



**Department
of Health**

Cancer Survivorship Data Compendium - 2016 New York State Behavioral Risk Factor Surveillance System

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Introduction

About this Resource

- The Cancer Survivorship Data Compendium uses data from the 2016 New York State (NYS) Behavioral Risk Factor Surveillance System (BRFSS).
- The purpose of the compendium is to present cancer-related data about survivorship, comorbidities, risk behaviors, quality of life, preventive care, and health care access.
- Users can present the slide deck in its entirety or pull relevant slides or relevant data for their own purposes. Please use suggested citation on slide 56 when referencing this resource.

About this Resource (Continued)

- A key finding is included for each slide to assist with interpretation. These talking points can be found starting on slide 57.
- Phrases such as “more likely,” “twice as likely,” and “three times as likely” are used to describe the strength of an association.
 - Due to the nature of the BRFSS survey methodology, a cause-and-effect relationship cannot be determined.
- Statistical significance is assessed by comparing the 95% confidence intervals of different groups. If the confidence intervals from two groups do not overlap we consider the estimates to be significantly different from one another.

About this Resource (Continued)

- Some of the data included in this presentation use age-adjustment <https://www.health.ny.gov/diseases/chronic/ageadj.htm>.
- Age-adjustment is a statistical process applied to rates of disease, death, injuries or other health outcomes that are associated with age.
- Age-adjustment allows groups in the population with different age structures to be compared.
- Because cancer survivors tend to be older in age than adults with no history of cancer, age-adjustment is appropriate to use for health outcomes that also vary by age.
- Slides where age-adjustment is used are noted.

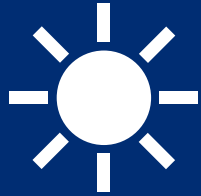
About the Behavioral Risk Factor Surveillance System (BRFSS)

- It is an annual statewide telephone and cellular survey designed by the Centers for Disease Control and Prevention (CDC).
- The NYS BRFSS sample is designed to be representative of the non-institutionalized adult household population, aged 18+ years
- It monitors modifiable risk behaviors and other factors contributing to the leading causes of morbidity and mortality.
- Interviews are conducted in English and Spanish.
- For more information about the BRFSS, visit <https://www.health.ny.gov/statistics/brfss/>

Cancer Survivorship in the BRFSS

Cancer Survivorship Survey Questions

- In 2016, the NYS BRFSS questionnaire included two questions to assess cancer survivorship in the adult population:



Has a doctor, nurse, or other health professional ever told you that you had skin cancer?



Has a doctor, nurse, or other health professional ever told you that you had any other types of cancer?

Cancer Survivorship Status

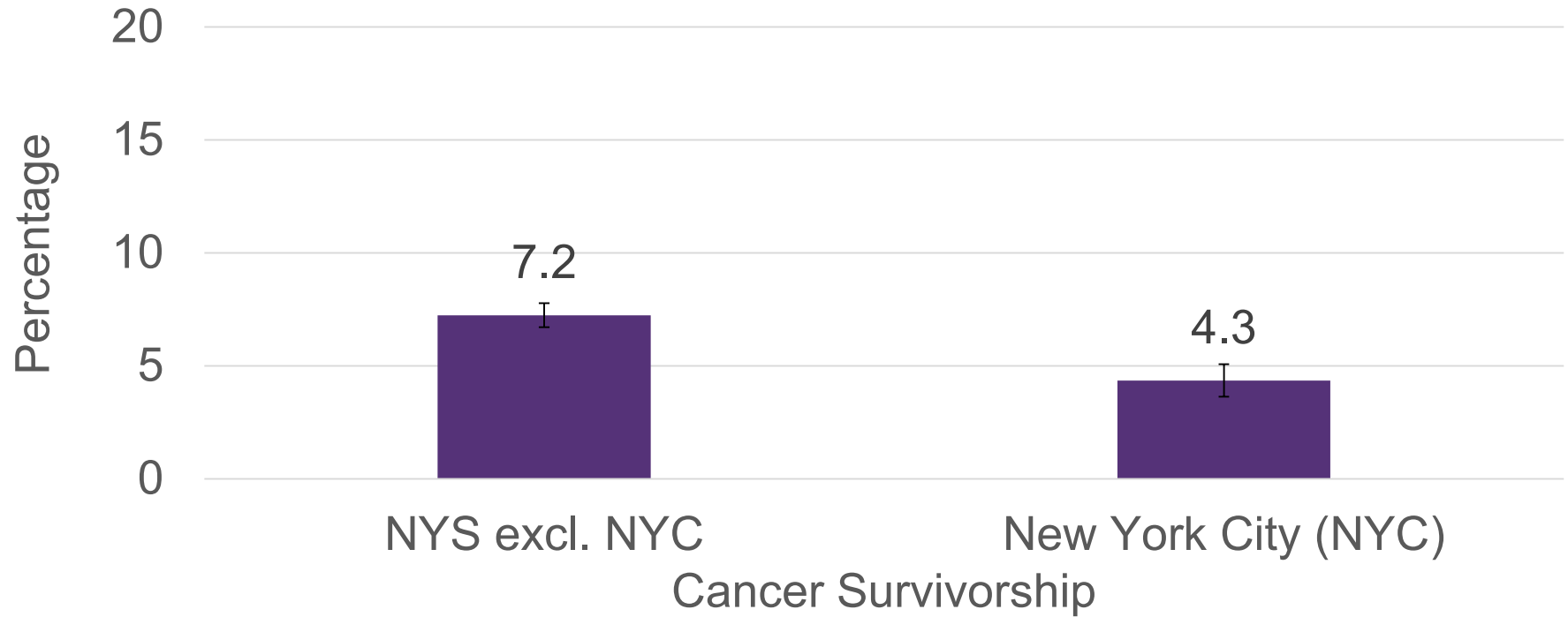
- In the following slides, a cancer survivor includes those who responded “yes” to having ever been diagnosed with cancer, excluding those whose only form of cancer was skin cancer.
- Respondents only reporting a skin cancer diagnosis were excluded as the survey does not distinguish between melanoma and nonmelanoma skin cancers and nonmelanoma skin cancer typically does not require treatment beyond surgery.

Cancer Survivorship Demographics

Cancer Survivorship in NYS



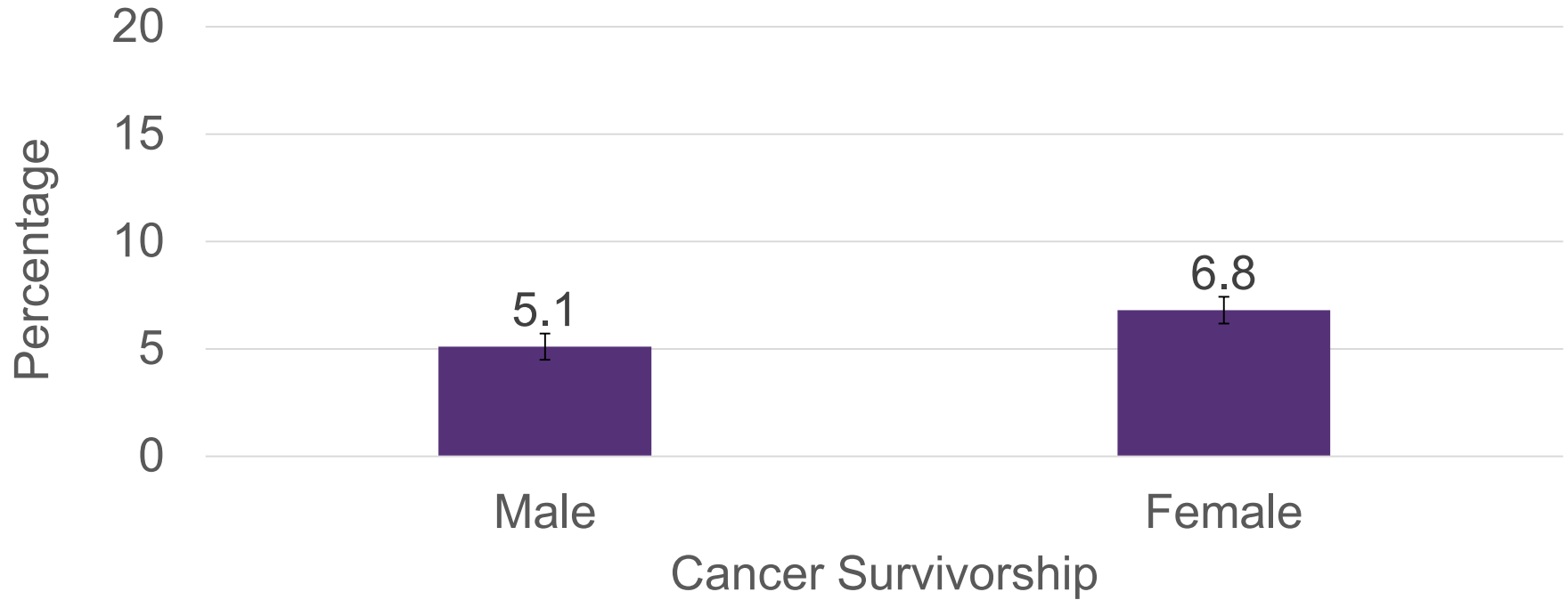
Cancer Survivorship in NYS, by Region



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

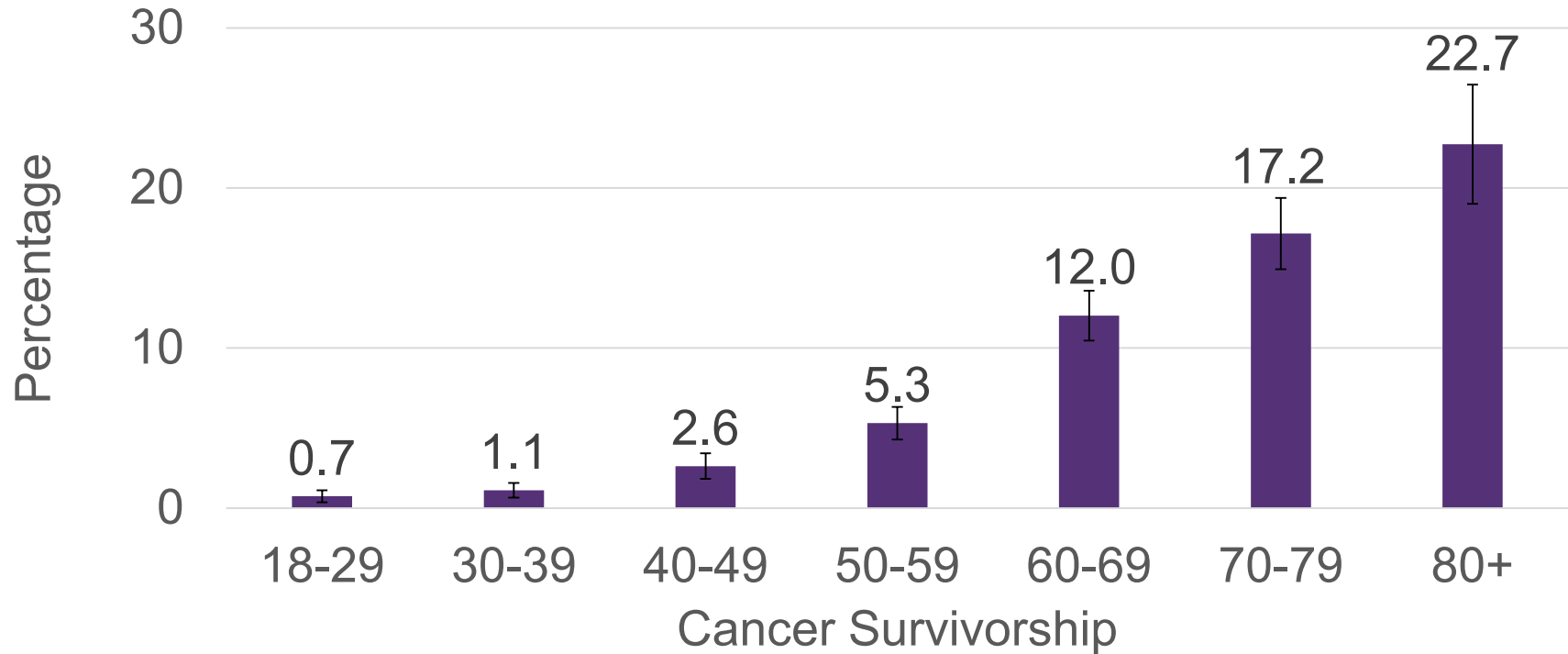
Cancer Survivorship in NYS, by Sex



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

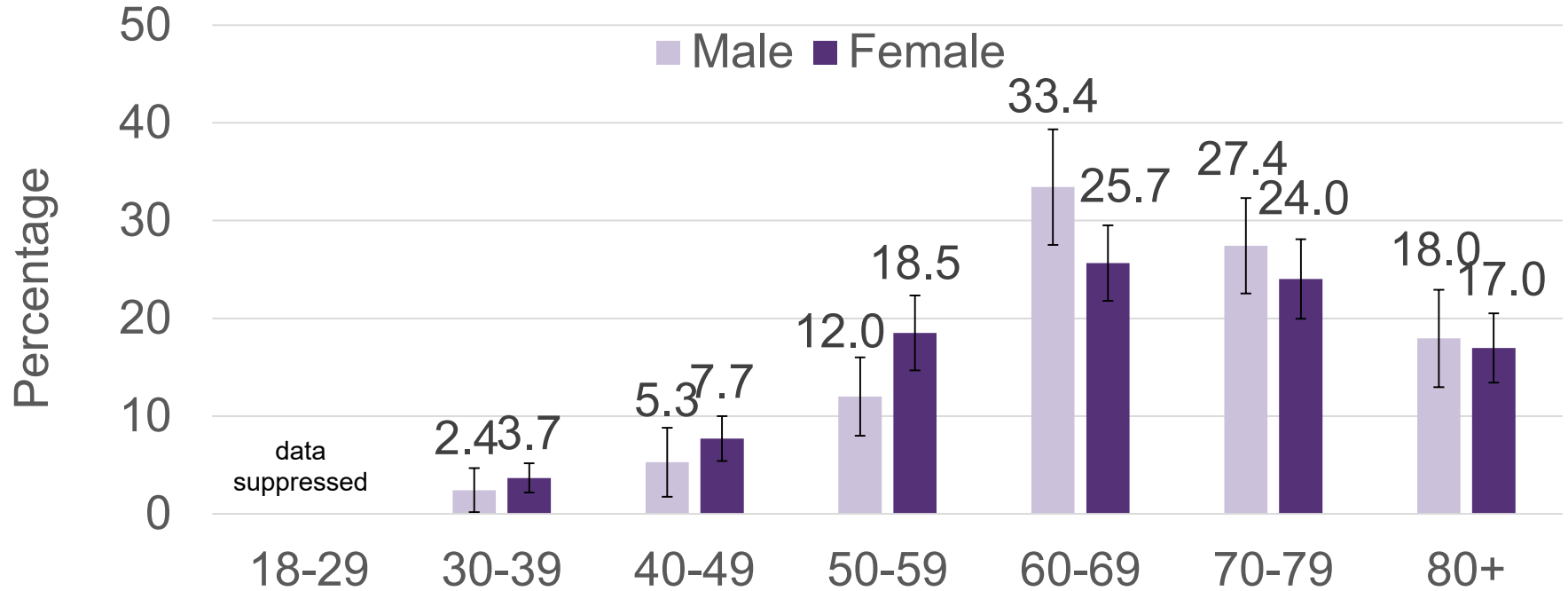
Cancer Survivorship in NYS, by Age Group



