



JUNE 13, 2024

Highlights from 2021 Cancer Incidence with Comparisons to Previous Years

WHAT TO KNOW

U.S. Cancer Statistics includes 1,777,566 new cases of invasive cancer occurring in 2021, the second year of the COVID-19 pandemic. For all cancers combined, the incidence in 2021 was 439 per 100,000 standard population.

Background

Each year, the Centers for Disease Control and Prevention (CDC) and the National Cancer Institute (NCI) produce updated *U.S. Cancer Statistics* data. These data are the official federal cancer statistics for the United States. *U.S. Cancer Statistics* provides cancer information about the U.S. population. Information about new cancer cases (incidence) comes from CDC's [National Program of Cancer Registries](#) (NPCR) and NCI's [Surveillance, Epidemiology, and End Results \(SEER\) Program](#). [Information about cancer deaths comes from CDC's National Center for Health Statistics](#).

Cancer rates normally change from year to year, in part because of changes in screening test use, diagnostic practices, and treatment. In addition, declines in cancer incidence in 2020, particularly during March to May, were likely due in part to disruptions in cancer screening, diagnosis, and care caused by the COVID-19 pandemic. This data brief presents rates for new cancer cases occurring in 2021, the second year of the COVID-19 pandemic. For comparison, data are also presented for cases diagnosed in 2017 to 2019 (pre-pandemic) and 2020 (first year of the pandemic).

Overview

For all cancers combined, the incidence in 2021 was 439 per 100,000 standard population. Although this rate is higher than in 2020 (first year of the COVID-19 pandemic), it is lower than it was in 2017 to 2019 (pre-pandemic).

Caution must be taken when examining trends to avoid incorrect interpretations of the effect of cancer prevention and early detection efforts. Observed downward trends may be due largely to the lower observed incidence in 2020 resulting from missed diagnoses related to disruptions in health services caused by the COVID-19 pandemic.

Variations in cancer incidence by sex, racial and ethnic group, and age group

Cancer incidence varied by sex, racial and ethnic groups, and age group.

From 2020 to 2021, cancer incidence:

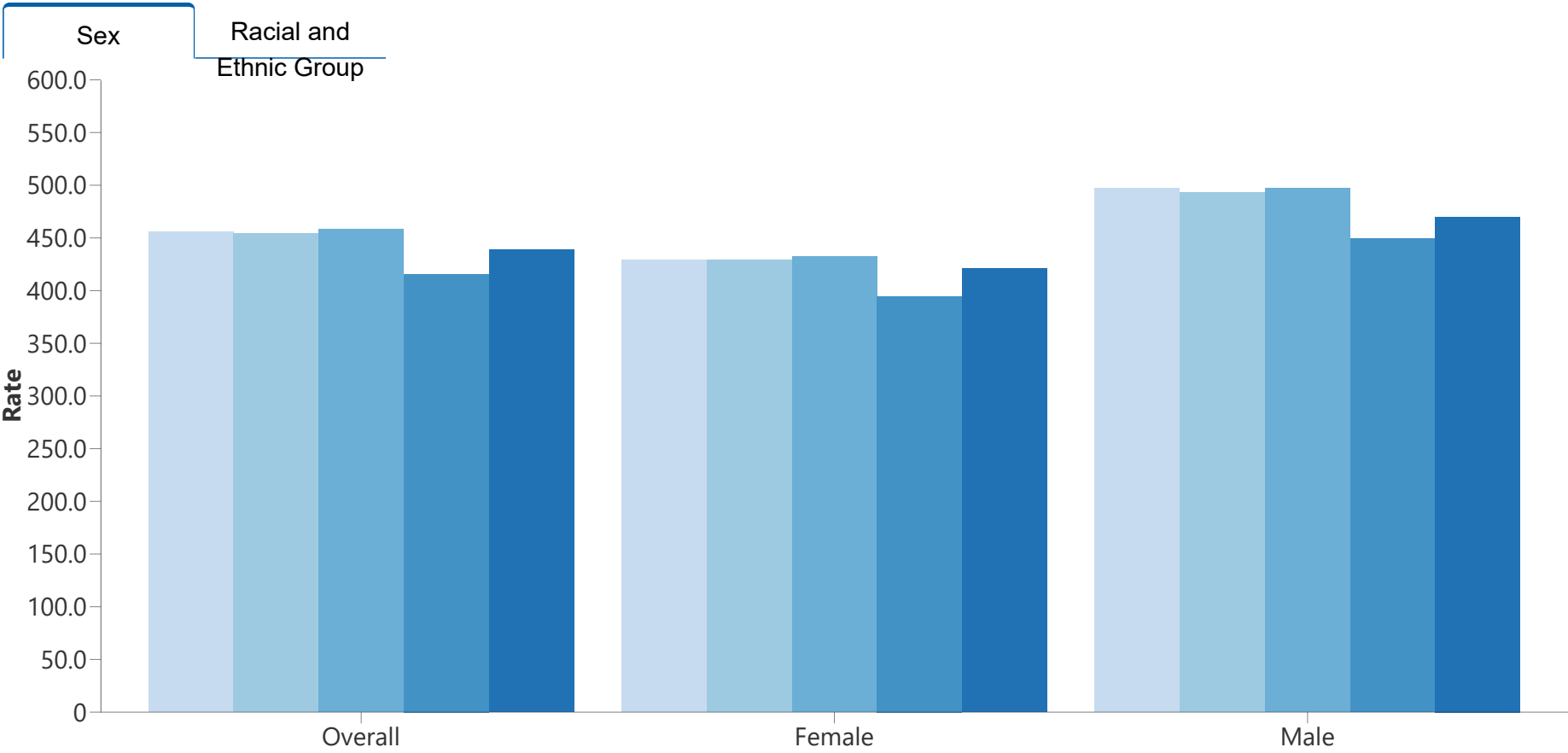
- Increased more among females than among males.
- Increased more among non-Hispanic Asian and Pacific Islander people than among members of other racial and ethnic groups.

