**CINA Deluxe Data Quality Profile (DQP) and Fitness of Use**

**Variable examined:** **Summary Stage 2000** (NAACCR Data Item #: 3020)

**Date:** March 22, 2021

**Filters:** Invasive cases only; excluded lymphoma, leukemia, DCO, and autopsy cases

**Diagnosis Years covered:** 2013-2017

**Cancer Sites**: Colorectal, lung, female breast, prostate, and cervix

**Database citation:** CINA Analytic File, 1995-2017, Expanded Races

**Number of Registries included:** 50 State Cancer Registries plus DC Cancer Registry

**Data Dictionary:** NAACCR Data Dictionary version 18 (http://datadictionary.naaccr.org/default.aspx?Version=18)

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**Technical Notes:**

1. The percentage of unknown summary stage 2000 includes unknown (code 9) or blank values.
2. Upper Whisker: extends to largest data point within the boundary of Q3 + 1.5(Q3 - Q1), where Q3 indicates the quartile 3 (75th percentile) and Q1 indicates the quartile 1 (25th Percentile). Interquartile Range (IQR) = Q3 - Q1.
3. Diagnostic confirmation: Microscopic confirmation includes positive histology, positive cytology, and positive microscopic confirmation, and method not specified.
4. Type of reporting source: Hospital inpatient, radiation treatment centers/medical oncology centers, clinic unit/surgical center, and Lab/Nursing home/hospice.
5. Urban/Rural 2013: The 2013 Rural-Urban Continuum codes distinguish metropolitan counties by the population size of their metro area, and nonmetropolitan counties by the degree of urbanization and adjacency to a metro area. Metropolitan area includes county metro area with a population ≥ of 1million, county metro area with a population between 25,000 and 1 million, and county metro area with population <25,000.

Table 1. Unknown summary stage 20001 by cancer site, Years 2013-2017 combined.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Colorectum** | | **Lung** | | **Female Breast** | | **Prostate** | | **Cervix** | |
| **Registry Level** |  |  |  |  |  |  |  |  |  |  |
| 25th-75th Percentile | 4.0-7.1% | | 2.5-5.7% | | 0.9-2.9% | | 2.9-9.0% | | 2.8-6.9% | |
| Minimum | 3.2% | | 1.3% | | 0.4% | | 0.7% | | 1.1% | |
| Mean | 5.8% | | 4.5% | | 2.0% | | 6.3% | | 5.1% | |
| Median | 5.2% | | 3.7% | | 1.5% | | 4.2% | | 4.3% | |
| Maximum | 12.8% | | 14.2% | | 5.5% | | 21.6% | | 14.0% | |
| Upper Whisker2 | 11.7% | | 10.5% | | 5.9% | | 18.2% | | 12.9% | |
| # outside of upper whisker | 2 | | 3 | | 0 | | 1 | | 2 | |
