SMALL AREA-LEVEL CANCER INCIDENCE IN DELAWARE, 2018-2022

DELAWARE DEPARTMENT OF HEALTH AND SOCIAL SERVICES
DIVISION OF PUBLIC HEALTH
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DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health
Bureau of Cancer Prevention and Control

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A. Cancer Incidence by Census Tract

Executive Summary

As required by 16 *Del. Code*[1] (Appendix A), the Delaware Department of Health and Social Services (DHSS), Division of Public Health (DPH) publishes cancer rates by census tract annually. The *Small Area-Level Cancer Incidence in Delaware, 2018-2022* report is released as a compendium to the *Cancer Incidence and Mortality in Delaware, 2018-2022* report that provides a summary of cancer statistics for the most recent five years of data available.

This report presents the 2018-2022 cancer incidence and mortality data and statistics for Delaware by census tract and by cancer reporting zones. Cancer reporting zones (to be referred to as "zones") are geographic areas created as aggregations of census tracts that were developed from Delaware's participation in the National Cancer Institute (NCI)/North American Association of Central Cancer Registries (NAACCR) Zone Design Project. The goal of the project is to create zones that will reduce suppression of data for small counties, increase spatial resolution for large counties, and create geographies that are more meaningful to cancer registries and stakeholders for cancer reporting and analysis. DPH, in conjunction with the Delaware Cancer Consortium (DCC), publishes this report as a source of cancer incidence and mortality information. DPH and other stakeholders can use this report to inform decisions on outreach and program strategies to combat cancer incidence and mortality in Delaware.

Due to the small populations and subsequent case counts of cancer by census tract, only statistics for all-site cancer incidence are provided at the census tract level. Cancer statistics by geographies such as census tracts may be helpful in identifying cancer rates in smaller and more specific areas. However, caution should be taken when interpreting census tract-level cancer rates, as they are typically calculated with low case counts and therefore have high levels of variability reflected by wide confidence intervals. Though census tract-level all-site cancer rates provide an overall picture of cancer in a specific area, researchers would supplement this information with additional analysis.

Statistics at the zone-level are provided for all-site, female breast, prostate, lung, and colorectal cancers.

The cancer reports can be accessed at: https://dhss.delaware.gov/dhss/dph/dpc/ca_stats.html.

[1] https://delcode.delaware.gov/title16/c020/index.html

Background

As required by 16 *Del. Code*[2] (Appendix A), the Delaware Department of Health and Social Services (DHSS), Division of Public Health (DPH) publishes cancer rates by census tract annually. Specifically:

> *"The agency [DPH] shall create a detailed map of each county in Delaware that graphically illustrates the overall incidence of cancer in each census tract. The census tracts will be identified on the maps and shall be color-coded to designate the degree of cancer incidence in each tract. These maps shall be created within 90 days of the agency receiving the cancer incidence data. The agency shall post the maps created … on their website in a format that can be easily accessed and read by the public."*

Delaware Census Tracts

Analysis included in this report is based on 2010 U.S. Census tracts. The most recent Census was conducted in 2020, but cancer rates are still currently being calculated based on 2010 U.S. Census definitions for the current report because populations data for 2018-2022 were not available based on 2020 U.S. Census definitions for this analysis. As of the 2010 U.S. Census, Delaware is divided into 214 census tracts. To determine which census tract an address falls into, use this online search tool from the U.S. Census Bureau: https://geocoding.geo.census.gov/geocoder/geographies/onelineaddress?form. Search for an address, leaving the Benchmark selection as defaulted and updating the Vintage selection to Census2010_Current. Click "Get Results". In the results, go to the section "Census Tracts" where you will find the name associated with the census tract (e.g., Census Tract 152).

- Census tracts tend to have small population sizes. In Delaware, the estimated average annual number of residents per census tract was 4,644 for 2018-2022. Data are aggregated across five years for the current analysis in order to meet privacy protection guidelines.

  The 2018-2022 census tract analyses include 31,176 Delaware cancer cases diagnosed during the period and that were assigned a census tract with high certainty.

Geocoding Validation Process

Accurate census tract assignment is necessary for valid rate calculation at the census tract level and relies on the accuracy and quality of patient address data. To assure accuracy and quality, cancer cases submitted to the Delaware Cancer Registry (DCR) undergo quality assurance review of the data fields for each patient's address. The case-level quality review of street address data includes correction of misspellings, incomplete addresses, and address formats. Accurint®, a Lexis Nexis® service, is used to assign a valid physical street address to post office box addresses where possible. DCR staff also use Accurint® to assign a valid physical street address to rural addresses where possible.

Geocoding software assigns cases to a census tract based on the patient's address at time of diagnosis. However, the address that is available for the case may not be complete (e.g., only ZIP Code is provided), may not be associated with the patient's residence (e.g., a post office box mailing address), or may have errors that prevent it from being geocoded with high accuracy. For these cases, it is difficult to know whether the assigned census tract is accurate. To prevent the calculation of rates based on cases that may be misassigned to a census tract, only cases considered to be coded at a high level of certainty are included in analyses.

[2] https://delcode.delaware.gov/title16/c020/index.html

Identifying Cases for Analysis

Cancer cases eligible for analysis totaled 32,090 and include all reportable[3] cancer cases diagnosed among Delawareans from Jan. 1, 2018 through Dec. 31, 2022. Table 1 shows the percentage by level of certainty of the residential census tract assignments for each individual. Census tracts are considered to be coded at a high level of certainty if based on a complete and valid street address of residence, if based on residence ZIP + 4 (i.e., first five digits of ZIP Code plus additional four digits that define the sector or several blocks of the area (digits 6 and 7) and the segment or one side of a street (digits 8 and 9)), or if based on residence city where the city has only one census tract, or based on residence ZIP Code where the ZIP Code has only one census tract. The current analysis includes 97.2% of cases (n=31,176) assigned to a census tract based on a high level of certainty in order to not include cases that may have been assigned to an incorrect census tract (e.g., census tract based on a provided Post Office Box instead of a residential address).

TABLE 1. NUMBER OF CASES AND PERCENTAGE OF CENSUS TRACT CERTAINTY FOR CANCER INCIDENCE DATA, DELAWARE, 2018-2022

Census Tract Based on Level of Certainty	n (% of Total)
Total Number of Cancer Incidence Cases	**32,090**
Number of Cancer Incidence Cases Included for Census Tract Analysis	**31,176 (97.2%)**
Complete and valid street address of residence	31,148 (97.1%)
Residence ZIP + 4*	0 (0%)
Residence city where city has only one census tract or based on residence ZIP Code where ZIP Code has only one census tract	28 (<.001%)
Number of Cancer Incidence Cases Excluded from Census Tract Analysis	**914 (2.8%)**
Residence ZIP + 2*	0 (0%)
Residence ZIP Code only	451 (1.4%)
ZIP Code of P.O. Box	172 (0.5%)
Not assigned, geocoding attempted, or blank	291 (0.9%)

** Residence ZIP + 4: Residence's five-digit ZIP Code plus additional four digits of ZIP Code that define the sector or several blocks of the area (digits 6 and 7) and the segment or one side of a street (digits 8 and 9)); Residence ZIP + 2: Residence's 5-digit ZIP Code plus additional two digits of ZIP Code that define the sector or several blocks of the area (digits 6 and 7)*

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025

[3] Excludes benign tumors, non-urinary bladder in situ tumors, and basal and squamous cell cancers per reporting guidelines mandated by the National Program of Cancer Registries (NPCR) of the Centers for Disease Control and Prevention (CDC).

Age-Adjusted Incidence Rates, by Census Tract

For each census tract, age-adjusted incidence rates were calculated at the census tract level. Calculating census tract level incidence rates requires cancer case counts as well as populations by census tract. Census tract populations for 2018-2022 are estimates from Woods & Poole Economics, Inc. Population data specific for each five-year age category and census tract were provided by the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program, made available through the SEER website (https://seer.cancer.gov/censustract-pops/).[4]

Age-adjusted incidence rates take into account the different age distributions of the populations at risk. To calculate age-adjusted incidence rates, crude incidence rates for each age group are multiplied by the appropriate 2000 U.S. Standard Population weight for that age group (Table 2). Age-adjusted incidence rates for each of the 19 age groups are then summed to yield the age-adjusted incidence rate for an entire census tract. All age-adjusted incidence rates were calculated for each census tract using a local SEER*Stat database built using DCR data and the census tract population estimates mentioned previously.[5]

TABLE 2. U.S. STANDARD YEAR 2000 POPULATION WEIGHTS, BY AGE GROUP

Age Group	Population Weight	Age Group	Population Weight
0	0.0138	**45-49**	0.0721
1-4	0.0553	**50-54**	0.0627
5-9	0.0725	**55-59**	0.0485
10-14	0.0730	**60-64**	0.0388
15-19	0.0722	**65-69**	0.0343
20-24	0.0665	**70-74**	0.0318
25-29	0.0645	**75-79**	0.0270
30-34	0.0710	**80-84**	0.0178
35-39	0.0808	**85+**	0.0155
40-44	0.0819	**Total**	1.0000

Source: U.S. Census 2000, accessed from SEER, http://seer.cancer.gov/stdpopulations/19ages.proportions.html

95% Confidence Intervals

Confidence intervals represent the range of values in which the cancer rate could reasonably fall. Our best estimate of the cancer rate in a particular census tract is the incidence rate itself. However, the rate could reasonably lie anywhere between the lower confidence limit (LCL) and the upper confidence limit (UCL). Because of this, a confidence interval is sometimes called the "margin of error."

[4] Populations - Total U.S. (2006-2023), Census Tract Estimates by Race/Origin Controlling to Vintage 2023 <2010 Tract Geographies>, National Cancer Institute, DCCPS, Surveillance Research Program, released February 2025. Source: Woods & Poole Economics, Inc. Washington, D.C. Copyright 2025.

[5] SEER*Stat Database: DE Census Tract 2006-2022 NPCR 2024 Submission - Linked To Census Tract Attributes Census 2010 Geographies Time Dependent (2008-2017) 2025.

When incidence rates are based on more than 100 cases, 95% confidence intervals are calculated using equation A-1.

In the equations below:

- **Age-adjusted (AA)** rate is the age-adjusted incidence rate for a particular census tract.
- **L** and **U** are values published by the National Center for Health Statistics for the specific purpose of calculating 95% confidence intervals for rates based on fewer than 100 cases[6].

EQUATION A-1: CONFIDENCE LIMIT EQUATIONS FOR 100 OR MORE CASES

$$\text{Lower Confidence Limit} = \text{AA Rate} - 1.96\left[\frac{\text{AA Rate}}{\sqrt{\#\text{ Cases}}}\right]$$

$$\text{Upper Confidence Limit} = \text{AA Rate} + 1.96\left[\frac{\text{AA Rate}}{\sqrt{\#\text{ Cases}}}\right]$$

where AA Rate is the age-adjusted incidence rate for a particular census tract.

When incidence rates are based on fewer than 100 cases, 95% confidence intervals are calculated using equation A-2.

EQUATION A-2: CONFIDENCE LIMIT EQUATIONS FOR FEWER THAN 100 CASES

Lower Confidence Limit (LCL) = AA Rate x L

Upper Confidence Limit (LCL) = AA Rate x U

Suppression

For this report, cancer frequencies and rates were suppressed according to the CDC's United States Cancer Statistics Suppression of Rates[7]:

- Incidence frequencies of fewer than 16 were not shown to protect patient privacy and confidentiality. Suppressing incidence statistics based on a small number of cancer cases helps protect patient privacy and confidentiality.[8,9]
- Age-adjusted incidence rates based on fewer than 16 cases were suppressed as they are inherently unstable and cannot be reliably interpreted.

[6] Martin JA, Hamilton BE, Ventura SJ, Menacker F, Park MM, Sutton PD. Births: Final data for 2001. National vital statistics reports; Vol 51 No. 2. Hyattsville, Maryland: National Center for Health Statistics. 2002. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_02.pdf

[7] Centers for Disease Control and Prevention. (2024, June 13). *Suppression of Rates and Counts*. United States Cancer Statistics (USCS). Retrieved October 8, 2024, from https://www.cdc.gov/united-states-cancer-statistics/technical-notes/suppression.html?CDC_AAref_Val=https://www.cdc.gov/cancer/uscs/technical_notes/stat_methods/suppression.htm

[8] Coughlin SS, Clutter GG, Hutton M. Ethics in Cancer Registries. *Journal of Cancer Registry Management, 2:* 5-10, 1999.

[9] McLaughlin CC. Confidentiality protection in publicly released central registry data. *Journal of Cancer Registry Management, 2:* 84-88, 2002.