In 2021, cancer incidence:

- Appears to be consistent with pre-pandemic trends among children younger than 15 years and adolescents and young adults 15 to 39 years.
- Appears to have rebounded since 2020 but may be a little lower than expected based on pre-pandemic trends among adults 40 years or older, especially men.

Figure 1. Annual cancer incidence[\[A\]](#) by demographic characteristics, United States, 2017 to 2021

Make a selection from the filters to change the visualization information.



Year of Diagnosis

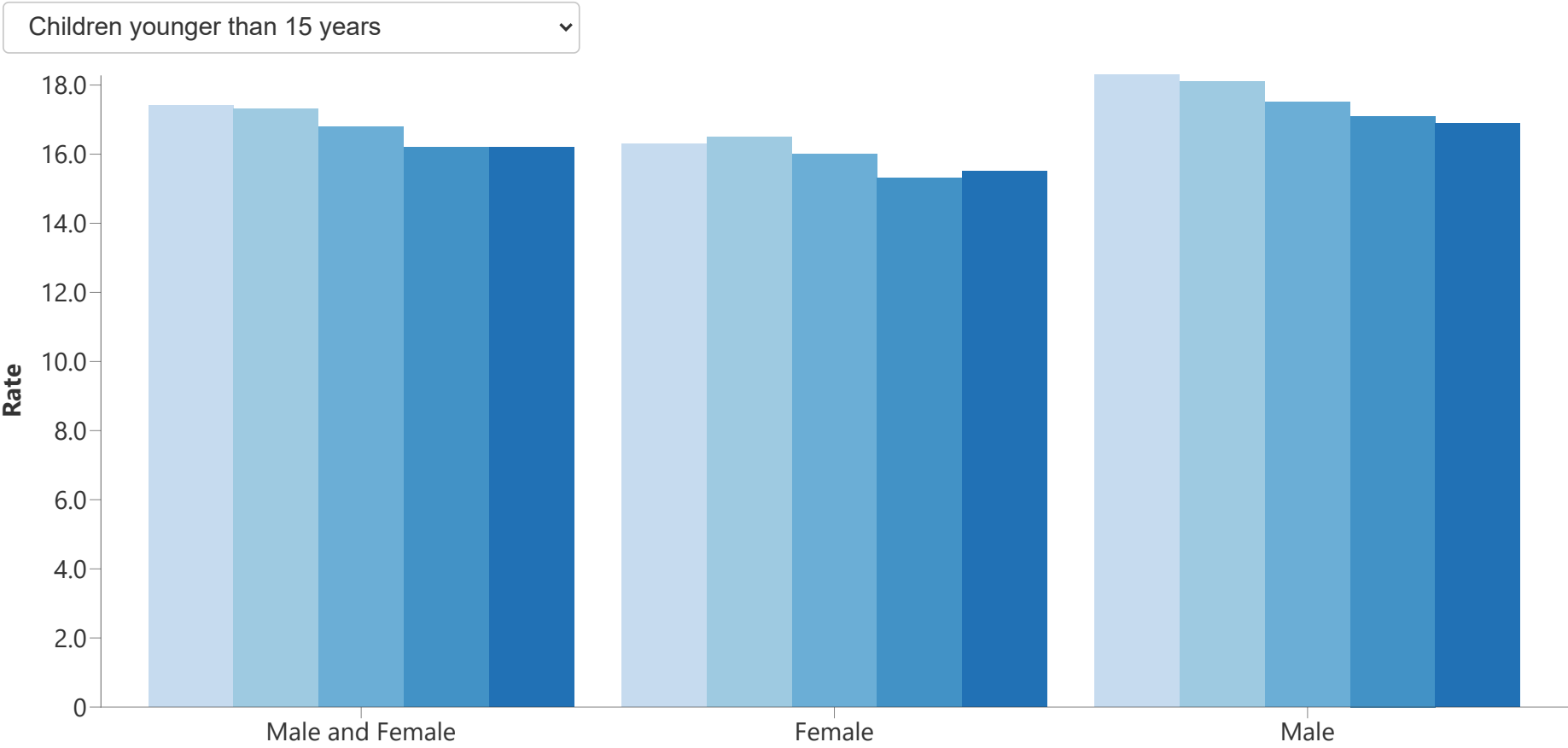
2017 2018 2019 2020 2021

Data Table				
Year	Overall	Female	Male	
