

What is Cancer?

Cancer is a term used to describe a group of diseases that cause the uncontrolled growth, invasion, and spread (metastasis) of abnormal or damaged cells.¹ Cancer is caused by external factors such as environmental conditions, radiation, infectious organisms, poor diet and lack of exercise, and tobacco use, as well as internal factors such as genetics, mutations, and hormones.

Risk Factors for Cancer

Demographic Risk Factors

- *Age*
 - The risk of getting cancer increases as age increases.
 - 80% of all cancers are diagnosed in individuals 55 years and older.²
- *Genetics and family history*
 - Individuals with family members who have had cancer may have a higher risk for that same type of cancer.
 - About 5-10% of all cancers are strongly hereditary.³
- *Race/ethnicity*
 - Certain races/ethnicities are at higher risk of developing and dying from cancer.
- *Sex*
 - Although some cancers are only seen in men (prostate cancer), or women (uterine, ovarian, or cervical cancer), some cancers are more likely to occur in men or in women.

Social and Behavioral Risk Factors

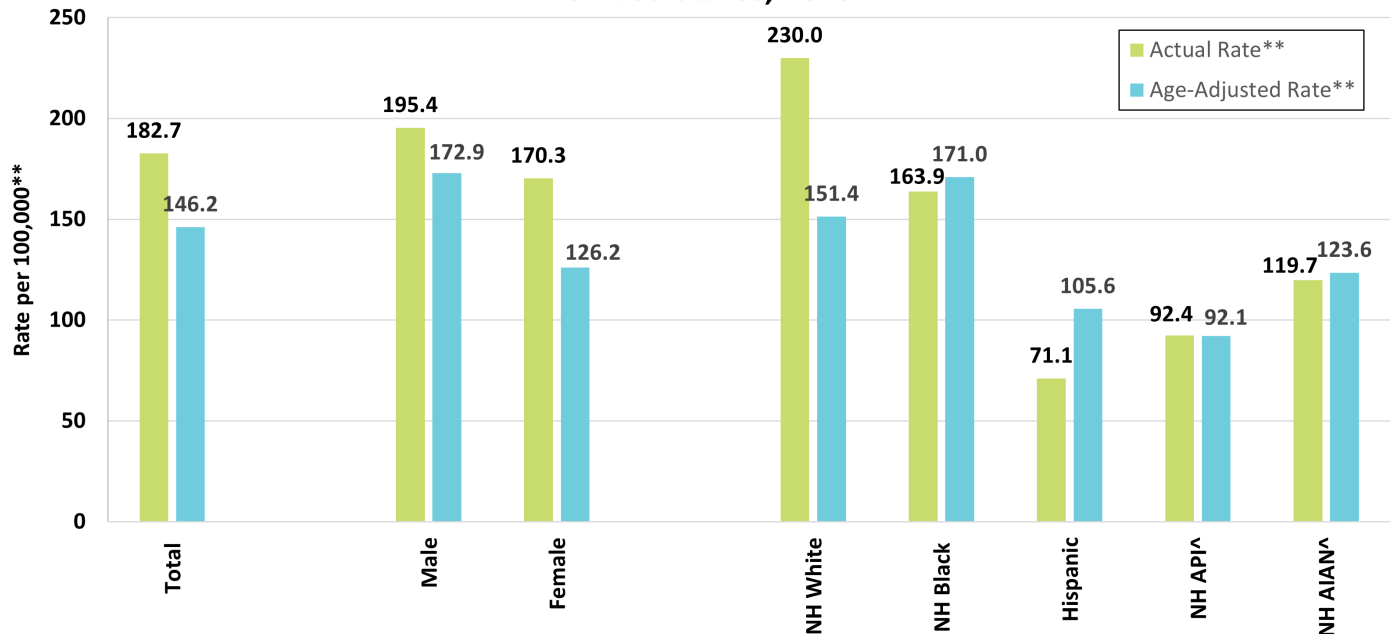
- *Smoking and secondhand smoke exposure*
 - The American Cancer Society estimated 142,670 lung cancer deaths in 2019.²
 - 81% of lung cancer deaths are caused by smoking.²
 - Smoking causes many other types of cancer, including cancers of the mouth, throat, esophagus, stomach, colon, rectum, liver, pancreas, larynx, trachea, bronchus, kidney and renal pelvis, urinary bladder, and cervix, and acute myeloid leukemia.⁴
 - Smokers are 15 to 30 times more likely to develop or die from lung cancer than nonsmokers.⁴
 - Secondhand smoke causes more than 7,300 lung cancer deaths among nonsmokers in the United States each year.⁵
- *Poor nutrition, physical inactivity, and obesity*
 - Up to 1/3 of cancer cases in the United States are associated with poor nutrition, physical inactivity, and/or being overweight or obese.⁶
 - Consumption of red and processed meat is associated with an increased risk of colorectal cancer and potentially stomach cancer.⁶
 - Having a high fat diet is linked with colon, lung and postmenopausal breast cancer.⁶
 - Exercising regularly, eating a healthy diet, and maintaining a healthy weight may reduce the risk of some cancers.