B. Alternative for Small-Area Analysis: Cancer Reporting Zones

Caution When Interpreting Census Tract Level Statistics

Analysis by geography can be meaningful because people living in the same area are not only potentially exposed to the same environmental factors, but also tend to have similarities in terms of risk and other contextual factors that may play a role in cancer incidence and treatment. For example, lifestyle behaviors may cluster in a homogeneous community (e.g., neighborhoods where individuals share similar characteristics such as socioeconomic status). In addition, exposure to environmental or occupational carcinogens is often limited to a defined geographic area.[10] Also, residents in certain geographic areas may be more impoverished than other residents, which affects their health insurance coverage and their level of access to health care, particularly cancer screening services.[11]

Particularly with Delaware where counties are quite populous, there may be differences in cancer rates at the sub-county level that would be masked by only reporting at the county or higher level. Analysis for areas such as census tracts are desired because it allows for results for a small area that may be more meaningful than at larger areas such as counties. However, there is an inherent instability in calculating cancer incidence rates at the census tract level. In a small area such as a census tract, the relative number of cancer diagnoses can change considerably from year to year. If one case of cancer is diagnosed in a census tract one year, and three cases of cancer are diagnosed in the same census tract the next year, the cancer rate for that census tract will change dramatically from one year to the next. These relatively large fluctuations do not typically occur in larger populations.

Census tract level reporting is also often limited to statistics based on all-site cancer due to the need to suppress results for patient privacy as well as due to the instability of rates that are based on small case counts. This becomes difficult to interpret in terms of what could be causing higher or lower rates, since risk factors differ by cancer site in addition to other factors that influence outcomes (e.g., whether screening is available).

In the past, census tracts were the most reasonable sub-county level for analysis for Delaware. However, the DCR recently began participating in a project that will allow reporting at the sub-county level more reliably.

Cancer Reporting Zones

In February 2022, the DCR began participating in the National Cancer Institute (NCI)/North American Association of Central Cancer Registries (NAACCR) Zone Design Project to create cancer reporting zones (to be referred to as “zones”) that could be used for sub-county reporting in the state. The goals of the NCI/NAACCR Zone Design Project are to work with individual central cancer registries to create zones that will reduce suppression of data for small counties, increase spatial resolution for large counties, and create geographies that are more meaningful to cancer registries and stakeholders for cancer reporting and analysis. Zones are created as aggregations of census tracts (i.e., are census tracts that are grouped together) with the objective of creating zones that have a minimum and target population of 50,000; are homogenous, based on the variables of percent minority, percent below poverty, and percent urban; and are as compact as possible. A crosswalk of census tract to zone as well as maps that show census

[10] Gomez SL, Shariff-Marco S, DeRouen M, Keegan TH, Yen IH, Mujahid M, Satariano WA, Glaser SL. The impact of neighborhood social and built environment factors across the cancer continuum: Current research, methodological considerations, and future directions. Cancer. 2015 Jul 15;121(14):2314-30. doi: 10.1002/cncr.29345. Epub 2015 Apr 6. PMID: 25847484; PMCID: PMC4490083.

[11] Kirby JB, Kaneda T. Neighborhood socioeconomic disadvantage and access to health care. J Health Soc Behav. 2005 Mar;46(1):15-31. doi: 10.1177/002214650504600103. PMID: 15869118.

tract geographies overlayed with zones are included in Appendix B, which can be used to determine what census tracts are contained within which zones. See the ‘‘Delaware Census Tracts” section on page 2 for information to identify the census tract associated with an address, which can then be used to determine the associated zone.

The benefits of reporting at the zone level are being able to calculate more stable rates and to generate statistics with less suppression compared to the census tract level. While Delaware is only able to report all-site cancer incidence rates with minimal suppression by census tract for a five-year period, cancer incidence rates for other sites can be reported at the zone level with much less suppression.

Since zones are created as aggregations of census tracts, DPH can utilize census tract level data to conduct the same types of analysis. Cancer case counts and populations at the census tract level are aggregated to the zone level to allow for zone level cancer rate calculations.

C. Interpretation of Cancer Rates and Results

In brief:

- A cancer rate in a census tract can have large changes year to year because of the relatively small population in each of the census tracts. For this reason, the incidence rates may be uncertain, subject to wide variation, and difficult to interpret.
- To help understand how much confidence there should be in a cancer rate for a census tract, a confidence interval was calculated. A confidence interval represents the range of values in which the cancer incidence rate could reasonably fall.
- The cancer rates by census tracts are displayed visually in choropleth maps that categorize the census tracts into quintiles. This allows for comparison of the rates across census tracts in Delaware relative to each other.

Analysis of disease rates for small areas, such as census tracts, is difficult to interpret and can be misleading if not considered carefully. Even though researchers calculate cancer rates using the best possible information, cancer rates have some uncertainty. The rate of any disease in a population provides a snapshot of the impact of that disease for a specific time period. In a small area such as a census tract, the snapshot can change from year to year. If one case of cancer is diagnosed in a census tract one year, and three cases of cancer are diagnosed in the same census tract the next year, the cancer rate for that census tract will change dramatically from one year to the next. These big fluctuations in the cancer rate do not typically occur in larger populations.

DPH can tell how much uncertainty there is in a cancer rate by studying its confidence interval. A confidence interval is a range of values that shows where the cancer rate could reasonably be between the lower confidence limit and the upper confidence limit. If the difference between the upper confidence limit and the lower confidence limit is wide, there is greater uncertainty in the reliability of the cancer incidence rate. If the difference between the upper confidence limit and the lower confidence limit is very narrow, there is much less uncertainty in the cancer rate. When a cancer rate is calculated for a large area (like a state or a country) with a large population, the odds are that more people have been diagnosed with cancer compared to a smaller area. When a cancer rate is calculated based on a large number of cases or deaths, researchers are more certain of the level of cancer in that area.

Calculating cancer rates by zones allow for analysis for a larger area than census tracts but smaller than at the county or state level for Delaware. This allows for better granularity to identify potential geographical patterns of cancer without the limitations associated with census tract level analysis (e.g., unstable rates, wide confidence intervals, suppression).

In Section D, Table 3 lists the actual rate and the confidence intervals for each census tract. When viewing the cancer rate in a census tract, it is important to look at the confidence interval. If a cancer rate has a relatively wide confidence interval, the cancer rate has a lot of uncertainty. When cancer rates have a lot of uncertainty, conclusions should be drawn cautiously.

Often is it helpful to compare different areas to see whether cancer rates are relatively higher in one area versus another. In Section E, choropleth maps are included that divide the census tracts into quintiles by cancer rate. To do this, the rates are divided into five groups based on the distribution of the cancer rates into the lowest fifth of the data (<20% of rates), the second fifth (21% to 40%), and so on. This is represented visually in the maps by color, where the lowest quintile is represented by yellow

shading for rates that fall in the lowest fifth of the data (i.e., have rates of 163.4-369.0 per 100,000 population) and the highest quintile is represented by dark blue shading. When dividing data into quintiles, each of the census tract rates will fall into one of the categories based on the distribution of the cancer rates across all the census tracts. This allows for comparison of the rates across census tracts in Delaware relative to each other, but does not provide a general indication of whether the census tract rate is "high" or not. DPH conducts additional analysis to determine whether cancer case counts in an area are much higher than expected and what may be causing higher cancer incidence in those areas. Though maps by quintiles are helpful for relative comparison, these should not be the only results used to draw conclusions.

Rates by zones are shown in Section F. Similar to Section E for census tracts, choropleth maps are provided by zone. The interpretations for the zone level analysis are the same as described above for the census tract level analysis. However, a different color gradient is used for the zone maps to distinguish the maps from each other. In addition, there are maps by the top four cancers by incidence included at the zone level: female breast, prostate, lung, and colorectal cancers.

D. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

TABLE 3. FIVE-YEAR AGE-ADJUSTED ALL-SITE CANCER INCIDENCE RATES BY CENSUS TRACT, DELAWARE, 2018-2022

2010 Census Tract Name	Age-Adjusted Rate (95% confidence Interval)	2010 Census Tract Name	Age-Adjusted Rate (95% confidence Interval)
2.00	536.8 (456.2, 628.0)	109.00	381.3 (300.0, 481.2)
3.00	362.7 (275.1, 469.5)	110.00	363.2 (290.6, 451.3)
4.00	347.8 (269.2, 444.0)	111.00	433.5 (351.0, 534.3)
5.00	453.5 (349.3, 578.7)	112.01	560.6 (432.4, 716.0)
6.01	450.7 (323.3, 608.1)	112.02	553.2 (464.8, 655.6)
6.02	407.0 (316.0, 521.4)	112.03	452.4 (376.0, 540.7)
9.00	421.9 (304.4, 569.7)	112.04	389.3 (318.2, 474.8)
11.00	316.8 (247.2, 420.8)	112.05	458.6 (345.3, 601.0)
12.00	487.8 (345.0, 682.4)	112.06	370.6 (306.2, 446.8)
13.00	341.6 (278.8, 418.5)	113.00	345.5 (262.2, 451.0)
14.00	508.2 (396.6, 644.0)	114.00	369.5 (299.5, 454.5)
15.00	338.6 (253.8, 444.9)	115.00	363.7 (289.5, 454.3)
16.00	337.4 (234.9, 468.9)	116.00	354.4 (280.8, 443.1)
19.02	535.6 (345.9, 786.2)	117.00	393.8 (316.6, 487.6)
21.00	450.7 (325.1, 609.5)	118.00	356.8 (296.6, 428.7)
22.00	327.4 (238.0, 439.4)	119.00	354.6 (282.2, 444.0)
23.00	414.6 (311.9, 539.0)	120.00	409.8 (342.4, 488.1)
24.00	351.5 (284.6, 429.9)	121.00	350.9 (273.5, 444.4)
25.00	421.4 (328.0, 533.3)	122.00	409.5 (335.9, 495.0)
26.00	514.2 (414.2, 630.4)	123.00	427.0 (330.5, 544.2)
27.00	592.5 (400.9, 836.1)	124.00	321.8 (257.3, 398.2)
28.00	382.2 (243.5, 571.4)	125.00	418.4 (352.1, 494.1)
29.00	372.0 (292.7, 467.3)	126.00	552.7 (449.0, 674.7)
30.02	272.9 (161.8, 438.8)	127.00	352.9 (291.1, 425.4)
101.01	366.6 (297.7, 447.2)	129.00	482.1 (400.4, 575.7)
101.04	318.6 (244.9, 408.9)	130.00	432.5 (323.4, 569.4)
102.00	525.4 (405.6, 673.1)	131.00	387.9 (296.2, 500.2)
103.00	472.1 (376.6, 585.7)	132.00	478.3 (383.3, 591.6)
104.00	418.8 (348.4, 500.6)	133.00	398.3 (297.1, 526.7)
105.02	360.8 (303.7, 426.7)	134.00	347.2 (268.4, 445.2)
107.02	500.1 (419.7, 591.7)	135.01	372.4 (322.1, 430.3)
108.00	419.2 (356.6, 492.0)	135.03	455.6 (396.7, 521.9)

Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025

* Age-adjusted incidence rate based on fewer than 16 cases has been suppressed.

Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.

TABLE 3. FIVE-YEAR AGE-ADJUSTED ALL-SITE CANCER INCIDENCE RATES BY CENSUS TRACT, DELAWARE, 2018-2022 (CONTINUED)

2010 Census Tract Name	Age-Adjusted Rate (95% confidence Interval)
135.05	572.0 (458.2, 707.5)
135.06	499.4 (412.6, 601.4)
136.04	505.9 (418.3, 607.4)
136.07	362.3 (305.8, 427.2)
136.08	475.1 (310.9, 687.2)
136.10	381.2 (318.8, 452.6)
136.11	480.1 (398.8, 573.0)
136.12	409.2 (348.6, 478.4)
136.13	438.2 (373.1, 512.6)
136.14	451.7 (359.1, 561.4)
136.15	395.2 (324.9, 479.2)
137.00	464.5 (372.6, 573.6)
138.00	461.7 (388.9, 544.5)
139.01	573.5 (453.2, 716.4)
139.03	734.4 (563.0, 937.4)
139.04	518.2 (437.7, 608.7)
140.00	464.4 (390.7, 548.4)
141.00	523.2 (423.3, 639.3)
142.00	442.1 (328.4, 588.4)
143.00	365.5 (297.0, 448.1)
144.02	531.4 (415.3, 671.4)
144.03	395.3 (307.3, 500.6)
144.04	396.7 (316.7, 492.4)
145.01	202.0 (105.4, 469.1)
145.02	706.1 (476.0, 1015.5)
147.02	395.2 (290.6, 528.0)
147.03	450.4 (380.0, 531.1)
147.05	432.2 (364.4, 509.7)
147.06	567.8 (424.1, 745.7)
148.03	448.7 (376.0, 533.3)
148.05	738.8 (640.1, 847.3)
148.07	565.0 (486.3, 652.9)
148.08	552.5 (442.0, 680.5)
148.09	498.8 (427.7, 578.5)
148.10	562.7 (478.9, 657.0)
149.03	673.9 (548.1, 818.2)
149.04	520.4 (436.6, 616.4)
149.06	698.5 (550.7, 872.2)
149.07	406.2 (324.6, 502.0)
149.08	403.2 (293.0, 540.8)
149.09	504.0 (414.5, 606.7)
150.00	545.7 (459.9, 643.2)
151.00	468.7 (385.0, 566.6)
152.00	425.2 (357.5, 502.3)
154.00	358.1 (280.6, 451.4)
155.02	434.1 (335.5, 553.3)
156.00	536.4 (413.5, 684.8)
158.02	357.9 (261.4, 479.2)
159.00	360.9 (284.9, 452.5)
160.00	291.0 (207.8, 397.0)
161.00	382.7 (290.2, 501.6)
162.00	419.2 (332.3, 524.5)
163.01	612.4 (524.5, 711.7)
163.02	458.5 (386.8, 539.3)
163.05	584.1 (503.5, 674.0)
164.01	641.4 (540.6, 755.1)
164.04	364.4 (282.4, 464.3)
166.01	557.3 (500.6, 618.9)
166.02	1179.1 (1043.9, 1327.0)
166.04	579.4 (509.6, 655.8)
166.08	954.9 (824.5, 1100.6)
168.01	629.8 (542.5, 727.6)
168.04	691.9 (584.6, 812.7)
169.01	468.0 (363.5, 595.9)

Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025

* Age-adjusted incidence rate based on fewer than 16 cases has been suppressed.

Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.

TABLE 3. FIVE-YEAR AGE-ADJUSTED ALL-SITE CANCER INCIDENCE RATES BY CENSUS TRACT, DELAWARE, 2018-2022 (CONTINUED)

2010 Census Tract Name	Age-Adjusted Rate (95% confidence Interval)
169.04	501.8 (391.3, 641.5)
401.00	584.8 (508.4, 669.8)
402.01	419.1 (344.3, 505.5)
402.02	606.5 (554.3, 662.5)
402.03	590.7 (497.4, 696.7)
405.01	471.3 (396.9, 556.2)
405.02	390.4 (305.1, 498.2)
407.00	443.0 (375.0, 520.7)
409.00	331.9 (242.9, 447.3)
410.00	468.8 (401.1, 544.9)
411.00	*
412.00	459.6 (381.2, 550.3)
413.00	435.2 (320.5, 577.1)
414.00	423.9 (342.7, 519.2)
415.00	405.1 (333.9, 488.3)
416.00	394.9 (305.1, 508.7)
417.01	482.7 (417.8, 555.8)
417.02	517.1 (434.3, 612.8)
418.01	551.6 (495.0, 613.3)
418.02	602.9 (511.1, 706.3)
419.00	599.5 (517.4, 691.4)
420.00	396.8 (315.6, 494.0)
421.00	467.1 (384.5, 563.5)
422.01	708.2 (631.5, 791.6)
422.02	541.1 (480.9, 607.4)
425.00	494.4 (399.5, 604.8)
428.00	558.2 (492.4, 631.0)
429.00	499.8 (427.5, 582.1)
430.00	487.5 (417.2, 566.8)
431.00	513.8 (415.8, 630.7)
432.02	557.3 (469.3, 658.2)

2010 Census Tract Name	Age-Adjusted Rate (95% confidence Interval)
433.00	438.7 (357.4, 532.9)
434.00	536.3 (457.0, 626.6)
501.01	407.3 (338.4, 487.8)
501.03	394.4 (330.8, 468.6)
501.04	482.5 (408.7, 566.5)
501.05	470.4 (399.8, 550.4)
502.00	527.3 (433.3, 636.8)
503.01	477.3 (420.9, 540.0)
503.02	392.3 (328.2, 466.2)
504.01	429.5 (354.7, 516.7)
504.03	376.2 (299.2, 468.0)
504.05	496.3 (412.6, 592.7)
504.06	341.6 (282.7, 409.7)
504.07	382.8 (321.6, 453.7)
504.08	364.4 (299.2, 440.3)
505.01	450.2 (371.2, 542.6)
505.03	380.9 (306.6, 467.0)
505.04	471.3 (397.8, 554.4)
506.01	448.7 (380.8, 526.0)
506.02	624.2 (548.8, 707.7)
507.01	569.9 (491.3, 659.9)
507.03	332.5 (252.0, 436.7)
507.04	567.9 (491.2, 656.7)
507.05	487.4 (420.2, 565.8)
507.06	543.4 (390.2, 746.4)
508.01	492.8 (410.5, 587.9)
508.02	801.8 (712.6, 900.4)
508.03	620.6 (556.9, 691.4)
509.01	486.1 (391.6, 601.7)
509.02	369.0 (307.1, 443.9)
510.03	632.1 (555.6, 718.0)

Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025

* Age-adjusted incidence rate based on fewer than 16 cases has been suppressed.

Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.

TABLE 3. FIVE-YEAR AGE-ADJUSTED ALL-SITE CANCER INCIDENCE RATES BY CENSUS TRACT, DELAWARE, 2018-2022 (CONTINUED)

2010 Census Tract Name	Age-Adjusted Rate (95% confidence Interval)
510.04	555.5 (486.6, 635.0)
510.05	477.8 (412.9, 553.6)
510.06	598.3 (493.0, 725.1)
510.07	542.1 (472.5, 622.7)
511.01	390.3 (164.6, 823.6)
511.02	246.5 (168.2, 397.5)
511.03	304.3 (204.7, 476.3)
512.01	337.4 (236.9, 497.3)
512.02	219.7 (159.3, 431.6)
512.03	163.4 (114.5, 336.1)
512.04	367.6 (187.6, 827.7)
512.05	228.8 (159.1, 483.0)

2010 Census Tract Name	Age-Adjusted Rate (95% confidence Interval)
513.01	475.4 (413.6, 547.1)
513.02	725.4 (626.6, 839.5)
513.03	522.9 (451.7, 605.0)
513.05	413.1 (347.3, 496.3)
513.06	587.3 (461.8, 744.3)
514.00	446.0 (365.1, 540.3)
515.00	434.4 (371.3, 506.2)
517.01	368.2 (302.4, 445.6)
517.02	425.3 (364.5, 494.3)
518.01	398.0 (328.1, 478.7)
518.02	431.9 (358.4, 516.5)
519.00	400.3 (335.8, 474.5)

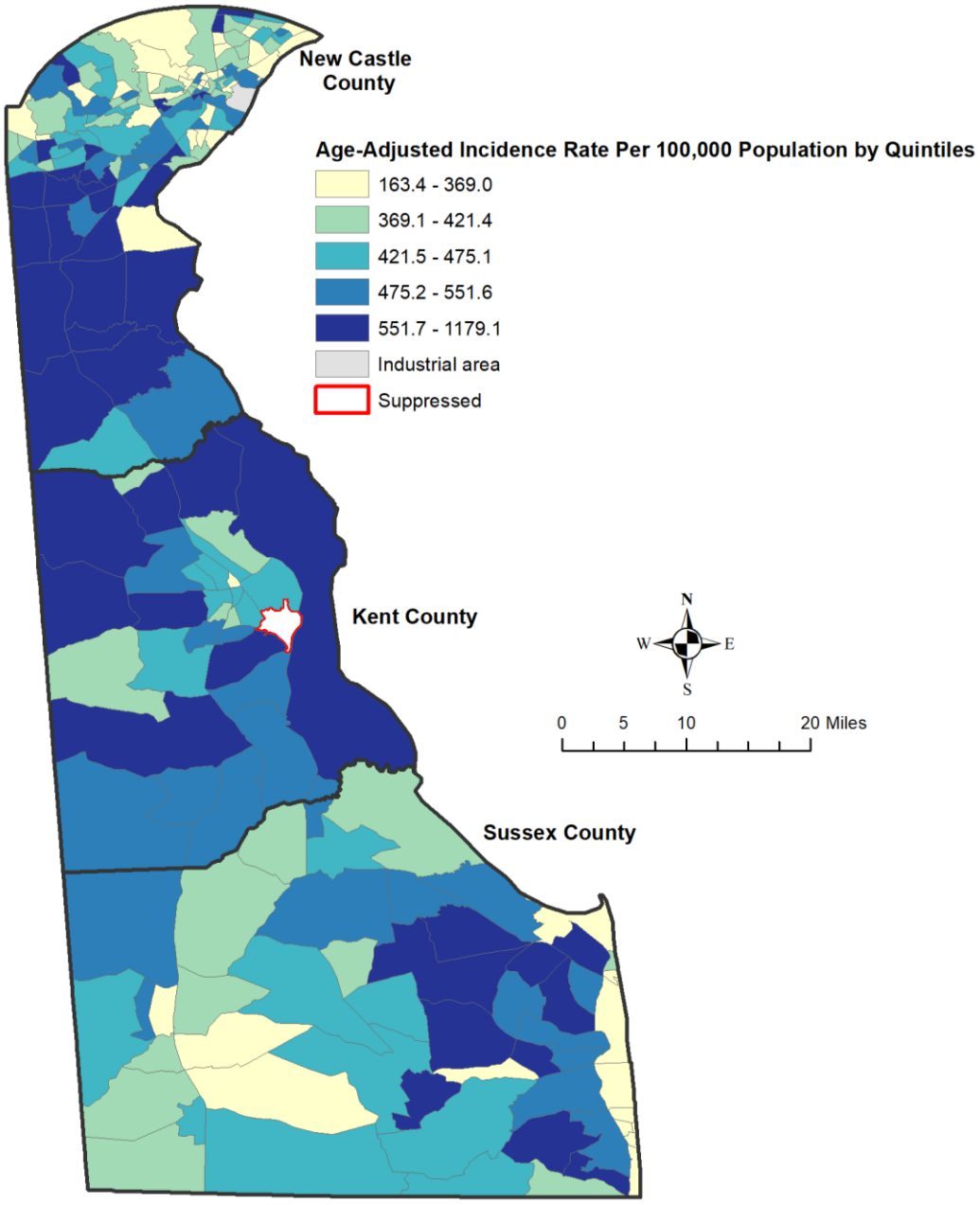
Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025

* Age-adjusted incidence rate based on fewer than 16 cases has been suppressed.

Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.

E. Maps of Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

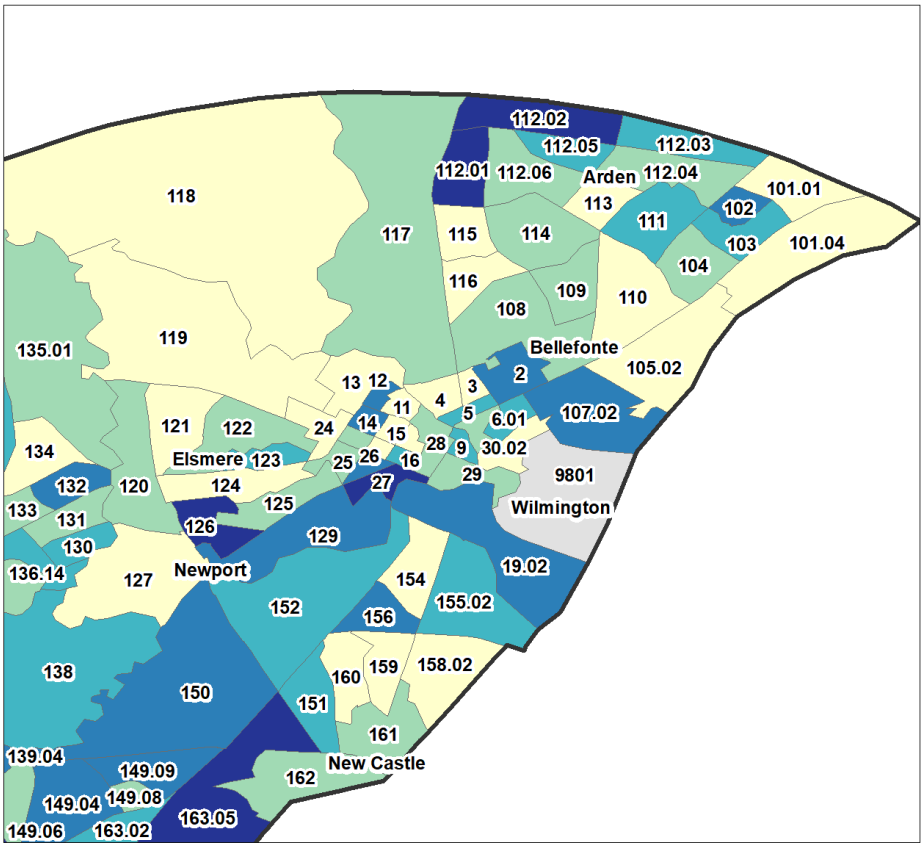
Figure 1. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html

