

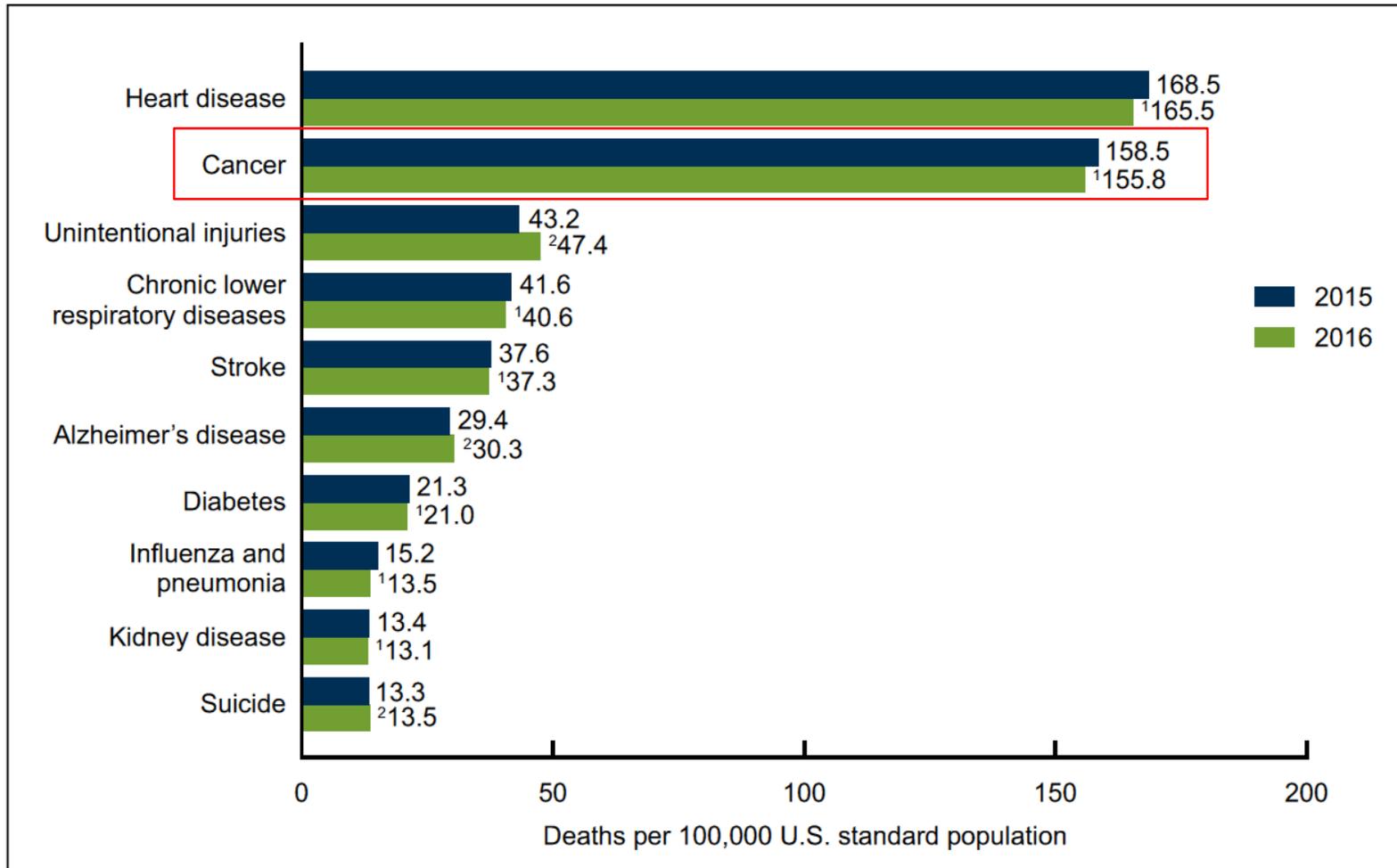


**University of Maryland Marlene and Stewart
Greenebaum Comprehensive Cancer Center
MD State Council on Cancer Annual Meeting
November 14, 2018**

US Mortality

10 leading causes of death 2015-2016

Figure 4. Age-adjusted death rates for the 10 leading causes of death in 2016: United States, 2015 and 2016



¹Statistically significant decrease in age-adjusted death rate from 2015 to 2016 ($p < 0.05$).

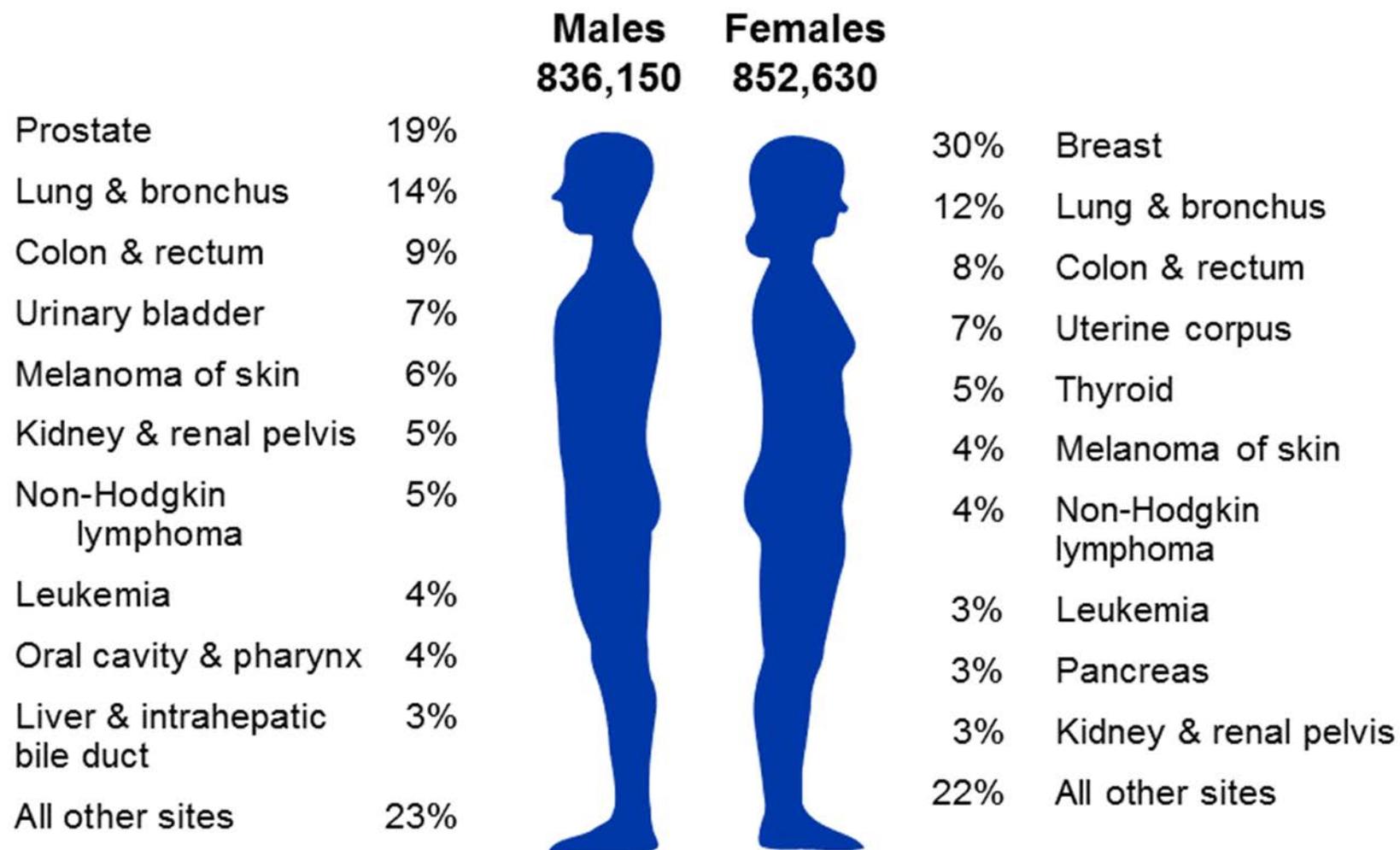
²Statistically significant increase in age-adjusted death rate from 2015 to 2016 ($p < 0.05$).

NOTES: A total of 2,744,248 resident deaths were registered in the United States in 2016. The 10 leading causes accounted for 74.1% of all deaths in the United States in 2016. Rankings for 2015 data are not shown. Causes of death are ranked according to number of deaths. Access data table for Figure 4 at:

https://www.cdc.gov/nchs/data/databriefs/db293_table.pdf#4.

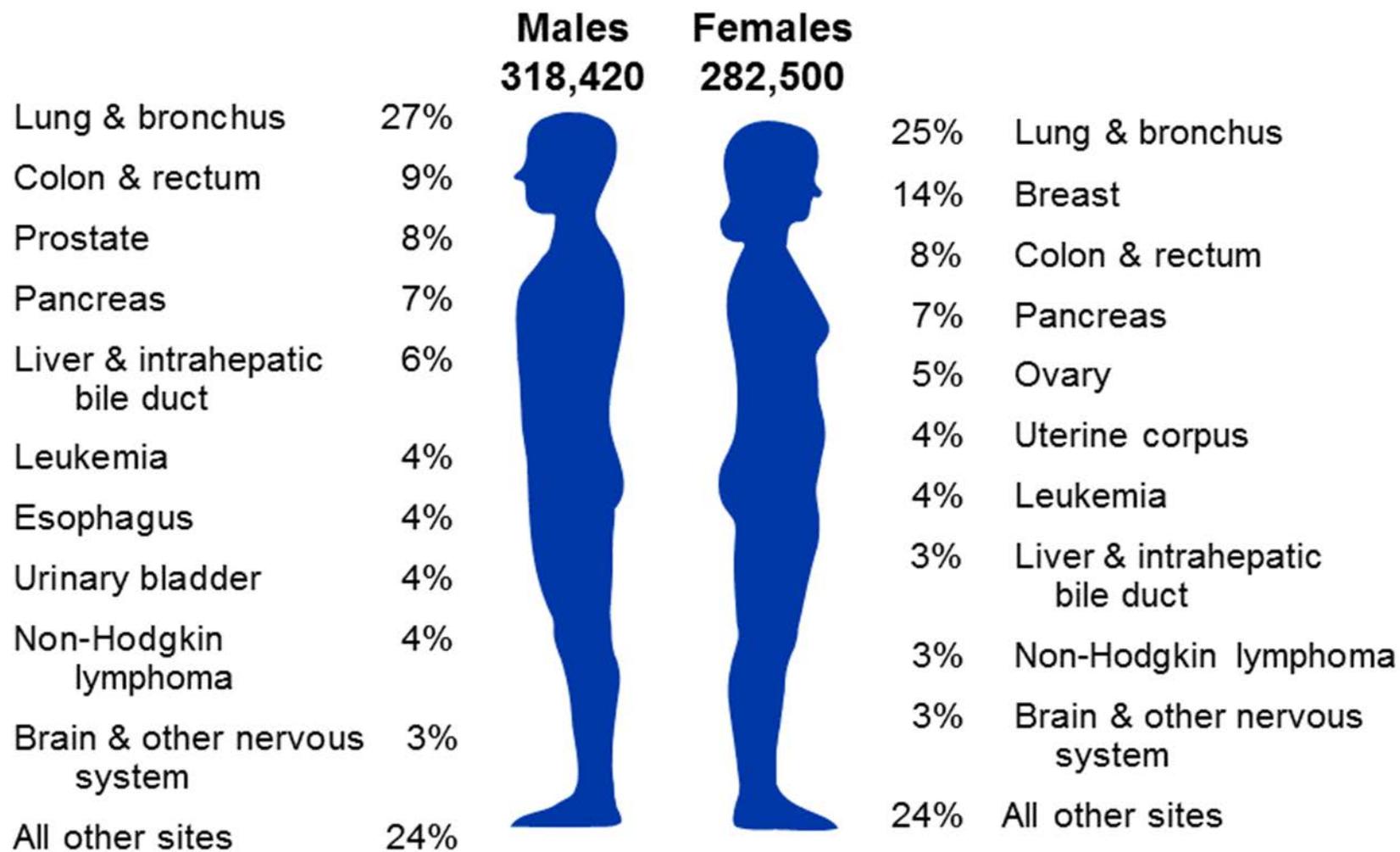
SOURCE: NCHS, National Vital Statistics System, Mortality.

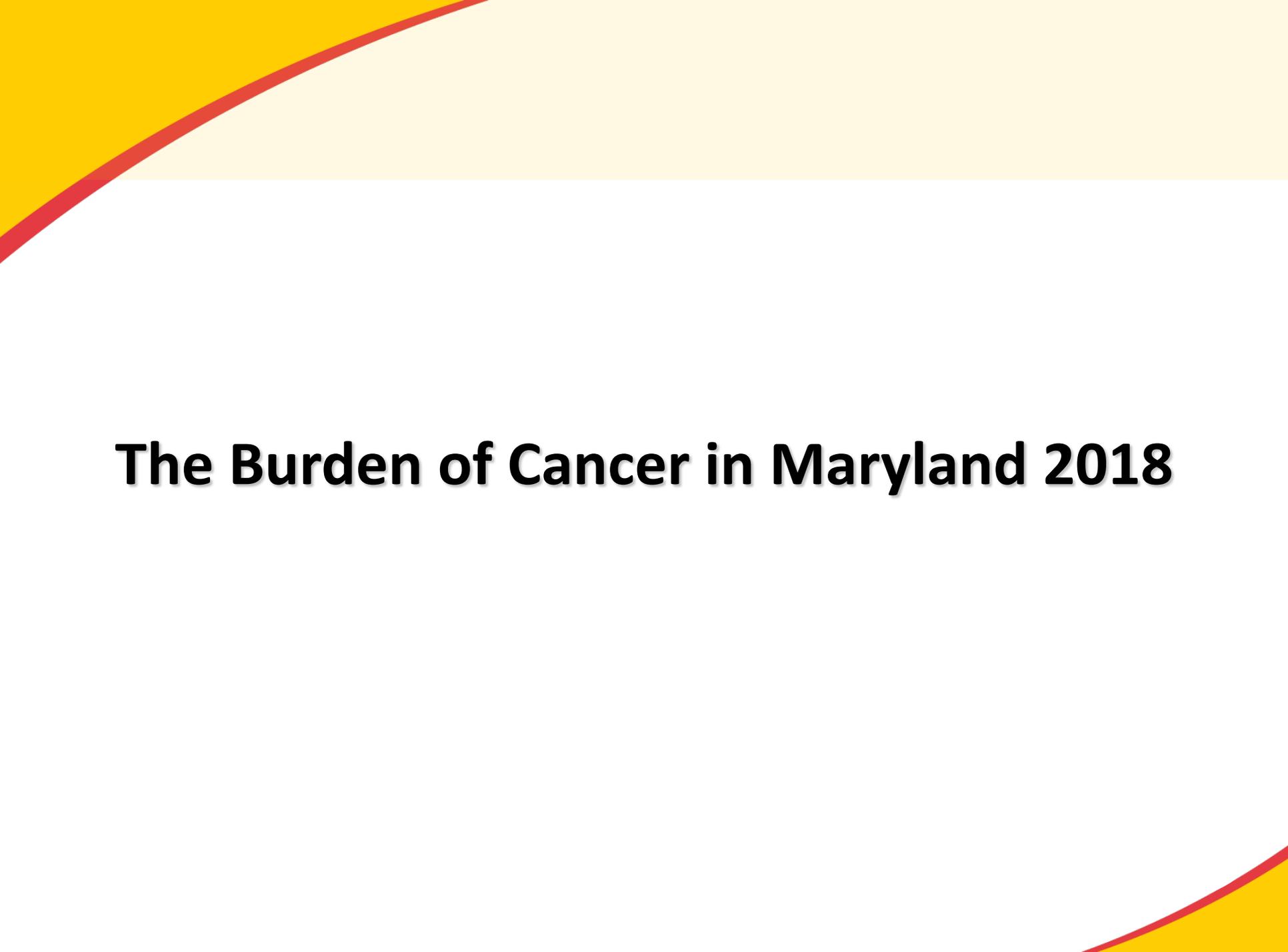
Estimated New Cancer Cases* in the US in 2017



*Excludes basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder.

Estimated Cancer Deaths in the US in 2017





The Burden of Cancer in Maryland 2018

Maryland at a Glance

Estimated new cases, 2018

33,810

Estimated deaths, 2018

10,780

Incidence rates, 2010-2014

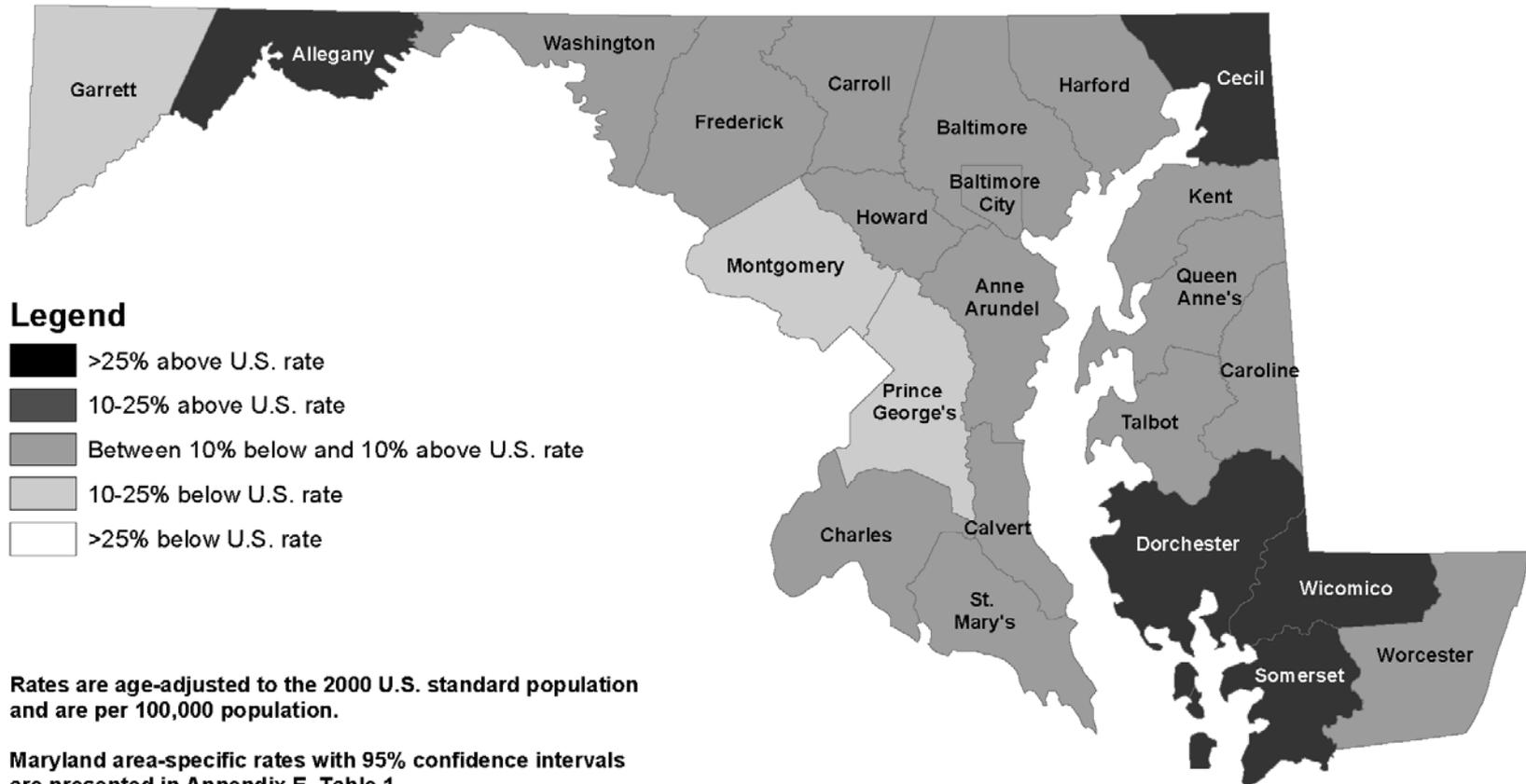
453.8

Average annual rate per 100,000 age adjusted to the 2000 US standard population

Death rates, 2011-2015

162.3

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



U.S. all cancer sites incidence rate, 2010-2014: 442.7 / 100,000

Maryland all cancer sites incidence rate, 2010-2014: 443.4 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Table 3.
All Cancer Sites Age-Adjusted Incidence Rates* by Jurisdiction,
Gender, and Race, Maryland, 2014

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	442.0	481.4	416.3	450.6	443.6	247.4
Allegany	477.4	495.5	479.9	476.9	**	**
Anne Arundel	472.5	489.6	467.1	488.6	418.4	248.4
Baltimore City	486.3	561.5	438.9	478.7	492.0	266.4
Baltimore County	490.4	547.0	451.9	502.2	498.0	247.7
Calvert	484.7	526.4	450.3	478.9	563.9	**
Caroline	478.9	534.4	423.9	458.5	557.8	0.0
Carroll	473.2	510.9	443.8	475.7	478.3	**
Cecil	507.4	570.6	457.6	506.1	600.1	**
Charles	433.0	493.5	385.2	496.5	360.4	**
Dorchester	453.8	466.5	455.5	454.5	466.1	**
Frederick	424.7	457.2	408.9	414.3	594.9	327.2
Garrett	424.9	427.1	428.4	426.5	0.0	**
Harford	499.4	562.8	453.3	503.6	557.5	236.0
Howard	383.8	393.4	382.0	392.8	450.8	251.5
Kent	454.2	497.0	435.7	428.7	654.2	0.0
Montgomery	368.8	388.0	358.9	372.2	390.3	258.5
Prince George's	397.0	441.5	369.2	389.3	397.2	219.9
Queen Anne's	442.1	481.2	409.3	447.8	424.4	0.0
St. Mary's	401.6	412.0	395.3	403.8	393.8	**
Somerset	452.3	573.2	339.7	488.0	414.0	0.0
Talbot	418.7	448.0	393.5	411.8	432.9	**
Washington	457.9	476.5	452.2	461.8	414.2	**
Wicomico	549.5	590.7	524.4	548.8	557.9	**
Worcester	474.7	529.6	427.1	477.4	529.1	**

