

Section 3
Adolescent and Young Adult Cancer by Site
Incidence, Survival and Mortality

Tumors affecting adolescents and young adults often differ from those affecting pediatric and older adult populations¹. For this reason, a classification scheme has been proposed for tumors diagnosed in adolescents and young adults². This classification scheme was updated based on site and histology codes of the International Classification of Diseases for Oncology, Third Edition³. Effective 2001, all cases reported to SEER were required to have an ICD-O-3 histology and behavior code and all previous cases were converted to ICD-O-3⁴. In addition, although benign brain tumors have also been reported to SEER since 2004, not enough time has elapsed to present rates and trend data for these tumors. These site / histology groupings, however, are not comparable with the groupings of ICD-10 for mortality. Therefore, for incidence and mortality comparisons, the SEER site recode as described in the appendix was used⁵. In this chapter, the incidence of malignant cancers in adolescent and young adults, 15 to 39 years of age, are presented based on the 2 different classification schemes described above.

REFERENCES:

1. The distinctive biology of cancer in adolescents and young adults. Bleyer A, Barr R, Hayes-Lattin B, et al. *Nat Rev Cancer*. 2008; 8: 288-98.
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3. International Classification of Diseases for Oncology, Third Edition Edited by A. Fritz, C. Percy, A. Jack, K. Shanmugaratnam, L. Sobin, D.M. Parkin and S. Whelan. World Health Organization. Geneva, Switzerland, 2000. 240 pp.
4. National Cancer Institute SEER Conversion Programs.
Worldwide web: (<https://seer.cancer.gov/tools/conversion/>) Accessed May 28, 2008.
5. National Cancer Institute Cancer Statistics Review 1975-2010. Appendix.
Worldwide web: (https://seer.cancer.gov/csr/1975_2010/results_merged/topic_siterecode.pdf.)
Released April 15, 2013.

Table 3.1

Age-Adjusted SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
All Races, 2014-2018

| Site | Ages 0-14 | | Ages 15-39 | | Ages 40+ | |
|---------------------------------------------------------------|-----------|--------|------------|--------|----------|--------|
| | Male | Female | Male | Female | Male | Female |
| All Sites Combined | 18.6 | 16.9 | 58.7 | 96.2 | 1079.1 | 901.2 |
| 1. LEUKEMIAS | 5.7 | 4.9 | 4.1 | 3.0 | 36.2 | 20.9 |
| 1.1 Acute lymphoid leukemia | 4.5 | 3.8 | 1.4 | 0.8 | 1.3 | 1.0 |
| 1.2 Acute myeloid leukemia | 0.9 | 0.8 | 1.2 | 1.3 | 11.1 | 7.1 |
| 1.3 Chronic myeloid leukemia | 0.2 | 0.1 | 0.9 | 0.6 | 4.9 | 2.9 |
| 1.4 Other and unspecified leukemias | 0.2 | 0.1 | 0.5 | 0.3 | 18.9 | 9.9 |
| 2. LYMPHOMAS | 2.2 | 1.2 | 8.5 | 6.9 | 53.8 | 36.7 |
| 2.1 Non-Hodgkin Lymphoma | 1.5 | 0.7 | 4.9 | 3.4 | 50.3 | 34.4 |
| 2.2 Hodgkin Lymphoma | 0.7 | 0.5 | 3.6 | 3.5 | 3.5 | 2.3 |
| 3. CNS, INTRACRANIAL, INTRASPINAL | 3.4 | 3.1 | 3.2 | 2.5 | 12.9 | 8.6 |
| 3.1 Astrocytoma | 1.7 | 1.8 | 1.9 | 1.4 | 10.3 | 6.5 |
| 3.1.1 Specified low-grade astrocytic tumors | 1.2 | 1.3 | 0.4 | 0.3 | 0.2 | 0.2 |
| 3.1.2 Glioblastoma and anaplastic astrocytoma | 0.2 | 0.2 | 1.1 | 0.7 | 9.6 | 5.9 |
| 3.1.3 Astrocytoma, NOS | 0.2 | 0.2 | 0.4 | 0.3 | 0.6 | 0.4 |
| 3.2 Other glioma | 0.6 | 0.5 | 0.8 | 0.7 | 1.3 | 1.0 |
| 3.3 Ependymoma | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 |
| 3.4 Medulloblastoma and other PNET | 0.7 | 0.4 | 0.2 | 0.1 | 0.0 | 0.0 |
| 3.4.1 Medulloblastoma | 0.5 | 0.3 | 0.1 | 0.1 | 0.0 | 0.0 |
| 3.4.2 Supratentorial PNET | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| 3.5 Other specified intracranial and intraspinal neoplasms | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 |
| 3.6 Unspecified intracranial and intraspinal neoplasms | 0.0 | - | 0.0 | 0.0 | 0.7 | 0.6 |
| 4. OSSEOUS & CHONDROMATOUS NEOPLASMS | 1.0 | 0.8 | 1.1 | 0.9 | 1.5 | 1.1 |
| 4.1 Osteosarcoma | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 4.2 Chondrosarcoma | 0.0 | 0.0 | 0.2 | 0.2 | 0.7 | 0.5 |
| 4.3 Ewing tumor | 0.4 | 0.3 | 0.4 | 0.2 | 0.1 | 0.1 |
| 4.4 Other specified and unspecified bone tumors | 0.1 | 0.0 | 0.1 | 0.1 | 0.5 | 0.3 |
| 5. SOFT TISSUE SARCOMAS | 1.1 | 1.0 | 3.2 | 2.5 | 12.9 | 9.3 |
| 5.1 Fibromatous neoplasms | 0.2 | 0.2 | 0.7 | 0.7 | 2.3 | 1.4 |
| 5.2 Rhabdomyosarcoma | 0.5 | 0.5 | 0.2 | 0.1 | 0.2 | 0.2 |
| 5.3 Other specified soft tissue sarcoma | 0.4 | 0.3 | 2.4 | 1.6 | 10.3 | 7.7 |
| 5.3.1 Specified soft tissue sarcoma | 0.2 | 0.2 | 1.9 | 1.2 | 7.0 | 5.6 |
| 5.3.1.1 Specified (excluding Kaposi sarcoma) | 0.2 | 0.2 | 1.1 | 1.2 | 5.7 | 5.4 |
| 5.3.1.2 Kaposi sarcoma | - | - | 0.8 | 0.0 | 1.3 | 0.2 |
| 5.3.2 Unspecified soft tissue sarcoma | 0.2 | 0.1 | 0.4 | 0.4 | 3.3 | 2.1 |
| 6. GERM CELL AND TROPHOBLASTIC NEOPLASMS | 0.5 | 0.7 | 11.9 | 1.0 | 4.2 | 0.2 |
| 6.1 Germ cell and trophoblastic neoplasms of gonads | 0.2 | 0.4 | 11.4 | 0.7 | 4.1 | 0.1 |
| 6.2 Germ cell and trophoblastic neoplasms of nongonadal sites | 0.3 | 0.3 | 0.5 | 0.3 | 0.1 | 0.1 |
| 6.2.1 Intracranial sites | 0.2 | 0.1 | 0.2 | 0.0 | - | - |
| 6.2.2 Other nongonadal sites | 0.1 | 0.2 | 0.3 | 0.3 | 0.1 | 0.1 |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- ^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
- ^b Adapted from RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 1067; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).
- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.1 - continued

Age-Adjusted SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
All Races, 2014-2018

| Site | Ages 0-14 | | Ages 15-39 | | Ages 40+ | |
|---------------------------------------------------------------------------------|-----------|--------|------------|--------|----------|--------|
| | Male | Female | Male | Female | Male | Female |
| 7. MELANOMA AND SKIN CARCINOMAS | 0.2 | 0.2 | 4.9 | 8.4 | 70.4 | 39.1 |
| 7.1 Melanoma | 0.2 | 0.2 | 4.8 | 8.3 | 66.0 | 37.0 |
| 7.2 Skin carcinomas | - | - | 0.1 | 0.1 | 4.3 | 2.1 |
| 8. CARCINOMAS (excluding skin) | 0.7 | 1.3 | 19.4 | 67.9 | 799.7 | 719.8 |
| 8.1 Thyroid carcinoma | 0.2 | 0.6 | 4.8 | 20.8 | 14.5 | 35.2 |
| 8.2 Other carcinoma of head and neck | 0.1 | 0.1 | 1.8 | 1.4 | 51.0 | 16.7 |
| 8.2.1 Nasopharyngeal carcinoma | - | - | 0.3 | 0.2 | 1.8 | 0.6 |
| 8.2.2 Other sites in lip, oral cavity and pharynx | 0.1 | 0.1 | 1.2 | 1.1 | 36.0 | 12.8 |
| 8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck | - | - | 0.2 | 0.2 | 13.2 | 3.3 |
| 8.3 Carcinoma of trachea, bronchus, and lung | - | 0.0 | 0.9 | 1.0 | 126.3 | 101.8 |
| 8.4 Carcinoma of breast | - | - | 0.1 | 22.6 | 2.8 | 277.9 |
| 8.5 Carcinoma of genitourinary tract | 0.1 | 0.1 | 3.8 | 14.0 | 383.6 | 141.2 |
| 8.5.1 Carcinoma of kidney | 0.1 | 0.0 | 2.7 | 1.9 | 46.1 | 21.7 |
| 8.5.2 Carcinoma of bladder | - | - | 0.9 | 0.4 | 77.2 | 18.9 |
| 8.5.3 Carcinoma of gonads | - | - | 0.0 | 2.0 | 0.0 | 20.0 |
| 8.5.4 Carcinoma of cervix and uterus | - | - | - | 9.3 | - | 67.4 |
| 8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract | - | - | 0.3 | 0.4 | 260.3 | 13.1 |
| 8.6 Carcinoma of gastrointestinal tract | 0.3 | 0.4 | 7.6 | 7.5 | 208.1 | 135.3 |
| 8.6.1 Carcinoma of colon and rectum | 0.2 | 0.3 | 5.1 | 5.2 | 96.8 | 75.6 |
| 8.6.2 Carcinoma of stomach | - | - | 0.8 | 0.8 | 19.7 | 9.9 |
| 8.6.3 Carcinoma of liver and intrahepatic bile ducts | 0.1 | - | 0.5 | 0.3 | 30.2 | 10.3 |
| 8.6.4 Carcinoma of pancreas | - | 0.0 | 0.5 | 0.7 | 30.9 | 23.6 |
| 8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract | - | - | 0.6 | 0.5 | 30.5 | 15.9 |
| 8.7 Carcinoma of other and ill-defined sites, NOS | - | 0.0 | 0.4 | 0.5 | 13.5 | 11.8 |
| 8.7.1 Adrenocortical carcinoma | - | - | 0.0 | 0.1 | 0.2 | 0.3 |
| 8.7.2 Carcinoma of other and ill-defined sites, NOS | - | - | 0.4 | 0.4 | 13.3 | 11.6 |
| 9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS | 3.9 | 3.6 | 2.0 | 2.6 | 47.4 | 37.3 |
| 9.1 Other pediatric and embryonal tumors, NOS | 2.8 | 2.8 | 0.1 | 0.1 | 0.2 | 0.2 |
| 9.1.1 Wilms tumor | 0.7 | 0.9 | - | 0.0 | 0.0 | 0.0 |
| 9.1.2 Neuroblastoma | 1.1 | 1.0 | 0.0 | 0.0 | 0.0 | - |
| 9.1.3 Other pediatric and embryonal tumors, NOS | 1.0 | 0.9 | 0.1 | 0.1 | 0.2 | 0.1 |
| 9.2 Other specified neoplasms, NOS | 1.0 | 0.8 | 1.9 | 2.5 | 47.2 | 37.1 |
| 9.2.1 Paraganglioma and glomus tumors | - | - | 0.1 | 0.0 | 0.1 | 0.1 |
| 9.2.2 Other specified gonadal tumors | - | - | 0.0 | 0.2 | 0.1 | 0.5 |
| 9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS | 0.9 | 0.6 | 0.6 | 0.5 | 22.0 | 14.2 |
| 9.2.4 Other specified neoplasms, NOS | 0.2 | 0.2 | 1.2 | 1.8 | 25.1 | 22.4 |
| 10. UNSPECIFIED MALIGNANT NEOPLASMS | - | - | 0.3 | 0.5 | 36.2 | 26.2 |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- ^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
- ^b Adapted from RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 1067; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).
- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.2

Age-Adjusted SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
White, 2014-2018

| Site | Ages 0-14 | | Ages 15-39 | | Ages 40+ | |
|---------------------------------------------------------------|-----------|--------|------------|--------|----------|--------|
| | Male | Female | Male | Female | Male | Female |
| All Sites Combined | 19.5 | 17.5 | 62.5 | 101.1 | 1091.0 | 929.2 |
| 1. LEUKEMIAS | 6.0 | 5.1 | 4.2 | 3.0 | 38.5 | 22.2 |
| 1.1 Acute lymphoid leukemia | 4.9 | 4.2 | 1.5 | 0.8 | 1.4 | 1.1 |
| 1.2 Acute myeloid leukemia | 0.8 | 0.7 | 1.2 | 1.3 | 11.6 | 7.4 |
| 1.3 Chronic myeloid leukemia | 0.2 | 0.1 | 0.9 | 0.6 | 5.1 | 2.9 |
| 1.4 Other and unspecified leukemias | 0.2 | 0.1 | 0.6 | 0.3 | 20.4 | 10.8 |
| 2. LYMPHOMAS | 2.2 | 1.2 | 8.7 | 7.1 | 56.7 | 38.7 |
| 2.1 Non-Hodgkin Lymphoma | 1.5 | 0.7 | 4.8 | 3.4 | 53.1 | 36.4 |
| 2.2 Hodgkin Lymphoma | 0.7 | 0.5 | 3.9 | 3.8 | 3.6 | 2.4 |
| 3. CNS, INTRACRANIAL, INTRASPINAL | 3.6 | 3.3 | 3.6 | 2.8 | 14.3 | 9.6 |
| 3.1 Astrocytoma | 1.7 | 1.9 | 2.1 | 1.6 | 11.5 | 7.3 |
| 3.1.1 Specified low-grade astrocytic tumors | 1.3 | 1.5 | 0.4 | 0.4 | 0.2 | 0.2 |
| 3.1.2 Glioblastoma and anaplastic astrocytoma | 0.2 | 0.2 | 1.2 | 0.8 | 10.7 | 6.8 |
| 3.1.3 Astrocytoma, NOS | 0.2 | 0.2 | 0.5 | 0.4 | 0.6 | 0.4 |
| 3.2 Other glioma | 0.6 | 0.5 | 0.9 | 0.8 | 1.4 | 1.1 |
| 3.3 Ependymoma | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 |
| 3.4 Medulloblastoma and other PNET | 0.7 | 0.5 | 0.2 | 0.1 | 0.1 | 0.1 |
| 3.4.1 Medulloblastoma | 0.5 | 0.3 | 0.2 | 0.1 | 0.0 | 0.0 |
| 3.4.2 Supratentorial PNET | 0.3 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| 3.5 Other specified intracranial and intraspinal neoplasms | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| 3.6 Unspecified intracranial and intraspinal neoplasms | 0.0 | - | 0.1 | 0.0 | 0.7 | 0.6 |
| 4. OSSEOUS & CHONDROMATOUS NEOPLASMS | 1.1 | 0.8 | 1.2 | 0.9 | 1.6 | 1.2 |
| 4.1 Osteosarcoma | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 4.2 Chondrosarcoma | - | - | 0.2 | 0.2 | 0.7 | 0.5 |
| 4.3 Ewing tumor | 0.4 | 0.4 | 0.4 | 0.3 | 0.1 | 0.1 |
| 4.4 Other specified and unspecified bone tumors | 0.1 | - | 0.1 | 0.1 | 0.5 | 0.3 |
| 5. SOFT TISSUE SARCOMAS | 1.1 | 1.0 | 2.7 | 2.3 | 13.1 | 9.0 |
| 5.1 Fibromatous neoplasms | 0.2 | 0.1 | 0.5 | 0.6 | 2.4 | 1.3 |
| 5.2 Rhabdomyosarcoma | 0.6 | 0.5 | 0.2 | 0.1 | 0.2 | 0.2 |
| 5.3 Other specified soft tissue sarcoma | 0.3 | 0.3 | 2.0 | 1.6 | 10.5 | 7.5 |
| 5.3.1 Specified soft tissue sarcoma | 0.2 | 0.2 | 1.6 | 1.2 | 7.1 | 5.4 |
| 5.3.1.1 Specified (excluding Kaposi sarcoma) | 0.2 | 0.2 | 1.1 | 1.2 | 5.9 | 5.3 |
| 5.3.1.2 Kaposi sarcoma | - | - | 0.5 | - | 1.2 | 0.1 |
| 5.3.2 Unspecified soft tissue sarcoma | 0.1 | 0.1 | 0.4 | 0.4 | 3.4 | 2.1 |
| 6. GERM CELL AND TROPHOBLASTIC NEOPLASMS | 0.5 | 0.6 | 14.2 | 0.9 | 4.9 | 0.2 |
| 6.1 Germ cell and trophoblastic neoplasms of gonads | 0.2 | 0.4 | 13.7 | 0.6 | 4.8 | 0.1 |
| 6.2 Germ cell and trophoblastic neoplasms of nongonadal sites | 0.3 | 0.3 | 0.5 | 0.3 | 0.1 | 0.1 |
| 6.2.1 Intracranial sites | 0.2 | 0.1 | 0.2 | - | - | - |
| 6.2.2 Other nongonadal sites | 0.1 | 0.2 | 0.3 | 0.3 | 0.1 | 0.1 |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- ^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
- ^b Adapted from RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 1067; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).
- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.2 - continued

