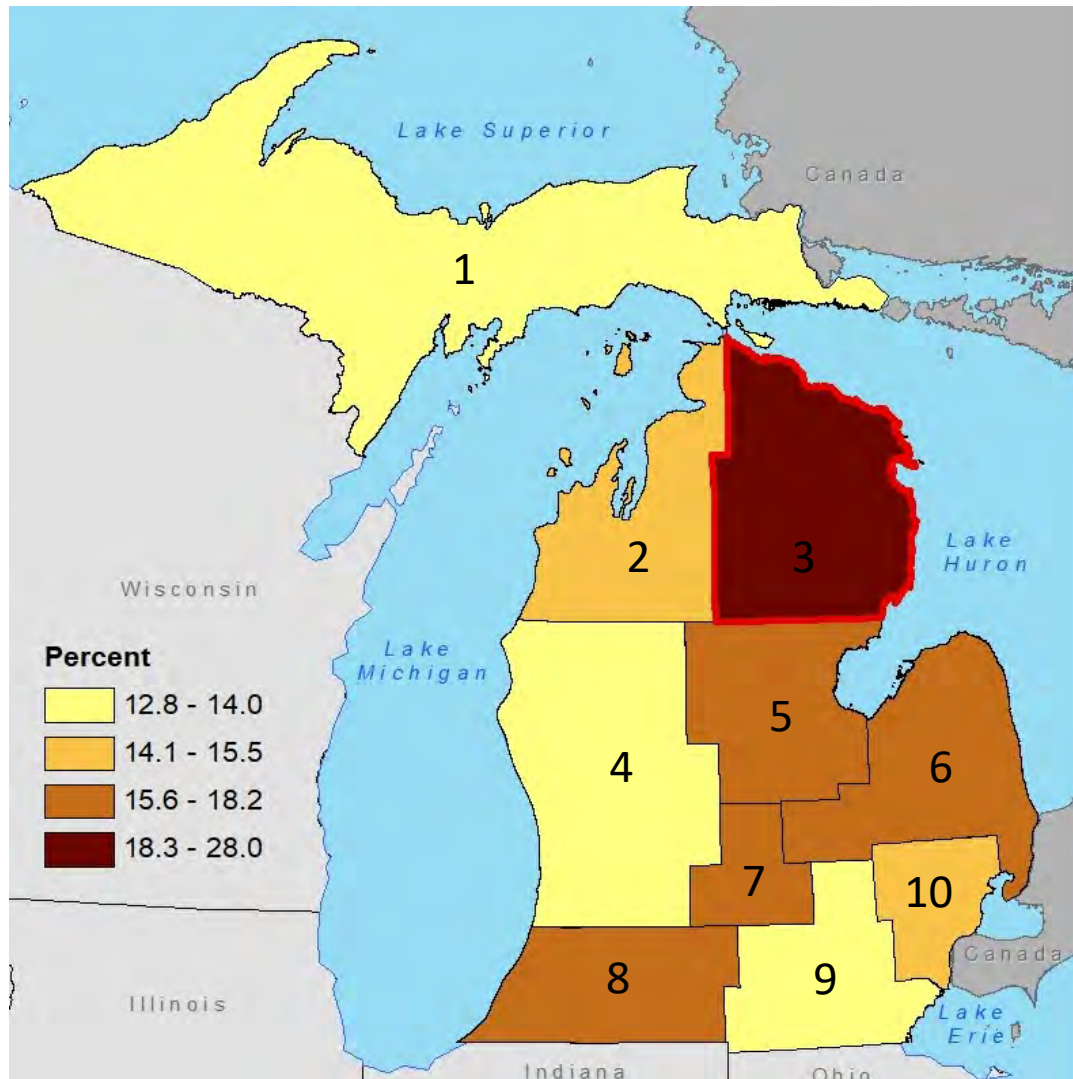


Prevalence of Adults who are Obese or Overweight ^{a,b}	
Prosperity Region	Percent (%)
1 – Upper Peninsula	67.1
2 – Northwest	67.1
3 – Northeast	69.3
4 – West Michigan	67.6
5 – East Central Michigan	69.7
6 – East Michigan	70.4
7 – South Central	66.5
8 – Southwest	73.6
9 – Southeast Michigan	63.9
10 – Detroit Metro	67.2
State of Michigan	67.8

Data Notes:

^a Data taken from 2016-2017 Michigan Behavioral Risk Factor Survey (MiBRFS) ^b Obesity or overweight defined as the proportion of respondents whose body mass index (BMI) is greater than or equal to 25.0.

Family History of Hereditary Cancer



Prevalence of Family History of Hereditary Cancer ^{a-c}	
Prosperity Region	Percent (%)
1 – Upper Peninsula	14.0
2 – Northwest	15.5
3 – Northeast	28.0*
4 – West Michigan	14.0
5 – East Central Michigan	16.4
6 – East Michigan	18.2
7 – South Central	16.3
8 – Southwest	16.5
9 – Southeast Michigan	12.8
10 – Detroit Metro	15.0
State of Michigan	15.4

Data Notes:

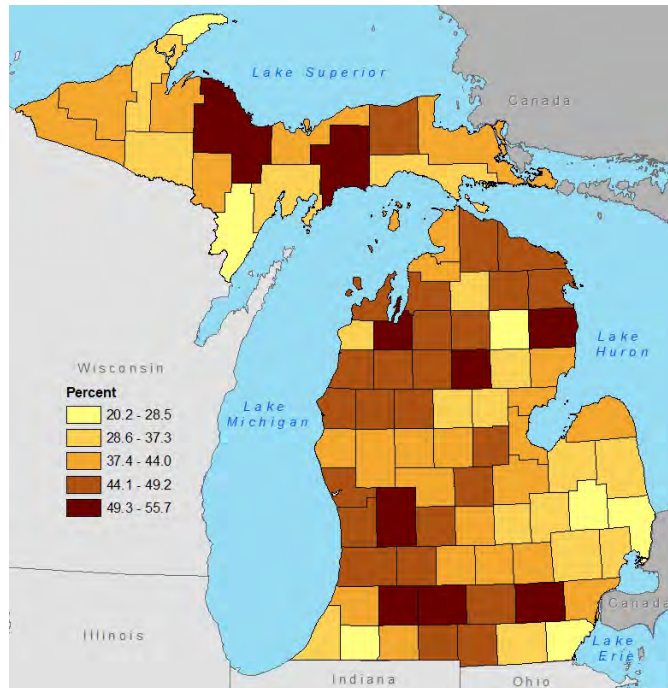
^a Data taken from 2016-2017 Michigan Behavioral Risk Factor Survey (MiBRFS) ^b Family History of Hereditary Cancer is defined here as having at least one relative diagnosed before the age of 50 with Breast Cancer (YBC) or diagnosed with Ovarian Cancer (OC) at any age ^c Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

HPV Vaccination Completion Percentage

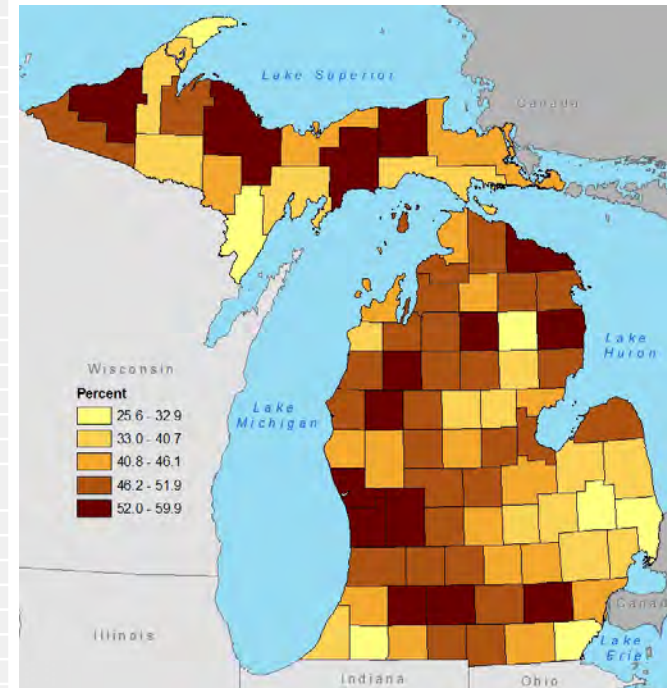
HPV Vaccination Completion Percentage among Adolescents
13 through 17 Years^{a,b}

County	Male	Female	County	Male	Female
Alcona	55.7	59.9	Lake	48.3	53.8
Alger	40.9	43.9	Lapeer	28.2	29.8
Allegan	47.0	51.9	Leelanau	47.3	44.7
Alpena	46.4	48.7	Lenawee	35.6	42.1
Antrim	44.7	47.6	Livingston	41.1	42.8
Arenac	39.3	45.5	Luce	48.0	54.5
Baraga	43.8	50.4	Mackinac	34.0	36.2
Barry	45.7	49.5	Macomb	36.5	39.6
Bay	43.1	46.9	Manistee	47.9	49.7
Benzie	33.6	38.2	Marquette	52.4	56.0
Berrien	37.0	40.7	Mason	46.0	49.8
Branch	45.2	49.9	Mecosta	43.9	47.6
Calhoun	51.0	52.4	Menominee	20.2	25.6
Cass	28.0	31.4	Midland	48.1	51.3
Charlevoix	40.2	49.3	Missaukee	44.8	48.1
Cheboygan	44.2	49.6	Monroe	27.9	32.2
Chippewa	40.4	45.8	Montcalm	42.1	47.4
Clare	32.4	39.3	Montmorency	45.9	51.1
Clinton	39.5	43.1	Muskegon	49.2	54.4
Crawford	48.5	53.6	Newaygo	41.1	45.7
Delta	31.9	34.8	Oakland	37.3	40.2
Dickinson	39.1	42.8	Oceana	40.9	46.0
Eaton	43.4	47.9	Ogemaw	32.4	37.4
Emmet	39.0	43.2	Ontonagon	41.5	56.3
Genesee	31.9	37.5	Osceola	46.3	50.1
Gladwin	33.6	38.2	Oscoda	23.3	26.3
Gogebic	43.1	47.5	Otsego	34.0	42.3
Grand Traverse	50.4	51.2	Ottawa	47.0	53.5
Gratiot	48.5	51.1	Presque Isle	48.5	55.5
Hillsdale	45.8	46.8	Roscommon	49.7	48.8
Houghton	32.2	35.5	Saginaw	43.2	45.5
Huron	44.0	48.5	St Clair	28.5	32.9
Ingham	41.7	46.1	St Joseph	38.1	42.3
Ionia	44.9	49.1	Sanilac	32.1	35.9
Iosco	39.1	50.1	Schoolcraft	52.1	54.7
Iron	35.3	39.9	Shiawassee	35.5	40.1
Isabella	42.6	43.6	Tuscola	36.7	39.3
Jackson	45.4	48.8	Van Buren	42.8	45.6
Kalamazoo	52.4	54.8	Washtenaw	54.6	57.3
Kalkaska	47.6	49.1	Wayne	40.4	43.5
Kent	50.7	55.0	Wexford	46.1	54.4
Keweenaw	24.1	30.0	State of Michigan	39.8	43.2

Male



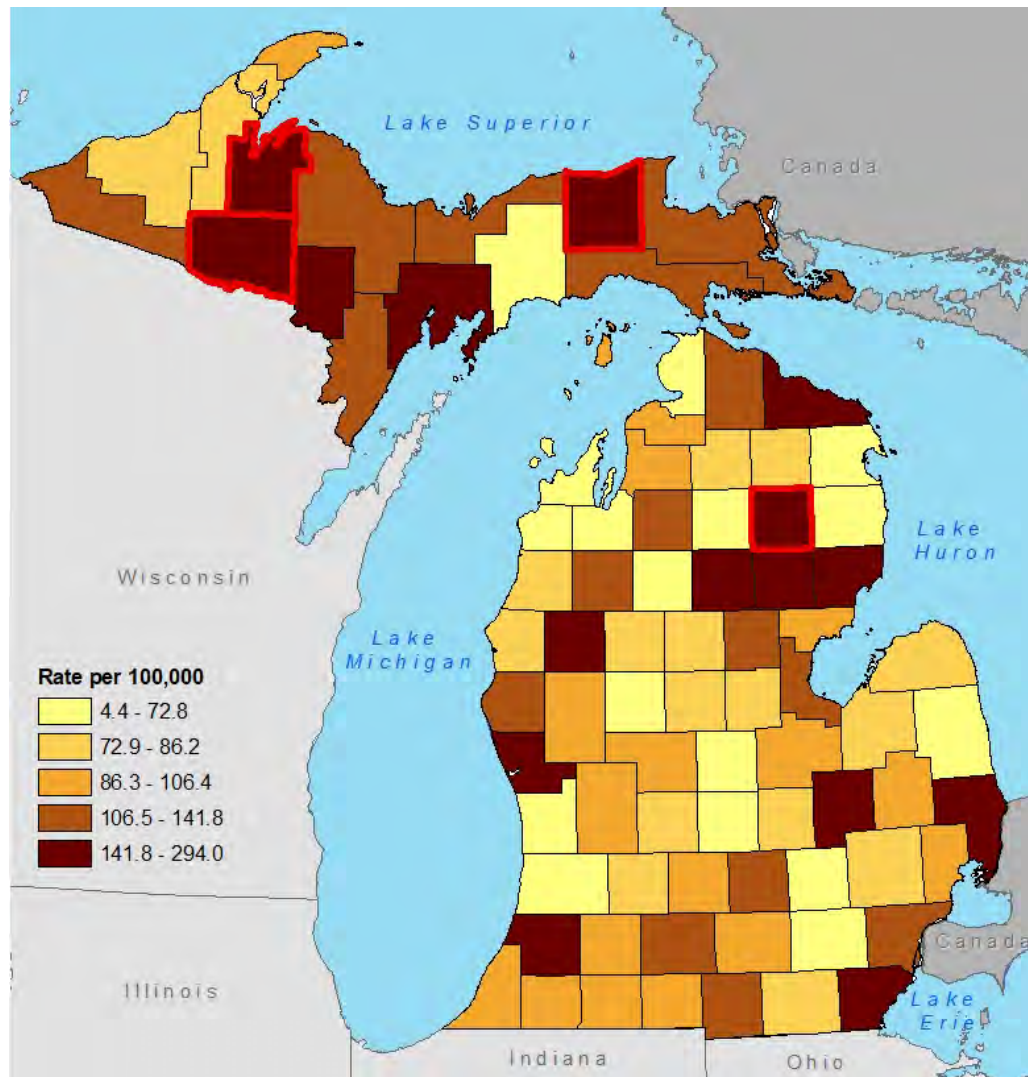
Female



Data Notes:

^a Vaccination data taken from the 2018 Immunization Report Card prepared by Michigan Care Improvement Registry (MCIR) ^b Completion defined as having two doses if initial dose was administered between age 9 and 14 or three doses if administered at age 15 or older.

Chronic Hepatitis C Rate

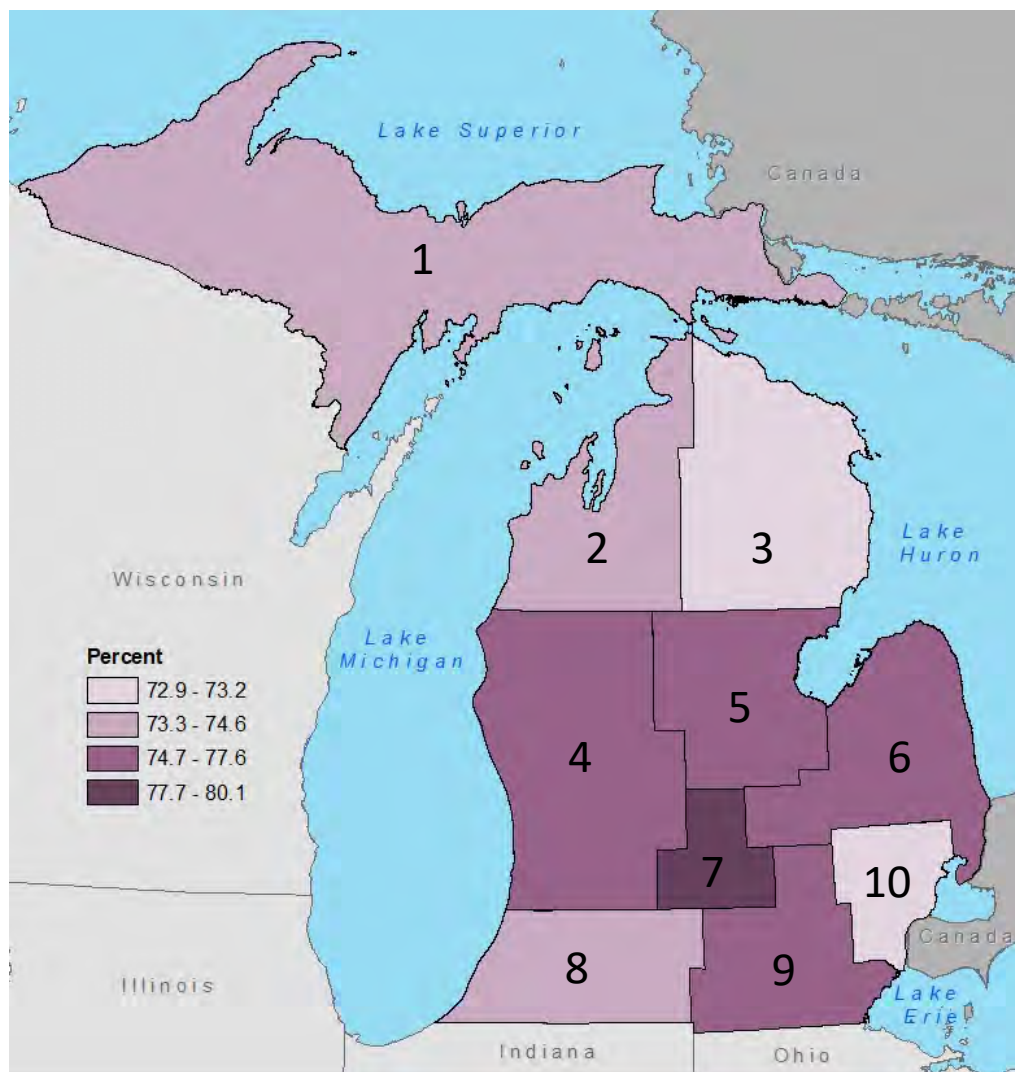


Chronic Hepatitis C Age-Adjusted Rate (per 100,000) ^{a-c}			
County	Rate	County	Rate
Alcona	38.6	Lake	191.4
Alger	108.5	Lapeer	92.8
Allegan	66.6	Leelanau	64.3
Alpena	48.8	Lenawee	82.2
Antrim	99.4	Livingston	62.0
Arenac	105.8	Luce	235.9 *
Baraga	294.0 *	Mackinac	110.9
Barry	75.4	Macomb	103.3
Bay	112.7	Manistee	86.2
Benzie	68.2	Marquette	127.9
Berrien	98.1	Mason	76.2
Branch	99.0	Mecosta	55.5
Calhoun	135.4	Menominee	141.8
Cass	91.1	Midland	77.9
Charlevoix	87.9	Missaukee	72.8
Cheboygan	126.0	Monroe	169.6
Chippewa	111.3	Montcalm	98.5
Clare	82.4	Montmorency	76.3
Clinton	33.4	Muskegon	152.2
Crawford	43.7	Newaygo	106.4
Delta	160.2	Oakland	81.2
Dickinson	168.4	Oceana	115.3
Eaton	97.1	Ogemaw	148.3
Emmet	72.3	Ontonagon	84.6
Genesee	158.3	Osceola	82.2
Gladwin	139.3	Oscoda	229.9 *
Gogebic	118.1	Otsego	85.8
Grand Traverse	70.6	Ottawa	45.7
Gratiot	38.8	Presque Isle	148.9
Hillsdale	115.8	Roscommon	147.7
Houghton	82.1	Saginaw	98.8
Huron	73.1	St Clair	169.2
Ingham	121.9	St Joseph	92.0
Ionia	76.3	Sanilac	51.1
Iosco	161.9	Schoolcraft	4.4
Iron	268.0 *	Shiawassee	75.6
Isabella	81.4	Tuscola	84.4
Jackson	102.2	Van Buren	151.6
Kalamazoo	99.0	Washtenaw	60.1
Kalkaska	110.1	Wayne	126.3
Kent	87.8	Wexford	126.7
Keweenaw	91.0	State of Michigan	121.5

Data Notes:

^a Data taken from the 2017 case reports submitted to the Michigan Disease Surveillance System (MDSS) ^b Rates are age-adjusted to the 2000 US Standard Population ^c Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Mammogram in the Past Two Years

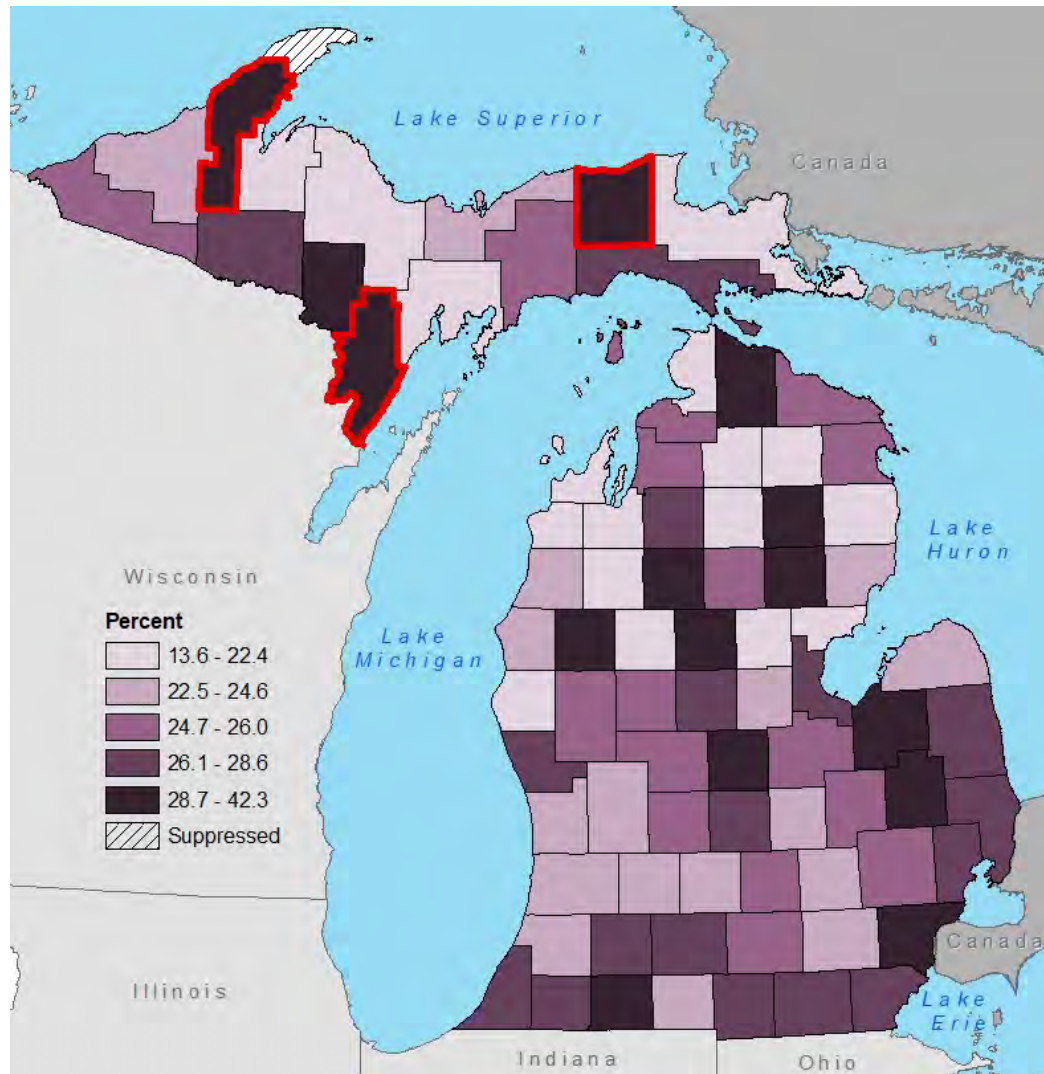


Prevalence of Women Aged 40 and Older who had a Mammogram in the Past Two Years ^a	
Prosperity Region	Percent (%)
1 – Upper Peninsula	74.5
2 – Northwest	74.6
3 – Northeast	73.2
4 – West Michigan	76.7
5 – East Central Michigan	76.4
6 – East Michigan	76.4
7 – South Central	80.1
8 – Southwest	74.3
9 – Southeast Michigan	77.6
10 – Detroit Metro	72.9
State of Michigan	75.0

Data Notes:

^a Data taken from 2014 and 2016 Michigan Behavioral Risk Factor Survey (MiBRFS).

