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The purpose of this brief is to summarize cancer incidence and mortality data and trends for the City of Cleveland from 2017-2021. The brief also summarizes the distribution of events by demographics such as age, race, sex, and neighborhood of residence and can aid to develop targeted programming.

What is Cancer?

Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body. Approximately four out of 10 Ohioans will be diagnosed with cancer at some point during their lifetime. Cancer is the second leading cause of death, accounting for nearly one in four deaths in Ohio and the United States.
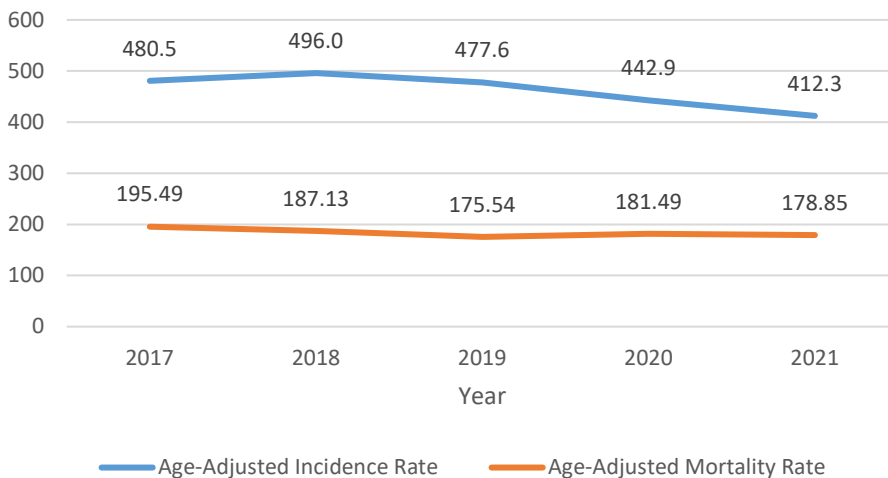
Between 2017 and 2021

10,489
Cleveland residents were diagnosed with Cancer

4,148
Cleveland residents died from Cancer

Age-Adjusted Cancer Incidence and Mortality *
Cleveland, OH

Age-Adjusted Incidence Rate values: 480.5 (2017), 496.0 (2018), 477.6 (2019), 442.9 (2020), 412.3 (2021)

Age-Adjusted Mortality Rate values: 195.49 (2017), 187.13 (2018), 175.54 (2019), 181.49 (2020), 178.85 (2021)

Between the years of 2017 and 2021, Cleveland saw an average of 2,097 new cancer diagnoses and 829 cancer deaths per year.
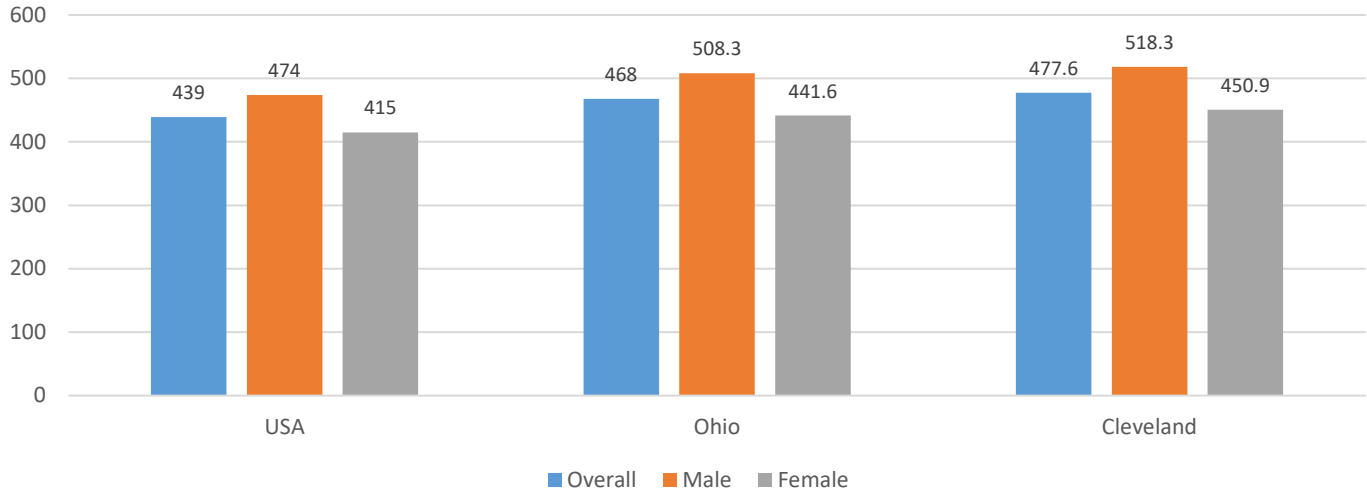
Although still high, there was a 14% decrease in the age-adjusted incidence rate of cancer between 2017 and 2021. Age-adjusted cancer mortality saw a more modest decrease of 8.5% in the same period.