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

Source: Maryland Cancer Registry

Table 6.
All Cancer Sites Age-Adjusted Mortality Rates* by Jurisdiction,
Gender, and Race, Maryland, 2014

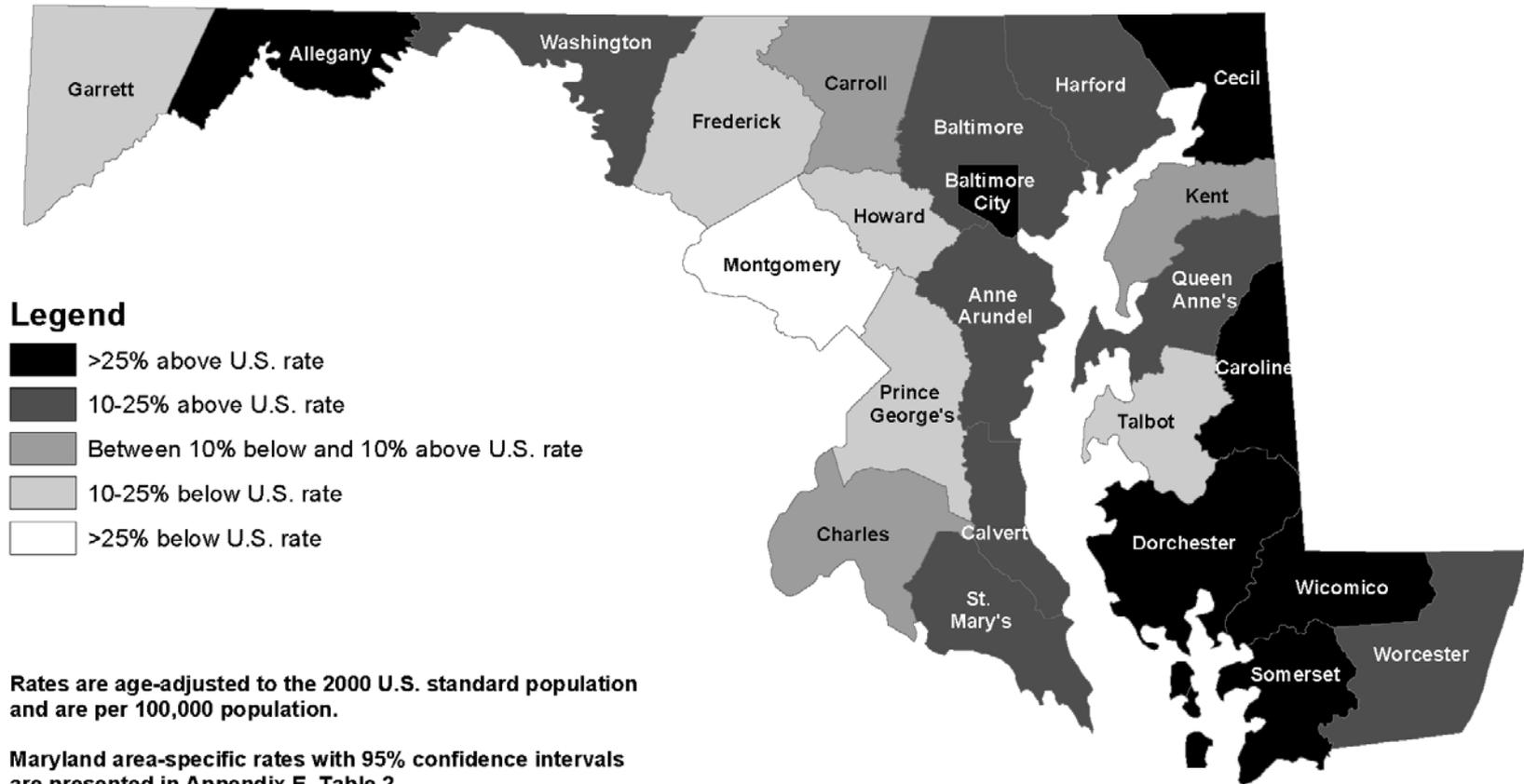
Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	161.8	191.5	141.7	160.6	181.0	85.7
Allegany	171.5	214.6	145.9	174.2	**	**
Anne Arundel	172.6	197.6	155.5	171.4	182.4	158.7
Baltimore City	237.8	301.3	198.5	259.3	230.1	**
Baltimore County	156.2	186.3	135.2	158.4	153.3	122.1
Calvert	171.2	183.0	162.2	165.9	221.6	**
Caroline	206.7	268.5	166.2	209.9	**	**
Carroll	159.2	183.7	142.9	162.6	**	**
Cecil	178.1	217.7	147.2	180.0	**	**
Charles	169.3	202.0	146.3	170.0	160.1	**
Dorchester	205.4	254.3	176.0	205.0	224.5	**
Frederick	156.0	186.0	133.2	152.2	238.7	**
Garrett	119.1	142.0	103.3	118.1	**	**
Harford	171.7	225.1	134.6	172.9	196.8	**
Howard	112.2	126.1	102.7	113.2	154.1	62.3
Kent	149.3	194.9	118.0	136.7	**	**
Montgomery	112.2	127.3	102.8	115.7	133.0	71.4
Prince George's	168.6	199.4	149.9	189.1	165.6	89.1
Queen Anne's	172.8	223.2	130.1	170.4	**	**
St. Mary's	185.8	210.2	166.2	190.5	180.3	**
Somerset	201.3	251.1	159.9	181.8	267.8	**
Talbot	164.7	200.5	136.7	154.7	**	**
Washington	173.1	194.8	159.7	179.4	**	**
Wicomico	209.3	233.1	195.3	206.7	243.9	**
Worcester	166.2	174.5	162.0	158.6	238.9	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: CDC Wonder, 2014

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

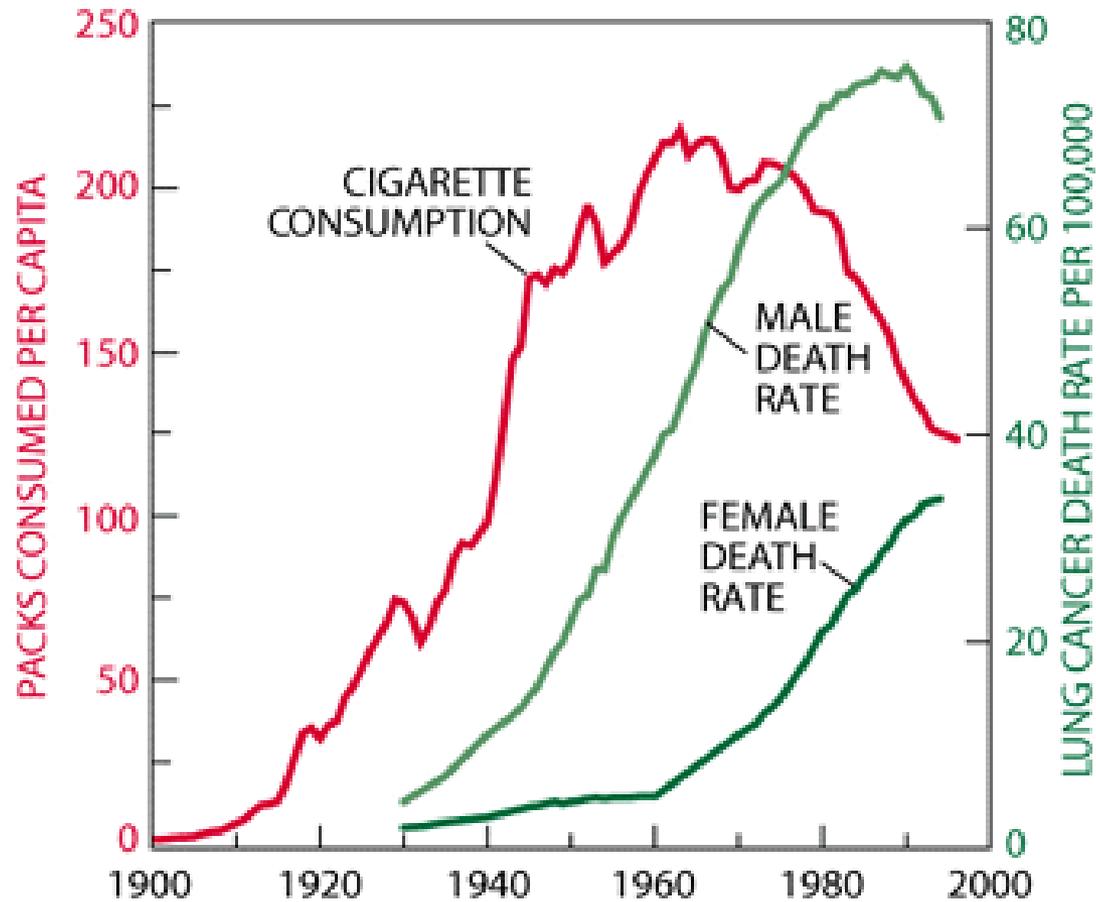


U.S. lung cancer incidence rate, 2010-2014: 55.8 / 100,000

Maryland lung cancer incidence rate, 2010-2014: 56.6 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Cigarettes Changed Everything



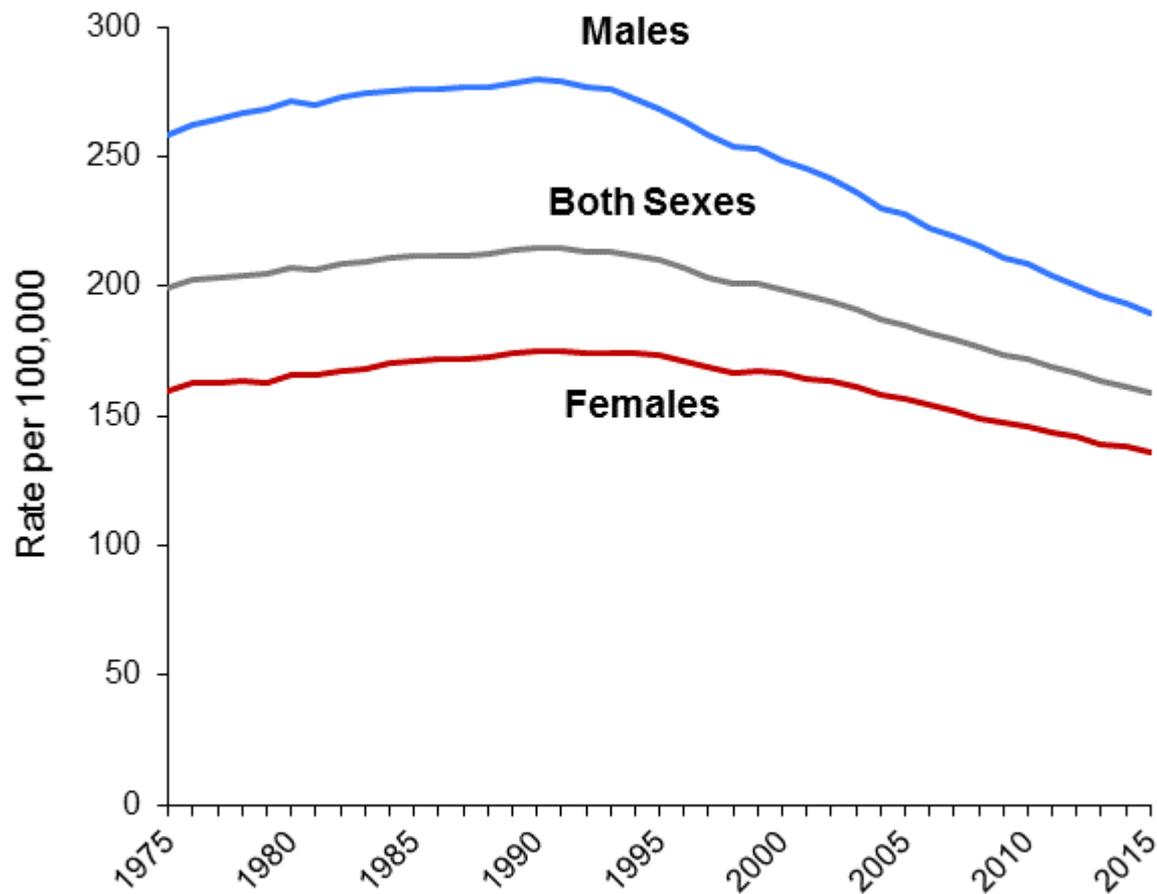
Cancer over time

- Cancer mortality in the United States rose steadily from 1930 to 1990, then began to decline
- In 1996, the American Cancer Society set a goal of reducing cancer mortality from its peak in 1990 by 50% in 2015

The American Cancer Society Challenge Goal to Reduce US Cancer Mortality by 50% Between 1990 and 2015: Results and Reflections

Tim Byers, MD, MPH¹; Richard C. Wender, MD²; Ahmedin Jemal, DVM, PhD³; Arnold M. Baskies, MD, FACS⁴; Elizabeth E. Ward, PhD⁵; Otis W. Brawley, MD⁶

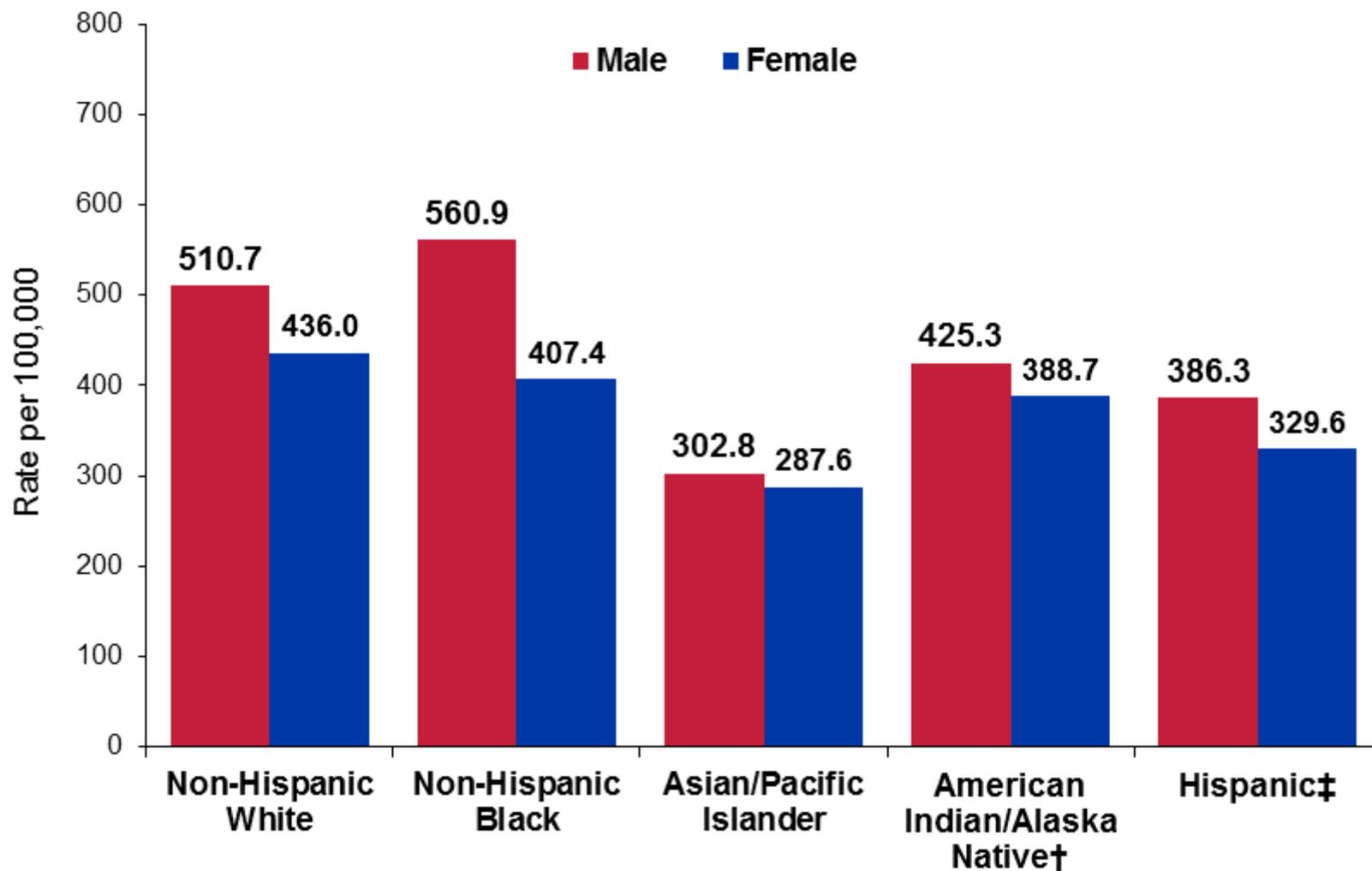
Trends in Cancer Death Rates* by Sex, US, 1975-2015



*Age-adjusted to the 2000 US standard population.

Source: National Center for Health Statistics, Centers for Disease Control and Prevention, 2017.

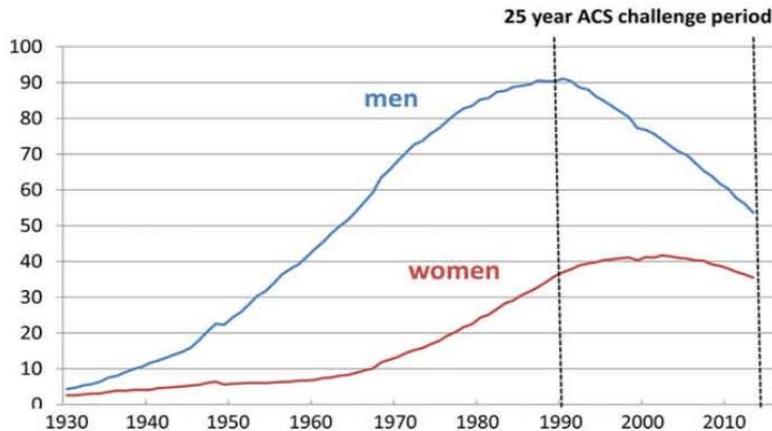
Cancer Incidence Rates* by Race and Ethnicity, 2010-2014



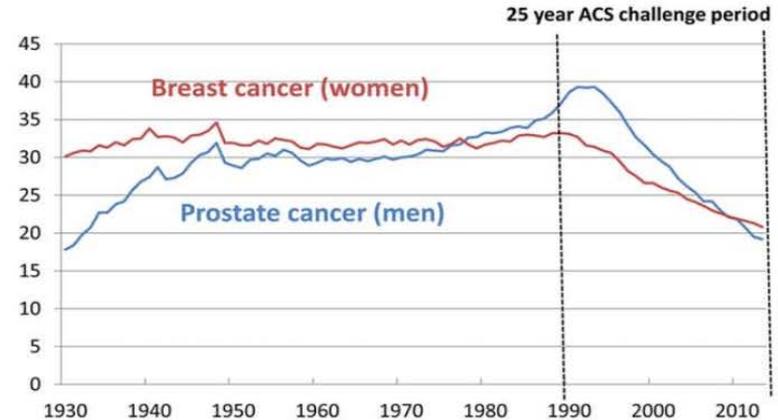
*Age-adjusted to the 2000 US standard population. †Data based on Indian Health Service Contract Health Service Delivery Area counties. ‡Persons of Hispanic origin may be of any race.

Source: North American Association of Central Cancer Registries, 2017.

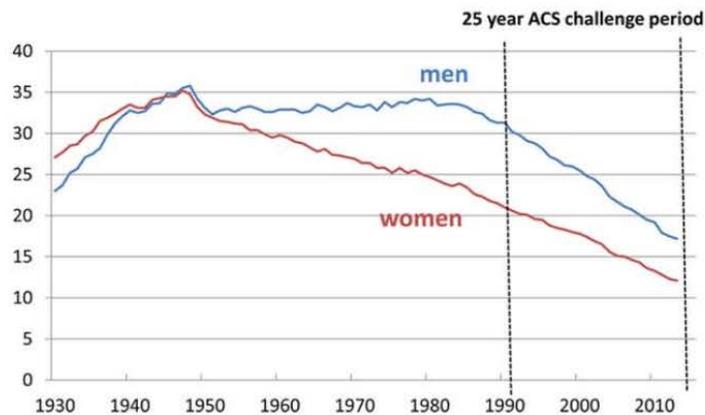
Lung cancer death rates by sex



Breast and prostate cancer death rates



Colorectal cancer death rates by sex



All-sites cancer death rates by sex

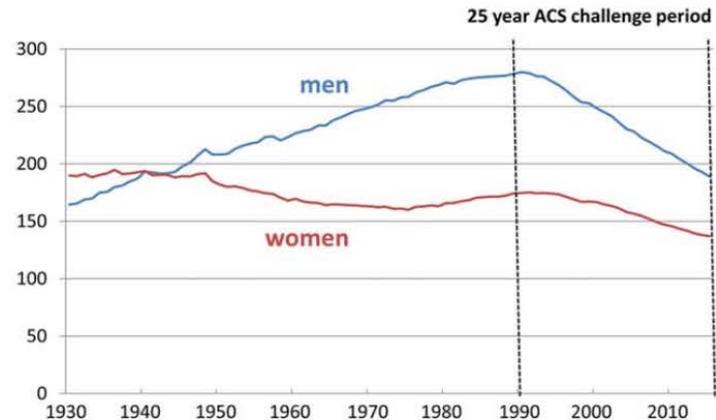


FIGURE 1. Long-Term Trends in Cancer Mortality. Trends are illustrated as deaths per 100,000 person-years in the United States for selected sites, by sex, with highlighting of the 1990 to 2015 American Cancer Society (ACS) challenge goal period (data from the National Center for Health Statistics²).