- Being overweight and obese is associated with at least 13 different types of cancers.⁷
- 55% of cancers diagnosed in women and 24% diagnosed in men are associated with being overweight or obese.⁸
- Obesity increases the risk of breast, colon, rectum, endometrium, esophagus, kidney, pancreas and gallbladder cancer.⁹
- *Alcohol abuse*
 - The risk of mouth, esophagus, pharynx, larynx, breast, liver, colon, and rectum cancer increases after consumption of one daily drink for women and two daily drinks for men.⁶
- *Environmental risks*
 - Skin cancer is the most common cancer in the United States and is caused by exposure to ultraviolet (UV) light from the sun or tanning beds.¹⁰
 - Infectious agents including hepatitis B virus, hepatitis C virus, human papillomavirus (HPV), *Helicobacter pylori*, and Epstein-Barr virus caused 13% of cancers worldwide in 2018.¹¹
 - Cancer can be caused by exposure to radon gas, asbestos, benzidine, cadmium, nickel, vinyl chloride, and other materials.¹²

National Statistics and Disparities

- Cancer is the second leading cause of death in the United States.⁷
- Over 1.7 million Americans are diagnosed with cancer and about 600,000 Americans die from cancer per year.⁷
- The five most common cancers in the United States are breast cancer, lung and bronchus cancer, prostate cancer, colorectal cancer, and skin cancer.¹³
- In the United States, men have approximately a 1 in 2 lifetime risk of developing cancer and a 1 in 5 lifetime risk of dying from cancer. Women have approximately a 1 in 3 lifetime risk of developing cancer and a 1 in 6 lifetime risk of dying from cancer. Lifetime risk is the probability that an individual, over the course of a lifetime, will develop and/or die from cancer.¹⁴
- Black Americans are more likely to develop and die from many, although not all, cancer types compared to any other racial or ethnic group.¹⁵
- White women and Black women have similar incidence of breast cancer, but black women are more likely to die from the disease.¹⁵
- Black men are twice as likely to die from prostate cancer compared to White men.¹⁵

Overall Cancer Deaths*: Actual and Age-Adjusted Rates,
United States, 2019**



*Overall Cancer Death refers to underlying cause of death among San Diego County residents (ICD-10 codes C00-C97).

**Rates per 100,000 population. Age-adjusted rates per 100,000, 2000 U.S. Standard population.

^API includes Asian and Pacific Islander. AIAN includes American Indian and Alaska Native. NH refers to non-Hispanic.

Source: National Vital Statistics System, CDC, NCHS. Online database accessed 05/09/2022, <http://www.wonder.cdc.gov>.

Prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. Contact 619.692.6667.

https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/

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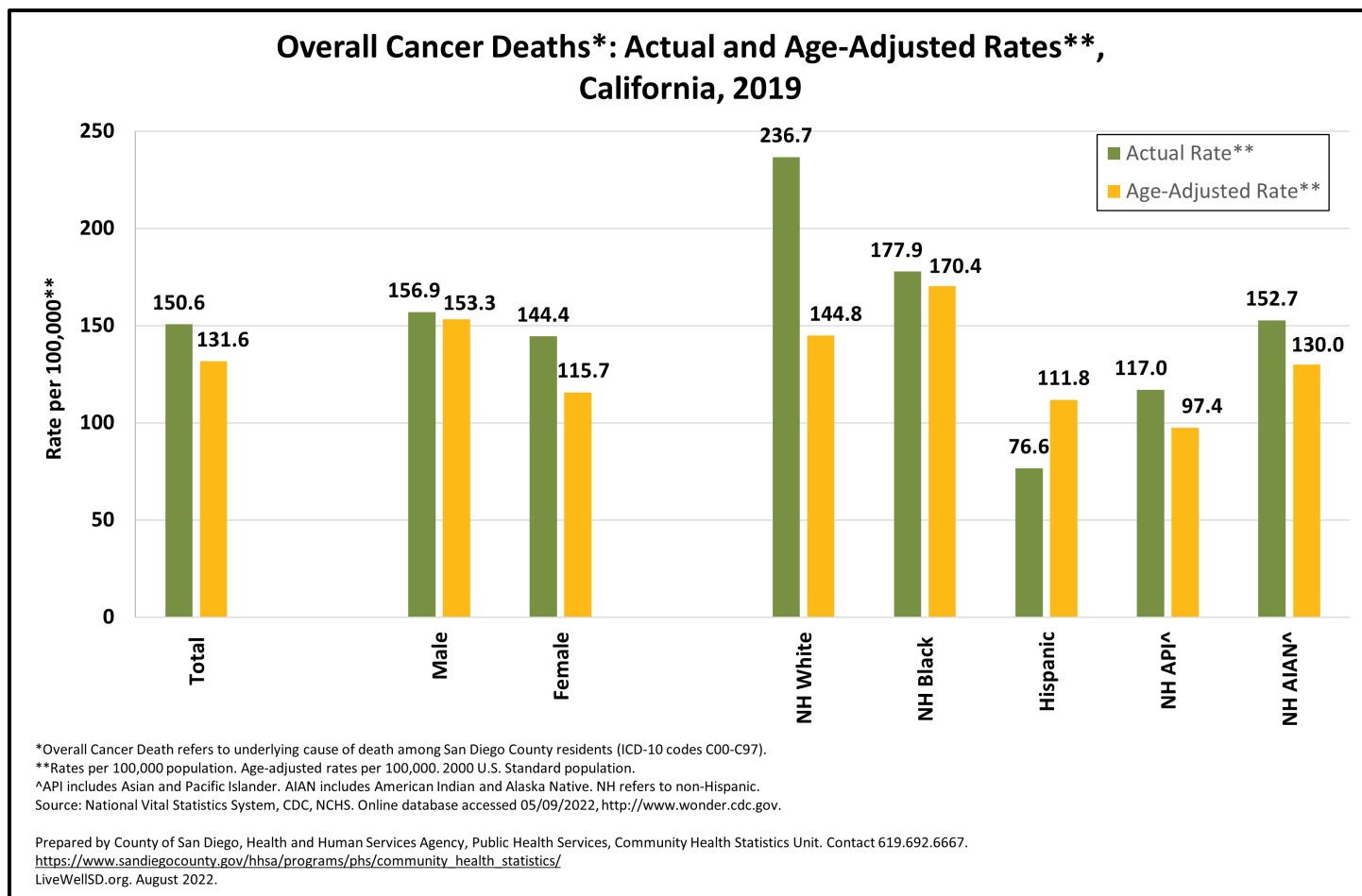
- The age-adjusted death rate for overall cancer in the United States in 2019 was 146.2 per 100,000 residents.¹⁶