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Comparison of Cleveland Cancer Rates

Age-Adjusted Incidence Rates 2019*

	USA	Ohio	Cleveland
Overall	439	468	477.6
Male	474	508.3	518.3
Female	415	441.6	450.9

■ Overall ■ Male ■ Female

Age-Adjusted Mortality Rates 2019*

	USA	Ohio	Cleveland
Overall	146.2	162.6	175.6
Male	173	194.3	214.2
Female	126	140.1	147.6

■ Overall ■ Male ■ Female
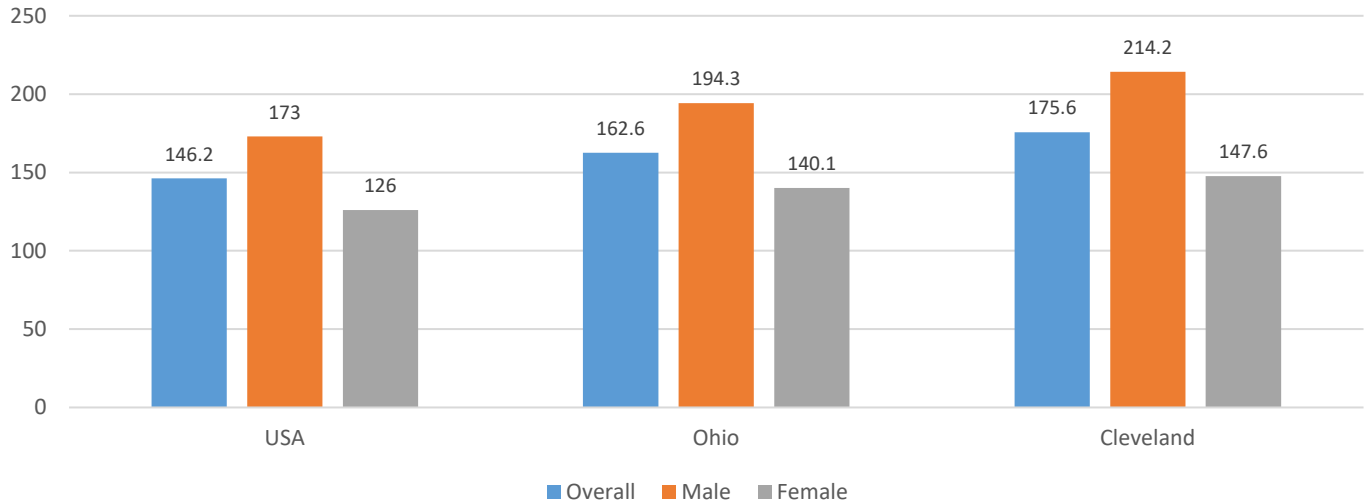
When compared to the country and the State of Ohio, Cleveland has a higher age-adjusted incidence and mortality rate for all cancers.