| **All cases combined** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** |
| **Sex** |  |  |  |  |  |  |  |  |  |  |
| Male | 367,858 | 6.0 | 556,382 | 4.6 | NA | 0.0 | 953,187 | 7.5 | NA | 0.0 |
| Female | 331,943 | 6.3 | 514,270 | 4.3 | 1,213,910 | 2.2 | NA | 0.0 | 63,478 | 6.0 |
| **Race** |  |  |  |  |  |  |  |  |  |  |
| Non-Hispanic White | 514,784 | 5.6 | 872,471 | 4.3 | 907,902 | 1.9 | 679,433 | 6.0 | 38,376 | 5.1 |
| Non-Hispanic Black | 84,640 | 6.4 | 112,030 | 4.2 | 139,073 | 2.3 | 151,246 | 6.8 | 9,469 | 6.6 |
| Hispanic | 62,062 | 7.1 | 46,766 | 6.7 | 101,002 | 3.2 | 67,816 | 10.5 | 11,124 | 6.6 |
| AI/AN | 4,872 | 7.4 | 6211 | 5.7 | 6704 | 3.5 | 4019 | 8.5 | 576 | 7.8 |
| Asian or Pacific Islander | 27,079 | 6.5 | 29,318 | 4.7 | 50,277 | 2.2 | 21,574 | 8.7 | 3,198 | 5.1 |
| Unknown | 6,221 | 34.1 | 3,548 | 22.7 | 8,769 | 22.9 | 28,690 | 40.6 | 717 | 37.1 |
| **Age** |  |  |  |  |  |  |  |  |  |  |
| 00-49 years | 79,438 | 4.3 | 32,562 | 3.1 | 218,772 | 2.0 | 19,924 | 4.5 | 31,202 | 5.3 |
| 50-64 years | 225,520 | 5.2 | 300,256 | 3.2 | 441,232 | 1.8 | 369,202 | 5.6 | 19,682 | 5.5 |
| 65-79 years | 255,309 | 5.3 | 538,593 | 4.0 | 423,581 | 2.0 | 484,107 | 7.8 | 9,697 | 7.2 |
| 80+ years | 139,530 | 10.2 | 199,238 | 7.7 | 130,307 | 4.7 | 79,935 | 15.9 | 2,896 | 12.6 |
| **Dx Confirmation3** |  |  |  |  |  |  |  |  |  |  |
| Microscopic confirmed | 682,768 | 5.2 | 975,647 | 2.9 | 1,204,129 | 1.8 | 929,413 | 6.6 | 62,302 | 5.0 |
| Non-microscopic confirmed | 12,116 | 27.8 | 79,484 | 9.9 | 5,581 | 24.4 | 13,176 | 16.2 | 472 | 25.8 |
| Unknown | 4,917 | 81.5 | 15,521 | 74.2 | 4,200 | 84.0 | 10,598 | 79.7 | 704 | 77.8 |
| **Type of reporting source4** |  |  |  |  |  |  |  |  |  |  |
| Hospital Inpatient | 646,503 | 4.5 | 979,273 | 3.2 | 1,049,626 | 1.5 | 713,377 | 3.4 | 56,751 | 4.3 |
| Radiation treatment/ medical oncology center | 8,133 | 5.4 | 25,804 | 2.7 | 42,961 | 1.4 | 78,406 | 10.2 | 1,721 | 3.9 |
| Clinic unit/surgical center | 33,757 | 26.1 | 56,149 | 20.0 | 107,198 | 5.1 | 104,284 | 19.9 | 3,758 | 14.8 |
| Lab/Nursing home/hospice | 11,408 | 41.9 | 9,426 | 51.5 | 14,125 | 33.7 | 57,120 | 33.7 | 1,248 | 56.1 |
| **Metro/Non-Metro 20135** |  |  |  |  |  |  |  |  |  |  |
| Metro | 564,000 | 6.1 | 850,023 | 4.3 | 1,019,483 | 2.2 | 784,754 | 7.8 | 53,006 | 5.9 |
| Non-Metro | 123,740 | 6.2 | 202,820 | 5.1 | 172,601 | 2.5 | 149,793 | 6.1 | 9,680 | 6.0 |
| Unknown | 12,061 | 6.4 | 17,809 | 5.5 | 21,826 | 2.7 | 18,640 | 7.2 | 792 | 7.1 |

