CHAPTER 5

Cancer (C)

Lead Agencies

Centers for Disease Control and Prevention
National Institutes of Health
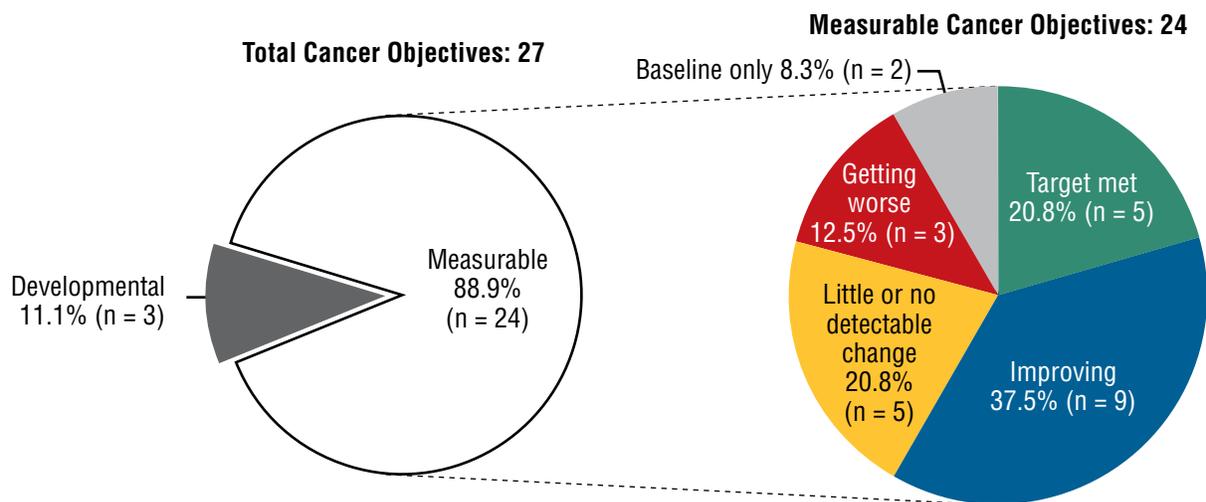
Contents

Goal: Reduce the number of new cancer cases, as well as the illness, disability, and death caused by cancer.

This chapter includes objectives that monitor trends in cancer mortality, incidence, and survival, as well as cancer screening, counseling, and cancer risk reduction. The Reader's Guide provides a step-by-step explanation of the content of this chapter, including criteria for highlighting objectives in the Selected Findings.[1]

Status of Objectives

Figure 5–1. Midcourse Status of the Cancer Objectives

Of the 27 objectives in the Cancer Topic Area, 3 objectives were developmental[2] and 24 were measurable[3] (Figure 5–1, Table 5–1). The midcourse status of the measurable objectives was as follows (Table 5–2):

- 5 objectives had met or exceeded their 2020 targets,[4]
- 9 objectives were improving,[5]
- 5 objectives had demonstrated little or no detectable change,[6]
- 3 objectives were getting worse,[7] and
- 2 objectives had baseline data only.[8]

Selected Findings

Mortality

Two of the eight objectives monitoring cancer mortality had exceeded their 2020 targets at midcourse, four objectives were improving, and two demonstrated little or no detectable change (Table 5–2).

- Between 2007 and 2013, **lung cancer deaths** (C-2) decreased from 50.6 to 43.4 per 100,000 population (age-adjusted) and **prostate cancer deaths** (C-7) decreased from 24.2 to 19.2 per 100,000 population (age-adjusted), exceeding their respective 2020 targets (Table 5–2).

  » The age-adjusted lung cancer death rate (C-2) varied by state. In 2013, 29 states and the District of Columbia had met the national target (Map 5–1).

  » In 2013, there were statistically significant disparities by sex, race and ethnicity, and geographic location in the age-adjusted lung cancer death rate (Table 5–3, C-2).

  » In 2013, there were statistically significant disparities by race and ethnicity and geographic location in the age-adjusted prostate cancer death rate (Table 5–3, C-7).

- Between 2007 and 2013, the following age-adjusted cancer death rates improved, moving toward their respective 2020 targets: **overall cancer deaths** (C-1) decreased from 179.3 to 163.2 per 100,000

population; **female breast cancer deaths** (C-3) declined from 23.0 to 20.8 per 100,000 population; **colorectal cancer deaths** (C-5) decreased from 17.1 to 14.7 per 100,000 population; and **oropharyngeal cancer deaths** (C-6) decreased from 2.5 to 2.4 per 100,000 population (Table 5–2).

» The age-adjusted female breast cancer death rate (C-3) varied by state. In 2013, 27 states had met the national target (Map 5–2).

» In 2013, there was a statistically significant disparity by race and ethnicity in the age-adjusted female breast cancer death rate (Table 5–3, C-3). The disparity by geographic location was not statistically significant.

» In 2013, there were statistically significant disparities by sex, race and ethnicity, and geographic location in the age-adjusted rates for overall cancer deaths (C-1), colorectal cancer deaths (C-5), and oropharyngeal cancer deaths (C-6) (Table 5–3).

■ There was no change in the age-adjusted **cervical cancer death rate** (C-4: 2.4 per 100,000 population in 2007 and 2013) or in the age-adjusted **melanoma death rate** (C-8: 2.7 per 100,000 population in 2007 and 2013) (Table 5–2).

» In 2013, there were statistically significant disparities by race and ethnicity and geographic location in the age-adjusted cervical cancer death rate (Table 5–3, C-4).

» In 2013, there were statistically significant disparities by sex, race and ethnicity, and geographic location in the age-adjusted melanoma death rate (Table 5–3, C-8).

New Cases of Specific Cancers

Two of the three objectives monitoring new cases of specific cancers had met or exceeded their 2020 targets at midcourse and one objective was improving (Table 5–2).

■ Between 2007 and 2011, **new cases of invasive colorectal cancer** (C-9) decreased from 46.9 to 39.9 cases per 100,000 population (age-adjusted), meeting the 2020 target (Table 5–2).

» In 2011, there were statistically significant disparities by sex and race and ethnicity in the age-adjusted rate of new cases of invasive colorectal cancer (Table 5–3, C-9).

■ Between 2007 and 2011, **new cases of late-stage female breast cancer** (C-11) decreased from 44.3 to 41.9 cases per 100,000 population (age-adjusted), exceeding the 2020 target (Table 5–2).