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Demographic Distribution of Cancer Incidence and Mortality
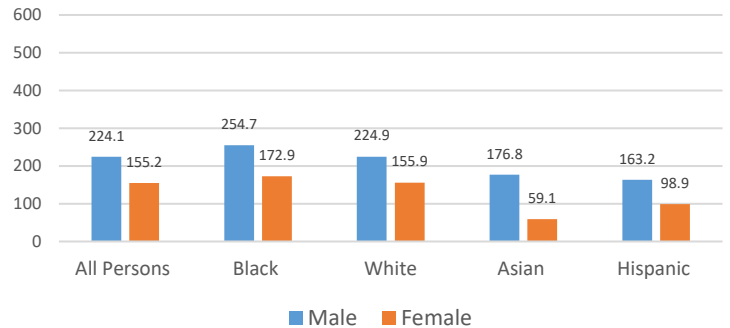
Age-Adjusted Incidence and Mortality Rates
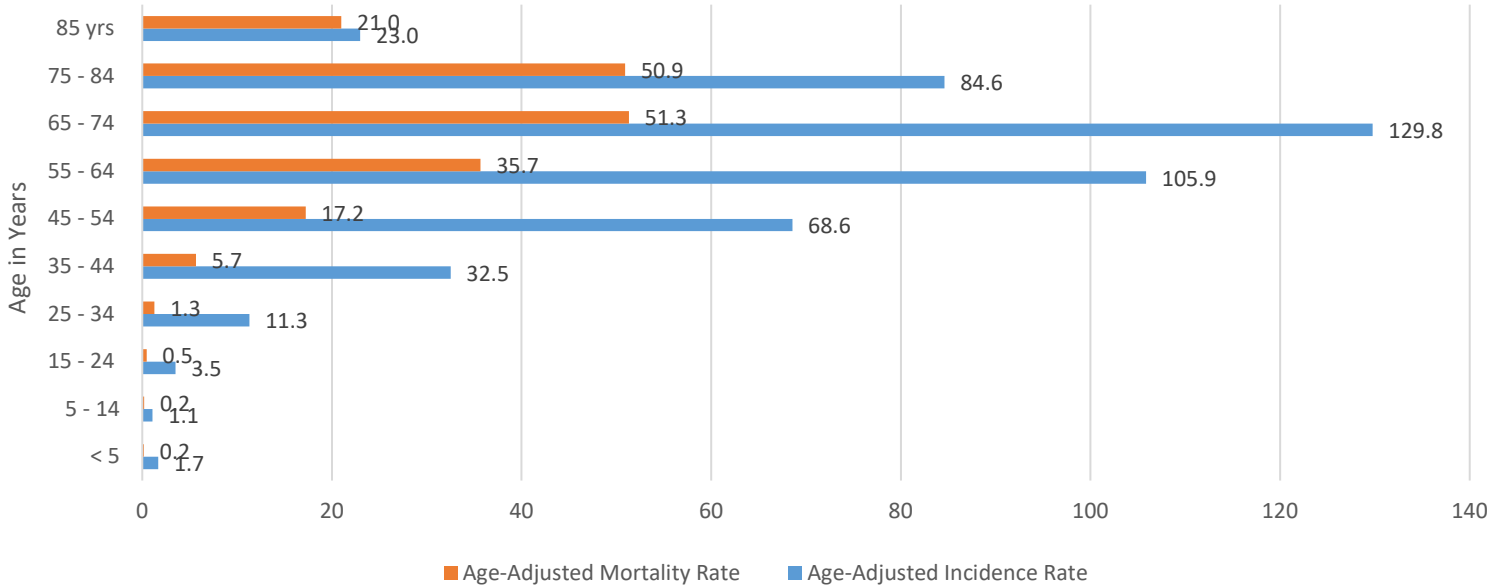
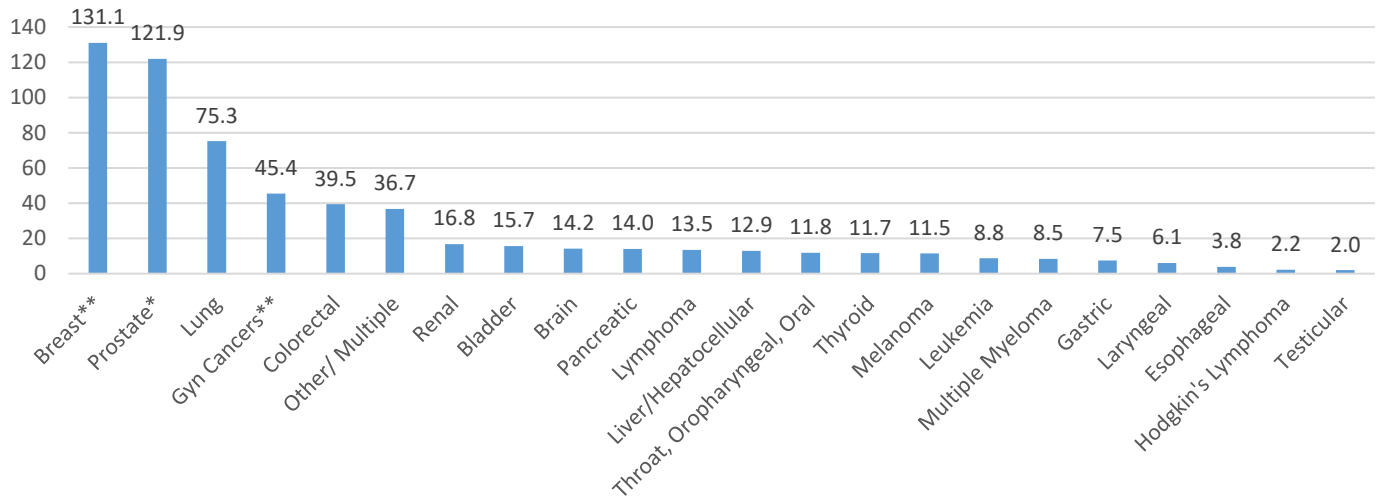## Age-Adjusted Incidence Rate of Cancer by Sex and Race
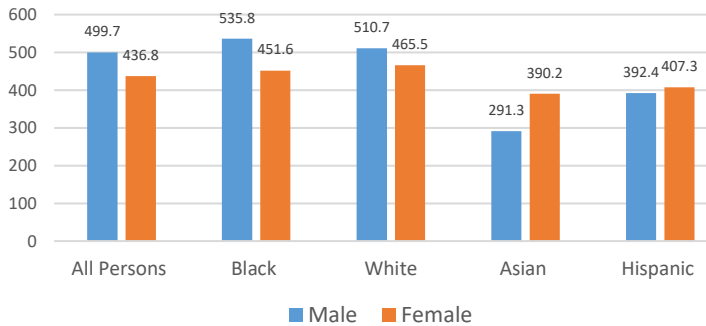
Age-Adjusted Mortality Rate of Cancer by Sex and Race