2017	456.0	429.2	497.1	
2018	454.3	429.1	493.2	
2019	458.1	432.6	497.3	
2020	415.8	394.7	449.6	
2021	439.1	420.9	470.0	

[Download Data \(CSV\)](#)

Figure 2. Annual cancer incidence [\[A\]](#) by age and sex, United States, 2017 to 2021

Make a selection from the filters to change the visualization information.



Year of Diagnosis

2017 2018 2019 2020 2021

Data Table			
Year	Male and Female	Female	Male
2017	17.4	16.3	18.3
2018	17.3	16.5	18.1
2019	16.8	16.0	17.5
2020	16.2	15.3	17.1
2021	16.2	15.5	16.9

[Download Data \(CSV\)](#)

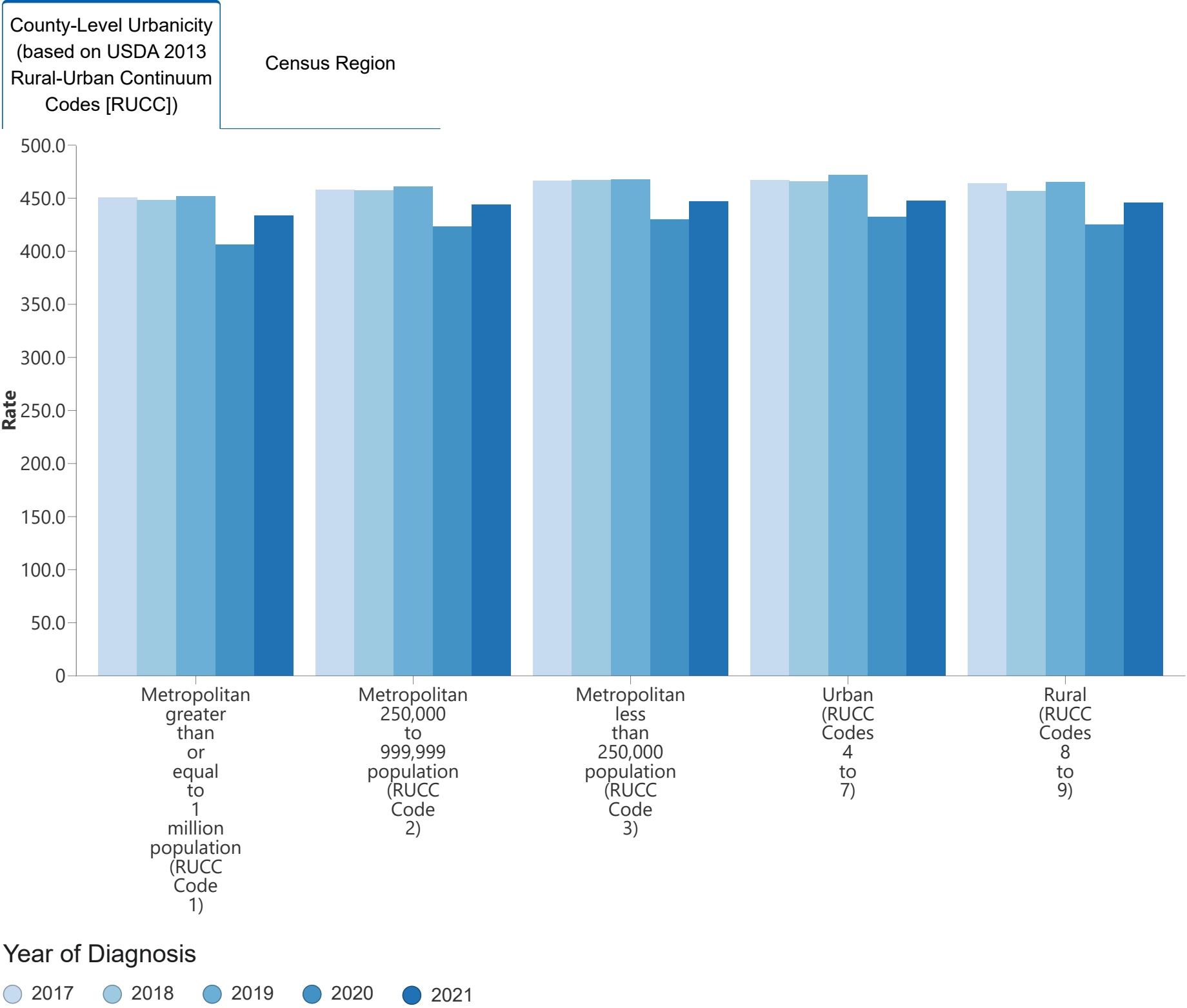
Variations in cancer incidence by geographic characteristics