Age-Adjusted SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
White, 2014-2018

| Site | Ages 0-14 | | Ages 15-39 | | Ages 40+ | |
|---------------------------------------------------------------------------------|-----------|--------|------------|--------|----------|--------|
| | Male | Female | Male | Female | Male | Female |
| 7. MELANOMA AND SKIN CARCINOMAS | 0.2 | 0.3 | 6.1 | 10.8 | 82.9 | 47.1 |
| 7.1 Melanoma | 0.2 | 0.3 | 6.0 | 10.7 | 78.0 | 44.8 |
| 7.2 Skin carcinomas | - | - | 0.1 | 0.1 | 4.8 | 2.3 |
| 8. CARCINOMAS (excluding skin) | 0.7 | 1.4 | 19.6 | 70.2 | 791.5 | 736.6 |
| 8.1 Thyroid carcinoma | 0.2 | 0.7 | 5.2 | 22.7 | 15.3 | 36.2 |
| 8.2 Other carcinoma of head and neck | 0.1 | 0.1 | 1.6 | 1.3 | 53.3 | 17.4 |
| 8.2.1 Nasopharyngeal carcinoma | - | - | 0.1 | 0.1 | 1.1 | 0.4 |
| 8.2.2 Other sites in lip, oral cavity and pharynx | 0.1 | 0.1 | 1.2 | 1.1 | 39.0 | 13.6 |
| 8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck | - | - | 0.2 | 0.2 | 13.3 | 3.4 |
| 8.3 Carcinoma of trachea, bronchus, and lung | - | - | 0.8 | 1.0 | 127.1 | 107.8 |
| 8.4 Carcinoma of breast | - | - | 0.1 | 22.2 | 2.8 | 284.3 |
| 8.5 Carcinoma of genitourinary tract | 0.0 | 0.1 | 3.9 | 14.9 | 376.5 | 146.7 |
| 8.5.1 Carcinoma of kidney | 0.0 | 0.0 | 2.7 | 2.1 | 47.3 | 22.4 |
| 8.5.2 Carcinoma of bladder | - | - | 0.9 | 0.4 | 84.7 | 20.7 |
| 8.5.3 Carcinoma of gonads | - | - | 0.0 | 2.0 | 0.0 | 20.9 |
| 8.5.4 Carcinoma of cervix and uterus | - | - | - | 9.9 | - | 68.6 |
| 8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract | - | - | 0.2 | 0.5 | 244.4 | 14.1 |
| 8.6 Carcinoma of gastrointestinal tract | 0.3 | 0.5 | 7.6 | 7.6 | 203.0 | 132.3 |
| 8.6.1 Carcinoma of colon and rectum | 0.2 | 0.4 | 5.2 | 5.4 | 95.3 | 75.4 |
| 8.6.2 Carcinoma of stomach | - | - | 0.8 | 0.7 | 17.9 | 8.8 |
| 8.6.3 Carcinoma of liver and intrahepatic bile ducts | 0.1 | - | 0.4 | 0.3 | 27.2 | 9.3 |
| 8.6.4 Carcinoma of pancreas | - | 0.0 | 0.5 | 0.7 | 31.4 | 23.3 |
| 8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract | - | - | 0.7 | 0.5 | 31.1 | 15.4 |
| 8.7 Carcinoma of other and ill-defined sites, NOS | - | - | 0.4 | 0.5 | 13.5 | 11.9 |
| 8.7.1 Adrenocortical carcinoma | - | - | 0.0 | 0.1 | 0.2 | 0.3 |
| 8.7.2 Carcinoma of other and ill-defined sites, NOS | - | - | 0.3 | 0.4 | 13.3 | 11.6 |
| 9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS | 4.0 | 3.6 | 1.9 | 2.5 | 47.1 | 35.4 |
| 9.1 Other pediatric and embryonal tumors, NOS | 2.9 | 2.8 | 0.1 | 0.1 | 0.2 | 0.2 |
| 9.1.1 Wilms tumor | 0.8 | 0.9 | - | 0.0 | - | 0.0 |
| 9.1.2 Neuroblastoma | 1.1 | 1.0 | - | 0.0 | 0.0 | - |
| 9.1.3 Other pediatric and embryonal tumors, NOS | 1.0 | 0.9 | 0.1 | 0.1 | 0.2 | 0.1 |
| 9.2 Other specified neoplasms, NOS | 1.1 | 0.8 | 1.8 | 2.3 | 46.9 | 35.3 |
| 9.2.1 Paraganglioma and glomus tumors | - | - | 0.0 | 0.0 | 0.1 | 0.1 |
| 9.2.2 Other specified gonadal tumors | - | - | 0.0 | 0.2 | 0.1 | 0.4 |
| 9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS | 0.9 | 0.6 | 0.6 | 0.5 | 20.9 | 12.8 |
| 9.2.4 Other specified neoplasms, NOS | 0.2 | 0.1 | 1.2 | 1.6 | 25.9 | 22.0 |
| 10. UNSPECIFIED MALIGNANT NEOPLASMS | - | - | 0.3 | 0.5 | 36.1 | 27.0 |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- ^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
- ^b Adapted from RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 1067; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).
- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.3

Age-Adjusted SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
Black, 2014-2018

| Site | Ages 0-14 | | Ages 15-39 | | Ages 40+ | |
|---------------------------------------------------------------|-----------|--------|------------|--------|----------|--------|
| | Male | Female | Male | Female | Male | Female |
| All Sites Combined | 13.5 | 13.1 | 43.7 | 77.0 | 1163.0 | 851.0 |
| 1. LEUKEMIAS | 3.3 | 3.2 | 3.4 | 2.7 | 27.9 | 17.3 |
| 1.1 Acute lymphoid leukemia | 2.1 | 2.2 | 0.7 | 0.4 | 0.8 | 0.7 |
| 1.2 Acute myeloid leukemia | 0.9 | 0.8 | 1.3 | 1.4 | 9.1 | 6.4 |
| 1.3 Chronic myeloid leukemia | - | - | 0.9 | 0.6 | 4.5 | 3.0 |
| 1.4 Other and unspecified leukemias | - | - | 0.5 | 0.3 | 13.5 | 7.1 |
| 2. LYMPHOMAS | 1.9 | 1.1 | 8.7 | 6.7 | 39.8 | 28.2 |
| 2.1 Non-Hodgkin Lymphoma | 1.2 | 0.6 | 5.4 | 3.5 | 36.0 | 25.7 |
| 2.2 Hodgkin Lymphoma | 0.7 | 0.5 | 3.3 | 3.1 | 3.8 | 2.5 |
| 3. CNS, INTRACRANIAL, INTRASPINAL | 2.7 | 2.3 | 1.9 | 1.7 | 7.6 | 5.0 |
| 3.1 Astrocytoma | 1.4 | 1.1 | 1.1 | 0.9 | 5.8 | 3.6 |
| 3.1.1 Specified low-grade astrocytic tumors | 0.9 | 0.8 | 0.3 | 0.3 | 0.1 | 0.1 |
| 3.1.2 Glioblastoma and anaplastic astrocytoma | 0.3 | - | 0.6 | 0.4 | 5.3 | 3.2 |
| 3.1.3 Astrocytoma, NOS | 0.2 | - | 0.2 | 0.2 | 0.4 | 0.3 |
| 3.2 Other glioma | 0.4 | 0.6 | 0.5 | 0.4 | 0.7 | 0.6 |
| 3.3 Ependymoma | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 3.4 Medulloblastoma and other PNET | 0.4 | 0.3 | 0.1 | - | - | - |
| 3.4.1 Medulloblastoma | 0.2 | - | - | - | - | - |
| 3.4.2 Supratentorial PNET | - | - | - | - | - | - |
| 3.5 Other specified intracranial and intraspinal neoplasms | - | - | - | 0.1 | 0.3 | 0.2 |
| 3.6 Unspecified intracranial and intraspinal neoplasms | - | - | - | - | 0.5 | 0.4 |
| 4. OSSEOUS & CHONDROMATOUS NEOPLASMS | 0.6 | 0.7 | 0.9 | 0.7 | 1.2 | 0.9 |
| 4.1 Osteosarcoma | 0.4 | 0.6 | 0.5 | 0.4 | 0.4 | 0.3 |
| 4.2 Chondrosarcoma | - | - | 0.2 | 0.2 | 0.4 | 0.3 |
| 4.3 Ewing tumor | - | - | 0.1 | - | - | - |
| 4.4 Other specified and unspecified bone tumors | - | - | - | 0.1 | 0.3 | 0.2 |
| 5. SOFT TISSUE SARCOMAS | 1.2 | 0.9 | 5.9 | 3.1 | 11.5 | 12.1 |
| 5.1 Fibromatous neoplasms | 0.2 | 0.2 | 1.3 | 1.0 | 2.1 | 1.8 |
| 5.2 Rhabdomyosarcoma | 0.5 | 0.4 | 0.3 | 0.2 | 0.2 | 0.4 |
| 5.3 Other specified soft tissue sarcoma | 0.4 | 0.2 | 4.4 | 1.9 | 9.2 | 9.9 |
| 5.3.1 Specified soft tissue sarcoma | 0.2 | - | 3.8 | 1.5 | 6.9 | 7.4 |
| 5.3.1.1 Specified (excluding Kaposi sarcoma) | 0.2 | - | 1.0 | 1.3 | 4.7 | 7.1 |
| 5.3.1.2 Kaposi sarcoma | - | - | 2.8 | 0.2 | 2.2 | 0.3 |
| 5.3.2 Unspecified soft tissue sarcoma | 0.2 | - | 0.6 | 0.4 | 2.4 | 2.6 |
| 6. GERM CELL AND TROPHOBLASTIC NEOPLASMS | 0.2 | 0.7 | 2.9 | 1.1 | 1.4 | 0.3 |
| 6.1 Germ cell and trophoblastic neoplasms of gonads | - | 0.4 | 2.6 | 0.7 | 1.3 | 0.1 |
| 6.2 Germ cell and trophoblastic neoplasms of nongonadal sites | - | 0.3 | 0.3 | 0.4 | - | 0.2 |
| 6.2.1 Intracranial sites | - | - | 0.1 | - | - | - |
| 6.2.2 Other nongonadal sites | - | 0.3 | 0.1 | 0.4 | - | 0.2 |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- ^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
- ^b Adapted from RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 1067; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).
- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.3 - continued

Age-Adjusted SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
Black, 2014-2018

| Site | Ages 0-14 | | Ages 15-39 | | Ages 40+ | |
|---------------------------------------------------------------------------------|-----------|--------|------------|--------|----------|--------|
| | Male | Female | Male | Female | Male | Female |
| 7. MELANOMA AND SKIN CARCINOMAS | - | - | 0.3 | 0.5 | 3.9 | 3.2 |
| 7.1 Melanoma | - | - | 0.2 | 0.3 | 2.6 | 2.3 |
| 7.2 Skin carcinomas | - | - | - | 0.2 | 1.3 | 0.9 |
| 8. CARCINOMAS (excluding skin) | 0.5 | 0.6 | 16.9 | 56.5 | 960.6 | 699.8 |
| 8.1 Thyroid carcinoma | - | - | 1.6 | 9.3 | 7.7 | 24.5 |
| 8.2 Other carcinoma of head and neck | - | - | 1.6 | 1.1 | 46.2 | 14.2 |
| 8.2.1 Nasopharyngeal carcinoma | - | - | 0.4 | 0.2 | 2.0 | 0.6 |
| 8.2.2 Other sites in lip, oral cavity and pharynx | - | - | 0.9 | 0.9 | 26.7 | 9.5 |
| 8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck | - | - | 0.3 | - | 17.6 | 4.1 |
| 8.3 Carcinoma of trachea, bronchus, and lung | - | - | 1.3 | 1.0 | 146.3 | 93.3 |
| 8.4 Carcinoma of breast | - | - | 0.2 | 25.1 | 4.0 | 265.1 |
| 8.5 Carcinoma of genitourinary tract | - | - | 3.8 | 11.2 | 497.2 | 129.4 |
| 8.5.1 Carcinoma of kidney | - | - | 2.9 | 1.6 | 51.3 | 24.5 |
| 8.5.2 Carcinoma of bladder | - | - | 0.5 | 0.3 | 42.9 | 14.0 |
| 8.5.3 Carcinoma of gonads | - | - | - | 1.3 | - | 15.4 |
| 8.5.4 Carcinoma of cervix and uterus | - | - | - | 7.3 | - | 65.2 |
| 8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract | - | - | 0.4 | 0.6 | 403.0 | 10.3 |
| 8.6 Carcinoma of gastrointestinal tract | - | - | 7.8 | 7.9 | 243.7 | 159.8 |
| 8.6.1 Carcinoma of colon and rectum | - | - | 5.2 | 4.9 | 112.5 | 84.5 |
| 8.6.2 Carcinoma of stomach | - | - | 0.7 | 0.8 | 26.1 | 13.3 |
| 8.6.3 Carcinoma of liver and intrahepatic bile ducts | - | - | 0.8 | 0.4 | 38.8 | 11.3 |
| 8.6.4 Carcinoma of pancreas | - | - | 0.5 | 0.9 | 34.8 | 29.2 |
| 8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract | - | - | 0.6 | 0.9 | 31.7 | 21.4 |
| 8.7 Carcinoma of other and ill-defined sites, NOS | - | - | 0.6 | 0.7 | 15.5 | 13.6 |
| 8.7.1 Adrenocortical carcinoma | - | - | - | - | 0.2 | 0.2 |
| 8.7.2 Carcinoma of other and ill-defined sites, NOS | - | - | 0.6 | 0.6 | 15.3 | 13.4 |
| 9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS | 2.9 | 3.3 | 2.3 | 3.3 | 61.5 | 57.2 |
| 9.1 Other pediatric and embryonal tumors, NOS | 2.4 | 2.7 | - | - | 0.1 | 0.1 |
| 9.1.1 Wilms tumor | 0.7 | 1.0 | - | - | - | - |
| 9.1.2 Neuroblastoma | 0.9 | 0.8 | - | - | - | - |
| 9.1.3 Other pediatric and embryonal tumors, NOS | 0.8 | 0.9 | - | - | - | 0.1 |
| 9.2 Other specified neoplasms, NOS | 0.6 | 0.6 | 2.2 | 3.2 | 61.4 | 57.1 |
| 9.2.1 Paraganglioma and glomus tumors | - | - | - | - | 0.2 | 0.2 |
| 9.2.2 Other specified gonadal tumors | - | - | - | 0.3 | - | 1.0 |
| 9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS | 0.3 | 0.3 | 0.9 | 0.8 | 38.3 | 28.1 |
| 9.2.4 Other specified neoplasms, NOS | 0.2 | 0.2 | 1.2 | 2.1 | 22.8 | 27.7 |
| 10. UNSPECIFIED MALIGNANT NEOPLASMS | - | - | 0.3 | 0.7 | 45.2 | 25.5 |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- ^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
- ^b Adapted from RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 1067; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).
- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.4
Age-Specific SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
All Races, 2014-2018