Between 2017 and 2021, cancer incidence was highest in the 65-74 age group. The highest morality rates were observed in the age groups 65-74 years and 75-84 years. In Cleveland, cancer disproportionately affects Black males. Overall, more males than females were diagnosed with cancer during these years, except among the Asian and Hispanic populations, where more females were diagnosed. The mortality rate for males remained higher than females in all racial/ ethnic groups. Disparities in cancer incidence and mortality can be attributed to many factors, such as access to care, stage at diagnosis, age at diagnosis, lifestyle, and environment.

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Cancer Incidence and Mortality by Site of Malignancy

Age Adjusted Incidence Rate by Cancer Site

Cancer Site	Rate
Breast**	131.1
Prostate*	121.9
Lung	75.3
Gyn Cancers**	45.4
Colorectal	39.5
Other/ Multiple	36.7
Renal	16.8
Bladder	15.7
Brain	14.2
Pancreatic	14.0
Lymphoma	13.5
Liver/Hepatocellular	12.9
Throat, Oropharyngeal, Oral	11.8
Thyroid	11.7
Melanoma	11.5
Leukemia	8.8
Multiple Myeloma	8.5
Gastric	7.5
Laryngeal	6.1
Esophageal	3.8
Hodgkin's Lymphoma	2.2
Testicular	2.0