TABLE 1. Age-Adjusted Cancer Death Rates in the United States in 5-Year Intervals From 1990 to 2015, for the 4 Leading Cancer Sites That Together Account for About One-Half of All Cancer Deaths in the United States, and for All Other Cancer Sites, by Sex*

SEX AND CANCER SITE	AGE-ADJUSTED MORTALITY RATE PER 100,000						% CHANGE, 1990–2015
	1990	1995	2000	2005	2010	2015	
Men							
Lung cancer	90.6	84.4	76.5	69.5	60.1	50.1	–45
Prostate cancer	38.6	37.3	30.4	25.4	21.8	18.1	–53
Colorectal cancer	30.8	27.7	25.1	21.2	18.8	16.4	–47
All other cancers	119.9	119.2	116.5	112	108.2	104.7	–13
All cancers	279.8	268.5	248.5	228.1	208.8	189.2	–32
Women							
Lung cancer	36.8	40.3	41.1	40.7	37.9	33.9	–8
Breast cancer	33.1	30.6	26.6	24.1	21.9	20.1	–39
Colorectal cancer	20.6	19.1	17.5	14.8	13.0	11.6	–44
All other cancers	84.0	83.4	81.4	76.8	72.9	69.9	–17
All cancers	174.7	173.4	166.7	156.5	145.7	135.6	–22
Both sexes							
All cancers	214.9	209.9	198.8	185.2	171.8	158.3	–26

*Cancer mortality data were obtained for the United States from the National Center for Health Statistics.² Death rates were age-adjusted to the year 2000 standard population for each year from 1990 to 2014. The 2015 rates were estimated as a linear extrapolation of the trends from 2010 to 2014 (2009–2013 extrapolation for race/ethnicity-specific groups due to lack of ethnicity-specific denominator data for 2014).

TABLE 2. Age-Adjusted Cancer Death Rates in the United States in 5-Year Intervals From 1990 to 2015, for All Cancer Sites Combined, by Demographic Factors of Sex, Age, and Race/Ethnicity

DEMOGRAPHIC FACTOR	AGE-ADJUSTED MORTALITY RATE PER 100,000 ^a						% CHANGE, 1990-2015
	1990	1995	2000	2005	2010	2015 ^b	
Sex							
Male	279.8	268.5	248.5	228.1	208.8	189.2	-32
Female	174.7	173.4	166.7	156.5	145.7	135.6	-22
Age, y							
1-19	3.5	3.0	2.8	2.7	2.3	2.3	-34
20-44	25.3	23.4	21.0	19.0	17.0	16.0	-37
45-64	269.0	246.2	219.8	200.0	182.5	170.1	-37
65-79	986.3	976.7	933.2	859.1	788.8	712.7	-28
≥80	1596.6	1647.1	1640.5	1595.0	1529.0	1430.1	-10
Race/ethnicity							
White ^c	210.8	208.4	199.3	187.2	175	162.3	-23
Black ^c	278.4	272.2	250.6	227.5	206.8	187.2	-33
Hispanic	137.4	139.7	134.7	129.6	119.2	113.8	-17
Asian/Pacific Islander ^c	134.6	134.3	120.1	114.4	108.4	99.7	-26
American Indian/Alaska Native ^{c,d}	158.9	184.9	169.4	177.0	172.3	164.6	+4

^aCancer mortality data were obtained for the United States from the National Center for Health Statistics.² Death rates were age-adjusted to the year 2000 standard population for each year from 1990 to 2014. ^bThe 2015 rates were estimated as a linear extrapolation of the trends from 2010 to 2014 (2009-2013 extrapolation for race/ethnicity-specific groups due to lack of ethnicity-specific denominator data for 2014). ^cThis category excludes persons of Hispanic ethnicity. Rates by race/ethnicity exclude data from Louisiana, New Hampshire, and Oklahoma. ^dData were based on Indian Health Service Contract Health Service Delivery Areas.

TABLE 3. Trends in the Prevalence of Cancer Risk Factors and Cancer Screening in the Population of the United States, 1980 to 2010, by Sex

RISK FACTOR	RISK FACTOR PREVALENCE, %						
	1985	1990	1995	2000	2005	2010	2013
Women							
Current tobacco smoking ^a	27.9	22.9	22.7	21.1	18.3	17.5	15.5
Obesity ^b	16.5	25.5	26.4	33.2	35.4	35.9	36.1
Screening not up to date							
Colorectal ^{a,c}	77.2	73.1	—	62.7	54.0	41.0	40.4
Breast ^a	72.7	50.2	39.1	26.3	31.8	31.2	30.9
Men							
Current tobacco smoking ^a	32.2	28.0	26.5	25.2	23.4	21.2	20.5
Obesity ^b	12.3	20.2	30.6	27.5	32.7	34.6	33.5
Screening not up-to-date							
Colorectal ^{a,c}	79.7	74.6	—	61.8	51.6	38.9	40.0

^aData are from the National Health Interview Survey.³ ^bData for 1985 are from the National Health and Nutrition Examination surveys,⁴ data for 1990 and 2000 through 2013 are from National Health and Nutrition Examination surveys,⁵ and data for 1995 are from Behavioral Risk Factor Surveillance System surveys.⁶ ^cThe 1987 data are shown as 1985, and 1992 data are shown as 1990.⁷

Cancer is Cured More Often

Trends in Five-year Relative Survival Rates (%), 1975-2013

Site	1975-1977	1987-1989	2007-2013
All sites	49	55	69
Breast (female)	75	84	91
Colorectum	50	60	66
Leukemia	34	43	64
Lung & bronchus	12	13	20
Melanoma of the skin	82	88	94
Non-Hodgkin lymphoma	47	51	73
Ovary	36	38	47
Pancreas	3	4	9
Prostate	68	83	99
Urinary bladder	72	79	78

5-year relative survival rates based on patients diagnosed in the 9 oldest SEER registries from 1975-1977, 1987-1989, and 2007-2013, all followed through 2014.

Source: Surveillance, Epidemiology, and End Results (SEER) Program, National Cancer Institute, 2017.

FIGURE 1 | I WILL SURVIVE

The number of cancer survivors in the United States has steadily increased since 1971 [red bars]. During the same period, the proportion of the nation's population that is living with, through, or beyond a cancer diagnosis has more than tripled [gold line]. Adapted from (5).

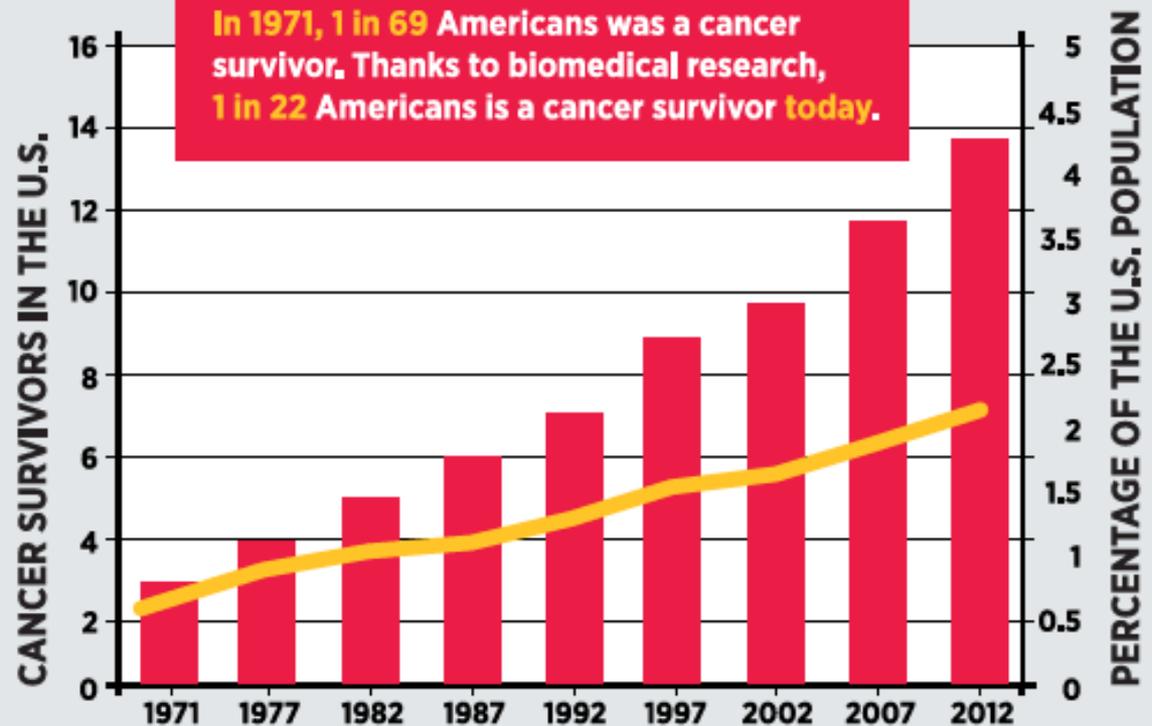
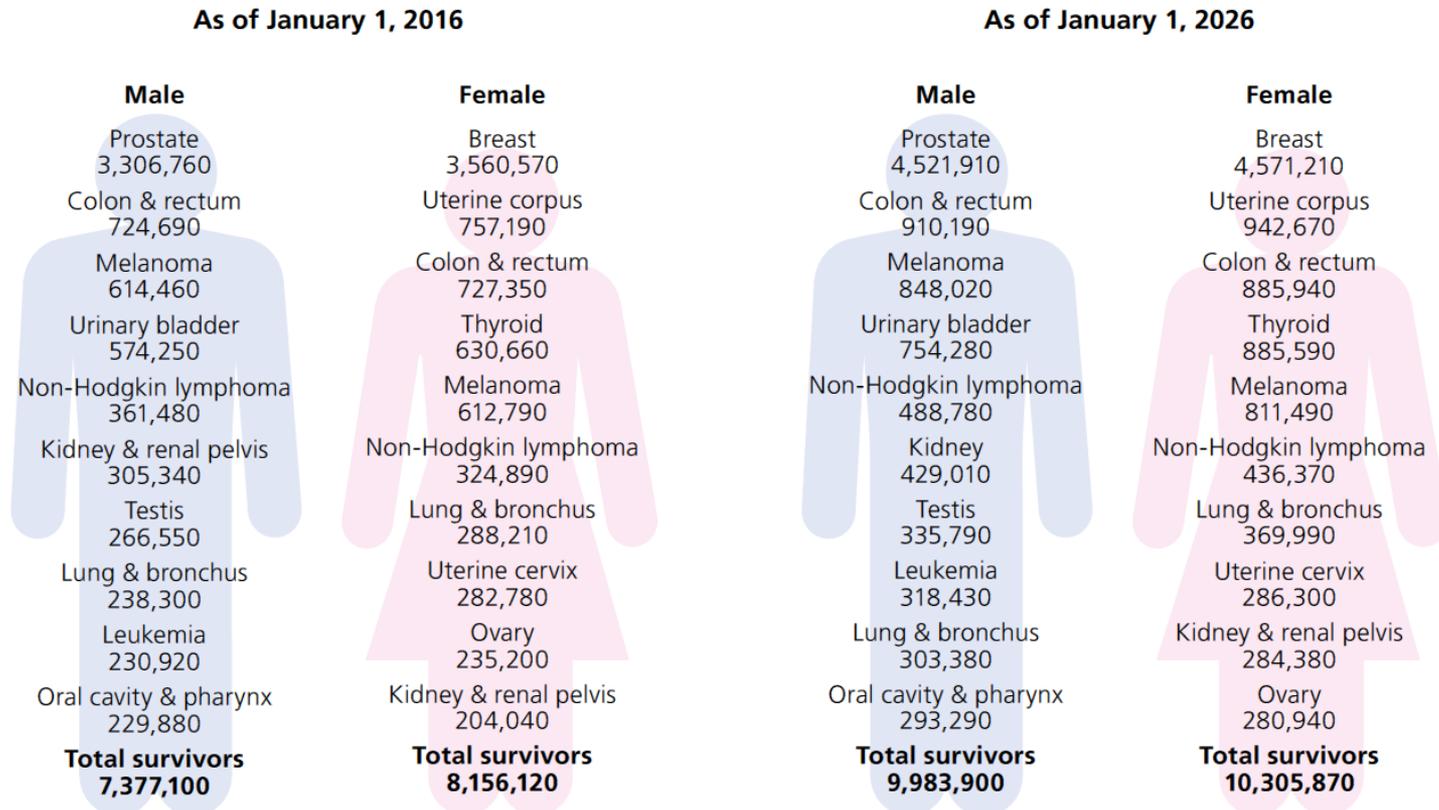


Figure 1. Estimated Numbers of US Cancer Survivors



NOTE: Beginning with the 2016-2017 edition, estimates for specific cancer types now take into account the potential for a history of more than one cancer type. Estimates should not be compared to those from previous years. See Sources of Statistics, page 34, for more information.

Source: Surveillance Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute.

American Cancer Society, Surveillance and Health Services Research, 2016

Tobacco Use is Declining, Obesity is not

Obesity and Cancer Incidence

REASONS TO MAINTAIN A HEALTHY WEIGHT AND KEEP ACTIVE

33%
CANCER CASES

About one in every three new cases of cancer diagnosed in the United States is related to being overweight or obese, being inactive, and/or eating poorly (10, 16).

The adenocarcinoma subtype of esophageal cancer, colorectal, endometrial, gallbladder, kidney, pancreatic, and postmenopausal breast cancers have been causally linked to being overweight or obese (10).

7
TYPES OF
CANCER



Regular physical activity can decrease an individual's risk of developing colon, endometrial, and postmenopausal breast cancers (23).

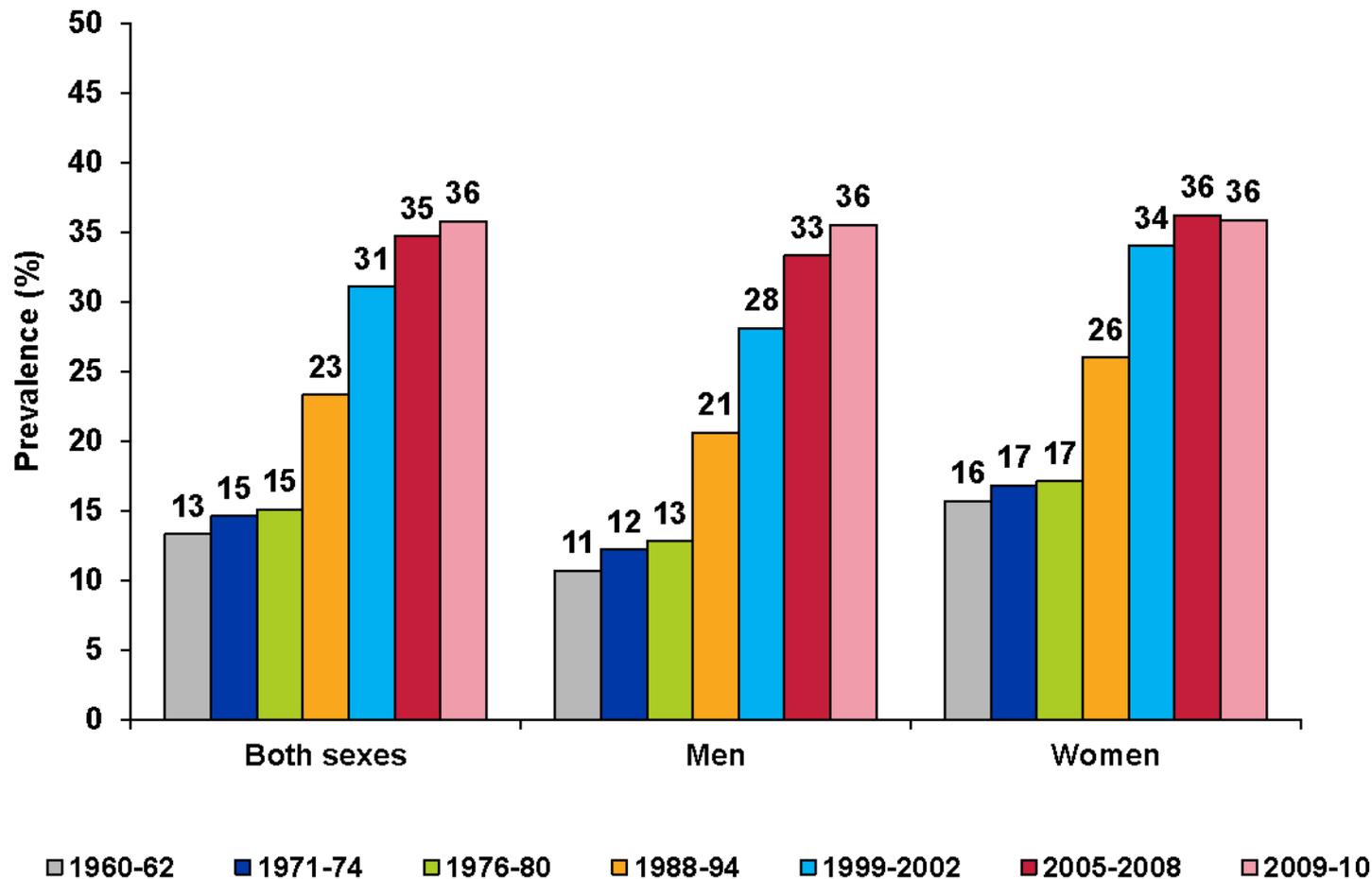
Sedentary behavior may increase the risk for developing colorectal, endometrial, ovarian, and prostate cancers (24).



**RISK OF
DEATH**

Obesity, lack of regular physical activity, and sedentary behavior are linked to worse outcomes, including increased risk for death, for patients with a number of types of cancer.

Trends in Obesity* Prevalence, Adults Aged 20 to 74, US, 1960-2010



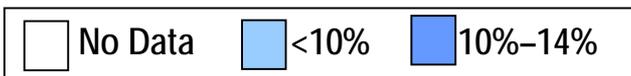
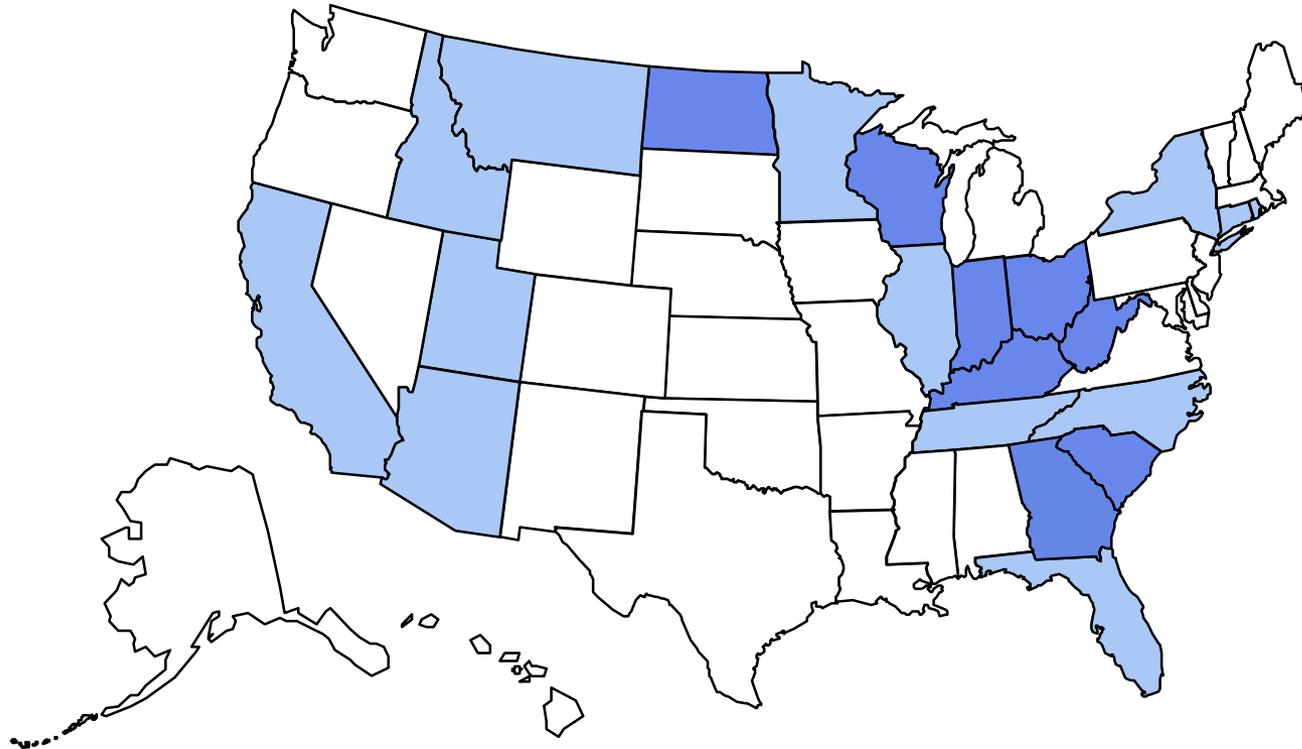
*Obesity=body mass index ≥ 30 kg/m²; estimates are age adjusted to the 2000 US standard population.

Source: National Health and Nutrition Examination Survey, National Center for Health Statistics, Centers for Disease Control and Prevention.