| Site | Ages 15-19 | | Ages 20-24 | | Ages 25-29 | | Ages 30-34 | | Ages 35-39 | |
|---------------------------------------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| All Sites Combined | 25.6 | 24.8 | 37.7 | 40.5 | 51.4 | 72.7 | 72.5 | 127.7 | 99.2 | 197.1 |
| 1. LEUKEMIAS | 4.1 | 2.6 | 3.4 | 2.4 | 3.4 | 2.7 | 4.1 | 3.3 | 5.2 | 3.8 |
| 1.1 Acute lymphoid leukemia | 2.6 | 1.2 | 1.4 | 0.7 | 1.0 | 0.6 | 0.9 | 0.6 | 1.0 | 0.6 |
| 1.2 Acute myeloid leukemia | 1.0 | 1.0 | 1.1 | 1.2 | 1.2 | 1.3 | 1.3 | 1.4 | 1.5 | 1.7 |
| 1.3 Chronic myeloid leukemia | 0.4 | 0.2 | 0.6 | 0.3 | 0.9 | 0.5 | 1.3 | 0.9 | 1.4 | 0.9 |
| 1.4 Other and unspecified leukemias | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.5 | 0.3 | 1.3 | 0.6 |
| 2. LYMPHOMAS | 6.0 | 4.9 | 7.2 | 6.4 | 7.9 | 7.0 | 9.1 | 7.6 | 11.7 | 8.4 |
| 2.1 Non-Hodgkin Lymphoma | 2.8 | 1.5 | 3.1 | 2.2 | 4.0 | 3.0 | 5.5 | 4.3 | 8.4 | 5.7 |
| 2.2 Hodgkin Lymphoma | 3.3 | 3.4 | 4.1 | 4.2 | 3.9 | 4.0 | 3.6 | 3.3 | 3.3 | 2.6 |
| 3. CNS, INTRACRANIAL, INTRASPINAL | 2.4 | 1.9 | 2.3 | 1.8 | 3.1 | 2.5 | 3.9 | 2.9 | 4.3 | 3.3 |
| 3.1 Astrocytoma | 1.4 | 1.1 | 1.4 | 1.0 | 1.7 | 1.4 | 2.3 | 1.6 | 2.6 | 1.9 |
| 3.1.1 Specified low-grade astrocytic tumors | 0.8 | 0.6 | 0.4 | 0.3 | 0.4 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 |
| 3.1.2 Glioblastoma and anaplastic astrocytoma | 0.4 | 0.3 | 0.7 | 0.4 | 0.9 | 0.8 | 1.5 | 1.0 | 1.8 | 1.2 |
| 3.1.3 Astrocytoma, NOS | 0.2 | 0.2 | 0.4 | 0.3 | 0.5 | 0.4 | 0.6 | 0.4 | 0.5 | 0.4 |
| 3.2 Other glioma | 0.4 | 0.4 | 0.5 | 0.5 | 0.8 | 0.7 | 1.0 | 0.9 | 1.2 | 0.8 |
| 3.3 Ependymoma | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| 3.4 Medulloblastoma and other PNET | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | - |
| 3.4.1 Medulloblastoma | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | - | 0.1 | - |
| 3.4.2 Supratentorial PNET | 0.1 | - | - | - | - | - | - | - | - | - |
| 3.5 Other specified intracranial and intraspinal neoplasms | - | - | - | - | - | - | 0.1 | 0.1 | - | 0.1 |
| 3.6 Unspecified intracranial and intraspinal neoplasms | - | - | - | - | - | - | - | - | - | - |
| 4. OSSEOUS & CHONDROMATOUS NEOPLASMS | 2.0 | 1.2 | 1.1 | 0.9 | 0.7 | 0.8 | 0.8 | 0.7 | 0.9 | 0.8 |
| 4.1 Osteosarcoma | 1.1 | 0.6 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 4.2 Chondrosarcoma | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 |
| 4.3 Ewing tumor | 0.7 | 0.4 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 |
| 4.4 Other specified and unspecified bone tumors | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 |
| 5. SOFT TISSUE SARCOMAS | 1.6 | 1.5 | 2.0 | 1.8 | 3.3 | 2.3 | 4.4 | 3.0 | 4.6 | 3.6 |
| 5.1 Fibromatous neoplasms | 0.3 | 0.3 | 0.4 | 0.6 | 0.6 | 0.8 | 0.9 | 0.9 | 1.0 | 0.9 |
| 5.2 Rhabdomyosarcoma | 0.4 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 |
| 5.3 Other specified soft tissue sarcoma | 1.0 | 0.9 | 1.4 | 1.1 | 2.6 | 1.3 | 3.3 | 2.0 | 3.4 | 2.6 |
| 5.3.1 Specified soft tissue sarcoma | 0.7 | 0.7 | 1.0 | 0.8 | 2.1 | 0.9 | 2.9 | 1.5 | 2.9 | 2.0 |
| 5.3.1.1 Specified (excluding Kaposi sarcoma) | 0.6 | 0.7 | 0.7 | 0.8 | 1.0 | 0.9 | 1.5 | 1.4 | 1.6 | 2.0 |
| 5.3.1.2 Kaposi sarcoma | - | - | 0.3 | - | 1.1 | - | 1.4 | - | 1.2 | - |
| 5.3.2 Unspecified soft tissue sarcoma | 0.3 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 | 0.5 |
| 6. GERM CELL AND TROPHOBLASTIC NEOPLASMS | 4.2 | 1.0 | 11.7 | 1.1 | 15.1 | 1.2 | 15.6 | 1.0 | 13.0 | 0.6 |
| 6.1 Germ cell and trophoblastic neoplasms of gonads | 3.5 | 0.9 | 11.0 | 0.8 | 14.6 | 0.8 | 15.2 | 0.6 | 12.8 | 0.3 |
| 6.2 Germ cell and trophoblastic neoplasms of nongonadal sites | 0.7 | 0.1 | 0.7 | 0.2 | 0.5 | 0.4 | 0.5 | 0.5 | 0.2 | 0.3 |
| 6.2.1 Intracranial sites | 0.5 | - | 0.3 | - | 0.1 | - | 0.1 | - | - | - |
| 6.2.2 Other nongonadal sites | 0.2 | - | 0.4 | 0.2 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.3 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.4 - continued
 Age-Specific SEER Incidence^a, by Age Group and Sex
 By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
 All Races, 2014-2018

| Site | Ages 15-19 | | Ages 20-24 | | Ages 25-29 | | Ages 30-34 | | Ages 35-39 | |
|------------------------------------------------------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 7. MELANOMA AND SKIN CARCINOMAS | 0.7 | 1.2 | 1.8 | 3.9 | 3.6 | 7.7 | 7.1 | 12.9 | 10.1 | 15.3 |
| 7.1 Melanoma | 0.6 | 1.2 | 1.8 | 3.9 | 3.6 | 7.6 | 7.0 | 12.7 | 9.9 | 15.1 |
| 7.2 Skin carcinomas | - | - | - | - | - | - | 0.1 | 0.2 | 0.2 | 0.2 |
| 8. CARCINOMAS (excluding skin) | 3.5 | 9.3 | 7.0 | 20.8 | 12.7 | 46.1 | 24.8 | 92.6 | 44.4 | 154.8 |
| 8.1 Thyroid carcinoma | 1.2 | 6.0 | 2.7 | 12.6 | 4.1 | 20.0 | 6.5 | 28.6 | 8.7 | 34.6 |
| 8.2 Other carcinoma of head and neck | 0.4 | 0.4 | 0.7 | 0.7 | 1.2 | 1.2 | 2.2 | 1.9 | 3.9 | 2.6 |
| 8.2.1 Nasopharyngeal carcinoma | 0.1 | 0.1 | 0.2 | - | 0.2 | 0.1 | 0.3 | 0.2 | 0.6 | 0.3 |
| 8.2.2 Other sites in lip, oral cavity and pharynx | 0.3 | 0.3 | 0.4 | 0.5 | 0.9 | 0.9 | 1.6 | 1.5 | 2.7 | 1.9 |
| 8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck | - | - | - | - | 0.1 | 0.1 | 0.3 | 0.2 | 0.6 | 0.4 |
| 8.3 Carcinoma of trachea, bronchus, and lung | 0.1 | 0.1 | 0.3 | 0.3 | 0.5 | 0.6 | 1.1 | 1.2 | 2.3 | 2.7 |
| 8.4 Carcinoma of breast | - | 0.1 | - | 1.5 | - | 9.9 | 0.1 | 29.8 | 0.2 | 63.8 |
| 8.5 Carcinoma of genitourinary tract | 0.2 | 0.6 | 0.8 | 2.5 | 1.9 | 9.2 | 4.8 | 21.2 | 10.1 | 33.1 |
| 8.5.1 Carcinoma of kidney | 0.1 | 0.2 | 0.5 | 0.5 | 1.3 | 1.1 | 3.5 | 2.7 | 7.2 | 4.6 |
| 8.5.2 Carcinoma of bladder | 0.1 | - | 0.3 | 0.2 | 0.5 | 0.3 | 1.1 | 0.5 | 2.1 | 0.9 |
| 8.5.3 Carcinoma of gonads | - | 0.3 | - | 0.8 | - | 1.5 | - | 2.6 | - | 4.2 |
| 8.5.4 Carcinoma of cervix and uterus | - | - | - | 1.0 | - | 6.2 | - | 14.9 | - | 22.2 |
| 8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract | - | - | - | - | 0.1 | 0.2 | 0.2 | 0.6 | 0.9 | 1.2 |
| 8.6 Carcinoma of gastrointestinal tract | 1.4 | 2.0 | 2.4 | 3.1 | 4.5 | 4.9 | 9.6 | 9.3 | 18.2 | 16.8 |
| 8.6.1 Carcinoma of colon and rectum | 1.1 | 1.5 | 1.6 | 2.2 | 3.2 | 3.5 | 6.4 | 6.4 | 11.8 | 11.2 |
| 8.6.2 Carcinoma of stomach | - | - | 0.2 | 0.3 | 0.4 | 0.4 | 1.1 | 1.0 | 2.1 | 2.1 |
| 8.6.3 Carcinoma of liver and intrahepatic bile ducts | 0.1 | 0.2 | 0.2 | 0.2 | 0.4 | 0.2 | 0.7 | 0.4 | 1.1 | 0.7 |
| 8.6.4 Carcinoma of pancreas | - | 0.3 | 0.1 | 0.3 | 0.2 | 0.5 | 0.7 | 0.9 | 1.4 | 1.5 |
| 8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract | - | - | 0.1 | 0.2 | 0.4 | 0.3 | 0.7 | 0.6 | 1.8 | 1.3 |
| 8.7 Carcinoma of other and ill-defined sites, NOS | - | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.6 | 0.9 | 1.1 |
| 8.7.1 Adrenocortical carcinoma | - | - | - | - | - | - | - | 0.1 | 0.1 | 0.1 |
| 8.7.2 Carcinoma of other and ill-defined sites, NOS | - | - | 0.1 | 0.1 | 0.3 | 0.3 | 0.5 | 0.5 | 0.9 | 1.0 |
| 9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS | 0.9 | 1.0 | 1.0 | 1.1 | 1.3 | 2.0 | 2.3 | 3.1 | 4.1 | 5.3 |
| 9.1 Other pediatric and embryonal tumors, NOS | 0.2 | 0.2 | 0.1 | 0.1 | - | 0.1 | - | 0.1 | 0.1 | 0.1 |
| 9.1.1 Wilms tumor | - | - | - | - | - | - | - | - | - | - |
| 9.1.2 Neuroblastoma | - | - | - | - | - | - | - | - | - | - |
| 9.1.3 Other pediatric and embryonal tumors, NOS | - | 0.1 | 0.1 | - | - | 0.1 | - | - | 0.1 | - |
| 9.2 Other specified neoplasms, NOS | 0.7 | 0.8 | 0.9 | 1.0 | 1.2 | 1.9 | 2.3 | 3.0 | 3.9 | 5.2 |
| 9.2.1 Paraganglioma and glomus tumors | - | - | - | - | - | - | - | - | - | 0.1 |
| 9.2.2 Other specified gonadal tumors | - | 0.1 | - | 0.1 | - | 0.1 | - | 0.2 | - | 0.3 |
| 9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.7 | 0.5 | 1.4 | 1.2 |
| 9.2.4 Other specified neoplasms, NOS ^c | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 1.4 | 1.5 | 2.2 | 2.4 | 3.6 |
| 10. UNSPECIFIED MALIGNANT NEOPLASMS | - | - | 0.2 | 0.3 | 0.2 | 0.4 | 0.3 | 0.6 | 0.6 | 1.1 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

^c Myeloproliferative disorders and myelodysplastic syndromes were first reported effective January 1, 2001 with the implementation of ICD-O 3.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.5
Age-Specific SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
White, 2014-2018