» In 2011, there was a statistically significant disparity by race and ethnicity in the age-adjusted rate of new cases of late-stage female breast cancer (Table 5–3, C-11).

■ **New cases of invasive uterine cervical cancer** (C-10) declined from 8.0 per 100,000 population (age-adjusted) in 2007 to 7.5 in 2011, moving toward the 2020 target (Table 5–2).

» In 2011, there was a statistically significant disparity by race and ethnicity in the age-adjusted rate of new cases of invasive uterine cervical cancer (Table 5–3, C-10).

5-Year Survival Rate

■ The proportion of **persons with cancer who were living 5 years or longer after diagnosis**[9] (C-13) increased from 65.2% in 2007 to 66.3% in 2010, moving toward the 2020 target (Table 5–2).

» In 2010, there were statistically significant disparities by sex and race and ethnicity in the 5-year cancer survival rate (Table 5–3, C-13).

Counseling and Screening

One of the six measurable objectives monitoring cancer counseling and screening had improved at midcourse, one demonstrated little or no detectable change, three had worsened, and one had baseline data only (Table 5–2).

■ The age-adjusted proportion of **women aged 21–65 who had received a Pap test within the past 3 years** (C-15) decreased from 84.5% in 2008 to 80.7% in 2013, moving away from the baseline and 2020 target (Table 5–2).

» In 2013, there were statistically significant disparities by education, family income, disability status, and geographic location in the age-adjusted proportion of women aged 21–65 who had received a Pap test within the past 3 years (Table 5–3, C-15). The disparity by race and ethnicity was not statistically significant.

■ The age-adjusted proportion of **adults aged 50–75 who had received a colorectal cancer screening based on the most recent guidelines** (C-16) increased from 52.1% in 2008 to 58.2% in 2013, moving toward the 2020 target (Table 5–2).

» The age-adjusted proportion of adults aged 50–75 who had received a colorectal cancer screening based on the most recent guidelines varied by state (Map 5–3).[10]

» In 2013, there were statistically significant disparities by race and ethnicity, education, family income, disability status, and geographic location in the age-adjusted proportion of adults aged 50–75 who had received a colorectal cancer screening based on the most recent guidelines (Table 5–3, C-16). The disparity by sex was not statistically significant.

■ There was little or no detectable change (73.7% in 2008 and 72.6% in 2013) in the age-adjusted proportion of **women aged 50–74 who had received a mammogram within the past 2 years** (Table 5–2, C-17).

» In 2013, there were statistically significant disparities by education, family income, disability status, and geographic location in the age-adjusted proportion of women aged 50–74 who had received a mammogram within the past 2 years (Table 5–3, C-17). The disparity by race and ethnicity was not statistically significant.

■ Between 2008 and 2010, the age-adjusted proportion of **women aged 50–74 who were counseled by their providers about mammograms** (C-18.1) decreased from 69.8% to 61.4%, and the age-adjusted proportion of **women aged 21–65 who were counseled by their providers about Pap tests** (C-18.2) decreased from 60.2% to 53.9%, moving away from their baselines and 2020 targets (Table 5–2).

» In 2010, there were statistically significant disparities by education, family income, and geographic location in the age-adjusted proportion of women aged 50–74 who had been counseled by their providers about mammograms (Table 5–3, C-18.1). The disparities by race and ethnicity and disability status were not statistically significant.

» In 2010, there were statistically significant disparities by education and family income in the age-adjusted proportion of women aged 21–65 who had been counseled by their provider about Pap tests (Table 5–3, C-18.2). The disparities by race and ethnicity, disability status, and geographic location were not statistically significant.

■ Data beyond the baseline (14.4% in 2010) were not available for the age-adjusted proportion of **men aged 40 and over who had ever been counseled about the advantages and disadvantages of the prostate-specific antigen (PSA) test** (C-19), so progress toward the 2020 target could not be assessed (Table 5–2).

» In 2010, there were statistically significant disparities by race and ethnicity, education, family income, and geographic location in the age-adjusted proportion of men aged 40 and over who had ever been counseled about the PSA test (Table 5–3, C-19). The disparity by disability status was not statistically significant.

Skin Cancer Prevention

One of the five measurable objectives monitoring skin cancer prevention had exceeded the 2020 target at midcourse, two objectives had improved, one demonstrated little or no detectable change, and one had baseline data only (Table 5–2).

■ Data beyond the baseline (37.5% in 2010) were not available for the age-adjusted proportion of **adults aged 18 and over reporting sunburn in the past 12 months** (C-20.2), so progress toward the 2020 target could not be assessed (Table 5–2).

» In 2010, there were statistically significant disparities by sex, race and ethnicity, education, family income, disability status, and geographic location in the age-adjusted proportion of adults who reported having sunburn in the past 12 months (Table 5–3, C-20.2).

■ The proportion of **students in grades 9–12 who reported using indoor tanning devices** (C-20.3) decreased from 15.6% in 2009 to 12.8% in 2013, exceeding the 2020 target (Table 5–2).

» In 2013, there were statistically significant disparities by sex and race and ethnicity in the proportion of students in grades 9–12 who reported using indoor tanning devices (Table 5–3, C-20.3).

■ The age-adjusted proportion of **adults aged 18 and over who reported using indoor tanning devices** (C-20.4) decreased from 5.6% in 2010 to 4.3% in 2013, moving toward the 2020 target (Table 5–2).

» In 2013, there were statistically significant disparities by sex, race and ethnicity, education, family income, and geographic location in the age-adjusted proportion of adults who used indoor tanning devices (Table 5–3, C-20.4). The disparity by disability status was not statistically significant.

■ There was little or no detectable change (9.3% in 2009 and 10.1% in 2013) in the proportion of **students in grades 9–12 who used protective measures to prevent skin cancer** (Table 5–2, C-20.5).

» In 2013, there were statistically significant disparities by sex and race and ethnicity in the proportion of students in grades 9–12 who used protective measures to prevent skin cancer (Table 5–3, C-20.5).

■ The age-adjusted proportion of **adults aged 18 and over who used protective measures to prevent skin cancer** (C-20.6) increased from 67.0% in 2008 to 70.0% in 2010, moving toward the 2020 target (Table 5–2).

» In 2010, there were statistically significant disparities by sex, race and ethnicity, education, family income, and geographic location in the age-adjusted proportion of adults who used protective measures to prevent skin cancer (Table 5–3, C-20.6). The disparity by disability status was not statistically significant.