Age Adjusted Mortality Rate by Cancer Site

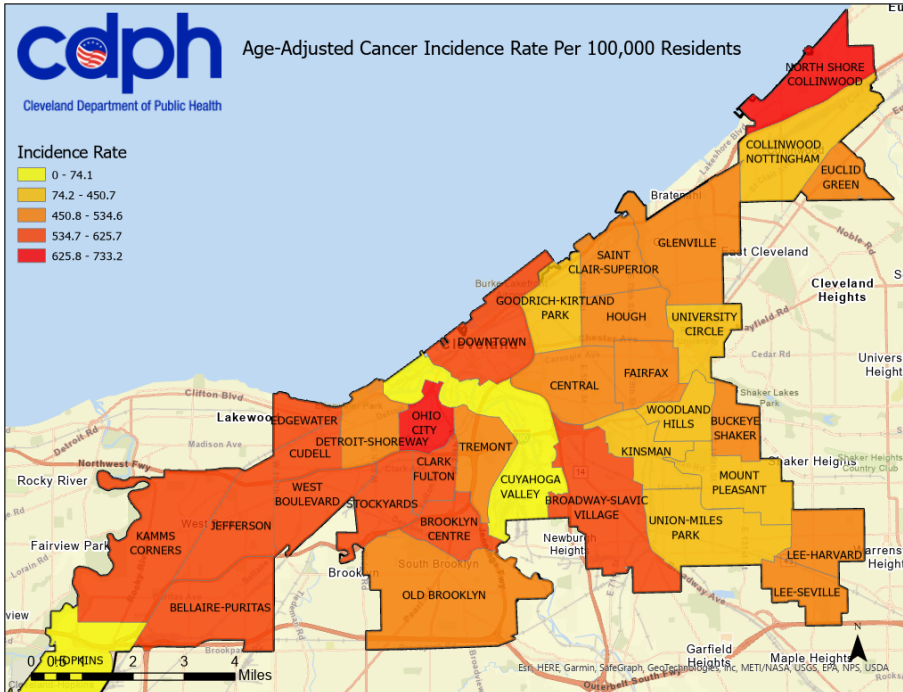| Cancer Site	Rate
Lung	50.9
Prostate*	27.1
Breast**	21.5
Other/ Multiple	19.2
Gyn Cancers**	16.4
Colorectal	15.1
Pancreatic	13.8
Liver/Hepatocellular	11.3
Leukemia	5.3
Lymphoma	4.9
Bladder	4.1
Gastric	3.9
Throat, Oropharyngeal,…	3.8
Esophageal	3.8
Multiple Myeloma	3.5
Brain	3.4
Renal	3.1
Laryngeal	2.3
Melanoma	1.4
Thyroid	0.4
Hodgkin's Lymphoma	0.3
Testicular	0.2
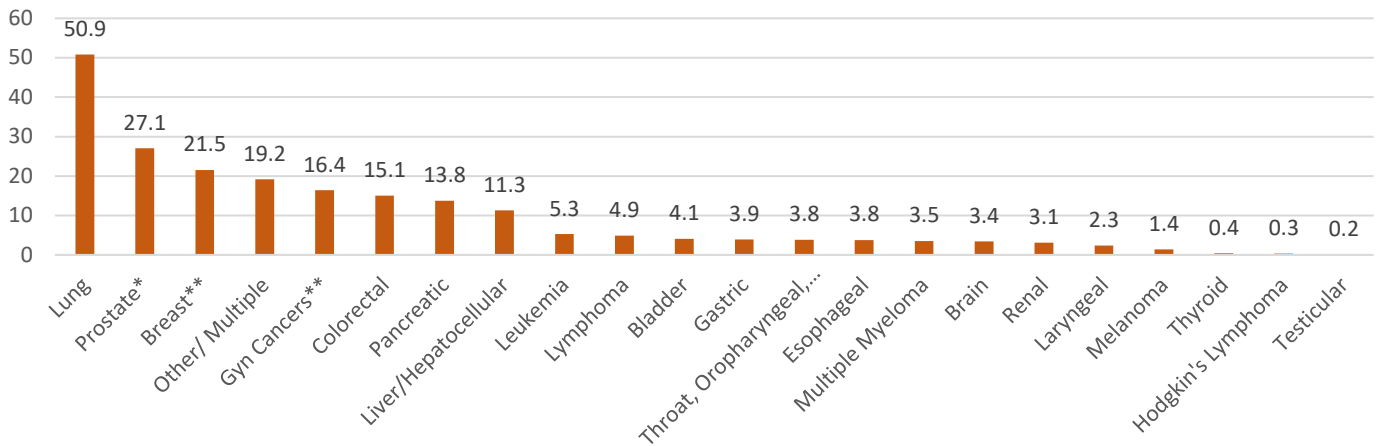
Breast, prostate and lung are the most common types of cancers affecting Cleveland. Lung cancer has the highest age-adjusted mortality rates – almost double the mortality of the second highest mortality rate of prostate cancer.