| Site | Ages 15-19 | | Ages 20-24 | | Ages 25-29 | | Ages 30-34 | | Ages 35-39 | |
|---------------------------------------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| All Sites Combined | 27.3 | 26.6 | 41.3 | 43.5 | 56.3 | 78.4 | 77.4 | 134.4 | 103.1 | 204.0 |
| 1. LEUKEMIAS | 4.3 | 2.6 | 3.5 | 2.5 | 3.4 | 2.7 | 4.2 | 3.3 | 5.3 | 4.0 |
| 1.1 Acute lymphoid leukemia | 2.9 | 1.3 | 1.5 | 0.7 | 1.1 | 0.6 | 1.0 | 0.6 | 1.0 | 0.6 |
| 1.2 Acute myeloid leukemia | 0.9 | 1.0 | 1.1 | 1.3 | 1.1 | 1.3 | 1.4 | 1.4 | 1.5 | 1.7 |
| 1.3 Chronic myeloid leukemia | 0.3 | 0.2 | 0.6 | 0.3 | 0.9 | 0.6 | 1.2 | 0.9 | 1.4 | 1.0 |
| 1.4 Other and unspecified leukemias | 0.2 | 0.1 | 0.2 | 0.2 | 0.4 | 0.2 | 0.5 | 0.3 | 1.4 | 0.6 |
| 2. LYMPHOMAS | 6.2 | 5.2 | 7.6 | 6.8 | 8.1 | 7.4 | 9.1 | 7.7 | 11.8 | 8.4 |
| 2.1 Non-Hodgkin Lymphoma | 2.7 | 1.5 | 3.0 | 2.1 | 3.9 | 3.0 | 5.3 | 4.3 | 8.4 | 5.6 |
| 2.2 Hodgkin Lymphoma | 3.5 | 3.7 | 4.6 | 4.7 | 4.2 | 4.4 | 3.9 | 3.4 | 3.4 | 2.8 |
| 3. CNS, INTRACRANIAL, INTRASPINAL | 2.6 | 2.1 | 2.5 | 2.0 | 3.5 | 2.8 | 4.4 | 3.3 | 4.7 | 3.7 |
| 3.1 Astrocytoma | 1.5 | 1.2 | 1.6 | 1.1 | 2.0 | 1.6 | 2.6 | 1.8 | 2.8 | 2.2 |
| 3.1.1 Specified low-grade astrocytic tumors | 0.8 | 0.7 | 0.4 | 0.3 | 0.4 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| 3.1.2 Glioblastoma and anaplastic astrocytoma | 0.4 | 0.3 | 0.8 | 0.4 | 1.0 | 0.9 | 1.6 | 1.1 | 1.9 | 1.4 |
| 3.1.3 Astrocytoma, NOS | 0.3 | 0.3 | 0.4 | 0.3 | 0.6 | 0.4 | 0.6 | 0.4 | 0.6 | 0.5 |
| 3.2 Other glioma | 0.5 | 0.4 | 0.5 | 0.5 | 0.9 | 0.8 | 1.2 | 1.0 | 1.3 | 1.0 |
| 3.3 Ependymoma | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| 3.4 Medulloblastoma and other PNET | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | - | 0.2 | - |
| 3.4.1 Medulloblastoma | 0.2 | - | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | - | 0.1 | - |
| 3.4.2 Supratentorial PNET | - | - | - | - | - | - | - | - | - | - |
| 3.5 Other specified intracranial and intraspinal neoplasms | - | - | - | - | - | - | - | - | - | - |
| 3.6 Unspecified intracranial and intraspinal neoplasms | - | - | - | - | - | - | - | - | - | - |
| 4. OSSEOUS & CHONDROMATOUS NEOPLASMS | 2.1 | 1.2 | 1.2 | 0.9 | 0.8 | 0.8 | 0.8 | 0.7 | 1.0 | 0.9 |
| 4.1 Osteosarcoma | 1.1 | 0.6 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 4.2 Chondrosarcoma | 0.1 | - | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 |
| 4.3 Ewing tumor | 0.8 | 0.5 | 0.6 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 4.4 Other specified and unspecified bone tumors | - | - | 0.1 | - | 0.1 | 0.1 | - | 0.1 | 0.2 | 0.2 |
| 5. SOFT TISSUE SARCOMAS | 1.6 | 1.4 | 1.7 | 1.6 | 2.6 | 2.2 | 3.5 | 2.8 | 4.0 | 3.4 |
| 5.1 Fibromatous neoplasms | 0.3 | 0.2 | 0.3 | 0.4 | 0.5 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 |
| 5.2 Rhabdomyosarcoma | 0.4 | 0.3 | 0.2 | - | 0.1 | - | - | - | 0.2 | - |
| 5.3 Other specified soft tissue sarcoma | 0.9 | 0.9 | 1.2 | 1.1 | 2.0 | 1.4 | 2.7 | 1.9 | 3.0 | 2.5 |
| 5.3.1 Specified soft tissue sarcoma | 0.7 | 0.7 | 0.9 | 0.8 | 1.6 | 1.0 | 2.2 | 1.4 | 2.5 | 1.9 |
| 5.3.1.1 Specified (excluding Kaposi sarcoma) | 0.6 | 0.7 | 0.7 | 0.8 | 1.1 | 0.9 | 1.3 | 1.4 | 1.6 | 1.9 |
| 5.3.1.2 Kaposi sarcoma | - | - | 0.1 | - | 0.5 | - | 0.9 | - | 0.9 | - |
| 5.3.2 Unspecified soft tissue sarcoma | 0.3 | 0.2 | 0.3 | 0.2 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 |
| 6. GERM CELL AND TROPHOBLASTIC NEOPLASMS | 5.0 | 0.9 | 14.0 | 1.0 | 18.3 | 1.1 | 18.7 | 1.0 | 15.4 | 0.5 |
| 6.1 Germ cell and trophoblastic neoplasms of gonads | 4.4 | 0.8 | 13.3 | 0.8 | 17.8 | 0.8 | 18.2 | 0.5 | 15.2 | 0.2 |
| 6.2 Germ cell and trophoblastic neoplasms of nongonadal sites | 0.7 | 0.1 | 0.7 | 0.2 | 0.5 | 0.3 | 0.5 | 0.4 | 0.2 | 0.3 |
| 6.2.1 Intracranial sites | 0.5 | - | 0.3 | - | 0.2 | - | - | - | - | - |
| 6.2.2 Other nongonadal sites | 0.2 | - | 0.4 | 0.2 | 0.4 | 0.3 | 0.4 | 0.4 | 0.2 | 0.3 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.5 - continued
 Age-Specific SEER Incidence^a, by Age Group and Sex
 By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
 White, 2014-2018

| Site | Ages 15-19 | | Ages 20-24 | | Ages 25-29 | | Ages 30-34 | | Ages 35-39 | |
|------------------------------------------------------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 7. MELANOMA AND SKIN CARCINOMAS | 0.8 | 1.5 | 2.2 | 4.9 | 4.6 | 9.9 | 9.0 | 16.5 | 12.6 | 19.5 |
| 7.1 Melanoma | 0.8 | 1.4 | 2.1 | 4.9 | 4.6 | 9.9 | 8.9 | 16.4 | 12.4 | 19.4 |
| 7.2 Skin carcinomas | - | - | - | - | - | - | - | 0.1 | 0.2 | 0.2 |
| 8. CARCINOMAS (excluding skin) | 3.7 | 10.4 | 7.5 | 22.4 | 13.4 | 49.2 | 25.1 | 95.6 | 43.7 | 157.6 |
| 8.1 Thyroid carcinoma | 1.2 | 6.7 | 3.0 | 14.2 | 4.7 | 22.5 | 7.0 | 30.8 | 9.4 | 37.2 |
| 8.2 Other carcinoma of head and neck | 0.4 | 0.3 | 0.6 | 0.7 | 1.0 | 1.1 | 2.1 | 1.7 | 3.5 | 2.5 |
| 8.2.1 Nasopharyngeal carcinoma | - | - | 0.1 | - | - | - | 0.1 | - | 0.2 | - |
| 8.2.2 Other sites in lip, oral cavity and pharynx | 0.3 | 0.3 | 0.4 | 0.6 | 0.8 | 0.9 | 1.6 | 1.5 | 2.7 | 2.0 |
| 8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck | - | - | - | - | 0.1 | 0.2 | 0.3 | 0.2 | 0.6 | 0.4 |
| 8.3 Carcinoma of trachea, bronchus, and lung | 0.1 | - | 0.3 | 0.3 | 0.5 | 0.6 | 1.0 | 1.1 | 2.0 | 2.5 |
| 8.4 Carcinoma of breast | - | - | - | 1.4 | - | 9.8 | - | 29.4 | 0.2 | 62.8 |
| 8.5 Carcinoma of genitourinary tract | 0.2 | 0.7 | 0.9 | 2.5 | 2.1 | 9.7 | 5.1 | 22.6 | 10.2 | 35.0 |
| 8.5.1 Carcinoma of kidney | - | 0.2 | 0.5 | 0.5 | 1.3 | 1.2 | 3.7 | 2.9 | 7.2 | 5.1 |
| 8.5.2 Carcinoma of bladder | 0.1 | - | 0.3 | 0.2 | 0.6 | 0.3 | 1.2 | 0.5 | 2.2 | 1.0 |
| 8.5.3 Carcinoma of gonads | - | 0.3 | - | 0.8 | - | 1.6 | - | 2.6 | - | 4.4 |
| 8.5.4 Carcinoma of cervix and uterus | - | - | - | 1.0 | - | 6.5 | - | 15.9 | - | 23.3 |
| 8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract | - | - | - | - | - | 0.2 | 0.2 | 0.7 | 0.8 | 1.2 |
| 8.6 Carcinoma of gastrointestinal tract | 1.6 | 2.4 | 2.5 | 3.2 | 4.7 | 5.1 | 9.4 | 9.3 | 17.7 | 16.5 |
| 8.6.1 Carcinoma of colon and rectum | 1.3 | 1.8 | 1.8 | 2.4 | 3.3 | 3.8 | 6.5 | 6.6 | 11.7 | 11.4 |
| 8.6.2 Carcinoma of stomach | - | - | 0.2 | 0.2 | 0.4 | 0.4 | 1.0 | 0.9 | 2.1 | 1.9 |
| 8.6.3 Carcinoma of liver and intrahepatic bile ducts | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.5 | 0.4 | 0.6 | 0.6 |
| 8.6.4 Carcinoma of pancreas | - | 0.3 | 0.1 | 0.3 | 0.2 | 0.5 | 0.7 | 0.8 | 1.4 | 1.5 |
| 8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract | - | - | 0.1 | 0.2 | 0.4 | 0.3 | 0.7 | 0.6 | 1.8 | 1.1 |
| 8.7 Carcinoma of other and ill-defined sites, NOS | - | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.8 | 1.0 |
| 8.7.1 Adrenocortical carcinoma | - | - | - | - | - | - | - | - | - | 0.1 |
| 8.7.2 Carcinoma of other and ill-defined sites, NOS | - | - | 0.2 | 0.1 | 0.2 | 0.3 | 0.5 | 0.4 | 0.7 | 0.9 |
| 9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS | 0.9 | 1.1 | 1.0 | 1.0 | 1.3 | 2.0 | 2.2 | 3.0 | 3.8 | 4.8 |
| 9.1 Other pediatric and embryonal tumors, NOS | 0.2 | 0.2 | 0.1 | - | - | 0.1 | - | 0.1 | 0.1 | - |
| 9.1.1 Wilms tumor | - | - | - | - | - | - | - | - | - | - |
| 9.1.2 Neuroblastoma | - | - | - | - | - | - | - | - | - | - |
| 9.1.3 Other pediatric and embryonal tumors, NOS | - | - | - | - | - | - | - | - | - | - |
| 9.2 Other specified neoplasms, NOS | 0.7 | 0.9 | 0.9 | 1.0 | 1.3 | 1.8 | 2.2 | 2.9 | 3.7 | 4.8 |
| 9.2.1 Paraganglioma and glomus tumors | - | - | - | - | - | - | - | - | - | - |
| 9.2.2 Other specified gonadal tumors | - | 0.1 | - | - | - | 0.1 | - | 0.2 | - | 0.3 |
| 9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.6 | 0.4 | 1.2 | 1.1 |
| 9.2.4 Other specified neoplasms, NOS ^c | 0.4 | 0.5 | 0.5 | 0.7 | 0.8 | 1.4 | 1.4 | 2.2 | 2.4 | 3.3 |
| 10. UNSPECIFIED MALIGNANT NEOPLASMS | - | - | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.5 | 0.6 | 1.0 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

^c Myeloproliferative disorders and myelodysplastic syndromes were first reported effective January 1, 2001 with the implementation of ICD-O 3.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.6
Age-Specific SEER Incidence^a, by Age Group and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
Black, 2014-2018

| Site | Ages 15-19 | | Ages 20-24 | | Ages 25-29 | | Ages 30-34 | | Ages 35-39 | |
|---------------------------------------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| All Sites Combined | 17.8 | 17.0 | 21.3 | 26.7 | 33.9 | 50.7 | 54.3 | 101.5 | 83.7 | 171.5 |
| 1. LEUKEMIAS | 2.8 | 1.7 | 2.5 | 2.4 | 2.7 | 2.2 | 3.5 | 3.5 | 5.0 | 3.5 |
| 1.1 Acute lymphoid leukemia | 1.4 | 0.5 | 0.7 | 0.6 | 0.6 | - | - | - | - | - |
| 1.2 Acute myeloid leukemia | 0.9 | 0.8 | 1.3 | 1.2 | 1.1 | 1.1 | 1.2 | 1.9 | 1.9 | 1.7 |
| 1.3 Chronic myeloid leukemia | - | - | - | - | 0.8 | - | 1.3 | 0.9 | 1.5 | 0.9 |
| 1.4 Other and unspecified leukemias | - | - | - | - | - | - | 0.7 | - | 1.1 | 0.6 |
| 2. LYMPHOMAS | 5.4 | 4.1 | 5.8 | 5.1 | 8.2 | 6.2 | 10.2 | 7.7 | 12.9 | 9.7 |
| 2.1 Non-Hodgkin Lymphoma | 2.6 | 1.4 | 3.1 | 2.0 | 4.5 | 3.1 | 6.9 | 4.1 | 9.2 | 6.4 |
| 2.2 Hodgkin Lymphoma | 2.8 | 2.7 | 2.6 | 3.0 | 3.7 | 3.1 | 3.3 | 3.6 | 3.7 | 3.3 |
| 3. CNS, INTRACRANIAL, INTRASPINAL | 1.7 | 1.8 | 1.2 | 1.3 | 1.7 | 1.4 | 2.0 | 1.9 | 2.9 | 1.9 |
| 3.1 Astrocytoma | 0.9 | 0.9 | 0.7 | 0.6 | 0.8 | 0.6 | 1.3 | 1.0 | 1.7 | 1.0 |
| 3.1.1 Specified low-grade astrocytic tumors | 0.6 | 0.6 | - | - | - | - | - | - | - | - |
| 3.1.2 Glioblastoma and anaplastic astrocytoma | - | - | - | - | - | - | 0.8 | - | 1.2 | 0.6 |
| 3.1.3 Astrocytoma, NOS | - | - | - | - | - | - | - | - | - | - |
| 3.2 Other glioma | - | - | - | - | - | - | - | - | 0.8 | - |
| 3.3 Ependymoma | - | - | - | - | - | - | - | - | - | - |
| 3.4 Medulloblastoma and other PNET | - | - | - | - | - | - | - | - | - | - |
| 3.4.1 Medulloblastoma | - | - | - | - | - | - | - | - | - | - |
| 3.4.2 Supratentorial PNET | - | - | - | - | - | - | - | - | - | - |
| 3.5 Other specified intracranial and intraspinal neoplasms | - | - | - | - | - | - | - | - | - | - |
| 3.6 Unspecified intracranial and intraspinal neoplasms | - | - | - | - | - | - | - | - | - | - |
| 4. OSSEOUS & CHONDROMATOUS NEOPLASMS | 1.7 | 1.0 | 0.8 | 0.7 | 0.6 | 0.8 | 0.6 | 0.8 | 0.8 | - |
| 4.1 Osteosarcoma | 1.3 | 0.8 | 0.5 | - | - | - | - | - | - | - |
| 4.2 Chondrosarcoma | - | - | - | - | - | - | - | - | - | - |
| 4.3 Ewing tumor | - | - | - | - | - | - | - | - | - | - |
| 4.4 Other specified and unspecified bone tumors | - | - | - | - | - | - | - | - | - | - |
| 5. SOFT TISSUE SARCOMAS | 2.1 | 1.8 | 3.6 | 2.3 | 7.0 | 2.7 | 9.1 | 4.0 | 7.5 | 4.3 |
| 5.1 Fibromatous neoplasms | - | - | 0.8 | 0.9 | 1.3 | 1.2 | 2.1 | 1.1 | 1.7 | 1.1 |
| 5.2 Rhabdomyosarcoma | 0.6 | - | - | - | - | - | - | - | - | - |
| 5.3 Other specified soft tissue sarcoma | 1.3 | 0.9 | 2.5 | 1.3 | 5.5 | 1.4 | 6.9 | 2.7 | 5.5 | 2.9 |
| 5.3.1 Specified soft tissue sarcoma | 0.8 | 0.8 | 2.1 | 1.0 | 5.0 | 0.9 | 6.3 | 2.2 | 4.7 | 2.2 |
| 5.3.1.1 Specified (excluding Kaposi sarcoma) | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 1.6 | 1.8 | 1.1 | 2.0 |
| 5.3.1.2 Kaposi sarcoma | - | - | 1.3 | - | 4.2 | - | 4.7 | - | 3.6 | - |
| 5.3.2 Unspecified soft tissue sarcoma | - | - | - | - | 0.5 | - | 0.6 | - | 0.8 | 0.6 |
| 6. GERM CELL AND TROPHOBLASTIC NEOPLASMS | 0.7 | 1.3 | 2.0 | 0.9 | 3.4 | 1.2 | 4.0 | 1.2 | 4.2 | 1.0 |
| 6.1 Germ cell and trophoblastic neoplasms of gonads | - | 1.1 | 1.7 | 0.5 | 3.1 | 0.6 | 3.7 | 0.6 | 4.1 | 0.6 |
| 6.2 Germ cell and trophoblastic neoplasms of nongonadal sites | - | - | - | - | - | 0.6 | - | 0.6 | - | - |
| 6.2.1 Intracranial sites | - | - | - | - | - | - | - | - | - | - |
| 6.2.2 Other nongonadal sites | - | - | - | - | - | 0.6 | - | 0.6 | - | - |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.6 - continued
 Age-Specific SEER Incidence^a, by Age Group and Sex
 By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
 Black, 2014-2018