Figure 2. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

Wilmington and Northeastern New Castle County



Age-Adjusted Incidence Rate Per 100,000 Population by Quintiles

- 163.4 - 369.0
- 369.1 - 421.4
- 421.5 - 475.1
- 475.2 - 551.6
- 551.7 - 1179.1
- Industrial area

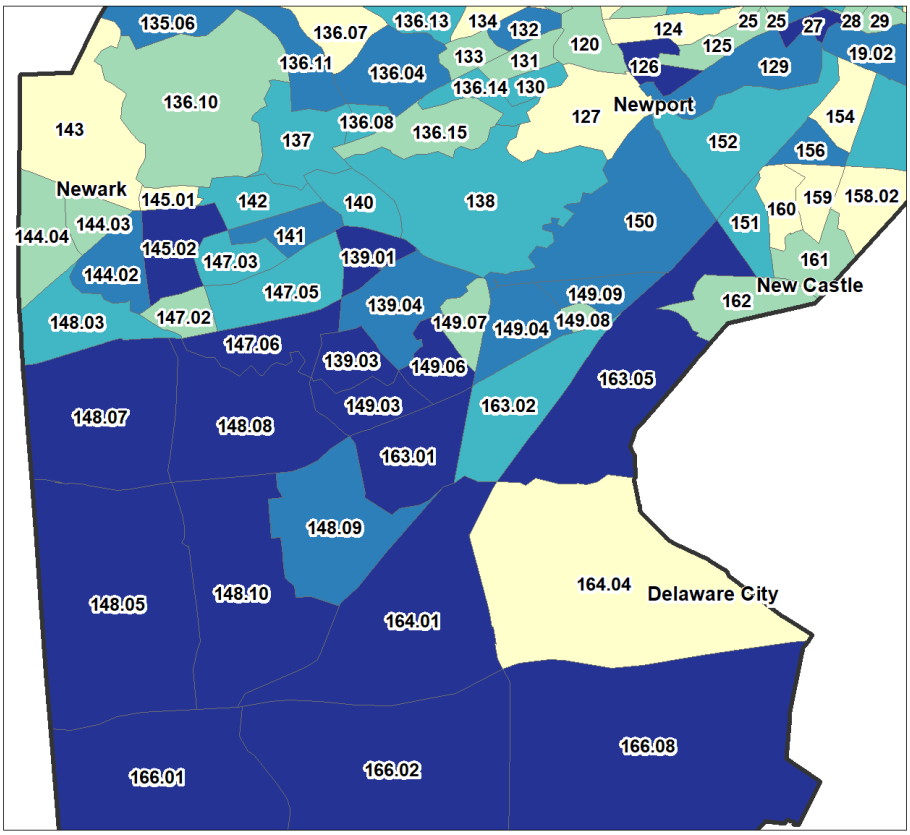
N
W E
S

0 1.25 2.5 5 Miles

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html

Figure 3. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

Newark, New Castle, and Central New Castle County



Age-Adjusted Incidence Rate Per 100,000 Population by Quintiles

- 163.4 - 369.0
- 369.1 - 421.4
- 421.5 - 475.1
- 475.2 - 551.6
- 551.7 - 1179.1

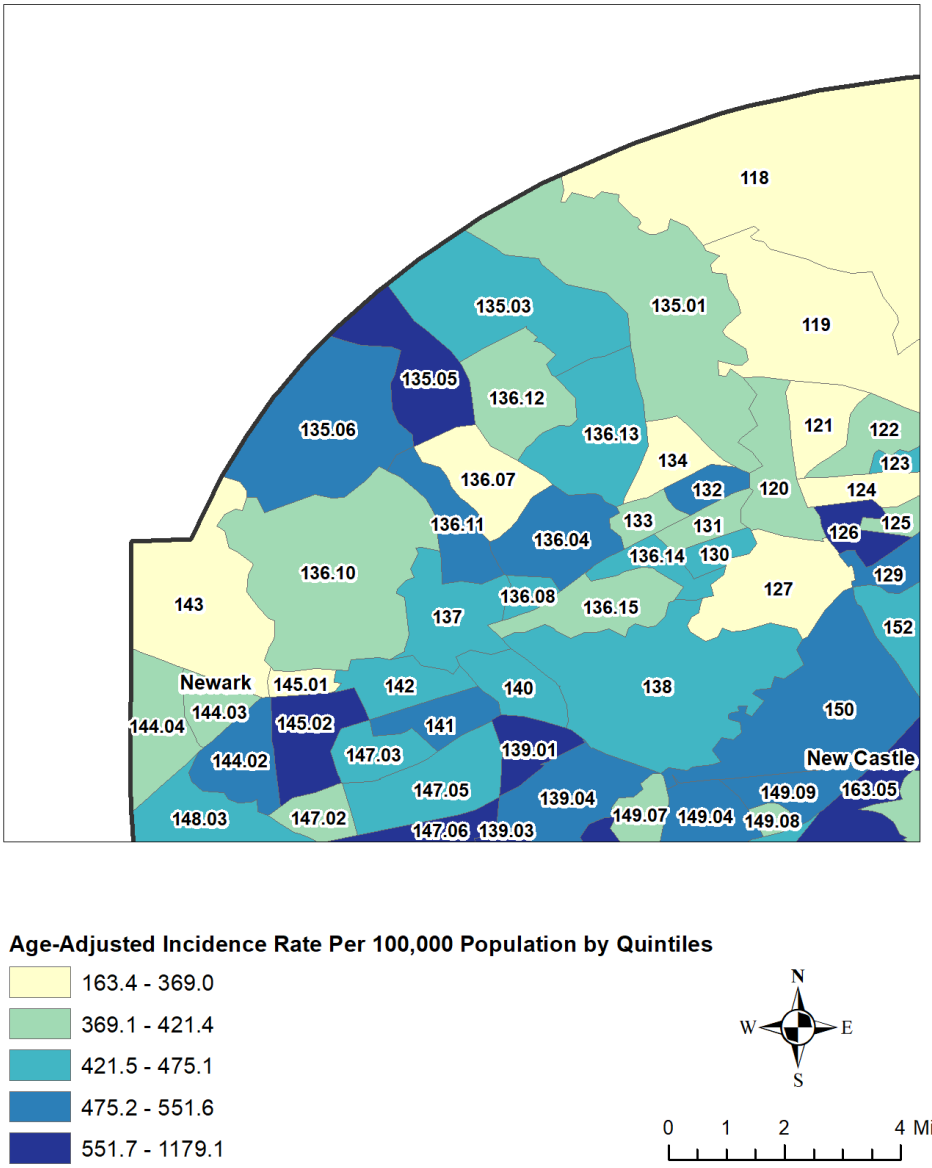
N
W E
S

0 1.25 2.5 5 Miles

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html

Figure 4. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

Hockessin and Northwestern New Castle County



Age-Adjusted Incidence Rate Per 100,000 Population by Quintiles

- 163.4 - 369.0
- 369.1 - 421.4
- 421.5 - 475.1
- 475.2 - 551.6
- 551.7 - 1179.1

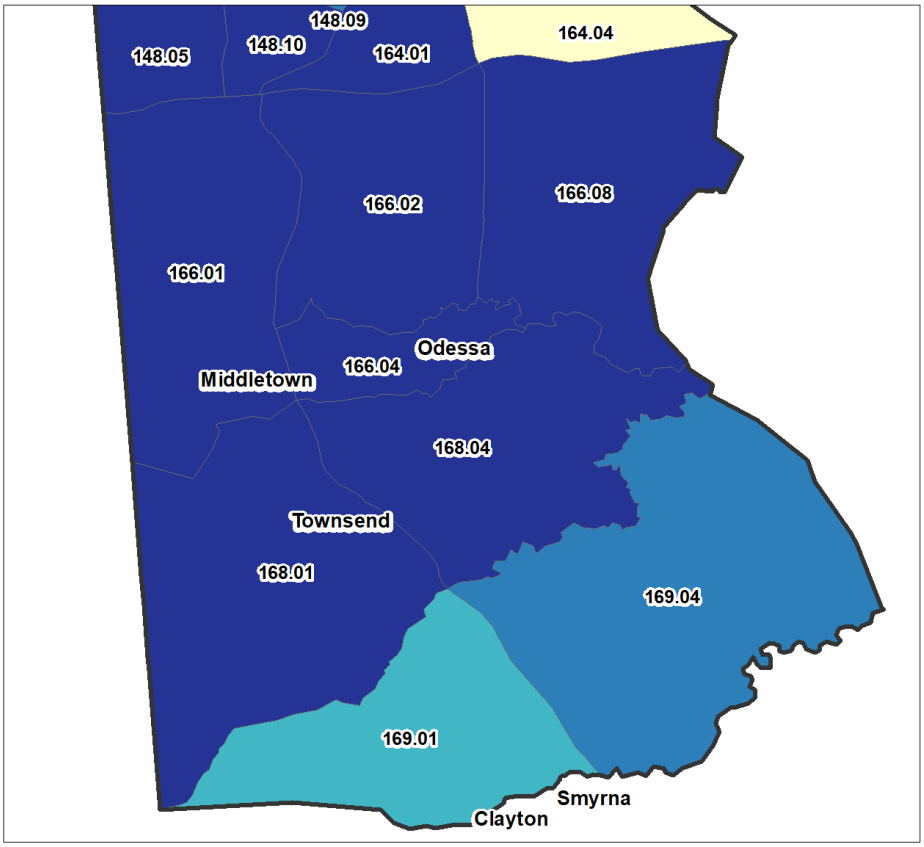
N
W E
S

0 1 2 4 Miles

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html

Figure 5. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

Southern New Castle County



Age-Adjusted Incidence Rate Per 100,000 Population by Quintiles

- 163.4 - 369.0
- 369.1 - 421.4
- 421.5 - 475.1
- 475.2 - 551.6
- 551.7 - 1179.1

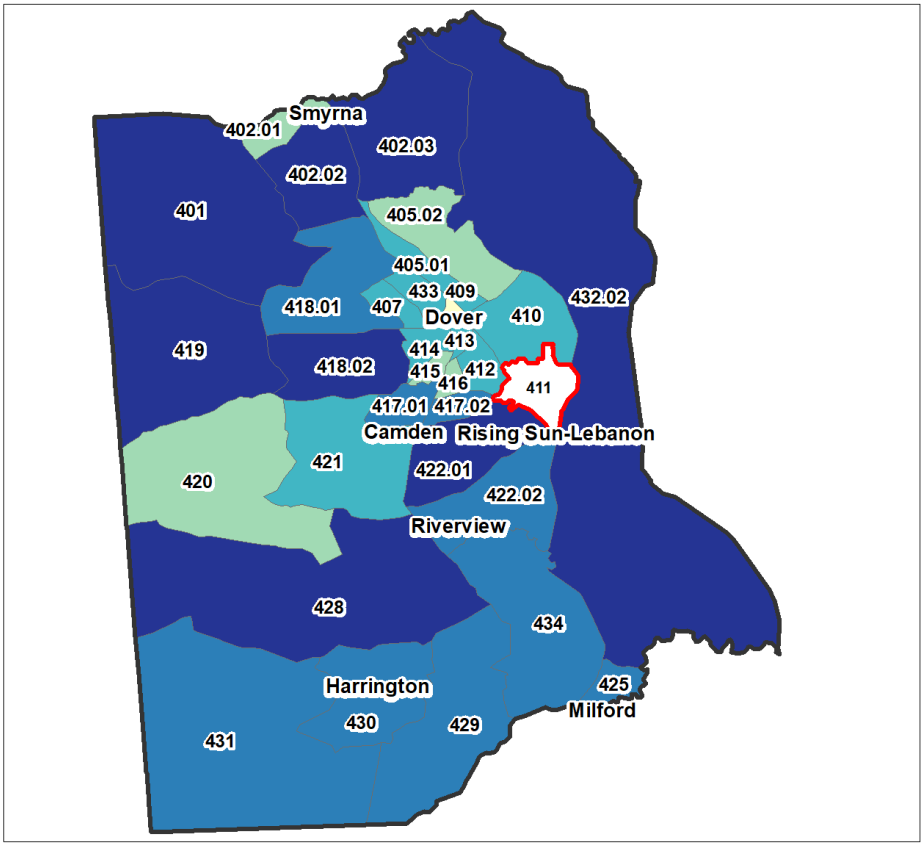
N
W E
S

0 1.5 3 6 Miles

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html

Figure 6. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

Kent County



Age-Adjusted Incidence Rate Per 100,000 Population by Quintiles

- 163.4 - 369.0
- 369.1 - 421.4
- 421.5 - 475.1
- 475.2 - 551.6
- 551.7 - 1179.1
- Suppressed