More Information

Readers interested in more detailed information about the objectives in this topic area are invited to visit the HealthyPeople.gov website, where extensive substantive and technical information is available:

■ For the background and importance of the topic area, see: http://www.healthypeople.gov/2020/ topics-objectives/topic/cancer

■ For data details for each objective, including definitions, numerators, denominators, calculations, and data limitations, see: http://www.healthypeople. gov/2020/topics-objectives/topic/cancer/objectives *Select an objective, then click on the "Data Details" icon.*

■ For objective data by population group (e.g., sex, race and ethnicity, or family income), including rates, percentages, or counts for multiple years, see: http://www.healthypeople.gov/2020/ topics-objectives/topic/cancer/objectives *Select an objective, then click on the "Data2020" icon.*

Data for the measurable objectives in this chapter were from the following data sources:

■ Behavioral Risk Factor Surveillance System: http://www.cdc.gov/brfss/

■ Bridged-race Population Estimates: http://www.cdc.gov/nchs/nvss/bridged_race.htm

■ National Health Interview Survey: http://www.cdc.gov/nchs/nhis.htm

■ National Program of Cancer Registries: https://www.cdc.gov/cancer/npcr/

■ National Vital Statistics System–Mortality: http://www.cdc.gov/nchs/nvss/deaths.htm

■ Surveillance, Epidemiology, and End Results Program: http://seer.cancer.gov/

■ Youth Risk Behavior Surveillance System: http://www. cdc.gov/healthyyouth/data/yrbs/index.htm

Footnotes

[1]The Technical Notes provide more information on Healthy People 2020 statistical methods and issues.

[2]**Developmental** objectives did not have a national baseline value.

[3]**Measurable** objectives had a national baseline value.

[4]**Target met or exceeded**—One of the following, as specified in the Midcourse Progress Table:
» At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)
» The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)

[5]**Improving**—One of the following, as specified in the Midcourse Progress Table:
» Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.
» Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.

[6]**Little or no detectable change**—One of the following, as specified in the Midcourse Progress Table:
» Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.
» Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.
» Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.
» Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline.
» There was no change between the baseline and the midcourse data point.

[7]**Getting worse**—One of the following, as specified in the Midcourse Progress Table:

» Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.

» Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.

[8]**Baseline only**—The objective only had one data point, so progress toward target attainment could not be assessed.

[9]Data for the 5-year cancer survival are calculated based on patients diagnosed in the 5-year period immediately preceding a given year and followed up through that year. For example, the 2007 survival rates used in the baseline are based on patients diagnosed in the 5 year period before 2007 (2002-2006) and followed up through 2007.

[10]The state data shown are from the Behavioral Risk Factor Surveillance System, while the national data, used to set the national target, are from the National Health Interview Survey. National and state data may not be directly comparable, and therefore the national target may not be applicable to the state data.

Suggested Citation

National Center for Health Statistics. Chapter 5: Cancer. Healthy People 2020 Midcourse Review. Hyattsville, MD. 2016.

Table 5–1. Cancer Objectives

LEGEND

Data for this objective are available in this chapter's Midcourse Progress Table.

Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

A state or county level map for this objective is available at the end of the chapter.

Not Applicable — Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
C-1	Reduce the overall cancer death rate	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census	
C-2	Reduce the lung cancer death rate	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census	
C-3	Reduce the female breast cancer death rate	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census	
C-4	Reduce the death rate from cancer of the uterine cervix	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census	
C-5	Reduce the colorectal cancer death rate	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census	
C-6	Reduce the oropharyngeal cancer death rate	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census	
C-7	Reduce the prostate cancer death rate	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census	
C-8	Reduce the melanoma cancer death rate	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census	
C-9	Reduce invasive colorectal cancer	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census	
C-10	Reduce invasive uterine cervical cancer	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census	

Table 5–1. Cancer Objectives—Continued

LEGEND

🚦 Data for this objective are available in this chapter's Midcourse Progress Table.

📊 Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

🗺️ A state or county level map for this objective is available at the end of the chapter.

| Not Applicable | Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives. |

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
C-11	Reduce late-stage female breast cancer	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census	🚦 📊
C-12	Increase the number of central, population-based registries from the 50 States and the District of Columbia that capture case information on at least 95 percent of the expected number of reportable cancers	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI	🚦
C-13	Increase the proportion of cancer survivors who are living 5 years or longer after diagnosis	Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI	🚦 📊
C-14	(Developmental) Increase the mental and physical health-related quality of life of cancer survivors	(Potential) National Health Interview Survey (NHIS), CDC/NCHS	Not Applicable
C-15	Increase the proportion of women who receive a cervical cancer screening based on the most recent guidelines	National Health Interview Survey (NHIS), CDC/NCHS	🚦 📊
C-16	Increase the proportion of adults who receive a colorectal cancer screening based on the most recent guidelines	National Health Interview Survey (NHIS), CDC/NCHS	🚦 📊 🗺️
C-17	Increase the proportion of women who receive a breast cancer screening based on the most recent guidelines	National Health Interview Survey (NHIS), CDC/NCHS	🚦 📊
C-18.1	Increase the proportion of women who were counseled by their providers about mammograms	National Health Interview Survey (NHIS), CDC/NCHS	🚦 📊
C-18.2	Increase the proportion of women who were counseled by their providers about Pap tests	National Health Interview Survey (NHIS), CDC/NCHS	🚦 📊
C-18.3	(Developmental) Increase the proportion of adults who were counseled by their providers about colorectal cancer screening	(Potential) National Health Interview Survey (NHIS), CDC/NCHS	Not Applicable

Table 5–1. Cancer Objectives—Continued

LEGEND

 Data for this objective are available in this chapter's Midcourse Progress Table.

 Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

 A state or county level map for this objective is available at the end of the chapter.