- In 2019, U.S. men had higher actual and age-adjusted overall cancer death rates than U.S. women.¹⁶
- Non-Hispanic Blacks had the highest age-adjusted overall cancer death rate (171.0 per 100,000 residents) followed by non-Hispanic Whites (151.4 per 100,000 residents) in 2019.¹⁶

Cost

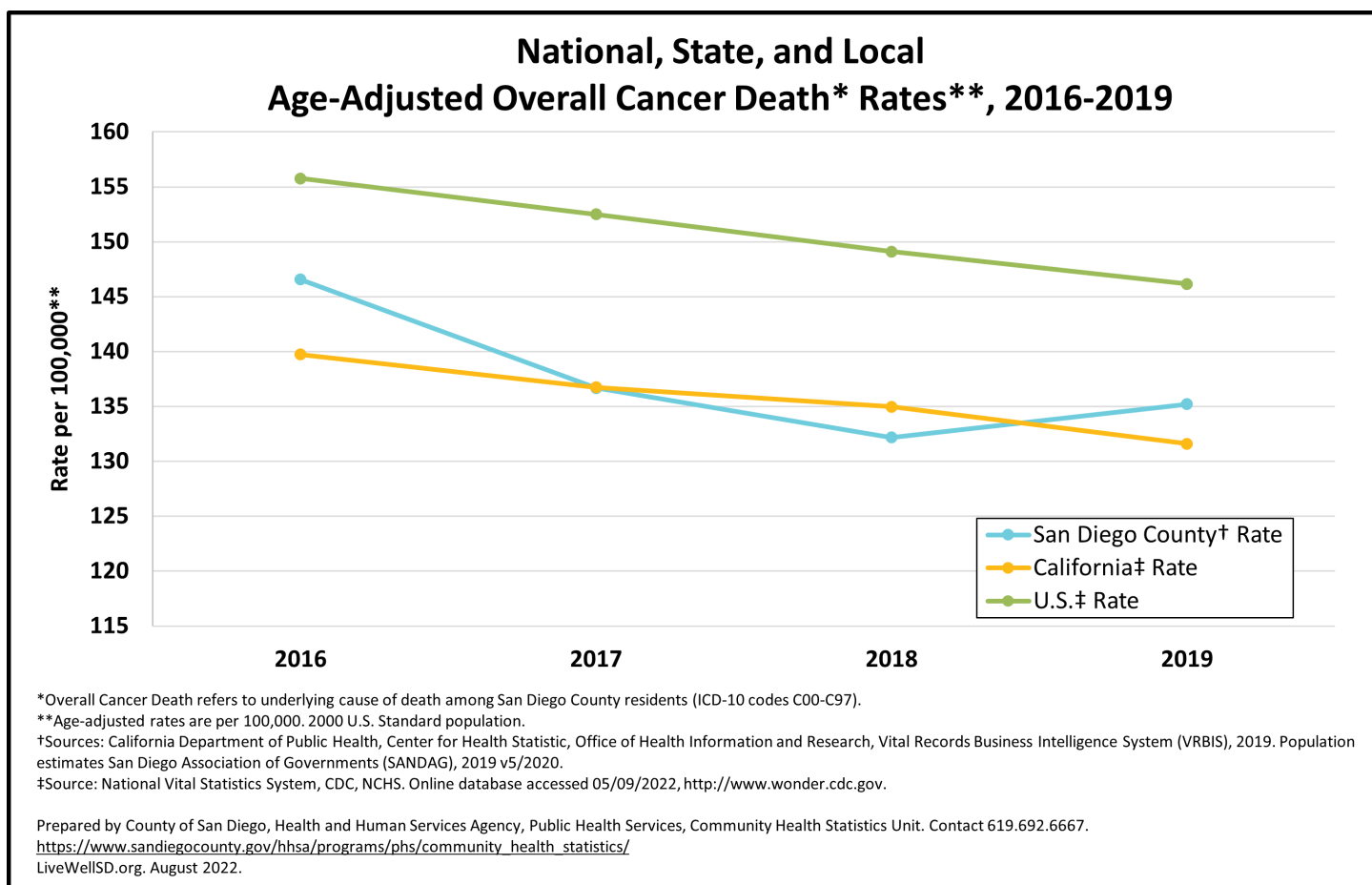
- The cost of cancer care in the United States estimated to be \$150.8 billion in 2018.¹³