Cancer incidence differed by county-level urbanicity (as defined by the 2013 [Rural-Urban Continuum Codes](#) developed by the U.S. Department of Agriculture). Incidence from 2020 to 2021 increased slightly more in metropolitan counties with populations of 1 million or more than in other counties.

Cancer incidence differed by [U.S. Census region](#), being lowest in the West. Cancer incidence from 2019 to 2020 declined the most and from 2020 to 2021 increased more in the Northeast than in other regions.

Figure 3. Annual cancer incidence [\[A\]](#) by geographic characteristics, United States, 2017 to 2021

Make a selection from the filters to change the visualization information.



Data Table	
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Year	Metropolitan greater than or equal to 1 million population (RUCC Code 1)	Metropolitan 250,000 to 999,999 population (RUCC Code 2)	Metropolitan less than 250,000 popula
2017	450.3	457.9	466.6
2018	448.1	457.3	466.8
2019	451.5	460.8	467.6
2020	406.1	423.2	429.6
2021	433.6	443.8	446.8

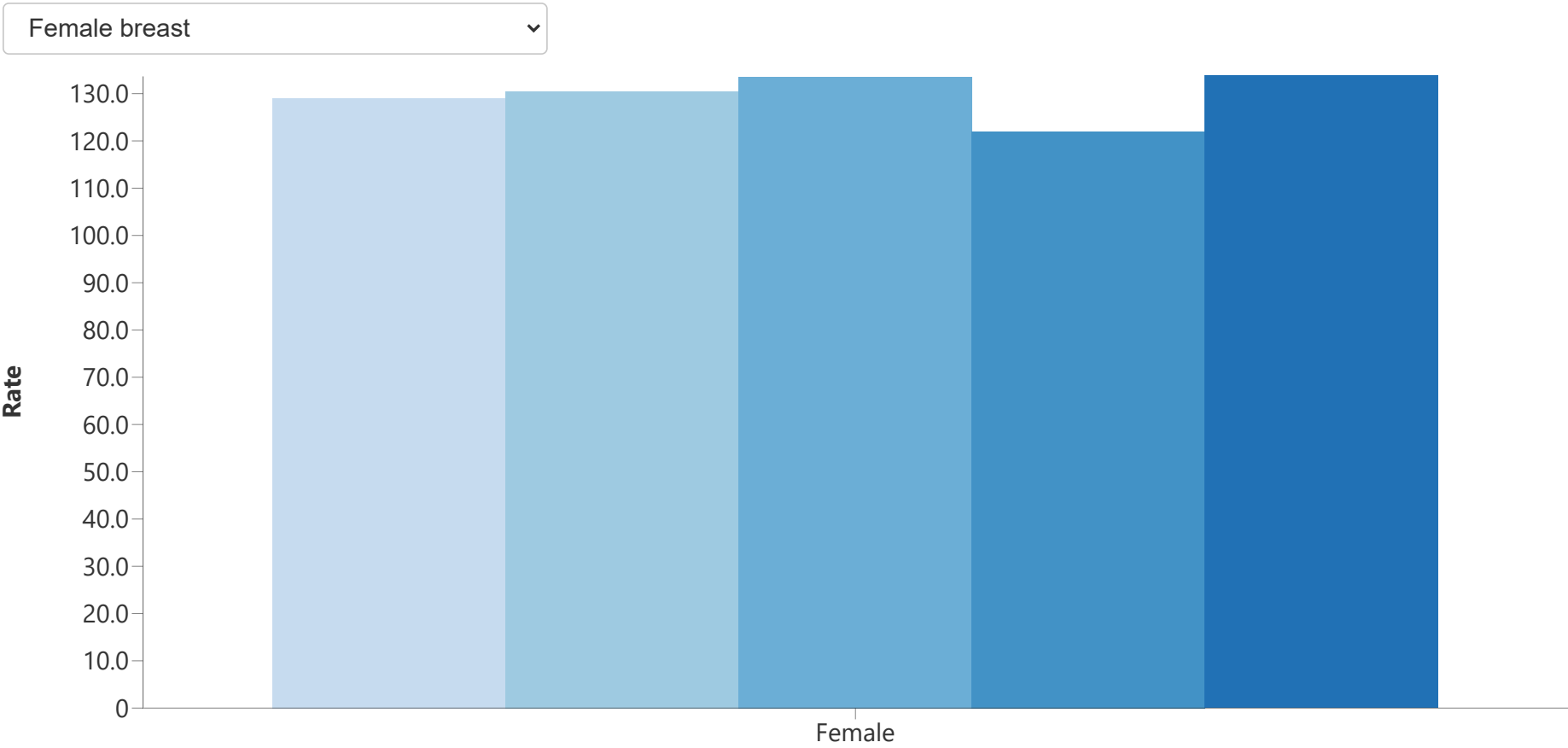
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Variations in cancer incidence, by cancer type and sex

Changes in incidence during 2017 to 2021 varied among the 12 most common cancer types. Incidence increased most from 2020 to 2021 for cancer types that are commonly diagnosed during preventive or routine health visits (breast, prostate, colon and rectum, melanoma, and thyroid cancer). Incidence in 2021 appeared to be in line with pre-pandemic trends for several cancer types, particularly breast cancer. The incidence of pancreatic cancer, which is often found when patients come in with symptoms, was relatively stable from 2017 to 2021. Incidence in 2021 was lower than expected based on pre-pandemic trends for several cancer types that are sometimes diagnosed in non-hospital facilities and tend to have longer reporting delay (prostate, non-Hodgkin lymphoma, and leukemia).

Figure 4. Annual cancer incidence [\[A\]](#) by selected cancer types and sex, United States, 2017 to 2021

Make a selection from the filters to change the visualization information.