Late Stage Breast Cancer



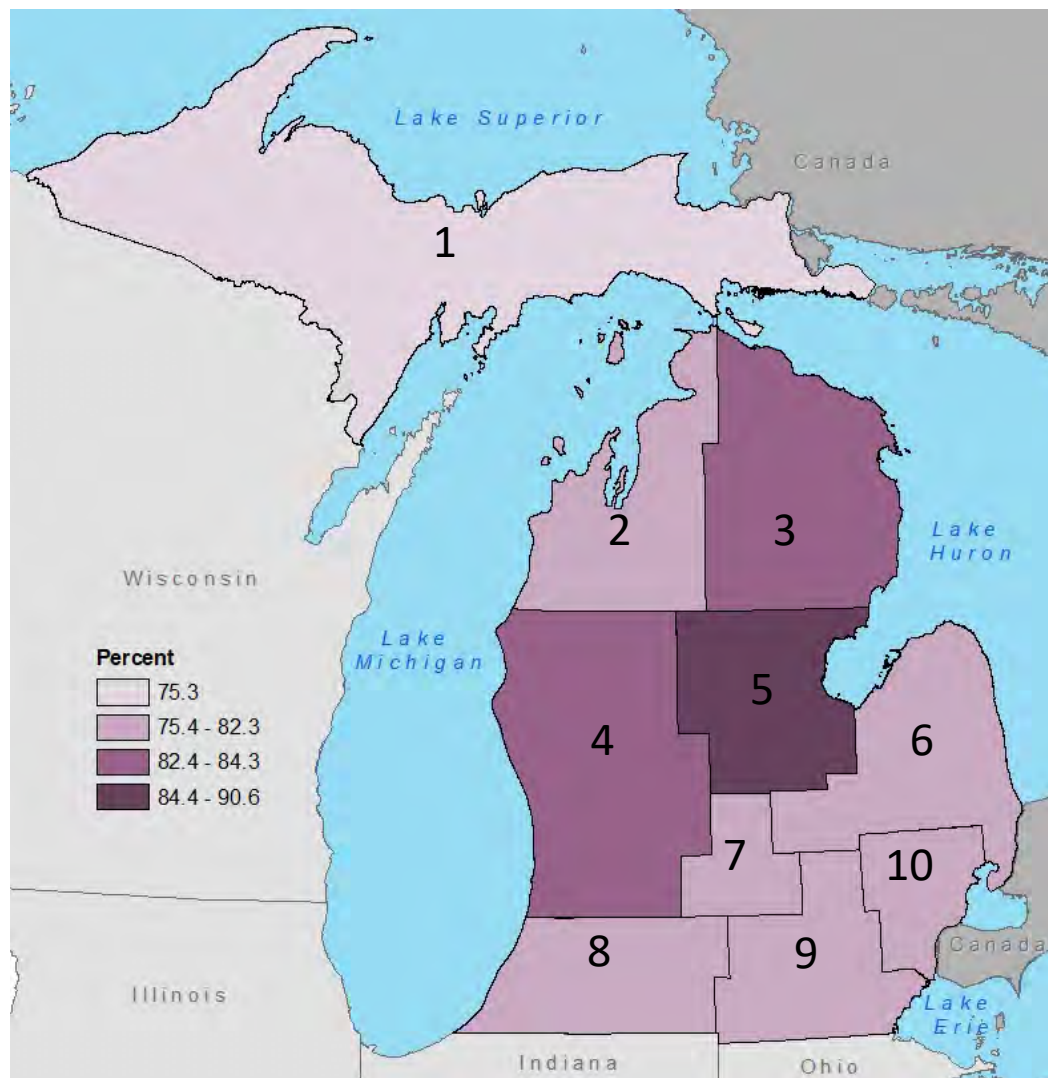
Percent of Female Breast Cancer Diagnosed at Late (Regional or Distant) Stage ^{a-d}

County	Percent	County	Percent
Alcona	22.2	Lake	34.5
Alger	23.1	Lapeer	33.0
Allegan	22.8	Leelanau	17.7
Alpena	25.0	Lenawee	27.8
Antrim	25.5	Livingston	24.0
Arenac	20.4	Luce	42.3 *
Baraga	20.0	Mackinac	27.6
Barry	24.5	Macomb	28.3
Bay	28.3	Manistee	23.9
Benzie	21.4	Marquette	18.0
Berrien	28.6	Mason	24.5
Branch	22.9	Mecosta	24.9
Calhoun	27.4	Menominee	37.3 *
Cass	27.3	Midland	24.1
Charlevoix	25.2	Missaukee	32.9
Cheboygan	30.6	Monroe	27.2
Chippewa	21.4	Montcalm	24.6
Clare	31.8	Montmorency	13.6
Clinton	27.9	Muskegon	26.7
Crawford	21.8	Newaygo	25.4
Delta	22.3	Oakland	24.9
Dickinson	31.4	Oceana	20.3
Eaton	24.0	Ogemaw	31.0
Emmet	20.5	Ontonagon	23.5
Genesee	25.0	Osceola	22.0
Gladwin	22.4	Oscoda	35.3
Gogebic	25.6	Otsego	15.7
Grand Traverse	20.6	Ottawa	23.0
Graziot	32.7	Presque Isle	25.7
Hillsdale	27.5	Roscommon	26.0
Houghton	36.6 *	Saginaw	25.2
Huron	24.6	St Clair	26.7
Ingham	25.0	St Joseph	31.2
Ionia	26.0	Sanilac	28.6
Iosco	23.1	Schoolcraft	25.6
Iron	26.3	Shiawassee	22.4
Isabella	27.9	Tuscola	29.4
Jackson	24.9	Van Buren	24.3
Kalamazoo	26.3	Washtenaw	22.8
Kalkaska	27.9	Wayne	29.2
Kent	24.3	Wexford	21.5
Keweenaw	.	State of Michigan	26.2

Data Notes:

^a Staging data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Proportion includes cases diagnosed at regional or distant stage ^c Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table ^d Data is suppressed if case count is < 6.

Pap Test in the Past Three Years



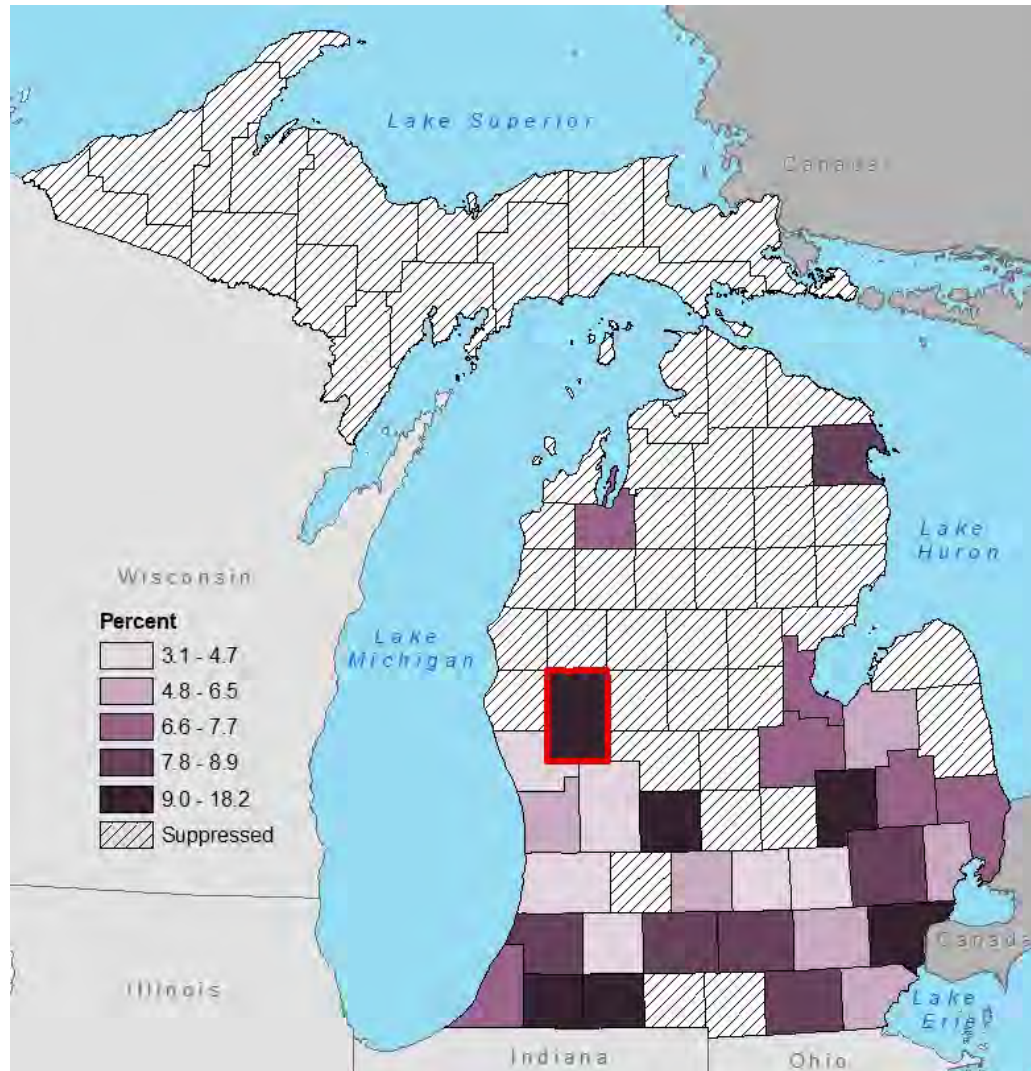
Prevalence of Women Aged 21 and Older who had a Pap Test within the Previous Three Years ^a

Prosperity Region	Percent (%)
1 – Upper Peninsula	75.3
2 – Northwest	81.0
3 – Northeast	84.3
4 – West Michigan	83.9
5 – East Central Michigan	90.6
6 – East Michigan	80.9
7 – South Central	81.9
8 – Southwest	82.3
9 – Southeast Michigan	80.4
10 – Detroit Metro	81.2
State of Michigan	82.0

Data Notes:

^a Data taken from 2014 and 2016 Michigan Behavioral Risk Factor Survey (MiBRFS).

Late Stage Cervical Cancer



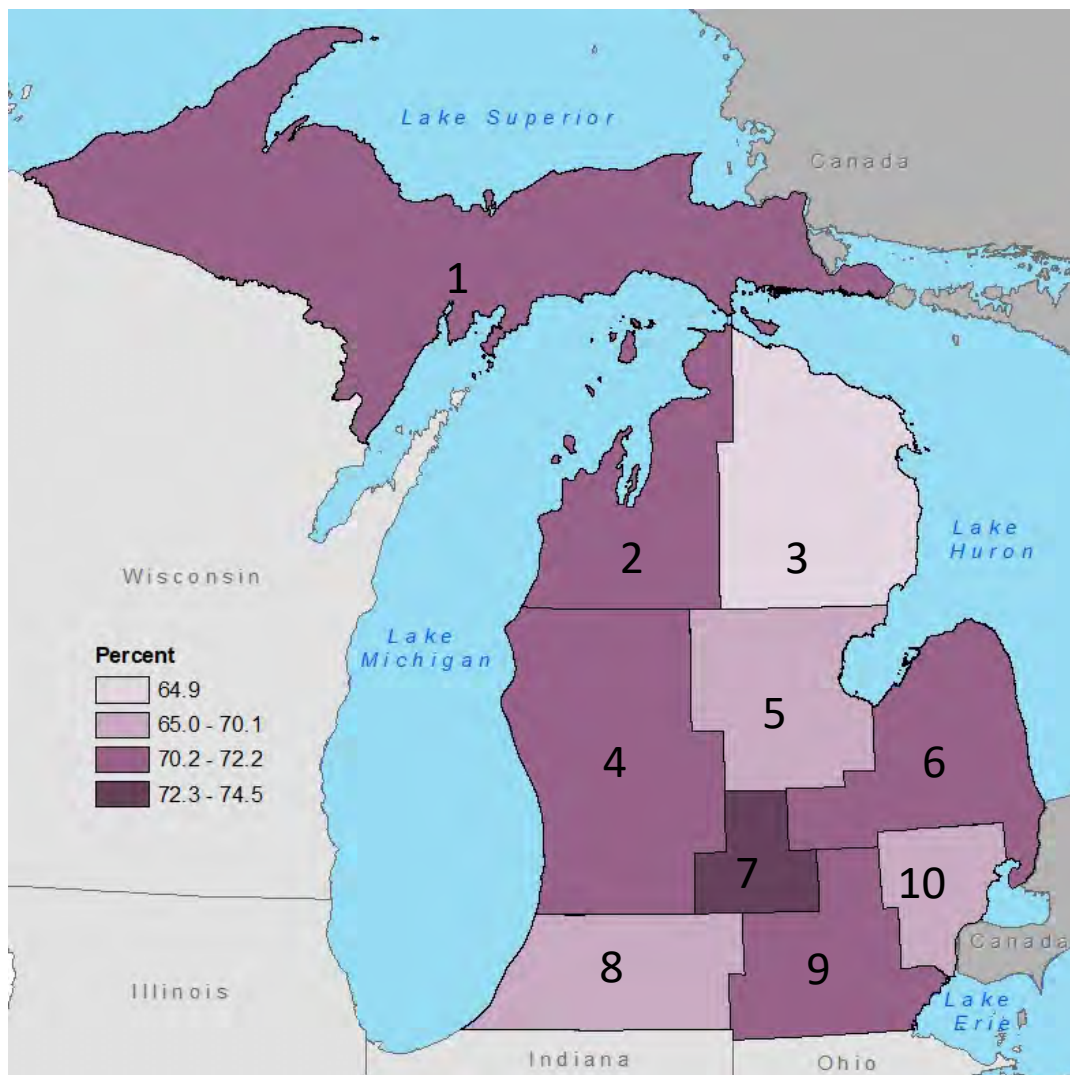
Percent of Cervical Cancer Diagnosed at Late (Regional or Distant) Stage^{a-d}

County	Percent	County	Percent
Alcona	.	Lake	.
Alger	.	Lapeer	7.3
Allegan	3.6	Leelanau	.
Alpena	7.8	Lenawee	8.7
Antrim	.	Livingston	4.4
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	.	Macomb	6.5
Bay	7.7	Manistee	.
Benzie	.	Marquette	.
Berrien	7.0	Mason	.
Branch	.	Mecosta	.
Calhoun	8.8	Menominee	.
Cass	9.4	Midland	.
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	5.7
Chippewa	.	Montcalm	.
Clare	.	Montmorency	.
Clinton	.	Muskegon	4.7
Crawford	.	Newaygo	18.2*
Delta	.	Oakland	7.8
Dickinson	.	Oceana	.
Eaton	5.8	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	9.4	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	6.8	Ottawa	5.9
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	.
Houghton	.	Saginaw	7.4
Huron	.	St Clair	7.1
Ingham	4.3	St Joseph	10.1
Ionia	9.9	Sanilac	8.3
Iosco	.	Schoolcraft	14.3
Isabella	.	Shiawassee	5.8
Jackson	8.3	Tuscola	5.8
Kalamazoo	3.1	Van Buren	8.9
Kalkaska	.	Washtenaw	5.6
Kent	4.1	Wayne	10.0
Keweenaw	.	Wexford	.
		State of Michigan	6.8

Data Notes:

^a Staging data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Proportion includes cases diagnosed at regional or distant stage ^c Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table ^d Data is suppressed if case count is < 6.

Appropriate Colorectal Screening



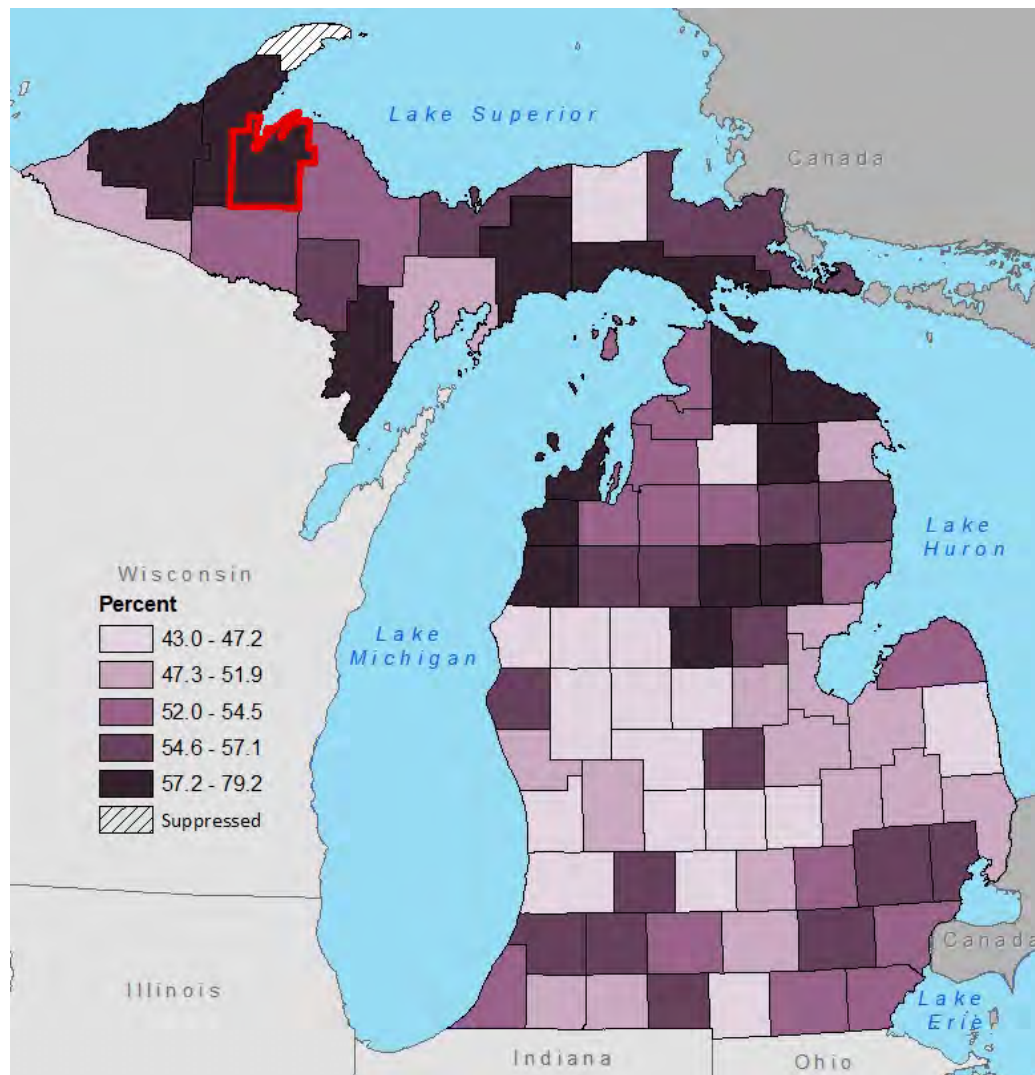
Prevalence of Adults Aged 50 and Older who has been Appropriately Screened for Colorectal Cancer ^{a,b}

Prosperity Region	Percent (%)
1 – Upper Peninsula	71.3
2 – Northwest	71.0
3 – Northeast	64.9
4 – West Michigan	72.2
5 – East Central Michigan	70.1
6 – East Michigan	71.7
7 – South Central	74.5
8 – Southwest	68.6
9 – Southeast Michigan	71.1
10 – Detroit Metro	69.7
State of Michigan	70.5

Data Notes:

^a Data taken from 2014 and 2016 Michigan Behavioral Risk Factor Survey (MiBRFS) ^b Appropriate screening defined as the proportion who reported having either a fecal occult blood test within the past year, a sigmoidoscopy within the past five years, or a colonoscopy within the past ten years.

Late Stage Colorectal Cancer

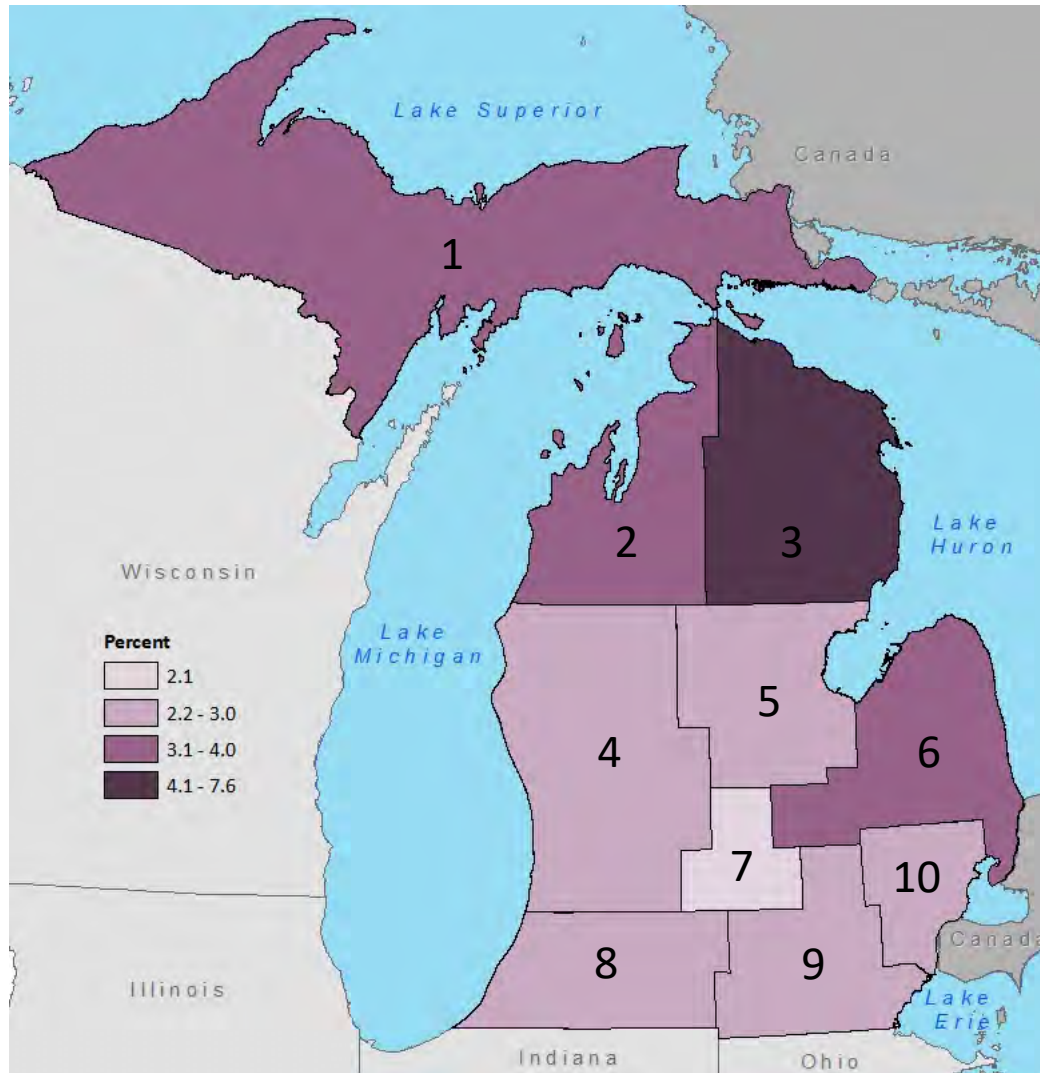


Percent of Colorectal Cancer Diagnosed at Late (Regional or Distant) Stage ^{a-d}			
County	Percent	County	Percent
Alcona	57.1	Lake	44.4
Alger	55.6	Lapeer	49.4
Allegan	47.1	Leelanau	61.4
Alpena	51.0	Lenawee	53.3
Antrim	53.2	Livingston	54.4
Arenac	47.3	Luce	45.5
Baraga	79.2*	Mackinac	59.4
Barry	55.4	Macomb	55.6
Bay	48.4	Manistee	57.6
Benzie	61.4	Marquette	54.2
Berrien	54.0	Mason	46.7
Branch	55.0	Mecosta	43.2
Calhoun	52.0	Menominee	62.3
Cass	51.9	Midland	50.6
Charlevoix	53.8	Missaukee	55.6
Cheboygan	63.6	Monroe	52.3
Chippewa	56.7	Montcalm	46.8
Clare	58.8	Montmorency	60.0
Clinton	47.2	Muskegon	47.4
Crawford	52.4	Newaygo	47.0
Delta	51.0	Oakland	56.0
Dickinson	55.9	Oceana	54.9
Eaton	43.5	Ogemaw	60.4
Emmet	53.2	Ontonagon	58.1
Genesee	49.9	Osceola	46.2
Gladwin	57.1	Oscoda	56.7
Gogebic	51.9	Otsego	47.1
Grand Traverse	54.0	Ottawa	46.7
Graziot	55.5	Presque Isle	57.7
Hillsdale	43.0	Roscommon	63.1
Houghton	59.8	Saginaw	51.2
Huron	52.6	St Clair	48.6
Ingham	50.9	St Joseph	51.5
Ionia	46.0	Sanilac	45.1
Iosco	52.2	Schoolcraft	60.7
Iron	54.5	Shiawassee	45.6
Isabella	45.5	Tuscola	48.7
Jackson	51.2	Van Buren	55.9
Kalamazoo	56.6	Washtenaw	55.5
Kalkaska	53.4	Wayne	54.0
Kent	49.3	Wexford	57.0
Keweenaw	.	State of Michigan	52.8

Data Notes:

^a Staging data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Proportion includes cases diagnosed at regional or distant stage ^c Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table ^d Data is suppressed if case count is < 6.

Population in Need of Lung Cancer Screening



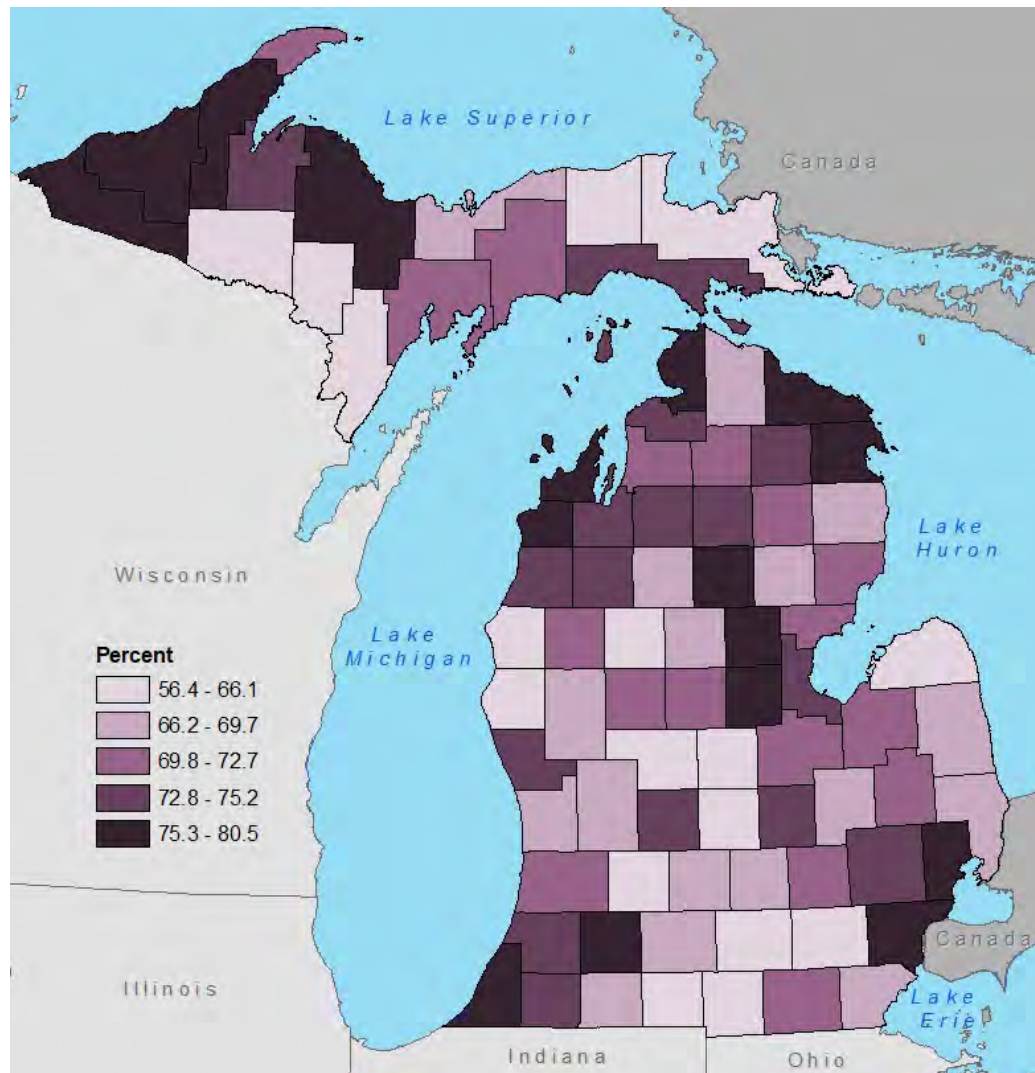
Prevalence of Adults Aged 55 and Older who Should be Referred to Lung Cancer Screening Services ^{a,b}

Prosperity Region	Percent (%)
1 – Upper Peninsula	4.0
2 – Northwest	3.5
3 – Northeast	7.6
4 – West Michigan	2.7
5 – East Central Michigan	3.0
6 – East Michigan	3.8
7 – South Central	2.1
8 – Southwest	2.7
9 – Southeast Michigan	2.8
10 – Detroit Metro	2.5
State of Michigan	2.9

Data Notes:

^a Data taken from 2016 and 2017 Michigan Behavioral Risk Factor Survey (MiBRFS) ^b Definition of the lung cancer screening population is from the United States Preventive Services Task Force and is defined to be adults who are 55 years and older who have a 30 pack year smoking history and currently smoke or have quit within the past 25 years.