Obesity Trends* Among U.S. Adults

BRFSS, 1985

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



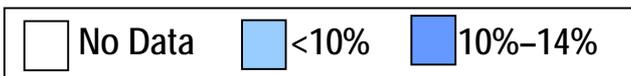
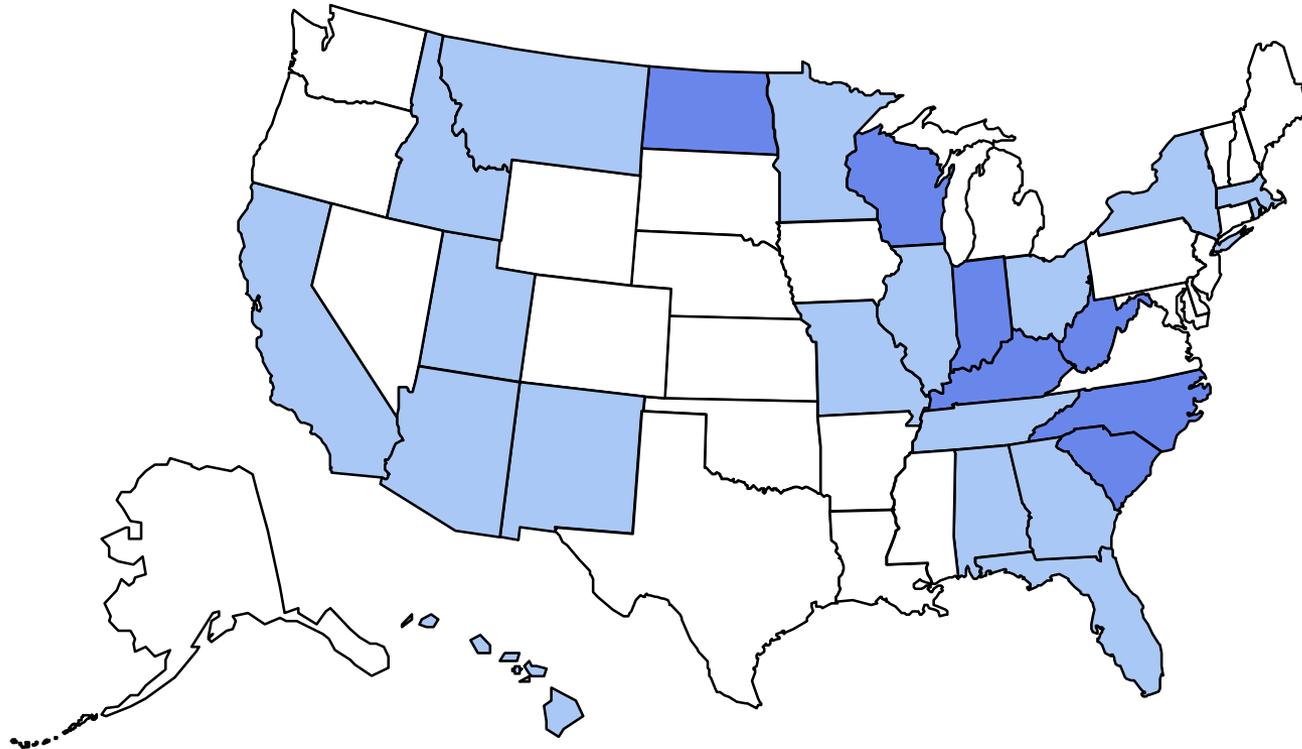
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1986

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



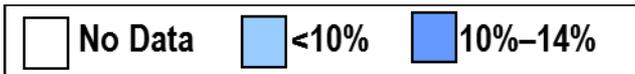
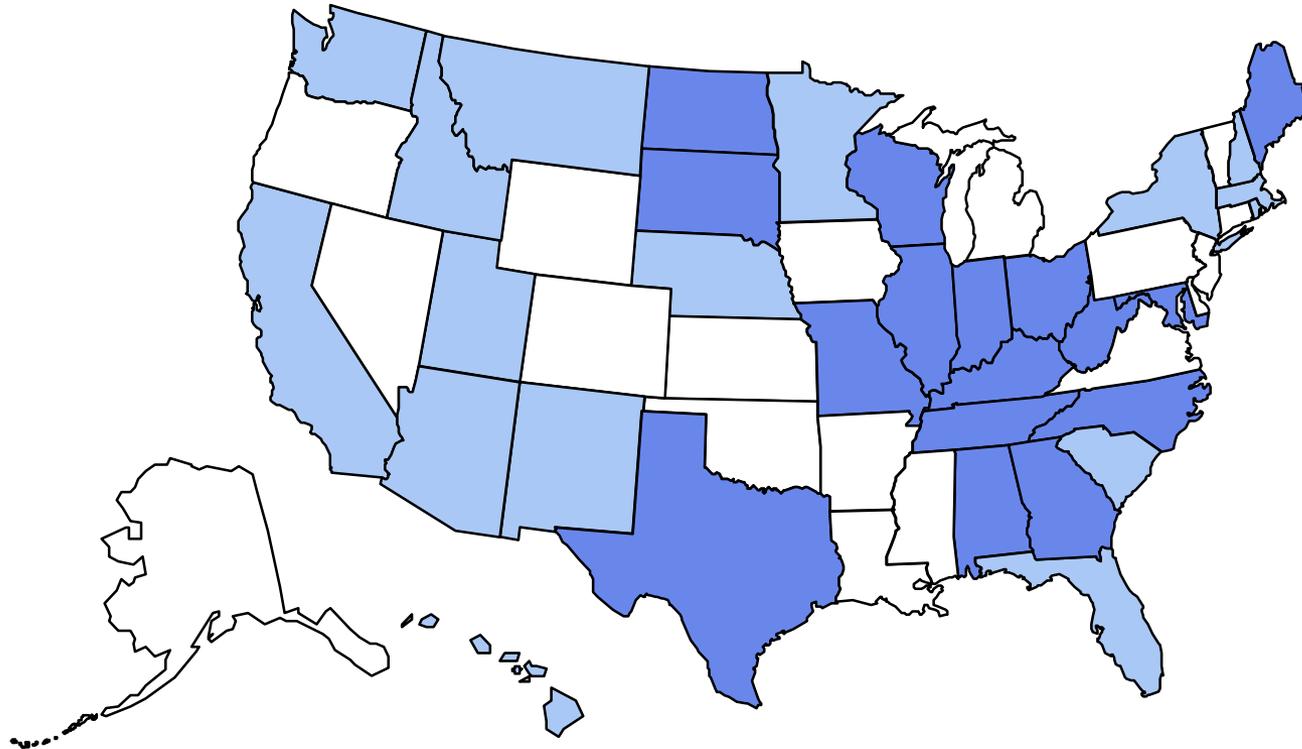
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1987

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



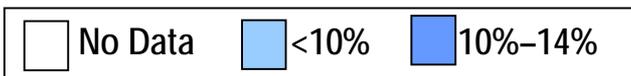
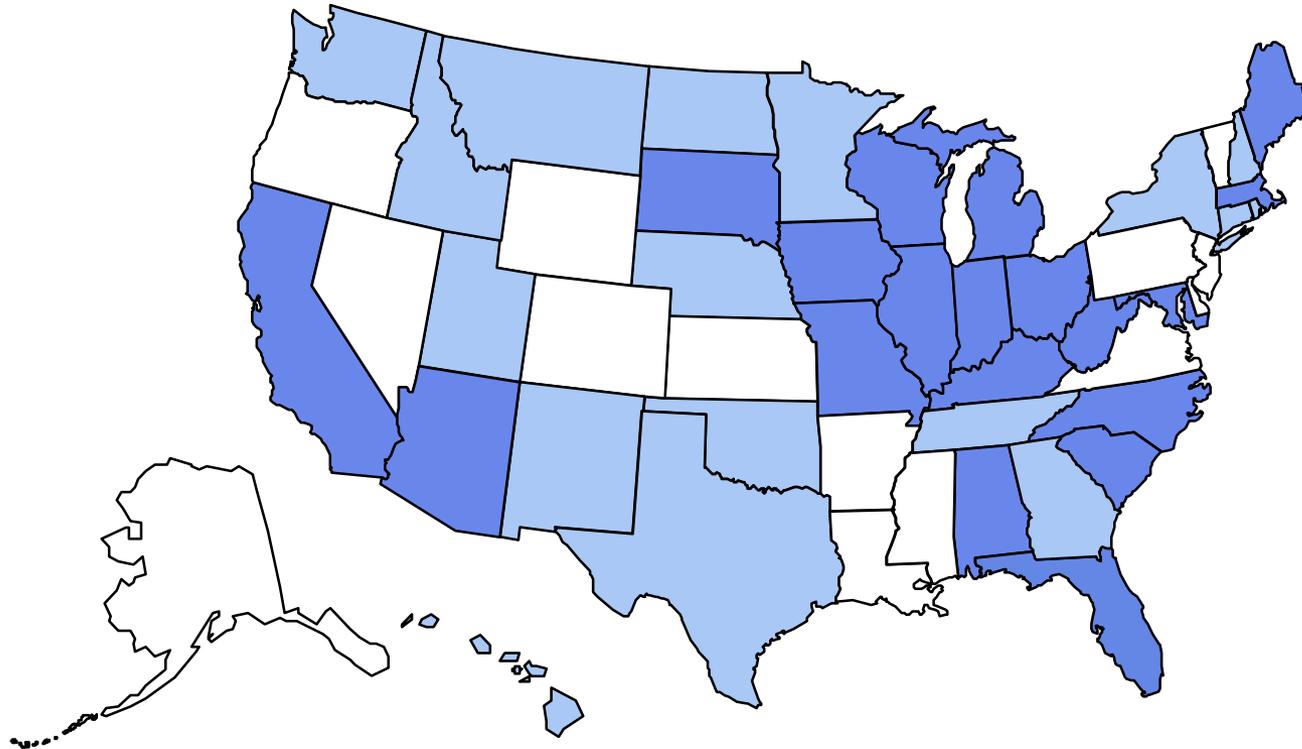
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1988

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



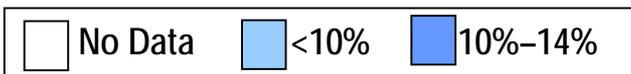
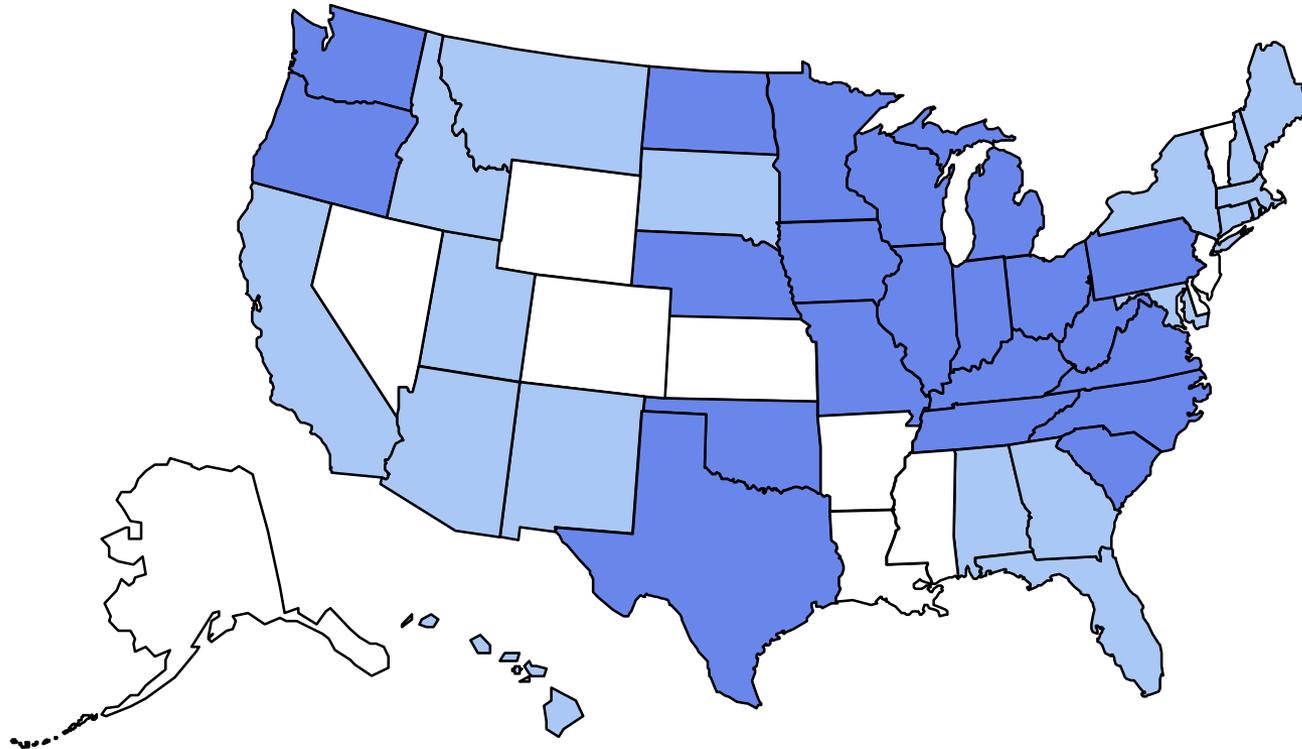
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1989

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



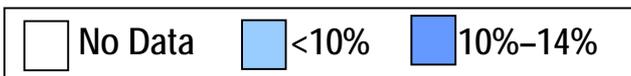
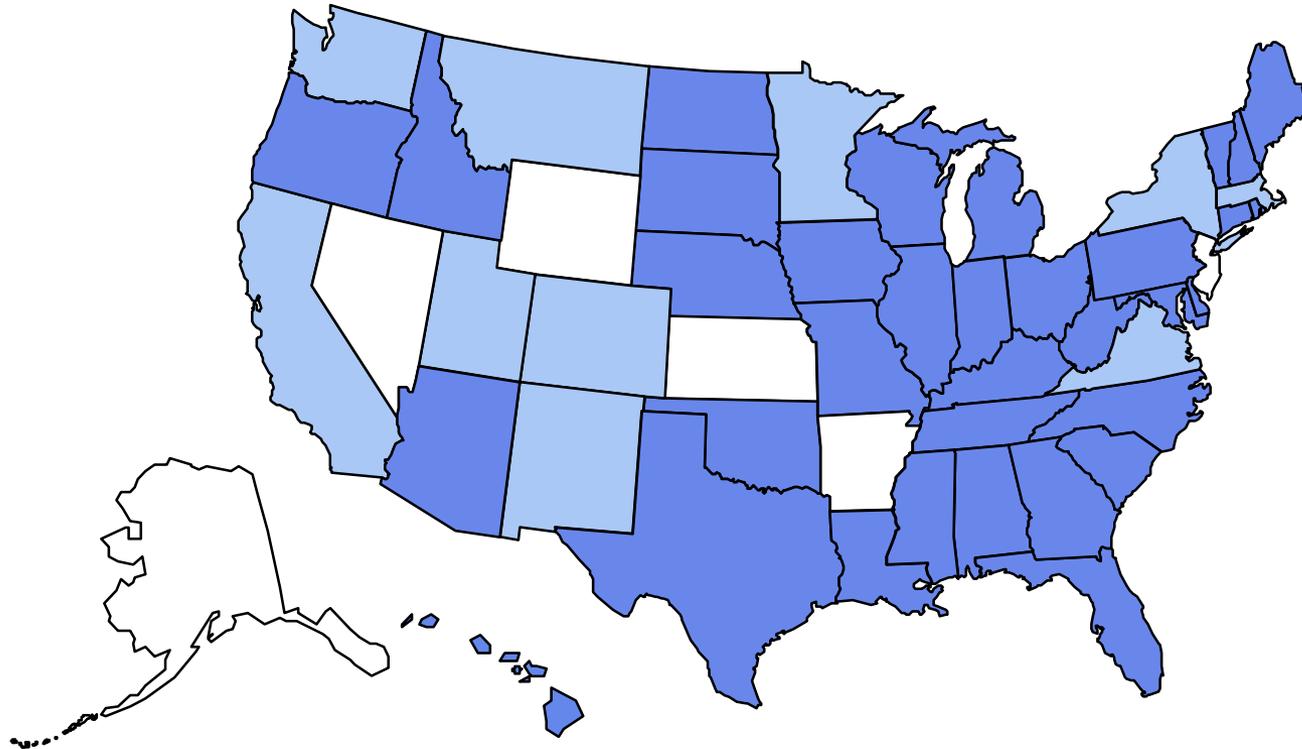
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1990

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



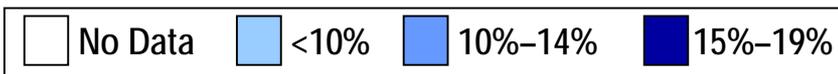
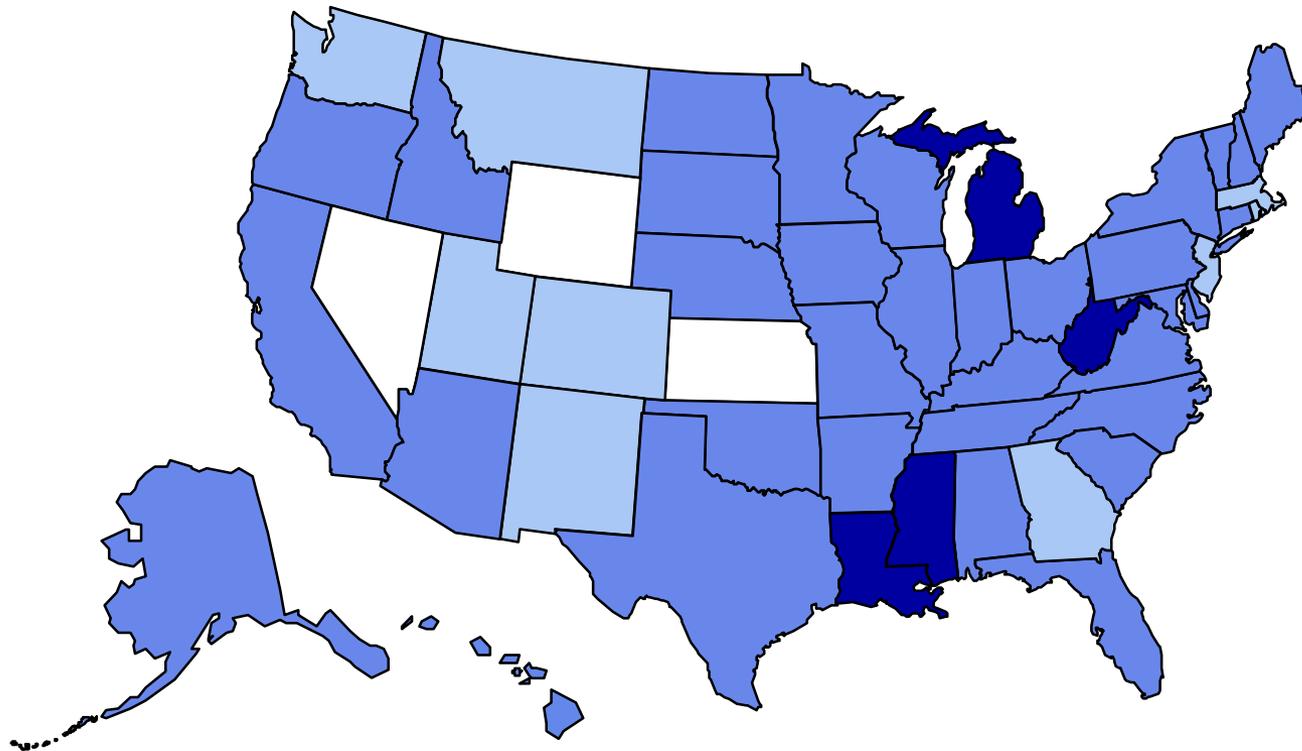
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1991

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



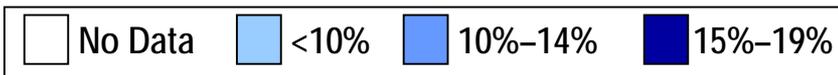
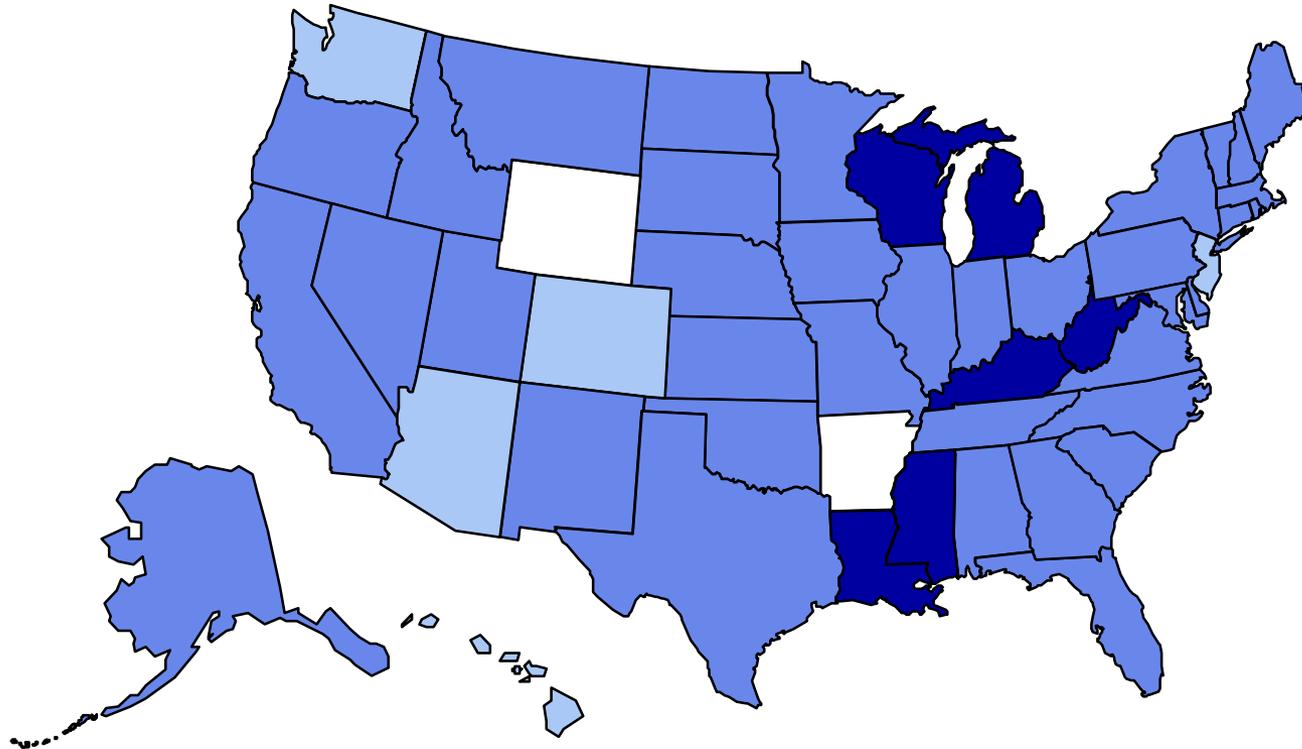
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1992