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

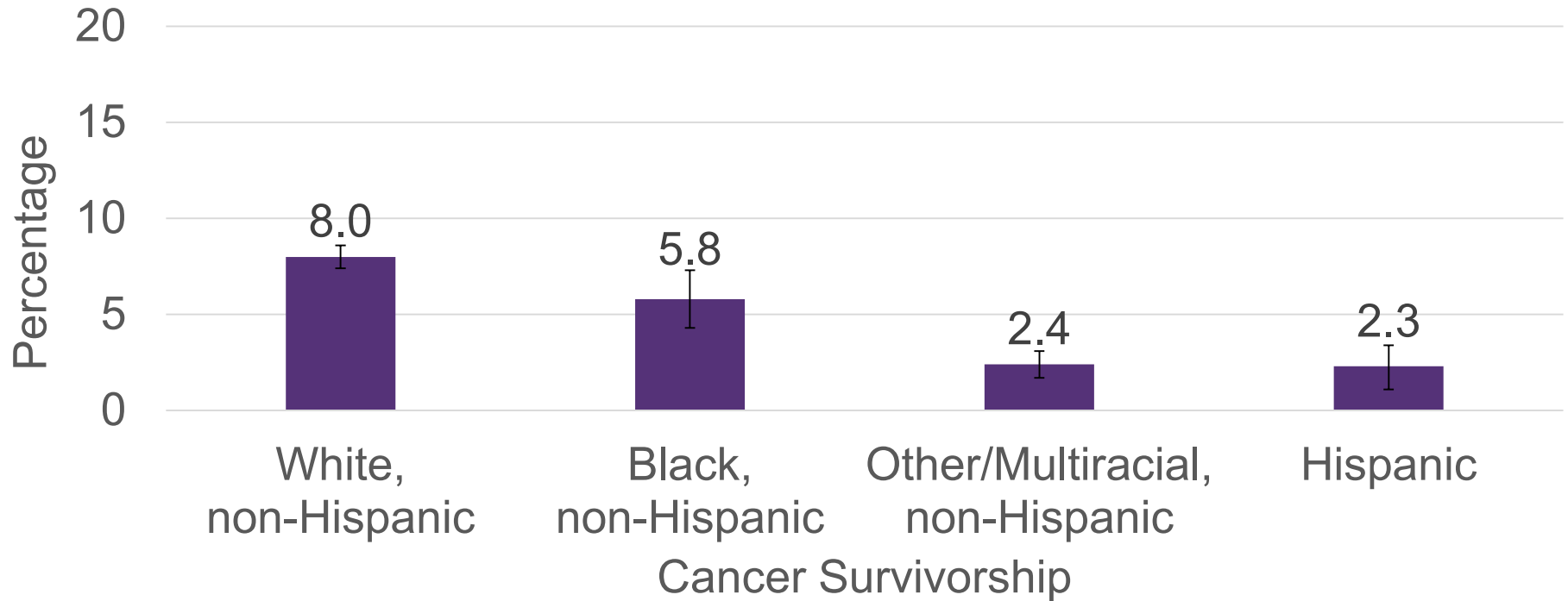
Cancer Survivorship in NYS, by Age and Sex



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

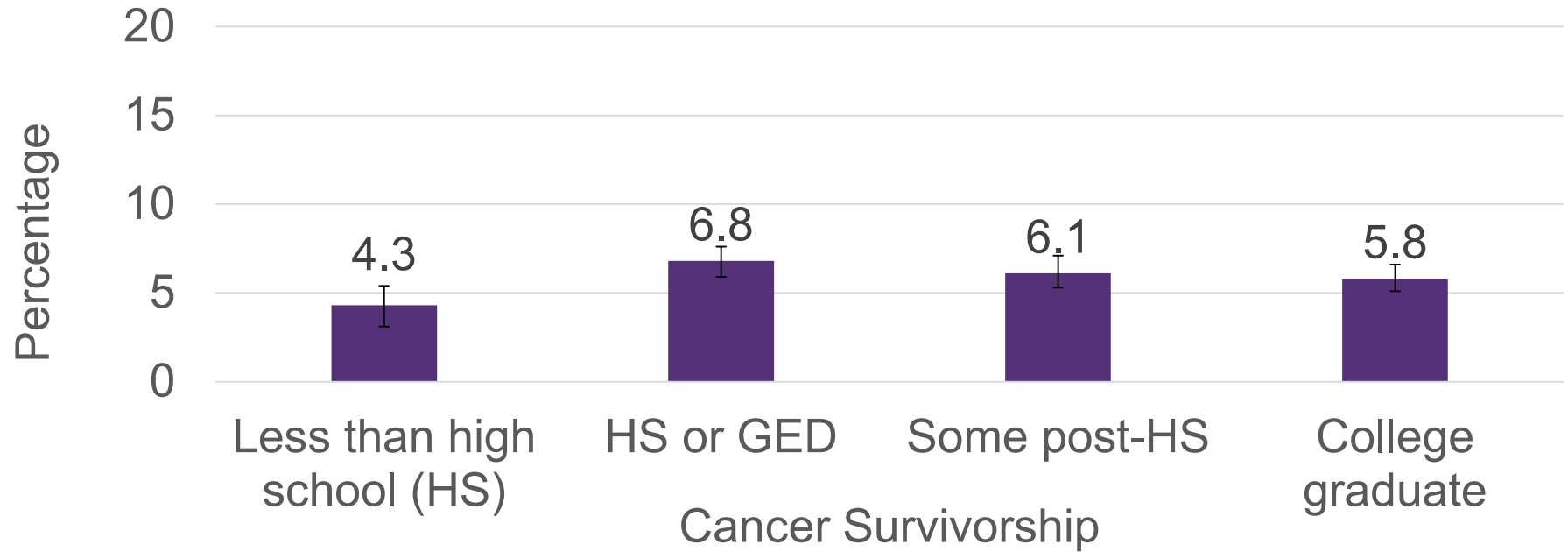
Cancer Survivorship in NYS, by Race/ Ethnicity



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

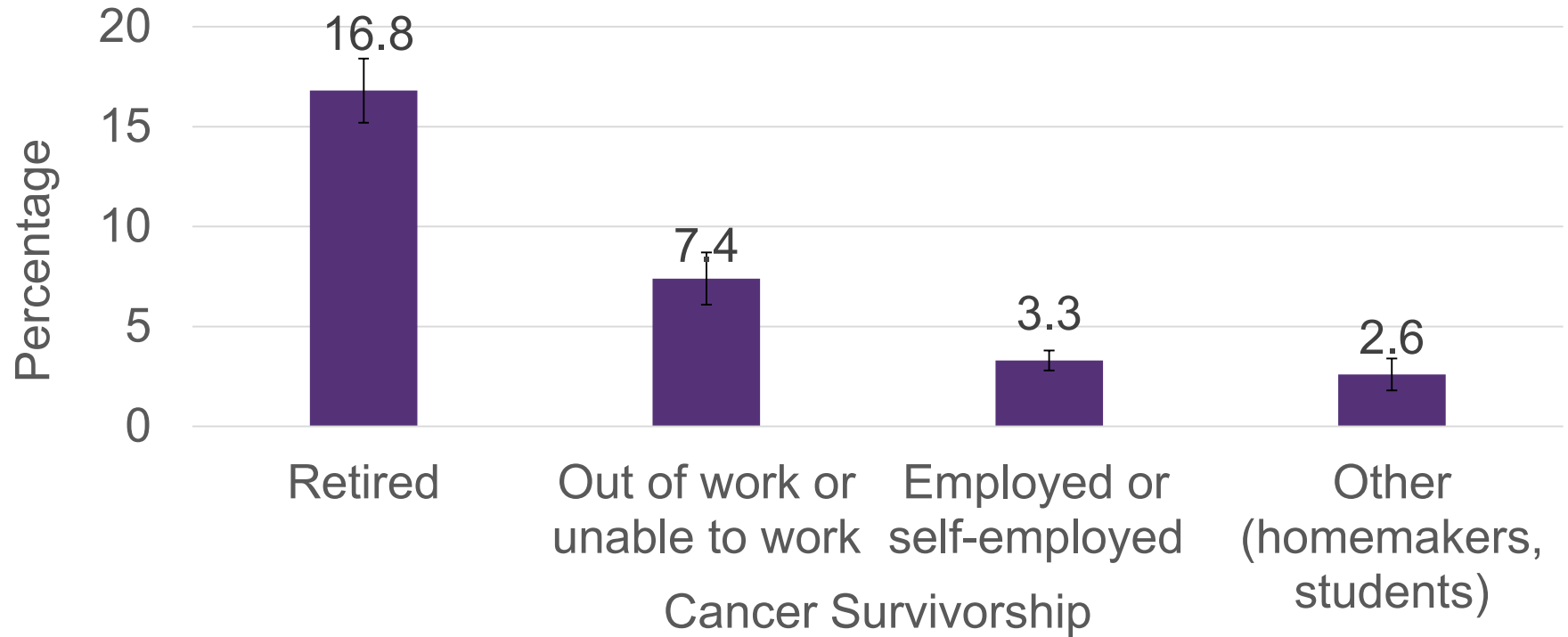
Cancer Survivorship in NYS, by Educational Attainment



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

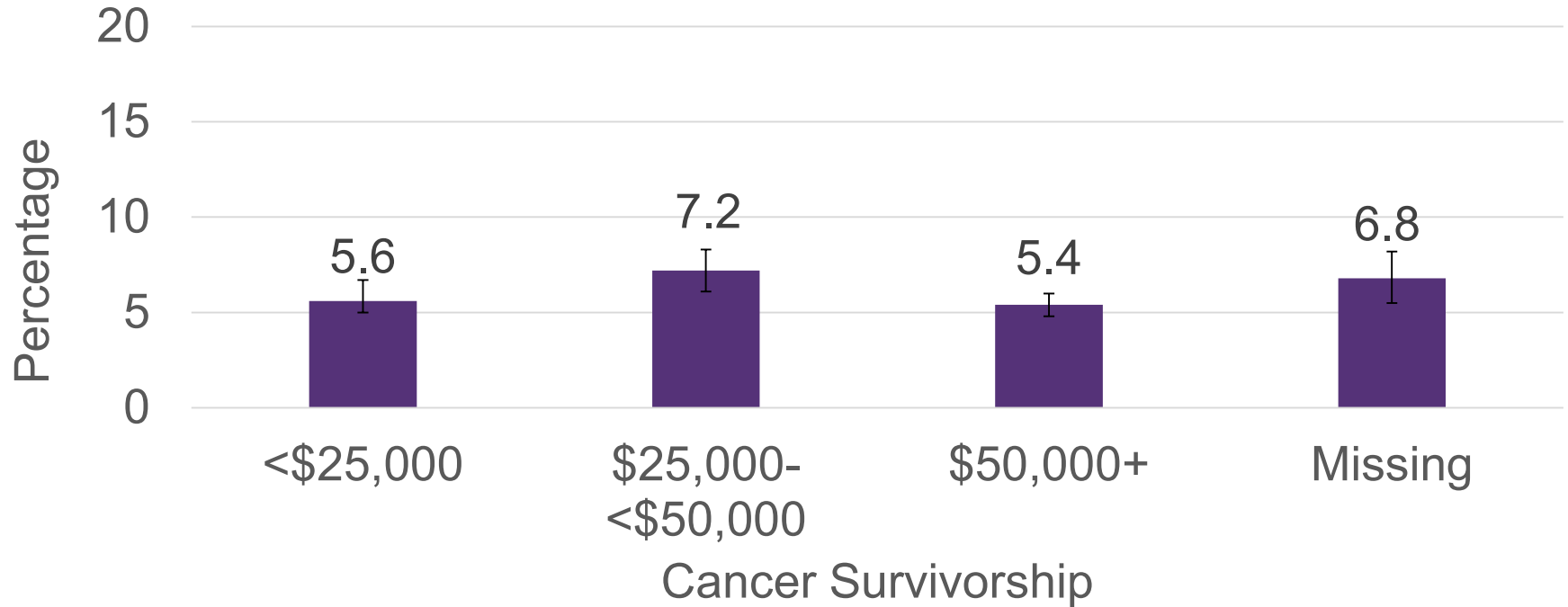
Cancer Survivorship in NYS, by Employment Status



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

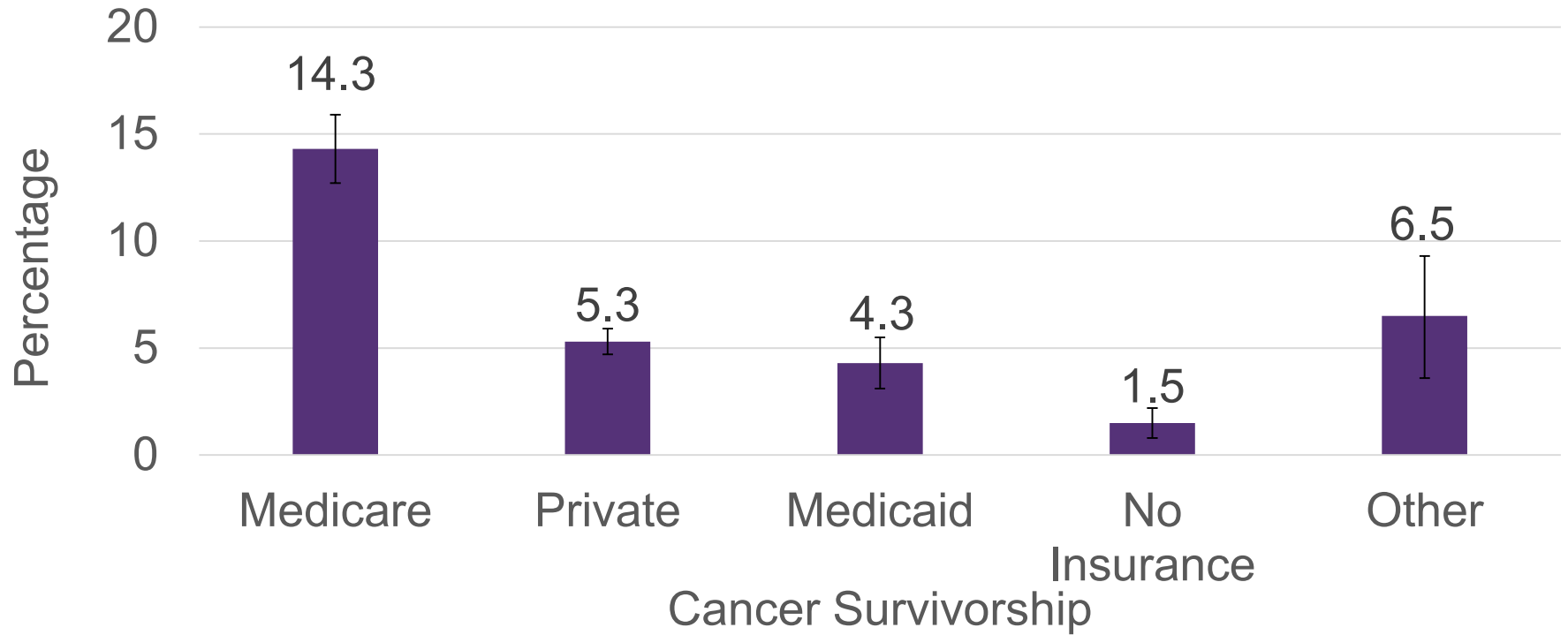
Cancer Survivorship in NYS, by Income Group