Late Stage Lung Cancer



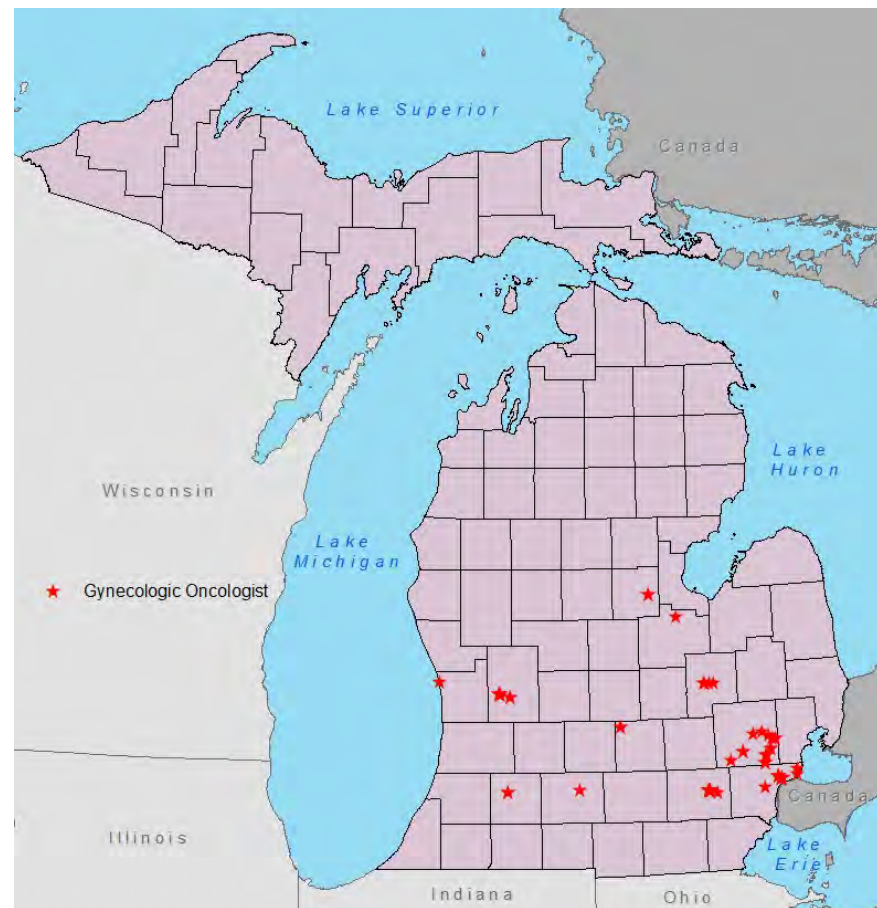
Percent of Lung Cancer Diagnosed at Late (Regional or Distant) Stage^{a-b}

County	Percent	County	Percent
Alcona	66.7	Lake	70.0
Alger	68.9	Lapeer	70.1
Allegan	69.9	Leelanau	77.2
Alpena	76.3	Lenawee	70.2
Antrim	70.1	Livingston	70.5
Arenac	71.1	Luce	63.2
Baraga	73.5	Mackinac	73.8
Barry	65.3	Macomb	77.7
Bay	73.8	Manistee	73.1
Benzie	80.5	Marquette	77.0
Berrien	76.3	Mason	63.8
Branch	62.8	Mecosta	71.6
Calhoun	66.4	Menominee	58.7
Cass	72.9	Midland	76.1
Charlevoix	74.4	Missaukee	67.5
Cheboygan	69.5	Monroe	66.6
Chippewa	64.0	Montcalm	65.5
Clare	69.4	Montmorency	74.0
Clinton	66.1	Muskegon	75.2
Crawford	72.9	Newaygo	68.3
Delta	71.3	Oakland	73.6
Dickinson	56.4	Oceana	64.2
Eaton	66.7	Ogemaw	68.7
Emmet	79.3	Ontonagon	75.9
Genesee	67.0	Osceola	64.7
Gladwin	76.3	Oscoda	72.1
Gogebic	76.7	Otsego	71.3
Grand Traverse	73.7	Ottawa	66.3
Gratiot	64.6	Presque Isle	78.5
Hillsdale	61.9	Roscommon	79.1
Houghton	75.4	Saginaw	71.1
Huron	65.7	St Clair	69.7
Ingham	68.1	St Joseph	68.4
Ionia	74.1	Sanilac	69.1
Iosco	69.9	Schoolcraft	72.7
Iron	60.3	Shiawassee	72.7
Isabella	70.7	Tuscola	71.0
Jackson	66.0	Van Buren	74.7
Kalamazoo	79.1	Washtenaw	65.9
Kalkaska	75.0	Wayne	76.8
Kent	68.6	Wexford	74.5
Keweenaw	70.0	State of Michigan	72.4

Data Notes:

^a Staging data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Proportion includes cases diagnosed at regional or distant stage.

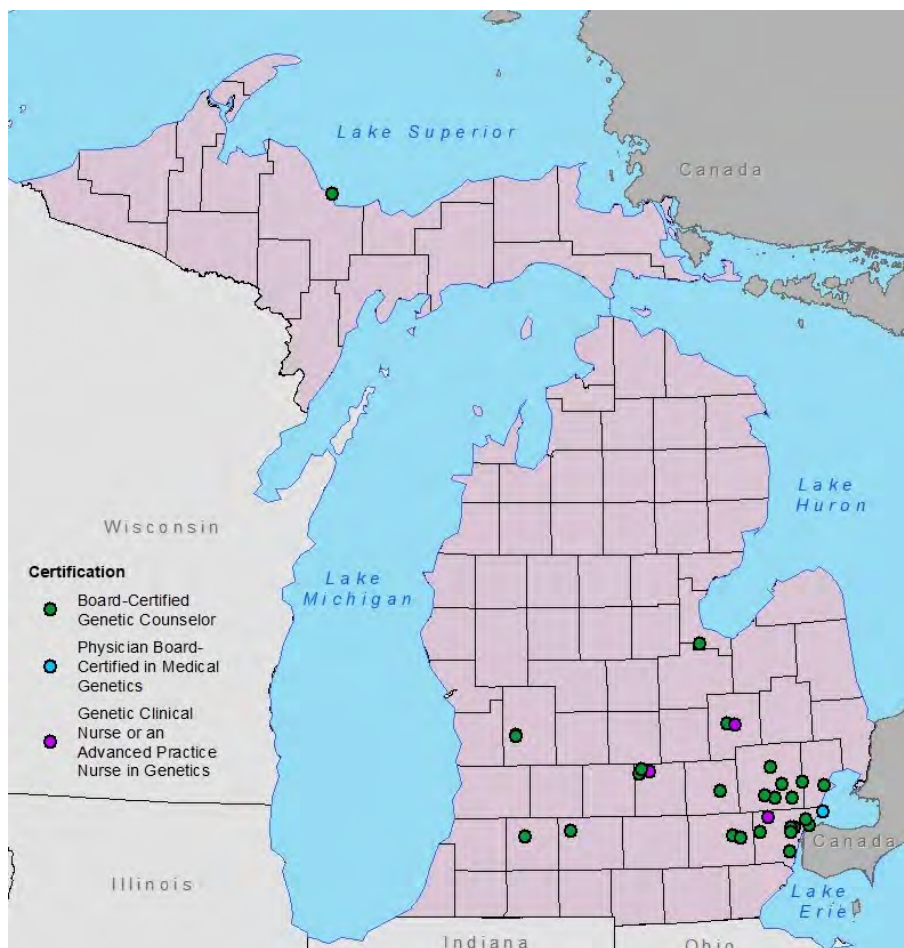
Gynecologic Oncologist Locations



Gynecologic Oncologist Locations

Facility	City	Facility	City
Barbara Adams DC	Ann Arbor	Michigan Health Physician Partners	Grand Rapids
University of Michigan OB/GYN	Ann Arbor	Spectrum Health Medical Group	Grand Rapids
House Officers – UroGyn and Reproduction	Ann Arbor	Gynecologic Oncology of West Michigan	Grand Rapids
House Officers – UroGyn and Reproduction	Ann Arbor	Spectrum Health Medical Group	Grand Rapids
University of Michigan	Ann Arbor	Spectrum Health Medical Group	Grand Rapids
University of Michigan	Ann Arbor	Spectrum Health Medical Group	Grand Rapids
University of Michigan	Ann Arbor	Surgical Services & Women Subspecialty (Beaumont Med Office Bldg)	Grosse Pointe
University of Michigan Rogel Cancer Center	Ann Arbor	Ascension Health/St. John Providence	Grosse Pointe Woods
University of Michigan	Ann Arbor	West Michigan Cancer Center	Kalamazoo
University of Michigan Rogel Cancer Center	Ann Arbor	West Michigan Cancer Center	Kalamazoo
University of Michigan OB/GYN	Ann Arbor	Sparrow Hospital Herbert-Herman Cancer Center	Lansing
University of Michigan	Ann Arbor	Sparrow Hospital Herbert-Herman Cancer Center	Lansing
University of Michigan Rogel Cancer Center	Ann Arbor	MidMichigan Health, Center for Women's Health	Midland
Roy & Wright MDs	Auburn Hills	MidMichigan Health, Center for Women's Health	Midland
Henry Ford – Macomb Hospital	Clinton Township	Saint Joseph Mercy Health System	Novi
Beaumont Gyn Oncology	Dearborn	Michigan Cancer Institute	Pontiac
Henry Ford Health Systems	Detroit	Troy Gynecology Oncology	Rochester Hills
Karmanos Cancer Institute	Detroit	Crittenton Cancer Center	Rochester Hills
Henry Ford Hospital	Detroit	Rochester Medical Group	Rochester Hills
Karmanos Cancer Institute	Detroit	Troy Gynecology Oncology	Rochester Hills
Hutzel Women's Ob/Gyn	Detroit	Troy Gynecology Oncology	Rochester Hills
Henry Ford Health System	Detroit	Beaumont	Royal Oak
Henry Ford Hospital Campus	Detroit	Beaumont Hospital – Royal Oak	Royal Oak
Karmanos Cancer Institute	Detroit	Beaumont Gynecology Oncology	Royal Oak
Henry Ford Medical Group	Detroit	Gyn Oncology Associates	Royal Oak
Valley Hospital Surgical of Michigan	Detroit	Beaumont – Royal Oak	Royal Oak
Henry Ford Medical Group	Detroit	Covenant Cancer Care Center	Saginaw
Harper Professional Building	Detroit	Detroit Medical Center	Southfield
Detroit Receiving Hospital	Detroit	Detroit Medical Center	Southfield
Karmanos Cancer Institute	Detroit	Detroit Medical Center	Southfield
Genesys Hurley	Flint	Cowell Family Cancer Center	Traverse City
Genesys Hurley Cancer Center	Flint	Henry Ford Medical Group	Troy
Hurley Women's Services	Flint	Henry Ford Medical Group	Troy
Advanced General Oncological Surgical Associates	Flint	Henry Ford West Bloomfield Hospital	West Bloomfield
North Ottawa Women's Health	Grand Haven	Henry Ford Medical Group	West Bloomfield
Cancer & Hematology Centers of West Michigan	Grand Rapids	Saint Joseph Mercy Health System	Ypsilanti
Gynecologic Oncology of West Michigan	Grand Rapids		

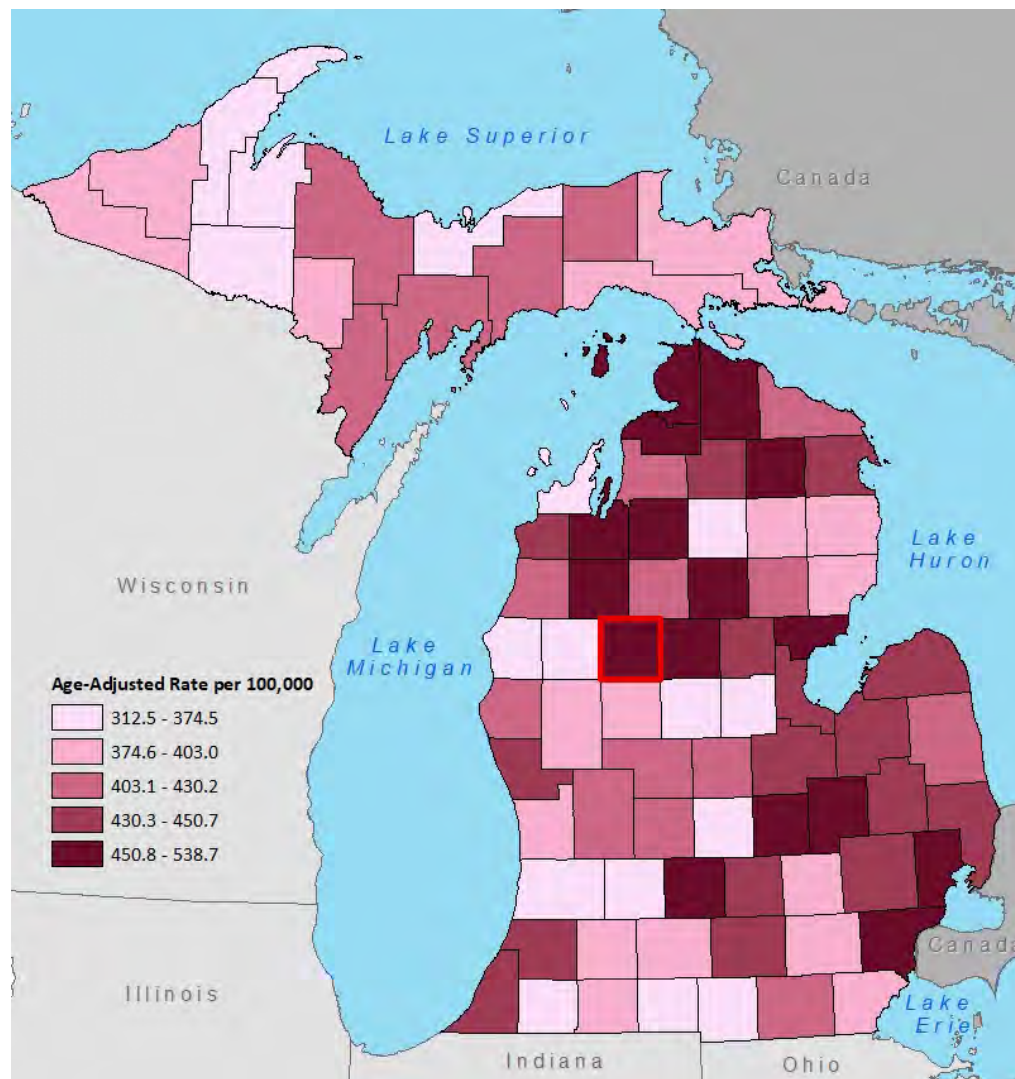
Genetic Services Clinic Locations



Board-Certified Genetic Counseling and Testing Locations

Facility	City	Certification
Breast & Ovarian Cancer Risk Evaluation Program	Ann Arbor	Board-Certified Genetic Counselor
University of Michigan Cancer Genetics Clinic	Ann Arbor	Board-Certified Genetic Counselor
Saint Joseph Mercy Hospital	Ypsilanti	Board-Certified Genetic Counselor
The Cancer Care Center	Battle Creek	Board-Certified Genetic Counselor
Karmanos Cancer Institute at McLaren Bay	Bay City	Board-Certified Genetic Counselor
Saint Joseph Mercy Hospital	Brighton	Board-Certified Genetic Counselor
Beaumont Center for Hematology & Oncology - Downriver	Brownstown	Board-Certified Genetic Counselor
Saint Joseph Mercy Hospital - Canton	Canton	Board-Certified Genetic Counselor
Karmanos Cancer Institute at McLaren - Clarkston	Clarkston	Board-Certified Genetic Counselor
Beaumont Hospital - Dearborn	Dearborn	Board-Certified Genetic Counselor
Beaumont Dearborn Medical Park	Dearborn	Board-Certified Genetic Counselor
Beaumont Center for Hematology & Oncology - Dearborn	Dearborn	Board-Certified Genetic Counselor
Beaumont Gynecologic Oncology Associates	Dearborn	Board-Certified Genetic Counselor
Karmanos Cancer Institute	Detroit	Board-Certified Genetic Counselor
Henry Ford Health System Cancer Genetics Program	Detroit	Board-Certified Genetic Counselor
Michigan State University Department of Surgery	East Lansing	Genetic Clinical/Advanced Practice Nurse
Karmanos Cancer Institute	Farmington Hills	Board-Certified Genetic Counselor
Karmanos Cancer Institute at McLaren Flint	Flint	Board-Certified Genetic Counselor
Hurley OB/GYN Associates	Flint	Genetic Clinical/Advanced Practice Nurse
Spectrum Health	Grand Rapids	Board-Certified Genetic Counselor
Lacks Cancer Center	Grand Rapids	Board-Certified Genetic Counselor
St. John Providence Health System	Grosse Pointe Woods	Physician Board-Certified
West Michigan Cancer Center	Kalamazoo	Board-Certified Genetic Counselor
Karmanos Cancer Institute at McLaren Greater Lansing	Lansing	Board-Certified Genetic Counselor
Sparrow Herbert-Herman Cancer Center	Lansing	Board-Certified Genetic Counselor
St. Mary Mercy Hospital Our Lady of Hope Cancer Center	Livonia	Genetic Clinical/Advanced Practice Nurse
Marquette General Hematology/Oncology	Marquette	Board-Certified Genetic Counselor
Karmanos Cancer Institute at McLaren Macomb	Mt Clemens	Board-Certified Genetic Counselor
Cancer Genetics/Risk Plus Clinic	Pontiac	Board-Certified Genetic Counselor
Beaumont Cancer Genetics Program	Royal Oak	Board-Certified Genetic Counselor
Beaumont Cancer Genetics Program	Sterling Heights	Board-Certified Genetic Counselor
Henry Ford West Bloomfield Hospital	West Bloomfield	Board-Certified Genetic Counselor

Overall Cancer Incidence

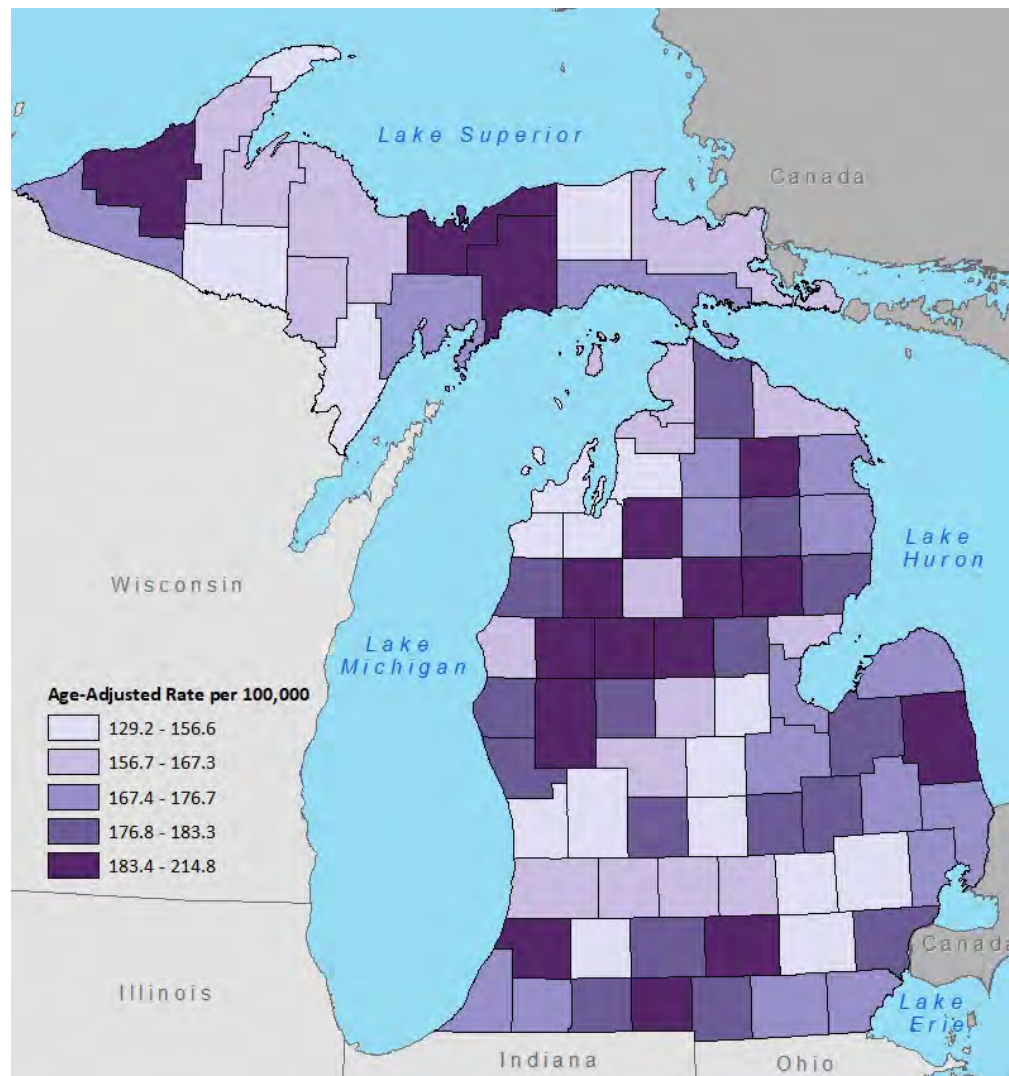


Age-Adjusted Cancer Incidence Rate (per 100,000) ^{a-c}			
County	Rate	County	Rate
Alcona	394.8	Lake	361.5
Alger	358.7	Lapeer	434.2
Allegan	352.0	Leelanau	322.3
Alpena	450.7	Lenawee	429.8
Antrim	420.9	Livingston	387.4
Arenac	489.3	Luce	408.1
Baraga	332.7	Mackinac	389.2
Barry	312.5	Macomb	460.7
Bay	431.1	Manistee	415.2
Benzie	432.9	Marquette	405.3
Berrien	447.5	Mason	324.9
Branch	367.1	Mecosta	399.9
Calhoun	382.7	Menominee	418.8
Cass	339.2	Midland	373.5
Charlevoix	454.6	Missaukee	416.7
Cheboygan	457.7	Monroe	379.7
Chippewa	397.3	Montcalm	413.9
Clare	474.9	Montmorency	474.5
Clinton	321.7	Muskegon	438.2
Crawford	363.1	Newaygo	376.1
Delta	410.6	Oakland	448.3
Dickinson	401.9	Oceana	406.8
Eaton	452.2	Ogemaw	408.9
Emmet	452.1	Ontonagon	395.8
Genesee	461.5	Osceola	538.7*
Gladwin	432.3	Oscoda	397.9
Gogebic	392.6	Otsego	440.8
Grand Traverse	497.8	Ottawa	389.8
Graziot	409.3	Presque Isle	416.8
Hillsdale	363.6	Roscommon	527.3
Houghton	374.5	Saginaw	434.4
Huron	441.1	St Clair	441.6
Ingham	435.7	St Joseph	390.8
Ionia	426.1	Sanilac	408.1
Iosco	402.7	Schoolcraft	430.2
Iron	322.9	Shiawassee	462.5
Isabella	362.1	Tuscola	448.3
Jackson	443.5	Van Buren	439.4
Kalamazoo	403.0	Washtenaw	400.4
Kalkaska	465.7	Wayne	480.4
Kent	418.6	Wexford	486.7
Keweenaw	337.2	State of Michigan	435.2

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Overall Cancer Mortality



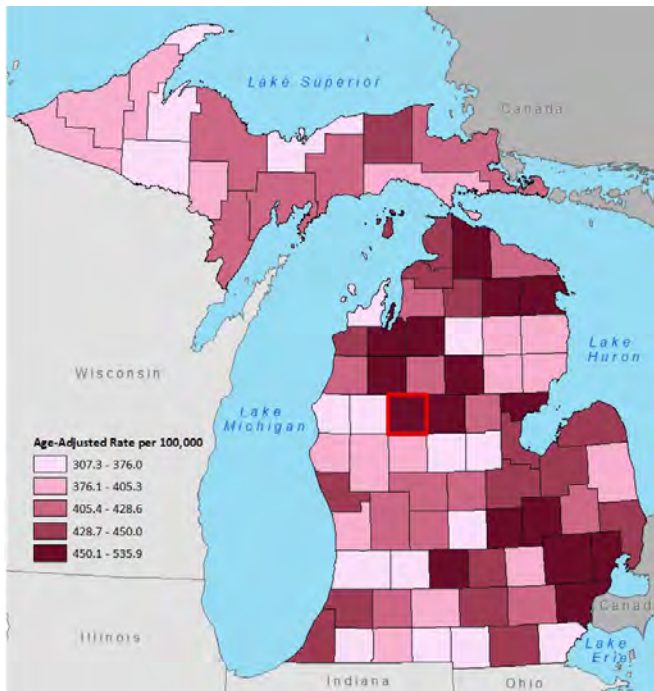
Age-Adjusted Cancer Mortality Rate (per 100,000) ^{a,b}			
County	Rate	County	Rate
Alcona	168.2	Lake	186.4
Alger	190.1	Lapeer	174.5
Allegan	163.4	Leelanau	129.2
Alpena	171.7	Lenawee	176.6
Antrim	156.6	Livingston	146.1
Arenac	167.3	Luce	151.9
Baraga	167.3	Mackinac	172.2
Barry	162.5	Macomb	173.0
Bay	171.6	Manistee	178.7
Benzie	146.3	Marquette	156.8
Berrien	171.9	Mason	159.2
Branch	184.0	Mecosta	183.1
Calhoun	180.9	Menominee	151.2
Cass	176.0	Midland	135.9
Charlevoix	158.1	Missaukee	161.4
Cheboygan	183.3	Monroe	176.7
Chippewa	167.3	Montcalm	162.1
Clare	205.5	Montmorency	190.9
Clinton	147.7	Muskegon	177.4
Crawford	174.1	Newaygo	184.4
Delta	168.2	Oakland	147.4
Dickinson	157.8	Oceana	182.7
Eaton	157.1	Ogemaw	192.5
Emmet	162.8	Ontonagon	195.3
Genesee	180.6	Osceola	188.7
Gladwin	180.8	Oscoda	181.9
Gogebic	170.6	Otsego	169.3
Grand Traverse	146.0	Ottawa	141.2
Graiot	155.9	Presque Isle	166.3
Hillsdale	179.7	Roscommon	214.8
Houghton	165.5	Saginaw	168.8
Huron	171.8	St Clair	174.9
Ingham	157.1	St Joseph	180.6
Ionia	180.0	Sanilac	185.6
Iosco	178.6	Schoolcraft	198.5
Iron	144.0	Shiawassee	179.6
Isabella	162.2	Tuscola	178.6
Jackson	193.8	Van Buren	189.5
Kalamazoo	152.3	Washtenaw	147.2
Kalkaska	194.1	Wayne	182.0
Kent	150.3	Wexford	187.1
Keweenaw	133.2	State of Michigan	166.9

Data Notes:

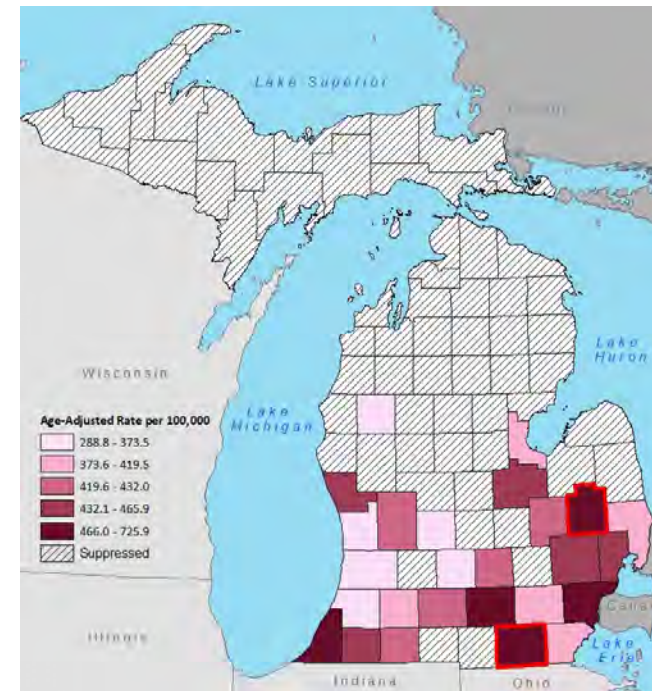
^a Mortality data taken from the 2013-2017 Michigan Resident Death Files ^b Rates are age-adjusted to the 2000 US Standard Population.