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



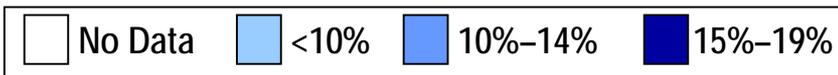
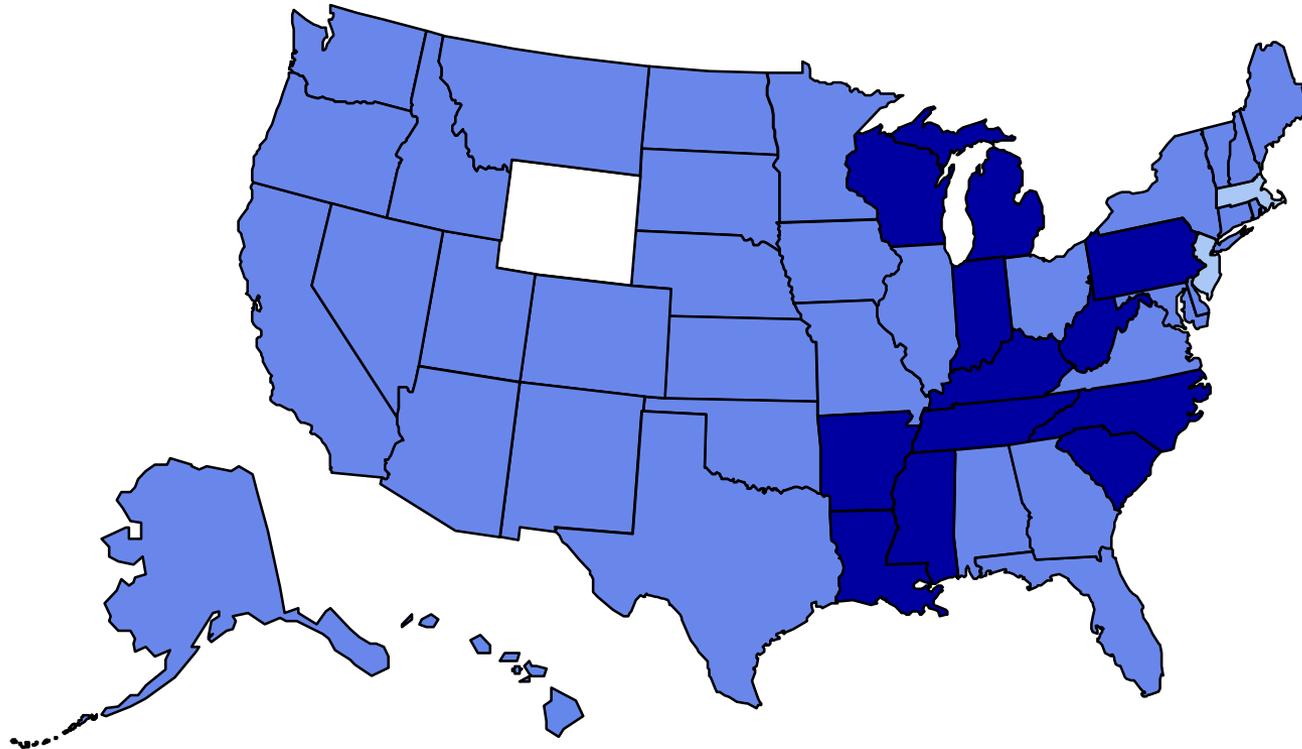
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1993

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



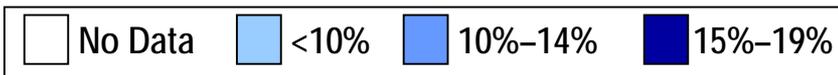
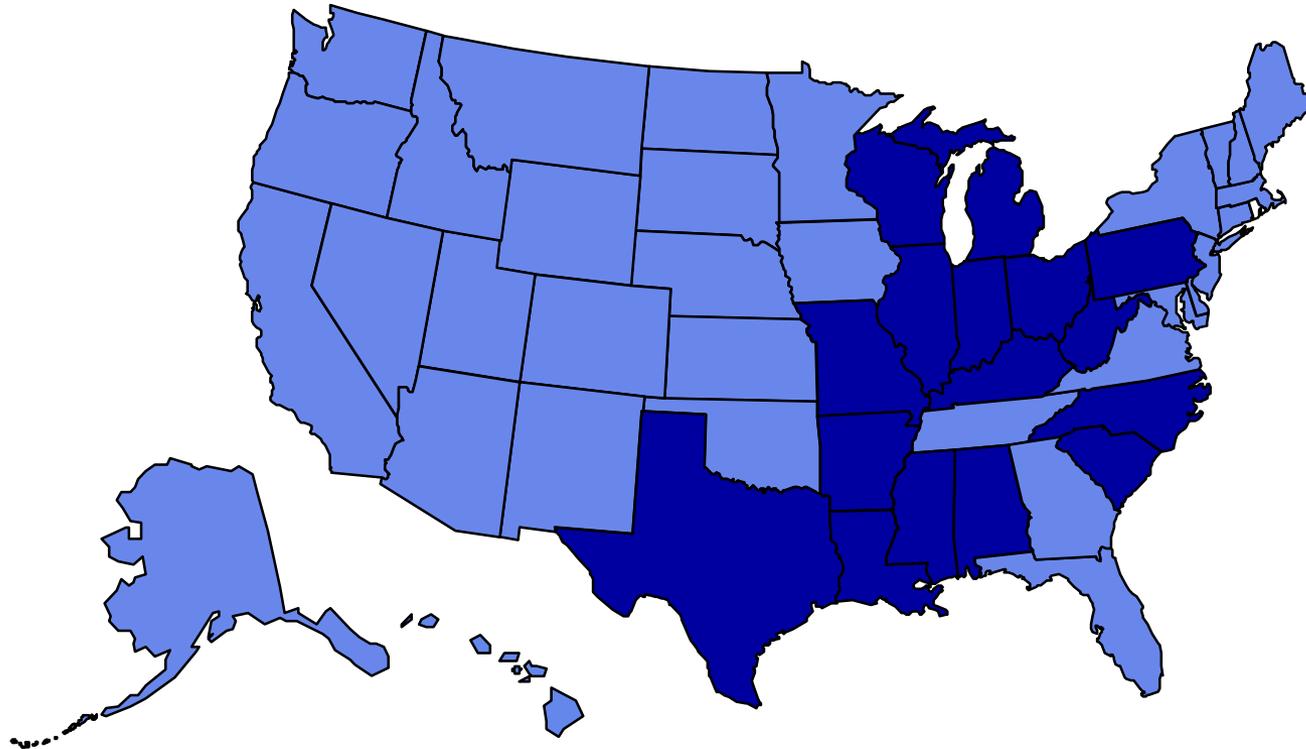
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1994

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



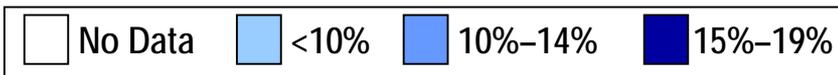
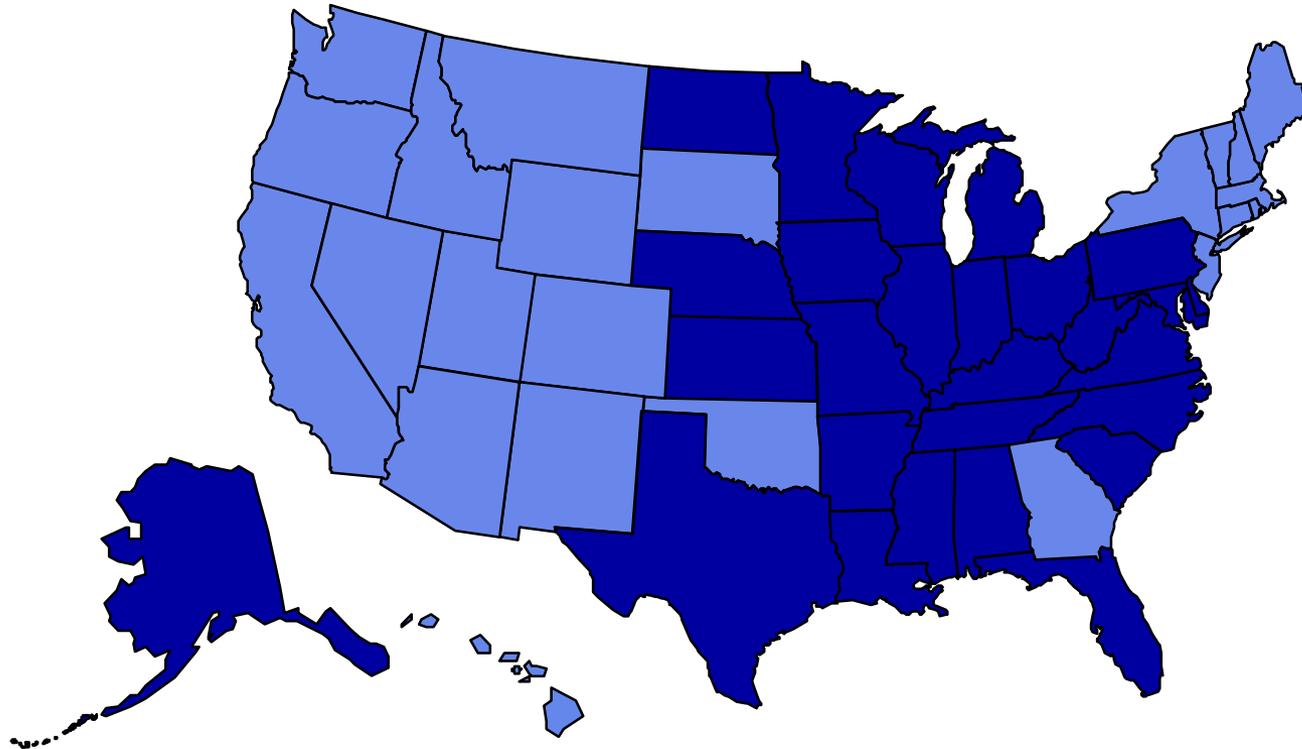
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1995

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



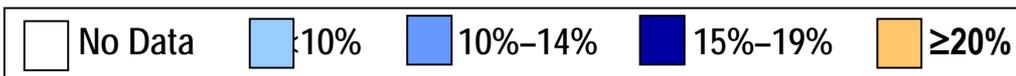
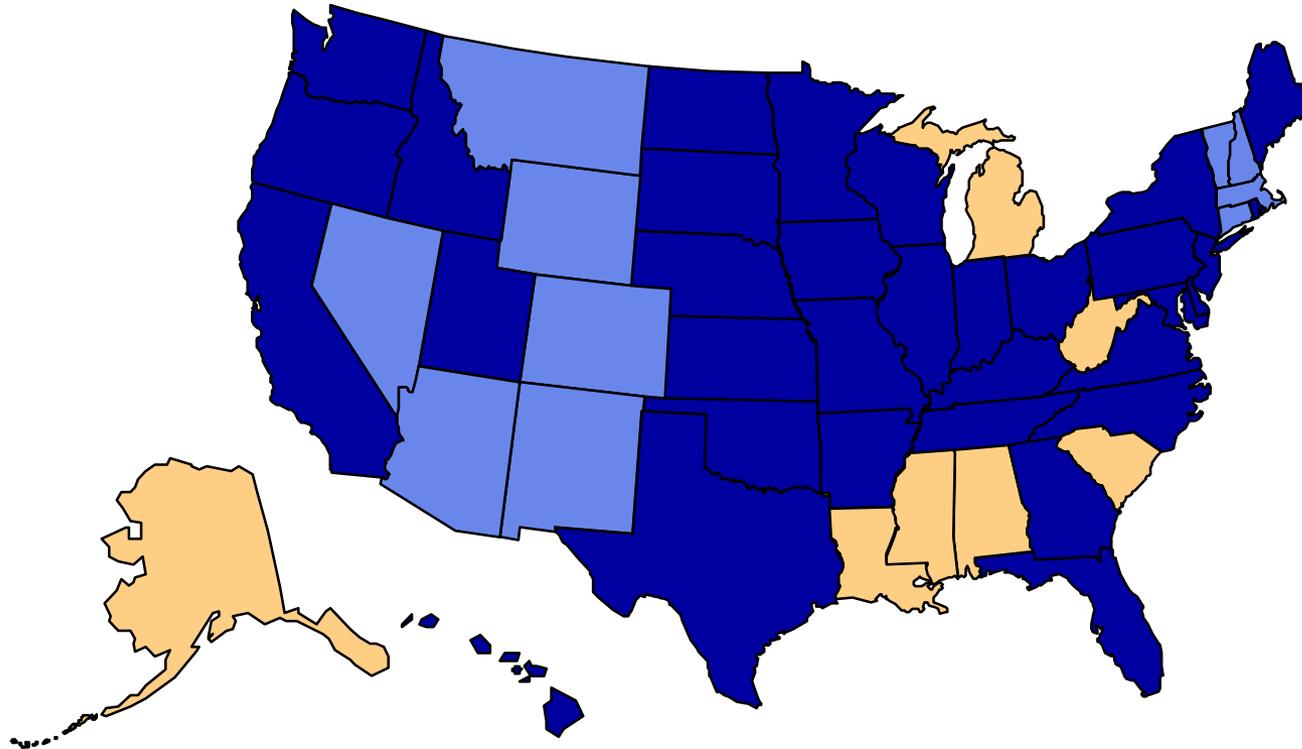
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1998

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



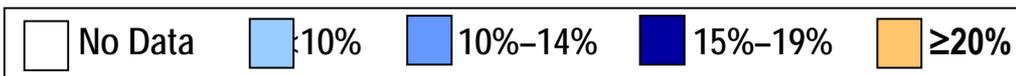
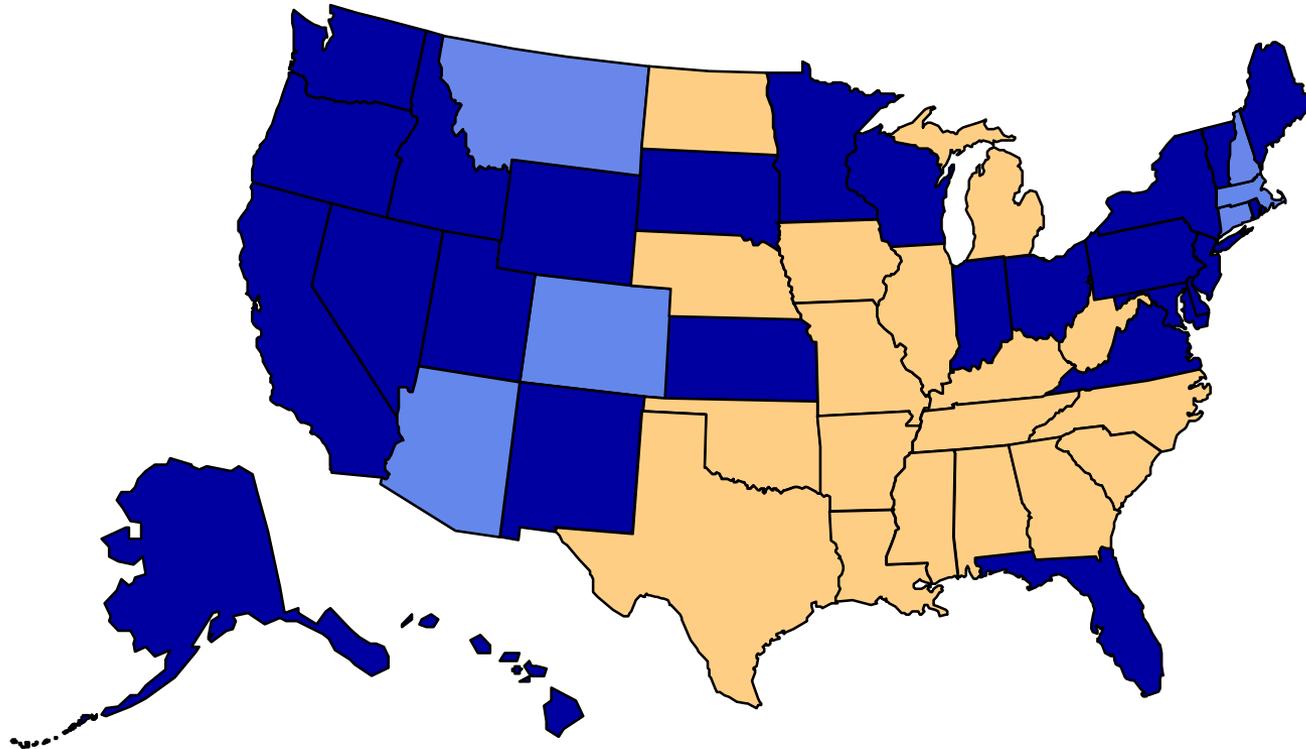
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 1999

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



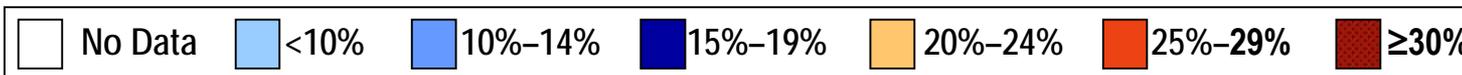
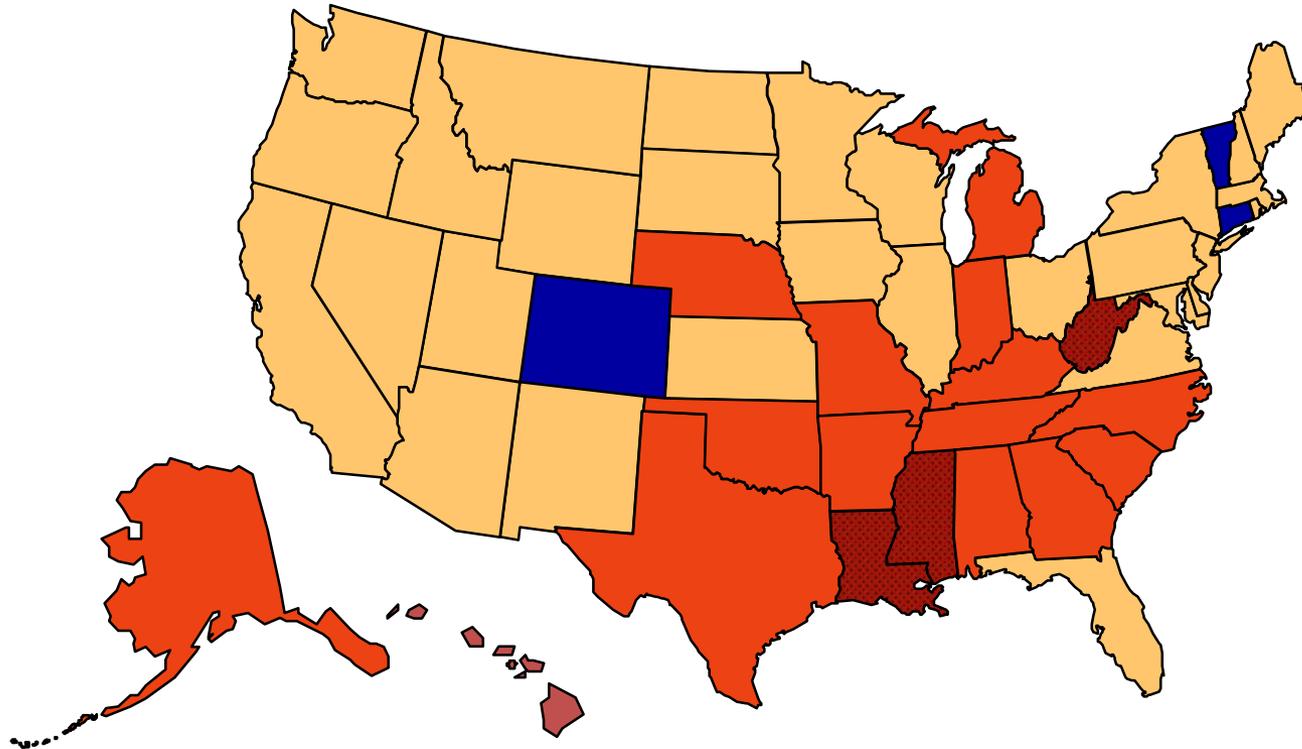
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 2005