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

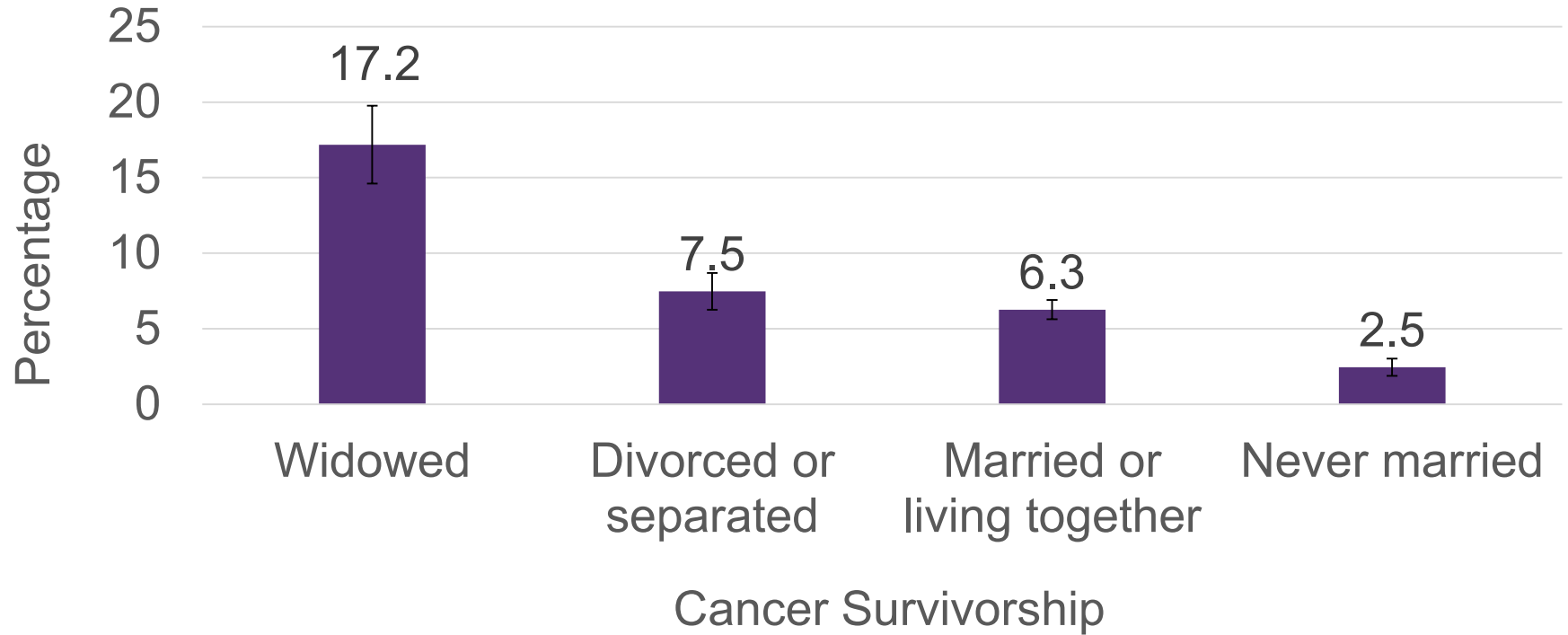
Cancer Survivorship in NYS, by Insurance Type



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

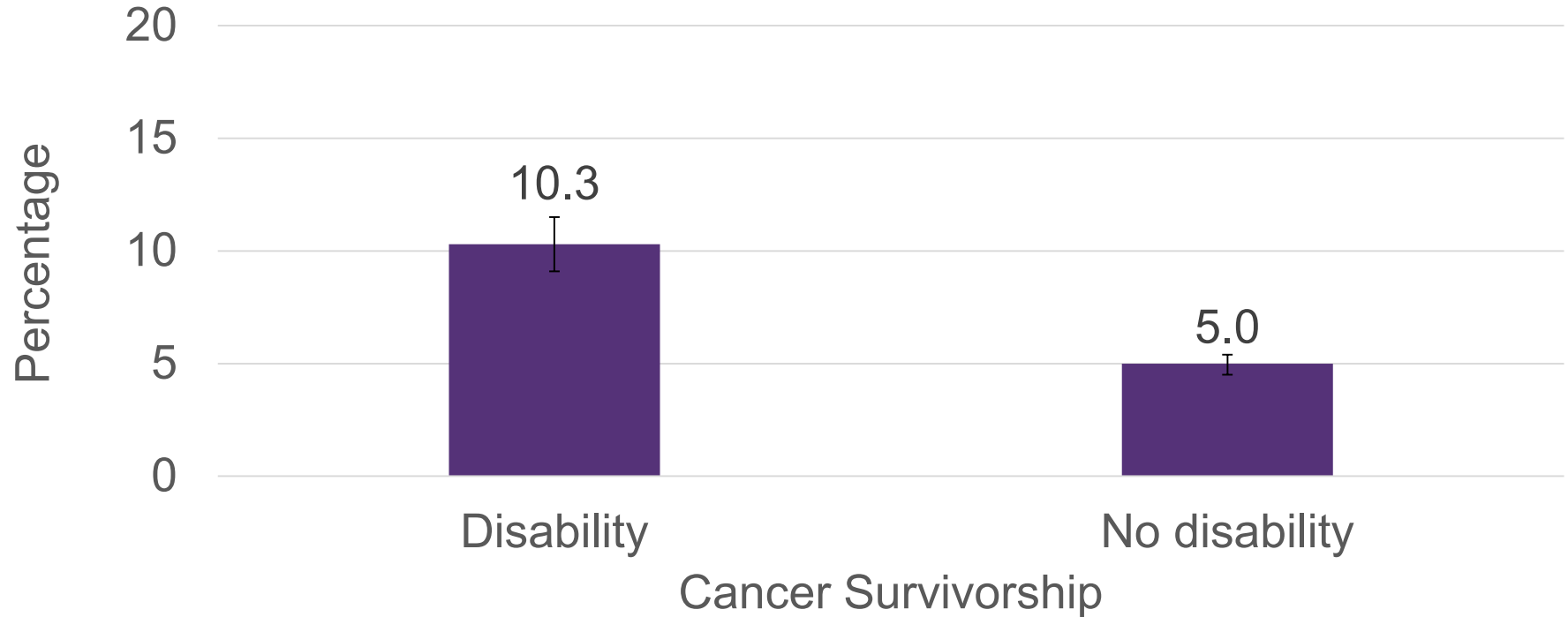
Cancer Survivorship in NYS, by Marriage Status



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

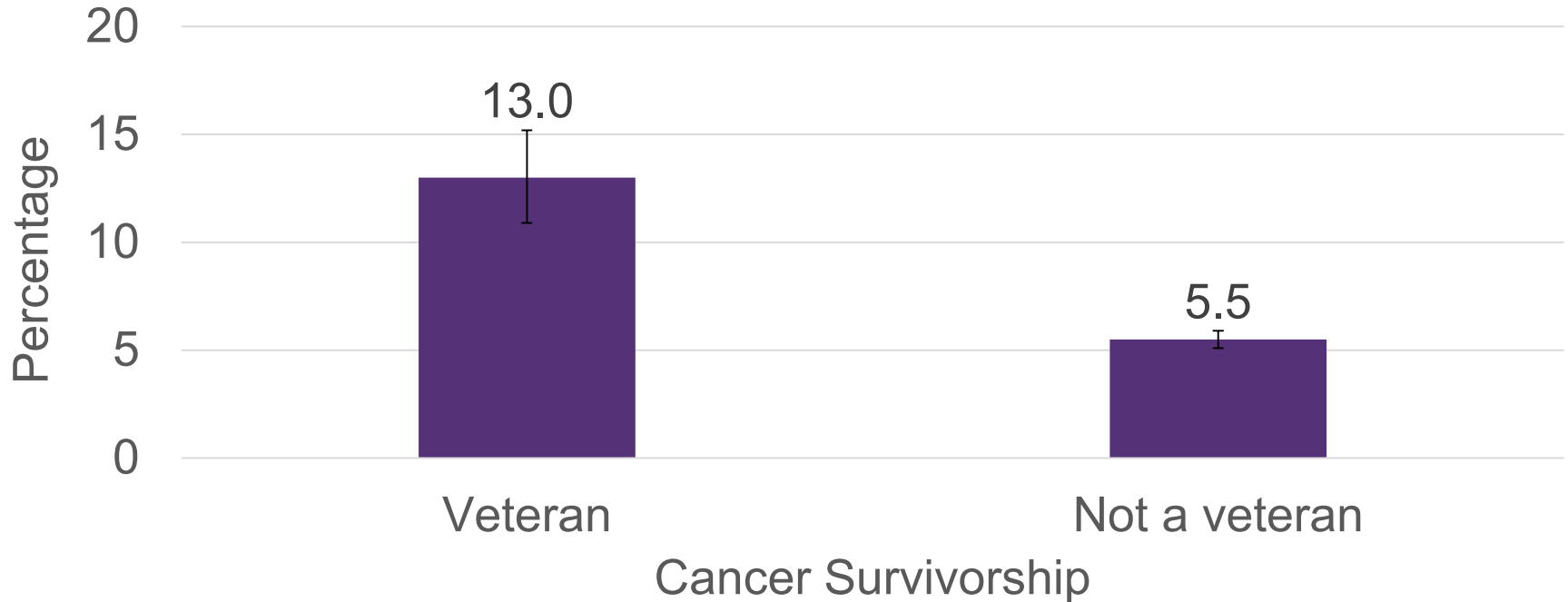
Cancer Survivorship in NYS, by Disability Status



Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

Cancer Survivorship in NYS, by Veteran Status



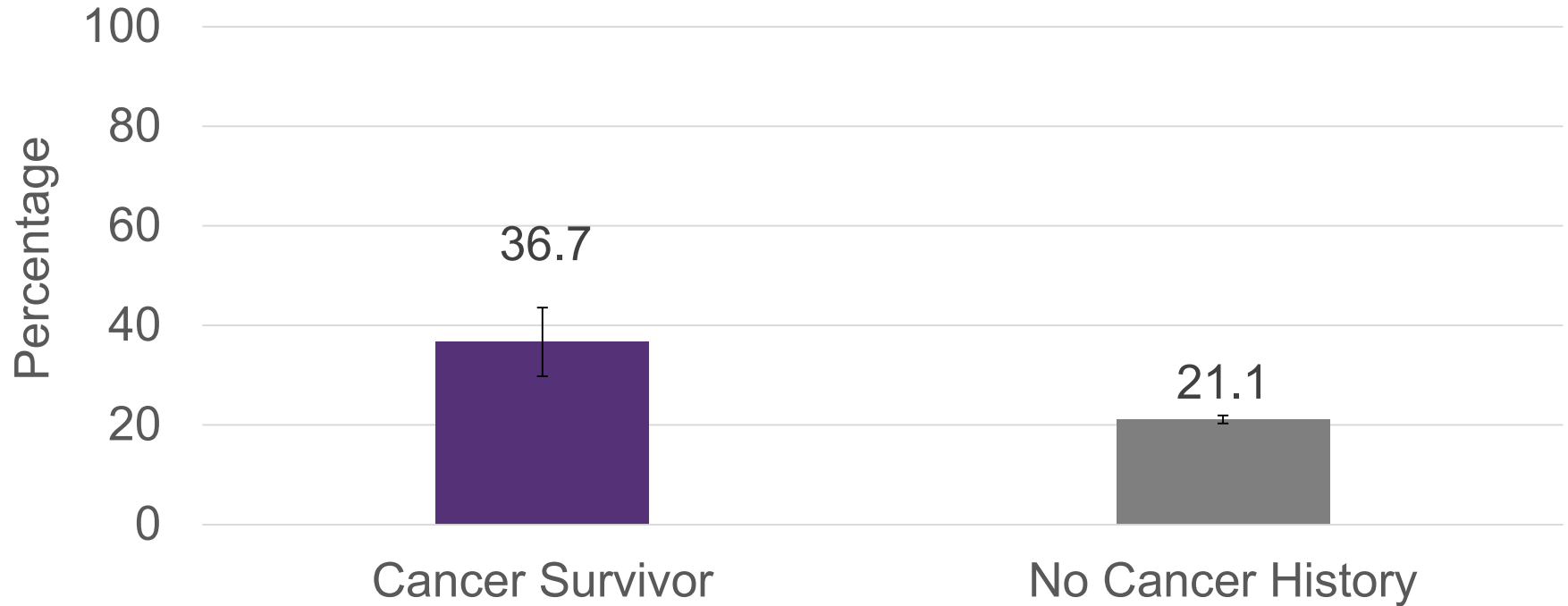
Data Source: Behavioral Risk Factor Surveillance System 2016

Note: Error bars represent 95% confidence intervals

Cancer Survivors vs. Adults with no Cancer History

Comorbidities

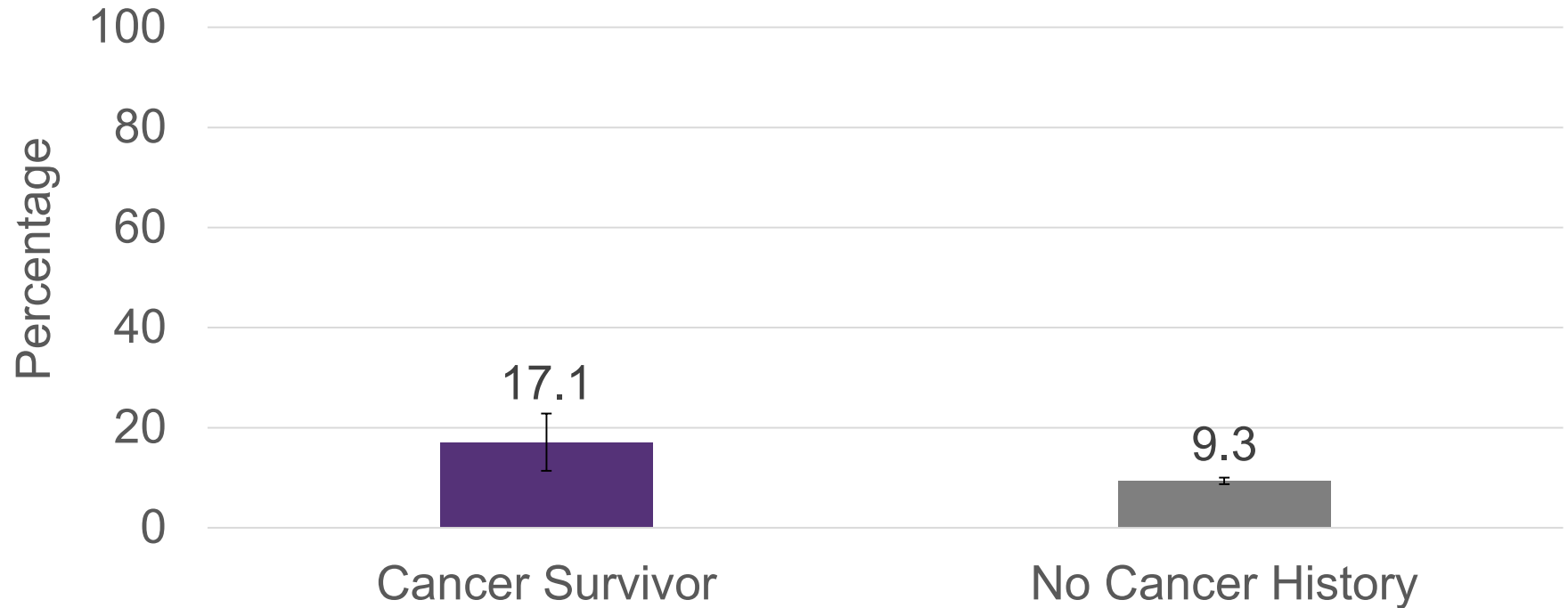
Prevalence* of Arthritis by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