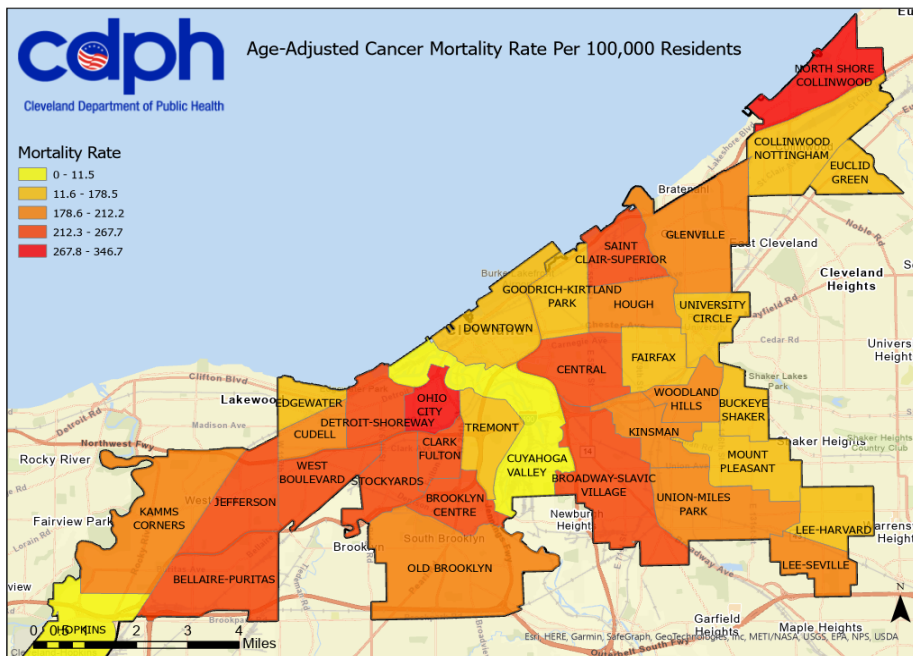*Only male patients are included in this calculation
**Only female patients are included in this calculation. Although males can also have breast cancer, for the purpose of this brief, only female patients are included in this data.

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Neighborhood Distribution of Cancer Incidence and Mortality

Age-Adjusted Cancer Incidence Rate Per 100,000 Residents

Incidence Rate
- 0 - 74.1
- 74.2 - 450.7
- 450.8 - 534.6
- 534.7 - 625.7
- 625.8 - 733.2

Neighborhoods that saw the highest number of new cancer cases between 2017 and 2021:

- North Shore Collinwood
- Ohio City
- Edgewater
- West Boulevard
- Kamms Corners
- Jefferson

Age-Adjusted Cancer Mortality Rate Per 100,000 Residents

Mortality Rate
- 0 - 11.5
- 11.6 - 178.5
- 178.6 - 212.2
- 212.3 - 267.7
- 267.8 - 346.7

Neighborhoods that saw the highest number of deaths from cancer between 2017 and 2021:

- Ohio City
- North Shore Collinwood
- Stockyards
- Saint Clair-Superior
- Central
- Bellaire-Puritas

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Cancer Stage at Diagnosis

Early detection of cancer usually results in better outcomes. In Cleveland, we see that almost 45% of cancers are diagnosed when the cancer has already spread. Of the cases in which the cancer had spread, 23% had distant spread. This is the likely reason for a higher mortality rate than the state or county.