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



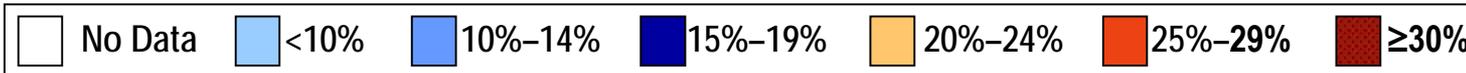
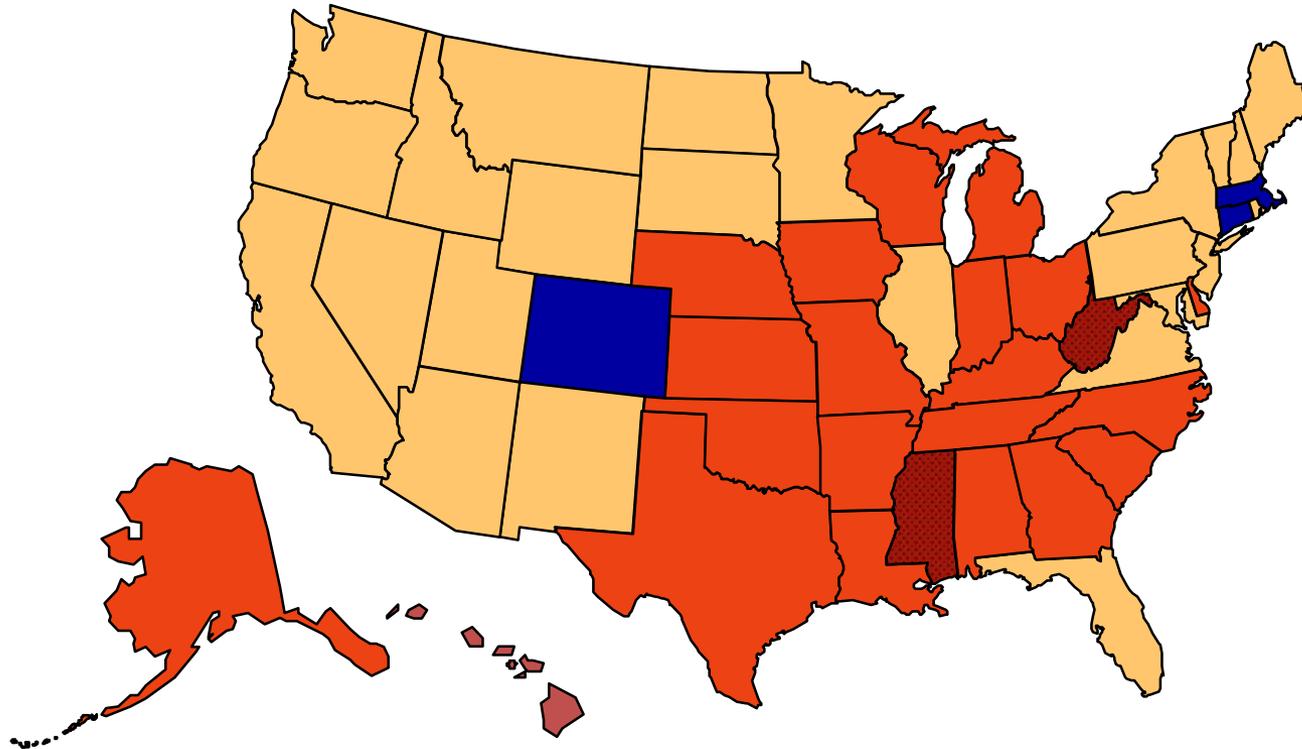
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 2006

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



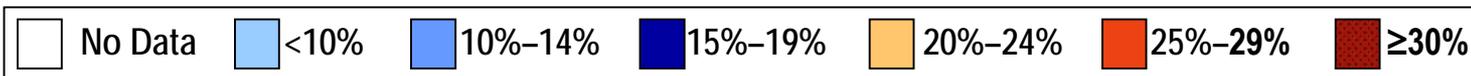
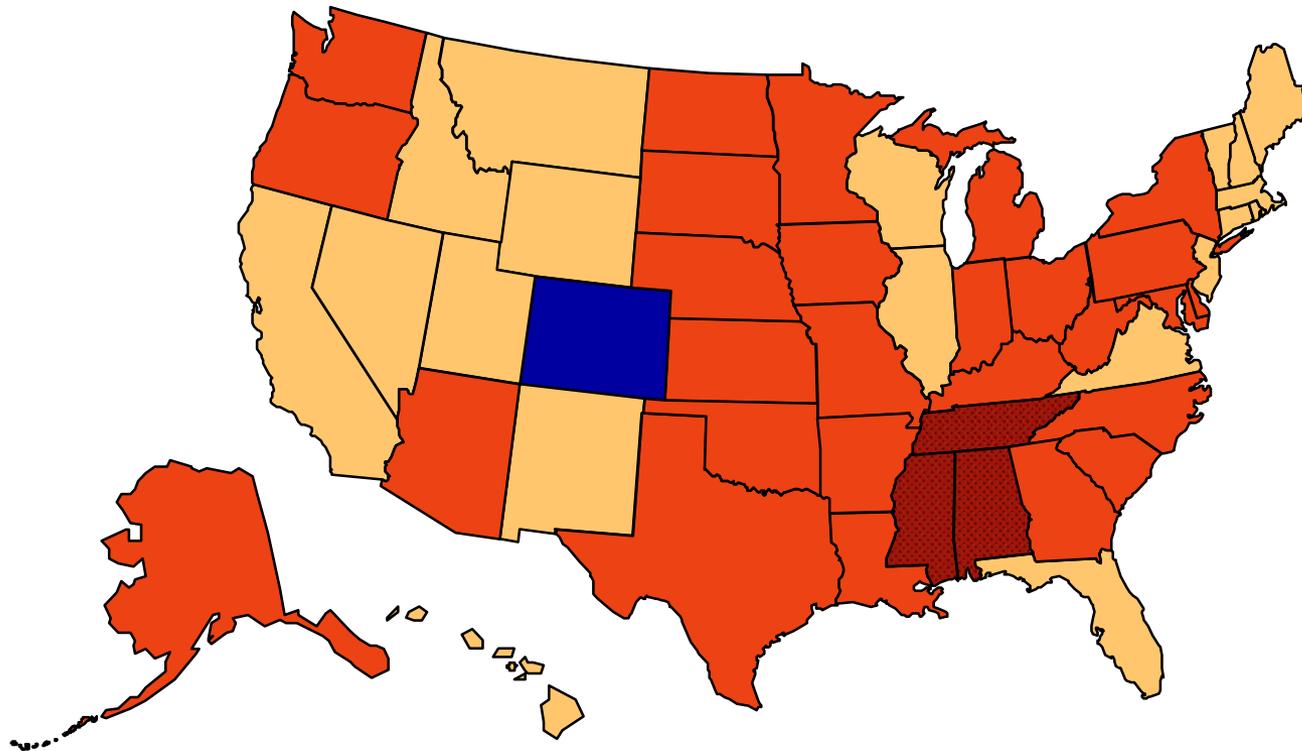
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 2007

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



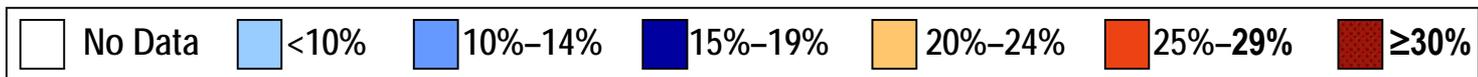
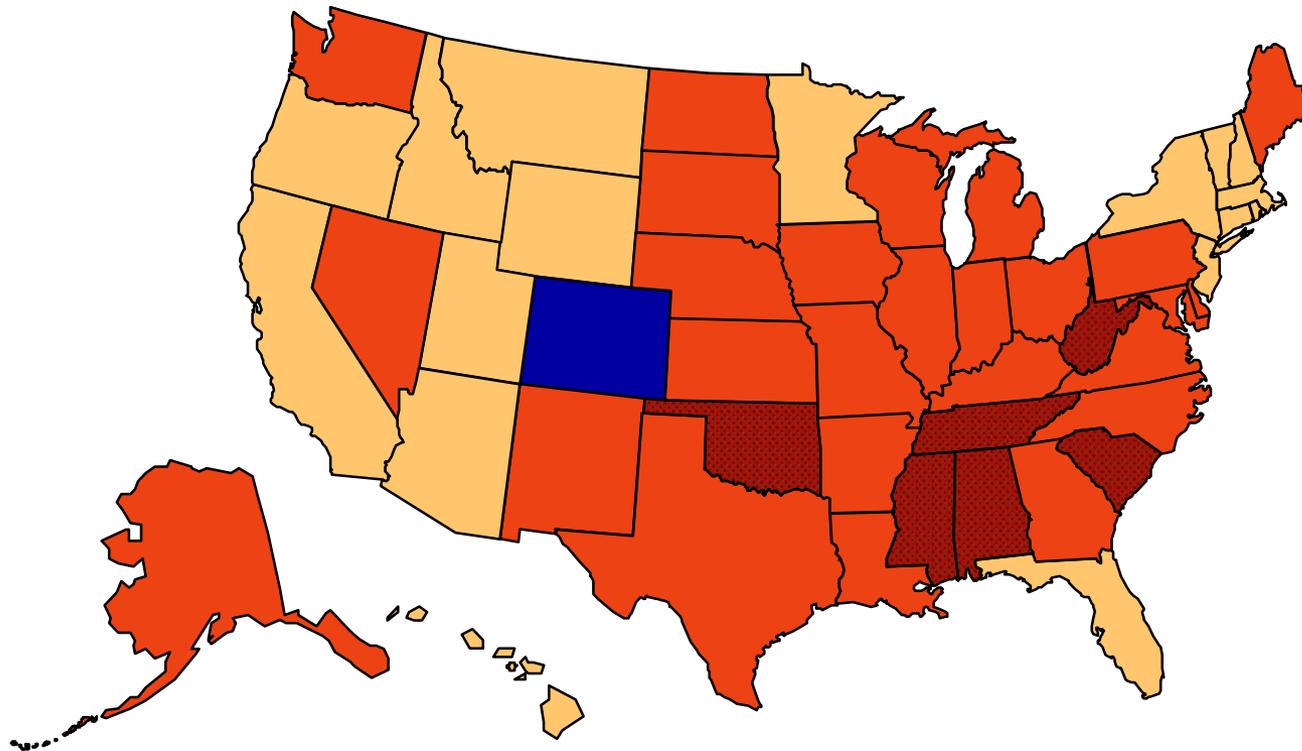
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 2008

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



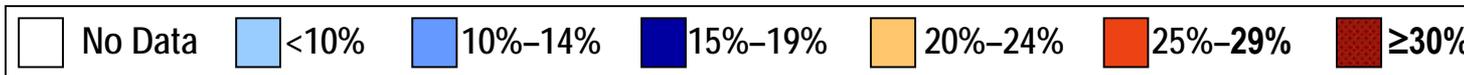
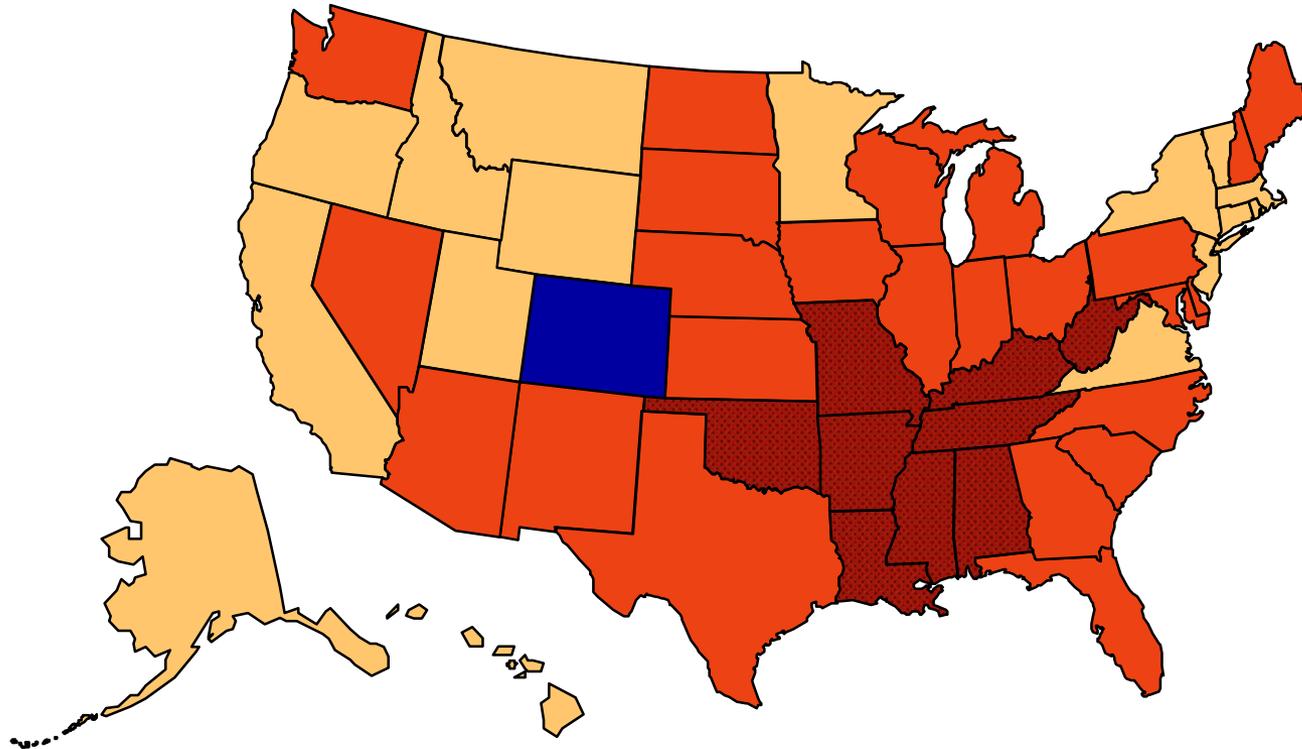
Source: Behavioral Risk Factor Surveillance System, CDC.



Obesity Trends* Among U.S. Adults

BRFSS, 2009

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)

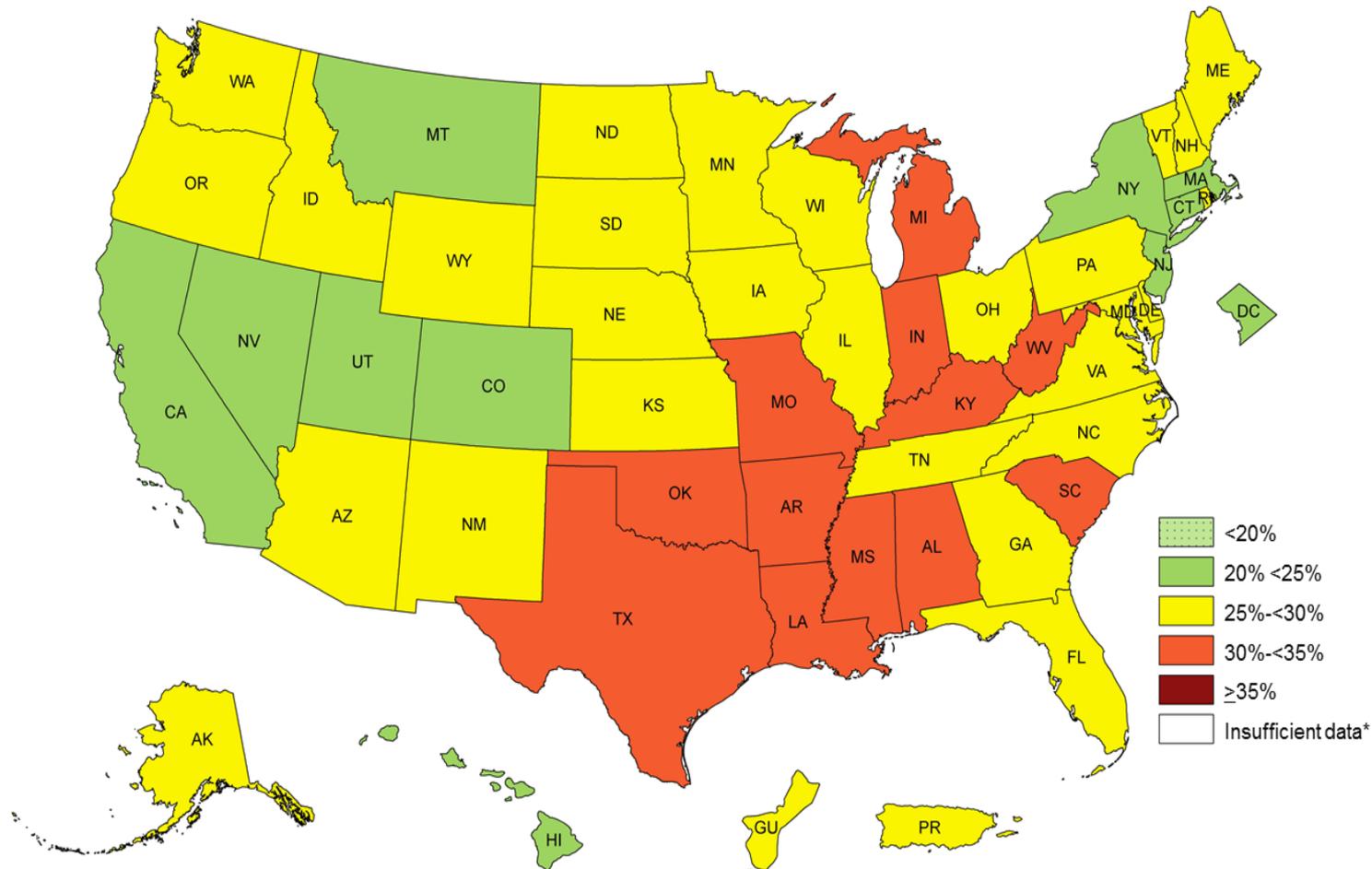


Source: Behavioral Risk Factor Surveillance System, CDC.



Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2011

† Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.

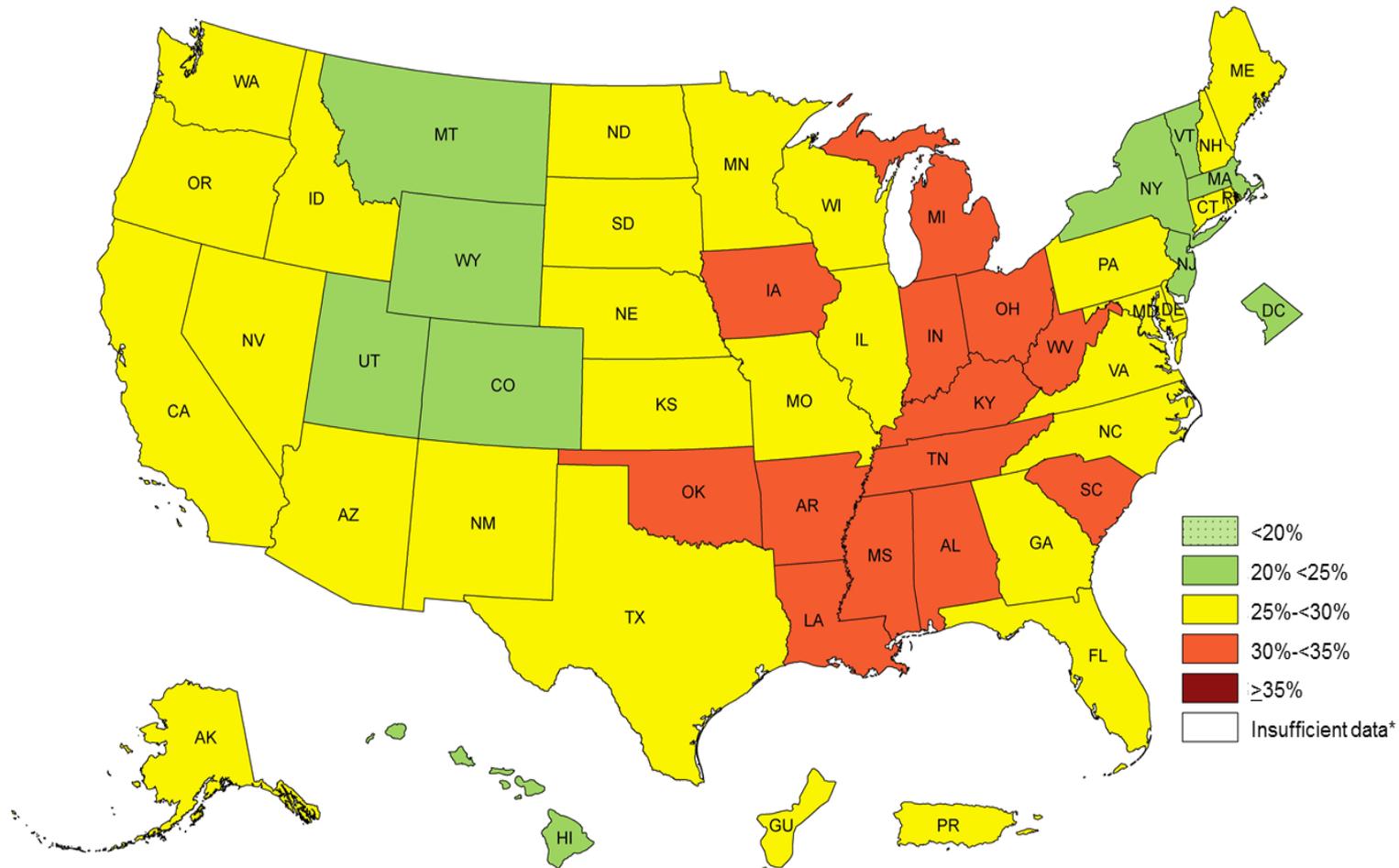


*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.



Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2012

† Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.