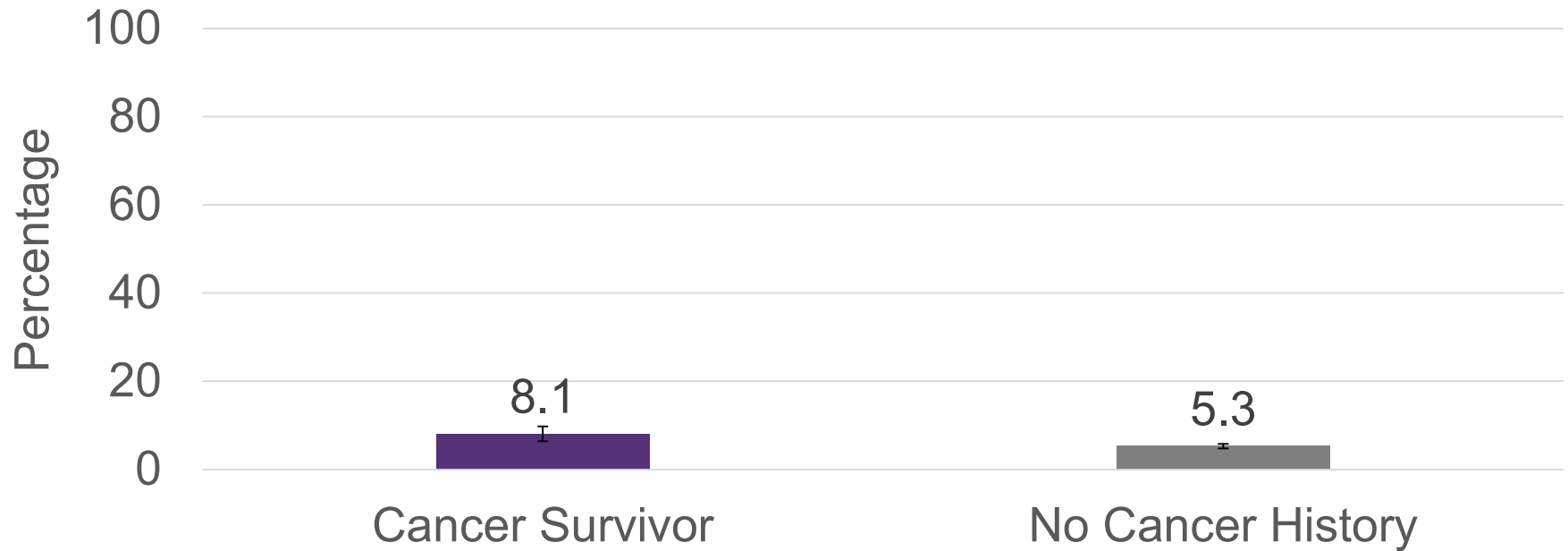
Prevalence* of Asthma by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

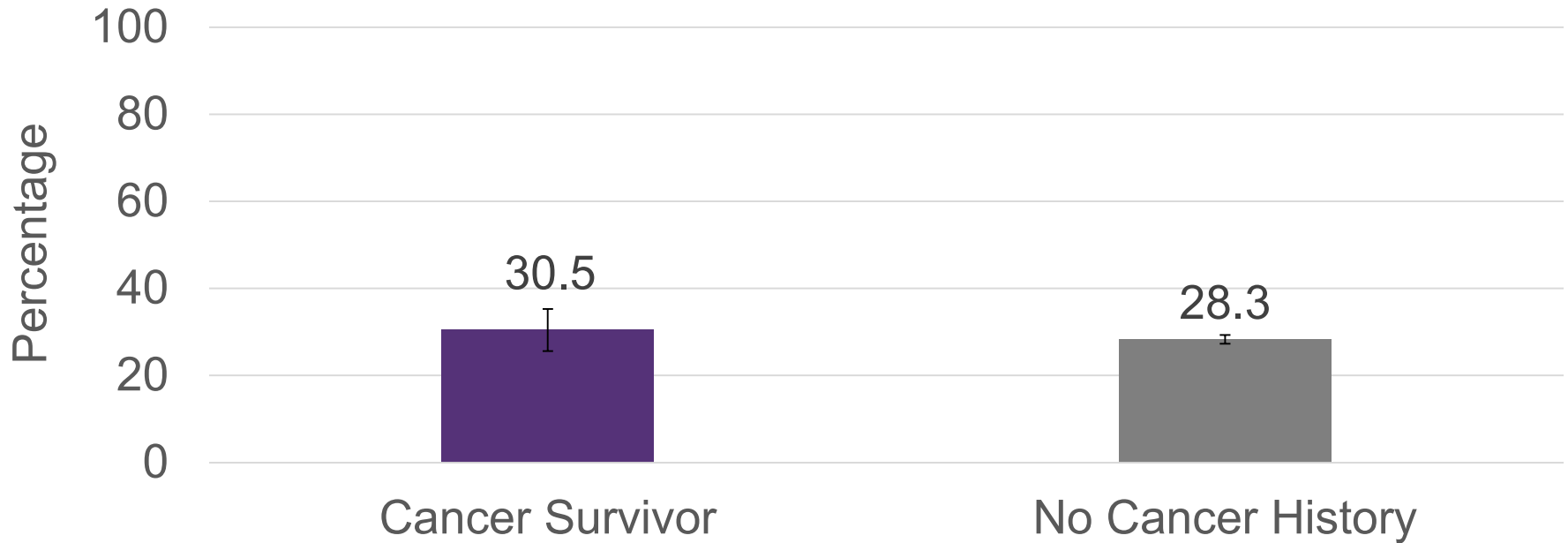
Prevalence* of Cardiovascular Disease by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

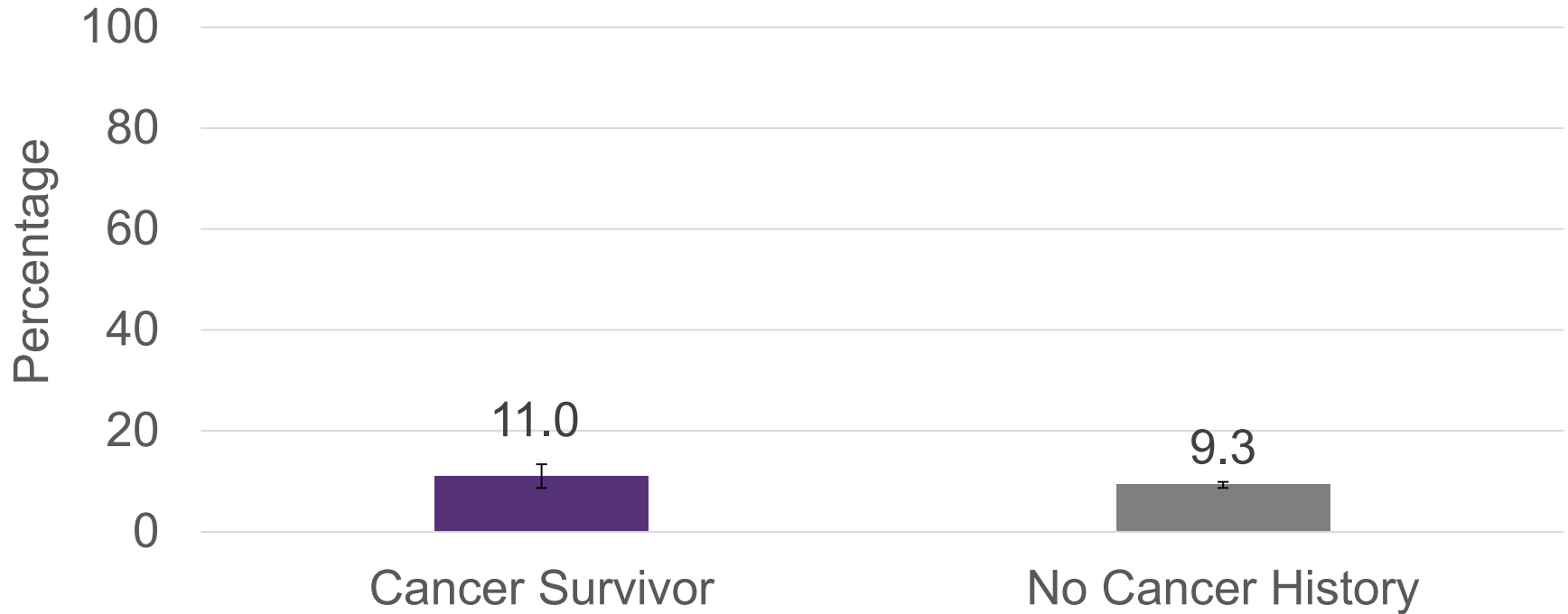
Prevalence* of High Blood Pressure by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

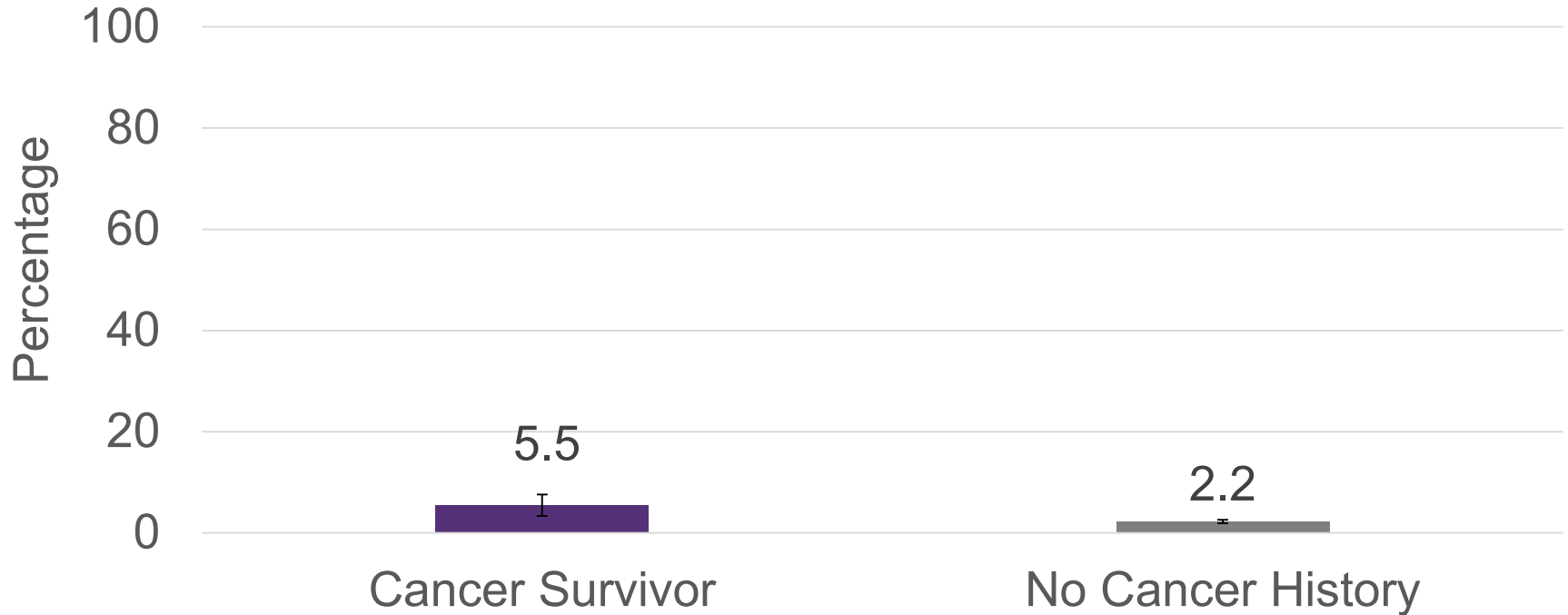
Prevalence* of Diabetes by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

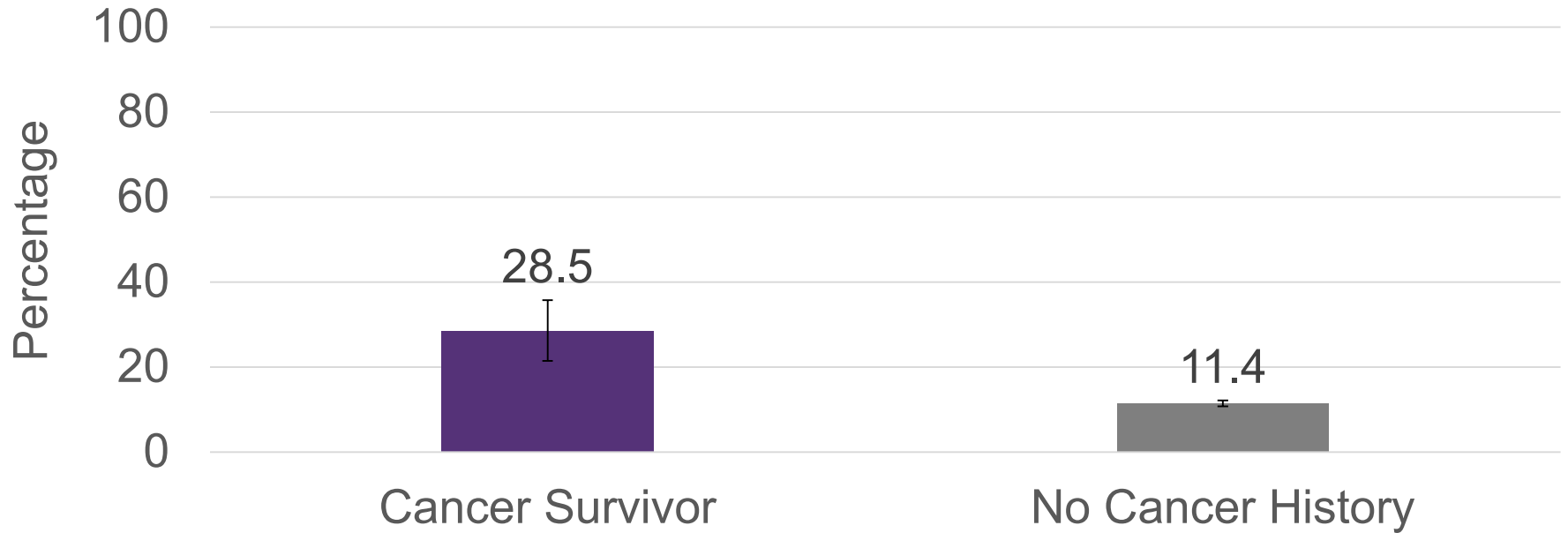
Prevalence* of Stroke by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Prevalence* of Depressive Disorders by Survivorship Status