| Site | Ages 15-19 | | Ages 20-24 | | Ages 25-29 | | Ages 30-34 | | Ages 35-39 | |
|------------------------------------------------------------------------------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 7. MELANOMA AND SKIN CARCINOMAS | - | - | - | - | - | - | - | 0.6 | 0.6 | 1.1 |
| 7.1 Melanoma | - | - | - | - | - | - | - | - | - | 0.8 |
| 7.2 Skin carcinomas | - | - | - | - | - | - | - | - | - | - |
| 8. CARCINOMAS (excluding skin) | 2.1 | 4.1 | 4.0 | 12.2 | 8.5 | 32.8 | 20.8 | 76.9 | 44.3 | 140.6 |
| 8.1 Thyroid carcinoma | 0.6 | 1.9 | 0.7 | 3.9 | 0.9 | 7.9 | 2.1 | 12.9 | 3.3 | 18.5 |
| 8.2 Other carcinoma of head and neck | - | 0.6 | 0.5 | 0.5 | 1.1 | 0.8 | 1.5 | 1.9 | 4.0 | 1.7 |
| 8.2.1 Nasopharyngeal carcinoma | - | - | - | - | - | - | - | - | 0.8 | - |
| 8.2.2 Other sites in lip, oral cavity and pharynx | - | - | - | - | - | 0.7 | 0.8 | 1.4 | 2.4 | 1.3 |
| 8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck | - | - | - | - | - | - | - | - | 0.8 | - |
| 8.3 Carcinoma of trachea, bronchus, and lung | - | - | - | - | 0.5 | - | 1.4 | 1.3 | 3.8 | 2.8 |
| 8.4 Carcinoma of breast | - | - | - | 2.1 | - | 11.5 | - | 33.3 | - | 70.1 |
| 8.5 Carcinoma of genitourinary tract | - | - | 0.8 | 2.6 | 1.7 | 7.5 | 4.3 | 16.6 | 10.8 | 26.2 |
| 8.5.1 Carcinoma of kidney | - | - | 0.6 | 0.8 | 1.5 | 1.0 | 3.4 | 2.2 | 8.0 | 3.7 |
| 8.5.2 Carcinoma of bladder | - | - | - | - | - | - | 0.7 | - | 1.2 | 0.7 |
| 8.5.3 Carcinoma of gonads | - | - | - | 0.6 | - | 0.8 | - | 1.7 | - | 3.1 |
| 8.5.4 Carcinoma of cervix and uterus | - | - | - | 1.1 | - | 5.2 | - | 11.4 | - | 17.0 |
| 8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract | - | - | - | - | - | - | - | 0.9 | 1.6 | 1.7 |
| 8.6 Carcinoma of gastrointestinal tract | 0.6 | 0.8 | 1.6 | 2.4 | 3.9 | 4.4 | 10.3 | 10.0 | 20.3 | 19.5 |
| 8.6.1 Carcinoma of colon and rectum | - | - | 1.0 | 1.5 | 2.8 | 2.8 | 6.7 | 6.5 | 13.6 | 12.0 |
| 8.6.2 Carcinoma of stomach | - | - | - | - | - | - | 1.1 | 0.9 | 1.6 | 2.4 |
| 8.6.3 Carcinoma of liver and intrahepatic bile ducts | - | - | - | - | - | - | 1.2 | - | 1.8 | 0.9 |
| 8.6.4 Carcinoma of pancreas | - | - | - | - | - | 0.6 | 0.7 | 1.4 | 1.5 | 1.8 |
| 8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract | - | - | - | - | - | - | 0.6 | 0.8 | 1.9 | 2.4 |
| 8.7 Carcinoma of other and ill-defined sites, NOS | - | - | - | - | - | - | 0.9 | 0.9 | 1.5 | 1.7 |
| 8.7.1 Adrenocortical carcinoma | - | - | - | - | - | - | - | - | - | - |
| 8.7.2 Carcinoma of other and ill-defined sites, NOS | - | - | - | - | - | - | 0.9 | 0.8 | 1.4 | 1.6 |
| 9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS | 1.0 | 0.9 | 1.0 | 1.3 | 1.4 | 2.3 | 3.1 | 3.9 | 4.7 | 7.4 |
| 9.1 Other pediatric and embryonal tumors, NOS | - | - | - | - | - | - | - | - | - | - |
| 9.1.1 Wilms tumor | - | - | - | - | - | - | - | - | - | - |
| 9.1.2 Neuroblastoma | - | - | - | - | - | - | - | - | - | - |
| 9.1.3 Other pediatric and embryonal tumors, NOS | - | - | - | - | - | - | - | - | - | - |
| 9.2 Other specified neoplasms, NOS | 0.8 | 0.8 | 0.9 | 1.1 | 1.3 | 2.2 | 3.0 | 3.9 | 4.6 | 7.3 |
| 9.2.1 Paraganglioma and glomus tumors | - | - | - | - | - | - | - | - | - | - |
| 9.2.2 Other specified gonadal tumors | - | - | - | - | - | - | - | - | - | 0.6 |
| 9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS | - | - | - | - | - | - | 1.1 | 1.0 | 2.3 | 2.1 |
| 9.2.4 Other specified neoplasms, NOS ^c | 0.6 | - | 0.7 | 0.8 | 0.9 | 1.6 | 1.8 | 2.5 | 2.0 | 4.6 |
| 10. UNSPECIFIED MALIGNANT NEOPLASMS | - | - | - | - | - | 0.6 | - | 0.9 | - | 1.3 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

^c Myeloproliferative disorders and myelodysplastic syndromes were first reported effective January 1, 2001 with the implementation of ICD-O 3.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.7

Age-Adjusted SEER Incidence^a, by Year and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
All Races, Ages 15-19

| Both Sexes | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 17,446 | 21.3 | 0.8* | 4,808 | 24.4 | 0.8* |
| 1. Leukemias | 2,065 | 2.5 | 0.9* | 551 | 2.8 | 0.9* |
| 2. Lymphomas | 4,212 | 5.2 | 0.2 | 1,072 | 5.4 | 0.2 |
| 3. CNS, intracranial, intraspinal | 1,679 | 2.1 | 0.6* | 446 | 2.3 | 0.6* |
| 4. Osseous & chondromatous neoplasms | 1,309 | 1.6 | 0.4 | 314 | 1.6 | 0.4 |
| 5. Soft tissue sarcomas | 1,219 | 1.5 | 0.1 | 287 | 1.5 | 0.1 |
| 6. Germ cell and trophoblastic neoplasms | 2,029 | 2.5 | 0.0 | 514 | 2.6 | -3.4 |
| 7. Melanoma and skin carcinomas | 1,217 | 1.5 | -0.1 | 259 | 1.3 | -3.4* |
| 8. Carcinomas (excluding skin) | 3,231 | 4.0 | 2.1* | 1,168 | 5.9 | 5.1* |
| 9. Miscellaneous specified neoplasms, NOS | 406 | 0.5 | 2.5 | 178 | 0.9 | 1.3 |
| 10. Unspecified malignant neoplasms | 62 | 0.1 | - | - | - | - |

| Males | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 9,133 | 21.9 | 0.7* | 2,476 | 24.6 | 0.7* |
| 1. Leukemias | 1,231 | 2.9 | 0.7* | 319 | 3.2 | 0.7* |
| 2. Lymphomas | 2,271 | 5.4 | 0.3 | 601 | 6.0 | 0.3 |
| 3. CNS, intracranial, intraspinal | 959 | 2.3 | 0.5 | 242 | 2.4 | 0.5 |
| 4. Osseous & chondromatous neoplasms | 866 | 2.1 | 0.6 | 223 | 2.2 | 0.6 |
| 5. Soft tissue sarcomas | 652 | 1.6 | 0.3 | 162 | 1.6 | 0.3 |
| 6. Germ cell and trophoblastic neoplasms | 1,509 | 3.6 | 0.9* | 404 | 4.0 | 0.9* |
| 7. Melanoma and skin carcinomas | 484 | 1.2 | 0.4 | 103 | 1.0 | 0.4 |
| 8. Carcinomas (excluding skin) | 932 | 2.2 | 2.7* | 323 | 3.2 | 7.3* |
| 9. Miscellaneous specified neoplasms, NOS | 195 | 0.5 | - | 91 | 0.9 | - |
| 10. Unspecified malignant neoplasms | 28 | 0.1 | - | - | - | - |

| Females | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 8,313 | 20.8 | 0.7* | 2,332 | 24.2 | 0.7* |
| 1. Leukemias | 834 | 2.1 | 1.2* | 232 | 2.4 | 1.2* |
| 2. Lymphomas | 1,941 | 4.9 | 0.0 | 471 | 4.9 | 0.0 |
| 3. CNS, intracranial, intraspinal | 720 | 1.8 | 0.7* | 204 | 2.1 | 0.7* |
| 4. Osseous & chondromatous neoplasms | 443 | 1.1 | 0.0 | 91 | 0.9 | 0.0 |
| 5. Soft tissue sarcomas | 567 | 1.4 | 0.0 | 125 | 1.3 | 0.0 |
| 6. Germ cell and trophoblastic neoplasms | 520 | 1.3 | -0.6 | 110 | 1.1 | -0.6 |
| 7. Melanoma and skin carcinomas | 733 | 1.8 | -0.3 | 156 | 1.6 | -3.3* |
| 8. Carcinomas (excluding skin) | 2,299 | 5.7 | 1.7* | 845 | 8.8 | 3.0 |
| 9. Miscellaneous specified neoplasms, NOS | 211 | 0.5 | - | 87 | 0.9 | - |
| 10. Unspecified malignant neoplasms | 34 | 0.1 | - | - | - | - |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

^c The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2018.

- Statistic could not be calculated. Count and rate based on less than 16 cases for the time interval. AAPC could not be calculated due to insufficient data.

* The AAPC is significantly different from zero (p<.05).

Table 3.8

Age-Adjusted SEER Incidence^a, by Year and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
All Races, Ages 20-24

| Both Sexes | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 29,594 | 35.2 | 0.7* | 8,010 | 39.1 | -0.1 |
| 1. Leukemias | 1,902 | 2.3 | 0.7* | 498 | 2.4 | 0.7* |
| 2. Lymphomas | 6,018 | 7.2 | 0.6* | 1,464 | 7.1 | -0.2 |
| 3. CNS, intracranial, intraspinal | 1,907 | 2.3 | 0.0 | 459 | 2.2 | -3.0* |
| 4. Osseous & chondromatous neoplasms | 775 | 0.9 | 0.9* | 211 | 1.0 | 0.9* |
| 5. Soft tissue sarcomas | 1,745 | 2.1 | 0.7 | 402 | 2.0 | -1.0* |
| 6. Germ cell and trophoblastic neoplasms | 4,616 | 5.5 | 0.8* | 1,272 | 6.2 | 0.8* |
| 7. Melanoma and skin carcinomas | 3,569 | 4.2 | 0.1 | 849 | 4.1 | -3.6* |
| 8. Carcinomas (excluding skin) | 8,393 | 10.0 | 0.8* | 2,600 | 12.7 | 1.8* |
| 9. Miscellaneous specified neoplasms, NOS | 480 | 0.6 | 4.2* | 213 | 1.0 | 4.2* |
| 10. Unspecified malignant neoplasms | 174 | 0.2 | - | 31 | 0.2 | - |

| Males | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 14,562 | 34.1 | 0.6* | 3,902 | 37.1 | 0.6* |
| 1. Leukemias | 1,099 | 2.6 | 0.6* | 281 | 2.7 | 0.6* |
| 2. Lymphomas | 3,247 | 7.6 | 0.2 | 805 | 7.7 | 0.2 |
| 3. CNS, intracranial, intraspinal | 1,071 | 2.5 | 0.0 | 254 | 2.4 | 0.0 |
| 4. Osseous & chondromatous neoplasms | 457 | 1.1 | 0.7 | 124 | 1.2 | 0.7 |
| 5. Soft tissue sarcomas | 1,036 | 2.4 | 0.7 | 236 | 2.2 | -1.5* |
| 6. Germ cell and trophoblastic neoplasms | 4,138 | 9.7 | 0.8* | 1,149 | 10.9 | 0.8* |
| 7. Melanoma and skin carcinomas | 1,212 | 2.8 | -0.6 | 262 | 2.5 | -3.2* |
| 8. Carcinomas (excluding skin) | 2,032 | 4.8 | 1.3* | 680 | 6.5 | 4.1* |
| 9. Miscellaneous specified neoplasms, NOS | 199 | 0.5 | - | 92 | 0.9 | - |
| 10. Unspecified malignant neoplasms | 66 | 0.2 | - | 16 | 0.2 | - |

| Females | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 15,032 | 36.4 | 0.5* | 4,108 | 41.2 | -0.4 |
| 1. Leukemias | 803 | 1.9 | 0.0 | 217 | 2.2 | -0.3 |
| 2. Lymphomas | 2,771 | 6.7 | 0.8* | 659 | 6.6 | -0.4 |
| 3. CNS, intracranial, intraspinal | 836 | 2.0 | 0.3 | 205 | 2.1 | -4.7 |
| 4. Osseous & chondromatous neoplasms | 318 | 0.8 | 1.0* | 87 | 0.9 | 1.0* |
| 5. Soft tissue sarcomas | 709 | 1.7 | 0.3 | 166 | 1.7 | 0.3 |
| 6. Germ cell and trophoblastic neoplasms | 478 | 1.2 | 0.3 | 123 | 1.2 | 0.3 |
| 7. Melanoma and skin carcinomas | 2,357 | 5.7 | 0.5 | 587 | 5.9 | -3.7* |
| 8. Carcinomas (excluding skin) | 6,361 | 15.4 | 0.7* | 1,920 | 19.3 | 1.6* |
| 9. Miscellaneous specified neoplasms, NOS | 281 | 0.7 | 2.7 | 121 | 1.2 | 4.4 |
| 10. Unspecified malignant neoplasms | 108 | 0.3 | - | - | - | - |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

^c The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2018.

- Statistic could not be calculated. Count and rate based on less than 16 cases for the time interval. AAPC could not be calculated due to insufficient data.

* The AAPC is significantly different from zero (p<.05).