State Statistics and Disparities



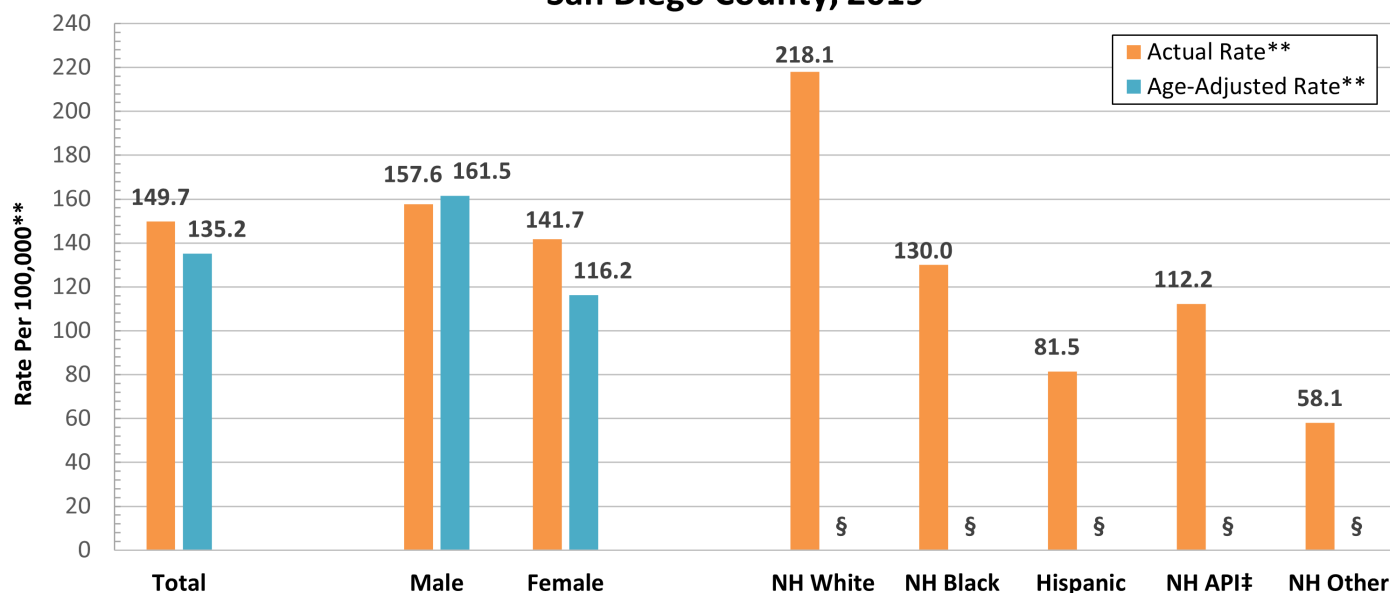
- The age-adjusted overall cancer death rate among California residents was 131.6 per 100,000 residents in 2019.¹⁶
- In California, men had a higher age-adjusted overall cancer death rate (153.3 per 100,000 residents) than women (115.7 per 100,000 residents).¹⁶
- In 2019, non-Hispanic Black residents in California had the highest age-adjusted overall cancer death rate (170.4 per 100,000 residents) while non-Hispanic Asian/Pacific Islander residents had the lowest (97.4 per 100,000 residents).¹⁶

Local Statistics and Disparities



- From 2016 to 2019, the age-adjusted overall cancer death rates in California and San Diego County remained below the national rate.^{16,17}
- In 2019, the age-adjusted overall cancer death rate in San Diego County surpassed the state rate but remained below the national rate.^{16,17}

Overall Cancer Deaths*: Actual and Age-Adjusted Rates** San Diego County, 2019



*Overall Cancer Death refers to underlying cause of death among San Diego County residents (ICD-10 codes C00-C97).