Overall Cancer Incidence by Race

White



Black



Age-Adjusted ^{a,b} Cancer Incidence Rate (per 100,000) by Race ^{c,d}					
County	White	Black	County	White	Black
Alcona	396.0	.	Lake	356.4	373.5
Alger	373.4	.	Lapeer	424.6	725.9*
Allegan	350.4	288.8	Leelanau	310.3	.
Alpena	451.9	.	Lenawee	430.5	576.7*
Antrim	419.5	.	Livingston	384.7	.
Arenac	479.8	.	Luce	434.6	.
Baraga	331.0	.	Mackinac	399.9	.
Barry	307.3	.	Macomb	467.5	465.9
Bay	430.1	418.5	Manistee	419.1	.
Benzie	433.3	.	Marquette	412.1	.
Berrien	440.5	519.8	Mason	324.4	.
Branch	368.4	.	Mecosta	396.8	.
Calhoun	381.9	428.9	Menominee	421.5	.
Cass	324.4	461.2	Midland	371.5	.
Charlevoix	438.6	.	Missaukee	410.7	.
Cheboygan	462.5	.	Monroe	376.0	385.3
Chippewa	413.9	.	Montcalm	413.8	.
Clare	470.6	.	Montmorency	468.2	.
Clinton	321.7	.	Muskegon	436.3	448.9
Crawford	364.8	.	Newaygo	376.7	.
Delta	414.6	.	Oakland	465.4	442.0
Dickinson	405.3	.	Oceana	404.1	.
Eaton	459.2	306.1	Ogemaw	400.2	.
Emmet	450.0	.	Ontonagon	395.4	.
Genesee	457.3	432.0	Osceola	535.9*	.
Gladwin	428.1	.	Oscoda	389.5	.
Gogebic	391.7	.	Otsego	433.2	.
Grand Traverse	498.5	.	Ottawa	392.1	340.1
Gratiot	415.5	.	Presque Isle	411.1	.
Hillsdale	364.0	.	Roscommon	523.3	.
Houghton	376.7	.	Saginaw	429.2	456.3
Huron	434.7	.	St Clair	433.8	401.9
Ingham	444.5	429.9	St Joseph	389.4	427.7
Ionia	428.6	321.5	Sanilac	398.2	.
Iosco	401.9	.	Schoolcraft	423.6	.
Iron	323.9	.	Shiawassee	459.1	.
Isabella	365.5	.	Tuscola	443.7	.
Jackson	438.1	543.1	Van Buren	441.9	369.7
Kalamazoo	405.3	412.3	Washtenaw	414.3	419.5
Kalkaska	464.6	.	Wayne	484.0	493.9
Kent	418.9	419.7	Wexford	488.1	.
Keweenaw	338.8	.	State of Michigan	434.3	465.0

Data Notes:

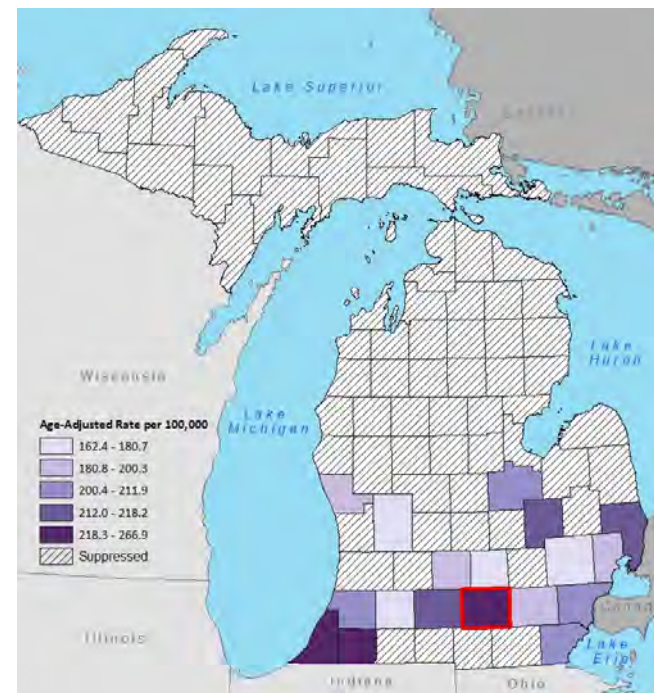
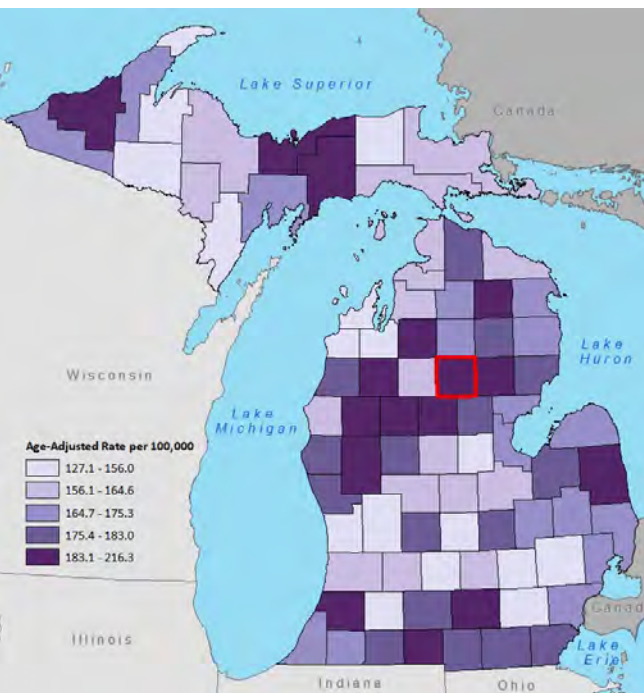
^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20. ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Overall Cancer Mortality by Race

White

Black

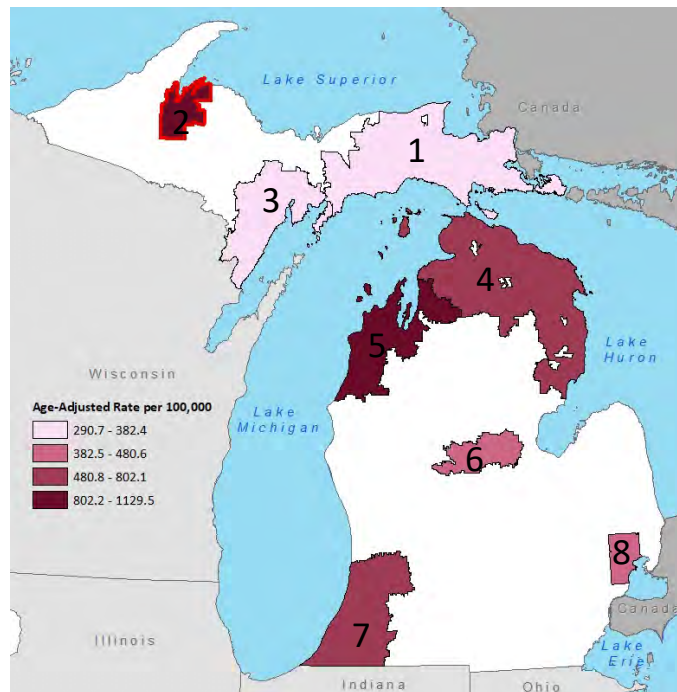
Age-Adjusted ^{a,b} Cancer Mortality Rate (per 100,000) by Race ^{c,d}					
County	White	Black	County	White	Black
Alcona	169.7	.	Lake	191.6	.
Alger	192.4	.	Lapeer	174.1	.
Allegan	163.7	.	Leelanau	127.1	.
Alpena	172.8	.	Lenawee	175.8	.
Antrim	156.7	.	Livingston	146.0	.
Arenac	168.9	.	Luce	147.9	.
Baraga	156.0	.	Mackinac	160.9	.
Barry	162.3	.	Macomb	172.7	200.0
Bay	172.4	.	Manistee	179.0	.
Benzie	145.2	.	Marquette	157.7	.
Berrien	165.7	243.2	Mason	159.7	.
Branch	185.3	.	Mecosta	179.4	.
Calhoun	177.9	214.1	Menominee	151.2	.
Cass	173.4	220.6	Midland	137.1	.
Charlevoix	156.1	.	Missaukee	160.3	.
Cheboygan	181.1	.	Monroe	176.3	207.7
Chippewa	164.2	.	Montcalm	162.9	.
Clare	205.0	.	Montmorency	191.1	.
Clinton	147.2	.	Muskegon	175.5	190.4
Crawford	175.3	.	Newaygo	184.3	.
Delta	168.0	.	Oakland	147.6	167.4
Dickinson	157.0	.	Oceana	183.0	.
Eaton	154.8	186.9	Ogemaw	193.7	.
Emmet	163.8	.	Ontonagon	186.0	.
Genesee	174.6	215.1	Osceola	187.0	.
Gladwin	182.0	.	Oscoda	181.6	.
Gogebic	165.6	.	Otsego	169.6	.
Grand Traverse	146.1	.	Ottawa	140.4	.
Griatiot	159.3	.	Presque Isle	164.6	.
Hillsdale	179.8	.	Roscommon	216.3*	.
Houghton	166.7	.	Saginaw	162.8	204.7
Huron	171.6	.	St Clair	174.4	218.2
Ingham	157.9	162.4	St Joseph	180.9	.
Ionia	179.4	.	Sanilac	185.3	.
Iosco	178.9	.	Schoolcraft	197.7	.
Iron	144.5	.	Shiawassee	180.7	.
Isabella	162.1	.	Tuscola	179.2	.
Jackson	189.1	266.9*	Van Buren	187.9	211.9
Kalamazoo	150.6	180.7	Washtenaw	145.5	200.3
Kalkaska	197.0	.	Wayne	170.9	204.1
Kent	148.4	174.9	Wexford	188.4	.
Keweenaw	134.1	.	State of Michigan	164.0	196.1



Data Notes:
^a Mortality data taken from the 2013-2017 Michigan Resident Death Files ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20
^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Overall Cancer Incidence & Mortality among American Indian Residents, by Tribal Service Region

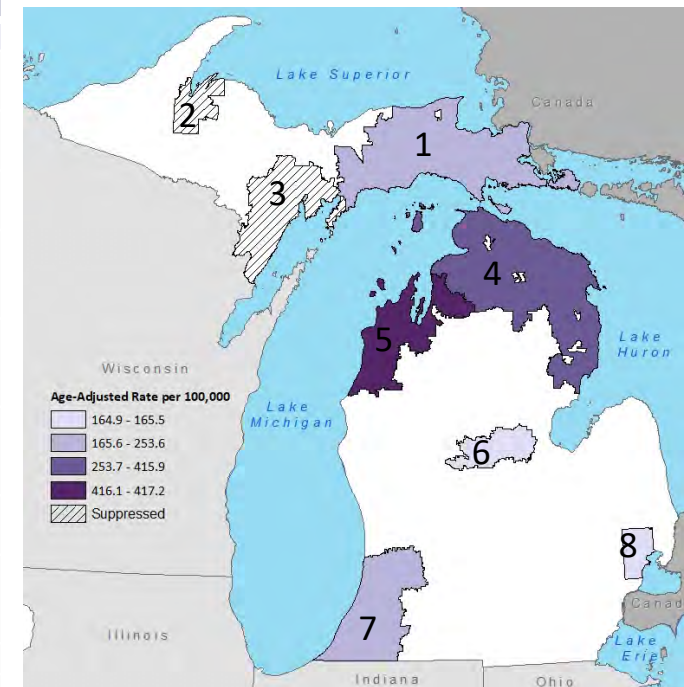
Incidence



Cancer Rates among Native American Residents by Tribal Service Region ^{a-d}

Prosperity Region	Incidence	Mortality
1 – Sault Ste. Marie Tribe of Chippewa	382.4	253.6
2 – Keweenaw Bay Indian Tribe	1129.5*	.
3 – Hannahville Indian Tribe	290.72	.
4 – Little Traverse Bay Band of Odawa Indians	492.72	416.0
5 – Grand Traverse Band of Ottawa and Chippewa Indians	907.5	417.2
6 – Saginaw Chippewa Indian Tribe	455.1	164.9
7 – Pokagon Band of Potawatomi Indians	802.1	234.6
8 – American Indian Health and Family Services	480.7	165.5
State of Michigan	476.8	265.8

Mortality



Data Notes:

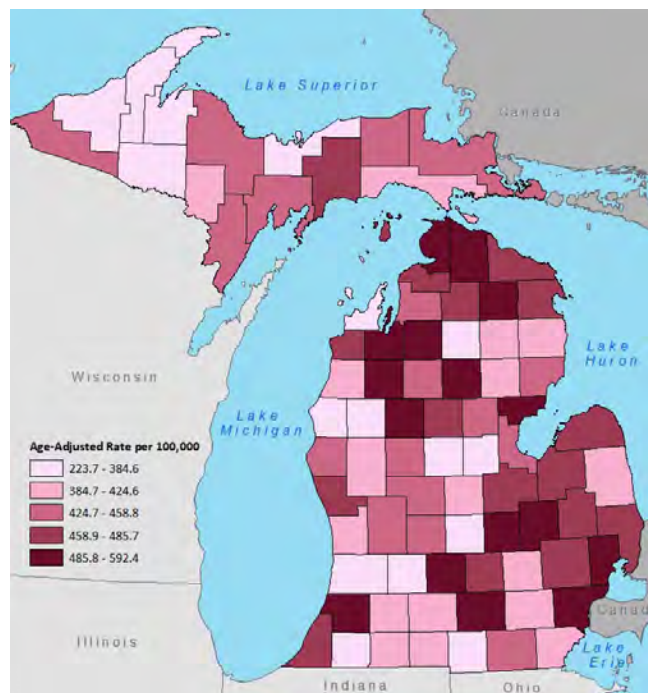
^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Mortality data taken from the 2013-2017 Michigan Resident Death Files ^c Rates are age-adjusted to the 2000 US Standard Population ^d Service area rate suppressed if case count < 20 ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Overall Cancer Incidence by Sex

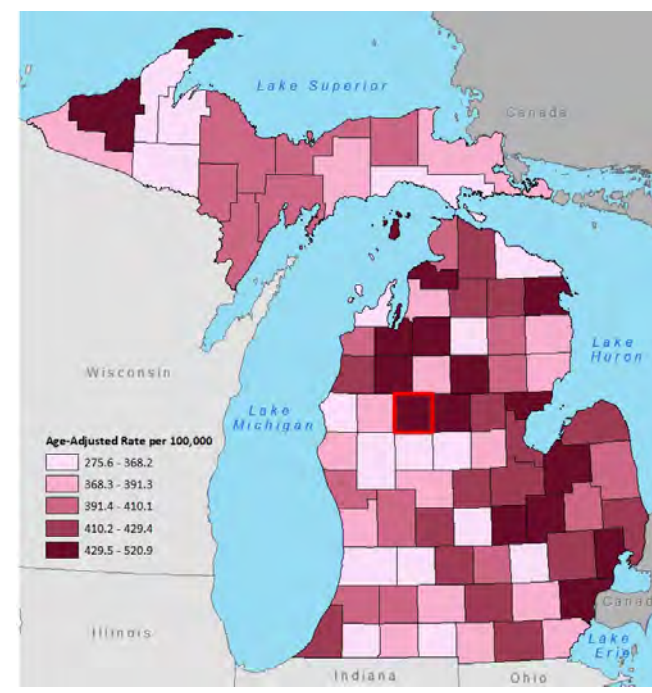
Age-Adjusted ^{a,b} Cancer Incidence Rate per (100,000)
by Sex ^c

County	Male	Female	County	Male	Female
Alcona	410.7	376.7	Lake	352.8	368.5
Alger	338.2	395.8	Lapeer	474.8	403.2
Allegan	382.0	328.9	Leelanau	338.9	310.4
Alpena	472.2	438.7	Lenawee	458.5	418.5
Antrim	458.8	391.3	Livingston	416.7	365.7
Arenac	492.4	488.4	Luce	427.9	408.0
Baraga	330.6	349.8	Mackinac	422.1	360.7
Barry	324.6	307.1	Macomb	493.1	442.9
Bay	458.7	415.9	Manistee	412.4	427.3
Benzie	464.5	410.1	Marquette	427.6	394.8
Berrien	480.8	425.3	Mason	382.0	275.6
Branch	387.8	359.8	Mecosta	457.9	354.1
Calhoun	401.1	374.6	Menominee	439.3	404.6
Cass	351.1	333.8	Midland	383.4	368.8
Charlevoix	470.0	447.5	Missaukee	446.8	389.0
Cheboygan	499.1	420.2	Monroe	400.0	369.0
Chippewa	432.0	381.6	Montcalm	448.7	389.8
Clare	479.8	475.5	Montmorency	541.0	418.2
Clinton	355.8	293.2	Muskegon	482.9	406.1
Crawford	381.4	348.0	Newaygo	398.2	358.7
Delta	430.3	402.9	Oakland	485.7	424.6
Dickinson	400.0	405.0	Oceana	429.8	386.7
Eaton	492.2	424.1	Ogemaw	422.0	404.6
Emmet	509.2	404.9	Ontonagon	358.1	435.5
Genesee	487.0	446.5	Osceola	567.7	520.9*
Gladwin	453.7	420.4	Oscoda	400.4	398.2
Gogebic	426.0	370.9	Otsego	474.7	413.9
Grand Traverse	542.1	470.6	Ottawa	410.3	379.0
Gratiot	417.0	418.5	Presque Isle	467.0	366.6
Hillsdale	354.2	379.9	Roscommon	592.4	470.7
Houghton	384.6	368.2	Saginaw	460.4	418.7
Huron	475.5	416.5	St Clair	463.1	429.4
Ingham	479.2	407.3	St Joseph	401.2	389.0
Ionia	452.9	419.7	Sanilac	423.6	398.8
Iosco	433.9	376.9	Schoolcraft	476.1	385.8
Iron	309.8	344.3	Shiawassee	505.1	432.9
Isabella	379.3	355.1	Tuscola	467.9	436.9
Jackson	488.3	411.6	Van Buren	491.5	397.8
Kalamazoo	424.6	391.5	Washtenaw	424.6	386.0
Kalkaska	489.7	446.8	Wayne	532.6	445.3
Kent	442.0	405.1	Wexford	500.6	478.7
Keweenaw	223.7	463.5	State of Michigan	466.9	414.7

Male



Female



Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table

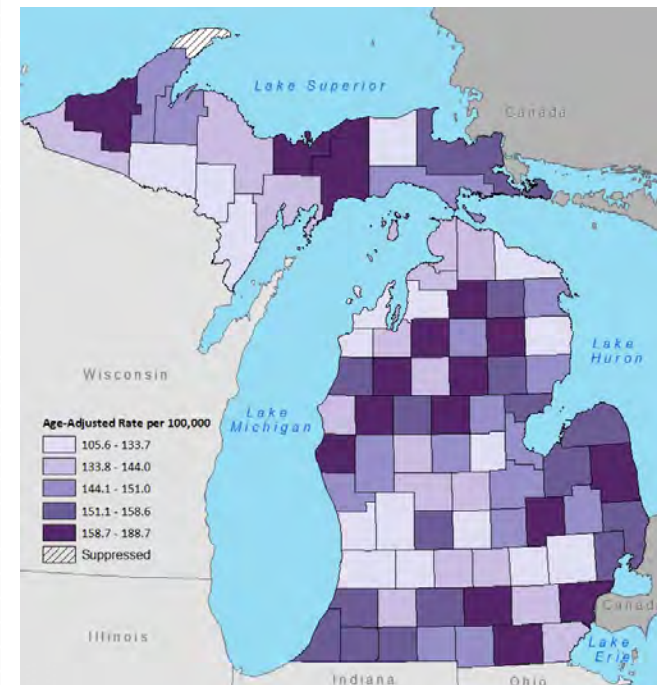
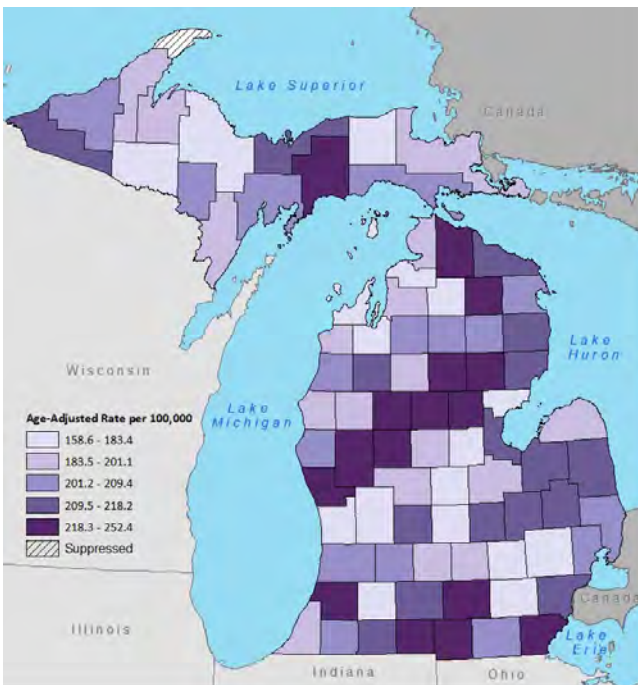
Overall Cancer Mortality by Sex

Male

Female

Age-Adjusted ^{a,b} Cancer Mortality Rate per (100,000)
by Sex ^c

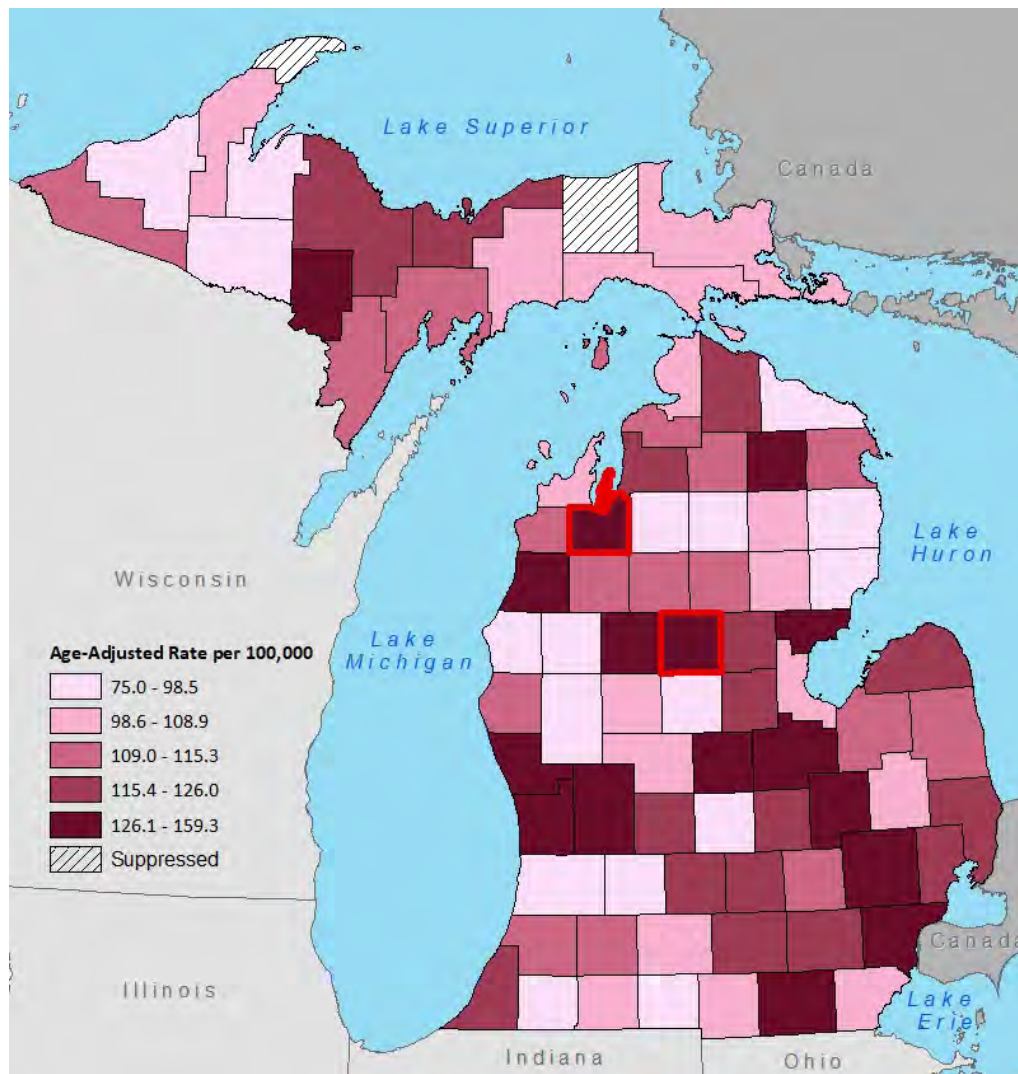
County	Male	Female	County	Male	Female
Alcona	213.0	128.2	Lake	187.8	186.8
Alger	209.5	180.6	Lapeer	210.0	149.7
Allegan	202.0	133.7	Leelanau	158.6	105.6
Alpena	201.8	151.0	Lenawee	204.8	158.7
Antrim	196.5	122.9	Livingston	165.3	131.7
Arenac	183.2	152.7	Luce	179.3	122.1
Baraga	199.0	149.6	Mackinac	205.4	147.0
Barry	206.5	129.7	Macomb	203.7	153.2
Bay	212.4	145.0	Manistee	205.1	158.4
Benzie	191.0	110.7	Marquette	183.4	136.3
Berrien	199.5	152.4	Mason	190.3	136.0
Branch	236.1	146.5	Mecosta	244.8	135.7
Calhoun	218.2	155.3	Menominee	187.6	118.6
Cass	203.9	155.0	Midland	159.8	117.7
Charlevoix	179.7	141.4	Missaukee	192.4	134.4
Cheboygan	226.7	144.0	Monroe	223.4	143.2
Chippewa	189.6	152.5	Montcalm	190.8	138.6
Clare	248.7	170.1	Montmorency	230.2	158.6
Clinton	170.4	130.1	Muskegon	220.4	147.4
Crawford	207.6	145.0	Newaygo	225.3	150.0
Delta	205.0	143.2	Oakland	172.9	131.0
Dickinson	207.6	118.3	Oceana	208.8	161.5
Eaton	188.9	134.8	Ogemaw	237.0	155.2
Emmet	197.4	137.4	Ontonagon	201.9	188.7
Genesee	211.4	159.6	Osceola	236.5	153.9
Gladwin	223.1	144.5	Oscoda	204.6	165.1
Gogebic	209.5	143.5	Otsego	179.1	162.6
Grand Traverse	163.3	134.2	Ottawa	176.9	115.7
Gratiot	178.7	139.6	Presque Isle	214.7	122.3
Hillsdale	222.9	148.0	Roscommon	252.4	184.8
Houghton	190.2	145.1	Saginaw	201.1	146.3
Huron	196.7	155.6	St Clair	208.7	152.6
Ingham	188.1	137.0	St Joseph	212.6	156.6
Ionia	210.1	158.4	Sanilac	211.1	166.0
Iosco	217.9	148.8	Schoolcraft	245.4	162.0
Iron	178.1	118.0	Shiawassee	217.5	150.6
Isabella	184.4	145.9	Tuscola	213.8	151.3
Jackson	239.3	159.0	Van Buren	230.0	156.4
Kalamazoo	180.7	133.8	Washtenaw	168.0	134.5
Kalkaska	209.4	180.5	Wayne	216.1	159.6
Kent	183.4	126.9	Wexford	218.2	162.8
Keweenaw	.	.	State of Michigan	198.6	144.8



Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20.