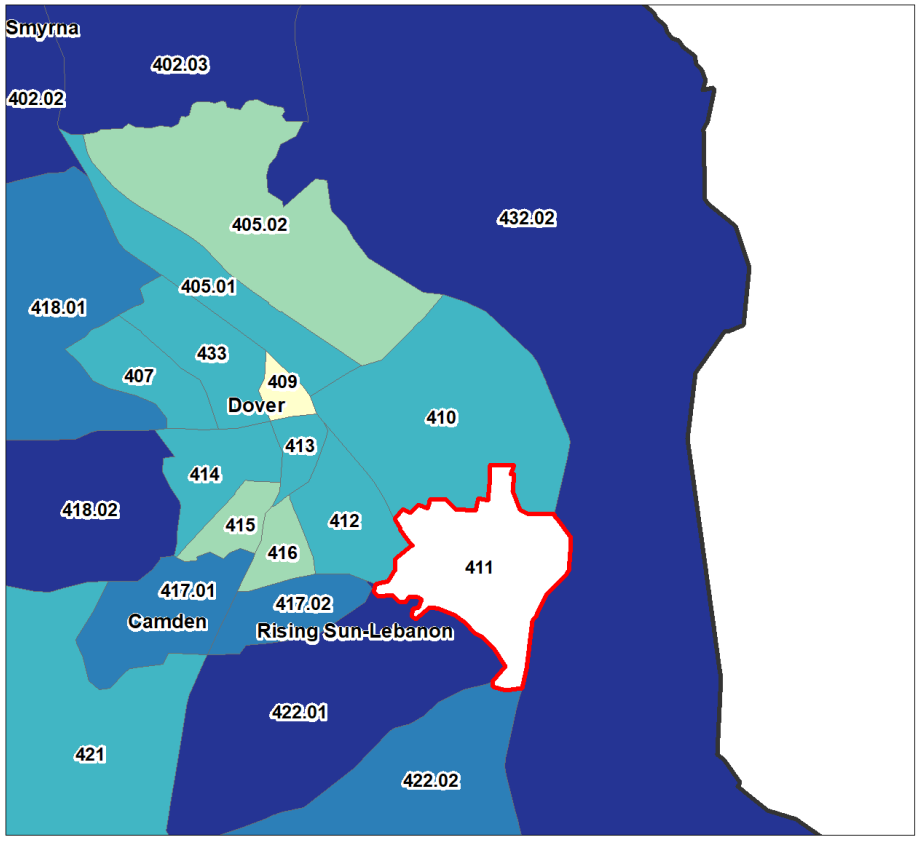
N
W E
S

0 3 6 12 Miles

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html

Figure 7. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

Greater Dover



Age-Adjusted Incidence Rate Per 100,000 Population by Quintiles

- 163.4 - 369.0
- 369.1 - 421.4
- 421.5 - 475.1
- 475.2 - 551.6
- 551.7 - 1179.1
- Suppressed

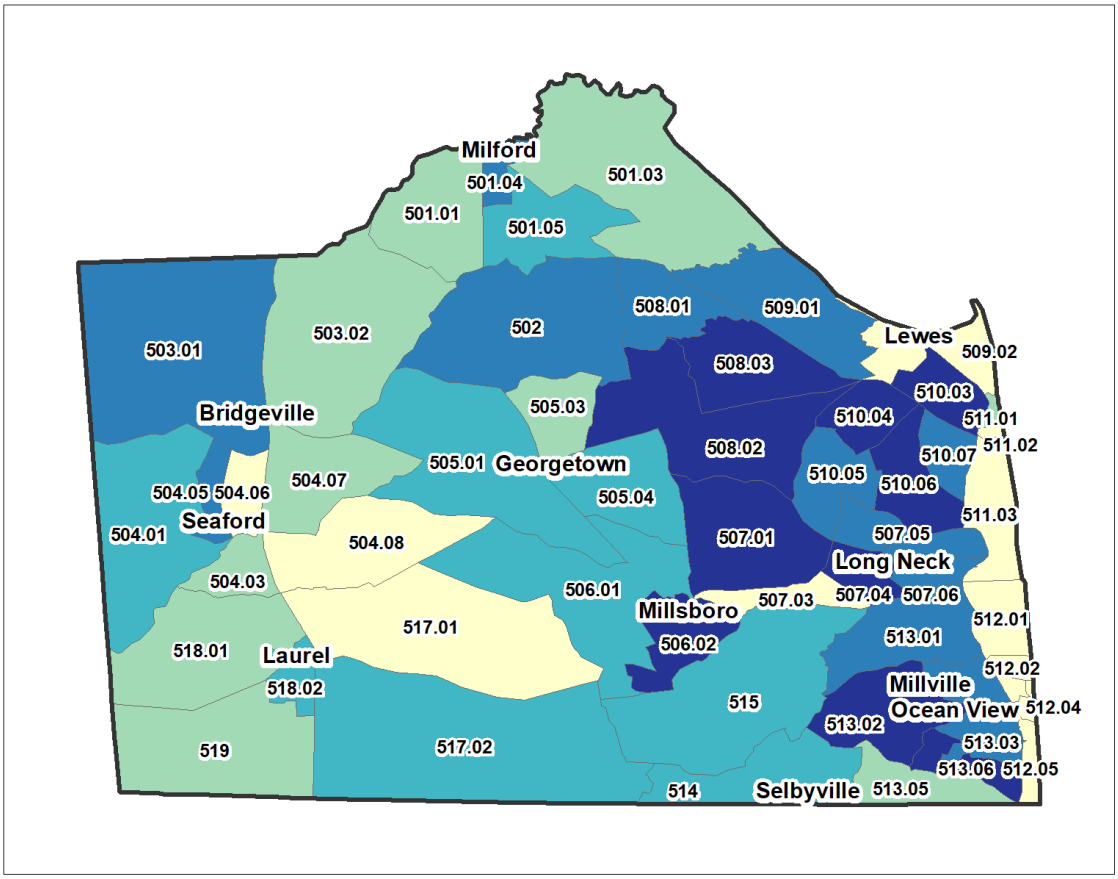
N
W E
S

0 1.25 2.5 5 Miles

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html

Figure 8. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Census Tract, Delaware, 2018-2022

Sussex County



Age-Adjusted Incidence Rate Per 100,000 Population by Quintiles

- 163.4 - 369.0
- 369.1 - 421.4
- 421.5 - 475.1
- 475.2 - 551.6
- 551.7 - 1179.1

N
W E
S

0 3.25 6.5 13 Miles

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html

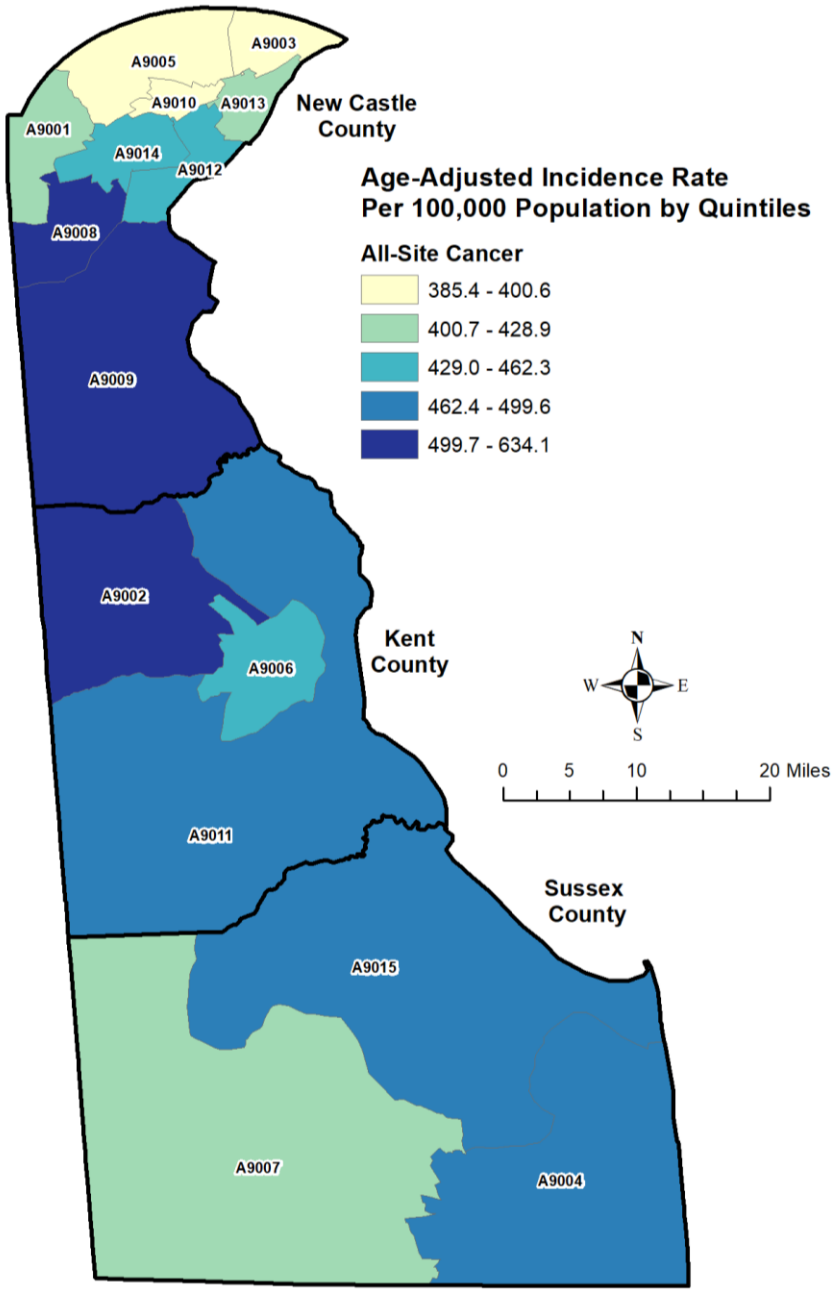
F. Table and Maps of Cancer Incidence Rates by Zone, Delaware, 2018-2022

Table 4. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Zone, Delaware, 2018-2022

Zone Name	Zone ID	Age-Adjusted Rate (95% confidence Interval)
Newark, North Star	A9001	428.9 (406.1, 452.8)
Dover, Smyrna	A9002	533.8 (510.0, 558.5)
North Wilmington, Claymont	A9003	400.6 (382.5, 419.3)
Millsboro, Long Neck, Ocean View, Selbyville, Bethany Beach	A9004	482.9 (465.2, 501.3)
North Wilmington, Greenville, Hockessin	A9005	385.4 (367.8, 403.8)
Dover, Dover Air Force Base	A9006	462.3 (439.6, 485.9)
Seaford, Bridgeville	A9007	407.0 (389.1, 425.6)
Bear, Glasgow	A9008	582.2 (550.0, 615.7)
Middletown, Odessa, Townsend	A9009	634.1 (605.9, 663.4)
Wilmington, Elsmere	A9010	396.5 (376.4, 417.5)
Milford, Harrington, Leipsic, Smyrna, Little Creek	A9011	499.6 (477.4, 522.7)
Wilmington Manor, New Castle, Bear	A9012	440.9 (418.6, 464.1)
Wilmington	A9013	400.8 (379.0, 423.5)
Christiana, Newark, Stanton	A9014	437.6 (416.8, 459.3)
Georgetown, Milford, Lewes	A9015	493.5 (475.0, 512.6)

Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Figure 9. Five-Year Age-Adjusted All-Site Cancer Incidence Rates by Zone, Delaware, 2018-2022