Cancer Stage at Diagnosis

- In situ
- Local
- Regional
- Distant
- Unstaged/ Unknown

5% 40% 22% 23% 10%
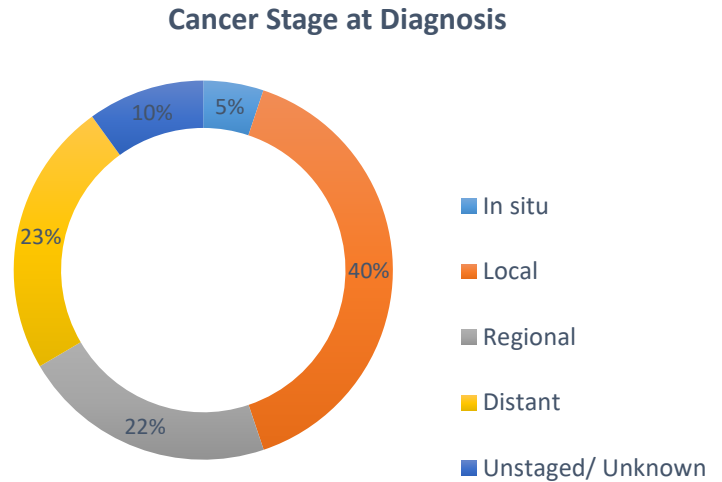
Across the racial and ethnic groups, regional and distant cancers together comprised the majority of cancer cases by stage except Hispanic residents. Hispanics had the highest proportion of local stage cancers of all cancer stages.
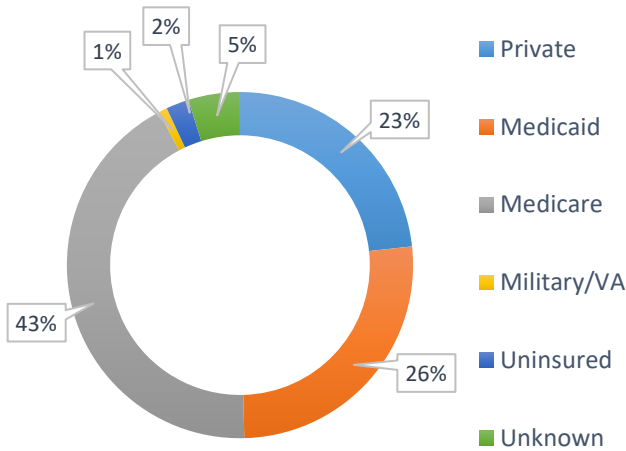
Cancer Stage at Diagnosis by Race/Ethnicity

In Situ | Local | Regional | Distant | Unstaged/Unknown/Missing
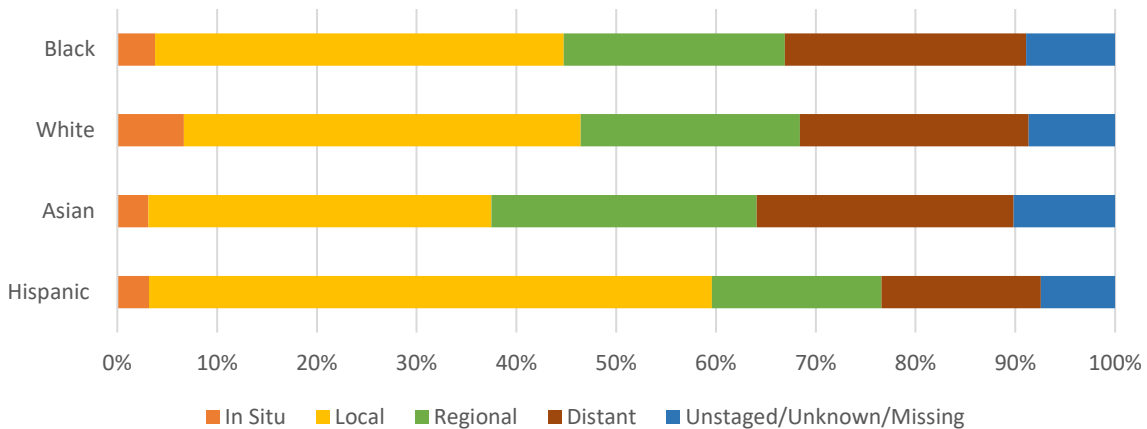
Glossary- In situ: Abnormal cells are present but not spread to nearby tissue
Local: Cancer is limited to the place where it started, with no sign that it has spread
Regional: Cancer has spread to nearby lymph nodes, tissues, or organs
Distant: Cancer has spread to distant parts of the body
Unknown/Missing: There is not enough information to determine the stage
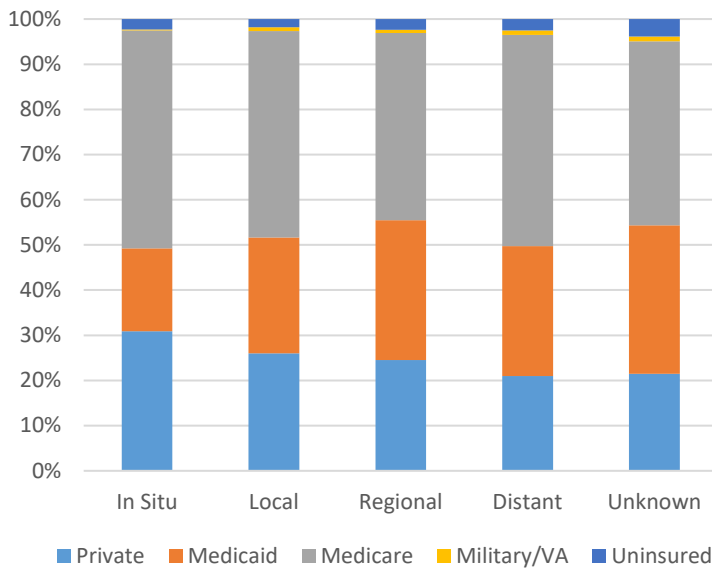
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Cancer Diagnosis and Insurance