Year of Diagnosis

2017 2018 2019 2020 2021

Data Table	
Year	Female
2017	129.0
2018	130.5
2019	133.6
2020	122.0
2021	133.8

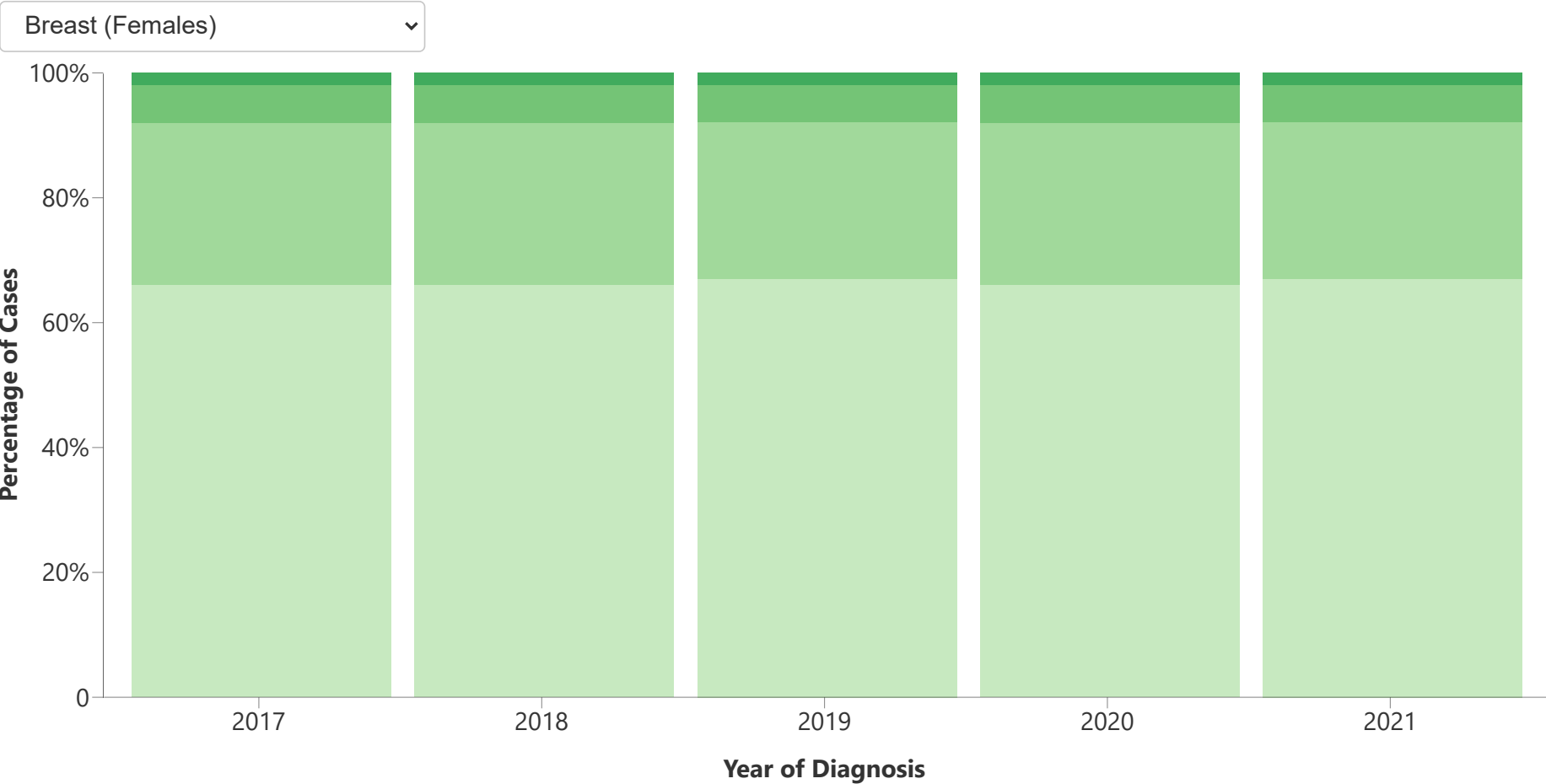
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Percentage of cases by stage at diagnosis

In 2021, about two-thirds of breast and prostate cancers and about one-third of colorectal and lung cancers were diagnosed at a localized stage, when cancer is more treatable. The percentage of cases diagnosed at a localized stage in 2020 and 2021 was similar for prostate cancer (69%) but was slightly higher in 2021 than in 2020 for breast cancer (67% and 66%), colorectal cancer (33% and 31%), and lung cancer (30% and 28%).

Figure 5. Percentage of cases, by stage at diagnosis, for the most common cancer types, United States, 2017 to 2021

Make a selection from the filters to change the visualization information.



Stage at Diagnosis

Localized Regional Distant Unknown

Data Table					
Stage	2017	2018	2019	2020	2021
Localized	66%	66%	67%	66%	67%
Regional	26%	26%	25%	26%	25%
Distant	6%	6%	6%	6%	6%
Unknown	2%	2%	2%	2%	2%

[Download Data \(CSV\)](#)

Suggested citation

Centers for Disease Control and Prevention. Highlights from 2021 Cancer Incidence with Comparisons to Previous Years. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2024.

SOURCES

CONTENT SOURCE:

National Center for Chronic Disease Prevention and Health Promotion; Division of Cancer Prevention and Control

FOOTNOTES

- A. Age-adjusted rate (cases per 100,000 standard population).
- B. Percentages may not sum to 100% because of rounding.

SOURCES

- Data in this brief come from [U.S. Cancer Statistics](#), the official federal cancer statistics. The data in this brief are limited to invasive (malignant) cancers, which excludes basal and squamous cell carcinomas of the skin (except when these occur on the skin of the genital organs), benign and borderline brain and central nervous system tumors, and *in situ* cancers except urinary bladder. Urinary bladder cancer includes invasive and *in situ* cancer.
- U.S. Cancer Statistics incidence data are from population-based registries that participate in CDC's National Program of Cancer Registries (NPCR) and/or the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program and that met [high-quality data criteria](#) for data submitted in 2023,, covering 98% of the U.S. population (excluding data from Indiana).