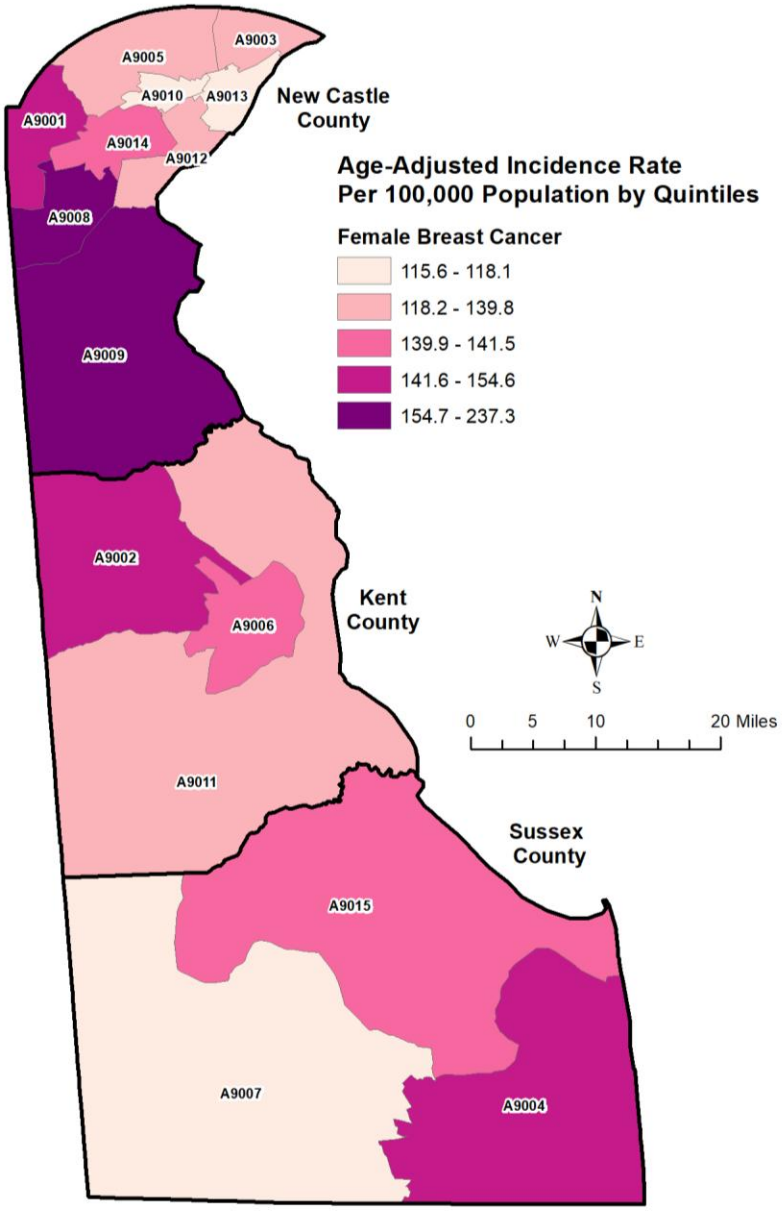
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html
Source: Delaware Cancer Reporting Zone Shapefile: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Table 5. Five-Year Age-Adjusted Female Breast Cancer Incidence Rates by Zone, Delaware, 2018-2022

Zone Name	Zone ID	Age-Adjusted Rate (95% confidence Interval)
Newark, North Star	A9001	154.6 (135.8, 175.5)
Dover, Smyrna	A9002	153.5 (135.9, 173.0)
North Wilmington, Claymont	A9003	135.0 (120.1, 151.5)
Millsboro, Long Neck, Ocean View, Selbyville, Bethany Beach	A9004	143.5 (128.9, 159.6)
North Wilmington, Greenville, Hockessin	A9005	139.8 (124.8, 156.3)
Dover, Dover Air Force Base	A9006	139.9 (122.6, 159.0)
Seaford, Bridgeville	A9007	116.2 (102.5, 131.3)
Bear, Glasgow	A9008	178.9 (156.3, 204.0)
Middletown, Odessa, Townsend	A9009	237.3 (214.1, 262.6)
Wilmington, Elsmere	A9010	118.1 (102.6, 135.3)
Milford, Harrington, Leipsic, Smyrna, Little Creek	A9011	126.9 (111.5, 143.9)
Wilmington Manor, New Castle, Bear	A9012	139.8 (122.8, 158.6)
Wilmington	A9013	115.6 (100.1, 132.9)
Christiana, Newark, Stanton	A9014	141.5 (125.3, 159.4)
Georgetown, Milford, Lewes	A9015	140.0 (125.3, 156.0)

Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Figure 10. Five-Year Age-Adjusted Female Breast Cancer Incidence Rates by Zone, Delaware, 2018-2022



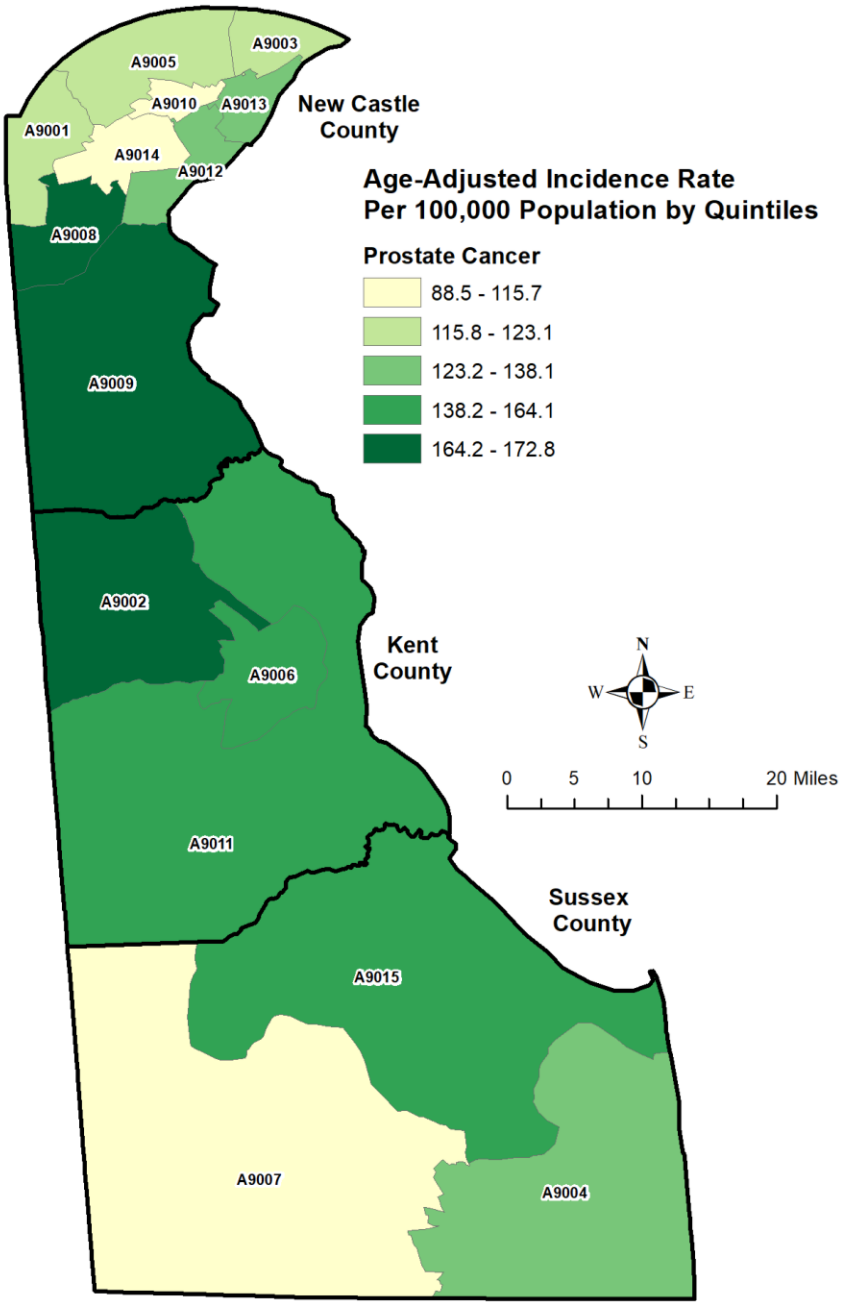
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html
Source: Delaware Cancer Reporting Zone Shapefile: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Table 6. Five-Year Age-Adjusted Prostate Cancer Incidence Rates by Zone, Delaware, 2018-2022

Zone Name	Zone ID	Age-Adjusted Rate (95% confidence Interval)
Newark, North Star	A9001	123.1 (106.4, 142.0)
Dover, Smyrna	A9002	170.5 (152.1, 190.5)
North Wilmington, Claymont	A9003	118.1 (105.2, 132.4)
Millsboro, Long Neck, Ocean View, Selbyville, Bethany Beach	A9004	129.2 (119.0, 140.6)
North Wilmington, Greenville, Hockessin	A9005	118.7 (106.0, 132.9)
Dover, Dover Air Force Base	A9006	164.1 (145.3, 184.7)
Seaford, Bridgeville	A9007	88.5 (77.6, 100.6)
Bear, Glasgow	A9008	172.8 (148.4, 200.1)
Middletown, Odessa, Townsend	A9009	168.5 (149.2, 189.8)
Wilmington, Elsmere	A9010	103.0 (88.7, 119.0)
Milford, Harrington, Leipsic, Smyrna, Little Creek	A9011	144.3 (128.3, 161.9)
Wilmington Manor, New Castle, Bear	A9012	136.6 (119.4, 155.8)
Wilmington	A9013	138.1 (119.3, 159.0)
Christiana, Newark, Stanton	A9014	115.7 (100.7, 132.4)
Georgetown, Milford, Lewes	A9015	140.8 (128.7, 154.0)

Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Figure 11. Five-Year Age-Adjusted Prostate Cancer Incidence Rates by Zone, Delaware, 2018-2022



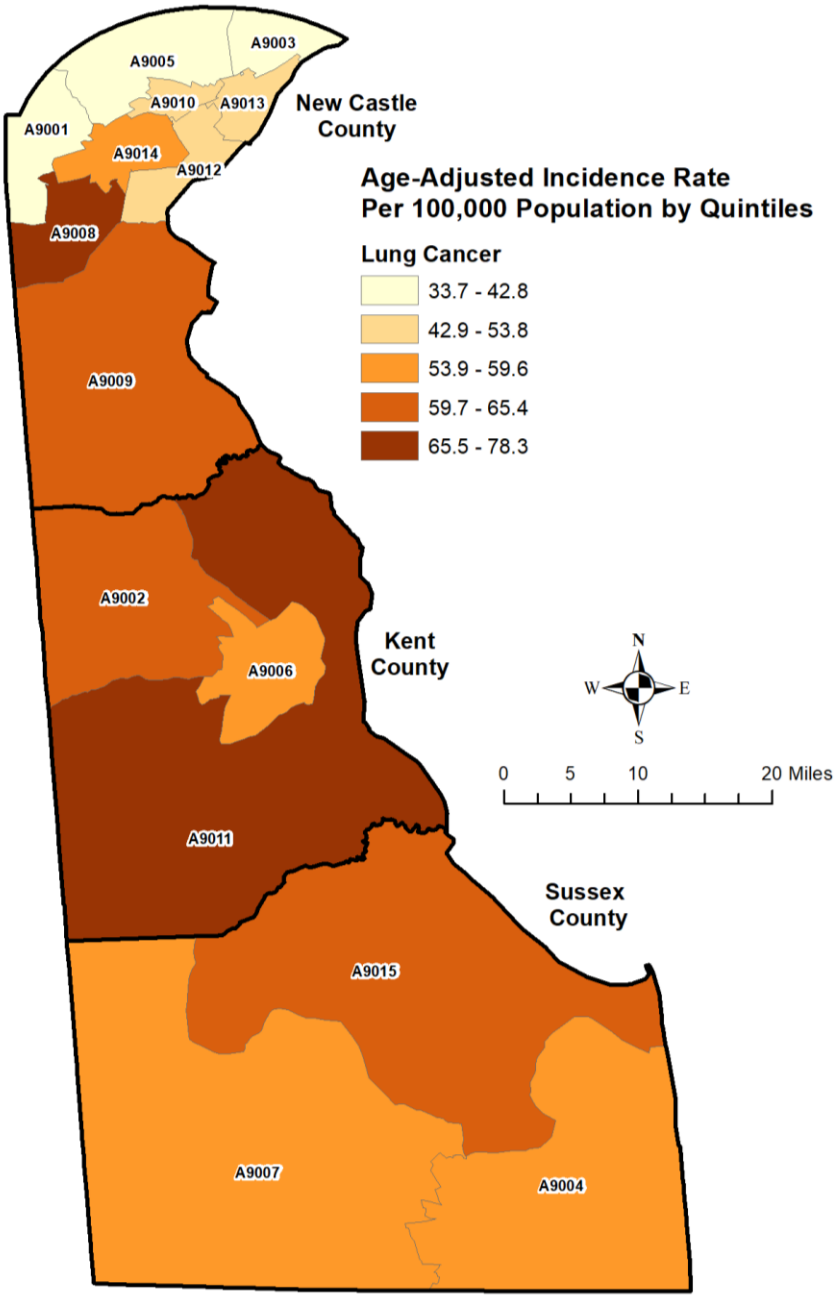
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html
Source: Delaware Cancer Reporting Zone Shapefile: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Table 7. Five-Year Age-Adjusted Lung Cancer Incidence Rates by Zone, Delaware, 2018-2022