See the technical notes on page 2 for the cited numbers 1-5 in this table.

Table 2. Unknown summary stage 20001 by diagnosis year: Colorectal cancer 2013-2017

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
| **Registry Level** |  |  |  |  |  |  |  |  |  |  |
| 25th-75th Percentile | 4.1-7.1% | | 3.8-6.9% | | 3.9-6.5% | | 4.5-7.3% | | 4.5-7.4% | |
| Minimum | 2.2% | | 1.5% | | 1.0% | | 2.3% | | 1.4% | |
| Mean | 5.7% | | 5.7% | | 5.4% | | 6.2% | | 6.0% | |
| Median | 5.0% | | 4.9% | | 4.6% | | 5.8% | | 5.7% | |
| Maximum | 13.6% | | 14.8% | | 15.1% | | 15.3% | | 11.0% | |
| Upper Whisker2 | 11.6% | | 11.5% | | 10.4% | | 11.6% | | 11.7% | |
| # outside of upper whisker | 2 | | 2 | | 2 | | 1 | | 0 | |
| **All cases combined** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** |
| **Sex** |  |  |  |  |  |  |  |  |  |  |
| Male | 72,244 | 5.7 | 73,791 | 5.7 | 74,365 | 5.7 | 74,012 | 6.4 | 73,446 | 6.5 |
| Female | 65,610 | 6.1 | 66,529 | 6.2 | 66,573 | 5.8 | 67,468 | 6.6 | 65,763 | 6.7 |
| **Race** |  |  |  |  |  |  |  |  |  |  |
| Non-Hispanic White | 102,894 | 5.5 | 103,894 | 5.5 | 103,610 | 5.3 | 103,213 | 5.8 | 101,173 | 5.9 |
| Non-Hispanic Black | 16,819 | 6.4 | 17,081 | 6.2 | 17,149 | 6.0 | 17,061 | 6.6 | 16,530 | 7.0 |
| Hispanic | 11275 | 7.0 | 11977 | 7.1 | 12569 | 6.6 | 13029 | 7.6 | 13,212 | 7.3 |
| AI/AN | 906 | 8.6 | 925 | 8.0 | 990 | 6.2 | 1,035 | 7.0 | 1,016 | 7.3 |
| Asian or Pacific Islander | 5,056 | 6.2 | 5,339 | 6.7 | 5,349 | 5.9 | 5,658 | 6.5 | 5,677 | 7.2 |
| Unknown | 878 | 23.2 | 1068 | 25.5 | 1240 | 32.3 | 1458 | 43.3 | 1577 | 38.9 |
| **Age** |  |  |  |  |  |  |  |  |  |  |
| 00-49 years | 14,556 | 4.3 | 15,443 | 4.2 | 16,262 | 4.2 | 16,534 | 4.5 | 16,643 | 4.4 |
| 50-64 years | 43,489 | 4.8 | 45,609 | 4.9 | 45,756 | 4.9 | 45,957 | 5.7 | 44,709 | 6.0 |
| 65-79 years | 50,216 | 4.9 | 50,893 | 5.0 | 51,098 | 4.8 | 51,703 | 5.7 | 51,399 | 6.0 |
| 80+ years | 29,592 | 10.1 | 28,374 | 10.3 | 27,822 | 9.8 | 27,285 | 10.6 | 26,457 | 10.3 |
| **Dx Confirmation3** |  |  |  |  |  |  |  |  |  |  |
| Microscopic confirmed | 134,399 | 4.9 | 136,997 | 5.1 | 137,399 | 4.8 | 138,065 | 5.6 | 135,908 | 5.7 |
| Non-microscopic confirmed | 2,379 | 29.2 | 2,368 | 27.6 | 2,538 | 25.8 | 2,419 | 28.8 | 2,412 | 27.7 |
| Unknown | 1076 | 82.0 | 955 | 79.9 | 1001 | 79.1 | 996 | 82.8 | 889 | 83.9 |
| **Type of reporting source4** |  |  |  |  |  |  |  |  |  |  |
| Hospital Inpatient | 128,229 | 4.5 | 129,906 | 4.4 | 130,113 | 4.1 | 130,308 | 4.7 | 127,947 | 4.8 |
| Radiation treatment/ medical oncology center | 1,482 | 6.3 | 1,572 | 4.6 | 1,718 | 4.7 | 1,653 | 5.3 | 1,708 | 6.1 |
| Clinic unit/surgical center | 6,104 | 24.1 | 6,599 | 25.1 | 6,794 | 25.8 | 7,046 | 26.9 | 7,214 | 28.1 |
| Lab/Nursing home/hospice | 2,039 | 42.2 | 2,243 | 39.8 | 2,313 | 40.8 | 2,473 | 46.1 | 2,340 | 40.1 |
| **Metro/Non-Metro 20135** |  |  |  |  |  |  |  |  |  |  |
| Metro | 110,698 | 5.9 | 113,301 | 5.9 | 113,541 | 5.7 | 114,219 | 6.5 | 112,241 | 6.6 |
| Non-Metro | 24,769 | 6.0 | 24,696 | 6.2 | 24,983 | 5.8 | 24,767 | 6.5 | 24,525 | 6.7 |
| Unknown | 2,387 | 4.2 | 2,323 | 5.3 | 2,414 | 7.9 | 2,494 | 8.4 | 2,443 | 5.9 |

See the technical notes on page 2 for the cited numbers 1-5 in this table.