**Rates calculated per 100,000 residents. Age-adjusted rates are per 100,000 2000 U.S. standard population.

§ Rates not calculated for < 5 cases.

‡ API includes Asian and Pacific Islander. NH refers to non-Hispanic.

Sources: California Department of Public Health, Center for Health Statistics, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019. Population estimates San Diego Association of Governments (SANDAG), 2019 v5/2020.

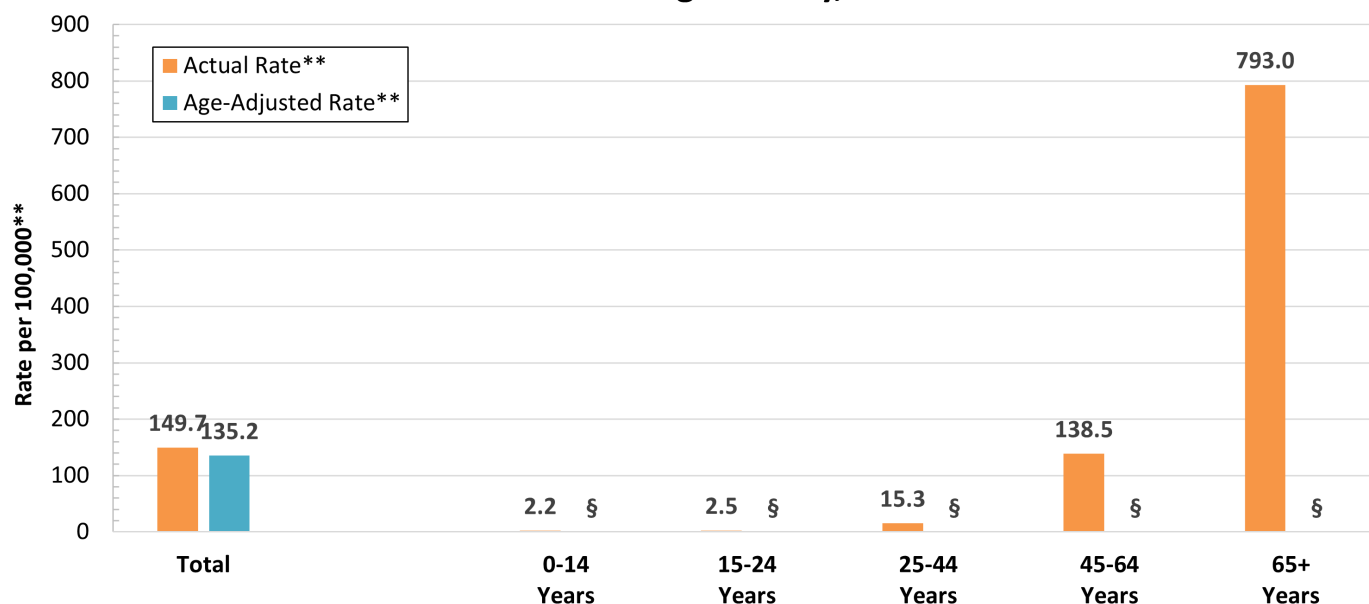
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- The actual overall cancer death rate among residents of San Diego County was 149.7 per 100,000 residents in 2019.¹⁷
- In 2019, the age-adjusted overall cancer death rate among male residents in San Diego County was nearly 1.4 times greater than the age-adjusted overall cancer death rate of female residents (161.5 per 100,000 residents versus 116.2 per 100,000 residents).¹⁷
- Non-Hispanic Whites had the highest actual overall cancer death rate in San Diego County compared to other races/ethnicities.¹⁷

Overall Cancer Death* Rates** by Age Group, San Diego County, 2019



*Overall Cancer Death refers to underlying cause of death among San Diego County residents (ICD-10 codes C00-C97).

**Rates calculated per 100,000 residents. Age-adjusted rates are per 100,000 2000 U.S. standard population.

§ Rates not calculated for < 5 cases.

Sources: California Department of Public Health, Center for Health Statistics, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019. Population estimates San Diego Association of Governments (SANDAG), 2019 v5/2020.