Table 3.9

Age-Adjusted SEER Incidence^a, by Year and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
All Races, Ages 25-29

| Both Sexes | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 50,538 | 57.2 | 0.5 | 13,778 | 64.4 | -0.6 |
| 1. Leukemias | 2,174 | 2.5 | 0.8* | 594 | 2.8 | 0.8* |
| 2. Lymphomas | 7,312 | 8.3 | 0.2 | 1,743 | 8.1 | -1.7* |
| 3. CNS, intracranial, intraspinal | 2,553 | 2.9 | -0.1 | 640 | 3.0 | -4.2 |
| 4. Osseous & chondromatous neoplasms | 632 | 0.7 | 1.2* | 189 | 0.9 | 1.2* |
| 5. Soft tissue sarcomas | 3,456 | 3.9 | 1.1 | 615 | 2.9 | -0.6 |
| 6. Germ cell and trophoblastic neoplasms | 6,427 | 7.3 | 0.9* | 1,790 | 8.4 | -0.9 |
| 7. Melanoma and skin carcinomas | 6,713 | 7.6 | 0.3 | 1,663 | 7.8 | -2.8* |
| 8. Carcinomas (excluding skin) | 20,233 | 22.9 | 0.7* | 6,129 | 28.6 | 1.6* |
| 9. Miscellaneous specified neoplasms, NOS | 782 | 0.9 | 3.1* | 345 | 1.6 | 1.9 |
| 10. Unspecified malignant neoplasms | 235 | 0.3 | - | 57 | 0.3 | - |

| Males | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 22,577 | 50.8 | 0.5 | 5,889 | 54.2 | -1.2* |
| 1. Leukemias | 1,248 | 2.8 | 0.5* | 331 | 3.0 | 0.5* |
| 2. Lymphomas | 4,173 | 9.4 | 0.5 | 998 | 9.2 | 0.1 |
| 3. CNS, intracranial, intraspinal | 1,391 | 3.1 | 0.6* | 356 | 3.3 | 0.6* |
| 4. Osseous & chondromatous neoplasms | 350 | 0.8 | 0.2 | 95 | 0.9 | 0.2 |
| 5. Soft tissue sarcomas | 2,506 | 5.6 | 1.3 | 397 | 3.7 | -0.7 |
| 6. Germ cell and trophoblastic neoplasms | 5,932 | 13.3 | 1.1 | 1,662 | 15.3 | -0.6 |
| 7. Melanoma and skin carcinomas | 2,355 | 5.3 | -1.3 | 534 | 4.9 | -6.5 |
| 8. Carcinomas (excluding skin) | 4,211 | 9.5 | 0.6 | 1,355 | 12.5 | 2.0* |
| 9. Miscellaneous specified neoplasms, NOS | 301 | 0.7 | - | 132 | 1.2 | - |
| 10. Unspecified malignant neoplasms | 98 | 0.2 | - | 22 | 0.2 | - |

| Females | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 27,961 | 63.8 | 0.7* | 7,889 | 75.0 | 1.1* |
| 1. Leukemias | 926 | 2.1 | 1.2* | 263 | 2.5 | 1.2* |
| 2. Lymphomas | 3,139 | 7.2 | 0.5 | 745 | 7.1 | -0.6 |
| 3. CNS, intracranial, intraspinal | 1,162 | 2.7 | 0.6* | 284 | 2.7 | 0.6* |
| 4. Osseous & chondromatous neoplasms | 282 | 0.6 | 1.9* | 94 | 0.9 | 1.9* |
| 5. Soft tissue sarcomas | 950 | 2.2 | 0.4 | 218 | 2.1 | -1.3* |
| 6. Germ cell and trophoblastic neoplasms | 495 | 1.1 | -0.1 | 128 | 1.2 | -0.1 |
| 7. Melanoma and skin carcinomas | 4,358 | 9.9 | 0.7* | 1,129 | 10.7 | -2.9* |
| 8. Carcinomas (excluding skin) | 16,022 | 36.5 | 0.8* | 4,774 | 45.4 | 1.7* |
| 9. Miscellaneous specified neoplasms, NOS | 481 | 1.1 | 4.0* | 213 | 2.0 | 4.0* |
| 10. Unspecified malignant neoplasms | 137 | 0.3 | - | 35 | 0.3 | - |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

^c The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2018.

- Statistic could not be calculated. Count and rate based on less than 16 cases for the time interval. AAPC could not be calculated due to insufficient data.

* The AAPC is significantly different from zero (p<.05).

Table 3.10

Age-Adjusted SEER Incidence^a, by Year and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
All Races, Ages 30-34

| Both Sexes | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 77,692 | 88.3 | 0.8* | 20,893 | 99.9 | 0.2 |
| 1. Leukemias | 2,620 | 3.0 | 0.8* | 713 | 3.4 | 0.8* |
| 2. Lymphomas | 8,071 | 9.2 | 0.9 | 1,790 | 8.6 | -0.9* |
| 3. CNS, intracranial, intraspinal | 3,017 | 3.4 | 0.4* | 766 | 3.7 | 0.4* |
| 4. Osseous & chondromatous neoplasms | 573 | 0.7 | 0.5 | 141 | 0.7 | 0.5 |
| 5. Soft tissue sarcomas | 5,603 | 6.4 | 1.0 | 802 | 3.8 | -0.8 |
| 6. Germ cell and trophoblastic neoplasms | 6,472 | 7.4 | 1.7* | 1,784 | 8.5 | 0.6* |
| 7. Melanoma and skin carcinomas | 9,818 | 11.2 | 1.4* | 2,593 | 12.4 | 0.2 |
| 8. Carcinomas (excluding skin) | 39,827 | 45.3 | 0.8* | 11,663 | 55.8 | 1.9* |
| 9. Miscellaneous specified neoplasms, NOS | 1,266 | 1.4 | 2.9* | 525 | 2.5 | 2.1* |
| 10. Unspecified malignant neoplasms | 385 | 0.4 | 0.7 | 93 | 0.4 | 0.7 |

| Males | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 31,624 | 71.8 | 0.7 | 7,822 | 74.5 | -0.4 |
| 1. Leukemias | 1,504 | 3.4 | 0.7* | 396 | 3.8 | 0.7* |
| 2. Lymphomas | 4,946 | 11.2 | 1.0 | 1,034 | 9.8 | -1.0* |
| 3. CNS, intracranial, intraspinal | 1,759 | 4.0 | 0.3 | 446 | 4.2 | 0.3 |
| 4. Osseous & chondromatous neoplasms | 325 | 0.7 | 0.7 | 86 | 0.8 | 0.7 |
| 5. Soft tissue sarcomas | 4,418 | 10.0 | 1.1 | 501 | 4.8 | -1.6* |
| 6. Germ cell and trophoblastic neoplasms | 6,061 | 13.8 | 1.7* | 1,680 | 16.0 | 0.6* |
| 7. Melanoma and skin carcinomas | 3,849 | 8.7 | 0.1 | 927 | 8.8 | 0.1 |
| 8. Carcinomas (excluding skin) | 8,088 | 18.4 | 0.9* | 2,490 | 23.7 | 2.5* |
| 9. Miscellaneous specified neoplasms, NOS | 515 | 1.2 | 2.4* | 211 | 2.0 | -1.8 |
| 10. Unspecified malignant neoplasms | 142 | 0.3 | - | 41 | 0.4 | - |

| Females | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|-------|-------------------|-----------|-------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 46,068 | 104.9 | 0.9* | 13,071 | 125.5 | 1.4* |
| 1. Leukemias | 1,116 | 2.5 | 0.8* | 317 | 3.0 | 0.8* |
| 2. Lymphomas | 3,125 | 7.1 | 0.6* | 756 | 7.3 | -1.7* |
| 3. CNS, intracranial, intraspinal | 1,258 | 2.9 | 0.5* | 320 | 3.1 | 0.5* |
| 4. Osseous & chondromatous neoplasms | 248 | 0.6 | - | 55 | 0.5 | - |
| 5. Soft tissue sarcomas | 1,185 | 2.7 | 0.2 | 301 | 2.9 | 0.2 |
| 6. Germ cell and trophoblastic neoplasms | 411 | 0.9 | 0.1 | 104 | 1.0 | 0.1 |
| 7. Melanoma and skin carcinomas | 5,969 | 13.6 | 2.0* | 1,666 | 16.0 | 1.0* |
| 8. Carcinomas (excluding skin) | 31,739 | 72.3 | 0.8* | 9,173 | 88.0 | 1.7* |
| 9. Miscellaneous specified neoplasms, NOS | 751 | 1.7 | 3.0* | 314 | 3.0 | 5.1* |
| 10. Unspecified malignant neoplasms | 243 | 0.6 | - | 52 | 0.5 | - |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

^c The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2018.

- Statistic could not be calculated. Count and rate based on less than 16 cases for the time interval. AAPC could not be calculated due to insufficient data.

* The AAPC is significantly different from zero (p<.05).

Table 3.11

Age-Adjusted SEER Incidence^a, by Year and Sex
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults^b
All Races, Ages 35-39

| Both Sexes | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|-------|-------------------|-----------|-------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 113,030 | 135.7 | 0.7* | 29,010 | 145.1 | 0.1 |
| 1. Leukemias | 3,252 | 3.9 | 0.6 | 911 | 4.6 | 1.9* |
| 2. Lymphomas | 9,128 | 11.0 | 1.1* | 2,005 | 10.0 | -1.4* |
| 3. CNS, intracranial, intraspinal | 3,287 | 3.9 | -0.2 | 749 | 3.7 | -0.2 |
| 4. Osseous & chondromatous neoplasms | 570 | 0.7 | 1.2* | 156 | 0.8 | 1.2* |
| 5. Soft tissue sarcomas | 6,561 | 7.9 | 0.7 | 876 | 4.4 | -1.4* |
| 6. Germ cell and trophoblastic neoplasms | 5,033 | 6.0 | 1.5* | 1,329 | 6.6 | 0.4* |
| 7. Melanoma and skin carcinomas | 12,239 | 14.7 | 1.4* | 3,140 | 15.7 | 0.3* |
| 8. Carcinomas (excluding skin) | 70,191 | 84.3 | 0.5* | 18,869 | 94.4 | 0.4 |
| 9. Miscellaneous specified neoplasms, NOS | 2,144 | 2.6 | 2.8* | 828 | 4.1 | 2.5* |
| 10. Unspecified malignant neoplasms | 569 | 0.7 | -0.5 | 114 | 0.6 | -0.5 |

| Males | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|-------|-------------------|-----------|------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 41,765 | 100.6 | 0.5* | 9,742 | 97.7 | 0.2 |
| 1. Leukemias | 1,877 | 4.5 | 0.4* | 506 | 5.1 | 0.4* |
| 2. Lymphomas | 5,845 | 14.1 | 1.1* | 1,161 | 11.6 | -1.6* |
| 3. CNS, intracranial, intraspinal | 1,907 | 4.6 | -0.3 | 426 | 4.3 | -0.3 |
| 4. Osseous & chondromatous neoplasms | 319 | 0.8 | 0.5 | 83 | 0.8 | 0.5 |
| 5. Soft tissue sarcomas | 5,050 | 12.2 | 1.7 | 528 | 5.3 | -2.0* |
| 6. Germ cell and trophoblastic neoplasms | 4,778 | 11.5 | 1.6* | 1,259 | 12.6 | 0.4* |
| 7. Melanoma and skin carcinomas | 5,238 | 12.6 | 0.6 | 1,227 | 12.3 | -0.4* |
| 8. Carcinomas (excluding skin) | 15,599 | 37.6 | 0.3* | 4,159 | 41.7 | 1.1* |
| 9. Miscellaneous specified neoplasms, NOS | 902 | 2.2 | 2.4 | 335 | 3.4 | 1.5 |
| 10. Unspecified malignant neoplasms | 220 | 0.5 | -1.1 | 39 | 0.4 | -1.1 |

| Females | 1975-2018 | | | 2009-2018 | | |
|-------------------------------------------|-----------|-------|-------------------|-----------|-------|-------------------|
| | No. | Rate | AAPC ^c | No. | Rate | AAPC ^c |
| All Sites Combined | 71,265 | 170.6 | 0.7* | 19,268 | 192.3 | 0.3 |
| 1. Leukemias | 1,375 | 3.3 | 0.9 | 405 | 4.0 | 1.3* |
| 2. Lymphomas | 3,283 | 7.9 | 1.0* | 844 | 8.4 | -0.8 |
| 3. CNS, intracranial, intraspinal | 1,380 | 3.3 | -0.1 | 323 | 3.2 | -0.1 |
| 4. Osseous & chondromatous neoplasms | 251 | 0.6 | - | 73 | 0.7 | - |
| 5. Soft tissue sarcomas | 1,511 | 3.6 | -0.4 | 348 | 3.5 | -0.4 |
| 6. Germ cell and trophoblastic neoplasms | 255 | 0.6 | 0.1 | 70 | 0.7 | 0.1 |
| 7. Melanoma and skin carcinomas | 7,001 | 16.8 | 1.7 | 1,913 | 19.1 | 0.5* |
| 8. Carcinomas (excluding skin) | 54,592 | 130.7 | 0.5* | 14,710 | 146.8 | 0.4 |
| 9. Miscellaneous specified neoplasms, NOS | 1,242 | 3.0 | 3.6* | 493 | 4.9 | 3.6* |
| 10. Unspecified malignant neoplasms | 349 | 0.8 | -0.2 | 75 | 0.7 | -0.2 |

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b Adapted from: RD Barr, EJ Holowaty, JM Birch. Classification Scheme for tumors diagnosed in adolescents and young adults. Cancer. 106:7; 1425-1430. (Restricted to malignant tumors and updated based on ICD-O-3 definitions).

^c The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2018.

- Statistic could not be calculated. Count and rate based on less than 16 cases for the time interval. AAPC could not be calculated due to insufficient data.

* The AAPC is significantly different from zero (p<.05).

Table 3.12

SEER Incidence^a and U.S. Mortality^b Rate Comparison by Race/Ethnicity, 2014-2018
Ages 15-19

| Males | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 25.6 | 27.3 | 17.8 | 20.5 | 26.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.7 |
| Leukemia | 4.1 | 4.3 | 2.8 | 3.2 | 5.8 | 0.9 | 0.9 | 0.6 | 1.1 | 1.3 |
| Lymphoma | 6.0 | 6.2 | 5.4 | 5.2 | 4.6 | 0.2 | 0.2 | 0.3 | - | 0.2 |
| Hodgkin Lymphoma | 3.3 | 3.5 | 2.8 | 2.4 | 2.3 | 0.0 | 0.0 | - | - | - |
| Non-Hodgkin Lymphoma | 2.8 | 2.8 | 2.6 | 2.8 | 2.3 | 0.2 | 0.2 | 0.3 | - | 0.1 |
| Brain and Other Nervous System | 2.5 | 2.7 | 1.7 | 2.1 | 1.8 | 0.6 | 0.6 | 0.5 | 0.7 | 0.5 |
| Bones and Joints | 1.9 | 1.9 | 1.8 | 1.8 | 1.7 | 0.6 | 0.7 | 0.5 | 0.6 | 0.7 |
| Soft Tissue including Heart | 1.4 | 1.4 | 1.6 | 1.1 | 1.3 | 0.3 | 0.3 | 0.4 | - | 0.3 |
| Skin excluding Basal and Squamous | 0.8 | 0.9 | - | - | 0.3 | 0.0 | 0.0 | - | - | - |
| Respiratory System | 0.4 | 0.4 | - | - | 0.5 | 0.1 | 0.1 | - | - | - |
| Male Genital System | 3.7 | 4.5 | 0.7 | 1.7 | 5.7 | 0.1 | 0.1 | - | - | 0.1 |
| Digestive System | 1.6 | 1.8 | 0.7 | - | 1.7 | 0.1 | 0.1 | - | - | 0.2 |

| Females | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 24.8 | 26.6 | 17.0 | 20.7 | 22.4 | 2.3 | 2.4 | 2.3 | 1.8 | 2.4 |
| Leukemia | 2.6 | 2.6 | 1.7 | 3.2 | 3.2 | 0.6 | 0.6 | 0.5 | 0.6 | 0.9 |
| Lymphoma | 4.9 | 5.2 | 4.2 | 3.9 | 3.8 | 0.1 | 0.1 | - | - | 0.2 |
| Hodgkin Lymphoma | 3.4 | 3.7 | 2.7 | 2.2 | 2.3 | 0.0 | - | - | - | - |
| Non-Hodgkin Lymphoma | 1.5 | 1.5 | 1.4 | 1.7 | 1.5 | 0.1 | 0.1 | - | - | - |
| Brain and Other Nervous System | 2.0 | 2.1 | 1.8 | 1.3 | 1.3 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 |
| Bones and Joints | 1.1 | 1.1 | 0.9 | 1.2 | 1.0 | 0.4 | 0.4 | 0.4 | - | 0.3 |
| Soft Tissue including Heart | 1.3 | 1.3 | 1.1 | 1.3 | 1.6 | 0.3 | 0.3 | 0.4 | - | 0.2 |
| Skin excluding Basal and Squamous | 1.3 | 1.5 | - | - | 0.6 | - | - | - | - | - |
| Respiratory System | 0.2 | 0.2 | - | - | - | 0.0 | 0.0 | - | - | - |
| Breast | 0.2 | 0.2 | - | - | - | - | - | - | - | - |
| Female Genital System | 1.6 | 1.5 | 1.8 | 1.3 | 1.8 | 0.1 | 0.1 | - | - | - |
| Digestive System | 2.1 | 2.5 | 1.0 | 1.0 | 2.2 | 0.1 | 0.1 | - | - | - |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).^b US Mortality Files, National Center for Health Statistics, CDC.^c Asian/Pacific Islander^d Hispanic is not mutually exclusive from whites, blacks, and Asian/Pacific Islanders. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.13