Not Applicable | Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
C-19	Increase the proportion of men who have discussed the advantages and disadvantages of the prostate-specific antigen (PSA) test to screen for prostate cancer with their health care provider	National Health Interview Survey (NHIS), CDC/NCHS	
C-20.1	(Developmental) Reduce the proportion of adolescents in grades 9 through 12 who report sunburn	(Potential) Youth Risk Behavior Surveillance System (YRBSS), CDC/NCHHSTP	Not Applicable
C-20.2	Reduce the proportion of adults aged 18 years and older who report sunburn	National Health Interview Survey (NHIS), CDC/NCHS	
C-20.3	Reduce the proportion of adolescents in grades 9 through 12 who report using artificial sources of ultraviolet light for tanning	Youth Risk Behavior Surveillance System (YRBSS), CDC/NCHHSTP	
C-20.4	Reduce the proportion of adults aged 18 and older who report using artificial sources of ultraviolet light for tanning	National Health Interview Survey (NHIS), CDC/NCHS	
C-20.5	Increase the proportion of adolescents in grades 9 through 12 who follow protective measures that may reduce the risk of skin cancer	Youth Risk Behavior Surveillance System (YRBSS), CDC/NCHHSTP	
C-20.6	Increase the proportion of adults aged 18 years and older who follow protective measures that may reduce the risk of skin cancer	National Health Interview Survey (NHIS), CDC/NCHS	

Table 5–2. Midcourse Progress for Measurable[1] Cancer Objectives

LEGEND

| ✓ Target met or exceeded[2,3] | ✚ Improving[4,5] | ⦿ Little or no detectable change[6–10] | ▬ Getting worse[11,12] | ▮ Baseline only[13] | ▮ Informational[14] |

Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target[15]	Movement Away From Baseline[16]	Movement Statistically Significant[17]
✚ [4] **C-1** Overall cancer deaths (age-adjusted, per 100,000 population)	179.3 (2007)	163.2 (2013)	161.4	89.9%		Yes
✓ [2] **C-2** Lung cancer deaths (age-adjusted, per 100,000 population)	50.6 (2007)	43.4 (2013)	45.5	141.2%		Yes
✚ [4] **C-3** Female breast cancer deaths (age-adjusted, per 100,000 population)	23.0 (2007)	20.8 (2013)	20.7	95.7%		Yes
⦿ [10] **C-4** Cervical cancer deaths (age-adjusted, per 100,000 population)	2.4 (2007)	2.4 (2013)	2.2		0.0%	
✚ [4] **C-5** Colorectal cancer deaths (age-adjusted, per 100,000 population)	17.1 (2007)	14.7 (2013)	14.5	92.3%		Yes
✚ [4] **C-6** Oropharyngeal cancer deaths (age-adjusted, per 100,000 population)	2.5 (2007)	2.4 (2013)	2.3	50.0%		Yes
✓ [2] **C-7** Prostate cancer deaths (age-adjusted, per 100,000 population)	24.2 (2007)	19.2 (2013)	21.8	208.3%		Yes
⦿ [10] **C-8** Melanoma deaths (age-adjusted, per 100,000 population)	2.7 (2007)	2.7 (2013)	2.4		0.0%	
✓ [2] **C-9** New cases of colorectal cancer (age-adjusted, per 100,000 population)	46.9 (2007)	39.9 (2011)	39.9	100.0%		Yes
✚ [4] **C-10** New cases of invasive uterine cervical cancer (age-adjusted, per 100,000 population)	8.0 (2007)	7.5 (2011)	7.2	62.5%		Yes
✓ [2] **C-11** New cases of late-stage female breast cancer (age-adjusted, per 100,000 population)	44.3 (2007)	41.9 (2011)	42.1	109.1%		Yes
⦿ [9] **C-12** Statewide cancer registries (number of states and D.C.)	43 (2006)	40 (2011)	51		7.0%	
✚ [4] **C-13** Relative 5-year cancer survival rate (percent)	65.2% (2007)	66.3% (2010)	71.7%	16.9%		Yes
▬ [11] **C-15** Women receiving a Pap test within past 3 years (age-adjusted, percent, 21–65 years)	84.5% (2008)	80.7% (2013)	93.0%		4.5%	Yes
✚ [4] **C-16** Adults receiving colorectal cancer screening based on the most recent guidelines (age-adjusted, percent, 50–75 years)	52.1% (2008)	58.2% (2013)	70.5%	33.2%		Yes
⦿ [8] **C-17** Women receiving a mammogram within past 2 years (age-adjusted, percent, 50–74 years)	73.7% (2008)	72.6% (2013)	81.1%		1.5%	No

Table 5–2. Midcourse Progress for Measurable[1] Cancer Objectives—Continued

LEGEND

| ✓ Target met or exceeded[2,3] | ✚ Improving[4,5] | ◯ Little or no detectable change[6–10] | ➖ Getting worse[11,12] | Baseline only[13] | Informational[14] |

Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target[15]	Movement Away From Baseline[16]	Movement Statistically Significant[17]
[11] **C-18.1** Women counseled about mammograms (age-adjusted, percent, 50–74 years)	69.8% (2008)	61.4% (2010)	76.8%		12.0%	Yes
[11] **C-18.2** Women counseled about Pap tests (age-adjusted, percent, 21–65 years)	60.2% (2008)	53.9% (2010)	66.2%		10.5%	Yes
[13] **C-19** Men ever counseled about advantages and disadvantages of the PSA test (age-adjusted, percent, 40+ years)	14.4% (2010)		15.9%			
[13] **C-20.2** Adults reporting sunburn in the past 12 months (age-adjusted, percent, 18+ years)	37.5% (2010)		33.8%			
[2] **C-20.3** Adolescents using indoor tanning devices (percent, grades 9–12)	15.6% (2009)	12.8% (2013)	14.0%	175.0%		No
[4] **C-20.4** Adults using indoor tanning devices (age-adjusted, percent, 18+ years)	5.6% (2010)	4.3% (2013)	3.6%	65.0%		Yes
[6] **C-20.5** Adolescents using protective measures to prevent skin cancer (percent, grades 9–12)	9.3% (2009)	10.1% (2013)	11.2%	42.1%		No
[4] **C-20.6** Adults using protective measures to prevent skin cancer (age-adjusted, percent, 18+ years)	67.0% (2008)	70.0% (2010)	73.7%	44.8%		Yes

Table 5–2. Midcourse Progress for Measurable[1] Cancer Objectives—Continued

NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of progress.

FOOTNOTES

[1]**Measurable** objectives had a national baseline value.

Target met or exceeded:

[2]At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)

[3]The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)

Improving:

[4]Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.

[5]Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.

Little or no detectable change:

[6]Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.

[7]Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.

[8]Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.

[9]Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline.

[10]There was no change between the baseline and the midcourse data point.

Getting worse:

[11]Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.

[12]Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.

[13]**Baseline only:** The objective only had one data point, so progress toward target attainment could not be assessed.