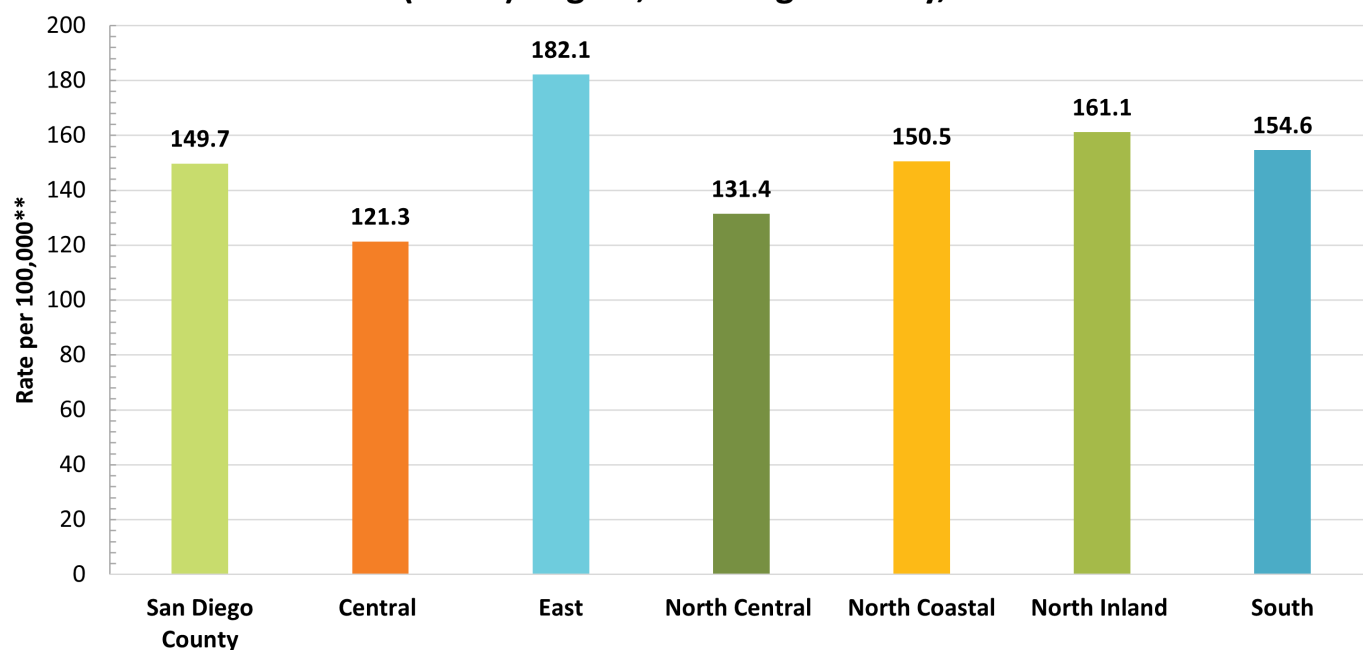
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- The actual overall cancer death rate among residents aged 65+ years was 793.0 per 100,000 residents, approximately 5.3 times the total death rate in San Diego County in 2019.¹⁷

Overall Cancer Death* Rates** by Health and Human Services Agency (HHS) Region, San Diego County, 2019



*Overall Cancer Death refers to underlying cause of death among San Diego County residents (ICD-10 codes C00-C97).

**Rates calculated per 100,000 residents.

Sources: California Department of Public Health, Center for Health Statistics, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019. Population estimates San Diego Association of Governments (SANDAG), 2019 v5/2020.

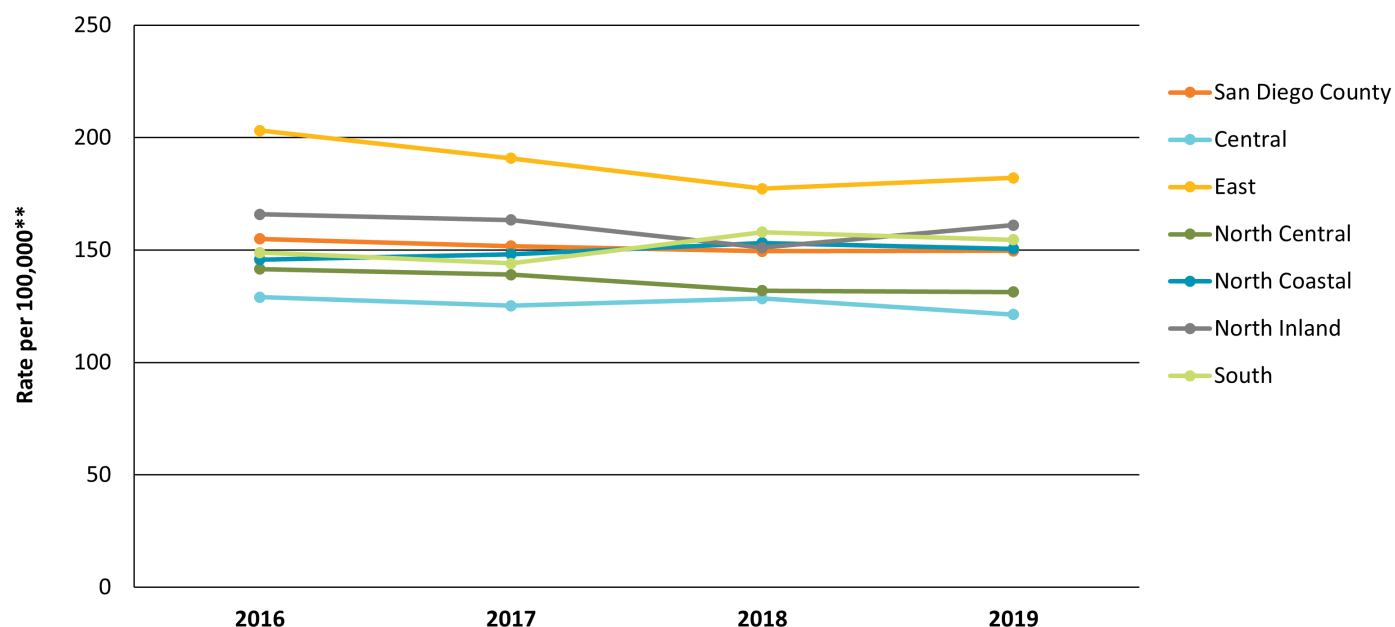
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- In 2019, East Region of San Diego County had the highest rate of overall cancer deaths (182.1 per 100,000 residents) while Central Region had the lowest (121.3 per 100,000 residents).¹⁷
- East Region (182.1 per 100,000 residents), North Inland Region (161.1 per 100,000 residents), South Region (154.6 per 100,000 residents), and North Coastal Region (150.5 per 100,000 residents) had overall cancer death rates that surpassed the county overall cancer death rate in 2019 (149.7 per 100,000 residents).¹⁷