SEER Incidence^a and U.S. Mortality^b Rate Comparison by Race/Ethnicity, 2014-2018
Ages 20-24

| Males | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 37.7 | 41.3 | 21.3 | 28.6 | 38.3 | 4.6 | 4.7 | 4.6 | 3.5 | 5.6 |
| Leukemia | 3.4 | 3.5 | 2.5 | 3.1 | 5.2 | 1.1 | 1.1 | 1.2 | 0.9 | 1.9 |
| Lymphoma | 7.2 | 7.6 | 5.8 | 5.6 | 5.5 | 0.4 | 0.4 | 0.6 | - | 0.4 |
| Hodgkin Lymphoma | 4.1 | 4.6 | 2.6 | 2.5 | 2.9 | 0.1 | 0.1 | - | - | - |
| Non-Hodgkin Lymphoma | 3.1 | 3.0 | 3.1 | 3.1 | 2.7 | 0.3 | 0.3 | 0.4 | - | 0.3 |
| Brain and Other Nervous System | 2.4 | 2.7 | 1.4 | 1.9 | 1.9 | 0.6 | 0.7 | 0.4 | - | 0.5 |
| Bones and Joints | 1.0 | 1.1 | 0.7 | 0.7 | 1.0 | 0.5 | 0.6 | 0.4 | - | 0.7 |
| Soft Tissue including Heart | 1.3 | 1.2 | 1.5 | 1.2 | 1.2 | 0.4 | 0.4 | 0.5 | - | 0.4 |
| Skin excluding Basal and Squamous | 1.9 | 2.2 | 0.6 | - | 0.5 | 0.1 | 0.1 | - | - | - |
| Respiratory System | 0.9 | 0.8 | 0.7 | 1.3 | 1.2 | 0.1 | 0.1 | - | - | 0.1 |
| Male Genital System | 11.2 | 13.5 | 1.8 | 5.6 | 15.3 | 0.3 | 0.4 | - | - | 0.6 |
| Digestive System | 2.6 | 2.7 | 1.7 | 2.3 | 2.2 | 0.4 | 0.4 | 0.5 | 0.5 | 0.4 |

| Females | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 40.5 | 43.5 | 26.7 | 31.2 | 33.6 | 3.0 | 2.9 | 3.4 | 2.3 | 3.1 |
| Leukemia | 2.4 | 2.5 | 2.4 | 1.8 | 2.6 | 0.5 | 0.6 | 0.5 | - | 0.9 |
| Lymphoma | 6.4 | 6.8 | 5.1 | 4.7 | 4.8 | 0.2 | 0.2 | 0.4 | - | 0.2 |
| Hodgkin Lymphoma | 4.2 | 4.7 | 3.0 | 2.3 | 2.8 | 0.1 | 0.1 | - | - | - |
| Non-Hodgkin Lymphoma | 2.2 | 2.1 | 2.0 | 2.3 | 2.0 | 0.2 | 0.1 | 0.2 | - | - |
| Brain and Other Nervous System | 1.8 | 2.0 | 1.3 | 1.2 | 1.4 | 0.4 | 0.5 | 0.3 | - | 0.4 |
| Bones and Joints | 0.7 | 0.8 | 0.7 | - | 0.8 | 0.3 | 0.3 | 0.2 | - | 0.3 |
| Soft Tissue including Heart | 1.3 | 1.2 | 1.6 | 0.8 | 1.2 | 0.3 | 0.3 | 0.4 | - | 0.3 |
| Skin excluding Basal and Squamous | 4.2 | 5.0 | 0.7 | - | 0.8 | 0.1 | 0.1 | - | - | - |
| Respiratory System | 0.4 | 0.4 | - | - | 0.4 | 0.1 | 0.0 | - | - | - |
| Breast | 1.6 | 1.5 | 2.2 | 1.1 | 1.5 | 0.1 | 0.1 | 0.2 | - | - |
| Female Genital System | 3.2 | 3.2 | 3.2 | 3.1 | 3.7 | 0.2 | 0.2 | 0.3 | - | 0.2 |
| Digestive System | 3.2 | 3.4 | 2.6 | 2.3 | 3.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).^b US Mortality Files, National Center for Health Statistics, CDC.^c Asian/Pacific Islander^d Hispanic is not mutually exclusive from whites, blacks, and Asian/Pacific Islanders. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.14

SEER Incidence^a and U.S. Mortality^b Rate Comparison by Race/Ethnicity, 2014-2018
Ages 25-29

| Males | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 51.4 | 56.3 | 33.9 | 33.4 | 45.4 | 6.1 | 6.3 | 6.1 | 4.4 | 6.5 |
| Leukemia | 3.4 | 3.4 | 2.7 | 3.4 | 4.3 | 1.0 | 1.1 | 0.9 | 0.6 | 1.5 |
| Lymphoma | 7.9 | 8.1 | 8.2 | 5.4 | 5.7 | 0.5 | 0.5 | 0.8 | - | 0.5 |
| Hodgkin Lymphoma | 3.9 | 4.2 | 3.7 | 1.9 | 2.5 | 0.1 | 0.1 | 0.2 | - | 0.1 |
| Non-Hodgkin Lymphoma | 4.0 | 3.9 | 4.5 | 3.5 | 3.3 | 0.4 | 0.4 | 0.6 | - | 0.4 |
| Brain and Other Nervous System | 3.1 | 3.6 | 1.8 | 1.8 | 2.4 | 0.8 | 0.9 | 0.7 | 0.6 | 0.6 |
| Bones and Joints | 0.7 | 0.7 | 0.6 | 0.7 | 0.7 | 0.3 | 0.3 | 0.3 | - | 0.3 |
| Soft Tissue including Heart | 1.7 | 1.6 | 1.9 | 1.5 | 1.8 | 0.5 | 0.5 | 0.5 | - | 0.5 |
| Skin excluding Basal and Squamous | 3.8 | 4.7 | 0.7 | - | 0.9 | 0.3 | 0.3 | - | - | 0.2 |
| Respiratory System | 1.1 | 1.0 | 1.1 | 1.4 | 1.0 | 0.2 | 0.2 | 0.2 | - | 0.2 |
| Male Genital System | 14.8 | 18.1 | 3.3 | 5.6 | 16.4 | 0.5 | 0.6 | - | - | 0.9 |
| Digestive System | 4.8 | 4.9 | 4.2 | 4.3 | 4.5 | 1.1 | 1.0 | 1.3 | 1.2 | 1.0 |

| Females | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 72.7 | 78.4 | 50.7 | 53.8 | 64.5 | 5.6 | 5.6 | 6.8 | 3.8 | 5.4 |
| Leukemia | 2.7 | 2.7 | 2.2 | 2.5 | 3.2 | 0.7 | 0.7 | 0.7 | 0.5 | 0.9 |
| Lymphoma | 7.0 | 7.4 | 6.2 | 5.1 | 6.3 | 0.3 | 0.3 | 0.4 | - | 0.3 |
| Hodgkin Lymphoma | 4.0 | 4.4 | 3.1 | 2.6 | 3.0 | 0.1 | 0.1 | - | - | - |
| Non-Hodgkin Lymphoma | 3.0 | 3.0 | 3.1 | 2.5 | 3.3 | 0.2 | 0.2 | 0.3 | - | 0.2 |
| Brain and Other Nervous System | 2.5 | 2.8 | 1.4 | 1.8 | 2.0 | 0.5 | 0.6 | 0.5 | - | 0.4 |
| Bones and Joints | 0.7 | 0.6 | 0.8 | - | 0.6 | 0.2 | 0.2 | 0.2 | - | 0.1 |
| Soft Tissue including Heart | 1.5 | 1.5 | 1.7 | 1.1 | 1.8 | 0.3 | 0.4 | 0.4 | - | 0.4 |
| Skin excluding Basal and Squamous | 8.0 | 10.1 | 1.0 | 1.0 | 1.9 | 0.2 | 0.2 | - | - | - |
| Respiratory System | 0.8 | 0.9 | - | 0.7 | 0.7 | 0.1 | 0.1 | 0.2 | - | 0.2 |
| Breast | 10.1 | 10.0 | 11.8 | 8.3 | 8.8 | 0.7 | 0.6 | 1.5 | - | 0.6 |
| Female Genital System | 9.6 | 9.9 | 8.4 | 7.3 | 10.7 | 1.0 | 1.1 | 1.0 | 0.6 | 1.1 |
| Digestive System | 5.1 | 5.4 | 4.6 | 3.7 | 5.1 | 0.8 | 0.7 | 1.1 | 0.9 | 0.9 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).^b US Mortality Files, National Center for Health Statistics, CDC.^c Asian/Pacific Islander^d Hispanic is not mutually exclusive from whites, blacks, and Asian/Pacific Islanders. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.15

SEER Incidence^a and U.S. Mortality^b Rate Comparison by Race/Ethnicity, 2014-2018
Ages 30-34

| Males | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 72.5 | 77.4 | 54.3 | 48.3 | 57.9 | 9.7 | 9.9 | 10.9 | 6.6 | 8.0 |
| Leukemia | 4.1 | 4.2 | 3.5 | 3.8 | 4.6 | 1.1 | 1.1 | 1.1 | 0.8 | 1.3 |
| Lymphoma | 9.1 | 9.1 | 10.2 | 6.5 | 7.3 | 0.8 | 0.7 | 1.4 | 0.6 | 0.7 |
| Hodgkin Lymphoma | 3.6 | 3.9 | 3.3 | 2.0 | 2.5 | 0.2 | 0.2 | 0.3 | - | - |
| Non-Hodgkin Lymphoma | 5.5 | 5.3 | 6.9 | 4.5 | 4.8 | 0.6 | 0.5 | 1.1 | 0.5 | 0.6 |
| Brain and Other Nervous System | 3.9 | 4.5 | 2.0 | 2.6 | 2.6 | 1.4 | 1.6 | 0.7 | 0.6 | 0.7 |
| Bones and Joints | 0.6 | 0.7 | 0.6 | - | 0.6 | 0.3 | 0.3 | 0.2 | - | 0.2 |
| Soft Tissue including Heart | 2.3 | 2.1 | 3.3 | 2.1 | 2.2 | 0.5 | 0.5 | 0.7 | - | 0.4 |
| Skin excluding Basal and Squamous | 7.3 | 9.1 | 1.3 | 0.8 | 1.6 | 0.5 | 0.6 | - | - | 0.2 |
| Respiratory System | 1.8 | 1.8 | 2.2 | 1.5 | 1.5 | 0.5 | 0.5 | 1.0 | 0.5 | 0.3 |
| Male Genital System | 15.6 | 18.6 | 4.2 | 6.1 | 14.3 | 0.5 | 0.6 | 0.2 | - | 0.7 |
| Digestive System | 10.1 | 10.0 | 11.0 | 8.5 | 9.7 | 2.6 | 2.5 | 3.5 | 2.2 | 2.3 |

| Females | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 127.7 | 134.4 | 101.5 | 96.3 | 109.8 | 11.9 | 11.6 | 15.4 | 8.2 | 10.7 |
| Leukemia | 3.3 | 3.3 | 3.5 | 2.3 | 3.6 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 |
| Lymphoma | 7.6 | 7.7 | 7.7 | 5.6 | 6.5 | 0.4 | 0.4 | 0.8 | - | 0.3 |
| Hodgkin Lymphoma | 3.3 | 3.4 | 3.6 | 1.8 | 2.5 | 0.1 | 0.1 | - | - | - |
| Non-Hodgkin Lymphoma | 4.3 | 4.3 | 4.1 | 3.8 | 4.0 | 0.3 | 0.3 | 0.6 | - | 0.2 |
| Brain and Other Nervous System | 2.9 | 3.3 | 1.9 | 1.7 | 2.0 | 1.0 | 1.1 | 0.6 | 0.6 | 0.6 |
| Bones and Joints | 0.6 | 0.6 | 0.6 | - | 0.7 | 0.2 | 0.2 | - | - | 0.2 |
| Soft Tissue including Heart | 1.8 | 1.7 | 2.2 | 1.6 | 1.8 | 0.4 | 0.4 | 0.6 | - | 0.3 |
| Skin excluding Basal and Squamous | 13.1 | 16.6 | 1.1 | 1.2 | 3.4 | 0.4 | 0.5 | - | - | - |
| Respiratory System | 1.5 | 1.4 | 1.8 | 1.6 | 1.2 | 0.4 | 0.4 | 0.4 | 0.7 | 0.3 |
| Breast | 30.2 | 29.7 | 33.8 | 26.2 | 25.3 | 2.8 | 2.6 | 4.9 | 1.6 | 2.2 |
| Female Genital System | 20.0 | 21.1 | 16.4 | 14.2 | 22.8 | 2.3 | 2.3 | 2.6 | 1.3 | 2.5 |
| Digestive System | 9.8 | 9.9 | 10.7 | 6.9 | 10.6 | 2.0 | 1.9 | 2.8 | 1.7 | 2.4 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).^b US Mortality Files, National Center for Health Statistics, CDC.^c Asian/Pacific Islander^d Hispanic is not mutually exclusive from whites, blacks, and Asian/Pacific Islanders. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.16

SEER Incidence^a and U.S. Mortality^b Rate Comparison by Race/Ethnicity, 2014-2018
Ages 35-39

| Males | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 99.2 | 103.1 | 83.7 | 70.4 | 75.2 | 16.5 | 16.4 | 19.7 | 12.7 | 13.0 |
| Leukemia | 5.2 | 5.3 | 5.0 | 4.1 | 5.1 | 1.3 | 1.3 | 1.4 | 1.1 | 1.5 |
| Lymphoma | 11.7 | 11.8 | 12.9 | 7.9 | 9.8 | 1.0 | 0.9 | 1.6 | 0.5 | 0.9 |
| Hodgkin Lymphoma | 3.3 | 3.4 | 3.7 | 1.6 | 2.1 | 0.1 | 0.1 | 0.2 | - | - |
| Non-Hodgkin Lymphoma | 8.4 | 8.4 | 9.2 | 6.3 | 7.7 | 0.8 | 0.8 | 1.3 | 0.5 | 0.7 |
| Brain and Other Nervous System | 4.5 | 4.9 | 3.0 | 3.3 | 3.3 | 2.1 | 2.4 | 1.3 | 1.2 | 1.3 |
| Bones and Joints | 0.8 | 0.8 | 0.8 | - | 0.7 | 0.2 | 0.3 | - | - | 0.2 |
| Soft Tissue including Heart | 2.4 | 2.4 | 2.1 | 2.4 | 2.5 | 0.7 | 0.7 | 0.9 | 0.5 | 0.6 |
| Skin excluding Basal and Squamous | 10.4 | 12.6 | 1.7 | 1.7 | 2.0 | 0.9 | 1.1 | 0.2 | - | 0.2 |
| Respiratory System | 3.3 | 3.0 | 4.9 | 2.9 | 2.2 | 1.4 | 1.3 | 2.3 | 1.0 | 0.7 |
| Male Genital System | 13.8 | 16.0 | 5.8 | 4.4 | 11.3 | 0.5 | 0.5 | 0.4 | - | 0.5 |
| Digestive System | 19.1 | 18.5 | 21.3 | 17.2 | 17.9 | 5.8 | 5.5 | 7.7 | 5.7 | 5.0 |

| Females | Incidence | | | | | Mortality | | | | |
|-----------------------------------|-----------|-------|-------|------------------|-----------------------|-----------|-------|-------|------------------|-----------------------|
| | All Races | White | Black | API ^c | Hispanic ^d | All Races | White | Black | API ^c | Hispanic ^d |
| All Malignant Cancers | 197.1 | 204.0 | 171.5 | 160.2 | 170.2 | 22.2 | 21.6 | 29.0 | 16.5 | 20.0 |
| Leukemia | 3.8 | 4.0 | 3.5 | 2.9 | 3.9 | 1.0 | 1.0 | 1.3 | 0.9 | 1.1 |
| Lymphoma | 8.4 | 8.4 | 9.7 | 6.0 | 6.9 | 0.6 | 0.5 | 1.0 | 0.4 | 0.6 |
| Hodgkin Lymphoma | 2.6 | 2.8 | 3.3 | 1.1 | 1.9 | 0.1 | 0.1 | - | - | - |
| Non-Hodgkin Lymphoma | 5.7 | 5.6 | 6.4 | 4.9 | 5.0 | 0.5 | 0.4 | 0.8 | - | 0.5 |
| Brain and Other Nervous System | 3.3 | 3.8 | 1.8 | 2.1 | 2.8 | 1.3 | 1.5 | 0.7 | 0.8 | 0.9 |
| Bones and Joints | 0.7 | 0.7 | 0.6 | - | 0.7 | 0.2 | 0.2 | - | - | - |
| Soft Tissue including Heart | 1.9 | 1.8 | 1.7 | 1.9 | 2.0 | 0.5 | 0.5 | 0.7 | - | 0.5 |
| Skin excluding Basal and Squamous | 15.5 | 19.7 | 1.5 | 1.3 | 4.4 | 0.6 | 0.7 | 0.2 | - | 0.2 |
| Respiratory System | 3.3 | 3.2 | 3.1 | 4.4 | 2.4 | 1.1 | 1.1 | 1.3 | 1.2 | 0.7 |
| Breast | 64.5 | 63.4 | 71.1 | 58.9 | 53.1 | 6.6 | 6.1 | 10.9 | 4.3 | 5.5 |
| Female Genital System | 30.3 | 31.2 | 25.7 | 25.5 | 34.4 | 4.1 | 4.2 | 4.6 | 3.1 | 4.4 |
| Digestive System | 17.7 | 17.4 | 20.7 | 14.9 | 16.7 | 4.2 | 4.0 | 5.4 | 3.8 | 4.2 |

Rates are per 100,000.