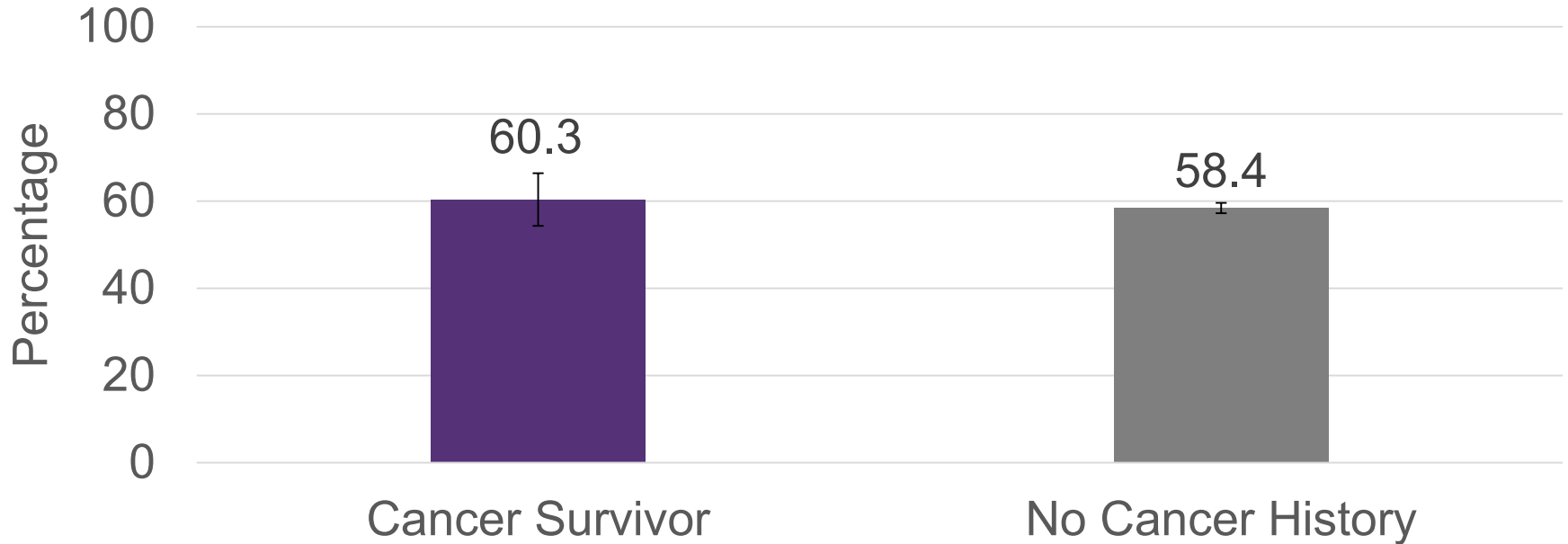


*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Cancer-Related Risk Behaviors

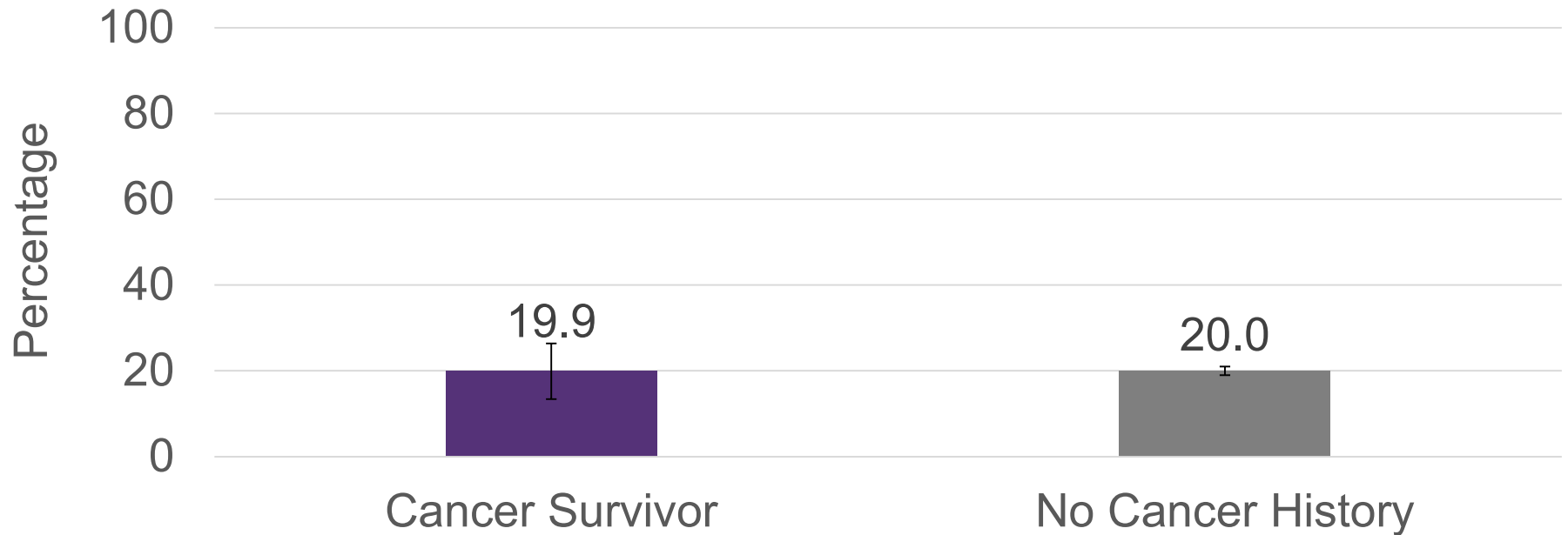
Prevalence* of Current Drinking by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

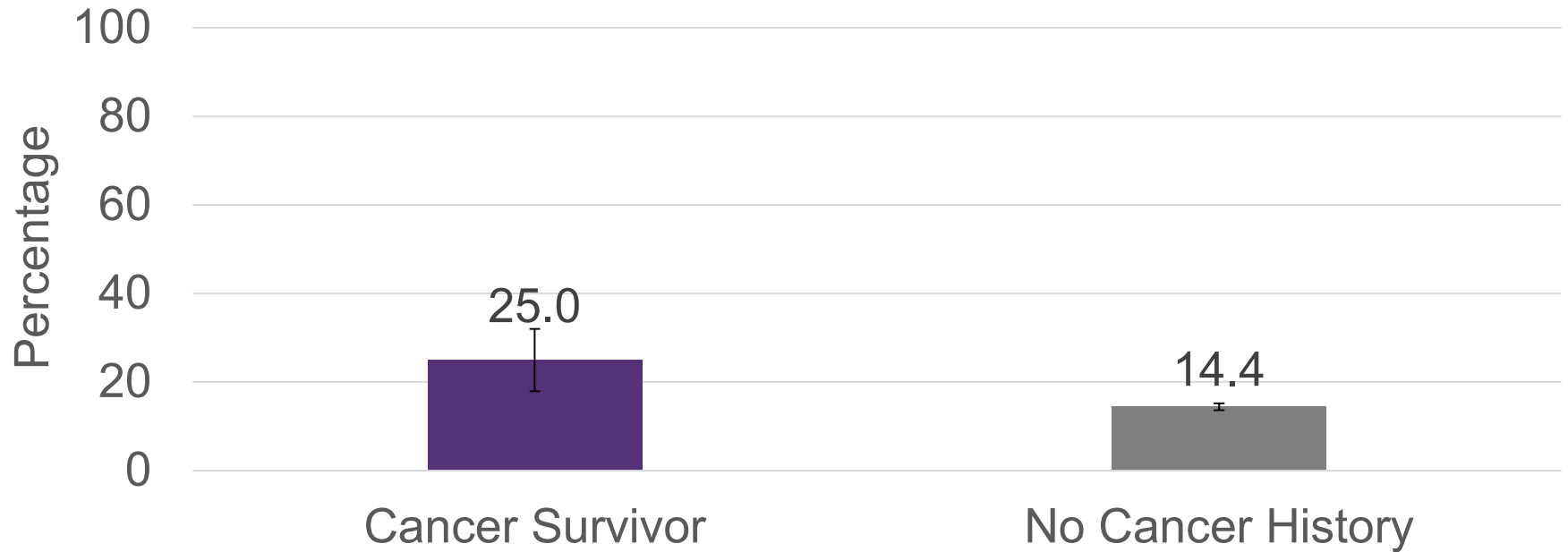
Prevalence* of Binge or Heavy Drinking by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

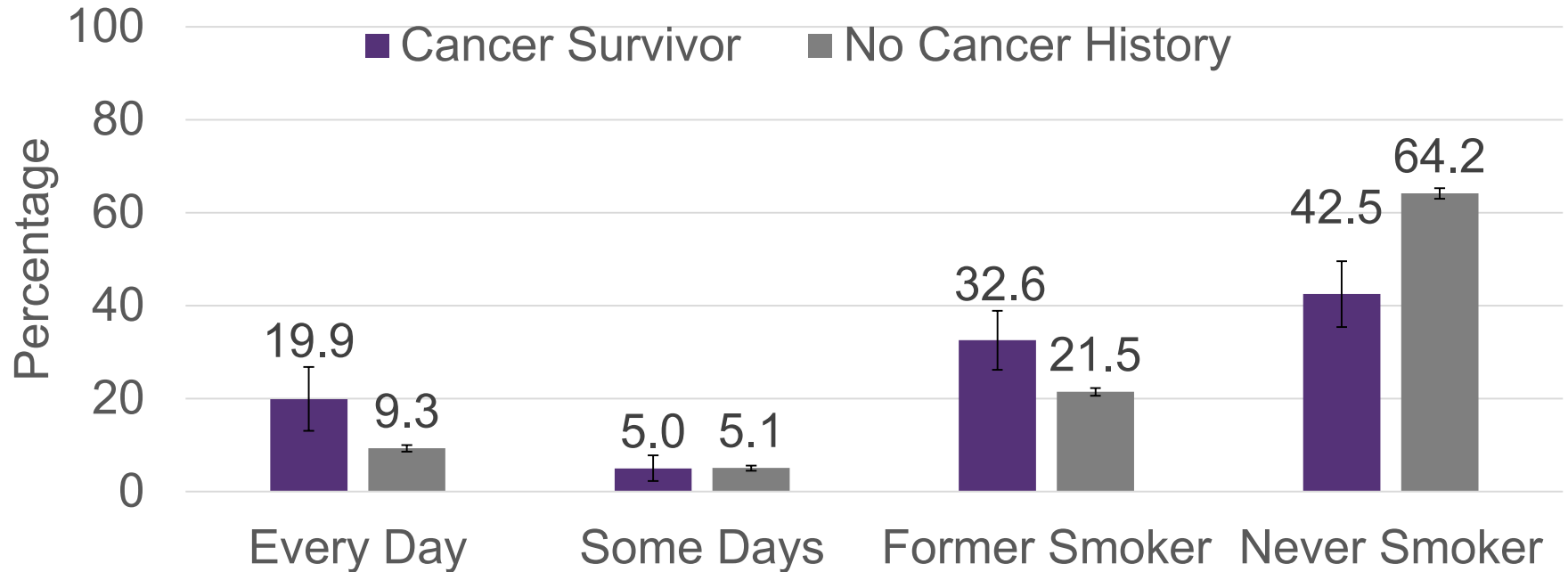
Prevalence* of Current Smoking by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

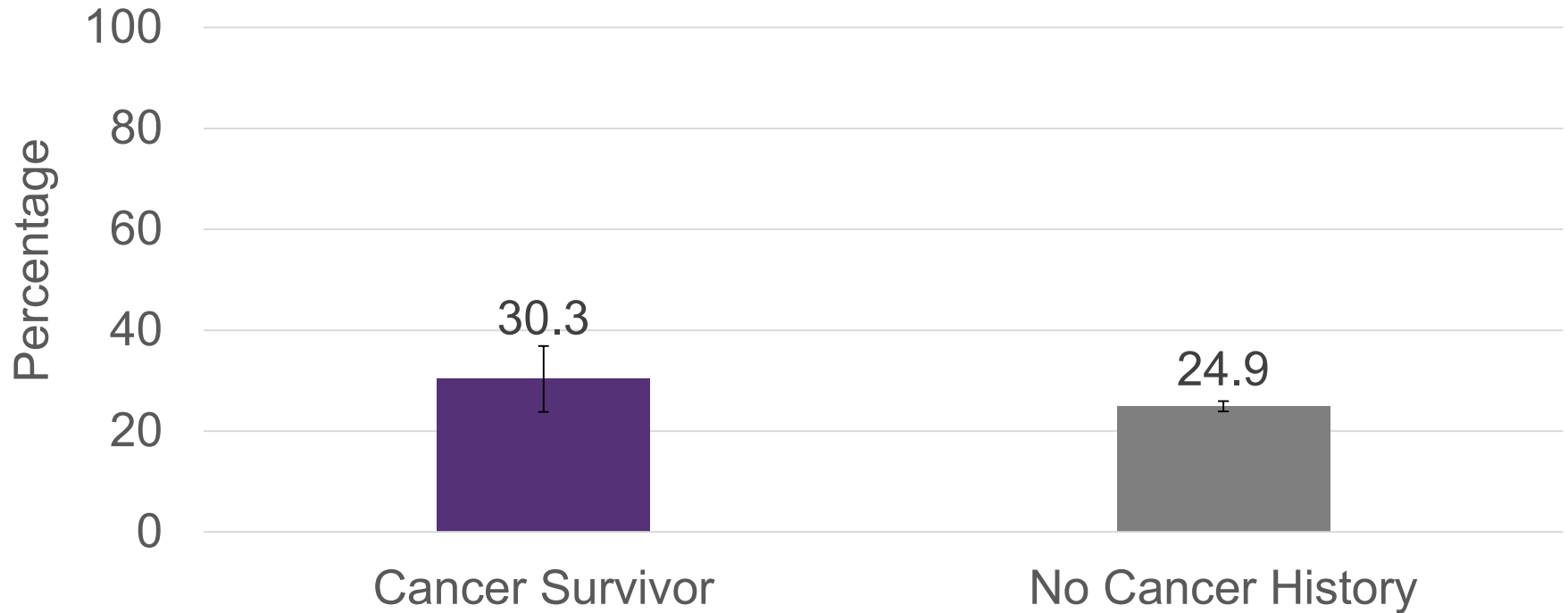
Prevalence* of Smoking Status by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

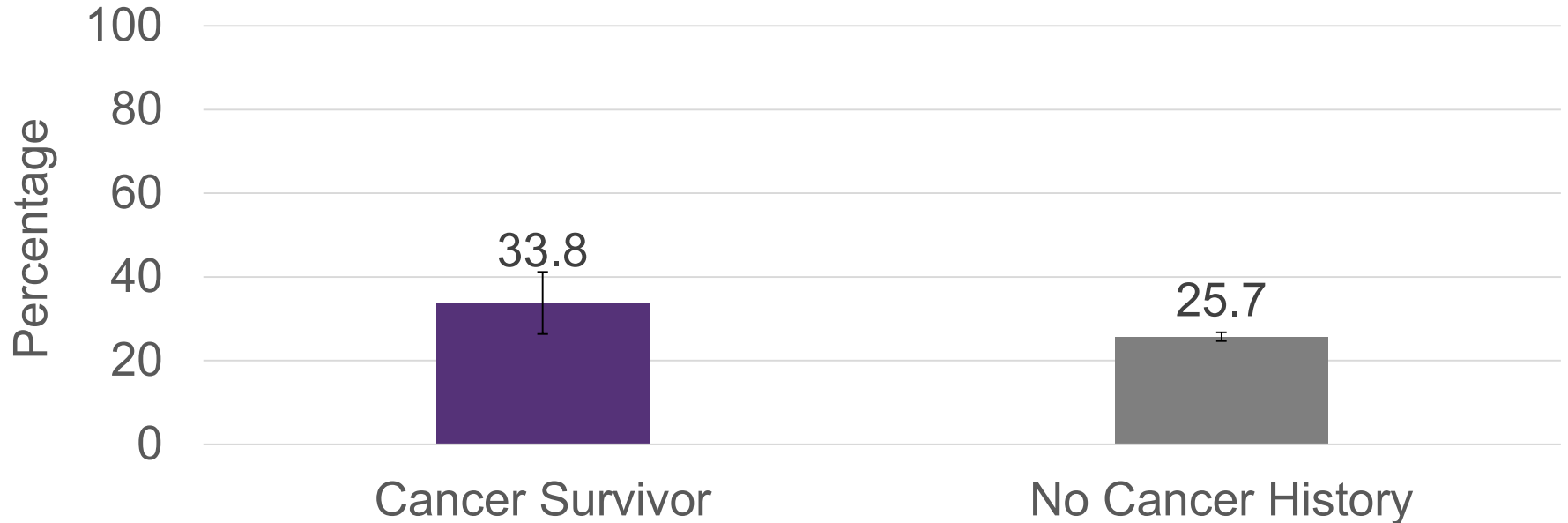
Prevalence* of Obesity by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Prevalence* of No Leisure Time Physical Activity by Survivorship Status