Overall Cancer Death* Rates** by Health and Human Services Agency (HHSA) Region, San Diego County, 2016-2019



*Overall Cancer Death refers to underlying cause of death among San Diego County residents (ICD-10 codes C00-C97).

**Rates calculated per 100,000 residents.

Sources: California Department of Public Health, Center for Health Statistics, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019. Population estimates San Diego Association of Governments (SANDAG), 2019 v5/2020.

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- East Region of San Diego County had the highest overall cancer death rates while Central Region had the lowest overall cancer death rates from 2016 to 2019.¹⁷

Cancer and Its Complications: Prevention for Individuals

- *Early detection and screening programs*
 - Mammograms
 - ◆ Women can start yearly breast cancer screenings with mammograms as early as 40 years old.¹⁸
 - Colorectal cancer screening
 - ◆ Routine screening should start at age 45.¹⁹
 - ◆ There are several screening tests for colorectal cancer including stool tests, flexible sigmoidoscopies, colonoscopies, and CT colonographies.¹⁹
 - Pap tests
 - ◆ Women ages 21 through 29 should be screened for cervical cancer with a pap test every 3 years.²⁰
 - ◆ Women ages 30 through 65 should receive one of the following tests every 3 or 5 years:²⁰
 - ◇ Pap test (every 3 years)
 - ◇ High-risk HPV testing (every 5 years)
 - ◇ Pap and high-risk HPV cotest (every 5 years)
- *Abstain from smoking and avoid exposure to secondhand smoke*
- *Protect skin from the sun and avoid tanning beds*
 - It is recommended to use sunscreen with at least SPF 15 from the hours 10 a.m. to 4 p.m. during daylight savings time (9 a.m. – 3 p.m. during standard time) when UV exposure is the most hazardous in the United States.²¹
- *Avoid exposure to chemicals and radiation*
- *Cancer vaccines*
 - HPV vaccination can be started at 11-12 years old.²²
 - Over 90% HPV-related cancers and anal, vaginal, cervical, and vulvar precancers can be prevented by HPV vaccination.²²
- *Maintain a healthy diet and exercise regularly*