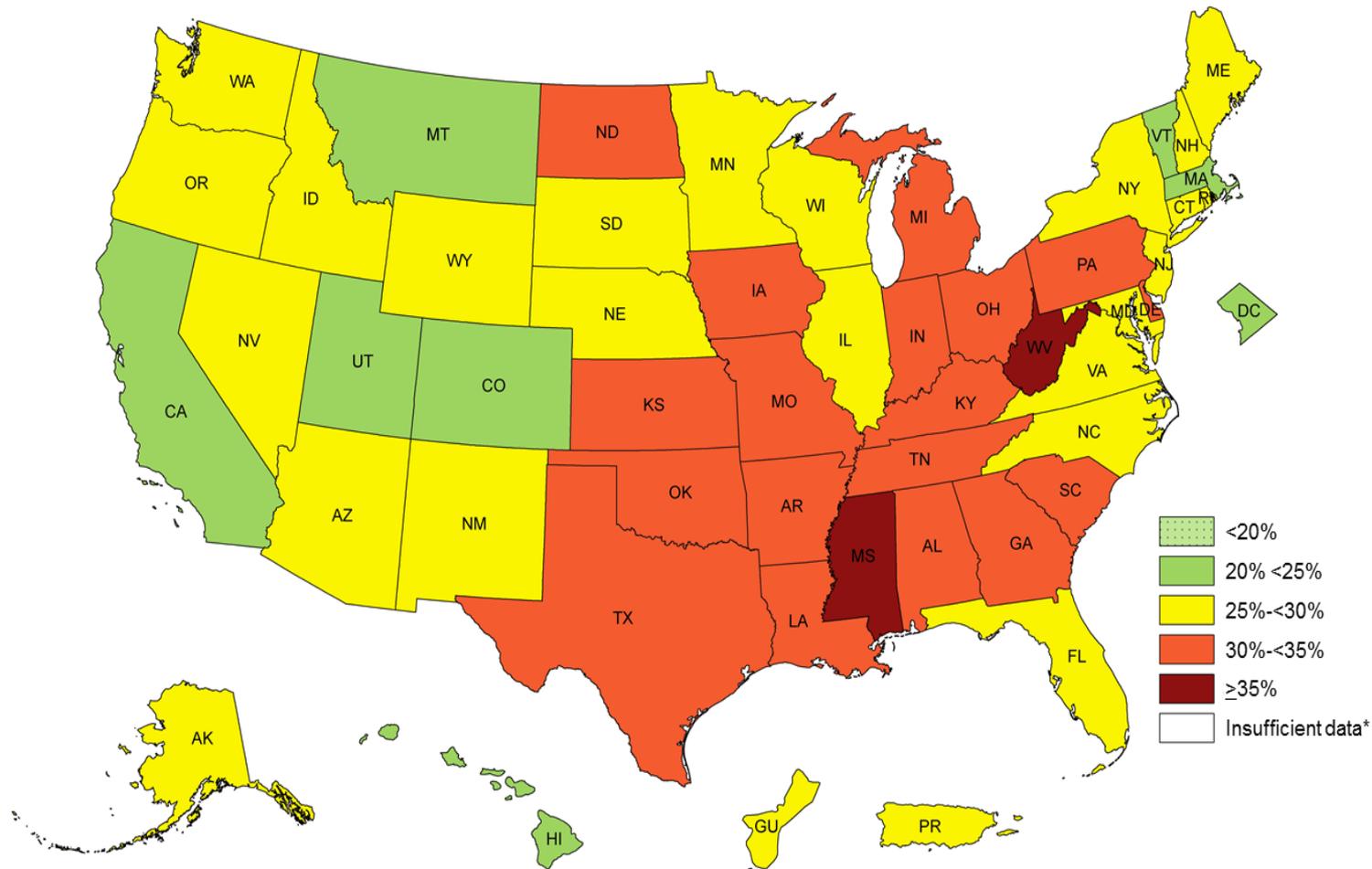


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Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2013

† Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.

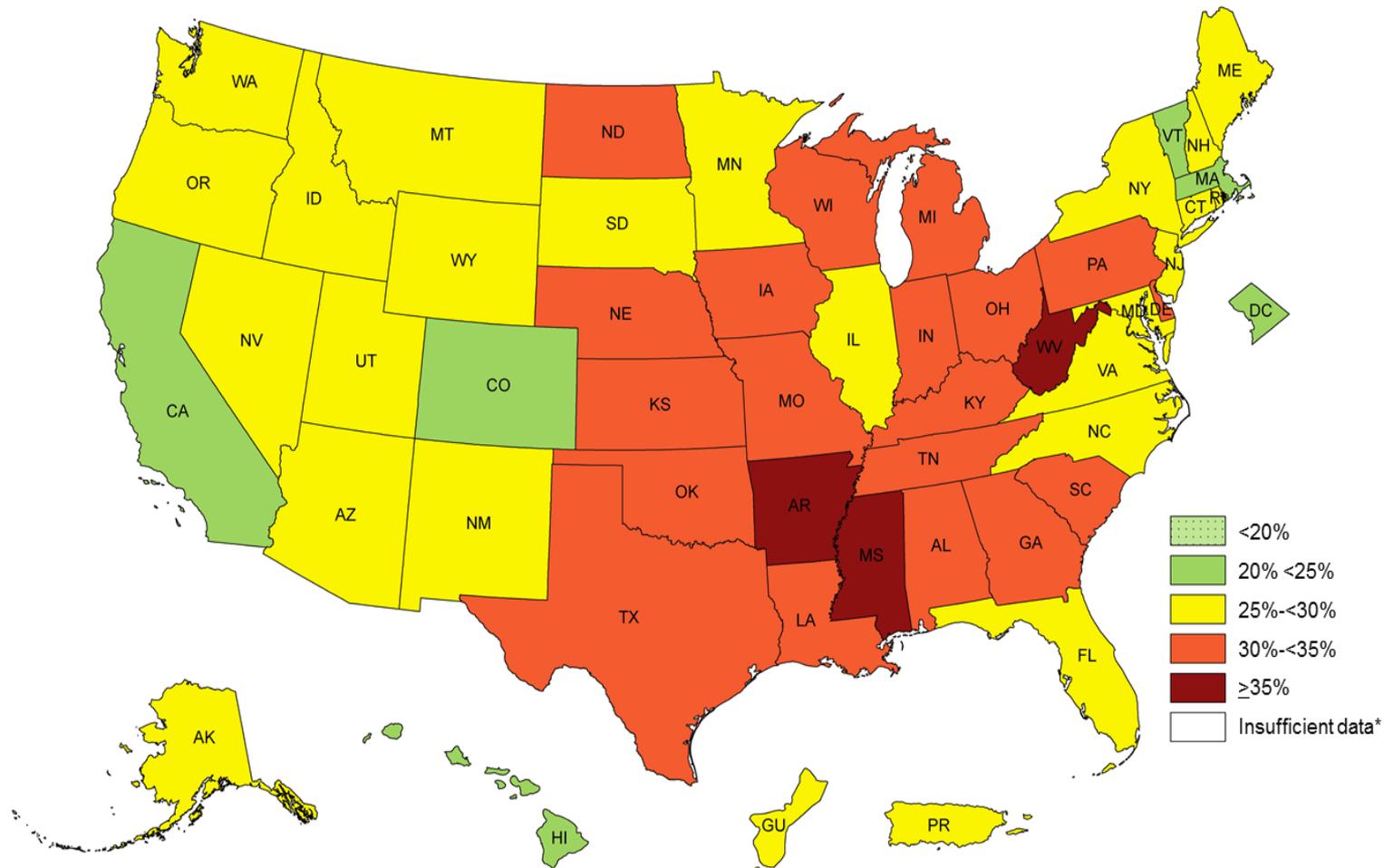


*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.



Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2014

† Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.

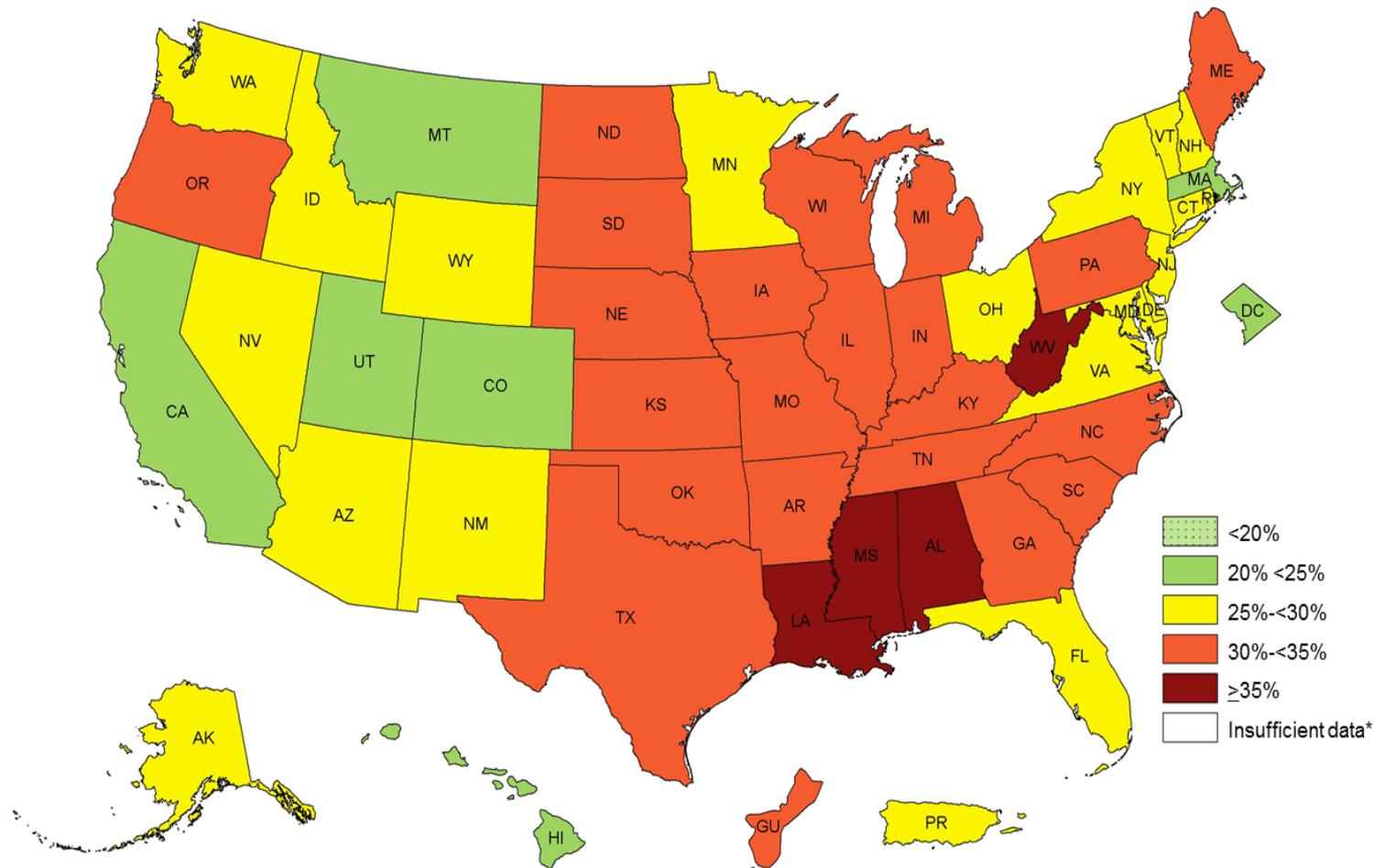


*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.



Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2015

† Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.

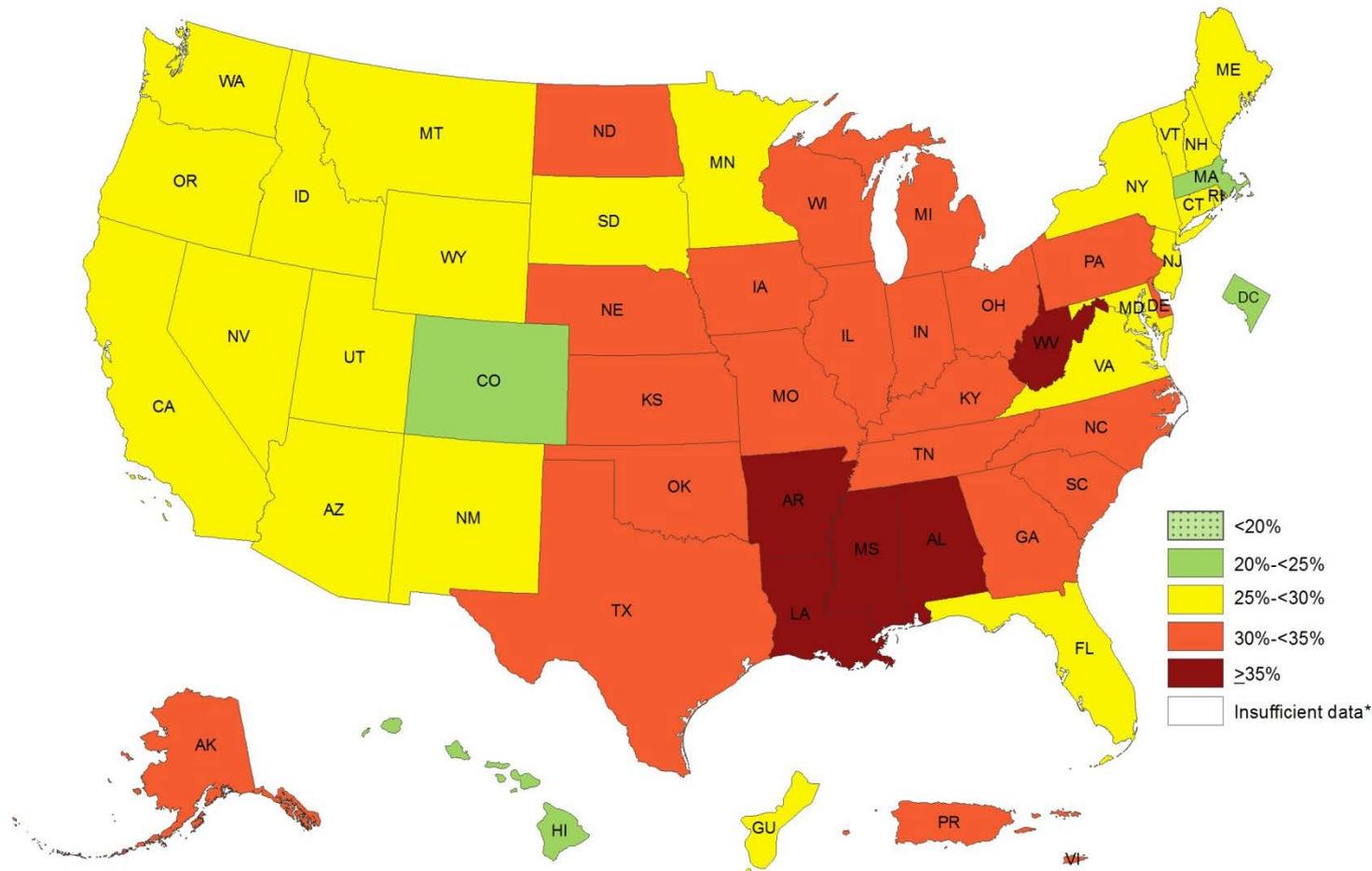


*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.



Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2016

† Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.



*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.



Cancer Looking Forward

- In 2018, the American Cancer Society will publish its updated goals for cancer mortality in 2035
- Unlike the 2015 goals which were aspirational, the 2035 goals are based on measured trends with projections developed by ACS epidemiologists

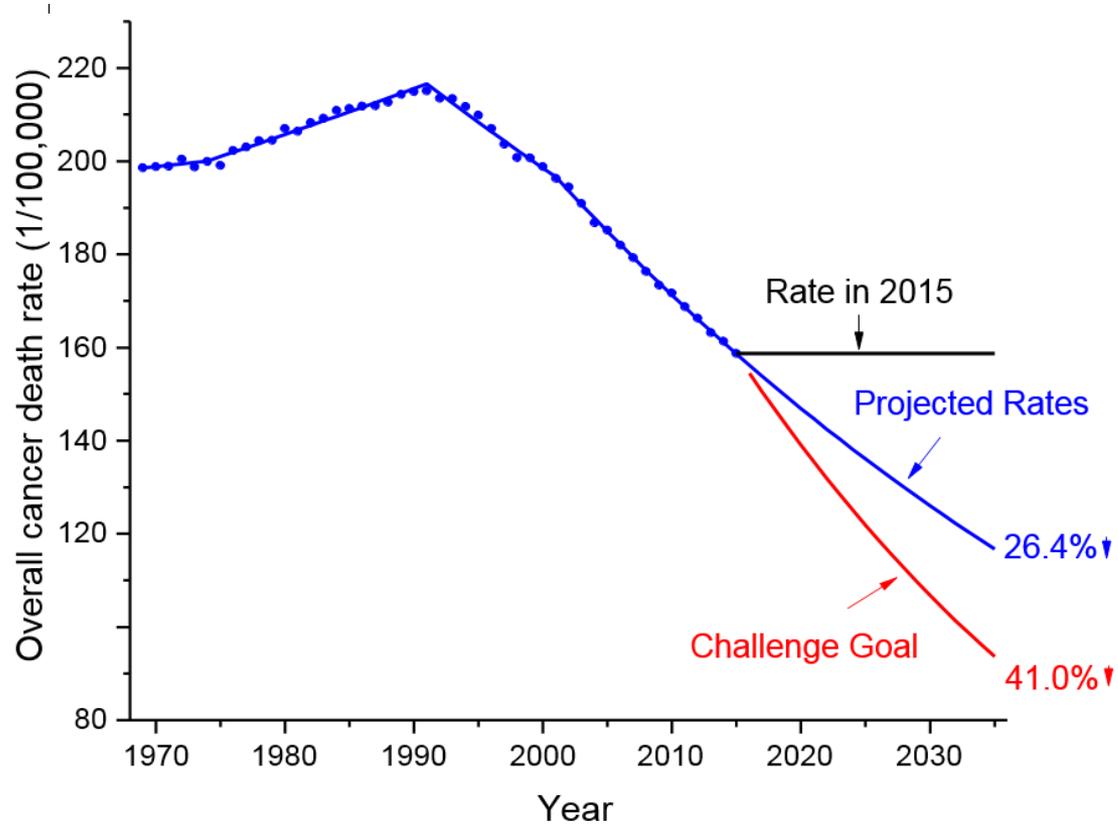


Otis W. Brawley, MD, MACP, FASCO, FACE

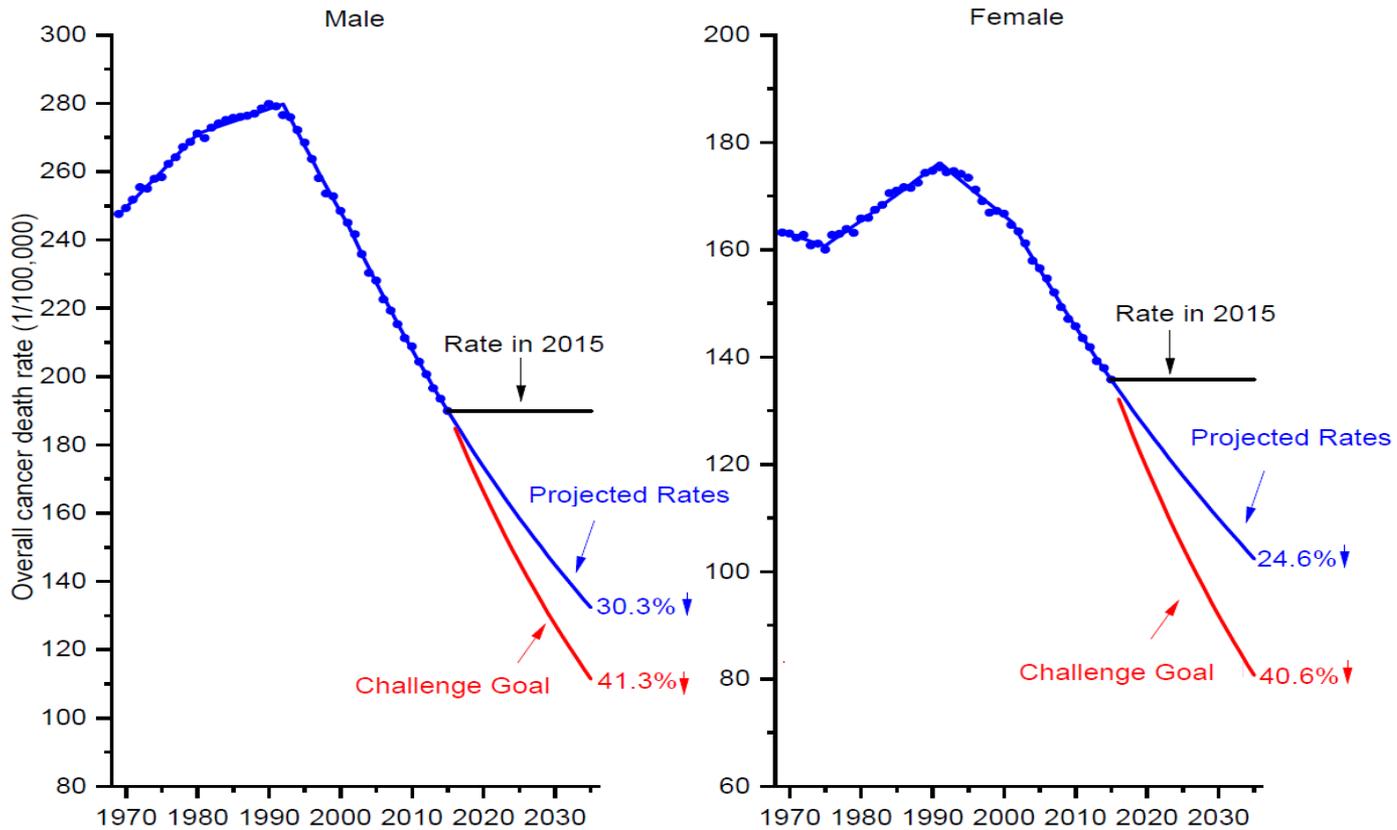
Chief Medical and Scientific Officer
American Cancer Society

Professor of Hematology, Medical Oncology,
Medicine, and Epidemiology
Emory University

US age-adjusted mortality rates measured from 1970 to 2015 with projected and challenge goal to 2035



US age-adjusted mortality rates measured from 1970 to 2015 with projected and challenge goal to 2035 for males and females



	Mortality Rates 1991	Mortality Rates 2015	% Change from 1991	Projected Rates 2035	Projected % Change from 2015	Projected % Change from 1991	Challenge Goal 2035	Challenge % Change from 2015	Challenge % Change from 1991
All Cancers	215.1	158.7	-26.2%	116.8	-26.4%	-45.7%	93.7	-41.0%	-56.44%
Female	175.3	135.8	-22.5%	102.4	-24.6%	-41.59%	80.6	-40.6%	-54.02%
Male	279.2	189.9	-32.0%	132.3	-30.3%	-52.61%	111.4	-41.3%	-60.1%
Lung	59.0	40.6	-31.2%	24.5	-39.7%	-58.47%	19.7	-51.5%	-66.61%
Colorectal	24.0	14.0	-41.7%	9.0	-35.7%	-62.5%	7.9	-43.6%	-67.08%
Breast	32.7	20.3	-37.9%	14.8	-27.1%	-54.74%	13.9	-31.5%	-57.49%
Prostate	39.3	18.9	-51.9%	9.8	-48.1%	-75.06%	9.2	-51.3%	-76.59%
Liver	3.7	6.6	78.4%	10.4	57.6%	181.08%	9.8	48.5%	164.86%
Pancreas	10.7	11	2.8%	11.6	5.5%	8.41%	7.0	-36.4%	-34.58%
Uterus	4.2	4.8	14.3%	7.0	45.8%	66.67%	6.5	35.4%	54.76%

Mortality rates are per 100,000 population, age adjusted to the US year 2000 standard.