Table 3. Unknown summary stage 20001 by diagnosis year: Lung cancer 2013-2017

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
| **Registry Level** |  |  |  |  |  |  |  |  |  |  |
| 25th-75th Percentile | 2.4-6.2% | | 2.2-5.9% | | 2.1-5.3% | | 2.5-5.6% | | 2.2-6.7% | |
| Minimum | 1.3% | | 1.4% | | 1.0% | | 1.3% | | 1.0% | |
| Mean | 4.8% | | 4.6% | | 4.1% | | 4.6% | | 4.7% | |
| Median | 4.3% | | 3.8% | | 3.0% | | 3.8% | | 3.7% | |
| Maximum | 16.1% | | 20.2% | | 15.0% | | 14.5% | | 19.5% | |
| Upper Whisker2 | 12.0% | | 11.4% | | 10.2% | | 10.3% | | 13.4% | |
| # outside of upper whisker | 2 | | 3 | | 3 | | 2 | | 1 | |
| **All cases combined** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** |
| **Sex** |  |  |  |  |  |  |  |  |  |  |
| Male | 111,523 | 5.1 | 111,733 | 4.6 | 112,024 | 3.9 | 111,317 | 4.7 | 109,785 | 4.6 |
| Female | 100,710 | 4.9 | 101,477 | 4.3 | 103,580 | 3.8 | 104,063 | 4.3 | 104,440 | 4.3 |
| **Race** |  |  |  |  |  |  |  |  |  |  |
| Non-Hispanic White | 173,903 | 4.9 | 174,525 | 4.4 | 175,892 | 3.7 | 174,764 | 4.2 | 173,387 | 4.2 |
| Non-Hispanic Black | 22,112 | 4.7 | 22,353 | 3.9 | 22,461 | 3.7 | 22,670 | 4.4 | 22,434 | 4.1 |
| Hispanic | 8965 | 7.3 | 8971 | 6.4 | 9353 | 6.0 | 9802 | 7.1 | 9,675 | 6.7 |
| AI/AN | 1,197 | 6.3 | 1,250 | 5.8 | 1,282 | 4.9 | 1,213 | 6.0 | 1,269 | 5.7 |
| Asian or Pacific Islander | 5,510 | 5.5 | 5,463 | 4.7 | 5,914 | 4.0 | 6,078 | 4.8 | 6,353 | 4.5 |
| Unknown | 521 | 14.2 | 611 | 12.6 | 621 | 17.1 | 763 | 32.4 | 1,032 | 29.4 |
| **Age** |  |  |  |  |  |  |  |  |  |  |
| 00-49 years | 7,492 | 3.3 | 6,817 | 3.0 | 6,432 | 3.0 | 6,074 | 3.4 | 5,747 | 2.8 |
| 50-64 years | 59,476 | 3.3 | 60,021 | 3.1 | 60,968 | 2.7 | 60,454 | 3.3 | 59,337 | 3.3 |
| 65-79 years | 104,479 | 4.5 | 106,602 | 4.0 | 108,456 | 3.4 | 109,101 | 4.1 | 109,955 | 4.1 |
| 80+ years | 40,786 | 8.9 | 39,769 | 7.9 | 39,747 | 6.9 | 39,751 | 7.6 | 39,185 | 7.4 |
| **Dx Confirmation3** |  |  |  |  |  |  |  |  |  |  |
| Microscopic confirmed | 192,855 | 3.1 | 194,222 | 2.9 | 196,266 | 2.4 | 196,264 | 3.0 | 196,040 | 3.1 |
| Non-microscopic confirmed | 15,649 | 10.9 | 15,712 | 9.6 | 16,334 | 8.9 | 16,237 | 10.3 | 15,552 | 10.0 |
| Unknown | 3,729 | 77.7 | 3,276 | 73.4 | 3,004 | 72.9 | 2,879 | 72.0 | 2,633 | 74.0 |
| **Type of reporting source4** |  |  |  |  |  |  |  |  |  |  |
| Hospital Inpatient | 194,131 | 3.5 | 195,101 | 3.0 | 197,234 | 2.7 | 196,884 | 3.3 | 195,923 | 3.3 |
| Radiation treatment/ medical oncology center | 5,028 | 3.1 | 5,082 | 2.6 | 5,383 | 1.9 | 5,166 | 3.0 | 5,145 | 2.7 |
| Clinic unit/surgical center | 11,271 | 24.8 | 11,263 | 21.4 | 11,305 | 18.2 | 11,246 | 17.5 | 11,064 | 17.8 |
| Lab/Nursing home/hospice | 1,803 | 49.4 | 1,764 | 56.5 | 1,682 | 54.5 | 2,084 | 53.1 | 2,093 | 45.0 |
| **Metro/Non-Metro 20135** |  |  |  |  |  |  |  |  |  |  |
| Metro | 168,829 | 4.9 | 169,190 | 4.3 | 170,963 | 3.7 | 170,815 | 4.3 | 170,226 | 4.2 |
| Non-Metro | 39,988 | 5.7 | 40,676 | 5.2 | 40,996 | 4.4 | 40,809 | 5.1 | 40,351 | 5.0 |
| Unknown | 3,416 | 2.4 | 3,344 | 3.3 | 3,645 | 5.7 | 3,756 | 6.5 | 3,648 | 9.2 |

See the technical notes on page 2 for the cited numbers 1-5 in this table.