Zone Name	Zone ID	Age-Adjusted Rate (95% confidence Interval)
Newark, North Star	A9001	42.8 (35.9, 50.7)
Dover, Smyrna	A9002	65.4 (57.6, 74.1)
North Wilmington, Claymont	A9003	40.7 (35.6, 46.5)
Millsboro, Long Neck, Ocean View, Selbyville, Bethany Beach	A9004	55.1 (50.4, 60.4)
North Wilmington, Greenville, Hockessin	A9005	33.7 (29.1, 39.0)
Dover, Dover Air Force Base	A9006	59.6 (52.0, 68.0)
Seaford, Bridgeville	A9007	54.1 (48.2, 60.6)
Bear, Glasgow	A9008	78.3 (66.2, 91.8)
Middletown, Odessa, Townsend	A9009	63.8 (54.8, 73.8)
Wilmington, Elsmere	A9010	52.5 (45.7, 60.2)
Milford, Harrington, Leipsic, Smyrna, Little Creek	A9011	68.0 (60.3, 76.6)
Wilmington Manor, New Castle, Bear	A9012	53.8 (46.3, 62.3)
Wilmington	A9013	50.5 (43.1, 58.9)
Christiana, Newark, Stanton	A9014	59.6 (52.4, 67.6)
Georgetown, Milford, Lewes	A9015	60.1 (54.3, 66.4)

Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Figure 12. Five-Year Age-Adjusted Lung Cancer Incidence Rates by Zone, Delaware, 2018-2022



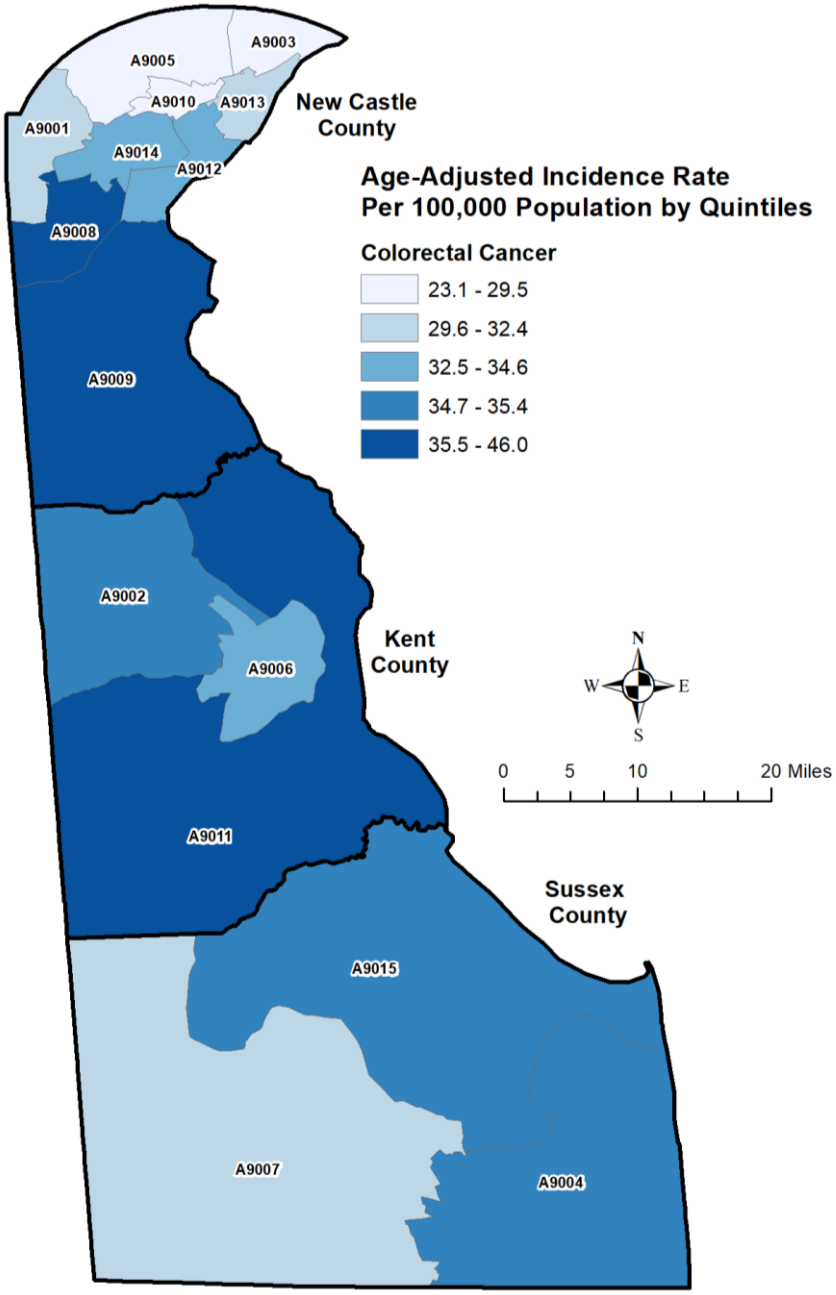
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html
Source: Delaware Cancer Reporting Zone Shapefile: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Table 8. Five-Year Age-Adjusted Colorectal Cancer Incidence Rates by Zone, Delaware, 2018-2022

Zone Name	Zone ID	Age-Adjusted Rate (95% confidence Interval)
Newark, North Star	A9001	31.6 (25.5, 38.8)
Dover, Smyrna	A9002	35.4 (29.3, 42.5)
North Wilmington, Claymont	A9003	23.1 (18.8, 28.1)
Millsboro, Long Neck, Ocean View, Selbyville, Bethany Beach	A9004	34.7 (29.8, 40.5)
North Wilmington, Greenville, Hockessin	A9005	27.5 (22.8, 33.1)
Dover, Dover Air Force Base	A9006	34.3 (28.3, 41.2)
Seaford, Bridgeville	A9007	32.4 (27.4, 38.1)
Bear, Glasgow	A9008	46.0 (36.8, 56.7)
Middletown, Odessa, Townsend	A9009	42.9 (35.6, 51.2)
Wilmington, Elsmere	A9010	29.5 (24.2, 35.6)
Milford, Harrington, Leipsic, Smyrna, Little Creek	A9011	38.2 (32.0, 45.3)
Wilmington Manor, New Castle, Bear	A9012	34.6 (28.5, 41.6)
Wilmington	A9013	29.6 (23.9, 36.4)
Christiana, Newark, Stanton	A9014	33.0 (27.4, 39.5)
Georgetown, Milford, Lewes	A9015	35.0 (29.9, 40.8)

Source: Delaware Department of Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Figure 13. Five-Year Age-Adjusted Colorectal Cancer Incidence Rates by Zone, Delaware, 2018-2022



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025
Source: 2010 U.S. Census county shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html
Source: Delaware Cancer Reporting Zone Shapefile: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

Appendix A. 16 *Del. Code*, Chapters 12 and 20 (76 Del. Laws., C 292 §1)[12]

CHAPTER 292 FORMERLY
SENATE BILL NO. 235
AS AMENDED BY
SENATE AMENDMENT NO. 2
AND
HOUSE AMENDMENT NO. 1

AN ACT TO AMEND TITLE 16 OF THE DELAWARE CODE RELATING TO UNIFORM HEALTH DATA REPORTING.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF DELAWARE:

WHEREAS, the State of Delaware traditionally has one of the highest rates of cancer incidence and mortality in the United States;

WHEREAS, identification of clusters of certain types of cancers in specific locations can help public health agencies develop intervention strategies leading to early detection when cancer is more easily cured;

WHEREAS, providing such data to medical researchers outside state government may assist in the process of both identifying cancer clusters and developing intervention strategies;

WHEREAS, the public good is served by allowing citizens to know of potential hazards in their communities so they can take actions to preserve their health;

WHEREAS, it is equally important to preserve the privacy and dignity of people afflicted with cancer, and

WHEREAS, the Department of Health and Social Services, Division of Public Health has opted to err on the side of cancer patient privacy by withholding even generic data on cancer clusters from other researchers and the public;

NOW THEREFORE:

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF DELAWARE:

Section 1. Amend Chapter 20, Title 16 of the Delaware Code by renumbering §2005 through 2008 as §2006 through 2009, respectively.

Section 2. Amend Chapter 20, Title 16 of the Delaware Code by inserting a new §2005 to read as follows:

"§2005(a). Cancer incidence data.

Notwithstanding any provisions in this Title to the contrary, the agency shall make available as public records cancer incidence by census tract and by type of cancer. Such released data shall be assigned consensus tract geography from the most recent decennial census. If release of such information by census tract will explicitly or implicitly identify any individual, the agency may combine data among contiguous census tracts, but only insofar as is necessary to protect patient confidentiality.

(b) The agency shall create a detailed map of each county in Delaware that graphically illustrates the overall incidence of cancer in each census tract. The census tracts will be identified on the maps and shall be color-coded to designate the degree of cancer incidence in each tract. These maps shall be created within 90 days of the agency receiving the cancer incidence data.

(c) The agency shall post the maps created under the subsection above on their website in a format that can be easily accessed and read by the public."

Section 3. Amend §1232(d) Title 16 of the Delaware Code by deleting the word "or" at the end of paragraph (6) and by inserting the word "or" at the end of paragraph 7 and by adding a new paragraph "(8)" to read as follows:

"(8) Pursuant to Title 16 §2005."

Section 4. Amend Subchapter III of Chapter 12 of Title 16 of the Delaware Code by inserting a new section §1233 to read as follows:

"§1233. Regulations.

The Department of Health and Social Services shall enforce this subchapter and shall from time to time promulgate any additional forms and regulations that are necessary for this purpose."

Approved July 3, 2008

[12] https://delcode.delaware.gov/title16/c020/index.html

Appendix B. Delaware 2010 Census Tract to Cancer Reporting Zone Crosswalk and Maps

TABLE B1. CROSSWALK OF DELAWARE 2010 CENSUS TRACT TO CANCER REPORTING ZONE

2010 Census Tract Name	Zone ID
2.00	A9013
3.00	A9013
4.00	A9013
5.00	A9013
6.01	A9013
6.02	A9013
9.00	A9013
11.00	A9010
12.00	A9005
13.00	A9005
14.00	A9010
15.00	A9010
16.00	A9013
19.02	A9013
21.00	A9013
22.00	A9010
23.00	A9010
24.00	A9010
25.00	A9010
26.00	A9010
27.00	A9013
28.00	A9013
29.00	A9013
30.02	A9013
101.01	A9003
101.04	A9003
102.00	A9003
103.00	A9003
104.00	A9003
105.02	A9013
107.02	A9013
108.00	A9003
109.00	A9003
110.00	A9003
111.00	A9003
112.01	A9003
112.02	A9003
112.03	A9003
112.04	A9003
112.05	A9003
112.06	A9003
113.00	A9003
114.00	A9003
115.00	A9003
116.00	A9003
117.00	A9005
118.00	A9005
119.00	A9005
120.00	A9010
121.00	A9010
122.00	A9010
123.00	A9010
124.00	A9010
125.00	A9010
126.00	A9010
127.00	A9014
129.00	A9012
130.00	A9014
131.00	A9010
132.00	A9010
133.00	A9005
134.00	A9005
135.01	A9005
135.03	A9005

Source: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

TABLE B2. CROSSWALK OF DELAWARE 2010 CENSUS TRACT TO CANCER REPORTING ZONE (CONTINUED)

2010 Census Tract Name	Zone ID
135.05	A9005
135.06	A9001
136.04	A9005
136.07	A9005
136.08	A9014
136.10	A9001
136.11	A9001
136.12	A9005
136.13	A9005
136.14	A9014
136.15	A9014
137.00	A9001
138.00	A9014
139.01	A9014
139.03	A9008
139.04	A9014
140.00	A9014
141.00	A9014
142.00	A9001
143.00	A9001
144.02	A9001
144.03	A9001
144.04	A9001
145.01	A9001
145.02	A9001
147.02	A9008
147.03	A9014
147.05	A9014
147.06	A9008
148.03	A9001
148.05	A9008
148.07	A9001

2010 Census Tract Name	Zone ID
148.08	A9008
148.09	A9008
148.10	A9008
149.03	A9008
149.04	A9012
149.06	A9008
149.07	A9014
149.08	A9012
149.09	A9012
150.00	A9014
151.00	A9012
152.00	A9012
154.00	A9013
155.02	A9013
156.00	A9012
158.02	A9012
159.00	A9012
160.00	A9012
161.00	A9012
162.00	A9012
163.01	A9008
163.02	A9012
163.05	A9012
164.01	A9009
164.04	A9009
166.01	A9009
166.02	A9009
166.04	A9009
166.08	A9009
168.01	A9009
168.04	A9009
169.01	A9009

Source: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)

Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

TABLE B3. CROSSWALK OF DELAWARE 2010 CENSUS TRACT TO CANCER REPORTING ZONE (CONTINUED)