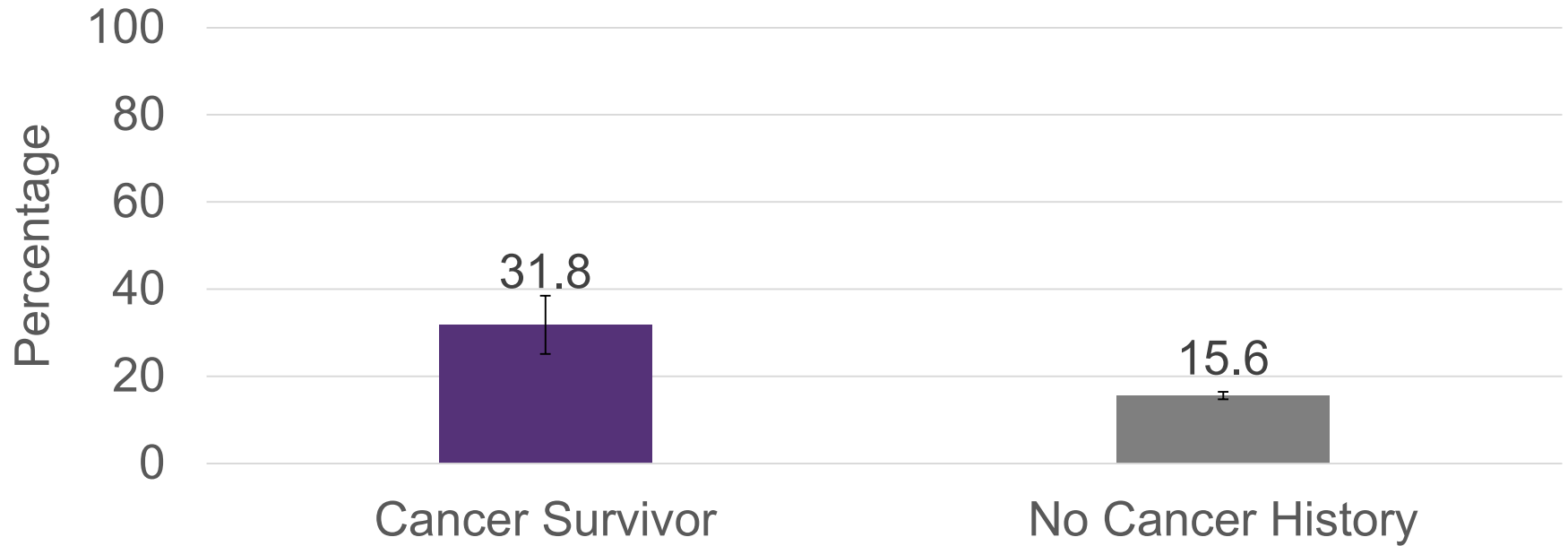
Leisure time physical activity is defined as any physical activities or exercises engaged in not related to one's regular job

***Rates are age-adjusted to the US 2000 standard population**

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Health-Related Quality of Life

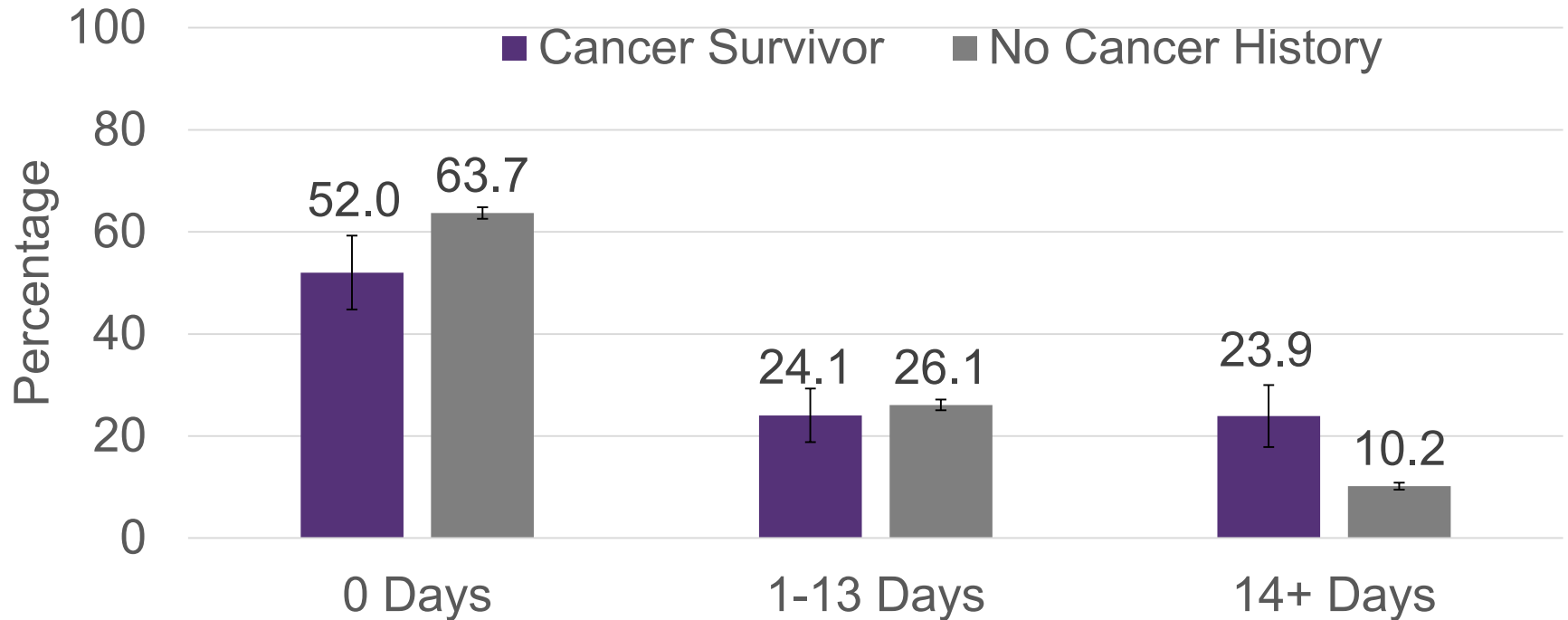
Percentage* of Adults Reporting Fair or Poor Health by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Physical Unhealthy Days* by Survivorship Status

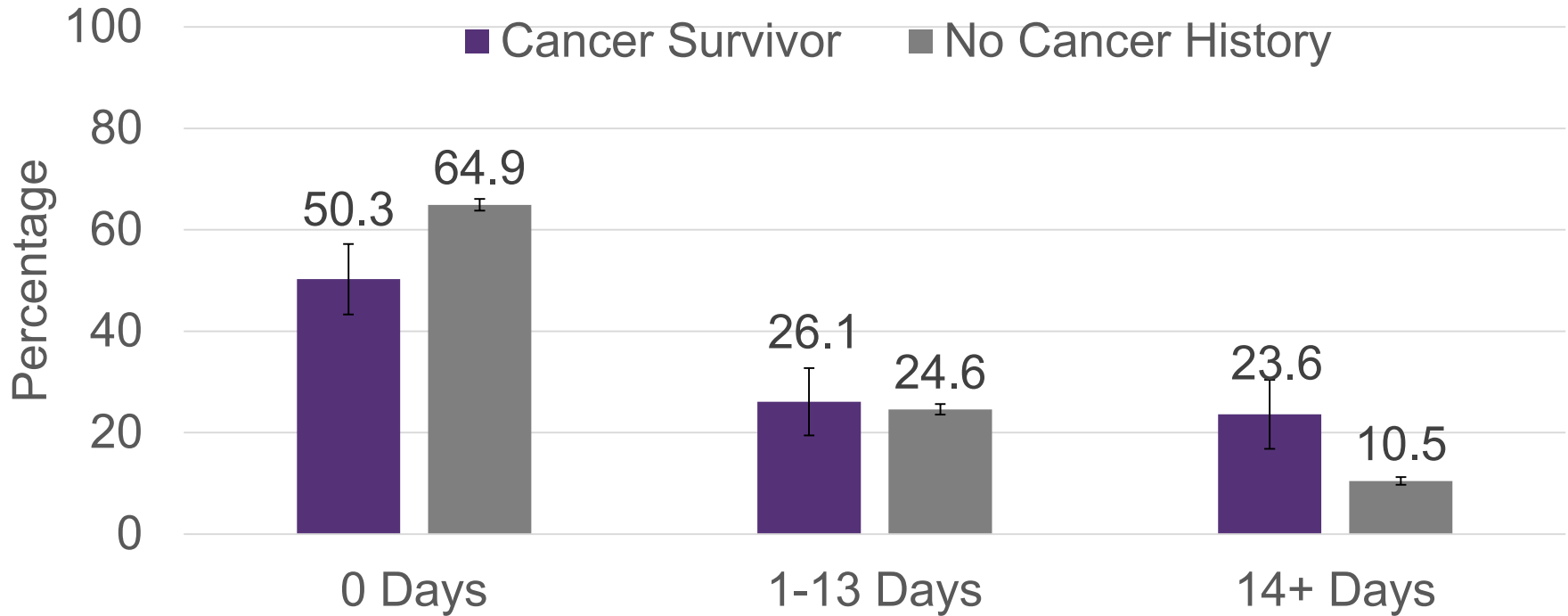


How many days during the past 30 days was your physical health not good?

*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Mental Unhealthy Days* by Survivorship Status

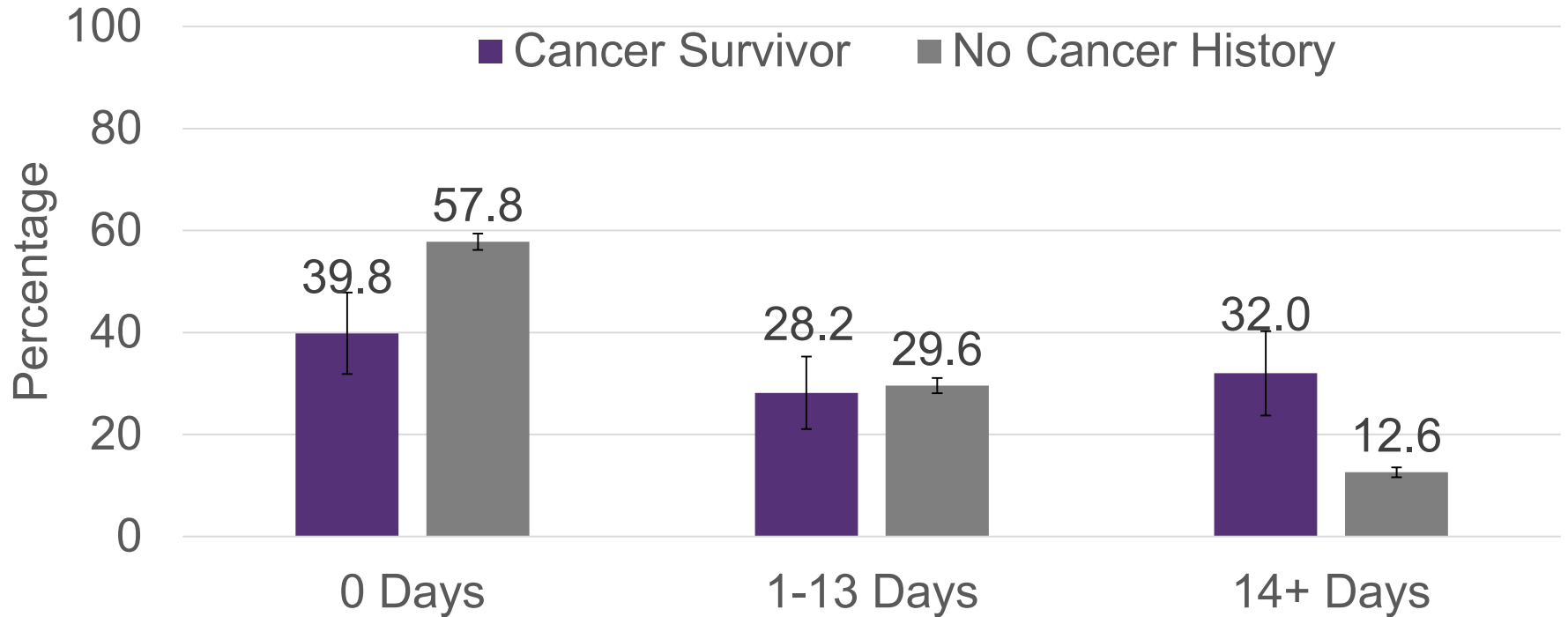


How many days during the past 30 days was your mental health not good?

*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Activity Limitation Days* by Survivorship Status

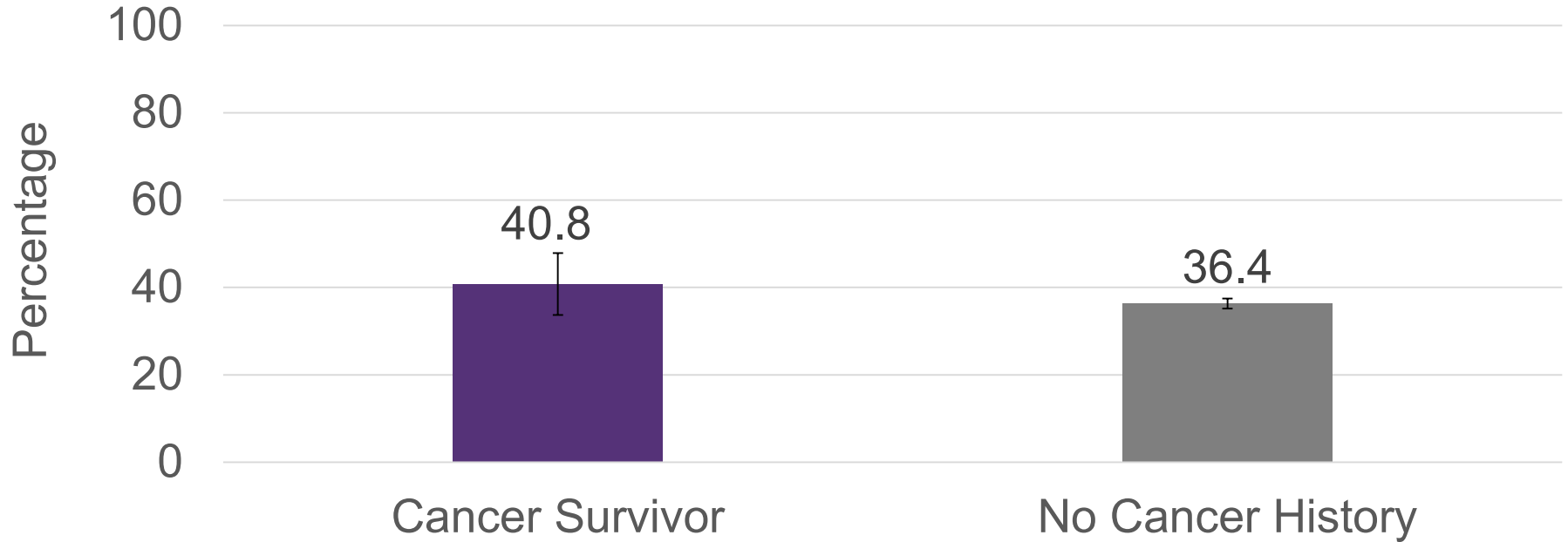


How many days during the past 30 days did poor physical or mental health keep you from doing your usual activities?