[14]**Informational:** A target was not set for this objective, so progress toward target attainment could not be assessed.

[15]For objectives that **moved toward** their targets, movement toward the target was measured as the percentage of targeted change achieved (unless the target was already met or exceeded at baseline):

$$\text{Percentage of targeted change achieved} = \frac{\text{Midcourse value} - \text{Baseline value}}{\text{HP2020 target} - \text{Baseline value}} \times 100$$

[16]For objectives that **moved away** from their baselines and targets, movement away from the baseline was measured as the magnitude of the percentage change from baseline:

$$\text{Magnitude of percentage change from baseline} = \frac{|\text{Midcourse value} - \text{Baseline value}|}{\text{Baseline value}} \times 100$$

[17]Statistical significance was tested when the objective had a target and at least two data points, standard errors of the data were available, and a normal distribution could be assumed. Statistical significance of the percentage of targeted change achieved or the magnitude of the percentage change from baseline was assessed at the 0.05 level using a normal one-sided test.

DATA SOURCES

C-1	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-2	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-3	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-4	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-5	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-6	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-7	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-8	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-9	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census
C-10	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census
C-11	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census
C-12	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI
C-13	Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI
C-15	National Health Interview Survey (NHIS), CDC/NCHS
C-16	National Health Interview Survey (NHIS), CDC/NCHS
C-17	National Health Interview Survey (NHIS), CDC/NCHS
C-18.1	National Health Interview Survey (NHIS), CDC/NCHS
C-18.2	National Health Interview Survey (NHIS), CDC/NCHS
C-19	National Health Interview Survey (NHIS), CDC/NCHS
C-20.2	National Health Interview Survey (NHIS), CDC/NCHS
C-20.3	Youth Risk Behavior Surveillance System (YRBSS), CDC/NCHHSTP
C-20.4	National Health Interview Survey (NHIS), CDC/NCHS
C-20.5	Youth Risk Behavior Surveillance System (YRBSS), CDC/NCHHSTP
C-20.6	National Health Interview Survey (NHIS), CDC/NCHS

Table 5–3. Midcourse Health Disparities[1] for Population-based Cancer Objectives

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios[2,3] for selected characteristics at the midcourse data point

LEGEND

At the midcourse data point | ■ Group with the most favorable (least adverse) rate | ■ Group with the least favorable (most adverse) rate | ■ Data are available, but this group did not have the highest or lowest rate. | □ Data are not available for this group because the data were statistically unreliable, not collected, or not analyzed.

Population-based Objectives	Sex		Summary Disparity Ratio[2]	Race and Ethnicity							Summary Disparity Ratio[3]	Education[4]						Summary Disparity Ratio[3]	Family Income[5]					Summary Disparity Ratio[3]	Disability		Summary Disparity Ratio[2]	Location		Summary Disparity Ratio[2]
	Male	Female		American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black, not Hispanic	White, not Hispanic		Less than high school	High school graduate	At least some college	Associate's degree	4-year college degree	Advanced degree		Poor	Near-poor	Middle	Near-high	High		Persons with disabilities	Persons without disabilities		Metropolitan	Nonmetropolitan	
C-1 Overall cancer deaths (age-adjusted, per 100,000 population) (2013)			1.404*		a	a					1.460*																			1.111*
C-2 Lung cancer deaths (age-adjusted, per 100,000 population) (2013)			1.514*		a	a					1.947*																			1.231*
C-3 Female breast cancer deaths (age-adjusted, per 100,000 population) (2013)					a	a					1.876*																			1.021
C-4 Cervical cancer deaths (age-adjusted, per 100,000 population) (2013)					a	a					1.554*																			1.199*
C-5 Colorectal cancer deaths (age-adjusted, per 100,000 population) (2013)			1.409*		a	a					1.491*																			1.167*
C-6 Oropharyngeal cancer deaths (age-adjusted, per 100,000 population) (2013)			2.855*		a	a					2.060*																			1.193*
C-7 Prostate cancer deaths (age-adjusted, per 100,000 population) (2013)					a	a					2.529*																			1.045*
C-8 Melanoma deaths (age-adjusted, per 100,000 population) (2013)			2.452*		a	a					5.104*																			1.187*

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios[2,3] for selected characteristics at the midcourse data point

LEGEND

| At the midcourse data point | ■ Group with the most favorable (least adverse) rate | ■ Group with the least favorable (most adverse) rate | ▨ Data are available, but this group did not have the highest or lowest rate. | ☐ Data are not available for this group because the data were statistically unreliable, not collected, or not analyzed. |

Characteristics and Groups

Population-based Objectives	Sex — Male	Sex — Female	Sex — Summary Disparity Ratio[2]	R&E — American Indian or Alaska Native	R&E — Asian	R&E — Native Hawaiian or other Pacific Islander	R&E — Two or more races	R&E — Hispanic or Latino	R&E — Black, not Hispanic	R&E — White, not Hispanic	R&E — Summary Disparity Ratio[3]	Edu — Less than high school	Edu — High school graduate	Edu — At least some college	Edu — Associate's degree	Edu — 4-year college degree	Edu — Advanced degree	Edu — Summary Disparity Ratio[3]	Inc — Poor	Inc — Near-poor	Inc — Middle	Inc — Near-high	Inc — High	Inc — Summary Disparity Ratio[3]	Dis — Persons with disabilities	Dis — Persons without disabilities	Dis — Summary Disparity Ratio[2]	Loc — Metropolitan	Loc — Nonmetropolitan	Loc — Summary Disparity Ratio[2]
C-9 New cases of colorectal cancer (age-adjusted, per 100,000 population) (2011)	■	■	1.323*	■	a	a			■		1.327*																			
C-10 New cases of invasive uterine cervical cancer (age-adjusted, per 100,000 population) (2011)					a	a		■			1.371*																			
C-11 New cases of late-stage female breast cancer (age-adjusted, per 100,000 population) (2011)				■	a	a			■		1.473*																			
C-13 Relative 5-year cancer survival rate (percent) (2010)	■	■	1.016*						b	b	1.116*																			
C-15 Women receiving a Pap test within past 3 years (age-adjusted, percent, 21–65 years) (2013)					■					■	1.060	■					■	1.098*	■				■	1.164*	■	■	1.050*	■	■	1.049*
C-16 Adults receiving colorectal cancer screening based on most recent guidelines (age-adjusted, percent, 50–75 years) (2013)	■	■	1.033					■			1.195*	■					■	1.295*	■				■	1.339*	■	■	1.079*	■	■	1.068*
C-17 Women receiving a mammogram within past 2 years (age-adjusted, percent, 50–74 years) (2013)										■	1.036	■					■	1.151*	■				■	1.282*	■	■	1.114*	■	■	1.098*
C-18.1 Women counseled about mammograms (age-adjusted, percent, 50–74 years) (2010)							■			■	1.146	■					■	1.132*	■				■	1.245*			1.057	■	■	1.075*