Female Breast Cancer Incidence



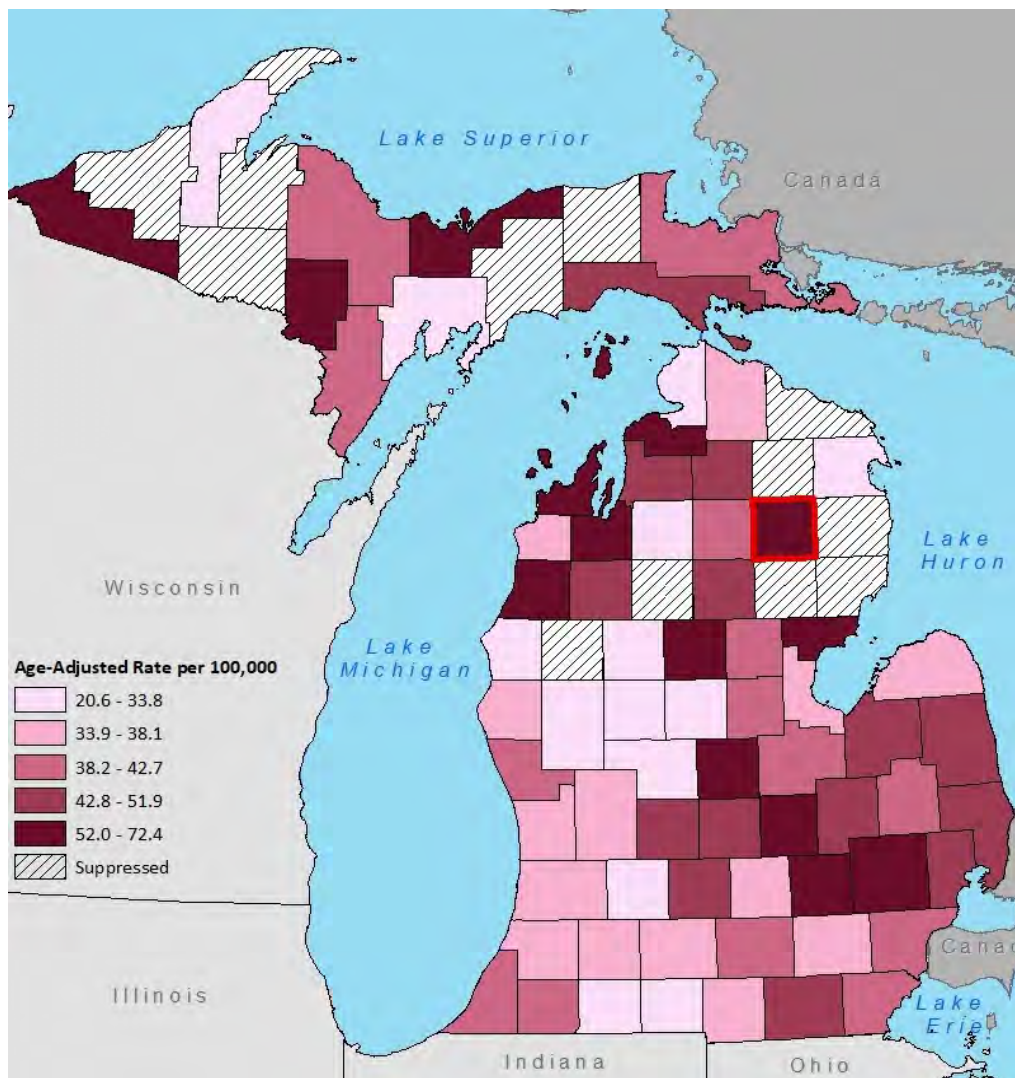
Age-Adjusted Female Breast Cancer Incidence Rate (per 100,000) ^{a-d}

County	Rate	County	Rate
Alcona	89.0	Lake	86.3
Alger	118.7	Lapeer	106.9
Allegan	90.3	Leelanau	100.3
Alpena	110.8	Lenawee	127.0
Antrim	118.4	Livingston	113.5
Arenac	143.8	Luce	.
Baraga	89.3	Mackinac	104.7
Barry	81.8	Macomb	126.0
Bay	107.9	Manistee	131.6
Benzie	112.3	Marquette	124.5
Berrien	121.7	Mason	79.5
Branch	88.7	Mecosta	99.7
Calhoun	103.9	Menominee	113.7
Cass	85.9	Midland	121.7
Charlevoix	115.2	Missaukee	114.1
Cheboygan	117.4	Monroe	101.8
Chippewa	101.8	Montcalm	101.5
Clare	154.4 *	Montmorency	127.6
Clinton	98.5	Muskegon	126.1
Crawford	82.3	Newaygo	88.4
Delta	110.2	Oakland	132.1
Dickinson	128.7	Oceana	110.0
Eaton	125.7	Ogemaw	100.5
Emmet	107.0	Ontonagon	86.8
Genesee	127.5	Osceola	128.6
Gladwin	121.9	Oscoda	104.1
Gogebic	111.2	Otsego	113.8
Grand Traverse	159.3 *	Ottawa	132.0
Gratiot	135.6	Presque Isle	75.0
Hillsdale	108.8	Roscommon	112.7
Houghton	101.7	Saginaw	127.3
Huron	121.1	St Clair	119.8
Ingham	122.2	St Joseph	108.9
Ionia	119.2	Sanilac	109.2
Iosco	95.6	Schoolcraft	103.8
Iron	85.5	Shiawassee	125.6
Isabella	87.7	Tuscola	114.5
Jackson	118.3	Van Buren	115.3
Kalamazoo	114.5	Washtenaw	122.6
Kalkaska	82.6	Wayne	129.3
Kent	129.6	Wexford	114.0
Keweenaw	.	State of Michigan	122.2

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Young Female Breast Cancer Incidence



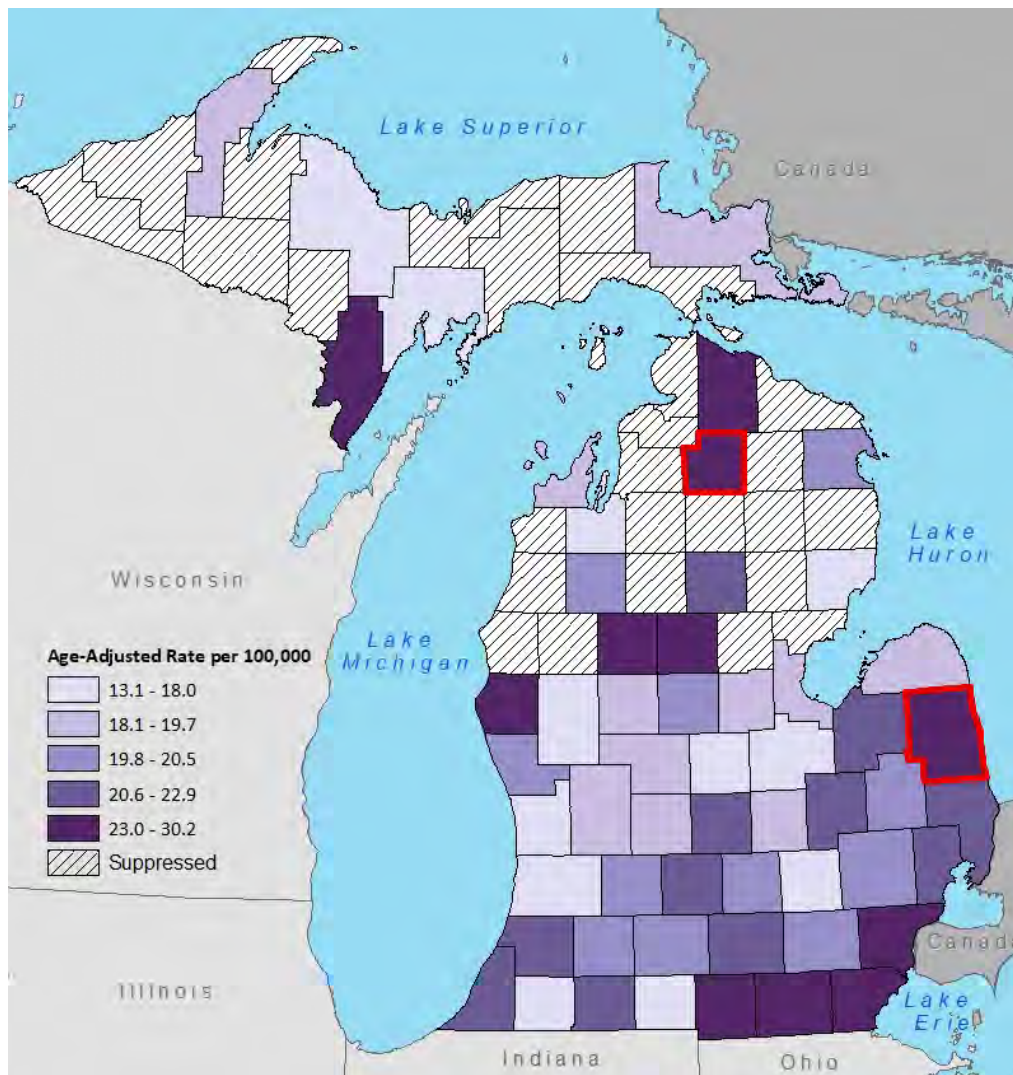
Age-Adjusted Young Female Breast Cancer Incidence Rate (per 100,000) ^{a-e}

County	Rate	County	Rate
Alcona	.	Lake	.
Alger	62.0	Lapeer	39.8
Allegan	35.0	Leelanau	65.8
Alpena	31.4	Lenawee	43.1
Antrim	48.9	Livingston	52.7
Arenac	57.2	Luce	.
Baraga	.	Mackinac	48.0
Barry	31.2	Macomb	47.3
Bay	37.2	Manistee	59.3
Benzie	36.1	Marquette	42.3
Berrien	39.6	Mason	33.8
Branch	28.4	Mecosta	26.9
Calhoun	36.6	Menominee	40.1
Cass	41.1	Midland	40.9
Charlevoix	57.8	Missaukee	.
Cheboygan	35.0	Monroe	39.5
Chippewa	38.9	Montcalm	33.5
Clare	68.7	Montmorency	.
Clinton	48.6	Muskegon	40.0
Crawford	40.5	Newaygo	28.6
Delta	30.8	Oakland	53.6
Dickinson	60.3	Oceana	34.5
Eaton	44.7	Ogemaw	.
Emmet	30.5	Ontonagon	.
Genesee	46.3	Osceola	33.6
Gladwin	41.6	Oscoda	72.4*
Gogebic	57.3	Otsego	51.6
Grand Traverse	57.3	Ottawa	37.7
Gratiot	58.0	Presque Isle	.
Hillsdale	35.3	Roscommon	51.9
Houghton	25.0	Saginaw	38.2
Huron	36.7	St Clair	44.7
Ingham	37.1	St Joseph	31.1
Ionia	48.6	Sanilac	49.2
Iosco	.	Schoolcraft	.
Iron	.	Shiawassee	54.2
Isabella	20.6	Tuscola	43.1
Jackson	41.0	Van Buren	35.9
Kalamazoo	37.5	Washtenaw	37.4
Kalkaska	29.2	Wayne	42.7
Kent	38.1	Wexford	43.2
Keweenaw	.	State of Michigan	42.8

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c Young is defined being diagnosed before the age of 50 ^d County rate suppressed if case count < 20 ^e Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Female Breast Cancer Mortality



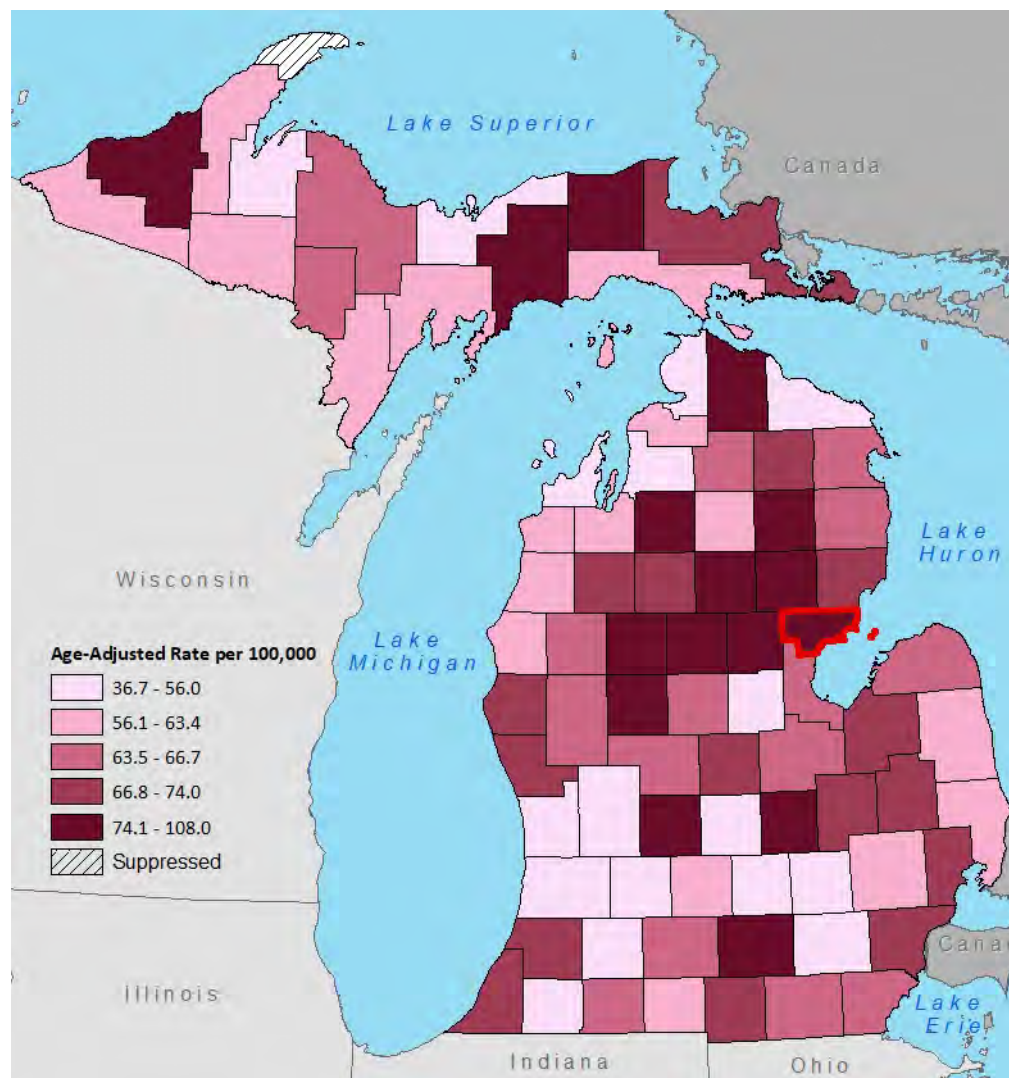
Age-Adjusted Female Breast Cancer Mortality Rate (per 100,000) ^{a-d}

County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	20.3
Allegan	17.3	Leelanau	19.7
Alpena	20.0	Lenawee	25.8
Antrim	.	Livingston	16.6
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	20.5	Macomb	21.4
Bay	19.2	Manistee	.
Benzie	.	Marquette	14.3
Berrien	22.0	Mason	.
Branch	18.0	Mecosta	19.0
Calhoun	20.0	Menominee	23.2
Cass	16.3	Midland	19.3
Charlevoix	.	Missaukee	.
Cheboygan	24.1	Monroe	23.0
Chippewa	18.9	Montcalm	18.9
Clare	26.1	Montmorency	.
Clinton	21.0	Muskegon	19.8
Crawford	.	Newaygo	13.1
Delta	13.5	Oakland	20.0
Dickinson	.	Oceana	23.1
Eaton	22.2	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	22.9	Osceola	25.2
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	30.2 *
Grand Traverse	16.2	Ottawa	16.2
Gratiot	17.2	Presque Isle	.
Hillsdale	26.3	Roscommon	21.6
Houghton	19.5	Saginaw	17.5
Huron	18.4	St Clair	21.8
Ingham	20.0	St Joseph	20.7
Ionia	19.5	Sanilac	26.8 *
Iosco	17.1	Schoolcraft	.
Iron	.	Shiawassee	19.6
Isabella	20.1	Tuscola	22.5
Jackson	21.2	Van Buren	20.8
Kalamazoo	20.5	Washtenaw	20.5
Kalkaska	.	Wayne	23.5
Kent	18.5	Wexford	20.2
Keweenaw	.	State of Michigan	20.6

Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by red asterisk in the table.

Lung & Bronchus Cancer Incidence



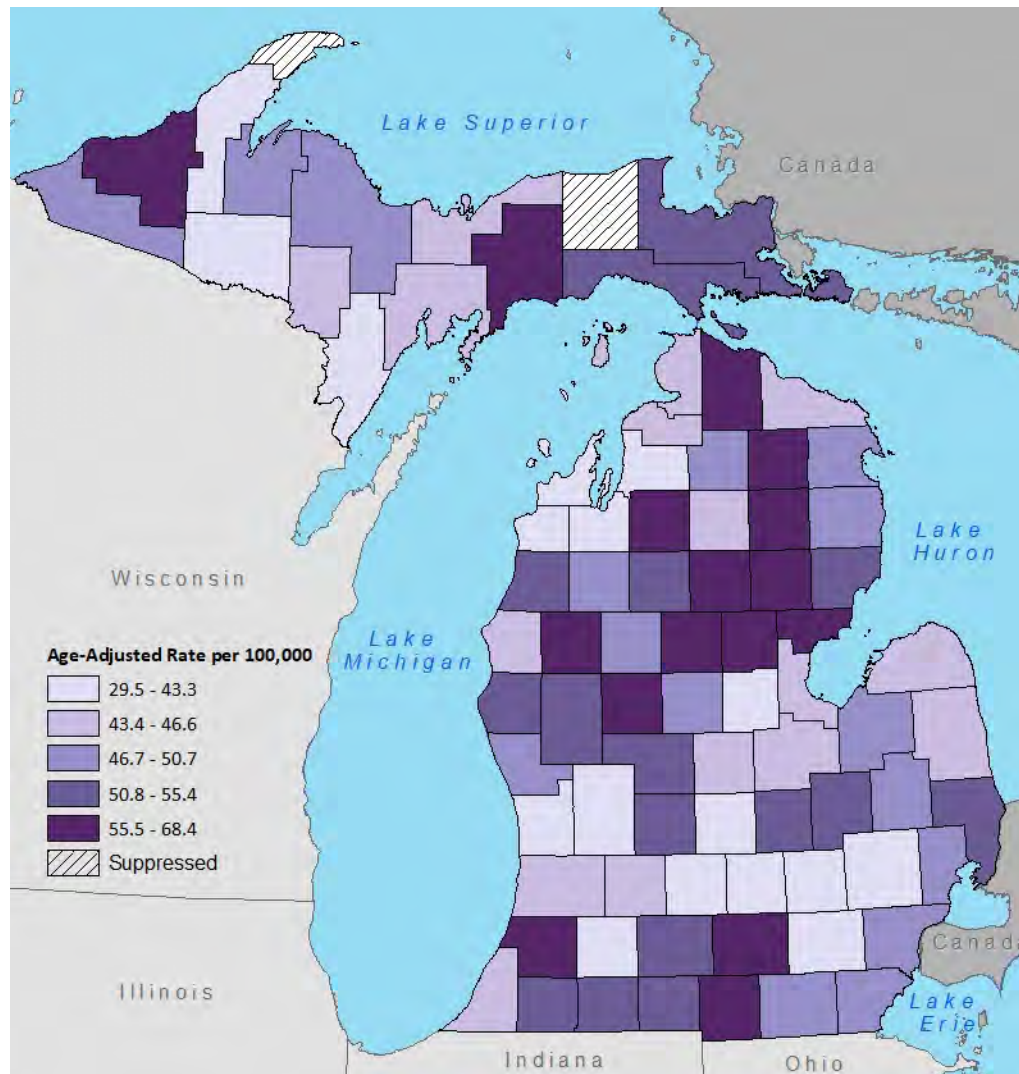
Age-Adjusted Lung & Bronchus Cancer Incidence Rate (per 100,000) ^{a-d}

County	Percent (%)	County	Percent (%)
Alcona	66.2	Lake	64.3
Alger	53.6	Lapeer	68.5
Allegan	52.5	Leelanau	37.6
Alpena	64.4	Lenawee	63.8
Antrim	55.3	Livingston	47.0
Arenac	108.0 *	Luce	80.4
Baraga	54.8	Mackinac	59.9
Barry	47.6	Macomb	71.4
Bay	65.4	Manistee	56.5
Benzie	58.5	Marquette	64.9
Berrien	69.0	Mason	60.2
Branch	63.4	Mecosta	80.9
Calhoun	66.3	Menominee	59.2
Cass	55.4	Midland	49.3
Charlevoix	62.7	Missaukee	70.0
Cheboygan	78.4	Monroe	65.0
Chippewa	72.1	Montcalm	66.7
Clare	81.2	Montmorency	73.5
Clinton	36.7	Muskegon	70.3
Crawford	56.7	Newaygo	63.5
Delta	58.6	Oakland	56.8
Dickinson	63.6	Oceana	70.9
Eaton	56.5	Ogemaw	78.0
Emmet	56.0	Ontonagon	75.0
Genesee	74.0	Osceola	91.9
Gladwin	74.7	Oscoda	80.6
Gogebic	62.1	Otsego	64.4
Grand Traverse	61.5	Ottawa	41.0
Gratiot	67.0	Presque Isle	47.2
Hillsdale	67.2	Roscommon	85.4
Houghton	57.9	Saginaw	63.8
Huron	65.8	St Clair	62.6
Ingham	55.7	St Joseph	66.7
Ionia	74.6	Sanilac	56.4
Iosco	73.4	Schoolcraft	90.8
Iron	56.1	Shiawassee	77.0
Isabella	65.7	Tuscola	68.5
Jackson	74.7	Van Buren	72.9
Kalamazoo	55.4	Washtenaw	47.6
Kalkaska	76.9	Wayne	73.9
Kent	55.3	Wexford	69.4
Keweenaw	.	State of Michigan	63.9

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Lung & Bronchus Cancer Mortality