Insurance of Newly Diagnosed Cancer Patients

- Private — 23%
- Medicaid — 26%
- Medicare — 43%
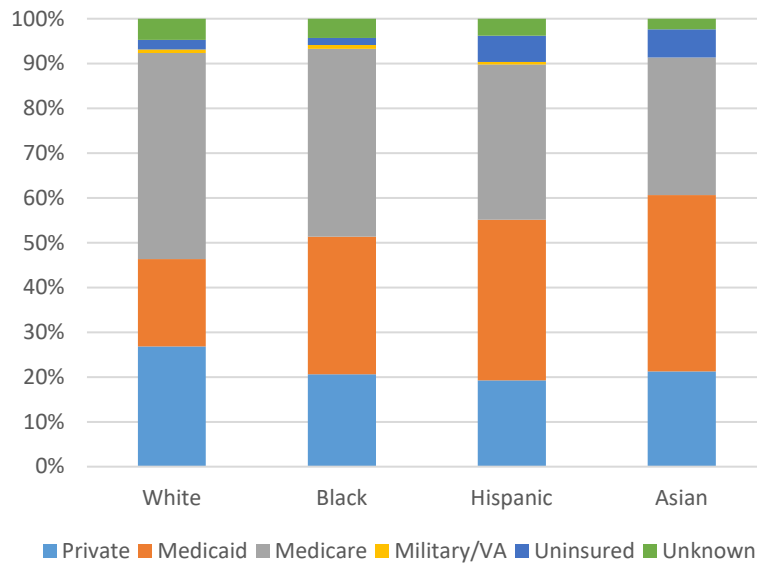- Military/VA — 1%
- Uninsured — 2%
- Unknown — 5%

Medicare covered 43% of those diagnosed with cancer between 2017 and 2021. This is not unusual since cancer risk increases with age. For White residents, private insurance coverage was almost 25%, the highest among the races. The Asian population had the highest proportion of Medicaid coverage. Race or Stage at Diagnosis does not have a meaningful correlation with primary insurance of patients.

Cancer Stage at Diagnosis and Primary Insurance

Legend: Private, Medicaid, Medicare, Military/VA, Uninsured

Race and Primary Insurance of Newly Diagnosed Cancer Patients

Legend: Private, Medicaid, Medicare, Military/VA, Uninsured, Unknown

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Risk Factors for Cancer

Things we can change that affect cancer risk	Things we cannot change that increase cancer risk
- Nutrition/eating habits - Smoking - Activity level - Timely screening when eligible/recommended by doctor - Vaccination to prevent HPV - Weight - Alcohol use - Sunscreen use	- Age - Genetic predisposition - Family history - Previous treatment-related cancer

Smoking as a Risk

- Smoking is one of the greatest risk factors for cancer and death, accounting for one third of all deaths from cancer.
- Smoking causes a variety of cancers – lung, mouth, throat, acute myeloid leukemia, colon, rectum, liver, larynx, cervix, esophagus, stomach, bladder and pancreatic cancers.
- 10 years after quitting smoking, the risk of lung cancer risk will be half of that of a non-smoker.
- Secondhand smoke also causes lung cancer.
- There is no safe level of tobacco use.

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