Table 5–3. Midcourse Health Disparities[1] for Population-based Cancer Objectives—Continued

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios[2,3] for selected characteristics at the midcourse data point

LEGEND

At the midcourse data point — ■ Group with the most favorable (least adverse) rate — ■ Group with the least favorable (most adverse) rate — ■ Data are available, but this group did not have the highest or lowest rate. — □ Data are not available for this group because the data were statistically unreliable, not collected, or not analyzed.

Population-based Objectives	Sex		Summary Disparity Ratio[2]	Race and Ethnicity							Summary Disparity Ratio[3]	Education[4]						Summary Disparity Ratio[3]	Family Income[5]					Summary Disparity Ratio[3]	Disability		Summary Disparity Ratio[2]	Location		Summary Disparity Ratio[2]
	Male	Female		American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black, not Hispanic	White, not Hispanic		Less than high school	High school graduate	At least some college	Associate's degree	4-year college degree	Advanced degree		Poor	Near-poor	Middle	Near-high	High		Persons with disabilities	Persons without disabilities		Metropolitan	Nonmetropolitan	
C-18.2 Women counseled about Pap tests (age-adjusted, percent, 21–65 years) (2010)											1.162							1.165*						1.167*			1.046			1.050
C-19 Men ever counseled about advantages and disadvantages of the PSA test (age-adjusted, percent, 40+ years) (2010)											1.466*							1.660*						1.569*			1.090			1.368*
C-20.2 Adults reporting sunburn in the past 12 months (age-adjusted, percent, 18+ years) (2010)			1.046*								2.890*							1.667*						1.531*			1.180*			1.141*
C-20.3 Adolescents using indoor tanning devices (percent, grades 9–12) (2013)			3.835*								3.140*																			
C-20.4 Adults using indoor tanning devices (age-adjusted, percent, 18+ years) (2013)			3.896*								4.395*							3.257*						1.948*			1.028			1.771*
C-20.5 Adolescents using protective measures to prevent skin cancer (percent, grades 9–12) (2013)			1.911*								1.677*																			
C-20.6 Adults using protective measures to prevent skin cancer (age-adjusted, percent, 18+ years) (2010)			1.103*								1.092*							1.077*						1.053*			1.037			1.054*

Table 5–3. Midcourse Health Disparities[1] for Population-based Cancer Objectives—Continued

NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of disparities.

FOOTNOTES

[1]**Health disparities** were assessed among population groups within specified demographic characteristics (sex, race and ethnicity, educational attainment, etc.). This assessment did not include objectives that were not population-based, such as those based on states, worksites, or those monitoring the number of events.

[2]When there were only two groups (e.g., male and female), the **summary disparity ratio** was the ratio of the higher to the lower rate.

[3]When there were three or more groups (e.g., white non-Hispanic, black non-Hispanic, Hispanic) and the most favorable rate (R_b) was the highest rate, the **summary disparity ratio** was calculated as R_b/R_a, where R_a = the average of the rates for all other groups. When there were three or more groups and the most favorable rate was the lowest rate, the summary disparity ratio was calculated as R_a/R_b.

[4]Unless otherwise footnoted, data do not include persons under age 25 years.

[5]Unless otherwise footnoted, the poor, near-poor, middle, near-high, and high income groups are for persons whose family incomes were less than 100%, 100%–199%, 200%–399%, 400%–599%, and at or above 600% of the poverty threshold, respectively.

*The summary disparity ratio was significantly greater than 1.000. Statistical significance was assessed at the 0.05 level using a normal one-sided test on the natural logarithm scale.
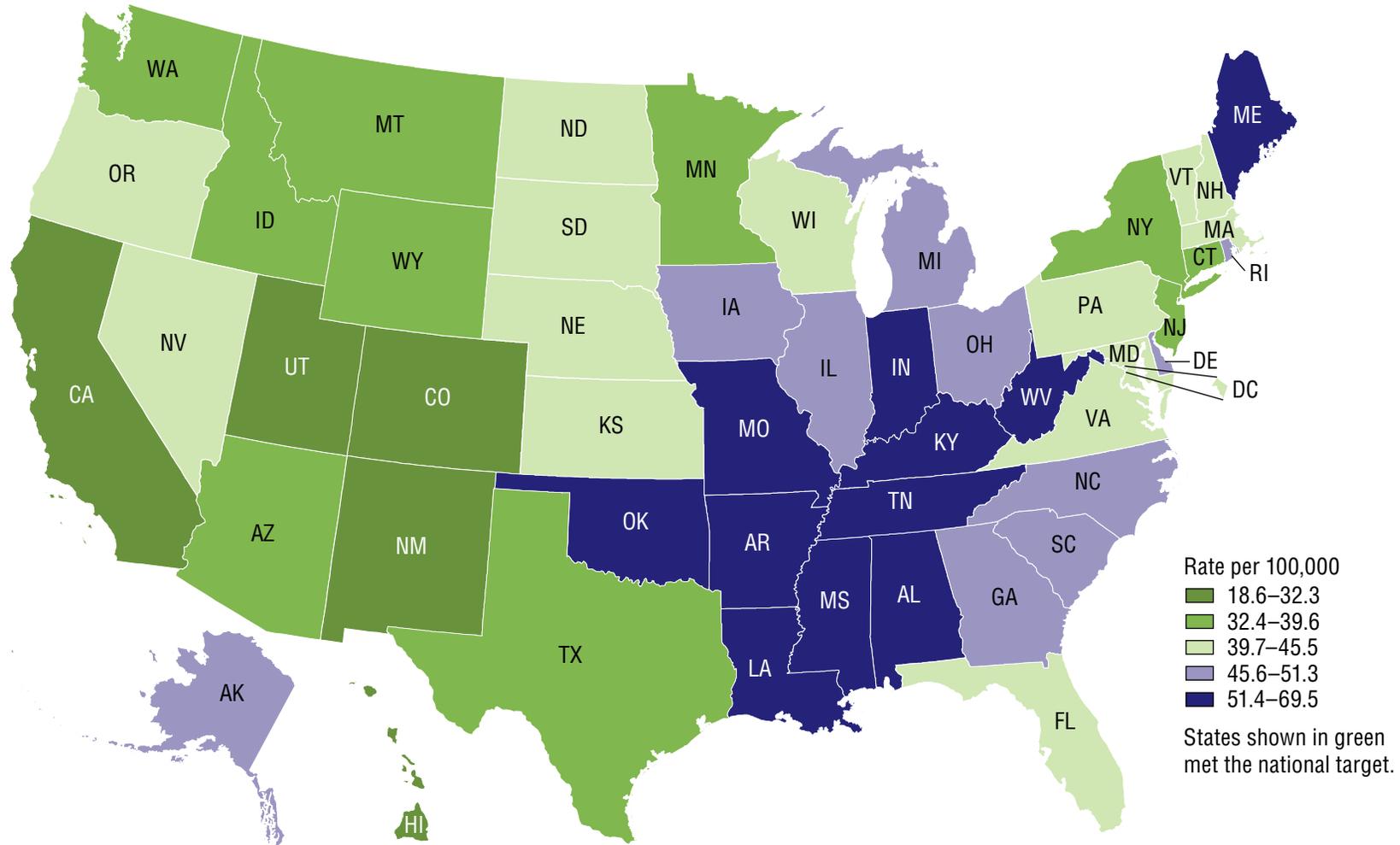
[a]Data are for Asian or Pacific Islander persons.