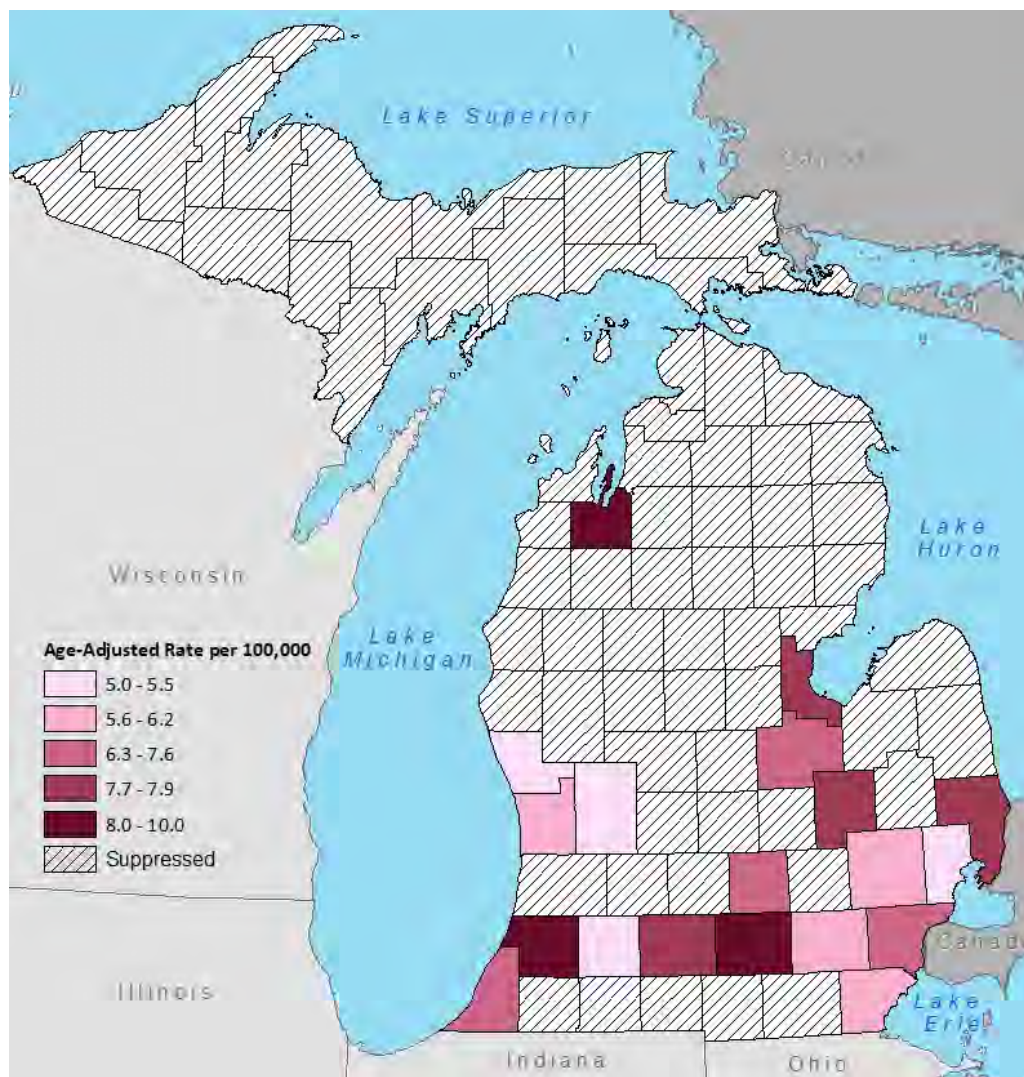
Age-Adjusted Lung & Bronchus Cancer Mortality Rate (per 100,000) ^{a-c}

County	Rate	County	Rate
Alcona	49.9	Lake	65.2
Alger	45.8	Lapeer	50.4
Allegan	45.6	Leelanau	31.2
Alpena	48.6	Lenawee	48.1
Antrim	36.2	Livingston	36.6
Arenac	64.2	Luce	.
Baraga	49.0	Mackinac	55.4
Barry	44.4	Macomb	49.7
Bay	45.8	Manistee	51.6
Benzie	43.3	Marquette	50.3
Berrien	46.6	Mason	46.4
Branch	53.3	Mecosta	56.6
Calhoun	50.7	Menominee	38.6
Cass	52.1	Midland	34.2
Charlevoix	43.3	Missaukee	53.8
Cheboygan	60.1	Monroe	50.7
Chippewa	55.2	Montcalm	51.2
Clare	57.1	Montmorency	55.9
Clinton	33.9	Muskegon	47.9
Crawford	43.9	Newaygo	55.0
Delta	44.9	Oakland	36.2
Dickinson	44.6	Oceana	53.5
Eaton	39.5	Ogemaw	63.3
Emmet	44.9	Ontonagon	67.1
Genesee	51.3	Osceola	49.8
Gladwin	56.1	Oscoda	57.8
Gogebic	47.3	Otsego	50.5
Grand Traverse	38.5	Ottawa	29.5
Gratiot	45.7	Presque Isle	44.4
Hillsdale	56.0	Roscommon	60.0
Houghton	41.4	Saginaw	46.4
Huron	45.4	St Clair	52.3
Ingham	39.0	St Joseph	52.6
Ionia	52.7	Sanilac	46.0
Iosco	54.8	Schoolcraft	68.4
Iron	36.2	Shiawassee	54.7
Isabella	47.0	Tuscola	46.9
Jackson	58.0	Van Buren	58.4
Kalamazoo	38.4	Washtenaw	34.0
Kalkaska	62.1	Wayne	50.0
Kent	38.5	Wexford	49.5
Keweenaw	.	State of Michigan	45.4

Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20.

Cervical Cancer Incidence



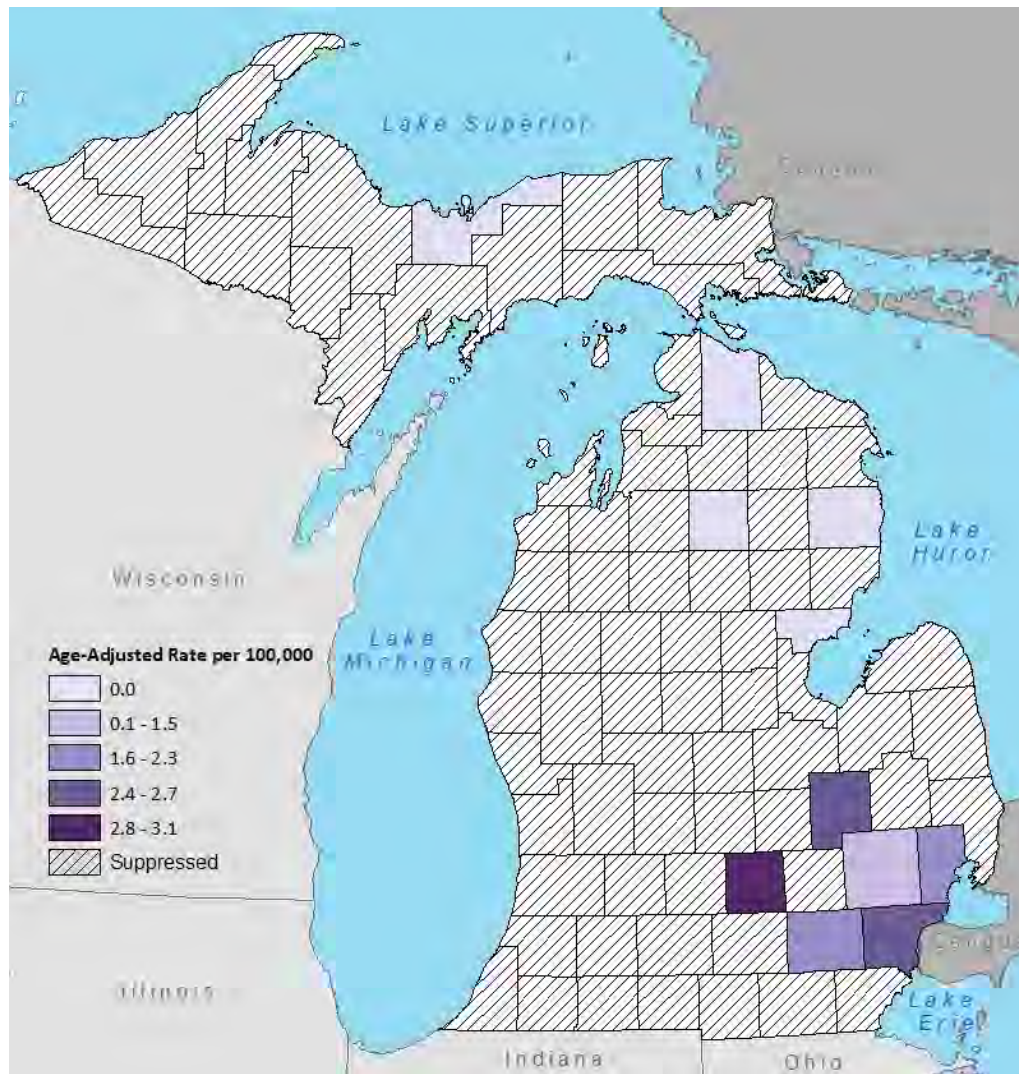
Age-Adjusted Cervical Cancer Incidence Rate (per 100,000) ^{a-d}

County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	.
Allegan	.	Leelanau	.
Alpena	.	Lenawee	.
Antrim	.	Livingston	.
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	.	Macomb	5.5
Bay	7.8	Manistee	.
Benzie	.	Marquette	.
Berrien	6.8	Mason	.
Branch	.	Mecosta	.
Calhoun	7.9	Menominee	.
Cass	.	Midland	.
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	6.2
Chippewa	.	Montcalm	.
Clare	.	Montmorency	.
Clinton	.	Muskegon	5.2
Crawford	.	Newaygo	.
Delta	.	Oakland	5.8
Dickinson	.	Oceana	.
Eaton	.	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	7.7	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	7.9	Ottawa	5.8
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	.
Houghton	.	Saginaw	7.1
Huron	.	St Clair	7.8
Ingham	7.4	St Joseph	.
Ionia	.	Sanilac	.
Iosco	.	Schoolcraft	.
Iron	.	Shiawassee	.
Isabella	.	Tuscola	.
Jackson	8.0	Van Buren	10.0
Kalamazoo	5.0	Washtenaw	5.8
Kalkaska	.	Wayne	7.6
Kent	5.2	Wexford	.
Keweenaw	.	State of Michigan	6.5

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20. ^d Among females only.

Cervical Cancer Mortality



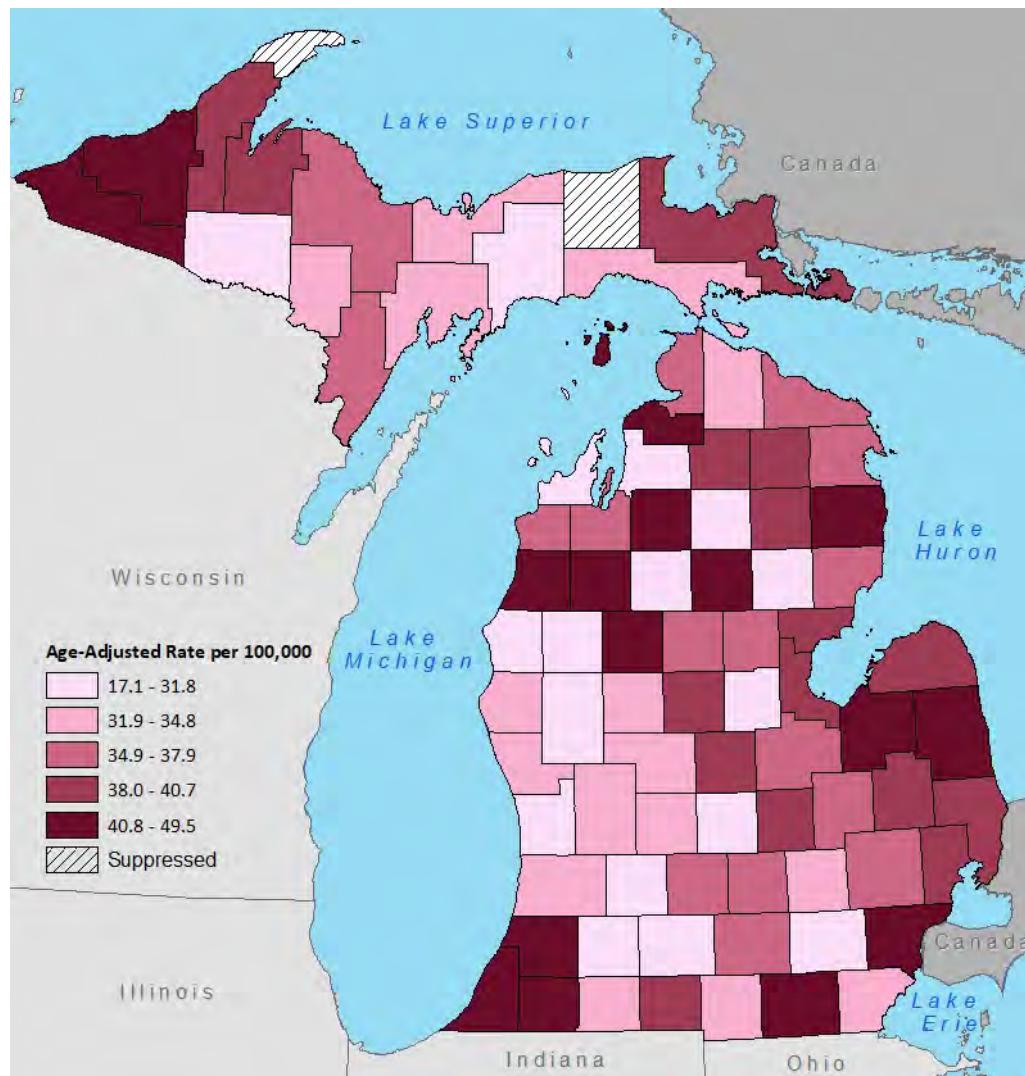
Age-Adjusted Cervical Cancer Mortality Rate (per 100,000) ^{a-d}

County	Rate	County	Rate
Alcona	0.0	Lake	.
Alger	0.0	Lapeer	.
Allegan	.	Leelanau	.
Alpena	.	Lenawee	.
Antrim	.	Livingston	.
Arenac	0.0	Luce	.
Baraga	.	Mackinac	.
Barry	.	Macomb	2.1
Bay	.	Manistee	.
Benzie	.	Marquette	.
Berrien	.	Mason	.
Branch	.	Mecosta	.
Calhoun	.	Menominee	.
Cass	.	Midland	.
Charlevoix	.	Missaukee	.
Cheboygan	0.0	Monroe	.
Chippewa	.	Montcalm	.
Clare	.	Montmorency	.
Clinton	.	Muskegon	.
Crawford	0.0	Newaygo	.
Delta	.	Oakland	1.5
Dickinson	.	Oceana	.
Eaton	.	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	2.7	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	.	Ottawa	.
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	.
Houghton	.	Saginaw	.
Huron	.	St Clair	.
Ingham	3.1	St Joseph	.
Ionia	.	Sanilac	.
Iosco	.	Schoolcraft	.
Iron	.	Shiawassee	.
Isabella	.	Tuscola	.
Jackson	.	Van Buren	.
Kalamazoo	.	Washtenaw	2.3
Kalkaska	.	Wayne	2.7
Kent	.	Wexford	.
Keweenaw	.	State of Michigan	1.6

Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Among females only.

Colorectal Cancer Incidence



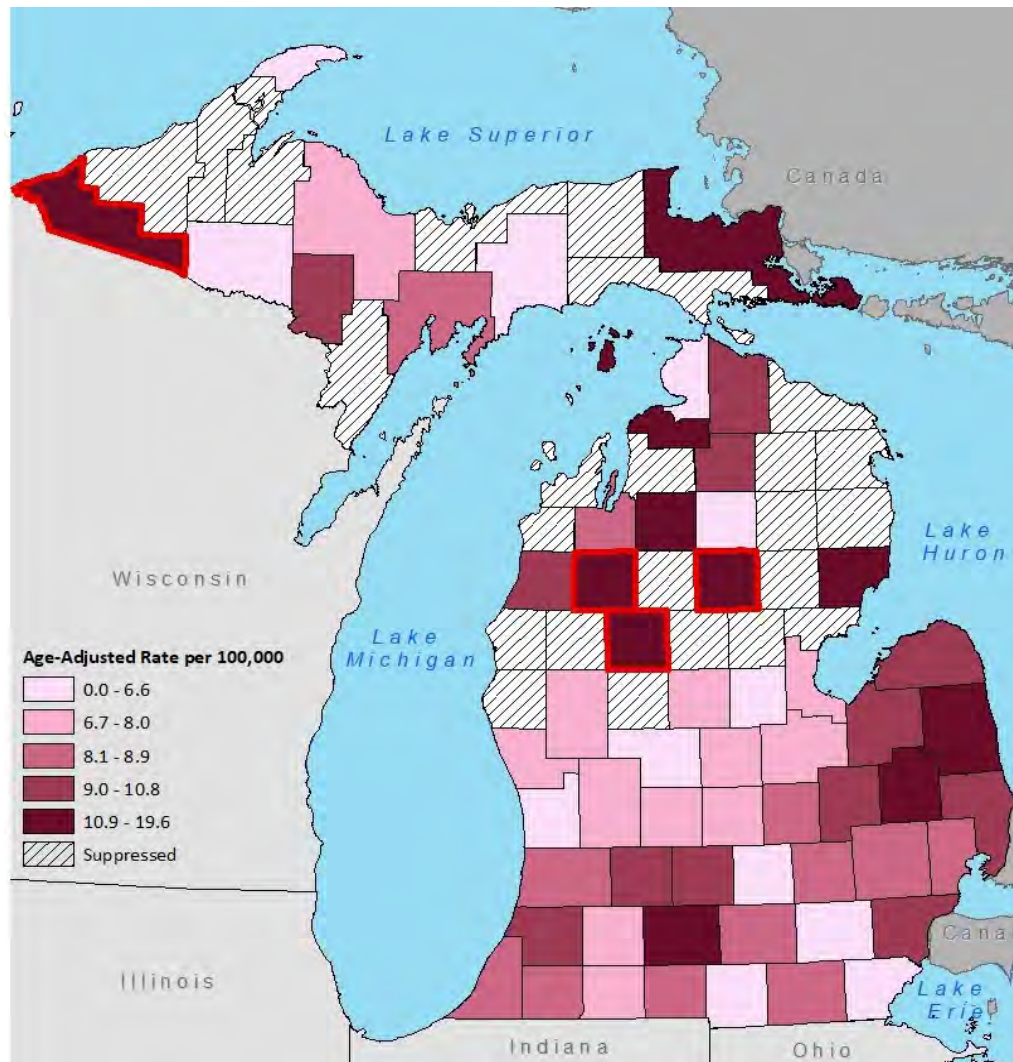
Age-Adjusted Colorectal Cancer Incidence Rate (per 100,000) ^{a-c}

County	Rate	County	Rate
Alcona	42.3	Lake	30.4
Alger	33.6	Lapeer	40.4
Allegan	32.8	Leelanau	20.5
Alpena	36.7	Lenawee	43.5
Antrim	31.8	Livingston	33.0
Arenac	39.1	Luce	.
Baraga	40.1	Mackinac	33.3
Barry	21.8	Macomb	38.6
Bay	39.8	Manistee	42.8
Benzie	37.2	Marquette	37.3
Berrien	41.5	Mason	17.1
Branch	38.6	Mecosta	33.5
Calhoun	31.7	Menominee	37.9
Cass	40.8	Midland	29.0
Charlevoix	43.5	Missaukee	24.1
Cheboyan	33.3	Monroe	33.9
Chippewa	40.3	Montcalm	34.7
Clare	37.6	Montmorency	40.6
Clinton	20.2	Muskegon	34.3
Crawford	31.5	Newaygo	27.9
Delta	33.2	Oakland	35.8
Dickinson	32.9	Oceana	33.8
Eaton	36.3	Ogemaw	25.7
Emmet	35.0	Ontonagon	46.8
Genesee	37.3	Osceola	48.7
Gladwin	35.0	Oscoda	40.7
Gogebic	44.2	Otsego	40.5
Grand Traverse	35.9	Ottawa	29.4
Gratiot	39.9	Presque Isle	36.0
Hillsdale	33.2	Roscommon	47.1
Houghton	38.4	Saginaw	35.2
Huron	39.2	St Clair	38.7
Ingham	37.1	St Joseph	34.8
Ionia	32.9	Sanilac	46.2
Iosco	37.2	Schoolcraft	31.8
Iron	23.5	Shiawassee	40.6
Isabella	40.3	Tuscola	49.5
Jackson	36.2	Van Buren	41.2
Kalamazoo	31.0	Washtenaw	28.8
Kalkaska	46.2	Wayne	44.7
Kent	33.6	Wexford	47.0
Keweenaw	.	State of Michigan	37.1

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20.

Young Colorectal Cancer Incidence



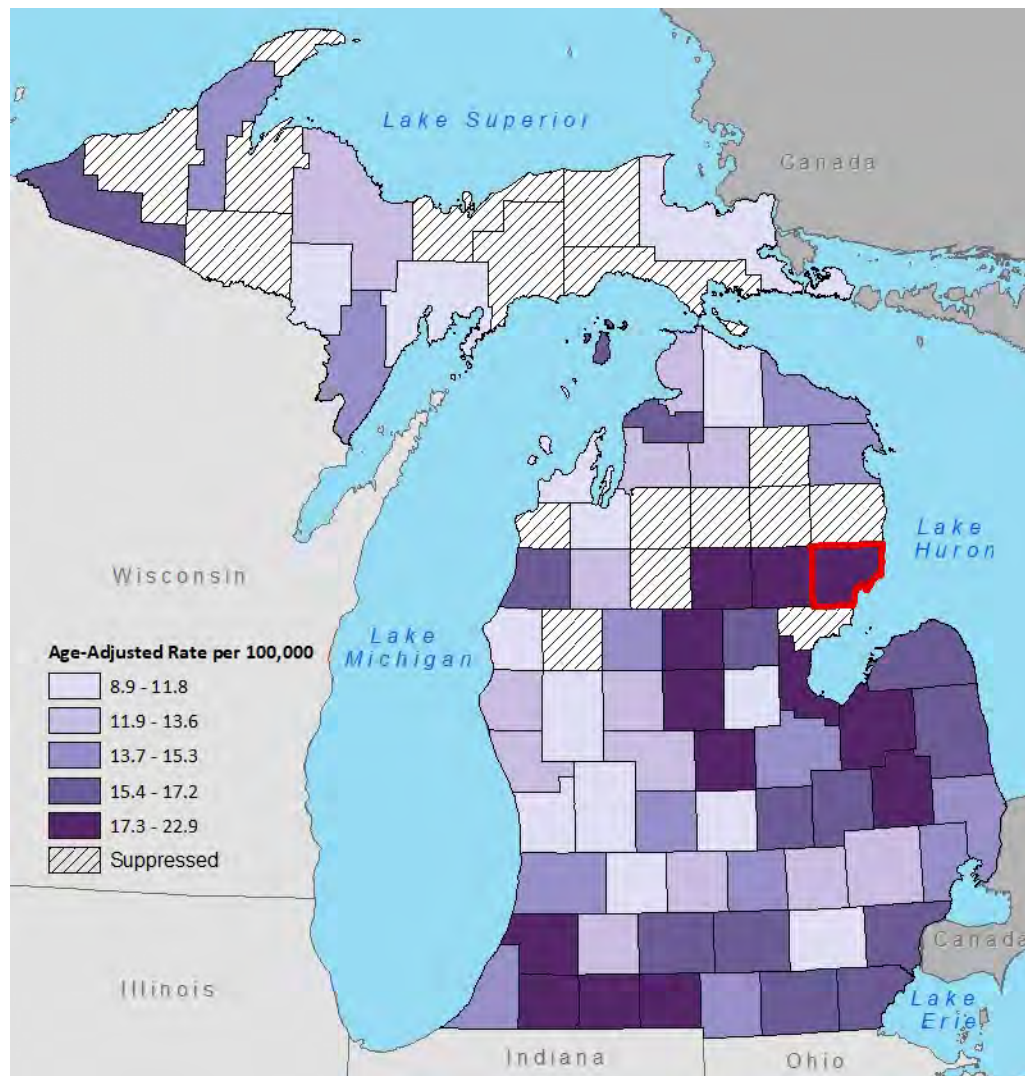
Age-Adjusted Young Colorectal Cancer Incidence Rate (per 100,000) ^{a-e}

County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	13.2
Allegan	8.9	Leelanau	.
Alpena	.	Lenawee	8.2
Antrim	.	Livingston	8.2
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	10.2	Macomb	8.5
Bay	8.0	Manistee	9.4
Benzie	.	Marquette	7.2
Berrien	8.5	Mason	.
Branch	8.1	Mecosta	.
Calhoun	11.4	Menominee	.
Cass	8.1	Midland	6.2
Charlevoix	11.4	Missaukee	.
Cheboygan	9.3	Monroe	6.1
Chippewa	12.4	Montcalm	6.6
Clare	.	Montmorency	.
Clinton	7.4	Muskegon	7.1
Crawford	0.0	Newaygo	7.0
Delta	8.1	Oakland	8.1
Dickinson	9.8	Oceana	.
Eaton	9.0	Ogemaw	.
Emmet	6.4	Ontonagon	.
Genesee	9.7	Osceola	17.6*
Gladwin	.	Oscoda	.
Gogebic	14.6*	Otsego	10.0
Grand Traverse	8.4	Ottawa	4.9
Gratiot	7.5	Presque Isle	.
Hillsdale	4.3	Roscommon	19.6*
Houghton	.	Saginaw	7.5
Huron	9.5	St Clair	9.4
Ingham	6.3	St Joseph	7.9
Ionia	7.0	Sanilac	12.6
Iosco	13.5	Schoolcraft	0.0
Iron	0.0	Shiawassee	8.1
Isabella	7.3	Tuscola	10.8
Jackson	8.4	Van Buren	10.4
Kalamazoo	6.8	Washtenaw	5.7
Kalkaska	14.1	Wayne	9.1
Kent	7.6	Wexford	15.2*
Keweenaw	0.0	State of Michigan	8.2

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c Young is defined being diagnosed before the age of 50 ^d County rate suppressed if case count < 20 ^e Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Colorectal Cancer Mortality