*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Percentage* of Adults Reporting Inadequate Sleep by Survivorship Status

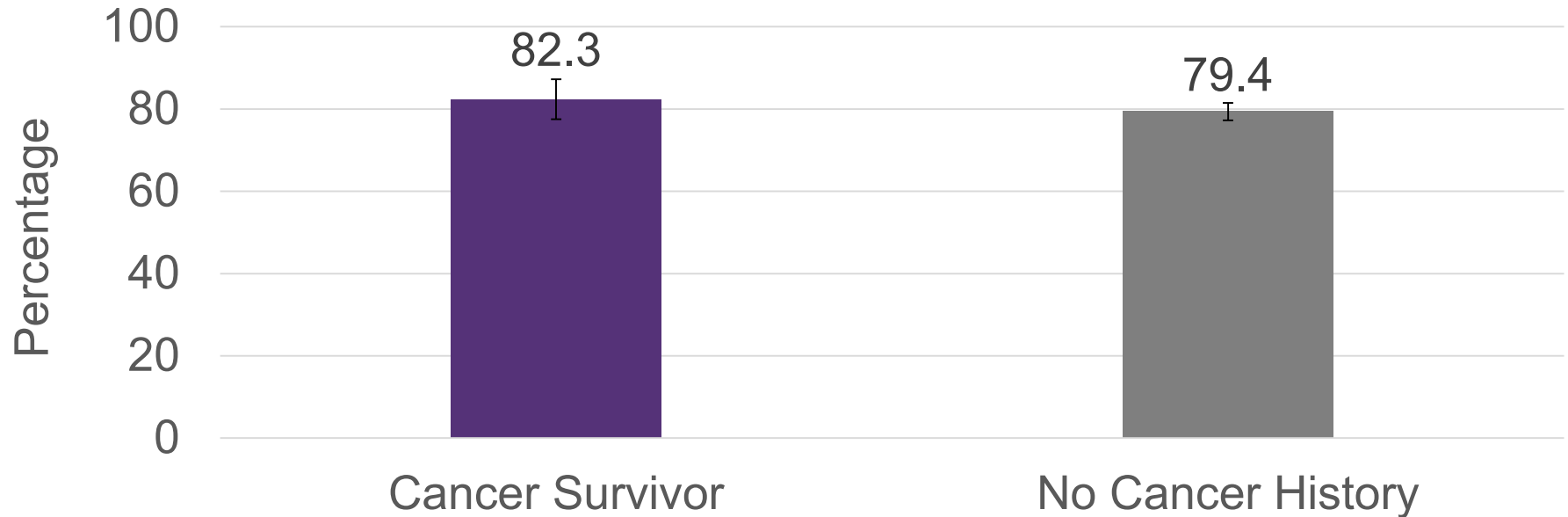


*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Preventive Care

Percentage* of Women up-to-date with Breast Cancer Screening by Survivorship Status

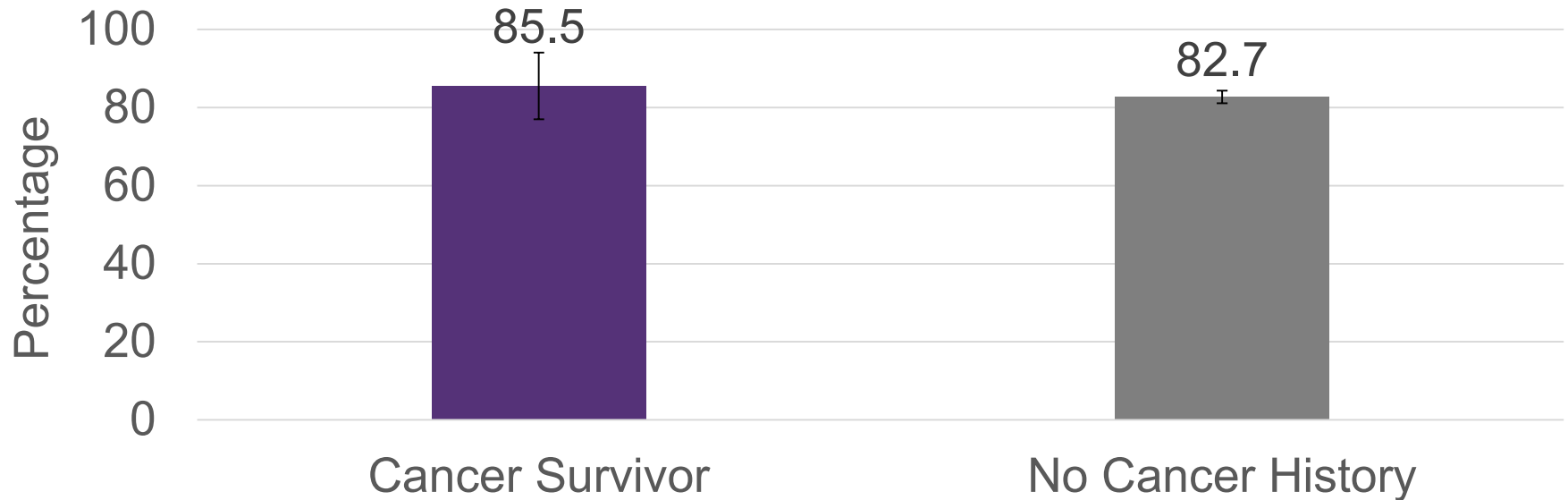


Women aged 50 to 74 receiving a mammogram every two years

***Rates are age-adjusted to the US 2000 standard population**

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Percentage* of Women up-to-date with Cervical Cancer Screening by Survivorship Status

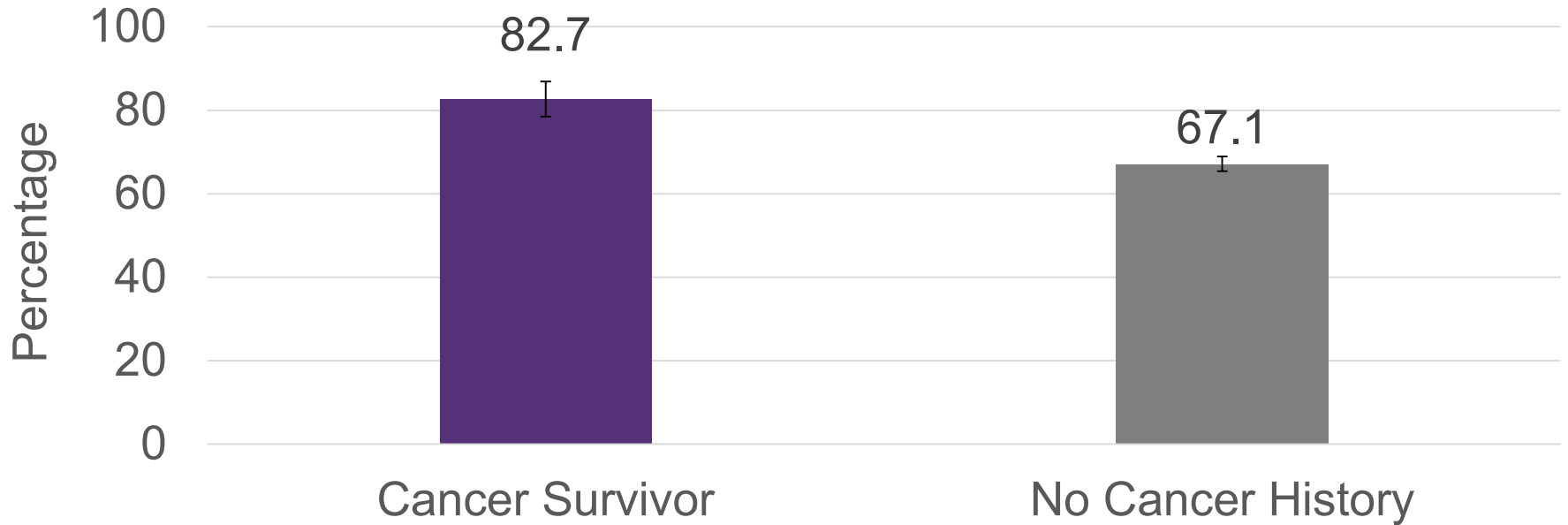


Pap test within 3 years for women ages 21 to 65 OR Pap and human papillomavirus (HPV) co-test within past 5 years for women ages 30 to 65.

***Rates are age-adjusted to the US 2000 standard population**

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Percentage* of Adults up-to-date with Colorectal Cancer Screening by Survivorship Status



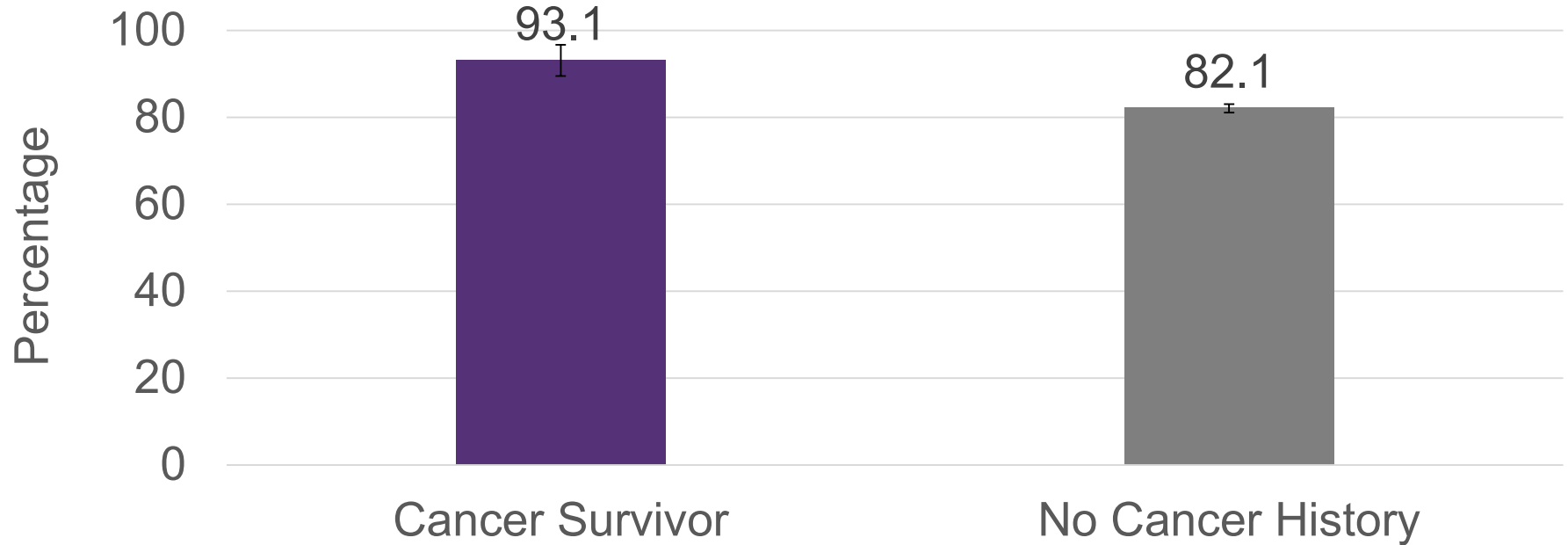
FOBT/FIT within 1 year, or sigmoidoscopy within 5 years with Fecal Occult Blood Test (FOBT)/ Fecal Immunochemical Test (FIT) within 3 years, or colonoscopy within 10 years

***Rates are age-adjusted to the US 2000 standard population**

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Health Care Access

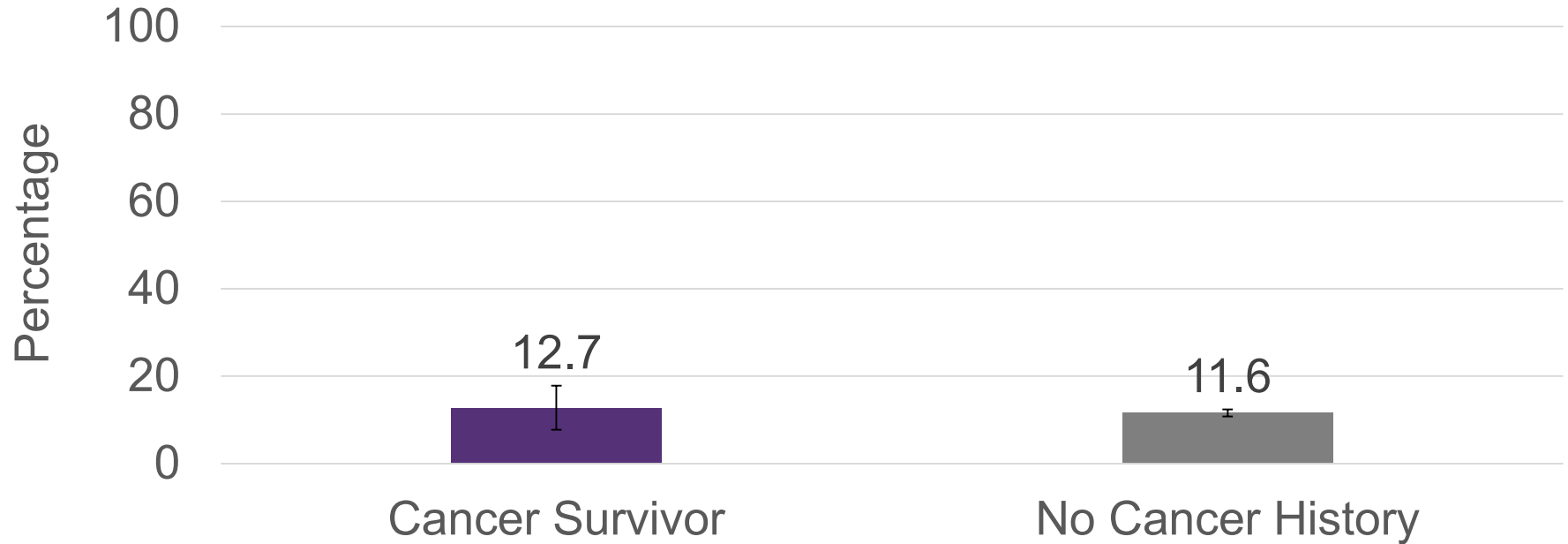
Percentage* of Adults with a Personal Doctor by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