Table 4. Unknown summary stage 20001 by diagnosis year: Female breast cancer 2013-2017

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
| **Registry Level** |  |  |  |  |  |  |  |  |  |  |
| 25th-75th Percentile | 0.9-2.8% | | 0.7-3.0% | | 0.5-2.5% | | 1.0-3.0% | | 0.9-3.1% | |
| Minimum | 0.3% | | 0.4% | | 0.3% | | 0.4% | | 0.2% | |
| Mean | 2.1% | | 2.0% | | 1.8% | | 2.1% | | 2.1% | |
| Median | 1.4% | | 1.4% | | 1.3% | | 1.6% | | 1.7% | |
| Maximum | 7.1% | | 7.2% | | 9.0% | | 5.5% | | 6.5% | |
| Upper Whisker2 | 5.7% | | 6.5% | | 5.6% | | 5.9% | | 6.4% | |
| # outside of upper whisker | 5 | | 1 | | 2 | | 0 | | 1 | |
| **All cases combined** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** |
| **Sex** |  |  |  |  |  |  |  |  |  |  |
| Male | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Female | 234,929 | 2.2 | 238,869 | 2.2 | 244,558 | 1.9 | 246,709 | 2.4 | 248,845 | 2.3 |
| **Race** |  |  |  |  |  |  |  |  |  |  |
| Non-Hispanic White | 177,783 | 2.0 | 180,141 | 1.9 | 182,929 | 1.7 | 183,397 | 2.0 | 183,652 | 1.8 |
| Non-Hispanic Black | 26,787 | 2.5 | 27,407 | 2.4 | 28,056 | 1.9 | 28,437 | 2.6 | 28,386 | 2.4 |
| Hispanic | 18,549 | 3.1 | 19,085 | 2.9 | 20,327 | 2.8 | 21,165 | 3.5 | 21,876 | 3.6 |
| AI/AN | 1,294 | 3.8 | 1,354 | 4.9 | 1,323 | 2.9 | 1,397 | 2.9 | 1,336 | 3.1 |
| Asian or Pacific Islander | 9,189 | 2.4 | 9,405 | 2.1 | 10,227 | 2.0 | 10,370 | 2.3 | 11,086 | 2.0 |
| Unknown | 1,301 | 16.2 | 1,453 | 15.2 | 1,643 | 17.5 | 1,900 | 29.4 | 2,472 | 29.7 |
| **Age** |  |  |  |  |  |  |  |  |  |  |
| 00-49 years | 43,815 | 2.0 | 43,701 | 1.9 | 44,038 | 1.7 | 43,637 | 2.3 | 43,581 | 2.1 |
| 50-64 years | 86,035 | 1.8 | 88,086 | 1.8 | 89,145 | 1.6 | 89,038 | 2.0 | 88,928 | 2.0 |
| 65-79 years | 78,564 | 2.0 | 81,155 | 1.9 | 85,175 | 1.7 | 87,888 | 2.2 | 90,799 | 2.1 |
| 80+ years | 26,509 | 4.7 | 25,920 | 4.7 | 26,198 | 4.3 | 26,143 | 4.9 | 25,537 | 4.8 |
| **Dx Confirmation3** |  |  |  |  |  |  |  |  |  |  |
| Microscopic confirmed | 232,894 | 1.8 | 237,025 | 1.8 | 242,527 | 1.6 | 244,723 | 2.0 | 246,960 | 2.0 |
| Non-microscopic confirmed | 1,141 | 29.8 | 1,140 | 24.0 | 1,147 | 19.5 | 1,081 | 21.4 | 1,072 | 27.4 |
| Unknown | 894 | 86.2 | 704 | 81.1 | 884 | 81.6 | 905 | 86.2 | 813 | 84.0 |
| **Type of reporting source4** |  |  |  |  |  |  |  |  |  |  |
| Hospital Inpatient | 203,544 | 1.6 | 206,651 | 1.5 | 211,821 | 1.3 | 212,567 | 1.6 | 215,043 | 1.6 |
| Radiation treatment/ medical oncology center | 8,285 | 1.7 | 8,632 | 1.3 | 9,035 | 1.3 | 8,724 | 1.8 | 8,285 | 1.1 |
| Clinic unit/surgical center | 20,394 | 4.9 | 20,834 | 4.6 | 21,056 | 4.2 | 22,317 | 5.8 | 22,597 | 6.0 |
| Lab/Nursing home/hospice | 2,706 | 29.0 | 2,752 | 34.0 | 2,646 | 34.2 | 3,101 | 36.0 | 2,920 | 34.8 |
| **Metro/Non-Metro 20135** |  |  |  |  |  |  |  |  |  |  |
| Metro | 197,171 | 2.2 | 200,313 | 2.1 | 205,331 | 1.9 | 207,379 | 2.4 | 209,289 | 2.3 |
| Non-Metro | 33,719 | 2.6 | 34,284 | 2.7 | 34,816 | 2.1 | 34,947 | 2.5 | 34,835 | 2.6 |
| Unknown | 4,039 | 1.1 | 4,272 | 1.7 | 4,411 | 3.0 | 4,383 | 4.2 | 4,721 | 3.2 |