[b]Data include persons of Hispanic origin.

DATA SOURCES

C-1	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-2	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-3	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-4	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-5	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
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C-7	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-8	National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
C-9	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census
C-10	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census
C-11	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI; Bridged-race Population Estimates, CDC/NCHS and Census
C-13	Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI
C-15	National Health Interview Survey (NHIS), CDC/NCHS
C-16	National Health Interview Survey (NHIS), CDC/NCHS
C-17	National Health Interview Survey (NHIS), CDC/NCHS
C-18.1	National Health Interview Survey (NHIS), CDC/NCHS
C-18.2	National Health Interview Survey (NHIS), CDC/NCHS
C-19	National Health Interview Survey (NHIS), CDC/NCHS
C-20.2	National Health Interview Survey (NHIS), CDC/NCHS
C-20.3	Youth Risk Behavior Surveillance System (YRBSS), CDC/NCHHSTP
C-20.4	National Health Interview Survey (NHIS), CDC/NCHS
C-20.5	Youth Risk Behavior Surveillance System (YRBSS), CDC/NCHHSTP
C-20.6	National Health Interview Survey (NHIS), CDC/NCHS

Map 5–1. Lung Cancer Deaths, by State: 2013

Healthy People 2020 Objective C-2 ● National Target = 45.5 per 100,000 population ● National Rate = 43.4 per 100,000 population

Rate per 100,000

- 18.6–32.3
- 32.4–39.6
- 39.7–45.5
- 45.6–51.3
- 51.4–69.5

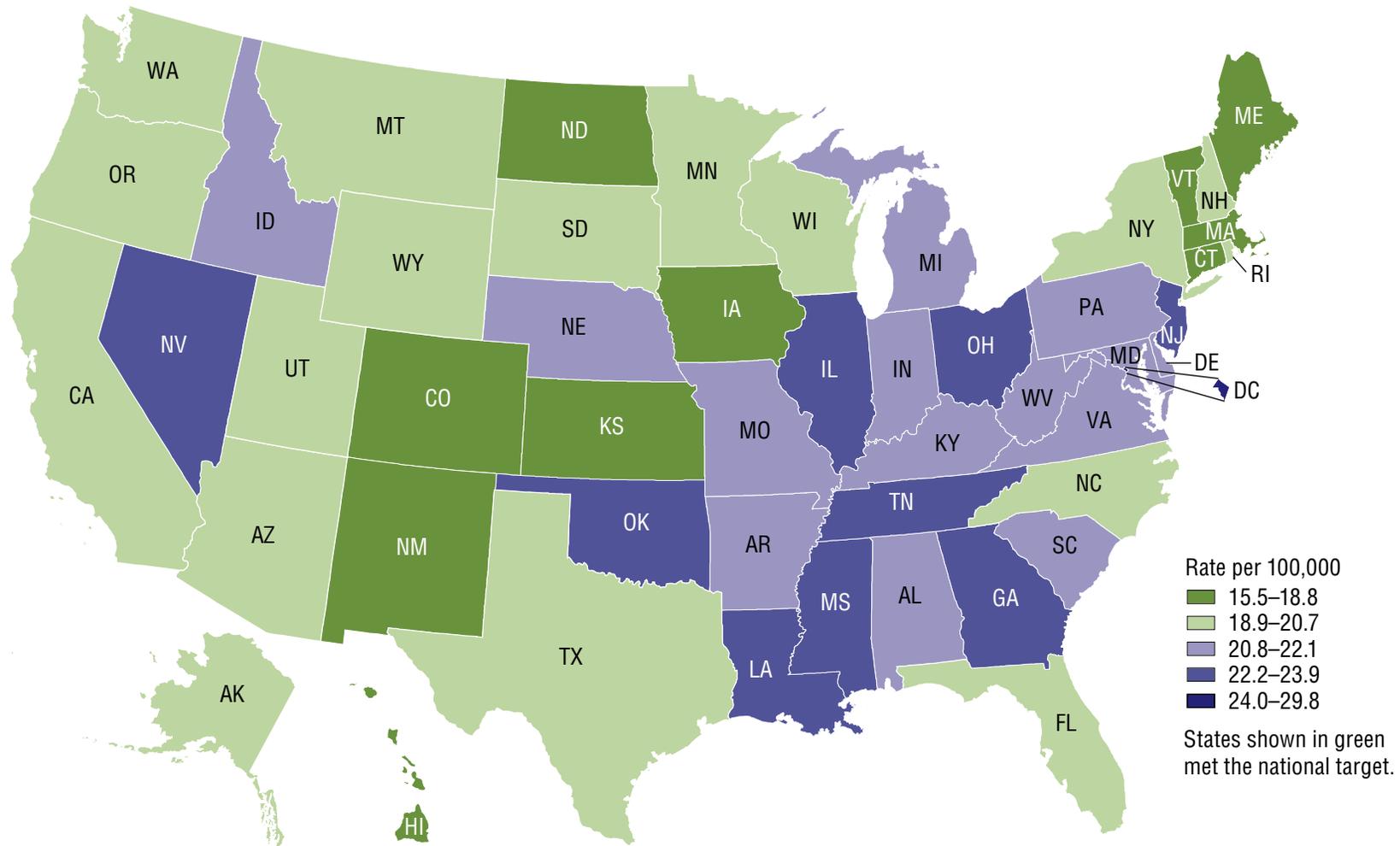States shown in green met the national target.