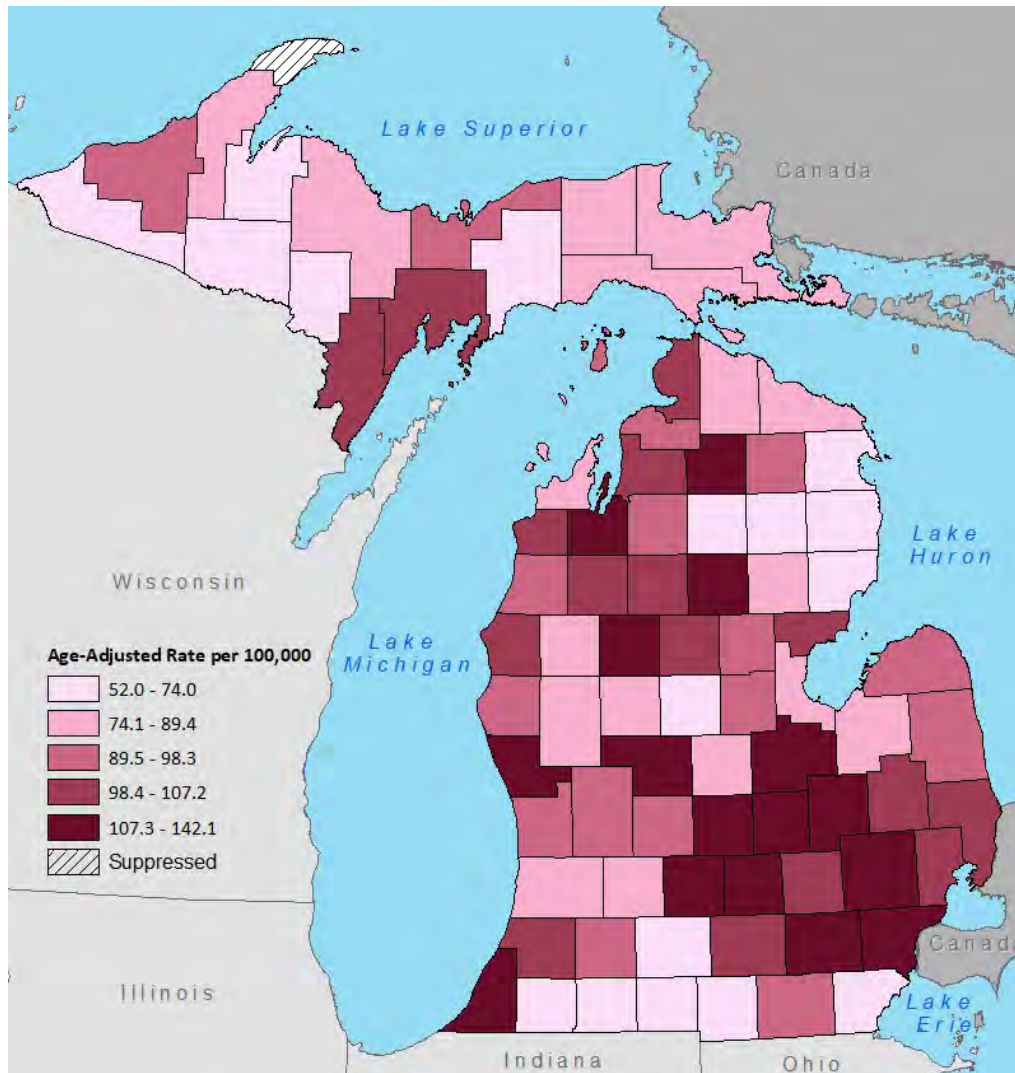
Age-Adjusted Colorectal Cancer Mortality Rate (per 100,000) ^{a-d}			
County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	17.2
Allegan	14.1	Leelanau	9.6
Alpena	15.3	Lenawee	15.7
Antrim	12.5	Livingston	13.5
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	10.6	Macomb	13.9
Bay	18.1	Manistee	15.9
Benzie	.	Marquette	13.3
Berrien	15.1	Mason	8.9
Branch	18.6	Mecosta	12.0
Calhoun	17.2	Menominee	15.3
Cass	17.8	Midland	11.1
Charlevoix	16.2	Missaukee	.
Cheboyan	9.3	Monroe	15.5
Chippewa	11.2	Montcalm	11.9
Clare	19.9	Montmorency	.
Clinton	11.3	Muskegon	13.6
Crawford	.	Newaygo	9.9
Delta	10.8	Oakland	12.1
Dickinson	11.7	Oceana	12.7
Eaton	13.2	Ogemaw	20.2
Emmet	12.6	Ontonagon	.
Genesee	15.7	Osceola	14.4
Gladwin	15.5	Oscoda	.
Gogebic	15.9	Otsego	12.1
Grand Traverse	11.0	Ottawa	11.0
Gratiot	17.3	Presque Isle	14.1
Hillsdale	14.2	Roscommon	21.6
Houghton	14.9	Saginaw	14.0
Huron	17.2	St Clair	14.7
Ingham	15.3	St Joseph	18.3
Ionia	14.3	Sanilac	16.3
Iosco	22.9 *	Schoolcraft	.
Iron	.	Shiawassee	16.3
Isabella	20.6	Tuscola	18.2
Jackson	16.4	Van Buren	17.8
Kalamazoo	12.6	Washtenaw	10.9
Kalkaska	.	Wayne	16.3
Kent	11.5	Wexford	13.5
Keweenaw	.	State of Michigan	14.2

Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20

^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Prostate Cancer Incidence



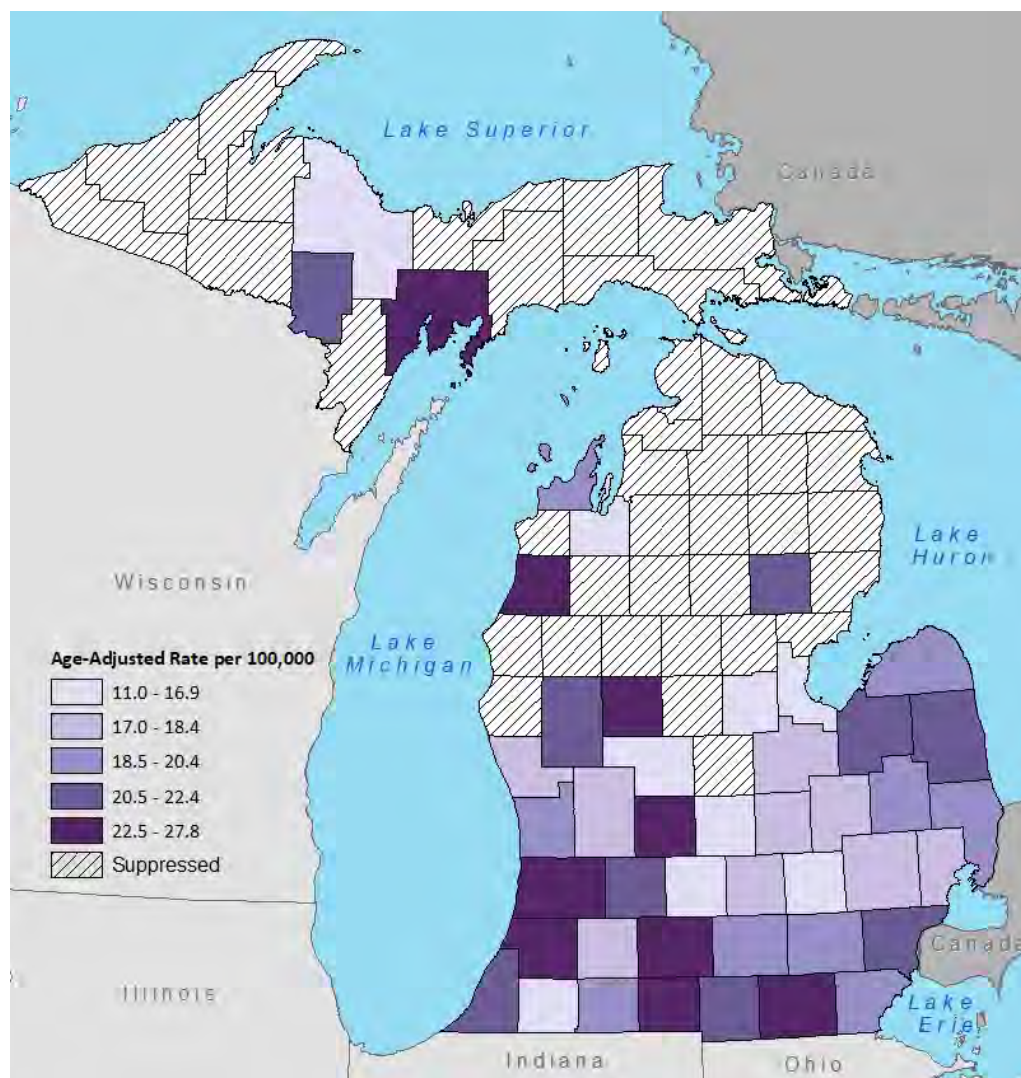
Age-Adjusted Prostate Cancer Incidence Rate (per 100,000) ^{a-d}

County	Rate	County	Rate
Alcona	68.3	Lake	74.4
Alger	94.8	Lapeer	100.1
Allegan	82.2	Leelanau	86.5
Alpena	68.3	Lenawee	98.3
Antrim	107.0	Livingston	105.5
Arenac	98.8	Luce	89.4
Baraga	72.9	Mackinac	75.4
Barry	82.4	Macomb	107.2
Bay	78.4	Manistee	94.0
Benzie	102.5	Marquette	87.3
Berrien	116.2	Mason	106.2
Branch	55.6	Mecosta	80.7
Calhoun	65.9	Menominee	102.9
Cass	67.0	Midland	89.6
Charlevoix	94.3	Missaukee	101.8
Cheboygan	83.8	Monroe	72.6
Chippewa	80.4	Montcalm	110.2
Clare	98.8	Montmorency	92.9
Clinton	107.7	Muskegon	109.0
Crawford	74.0	Newaygo	76.5
Delta	104.6	Oakland	121.5
Dickinson	65.7	Oceana	98.0
Eaton	127.4	Ogemaw	76.5
Emmet	100.2	Ontonagon	94.4
Genesee	116.8	Osceola	120.6
Gladwin	91.2	Oscoda	72.6
Gogebic	74.0	Otsego	109.6
Grand Traverse	142.1	Ottawa	97.8
Gratiot	74.6	Presque Isle	82.0
Hillsdale	62.9	Roscommon	114.1
Houghton	74.6	Saginaw	108.2
Huron	97.9	St Clair	101.1
Ingham	126.9	St Joseph	69.6
Ionia	94.8	Sanilac	91.2
Iosco	67.0	Schoolcraft	60.9
Iron	52.0	Shiawassee	112.2
Isabella	62.4	Tuscola	85.0
Jackson	102.9	Van Buren	103.7
Kalamazoo	97.8	Washtenaw	109.1
Kalkaska	90.5	Wayne	134.6
Kent	96.7	Wexford	99.6
Keweenaw	.	State of Michigan	107.3

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Among males only.

Prostate Cancer Mortality



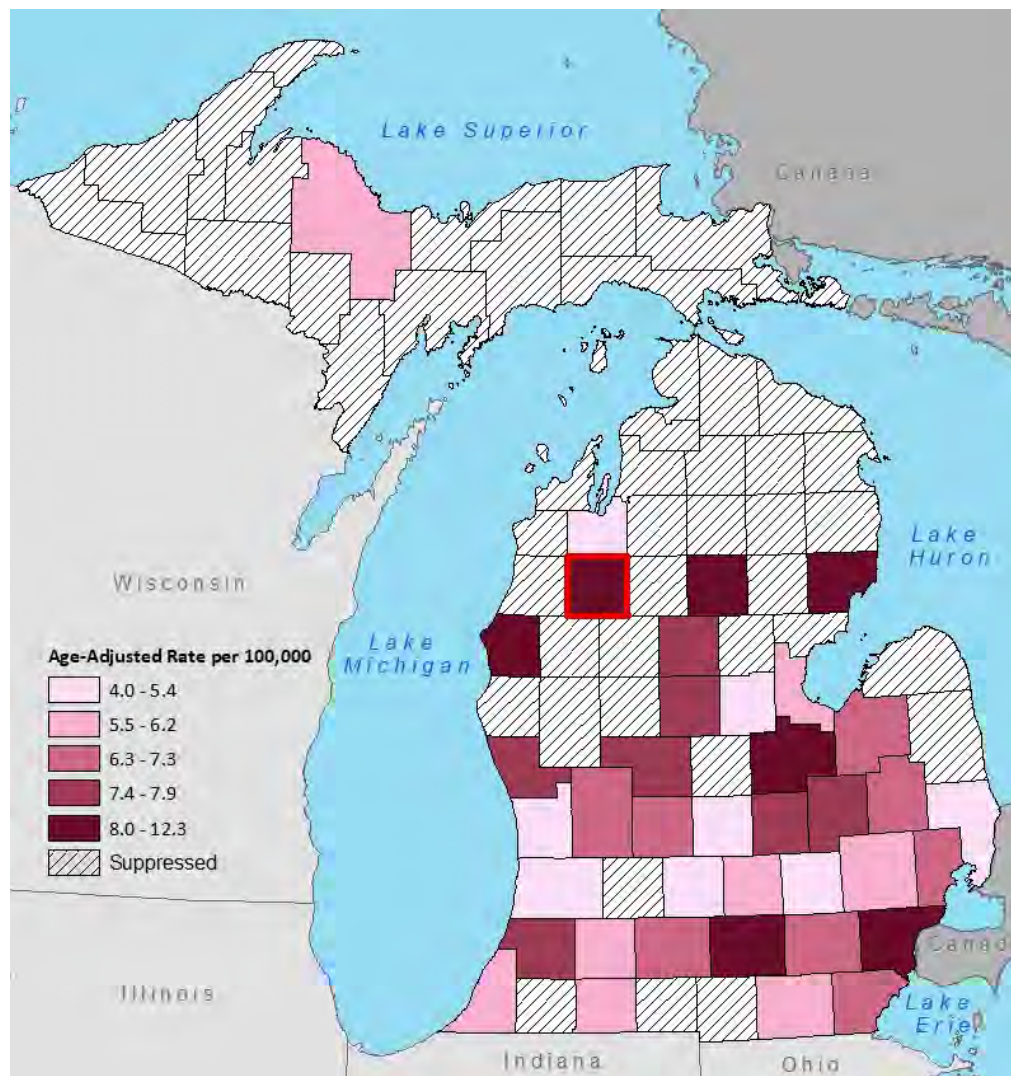
Age-Adjusted Prostate Cancer Mortality Rate (per 100,000) ^{a-d}

County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	18.9
Allegan	22.8	Leelanau	20.2
Alpena	.	Lenawee	24.5
Antrim	.	Livingston	16.5
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	20.5	Macomb	18.0
Bay	14.7	Manistee	27.8
Benzie	.	Marquette	14.3
Berrien	21.4	Mason	.
Branch	22.6	Mecosta	24.2
Calhoun	23.4	Menominee	.
Cass	16.1	Midland	11.0
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	20.4
Chippewa	.	Montcalm	16.9
Clare	.	Montmorency	.
Clinton	14.7	Muskegon	17.4
Crawford	.	Newaygo	20.7
Delta	25.7	Oakland	17.1
Dickinson	21.5	Oceana	.
Eaton	13.5	Ogemaw	22.2
Emmet	.	Ontonagon	.
Genesee	18.4	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	11.8	Ottawa	18.5
Gratiot	.	Presque Isle	.
Hillsdale	21.2	Roscommon	.
Houghton	.	Saginaw	17.2
Huron	18.6	St Clair	18.8
Ingham	17.6	St Joseph	19.1
Ionia	23.4	Sanilac	22.4
Iosco	.	Schoolcraft	.
Iron	.	Shiawassee	17.0
Isabella	.	Tuscola	21.0
Jackson	20.4	Van Buren	25.9
Kalamazoo	18.3	Washtenaw	19.4
Kalkaska	.	Wayne	22.1
Kent	17.8	Wexford	.
Keweenaw	.	State of Michigan	18.7

Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Among males only.

Liver Cancer Incidence

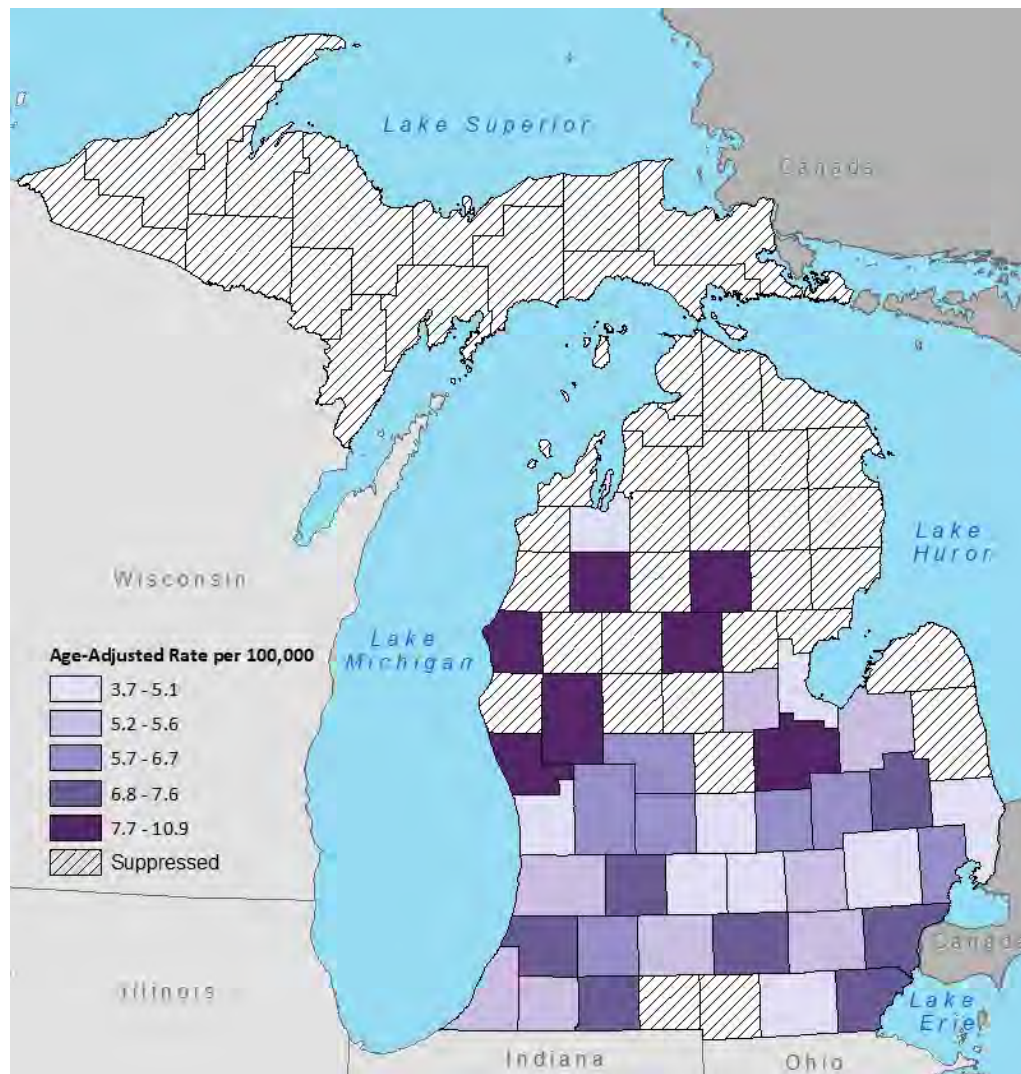


Age-Adjusted Liver Cancer Incidence Rate (per 100,000) ^{a-d}			
County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	6.3
Allegan	5.1	Leelanau	.
Alpena	.	Lenawee	6.0
Antrim	.	Livingston	5.2
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	.	Macomb	6.6
Bay	6.1	Manistee	.
Benzie	.	Marquette	5.6
Berrien	5.9	Mason	8.5
Branch	.	Mecosta	.
Calhoun	6.4	Menominee	.
Cass	.	Midland	4.0
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	6.9
Chippewa	.	Montcalm	7.3
Clare	7.4	Montmorency	.
Clinton	4.3	Muskegon	7.3
Crawford	.	Newaygo	.
Delta	.	Oakland	6.2
Dickinson	.	Oceana	.
Eaton	4.7	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	7.9	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	4.4	Ottawa	4.6
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	10.1
Houghton	.	Saginaw	8.5
Huron	.	St Clair	5.4
Ingham	5.5	St Joseph	6.1
Ionia	6.8	Sanilac	.
Iosco	9.4	Schoolcraft	.
Iron	.	Shiawassee	7.4
Isabella	7.4	Tuscola	6.4
Jackson	8.1	Van Buren	7.8
Kalamazoo	6.0	Washtenaw	6.3
Kalkaska	.	Wayne	9.8
Kent	7.3	Wexford	12.3 *
Keweenaw	.	State of Michigan	6.9

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Liver Cancer Mortality

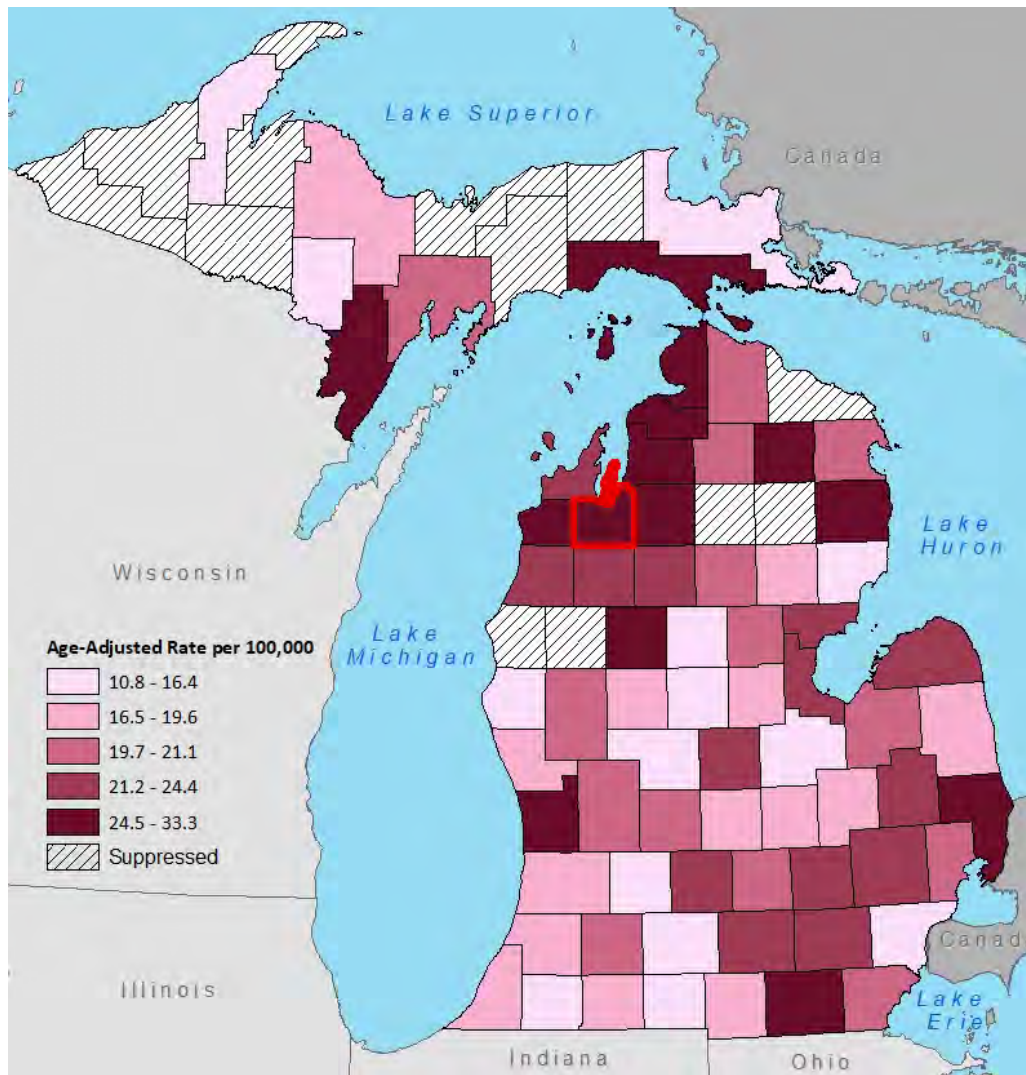


Age-Adjusted Liver Cancer Mortality Rate (per 100,000) ^{a-c}			
County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	7.6
Allegan	5.4	Leelanau	.
Alpena	.	Lenawee	4.2
Antrim	.	Livingston	5.2
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	6.8	Macomb	5.6
Bay	4.2	Manistee	.
Benzie	.	Marquette	.
Berrien	5.3	Mason	9.3
Branch	.	Mecosta	.
Calhoun	5.4	Menominee	.
Cass	5.3	Midland	5.6
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	7.3
Chippewa	.	Montcalm	5.8
Clare	10.8	Montmorency	.
Clinton	5.1	Muskegon	8.9
Crawford	.	Newaygo	8.5
Delta	.	Oakland	5.0
Dickinson	.	Oceana	.
Eaton	5.1	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	6.7	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	3.7	Ottawa	4.4
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	10.8
Houghton	.	Saginaw	7.7
Huron	.	St Clair	5.0
Ingham	4.6	St Joseph	7.0
Ionia	6.0	Sanilac	.
Iosco	.	Schoolcraft	.
Iron	.	Shiawassee	6.6
Isabella	.	Tuscola	5.3
Jackson	7.5	Van Buren	7.0
Kalamazoo	5.7	Washtenaw	5.4
Kalkaska	.	Wayne	7.5
Kent	5.8	Wexford	10.9
Keweenaw	.	State of Michigan	6.0

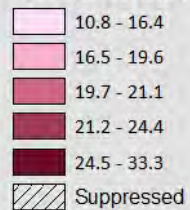
Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20.