See the technical notes on page 2 for the cited numbers 1-5 in this table.

Table 5. Unknown summary stage 20001 by diagnosis year: Prostate cancer 2013-2017

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
| **Registry Level** |  |  |  |  |  |  |  |  |  |  |
| 25th-75th Percentile | 2.2-7.1% | | 1.9-7.9% | | 1.7-6.9% | | 3.2-9.6% | | 2.8-10.8% | |
| Minimum | 0.4% | | 0.6% | | 0.6% | | 0.5% | | 0.2% | |
| Mean | 6.0% | | 5.9% | | 4.9% | | 7.2% | | 7.3% | |
| Median | 3.6% | | 3.4% | | 3.3% | | 5.9% | | 5.1% | |
| Maximum | 37.7% | | 23.3% | | 19.5% | | 26.7% | | 25.6% | |
| Upper Whisker2 | 14.5% | | 17.0% | | 14.7% | | 19.2% | | 22.8% | |
| # outside of upper whisker | 4 | | 4 | | 3 | | 1 | | 1 | |
| **All cases combined** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** |
| **Sex** |  |  |  |  |  |  |  |  |  |  |
| Male | 183,974 | 7.0 | 177,724 | 6.4 | 189,790 | 6.2 | 196,447 | 8.9 | 205,252 | 8.9 |
| Female | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Race** |  |  |  |  |  |  |  |  |  |  |
| Non-Hispanic White | 132,401 | 5.8 | 127,707 | 5.5 | 135,618 | 5.2 | 139,142 | 6.8 | 144,565 | 6.5 |
| Non-Hispanic Black | 29,206 | 6.8 | 28,709 | 6.1 | 30,377 | 5.9 | 31,250 | 8.0 | 31,704 | 7.1 |
| Hispanic | 13195 | 10.2 | 12769 | 9.1 | 13490 | 8.6 | 13943 | 12.5 | 14,419 | 11.8 |
| AI/AN | 812 | 10.3 | 767 | 10.2 | 800 | 5.6 | 789 | 9.9 | 851 | 6.7 |
| Asian or Pacific Islander | 4,057 | 9.5 | 3,753 | 7.8 | 4,396 | 8.4 | 4,495 | 9.6 | 4,873 | 8.0 |
| Unknown | 4,247 | 31.4 | 3,951 | 29.6 | 5,017 | 27.4 | 6,729 | 48.9 | 8,746 | 51.2 |
| **Age** |  |  |  |  |  |  |  |  |  |  |
| 00-49 years | 4,585 | 3.8 | 4,090 | 3.4 | 3,954 | 3.8 | 3,741 | 5.4 | 3,554 | 6.4 |
| 50-64 years | 73,483 | 4.7 | 71,014 | 4.5 | 73,509 | 4.4 | 74,350 | 7.0 | 76,846 | 7.3 |
| 65-79 years | 90,421 | 7.3 | 87,603 | 6.6 | 96,525 | 6.4 | 101,560 | 9.2 | 107,998 | 9.0 |
| 80+ years | 15,481 | 17.1 | 15,012 | 15.5 | 15,799 | 14.0 | 16,791 | 17.0 | 16,852 | 15.8 |
| **Dx Confirmation3** |  |  |  |  |  |  |  |  |  |  |
| Microscopic confirmed | 179,384 | 6.0 | 173,493 | 5.6 | 185,077 | 5.3 | 191,170 | 7.9 | 200,289 | 8.0 |
| Non-microscopic confirmed | 2,500 | 18.0 | 2,542 | 18.1 | 2,718 | 16.5 | 2,682 | 13.6 | 2,734 | 14.9 |
| Unknown | 2,090 | 78.7 | 1,689 | 76.6 | 1,995 | 78.0 | 2,595 | 82.0 | 2,229 | 81.8 |
| **Type of reporting source4** |  |  |  |  |  |  |  |  |  |  |
| Hospital Inpatient | 138,432 | 3.5 | 133,727 | 3.2 | 142,558 | 2.7 | 146,578 | 3.6 | 152,082 | 3.6 |
| Radiation treatment/ medical oncology center | 17,012 | 12.5 | 15,950 | 6.1 | 15,824 | 11.7 | 15,412 | 13.8 | 14,208 | 6.5 |
| Clinic unit/surgical center | 18,949 | 17.7 | 18,162 | 20.2 | 20,354 | 15.5 | 22,073 | 21.7 | 24,746 | 23.3 |
| Lab/Nursing home/hospice | 9,581 | 26.2 | 9,885 | 25.4 | 11,054 | 25.9 | 12,384 | 43.0 | 14,216 | 42.3 |
| **Metro/Non-Metro 20135** |  |  |  |  |  |  |  |  |  |  |
| Metro | 151,813 | 7.3 | 146,430 | 6.7 | 156,210 | 6.4 | 161,701 | 9.2 | 168,600 | 9.2 |
| Non-Metro | 28,874 | 5.5 | 27,846 | 5.5 | 29,764 | 5.0 | 31,092 | 7.0 | 32,217 | 7.2 |
| Unknown | 3,287 | 3.7 | 3,448 | 3.6 | 3,816 | 5.4 | 3,654 | 11.1 | 4,435 | 10.8 |