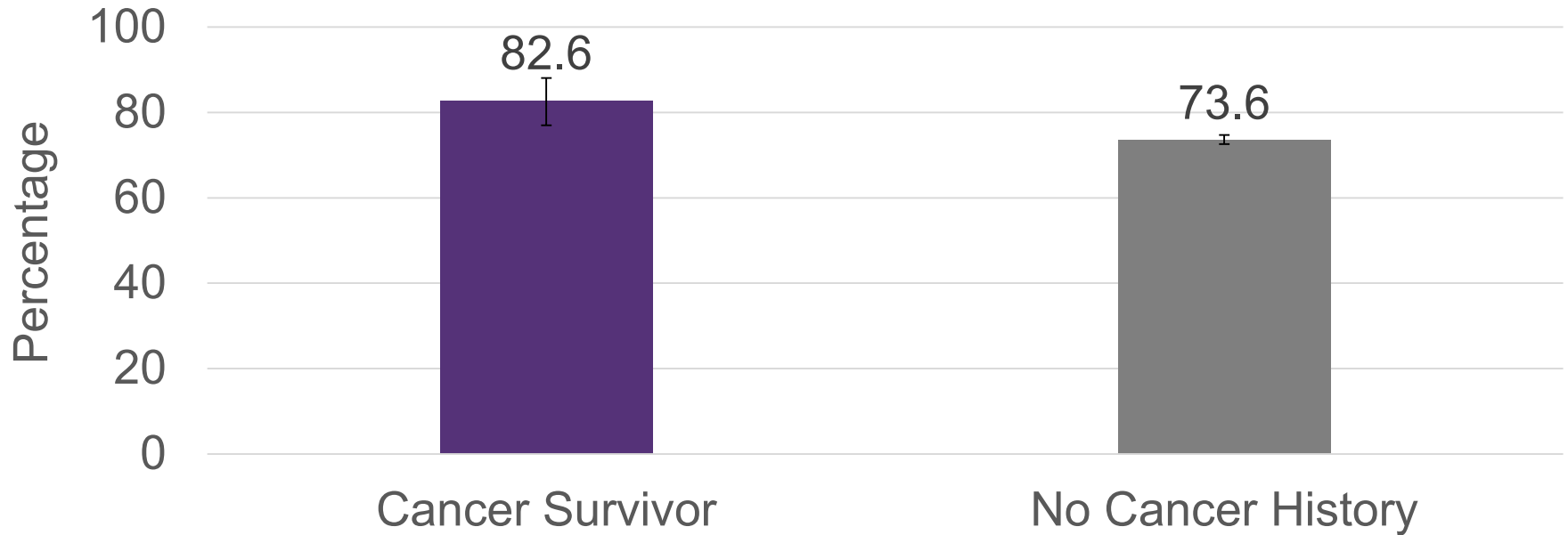
Percentage* of Adults who could not See a Doctor due to Cost by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

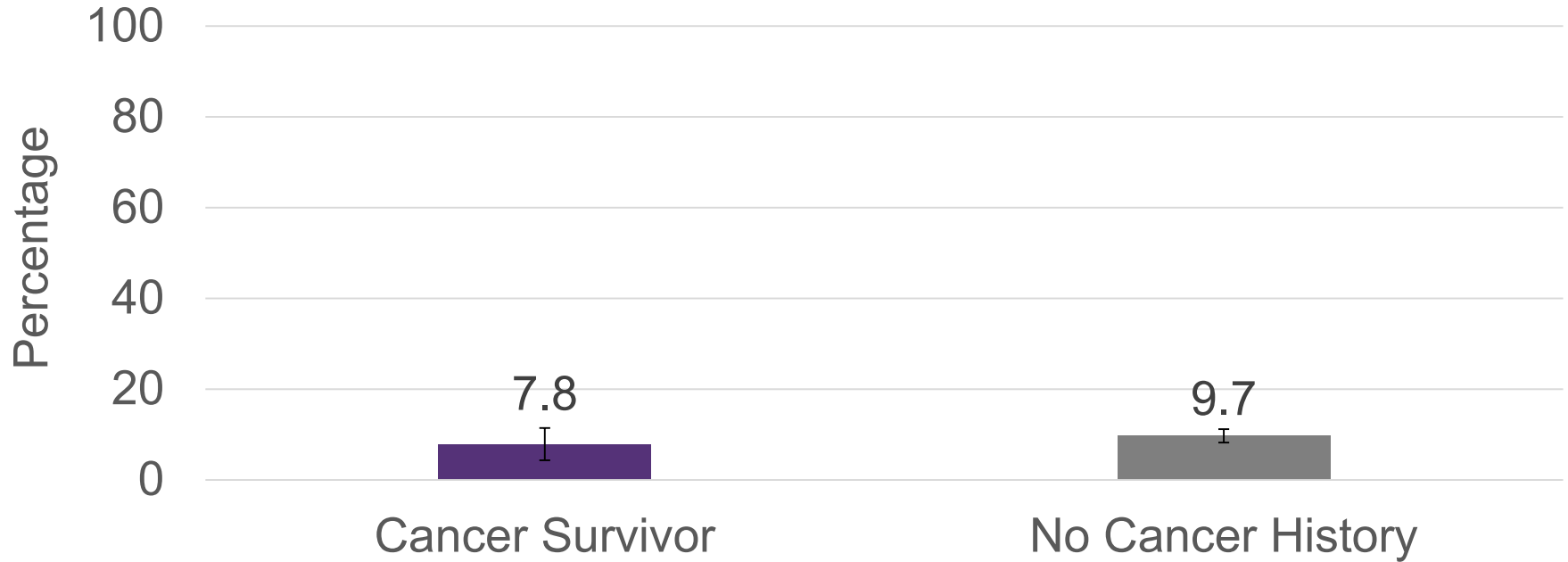
Percentage* of Adults who Received a Routine Health Check-Up in Past Year by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Percentage* of Adults who Participated in a Disease Self-Management Class by Survivorship Status



*Rates are age-adjusted to the US 2000 standard population

Data Source: Behavioral Risk Factor Surveillance System 2016; Note: Error bars represent 95% confidence intervals

Contact Information & Suggested Citation

- Contact information: Questions about this resource should be directed to the Bureau of Chronic Disease Evaluation and Research, by phone (518) 473-0673 or by email bcder@health.ny.gov
- Suggested citation: Bureau of Chronic Disease Evaluation and Research. *Cancer Survivorship Data Compendium - 2016 New York State Behavioral Risk Factor Surveillance System*. <https://www.health.ny.gov/statistics/brfss/reports/>. Accessed Date.

Compendium Talking Points

Cancer Survivorship Data Compendium - 2016 New York State Behavioral Risk Factor Surveillance System

Talking Points

Section: Introduction

Slides 4-6

- No notes

Slide 7

- *Note to presenter on Behavioral Risk Factor Surveillance System (BRFSS) limitations:*
 - *Because participation in the BRFSS requires a telephone, results may be biased by the exclusion of persons who cannot afford landline or cell phones.*
 - *Because BRFSS data are based on self-reports by survey participants, results may be subject to recall bias. Studies have shown, however, that BRFSS survey findings are both reliable and valid.*
 - *Because the findings are limited to noninstitutionalized United States citizens, cancer survivors with an advanced stage cancer living in nursing homes, long-term care facilities, or hospice or cancer survivors who are in the military are not included.*
 - *Because of survival bias, respondents might have survived cancer for several reasons: their cancer was an in situ or early stage cancer, was well differentiated, or was more responsive to treatment, or the survivors had better access to treatment or engaged in more positive health behaviors.*

Section: Cancer Survivorship in the BRFSS

Slide 9

- The BRFSS questionnaire is designed by a working group of BRFSS state coordinators and Centers for Disease Control and Prevention (CDC) staff and goes through rigorous testing before its use.
- Since 2011, the BRFSS survey has included two questions related to a cancer diagnosis history that must be asked by all states and without modification in wording. These questions are as follows and can be used to categorize respondents according to their cancer survivorship status:
 - The first question asks if a respondent has ever been told by a health professional that they had skin cancer.
 - The second question asks if a respondent has ever been told by a health professional that they had any other types of cancer.

Slide 10

- In these slides, a cancer survivor is defined as someone who has been diagnosed with cancer (other than skin cancer).
- *Note to presenter: Respondents only reporting a skin cancer diagnosis were excluded as we are unable to distinguish between melanoma and nonmelanoma skin cancers, and to be consistent with literature, would not want to characterize nonmelanoma skin cancer as a cancer survivor because typically it does not require treatment beyond surgery.*

Section: Cancer Survivorship Demographics

Slide 12

- 6% of the adult population (aged 18 years and older), representing over 936,000 New Yorkers, report they have ever been diagnosed with cancer.

Slide 13

- Cancer survivorship prevalence is significantly higher among those living outside of New York City (NYC) (7.2%) as compared to those living within NYC (4.3%).

Slide 14

- Cancer survivorship prevalence is significantly higher among females (6.8%) as compared to males (5.1%).

Slide 15

- Cancer survivorship among adults increases with age.
- Adults ages 18-29 have the lowest prevalence among all age groups and adults 80 and older have the highest prevalence among all age groups.

Slide 16

- When broken down by age and sex, some interesting differences can be seen.
- Among those aged 30 to 59, a higher percentage of women reported being a cancer survivor than men.
- Among those aged 60 to 79, a higher percentage of men reported being a cancer survivor than women.
- A similar percentage of men and women reported being a cancer survivor among those aged 80 years and older.

Slide 17

- Cancer survivorship prevalence is significantly higher among White, non-Hispanic adults (8%) as compared to all other racial/ethnic groups.

Slide 18

- Cancer survivorship prevalence is significantly higher among those with a high school diploma or General Education Diploma (GED) (6.8%) compared to those with less than a high school degree (4.3%).

Slide 19

- Cancer survivorship prevalence is five times greater among those who are retired (16.8%) and more than double among adults out of work or unable to work (7.4%) than among employed and self-employed adults (3.3%).

Slide 20

- Cancer survivorship prevalence is significantly higher among adults with incomes \$25,000-<\$50,000 (7.2%) as compared to \$50,000 or greater (5.4%).

Slide 21

- Cancer survivorship prevalence is significantly higher among adults with Medicare insurance (14.3%) as compared to all other insurance types.

Slide 22

- Cancer survivorship prevalence is more than double among adults who are widowed (17.2%) than adults who are divorced or separated (7.5%) and nearly three times higher than among adults who are married or living together (6.3%).

Slide 23

- Cancer survivorship prevalence is more than double among adults with disability (10.3%) than among adults without disability (5.0%).

Slide 24

- Cancer survivorship prevalence is more than double among veterans (13.0%) than among non-veterans (5.5%).

Section: Cancer Survivors vs. Adults with no Cancer History

Subsection: Comorbidities

Slide 27

- The prevalence of arthritis among cancer survivors (36.7%) is nearly twice as high as among adults with no cancer history (21.1%).

Slide 28

- The prevalence of asthma among cancer survivors (17.1%) is nearly twice as high as among adults with no cancer history (9.3%).

Slide 29

- The prevalence of cardiovascular disease among cancer survivors (8.1%) is significantly higher as compared to adults with no cancer history (5.3%).
- *Note to presenter: Cardiovascular disease is defined as those who reported having a myocardial infarction (heart attack) or angina or coronary heart disease.*

Slide 30

- Cancer survivors and adults with no cancer history have similar rates of high blood pressure.

Slide 31

- Cancer survivors and adults with no cancer history have similar rates of diabetes.

Slide 32

- Cancer survivors are more than twice as likely to have had a stroke (5.5%) than adults with no cancer history (2.2%).

Slide 33

- Cancer survivors are more than twice as likely to have a depressive disorder (28.5%) than adults with no cancer history (11.4%).
- *Note to presenter: Depressive disorder is defined as depression, major depression, dysthymia, or minor depression*

Subsection: Cancer-Related Risk Behaviors

Slide 35

- Cancer survivors and adults with no cancer history report similar rates of drinking alcohol in the past 30 days.

Slide 36

- Cancer survivors and adults with no cancer history report similar rates of binge or heavy drinking.
- *Note to presenter: Binge drinking is defined as consuming 4 or more drinks for women and 5 or more drinks for men on a single occasion; Heavy drinking is defined as consuming 8 or more drinks per week for women and 15 or more drinks per week for men.*

Slide 37

- Cancer survivors are significantly more likely to report being a current smoker (25.0%) than adults with no cancer history (14.4%). In fact, the prevalence of smoking among cancer survivors is nearly double that of adults with no cancer history.
- *Note to presenter: "Current smoker" is defined as an adult over the age of 18 who has smoked at least 100 cigarettes in their lifetime and currently smokes on at least some days.*

Slide 38

- Cancer survivors are nearly twice as likely to report being former smokers than adults with no cancer history (32.6% vs. 21.5%).
 - Cancer survivors are twice as likely to report being current smokers who smoke every day than adults with no cancer history (19.9% vs. 9.3%)
 - Conversely, adults with no cancer history are nearly twice as likely to report having never smoked as compared to cancer survivors (64.2% vs. 42.5%).
- Note to presenter: Every day is defined as having smoked at least 100 cigarettes in one's lifetime and now smoke every day; Some days: Some days is defined as having smoked at least 100 cigarettes in their lifetime and now smoke some days. Former smoker is defined as having smoked at least 100 cigarettes in one's lifetime and currently do not smoke. Never smoked is defined as having not smoked at least 100 cigarettes in one's lifetime.*

Slide 39

- Cancer survivors and adults with no cancer history have similar rates of obesity.

Slide 40

- Cancer survivors and adults with no cancer history have similar rates of no leisure time physical activity.
- *Note to presenter: leisure time physical activity is defined as any physical activities or exercises engaged in not related to one's regular job.*

Subsection: Quality of Life

Slide 42

- Cancer survivors are twice as likely to report fair or poor health (31.8%) as compared to adults with no cancer history (15.6%).

Slide 43

- Cancer survivors are more than twice as likely to report their physical health was not good on 14 or more of the past 30 days (23.9%) as compared to adults with no cancer history (10.2%).

Slide 44

- Cancer survivors are more than twice as likely to report their mental health was not good on 14 or more of the past 30 days (23.6%) as compared to adults with no cancer history (10.5%).

Slide 45

- Cancer survivors are nearly three times more likely to report having activity limitations due to poor physical or mental health on 14 or more of the past 30 days (32.0%) than adults with no cancer history (12.6%).

Slide 46

- Cancer survivors and adults with no cancer history report similar rates of inadequate sleep, defined as less than seven hours of sleep on average per night.

Subsection: Preventive Care

Slide 48

- Among women ages 50-74, cancer survivors are slightly more likely to report having a mammogram within the past two years than women with no cancer history, though this difference is not significant (82.3% vs 79.4%).

Slide 49

- Among women ages 21-65, cancer survivors are slightly more likely to have received a cervical cancer screening according to guidelines (Pap test within 3 years for women ages 21 to 65 OR Pap and human papillomavirus (HPV) co-test within past 5 years for women ages 30 to 65) than women with no cancer history, though this difference is not significant (85.5% vs 82.7%).

Slide 50

- Among adults ages 50-75, cancer survivors were significantly more likely to have received a colorectal cancer screening according to guidelines (Fecal Occult Blood Test (FOBT)/Fecal Immunochemical Test (FIT) within 1 year, or sigmoidoscopy within 5 years with Fecal Occult Blood Test (FOBT)/ Fecal Immunochemical Test (FIT) within 3 years, or colonoscopy within 10 years) than adults with no cancer history (82.7% vs. 67.1%).

Subsection: Health Care Access

Slide 52

- Cancer survivors are significantly more likely to report having a personal doctor/healthcare provider as compared to adults with no cancer history. (93% vs. 82%)

Slide 53

- Cancer survivors and adults with no cancer history report similar rates of not being able to see a doctor due to cost.

Slide 54

- Cancer survivors are significantly more likely to report having received a routine health check-up in the past year as compared to adults with no cancer history (82.6% vs. 73.6%).

Slide 55

- Cancer survivors and adults with no cancer history report similar rates of participating in a disease self-management class.