NOTES: Data are for ICD–10 code C34 reported as the underlying cause of death and are age-adjusted to the 2000 standard population. Data are displayed by a modified Jenks classification for U.S. states which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCES: National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census

Map 5–2. Female Breast Cancer Deaths, by State: 2013

Healthy People 2020 Objective C-3 ● National Target = 20.7 per 100,000 population ● National Rate = 20.8 per 100,000 population

Rate per 100,000

- 15.5–18.8
- 18.9–20.7
- 20.8–22.1
- 22.2–23.9
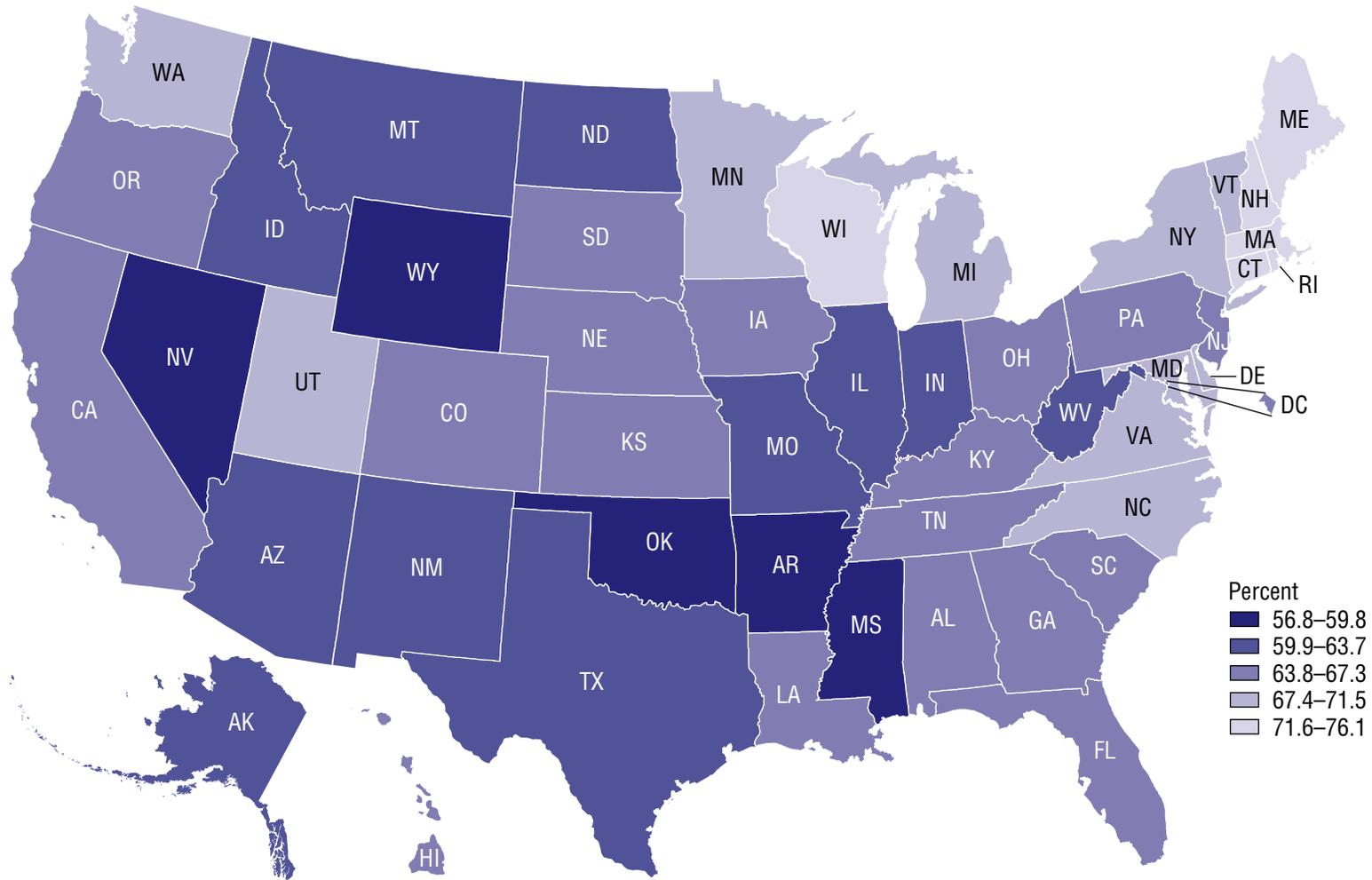- 24.0–29.8

States shown in green met the national target.

NOTES: Data are for ICD–10 code C50 reported as the underlying cause of death and are age-adjusted to the 2000 standard population. Data are displayed by a modified Jenks classification for U.S. states which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCES: National Vital Statistics System–Mortality (NVSS–M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census

Map 5–3. Adults (50–75 years) Who Received Colorectal Cancer Screening Based on Most Recent Guidelines, by State: 2014

Healthy People 2020 Objective C-16 ● Related State Data

Percent
- 56.8–59.8
- 59.9–63.7
- 63.8–67.3
- 67.4–71.5
- 71.6–76.1

NOTES: Data are for adults who received colorectal cancer screening based on the most recent guidelines and are age-adjusted to the 2000 standard population. National data for the objective come from the National Health Interview Survey (NHIS) and are the basis for setting the target of 70.5%. Data from the NHIS (58.2% in 2013) may not be directly comparable to the all-states combined data from the Behavioral Risk Factor Surveillance System (BRFSS) (66.1% in 2014), and therefore the national target is not applicable to individual states. Data are displayed by a Jenks classification for U.S. States which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCE: Behavioral Risk Factor Surveillance System (BRFSS), CDC/NCCDPHP