See the technical notes on page 13 for the cited numbers 1-5 in this table.

Table 6. Unknown summary stage 20001 by diagnosis year: Cervical cancer 2013-2017

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
| **Registry Level** |  |  |  |  |  |  |  |  |  |  |
| 25th-75th Percentile | 2.2-6.7% | | 2.8-7.0% | | 1.9-7.3% | | 1.8-5.0% | | 2.4-8.8% | |
| Minimum | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | |
| Mean | 4.7% | | 5.2% | | 5.1% | | 4.5% | | 5.9% | |
| Median | 4.6% | | 4.4% | | 4.6% | | 3.4% | | 5.6% | |
| Maximum | 12.3% | | 16.0% | | 24.2% | | 18.2% | | 20.2% | |
| Upper Whisker2 | 13.4% | | 13.5% | | 15.4% | | 9.8% | | 18.5% | |
| # outside of upper whisker | 0 | | 0 | | 3 | | 5 | | 1 | |
| **All cases combined** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** | **Total Count** | **% Unk** |
| **Sex** |  |  |  |  |  |  |  |  |  |  |
| Male | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Female | 12,173 | 5.7 | 12,646 | 5.8 | 12,902 | 5.8 | 13,055 | 5.9 | 12,702 | 6.6 |
| **Race** |  |  |  |  |  |  |  |  |  |  |
| Non-Hispanic White | 7,361 | 5.1 | 7,752 | 5.0 | 7,848 | 4.8 | 7,819 | 5.1 | 7,596 | 5.4 |
| Non-Hispanic Black | 1,916 | 6.4 | 1,864 | 5.8 | 1,916 | 6.8 | 1,927 | 6.7 | 1,846 | 7.4 |
| Hispanic | 2092 | 6.5 | 2,172 | 7.1 | 2225 | 6.4 | 2,407 | 6.0 | 2,228 | 6.9 |
| AI/AN | 111 | 11.7 | 108 | 5.6 | 125 | 5.6 | 111 | 9.9 | 121 | 6.6 |
| Asian or Pacific Islander | 597 | 4.2 | 617 | 5.7 | 647 | 5.1 | 656 | 5.9 | 681 | 4.7 |
| Unknown | 94 | 25.5 | 128 | 35.2 | 140 | 36.4 | 130 | 34.6 | 225 | 44.9 |
| **Age** |  |  |  |  |  |  |  |  |  |  |
| 00-49 years | 5,931 | 4.7 | 6,237 | 5.3 | 6,387 | 4.8 | 6,499 | 5.3 | 6,148 | 6.3 |
| 50-64 years | 3,785 | 5.0 | 3,970 | 5.1 | 4,033 | 5.7 | 3,989 | 5.7 | 3,905 | 5.7 |
| 65-79 years | 1,883 | 7.8 | 1,868 | 7.3 | 1,895 | 7.2 | 1,985 | 6.3 | 2,066 | 7.4 |
| 80+ years | 573 | 13.6 | 571 | 12.4 | 587 | 12.6 | 582 | 11.3 | 583 | 12.9 |
| **Dx Confirmation3** |  |  |  |  |  |  |  |  |  |  |
| Microscopic confirmed | 11,957 | 4.8 | 12,434 | 5.0 | 12,650 | 4.8 | 12,807 | 4.9 | 12,454 | 5.5 |
| Non-microscopic confirmed | 92 | 25.0 | 98 | 25.5 | 98 | 22.4 | 93 | 24.7 | 91 | 31.9 |
| Unknown | 124 | 77.4 | 114 | 77.2 | 154 | 78.6 | 155 | 76.1 | 157 | 79.6 |
| **Type of reporting source4** |  |  |  |  |  |  |  |  |  |  |
| Hospital Inpatient | 10,979 | 4.3 | 11,370 | 4.2 | 11,521 | 4.1 | 11,642 | 4.3 | 11,239 | 4.6 |
| Radiation treatment/ medical oncology center | 307 | 3.3 | 331 | 4.5 | 358 | 3.4 | 394 | 4.3 | 331 | 3.9 |
| Clinic unit/surgical center | 652 | 12.1 | 700 | 14.1 | 762 | 13.9 | 776 | 15.1 | 868 | 17.9 |
| Lab/Nursing home/hospice | 235 | 56.2 | 245 | 58.4 | 261 | 57.1 | 243 | 52.3 | 264 | 56.4 |
| **Metro/Non-Metro 20135** |  |  |  |  |  |  |  |  |  |  |
| Metro | 10,177 | 5.8 | 10,487 | 5.9 | 10,754 | 5.7 | 10,980 | 5.9 | 10,608 | 6.4 |
| Non-Metro | 1,846 | 5.5 | 2,022 | 5.7 | 1,981 | 5.7 | 1,903 | 5.7 | 1,928 | 7.3 |
| Unknown | 150 | 2.7 | 137 | 4.4 | 167 | 9.6 | 172 | 7.6 | 166 | 10.2 |