Melanoma Incidence



Age-Adjusted Rate per 100,000



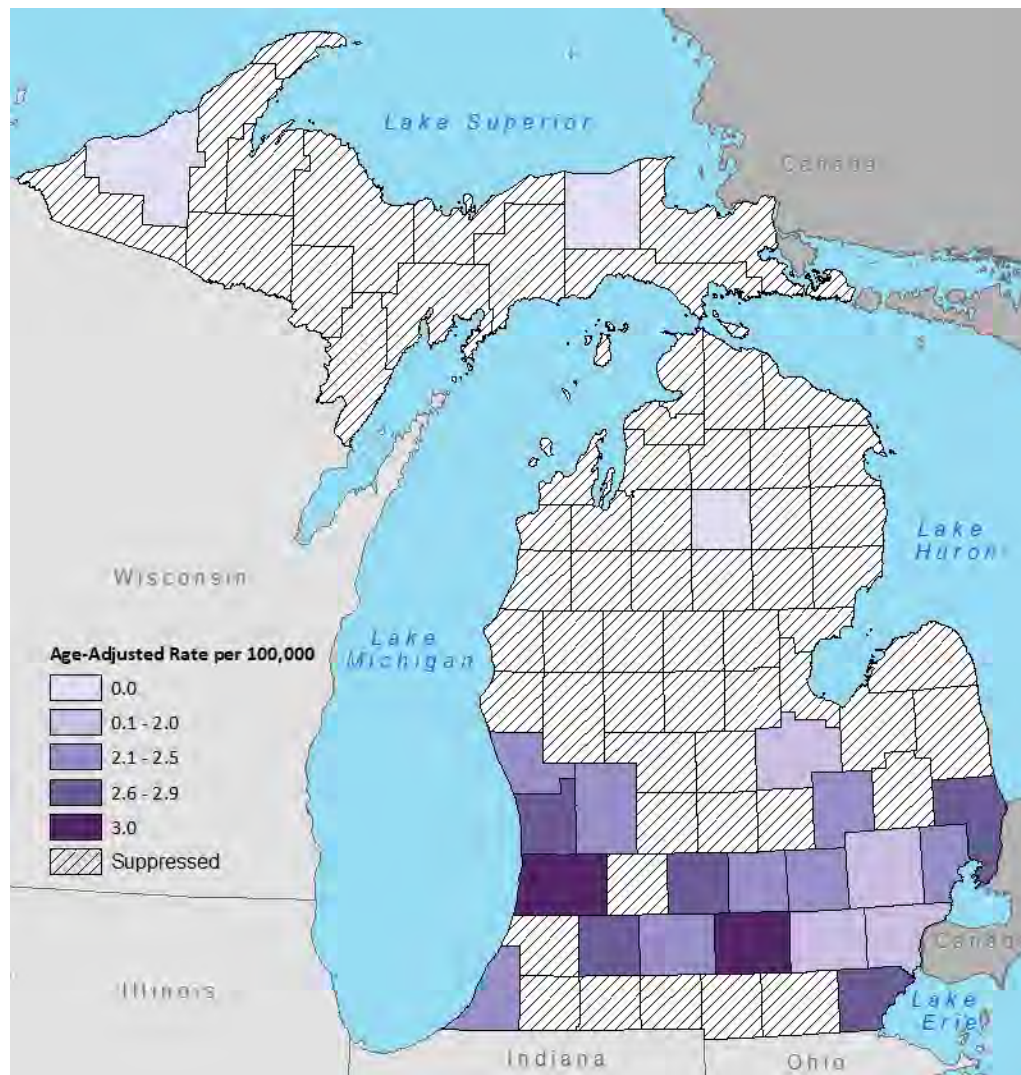
Age-Adjusted Melanoma Cancer Incidence Rate (per 100,000) ^{a-d}

County	Rate	County	Rate
Alcona	27.1	Lake	.
Alger	.	Lapeer	23.6
Allegan	17.9	Leelanau	23.1
Alpena	20.8	Lenawee	24.9
Antrim	30.2	Livingston	24.2
Arenac	24.4	Luce	.
Baraga	.	Mackinac	28.6
Barry	12.3	Macomb	19.7
Bay	22.7	Manistee	22.4
Benzie	30.1	Marquette	17.2
Berrien	18.4	Mason	.
Branch	13.7	Mecosta	18.1
Calhoun	14.3	Menominee	24.9
Cass	15.6	Midland	19.0
Charlevoix	26.7	Missaukee	22.4
Cheboygan	20.9	Monroe	20.0
Chippewa	14.3	Montcalm	16.4
Clare	11.1	Montmorency	30.1
Clinton	19.2	Muskegon	19.6
Crawford	.	Newaygo	19.9
Delta	19.8	Oakland	22.7
Dickinson	14.2	Oceana	12.6
Eaton	22.5	Ogemaw	17.0
Emmet	30.7	Ontonagon	.
Genesee	17.4	Osceola	27.7
Gladwin	20.6	Oscoda	.
Gogebic	.	Otsego	20.9
Grand Traverse	33.3 *	Ottawa	27.6
Gratiot	21.5	Presque Isle	.
Hillsdale	18.5	Roscommon	19.8
Houghton	13.3	Saginaw	15.1
Huron	23.5	St Clair	25.3
Ingham	20.6	St Joseph	17.6
Ionia	20.5	Sanilac	16.7
Iosco	15.8	Schoolcraft	.
Iron	.	Shiawassee	19.1
Isabella	10.8	Tuscola	21.1
Jackson	23.0	Van Buren	17.0
Kalamazoo	20.7	Washtenaw	23.4
Kalkaska	29.5	Wayne	12.5
Kent	21.0	Wexford	24.0
Keweenaw	.	State of Michigan	19.3

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Melanoma Mortality



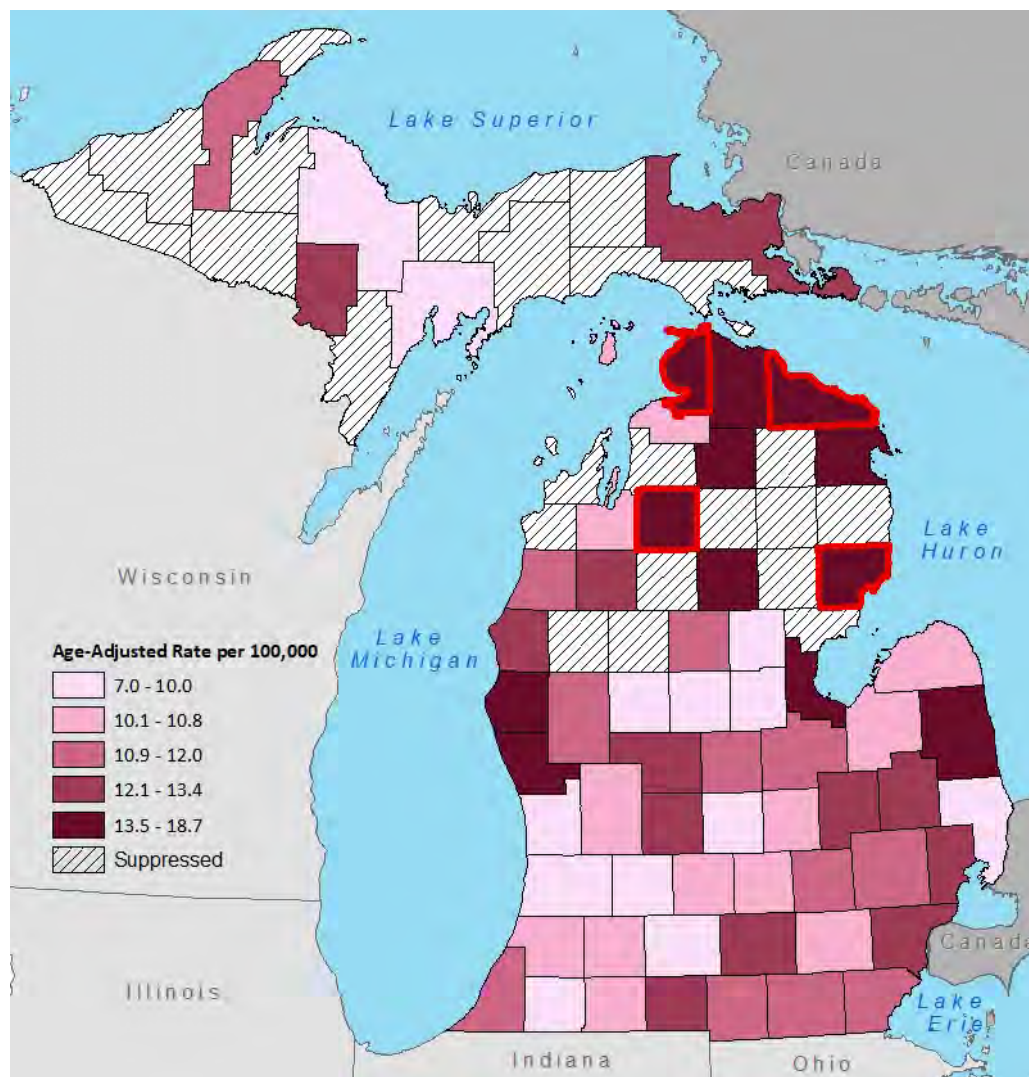
Age-Adjusted Melanoma Cancer Mortality Rate (per 100,000) ^{a-c}

County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	.
Allegan	3.0	Leelanau	.
Alpena	.	Lenawee	.
Antrim	.	Livingston	2.5
Arenac	.	Luce	0.0
Baraga	.	Mackinac	.
Barry	.	Macomb	2.5
Bay	.	Manistee	.
Benzie	.	Marquette	.
Berrien	2.2	Mason	.
Branch	.	Mecosta	.
Calhoun	2.3	Menominee	.
Cass	.	Midland	.
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	2.9
Chippewa	.	Montcalm	.
Clare	.	Montmorency	.
Clinton	.	Muskegon	2.5
Crawford	0.0	Newaygo	.
Delta	.	Oakland	1.9
Dickinson	.	Oceana	.
Eaton	2.8	Ogemaw	.
Emmet	.	Ontonagon	0.0
Genesee	2.2	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	.	Ottawa	2.8
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	.
Houghton	.	Saginaw	2.0
Huron	.	St Clair	2.7
Ingham	2.5	St Joseph	.
Ionia	.	Sanilac	.
Iosco	.	Schoolcraft	.
Iron	.	Shiawassee	.
Isabella	.	Tuscola	.
Jackson	3.0	Van Buren	.
Kalamazoo	2.7	Washtenaw	1.9
Kalkaska	.	Wayne	1.5
Kent	2.3	Wexford	.
Keweenaw	.	State of Michigan	2.3

Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File. ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20.

Oral Cancer Incidence

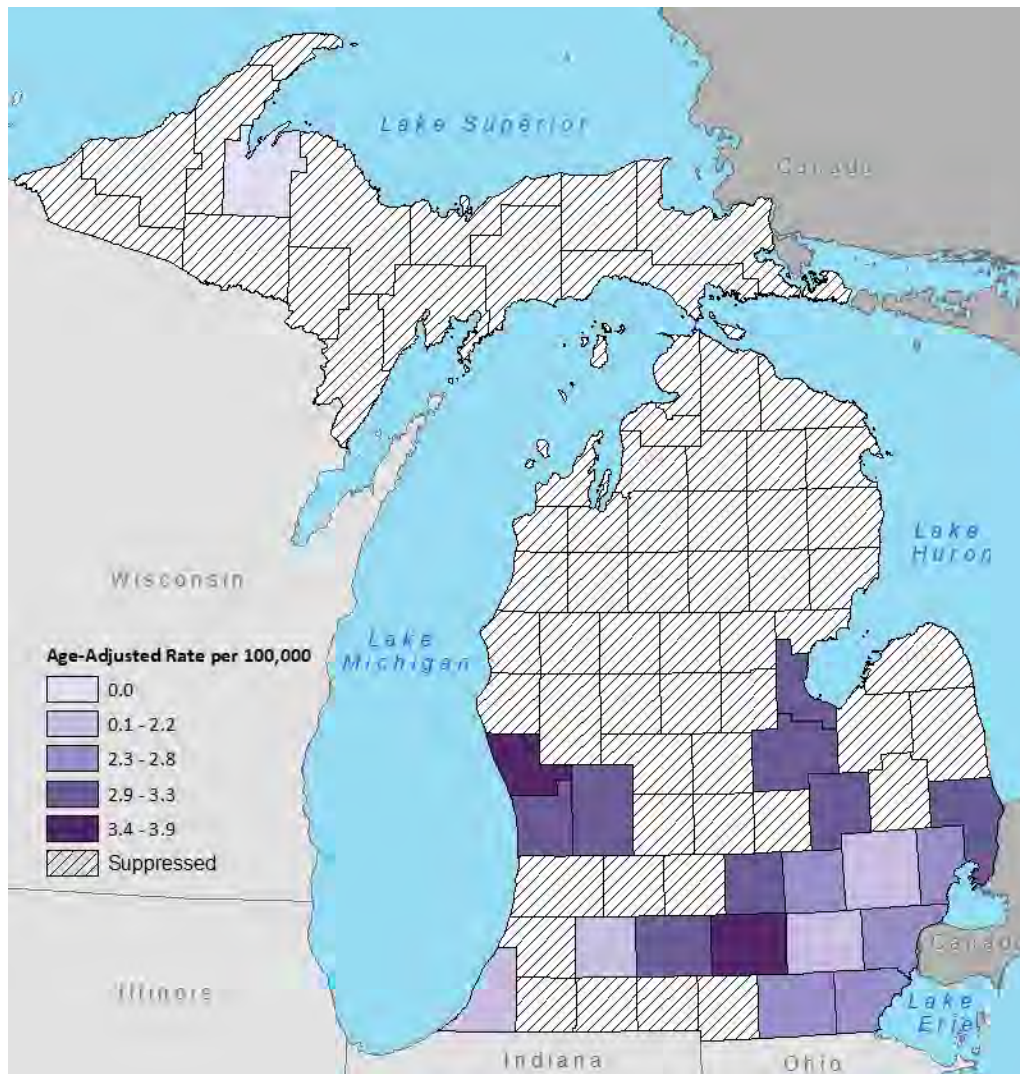


Age-Adjusted Oral Cancer Incidence Rate (per 100,000) ^{a-d}			
County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	12.2
Allegan	7.0	Leelanau	.
Alpena	16.3	Lenawee	11.5
Antrim	.	Livingston	11.8
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	7.9	Macomb	12.2
Bay	14.3	Manistee	10.8
Benzie	.	Marquette	7.4
Berrien	11.5	Mason	12.7
Branch	12.3	Mecosta	8.8
Calhoun	9.4	Menominee	.
Cass	9.9	Midland	9.5
Charlevoix	10.3	Missaukee	.
Cheboygan	15.8	Monroe	12.0
Chippewa	12.0	Montcalm	13.4
Clare	11.1	Montmorency	.
Clinton	7.6	Muskegon	14.7
Crawford	.	Newaygo	11.5
Delta	7.6	Oakland	11.0
Dickinson	12.1	Oceana	14.5
Eaton	10.8	Ogemaw	.
Emmet	16.9 *	Ontonagon	.
Genesee	12.7	Osceola	.
Gladwin	8.4	Oscoda	.
Gogebic	.	Otsego	14.6
Grand Traverse	10.4	Ottawa	8.2
Gratiot	11.5	Presque Isle	18.7 *
Hillsdale	11.9	Roscommon	15.3
Houghton	11.9	Saginaw	10.8
Huron	10.0	St Clair	10.0
Ingham	10.5	St Joseph	10.8
Ionia	12.6	Sanilac	13.6
Iosco	17.4 *	Schoolcraft	.
Iron	.	Shiawassee	10.4
Isabella	8.5	Tuscola	10.6
Jackson	13.1	Van Buren	10.8
Kalamazoo	10.2	Washtenaw	10.1
Kalkaska	18.0 *	Wayne	12.1
Kent	10.7	Wexford	12.3
Keweenaw	.	State of Michigan	11.4

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table.

Oral Cancer Mortality

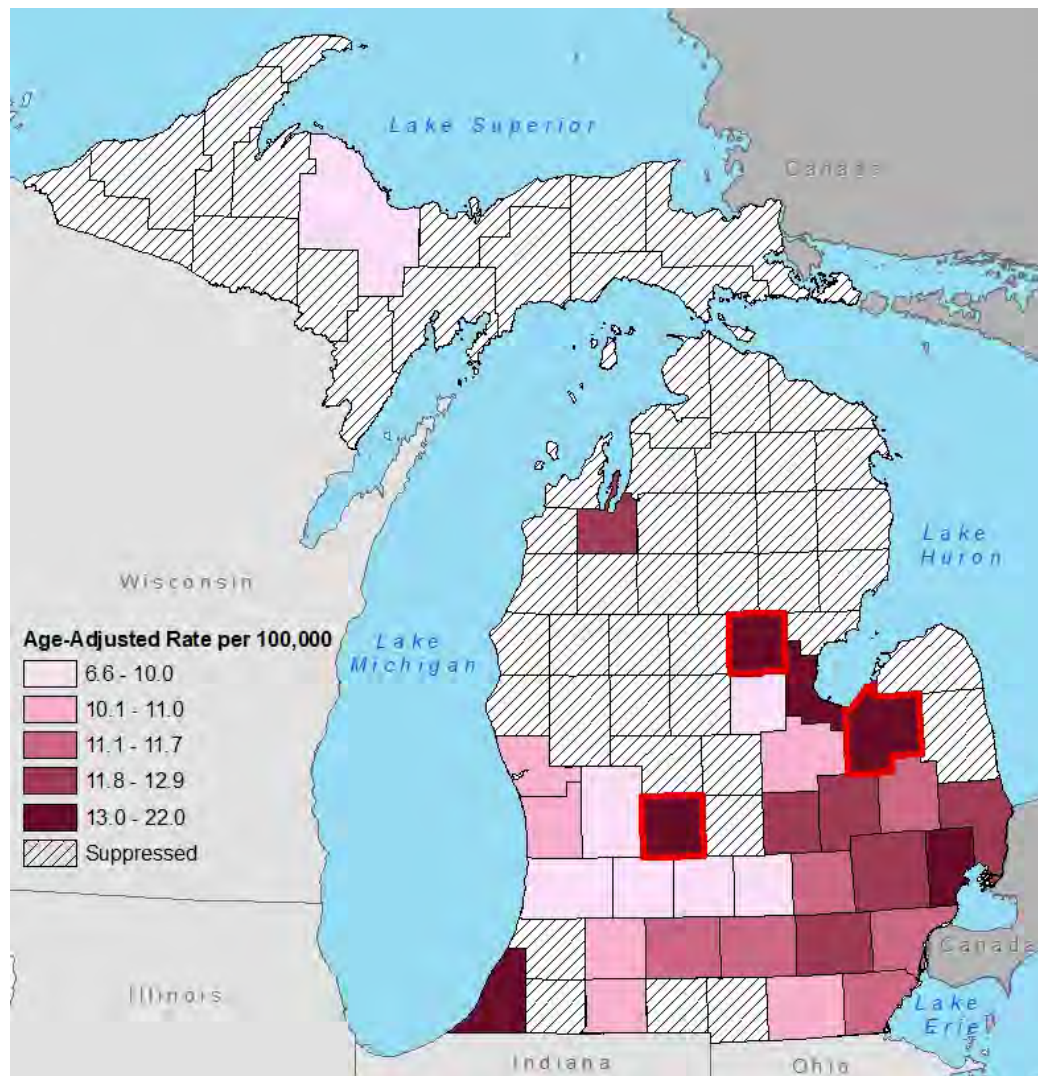


Age-Adjusted Oral Cancer Mortality Rate (per 100,000) ^{a-c}			
County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	.
Allegan	.	Leelanau	.
Alpena	.	Lenawee	2.7
Antrim	.	Livingston	2.5
Arenac	.	Luce	.
Baraga	0.0	Mackinac	.
Barry	.	Macomb	2.6
Bay	2.9	Manistee	.
Benzie	.	Marquette	.
Berrien	2.2	Mason	.
Branch	.	Mecosta	.
Calhoun	3.3	Menominee	.
Cass	.	Midland	.
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	2.7
Chippewa	.	Montcalm	.
Clare	.	Montmorency	.
Clinton	.	Muskegon	3.9
Crawford	.	Newaygo	.
Delta	.	Oakland	2.0
Dickinson	.	Oceana	.
Eaton	.	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	2.9	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	.	Ottawa	3.2
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	.
Houghton	.	Saginaw	3.3
Huron	.	St Clair	.
Ingham	2.9	St Joseph	.
Ionia	.	Sanilac	.
Iosco	.	Schoolcraft	3.2
Iron	.	Shiawassee	.
Isabella	.	Tuscola	.
Jackson	3.6	Van Buren	.
Kalamazoo	2.2	Washtenaw	1.3
Kalkaska	.	Wayne	2.8
Kent	2.9	Wexford	.
Keweenaw	.	State of Michigan	2.7

Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20.

Ovarian Cancer Incidence



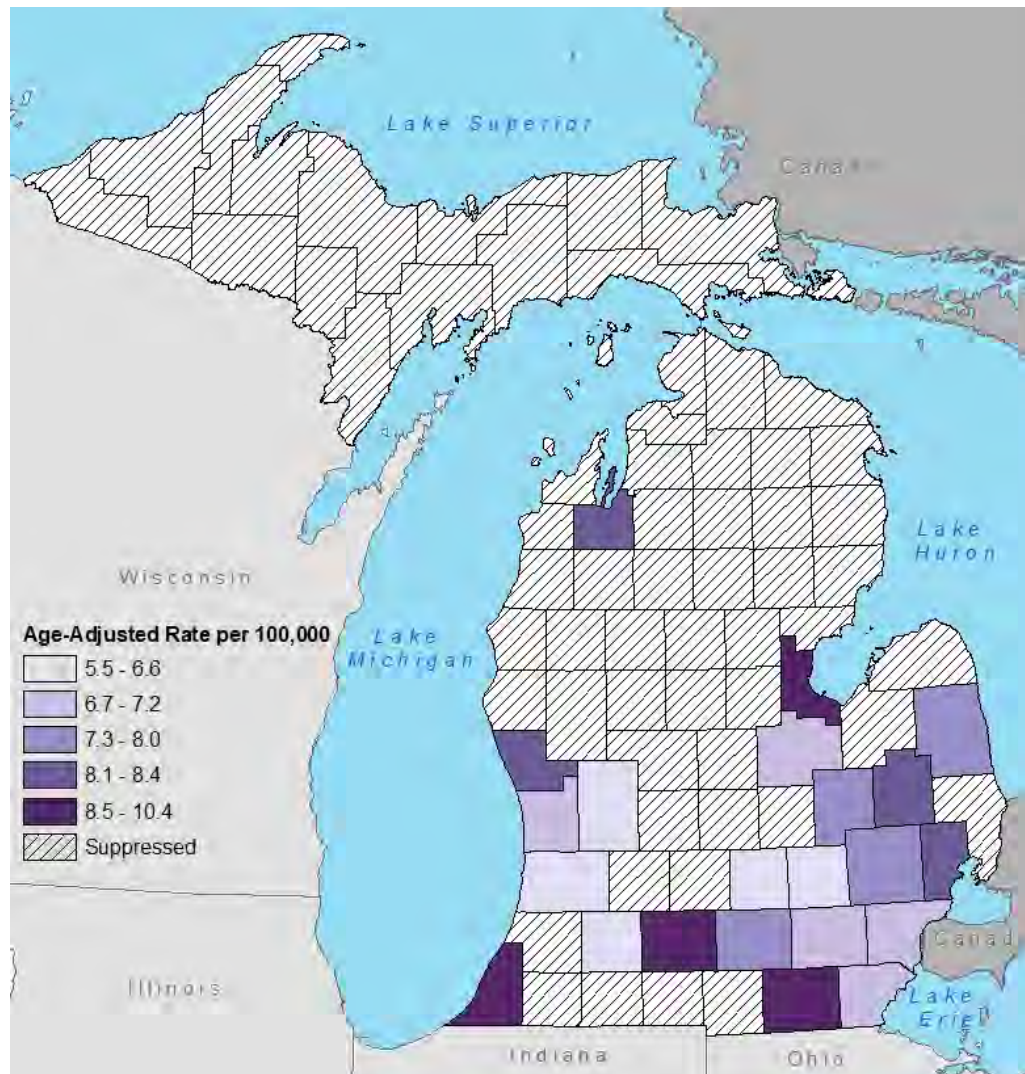
Age-Adjusted Ovarian Cancer Incidence Rate (per 100,000) ^{a-e}

County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	10.6
Allegan	5.6	Leelanau	.
Alpena	.	Lenawee	10.7
Antrim	.	Livingston	10.9
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	.	Macomb	13.3
Bay	13.1	Manistee	.
Benzie	.	Marquette	9.5
Berrien	13.7	Mason	.
Branch	.	Mecosta	.
Calhoun	11.0	Menominee	.
Cass	11.8	Midland	7.1
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	10.5
Chippewa	.	Montcalm	10.8
Clare	.	Montmorency	.
Clinton	.	Muskegon	10.2
Crawford	.	Newaygo	.
Delta	.	Oakland	11.6
Dickinson	.	Oceana	.
Eaton	10.8	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	12.6	Osceola	.
Gladwin	22.0 *	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	12.6	Ottawa	9.9
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	.
Houghton	.	Saginaw	10.6
Huron	.	St Clair	12.7
Ingham	10.1	St Joseph	.
Ionia	16.9 *	Sanilac	.
Iosco	.	Schoolcraft	.
Iron	.	Shiawassee	11.6
Isabella	.	Tuscola	16.6 *
Jackson	11.3	Van Buren	.
Kalamazoo	11.0	Washtenaw	11.7
Kalkaska	.	Wayne	11.6
Kent	9.9	Wexford	.
Keweenaw	.	State of Michigan	11.3

Data Notes:

^a Incidence data taken from the 2012-2016 Michigan Cancer Surveillance Program (MCSP) ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Counties defined as outliers (see page 3) are outlined in red on the map and indicated by a red asterisk in the table ^e Among females only.

Ovarian Cancer Mortality



Age-Adjusted Ovarian Cancer Mortality Rate (per 100,000) ^{a-d}

County	Rate	County	Rate
Alcona	.	Lake	.
Alger	.	Lapeer	8.3
Allegan	5.5	Leelanau	.
Alpena	.	Lenawee	8.4
Antrim	.	Livingston	6.3
Arenac	.	Luce	.
Baraga	.	Mackinac	.
Barry	.	Macomb	8.4
Bay	10.4	Manistee	.
Benzie	.	Marquette	.
Berrien	9.5	Mason	.
Branch	.	Mecosta	.
Calhoun	8.9	Menominee	.
Cass	.	Midland	.
Charlevoix	.	Missaukee	.
Cheboygan	.	Monroe	7.2
Chippewa	.	Montcalm	.
Clare	.	Montmorency	.
Clinton	.	Muskegon	8.2
Crawford	.	Newaygo	.
Delta	.	Oakland	7.3
Dickinson	.	Oceana	.
Eaton	.	Ogemaw	.
Emmet	.	Ontonagon	.
Genesee	7.4	Osceola	.
Gladwin	.	Oscoda	.
Gogebic	.	Otsego	.
Grand Traverse	8.3	Ottawa	6.9
Gratiot	.	Presque Isle	.
Hillsdale	.	Roscommon	.
Houghton	.	Saginaw	7.2
Huron	.	St Clair	7.6
Ingham	6.4	St Joseph	.
Ionia	.	Sanilac	.
Iosco	.	Schoolcraft	.
Iron	.	Shiawassee	.
Isabella	.	Tuscola	.
Jackson	8.0	Van Buren	.
Kalamazoo	6.6	Washtenaw	6.9
Kalkaska	.	Wayne	7.2
Kent	6.2	Wexford	.
Keweenaw	.	State of Michigan	7.3

Data Notes:

^a Mortality data taken from the 2013-2017 Michigan Resident Death File ^b Rates are age-adjusted to the 2000 US Standard Population ^c County rate suppressed if case count < 20 ^d Among females only.

Notes

For more information on:

Cancer Activities in Michigan:

- www.michigan.gov/cancer
- www.michigan.gov/hereditarycancer
- www.michigancancer.org

Data resources:

- Michigan Cancer Surveillance Program: www.Michigan.gov/mcsp
- Surveillance, Epidemiology, and End Results Program (SEER): <https://seer.cancer.gov>
- Centers for Disease Control and Prevention (CDC): US Cancer Statistics: <https://gis.cdc.gov/Cancer/USCS/DataViz.html>
- American Cancer Society (ACS) Statistics Center: <https://cancerstatisticscenter.cancer.org>

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