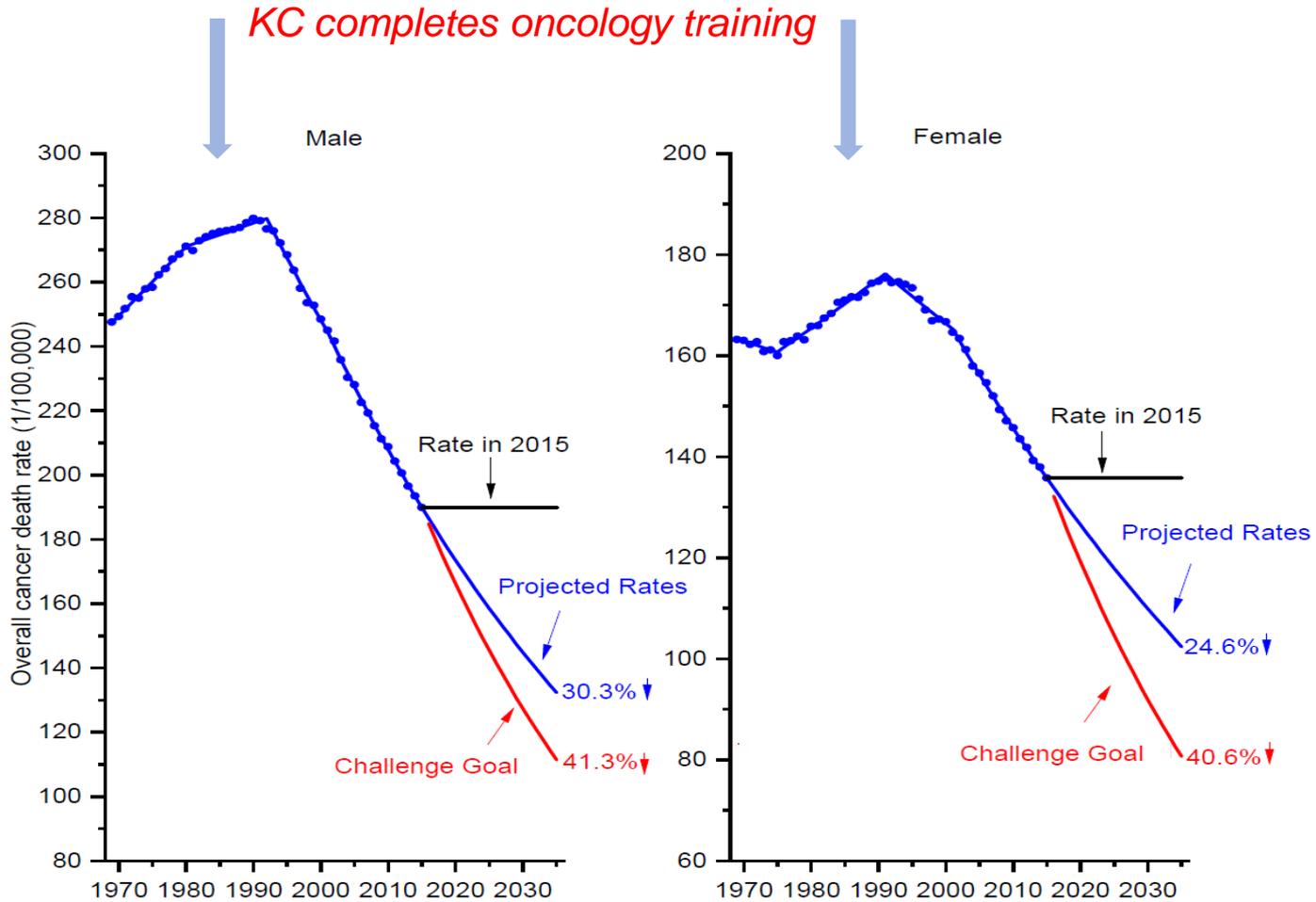
The proportional reduction (%) in death rates from obesity-related cancers if BMI level decreases to that of the 1970s by 2020

	Both sexes
All cancers	2.6%
Esophagus (adenocarcinoma only)	20.7%
Stomach (cardia only)	14.1%
Colorectal	2.0%
Liver	13.7%
Gallbladder	14.5%
Pancreas	6.7%
Breast (female) post-menopausal only	4.8%
Corpus uteri	20.6%
Ovary	1.5%
Kidney	13.2%
Thyroid	4.4%
Multiple myeloma	4.4%

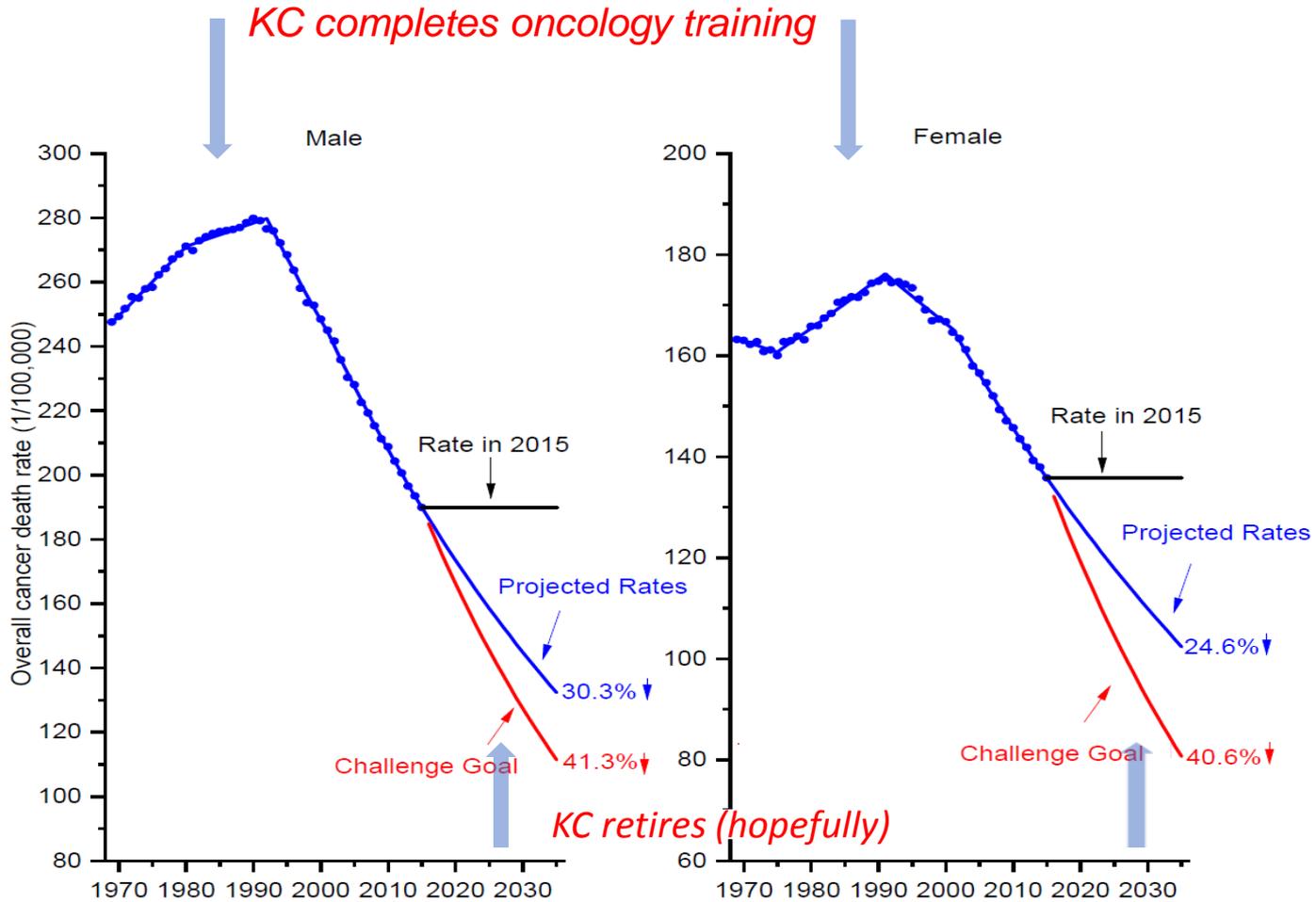
The proportional reduction (%) in death rates from smoking-related cancers if smoking prevalence decreases to 4% by 2020 (current US smoking rate 14% overall 7.7% college educated)

	Percent Decline from 2015
All Cancers	21.1%
Oral cavity, pharynx	39.4%
Esophagus	33.6%
Stomach	13.5%
Colorectal	8.3%
Liver	17.2%
Pancreas	10.3%
Larynx	60.5%
Lung	59.3%
Cervix	11.9%
Kidney	11.5%
Urinary bladder	31.7%
Leukemia	10.5%

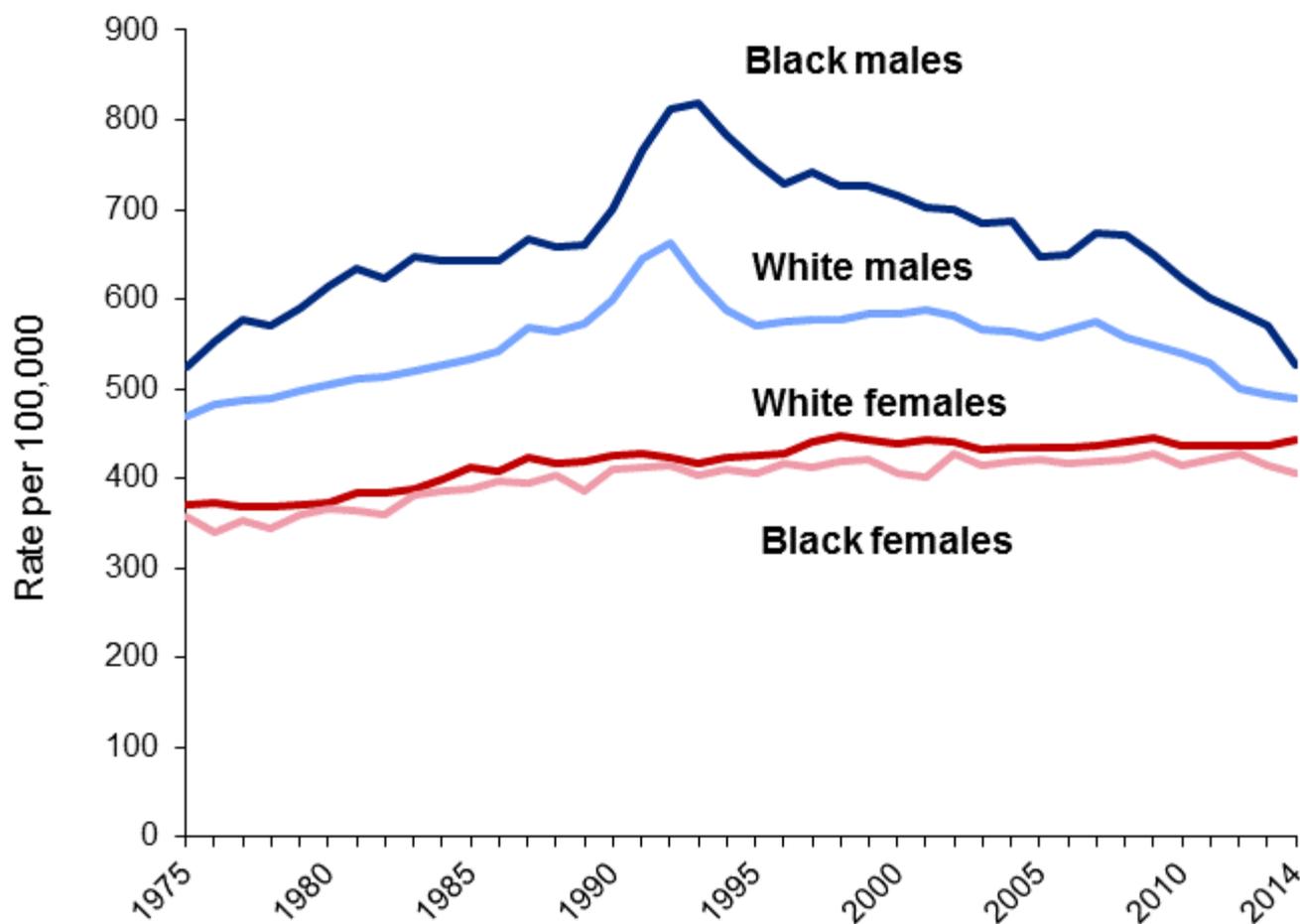
US age-adjusted mortality rates measured from 1970 to 2015 with projected and challenge goal to 2035 for males and females



US age-adjusted mortality rates measured from 1970 to 2015 with projected and challenge goal to 2035 for males and females

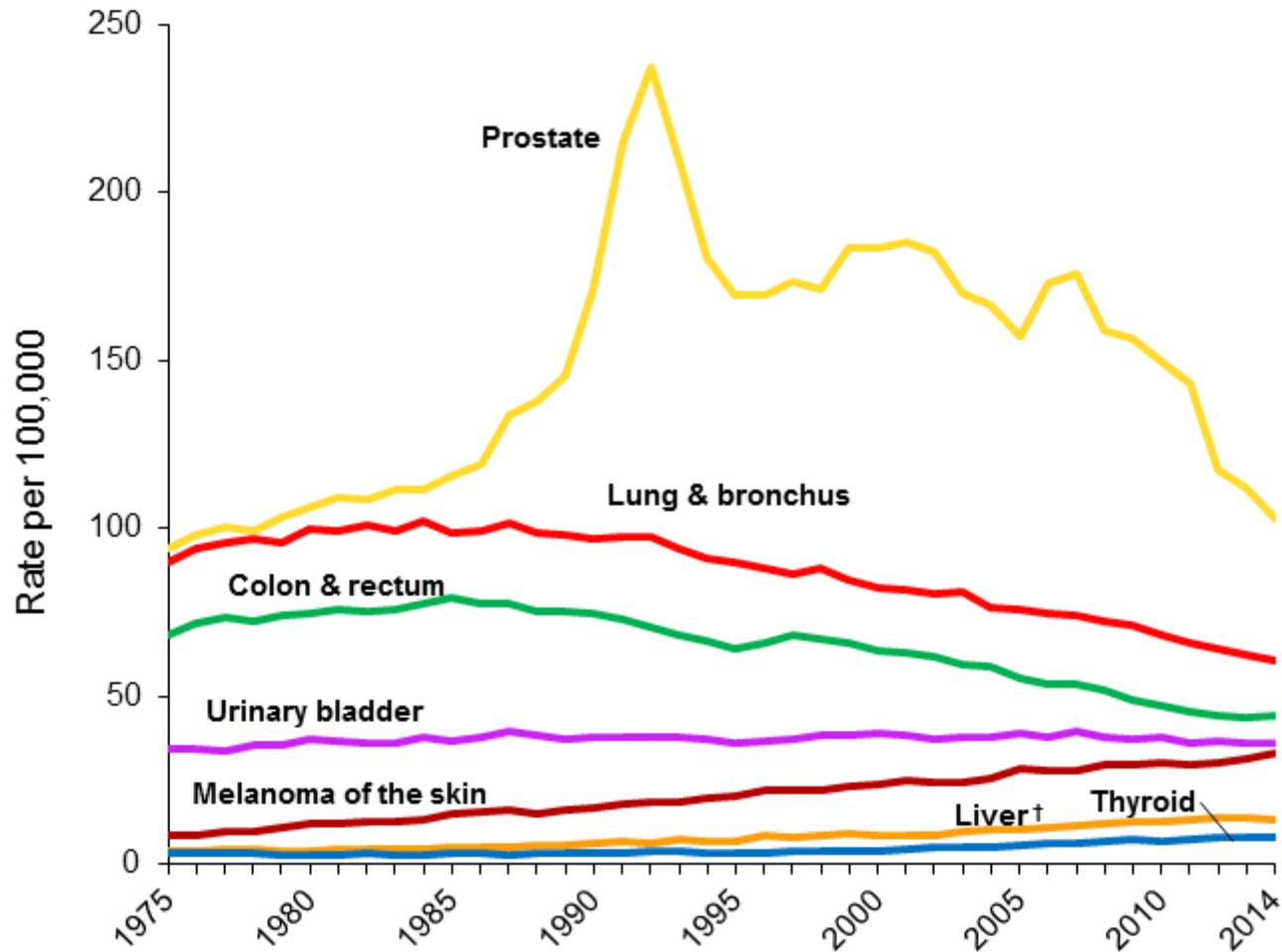


Trends in Cancer Incidence Rates* by Sex and Race, US, 1975-2014



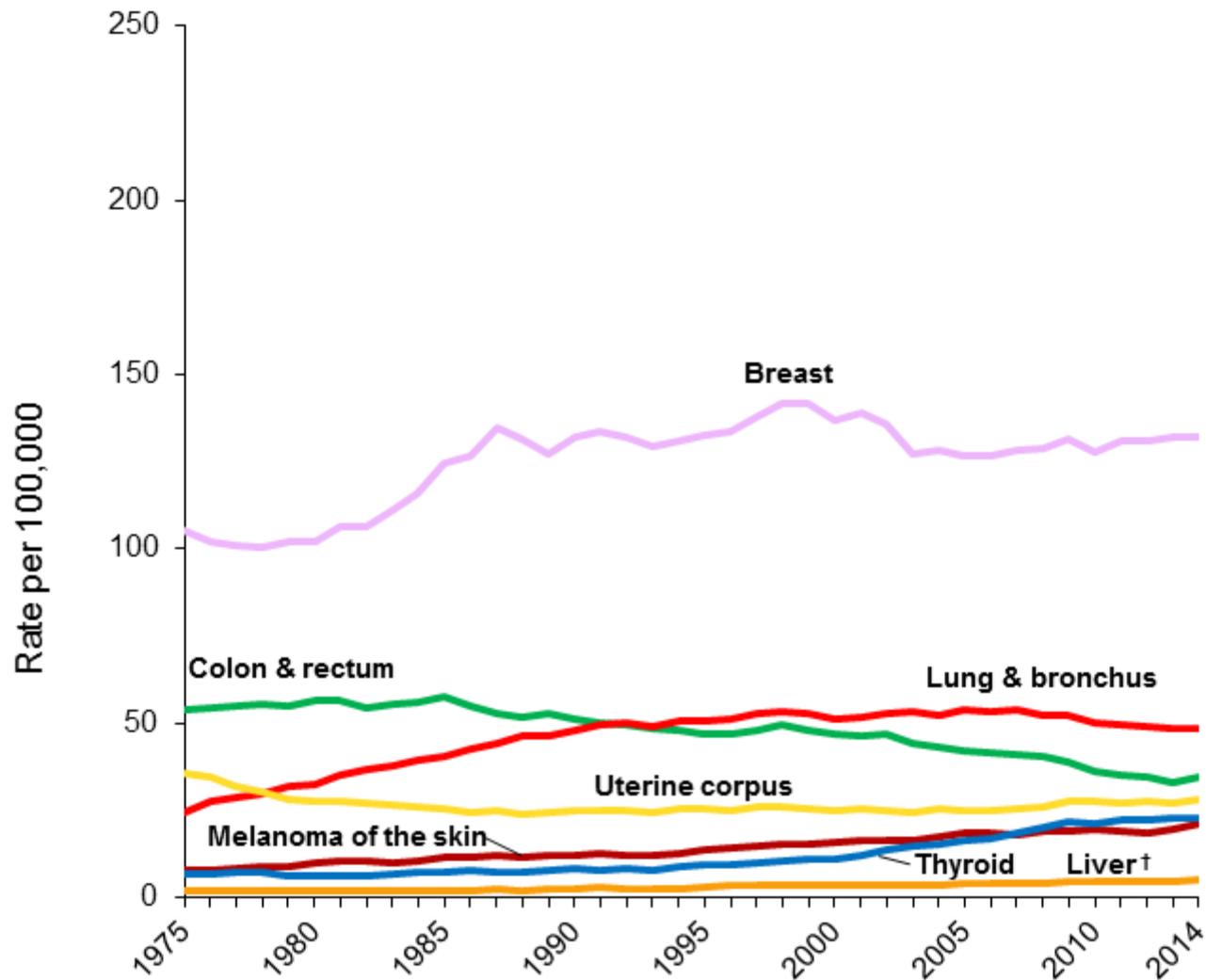
*Age-adjusted to the 2000 US standard population. Incidence rates are adjusted for delays in reporting.
Source: Surveillance, Epidemiology, and End Results (SEER) Program, National Cancer Institute, 2017.

Trends in Cancer Incidence Rates* Among Males, US, 1975-2014



*Age-adjusted to the 2000 US standard population and adjusted for delays in reporting. †Includes the intrahepatic bile duct. Source: Surveillance, Epidemiology, and End Results (SEER) Program, National Cancer Institute, 2017.

Trends in Cancer Incidence Rates* Among Females, US, 1975-2014



*Age-adjusted to the 2000 US standard population and adjusted for delays in reporting. †Includes the intrahepatic bile duct.
Source: Surveillance, Epidemiology, and End Results (SEER) Program, National Cancer Institute, 2017.