See the technical notes on page 13 for the cited numbers 1-5 in this table.

**Fitness for the Use of CiNA Summary Stage 2000 Data for Diagnosis Years 2013 to 2017**

**Assessment Based on the Unknown Rate of Summary Stage 2000**

The SEER summary stage is the most basic way of categorizing cancer spreading from its original point and has been broadly used in cancer epidemiology research. According to the SEER coding manual, the Summary Stage uses all information available in the medical record that combines all available clinical and pathological information on the extent of disease. Central Cancer Registries (CCR) that have a higher percentage of the unknown summary stage, especially those with unknown SS2000 above the upper whisker,1 may imply the data quality issue on stage data. For 2013-2015 cancer data, the summary stage 2000 (SS2000) was derived from the collaborative staging data fields; however, due to the change of SS2000 data collection method for 2016-2017 data, some registries manually coded SS2000, and some used derived SS2000. Five cancer sites, colorectal, lung, female breast, prostate, and cervical cancers, were selected for assessing the unknown SS2000.

Overall, for 2013-2017 data combined, female breast cancer had the lowest unknown SS2000 with the mean unknown rate of 2.2% for all registries data combined; in contrast, prostate cancer had the highest unknown SS2000 with the mean unknown rate of 7.5%. Three out of 51 CCRs had an unknown percentage > 10% for colorectal and lung cancer cases, 10 CCRs for prostate cancer cases, and 5 CCRs for cervix cancer cases. For breast cases, there was no CCR with an unknown rate > 10%, and only 2 CCRs had an unknown percentage > 5%. The issues of high unknown SS2000 for some CCRs could be attributed by multiple factorials, such as 1) the patient was only seen for a diagnosing biopsy at reporting facility and never returned; 2) diagnosing pathology and radiology reports were done at outside facility and reports were not available in the chart at the time of the case was abstracted; and/or 3) case consolidation was not properly performed by CCR staff.

Based on the evaluation of the percentage of unknown SS2000, the DA workgroup has the following recommendations for users of the SS2000 data. Our recommendations are for reference only. How to use these recommendations depends upon study objectives.

1. When a CCR has unknown SS2000 >10% or above the upper whisker, users should use the CCR's SS2000 data with caution; excluding the CCR may be an option.
2. Users may consider excluding cancer cases with unknown diagnostic confirmation in data analyses because these cases are more likely to have a higher percentage of unknown SS2000. We found in this evaluation that cases with unknown diagnostic confirmation had about 80% of unknown SS2000 across all five cancer sites.
3. Cancer cases abstracted based only on reports from Lab, nursing home, or hospice medical records also contribute to high unknown SS2000. Users should examine the percentage of unknown SS2000 by type of reporting sources and decide what data should be included before data analysis.