2010 Census Tract Name	Zone ID
169.04	A9009
401.00	A9002
402.01	A9002
402.02	A9002
402.03	A9011
405.01	A9002
405.02	A9011
407.00	A9002
409.00	A9006
410.00	A9006
411.00	A9006
412.00	A9006
413.00	A9006
414.00	A9006
415.00	A9006
416.00	A9006
417.01	A9006
417.02	A9006
418.01	A9002
418.02	A9002
419.00	A9002
420.00	A9011
421.00	A9011
422.01	A9006
422.02	A9011
425.00	A9011
428.00	A9011
429.00	A9011
430.00	A9011
431.00	A9011
432.02	A9011

2010 Census Tract Name	Zone ID
433.00	A9006
434.00	A9011
501.01	A9015
501.03	A9015
501.04	A9015
501.05	A9015
502.00	A9015
503.01	A9007
503.02	A9015
504.01	A9007
504.03	A9007
504.05	A9007
504.06	A9007
504.07	A9007
504.08	A9007
505.01	A9007
505.03	A9015
505.04	A9015
506.01	A9007
506.02	A9004
507.01	A9015
507.03	A9004
507.04	A9004
507.05	A9004
507.06	A9004
508.01	A9015
508.02	A9015
508.03	A9015
509.01	A9015
509.02	A9015
510.03	A9015

Source: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)

Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

TABLE B4. CROSSWALK OF DELAWARE 2010 CENSUS TRACT TO CANCER REPORTING ZONE (CONTINUED)

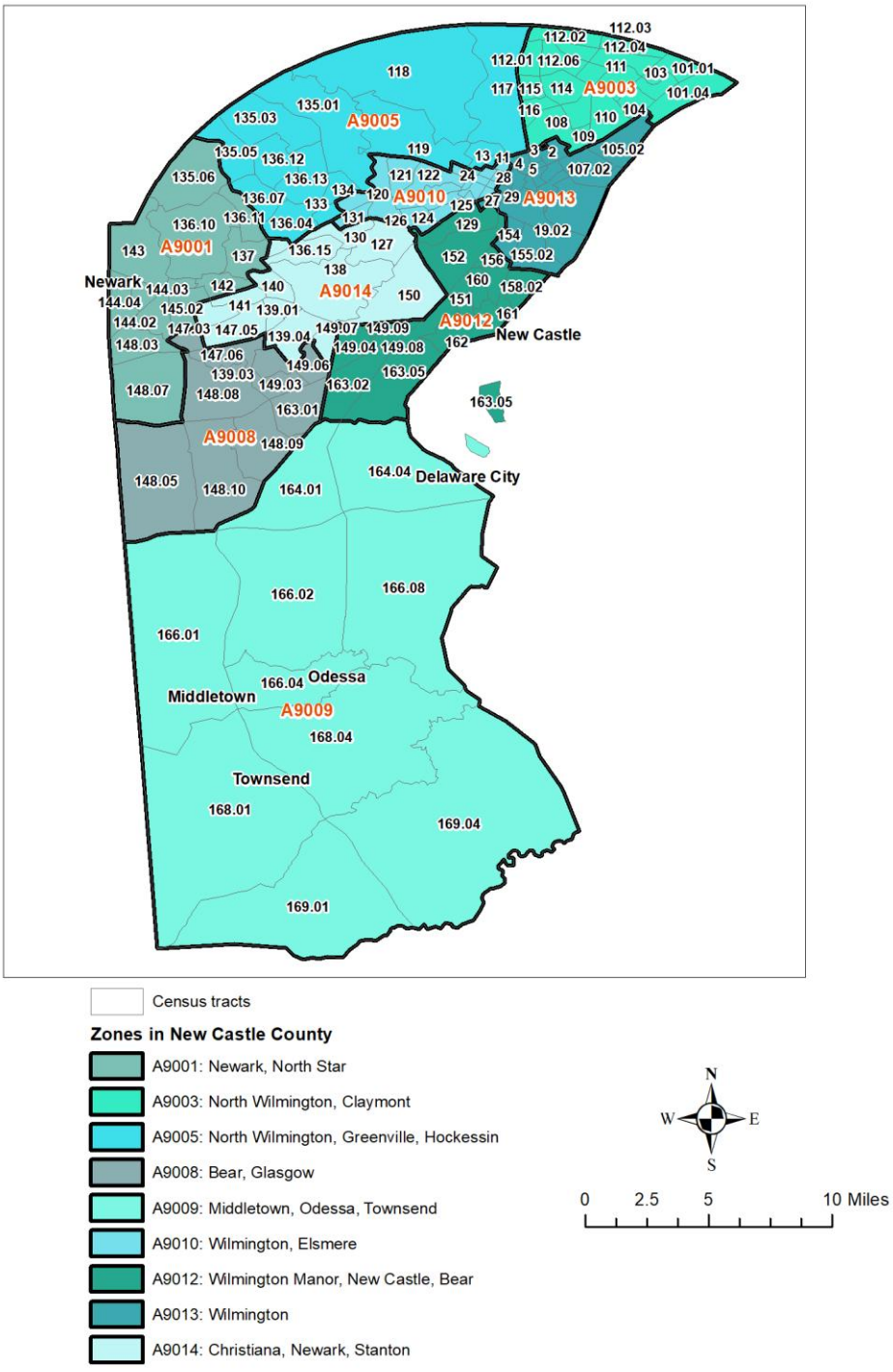
2010 Census Tract Name	Zone ID
510.04	A9004
510.05	A9004
510.06	A9004
510.07	A9004
511.01	A9015
511.02	A9004
511.03	A9004
512.01	A9004
512.02	A9004
512.03	A9004
512.04	A9004
512.05	A9004

2010 Census Tract Name	Zone ID
513.01	A9004
513.02	A9004
513.03	A9004
513.05	A9004
513.06	A9004
514.00	A9004
515.00	A9004
517.01	A9007
517.02	A9007
518.01	A9007
518.02	A9007
519.00	A9007

Source: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)

Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

B1. Census Tracts and Zones in New Castle County, Delaware



Census tracts

Zones in New Castle County

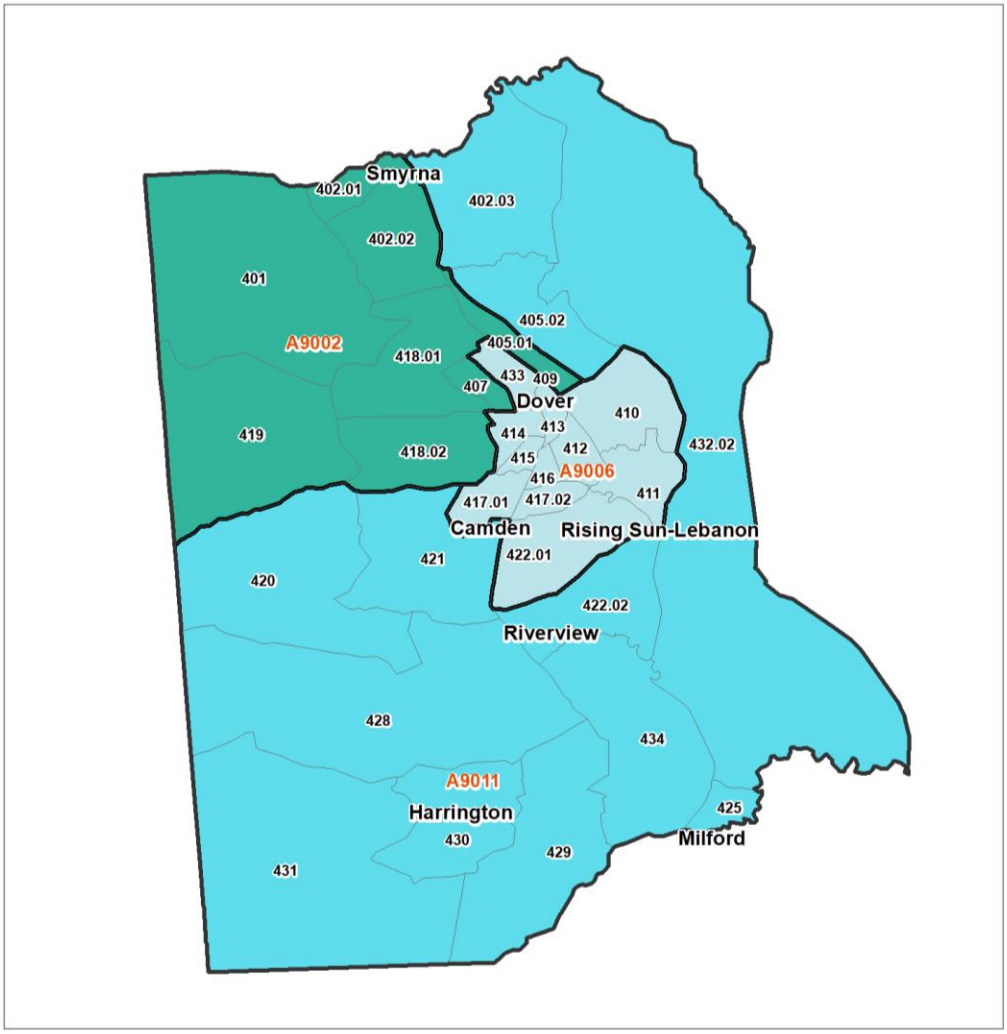
- A9001: Newark, North Star
- A9003: North Wilmington, Claymont
- A9005: North Wilmington, Greenville, Hockessin
- A9008: Bear, Glasgow
- A9009: Middletown, Odessa, Townsend
- A9010: Wilmington, Elsmere
- A9012: Wilmington Manor, New Castle, Bear
- A9013: Wilmington
- A9014: Christiana, Newark, Stanton

N
W E
S

0 2.5 5 10 Miles

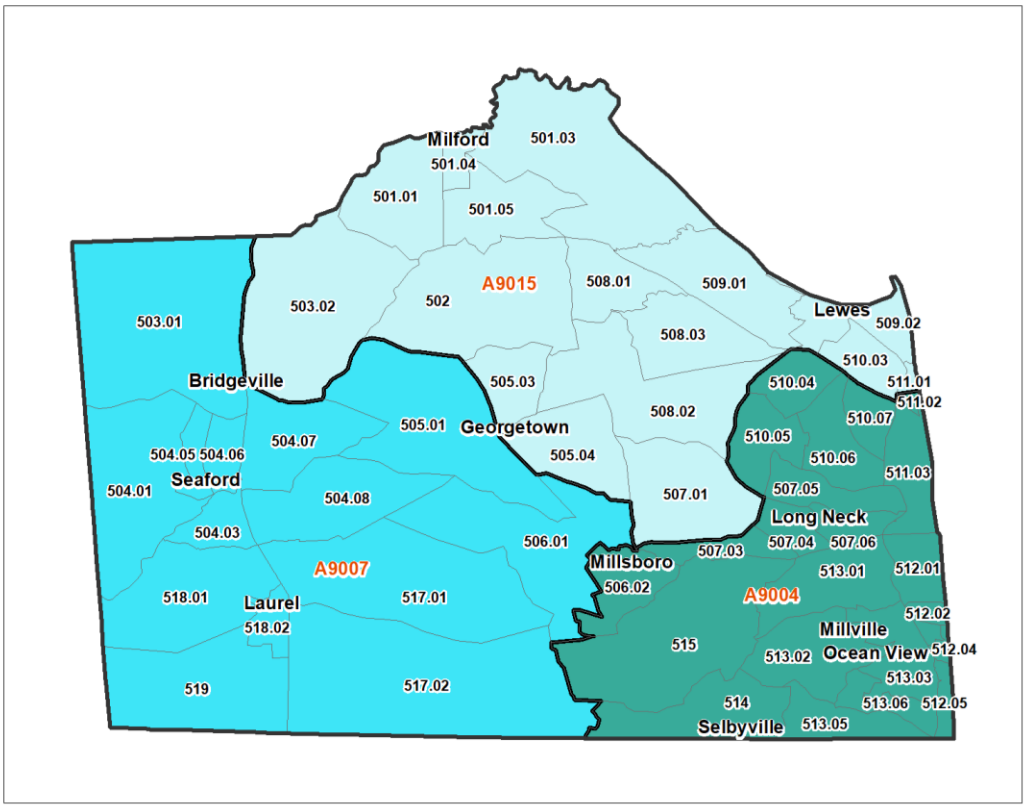
Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html
Source: Delaware Cancer Reporting Zone Shapefile: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

B2. Census Tracts and Zones in Kent County, Delaware



Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html
Source: Delaware Cancer Reporting Zone Shapefile: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.

B3. Census Tracts and Zones in Sussex County, Delaware



Source: 2010 U.S. Census county and tract shapefiles: https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.2010.html
Source: Delaware Cancer Reporting Zone Shapefile: The National Cancer Institute (NCI) and the North American Association of Central Cancer Registries (NAACCR)
Cancer reporting zones (referred to as "zones") are aggregations of census tracts that were created as part of the NCI/NAACCR Zone Design Project.