Prevention Tools for Public Health Professionals: Cancer Critical Pathway

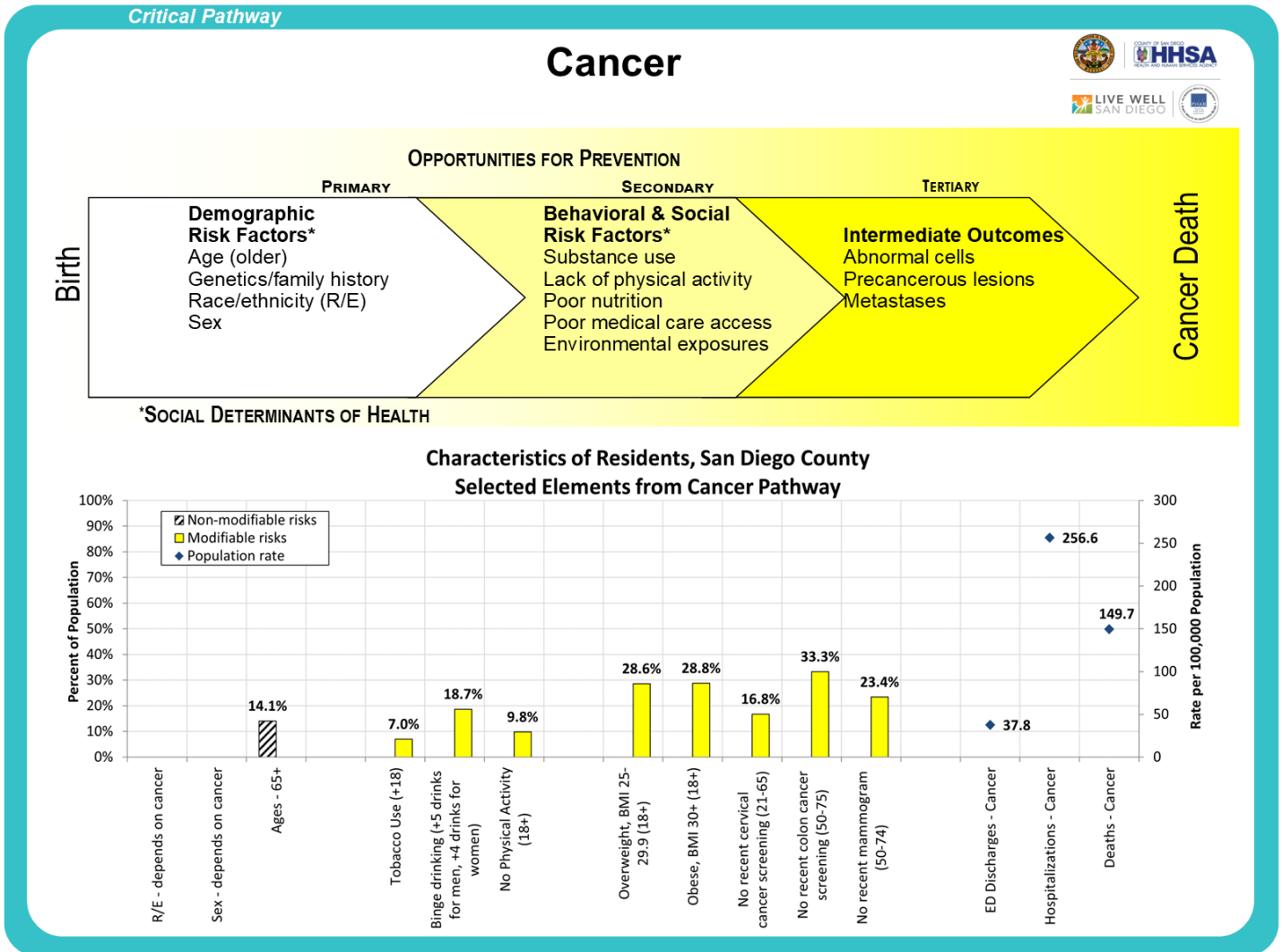
There are many opportunities for public health professionals in the community to help reduce the risk of cancer and to improve the health outcomes of individuals who already have the disease. To assist in community health efforts, a Cancer Critical Pathway was developed.

The Cancer Critical Pathway is a tool to be used in health promotion and disease prevention efforts. Its purpose is to identify populations at greater risk for cancer, and to identify prevention and early intervention opportunities. The Cancer Critical Pathway displays a diagram of the major risk factors and intermediate outcomes or related diseases that have an impact on, or result from, cancer. Risk factors are marked as non-modifiable (black striped bars) such as race/ethnicity or sex and modifiable (solid colored bars) such as physical activity or high blood pressure.

Beneath the risk factors diagram is a data grid describing the San Diego resident population in relation to selected elements of the pathway. The data grid is designed to assist in quick identification of opportunities for interventions that might have a high impact on a particular disease. The data represent all San Diegans, not only those with a particular disease. The left axis (bar) indicates the percent of the population with a known risk factor or intermediate outcome. The right axis (diamond) indicates the rate of a particular medical encounter within the population that is specified. The data are described fully in the complete version of the Critical Pathways.²³

In addition, the Community Health Statistics Unit website (www.SDHealthStatistics.com) provides detailed demographic, health and facility data including maps of geographically formatted health data. Also available are links to other County data sources and state and national sites of interest. For further assistance with data or interpretation, please contact the Community Health Statistics Unit.

Cancer Critical Pathway to Disease



County of San Diego ■ Health and Human Services Agency ■ Public Health Services ■ Community Health Statistics Unit ■ www.SDHealthStatistics.com ■ (619)692-6887 08/2022

Data Sources

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- ¹⁴ American Cancer Society. (2022). *Lifetime Risk of Developing or Dying from Cancer*. <https://www.cancer.org/healthy/cancer-causes/general-info/lifetime-probability-of-developing-or-dying-from-cancer.html>.
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- ¹⁶ National Vital Statistics System, CDC, NCHS. Online database accessed 05/09/2022, <http://www.wonder.cdc.gov>.
- ¹⁷ California Department of Public Health, Center for Health Statistic, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019.
- ¹⁸ American Cancer Society. *Cancer Screening Guidelines by Age*. <https://www.cancer.org/healthy/find-cancer-early/screening-recommendations-by-age.html#40-49>.
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