^a SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).^b US Mortality Files, National Center for Health Statistics, CDC.^c Asian/Pacific Islander^d Hispanic is not mutually exclusive from whites, blacks, and Asian/Pacific Islanders. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval.

Table 3.17

SEER Incidence^a and U.S. Mortality^b Rates and Trends for the Top 5 Cancer Sites^c by Age
All Races, Both Sexes, 1975-2018

| | Incidence | | | | Mortality | | | |
|--------------------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|
| | 1975-2018 | | 2009-2018 | | 1975-2018 | | 2009-2018 | |
| | Rate | AAPC ^d | Rate | AAPC ^d | Rate | AAPC ^d | Rate | AAPC ^d |
| <u>Ages 15-19</u> | | | | | | | | |
| All Malignant Cancers | 21.3 | 0.8* | 24.4 | 0.8* | 3.9 | -1.7* | 2.9 | -0.5 |
| Hodgkin Lymphoma | 3.4 | -0.5* | 3.3 | -0.5* | 0.2 | -5.1* | 0.0 | -5.9* |
| Brain and Other Nervous System | 2.1 | 0.5* | 2.3 | 0.5* | 0.6 | -0.9* | 0.5 | -0.9* |
| Thyroid | 2.1 | 2.2* | 3.4 | 2.8 | 0.0 | - | - | - |
| Non-Hodgkin Lymphoma | 1.7 | 1.5* | 2.1 | 1.5* | 0.3 | -3.5* | 0.1 | -4.8* |
| Testis | 1.6 | 0.2 | 1.7 | -4.4 | 0.1 | -4.9* | 0.0 | -2.4* |
| <u>Ages 20-24</u> | | | | | | | | |
| All Malignant Cancers | 35.2 | 0.7* | 39.1 | -0.1 | 5.3 | -1.7* | 4.1 | -2.9* |
| Hodgkin Lymphoma | 4.9 | 0.1 | 4.5 | -0.7* | 0.4 | -5.4* | 0.1 | -11.5* |
| Thyroid | 4.7 | 1.6* | 6.8 | 0.6 | 0.0 | - | 0.0 | - |
| Testis | 4.6 | 1.0* | 5.4 | 1.0* | 0.2 | -3.4* | 0.2 | -0.6 |
| Melanoma of the Skin | 4.1 | 0.1 | 4.0 | -3.3* | 0.2 | -4.9* | 0.1 | -12.4* |
| Brain and Other Nervous System | 2.3 | 0.2 | 2.3 | -2.3 | 0.6 | -0.7* | 0.6 | -0.7* |
| <u>Ages 25-29</u> | | | | | | | | |
| All Malignant Cancers | 57.2 | 0.5 | 64.4 | -0.6 | 8.0 | -1.5* | 6.2 | -1.5* |
| Thyroid | 7.7 | 1.6* | 11.7 | 0.5 | 0.0 | - | 0.0 | - |
| Melanoma of the Skin | 7.4 | 0.1 | 7.6 | -4.0* | 0.5 | -3.0* | 0.3 | -3.0* |
| Testis | 6.5 | 0.7* | 7.6 | -1.2 | 0.3 | -2.8* | 0.2 | 0.8 |
| Hodgkin Lymphoma | 4.8 | -0.2 | 4.3 | -0.2 | 0.5 | -5.6* | 0.2 | -10.8* |
| Breast | 4.3 | 0.5 | 4.9 | 1.9* | 0.5 | -1.6* | 0.4 | 0.2 |
| <u>Ages 30-34</u> | | | | | | | | |
| All Malignant Cancers | 88.3 | 0.8* | 99.9 | 0.2 | 13.9 | -1.3* | 10.9 | -0.3 |
| Breast | 13.6 | 0.2 | 14.4 | 0.7* | 2.0 | -1.5* | 1.4 | 0.5 |
| Melanoma of the Skin | 10.8 | 1.4* | 12.1 | 0.2 | 0.8 | -2.4* | 0.5 | -2.7* |
| Thyroid | 10.2 | 2.4* | 16.9 | 1.1 | 0.0 | -1.2* | 0.0 | -1.2* |
| Testis | 6.7 | 1.8* | 7.9 | 0.7* | 0.3 | -2.1* | 0.2 | 1.8* |
| Cervix Uteri | 5.6 | -1.1* | 4.7 | -1.1* | 0.8 | -0.7* | 0.7 | 1.9* |
| <u>Ages 35-39</u> | | | | | | | | |
| All Malignant Cancers | 135.7 | 0.7* | 145.1 | 0.1 | 25.9 | -1.4* | 19.5 | -0.5* |
| Breast | 31.8 | 0.4* | 32.3 | 0.3* | 4.8 | -1.4* | 3.3 | -0.4 |
| Melanoma of the Skin | 14.2 | 1.3* | 15.1 | 0.3* | 1.2 | -2.7* | 0.7 | -3.7* |
| Thyroid | 12.3 | 2.5* | 20.4 | 0.0 | 0.1 | -0.5 | 0.1 | -0.5 |
| Non-Hodgkin Lymphoma | 7.8 | 1.1 | 7.1 | -3.6* | 1.4 | -1.8* | 0.7 | -3.1* |
| Colon and Rectum | 7.7 | 1.3* | 10.2 | 2.7* | 2.1 | -0.3* | 2.3 | 1.2* |

Rates are per 100,000.

^a SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b US Mortality Files, National Center for Health Statistics, CDC.

^c Top 5 cancer sites selected based on 1975-2018 SEER 9 Incidence rates for the age group.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2018.

- Statistic could not be calculated. Count and rate based on less than 16 cases for the time interval. AAPC could not be calculated due to insufficient data.

* The AAPC is significantly different from zero (p<.05).

Table 3.18

SEER Incidence^a and U.S. Mortality^b Rates and Trends for the Top 5 Cancer Sites^c by Age
All Races, Males, 1975-2018

| | <u>Incidence</u> | | | | <u>Mortality</u> | | | |
|--------------------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
| | <u>1975-2018</u> | | <u>2009-2018</u> | | <u>1975-2018</u> | | <u>2009-2018</u> | |
| | Rate | AAPC ^d | Rate | AAPC ^d | Rate | AAPC ^d | Rate | AAPC ^d |
| <u>Ages 15-19</u> | | | | | | | | |
| All Malignant Cancers | 21.9 | 0.7* | 24.6 | 0.7* | 4.6 | -1.7* | 3.3 | -0.3 |
| Hodgkin Lymphoma | 3.3 | -0.5* | 3.2 | -0.5* | 0.2 | -5.2* | 0.0 | -5.2* |
| Testis | 3.1 | 0.1 | 3.4 | -4.5 | 0.1 | -4.9* | 0.1 | -2.4* |
| Brain and Other Nervous System | 2.4 | 0.5 | 2.6 | 0.5 | 0.7 | -0.9* | 0.6 | -0.9* |
| Non-Hodgkin Lymphoma | 2.2 | 1.5* | 2.8 | 1.5* | 0.4 | -3.3* | 0.2 | -3.3* |
| Bones and Joints | 1.9 | 0.3 | 2.0 | 0.3 | 0.7 | -1.1* | 0.6 | 0.0 |
| <u>Ages 20-24</u> | | | | | | | | |
| All Malignant Cancers | 34.1 | 0.6* | 37.1 | 0.6* | 6.3 | -1.6* | 4.8 | -1.3* |
| Testis | 9.1 | 0.9* | 10.5 | 0.9* | 0.5 | -3.4* | 0.3 | -0.4 |
| Hodgkin Lymphoma | 4.9 | -0.4* | 4.5 | -0.4* | 0.4 | -5.7* | 0.1 | -10.9* |
| Non-Hodgkin Lymphoma | 2.7 | 1.3* | 3.2 | 1.3* | 0.6 | -2.6* | 0.3 | -5.0* |
| Melanoma of the Skin | 2.7 | -0.6 | 2.4 | -3.5* | 0.2 | -4.7* | 0.1 | -11.4* |
| Brain and Other Nervous System | 2.6 | 0.1 | 2.5 | 0.1 | 0.7 | -0.7* | 0.6 | -0.7* |
| <u>Ages 25-29</u> | | | | | | | | |
| All Malignant Cancers | 50.8 | 0.5 | 54.2 | -1.2* | 8.4 | -1.7* | 6.5 | -2.4* |
| Testis | 13.0 | 0.7* | 14.9 | -1.4 | 0.6 | -2.8* | 0.5 | 0.7 |
| Melanoma of the Skin | 5.1 | -1.3 | 4.8 | -6.5 | 0.5 | -3.7* | 0.3 | -6.2* |
| Hodgkin Lymphoma | 5.0 | -0.3* | 4.6 | -0.3* | 0.6 | -4.7* | 0.2 | -4.7* |
| Non-Hodgkin Lymphoma | 4.4 | 1.2 | 4.6 | 0.4 | 0.9 | -2.1* | 0.5 | -5.1* |
| Kaposi sarcoma | 3.4 | - | 1.4 | - | - | - | - | - |
| <u>Ages 30-34</u> | | | | | | | | |
| All Malignant Cancers | 71.8 | 0.7 | 74.5 | -0.4 | 12.9 | -1.4* | 9.9 | -1.0* |
| Testis | 13.5 | 1.7* | 15.8 | 0.7* | 0.6 | -2.2* | 0.4 | 1.8* |
| Melanoma of the Skin | 8.4 | 0.1 | 8.5 | 0.1 | 1.0 | -2.5* | 0.5 | -2.8* |
| Kaposi sarcoma | 7.4 | - | 1.9 | - | - | - | - | - |
| Non-Hodgkin Lymphoma | 7.0 | 1.8* | 5.9 | -0.7 | 1.3 | -1.5* | 0.7 | -3.1* |
| Hodgkin Lymphoma | 4.2 | -0.1 | 4.0 | -0.1 | 0.7 | -4.5* | 0.2 | -5.3* |
| <u>Ages 35-39</u> | | | | | | | | |
| All Malignant Cancers | 100.6 | 0.5* | 97.7 | 0.2 | 22.5 | -1.5* | 16.8 | -0.6* |
| Melanoma of the Skin | 12.1 | 0.5 | 11.8 | -0.5* | 1.5 | -2.5* | 0.9 | -2.2* |
| Testis | 11.3 | 1.7* | 12.6 | 0.5* | 0.5 | -2.5* | 0.4 | -1.0* |
| Non-Hodgkin Lymphoma | 10.4 | 1.6 | 8.5 | -3.8* | 1.9 | -1.8* | 0.9 | -2.7* |
| Kaposi sarcoma | 8.8 | - | 1.8 | - | - | - | - | - |
| Colon and Rectum | 8.1 | 1.1* | 10.5 | 2.2* | 2.3 | -0.1 | 2.6 | 2.2* |

Rates are per 100,000.

^a SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b US Mortality Files, National Center for Health Statistics, CDC.

^c Top 5 cancer sites selected based on 1975-2018 rates for the age group.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2018.

- Statistic could not be calculated. Count and rate based on less than 16 cases for the time interval. AAPC could not be calculated due to insufficient data.

* The AAPC is significantly different from zero (p<.05).

Table 3.19

SEER Incidence^a and U.S. Mortality^b Rates and Trends for the Top 5 Cancer Sites^c by Age
All Races, Females, 1975-2018

| | <u>Incidence</u> | | | | <u>Mortality</u> | | | |
|--------------------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
| | <u>1975-2018</u> | | <u>2009-2018</u> | | <u>1975-2018</u> | | <u>2009-2018</u> | |
| | Rate | AAPC ^d | Rate | AAPC ^d | Rate | AAPC ^d | Rate | AAPC ^d |
| <u>Ages 15-19</u> | | | | | | | | |
| All Malignant Cancers | 20.8 | 0.7* | 24.2 | 0.7* | 3.2 | -1.7* | 2.3 | -1.7* |
| Hodgkin Lymphoma | 3.6 | -0.4 | 3.5 | -0.4 | 0.1 | -4.5* | 0.0 | -5.7* |
| Thyroid | 3.5 | 2.0* | 5.7 | 1.6 | 0.0 | - | - | - |
| Brain and Other Nervous System | 1.8 | 0.5 | 2.1 | 0.5 | 0.5 | -0.8* | 0.5 | 0.6 |
| Melanoma of the Skin | 1.8 | -0.4 | 1.5 | -4.0* | 0.0 | - | 0.0 | - |
| Ovary | 1.5 | -0.3 | 1.5 | -0.3 | 0.1 | -3.4* | 0.1 | -0.7 |
| <u>Ages 20-24</u> | | | | | | | | |
| All Malignant Cancers | 36.4 | 0.5* | 41.2 | -0.4 | 4.3 | -1.7* | 3.2 | -3.4* |
| Thyroid | 8.0 | 2.2* | 11.6 | 2.2* | 0.0 | - | - | - |
| Melanoma of the Skin | 5.5 | 0.5 | 5.7 | -3.7* | 0.2 | -4.6* | 0.1 | -8.2* |
| Hodgkin Lymphoma | 4.9 | 0.5 | 4.5 | -0.9* | 0.3 | -5.0* | 0.1 | -10.0* |
| Brain and Other Nervous System | 2.0 | 0.9* | 2.1 | 0.9* | 0.5 | -0.7* | 0.5 | -0.7* |
| Ovary | 1.9 | -0.5 | 1.8 | -0.5 | 0.2 | -2.0* | 0.2 | -0.9* |
| <u>Ages 25-29</u> | | | | | | | | |
| All Malignant Cancers | 63.8 | 0.7* | 75.0 | 1.1* | 7.5 | -1.4* | 5.8 | -1.4* |
| Thyroid | 12.8 | 1.7* | 19.9 | 0.4 | 0.0 | - | 0.0 | - |
| Melanoma of the Skin | 9.7 | 0.7* | 10.5 | -2.9* | 0.4 | -2.8* | 0.2 | -2.8* |
| Breast | 8.6 | 0.5* | 10.0 | 2.2* | 1.0 | -1.6* | 0.7 | 0.4 |
| Cervix Uteri | 6.7 | -1.3 | 4.8 | 1.0 | 0.7 | -1.4* | 0.6 | -1.4* |
| Hodgkin Lymphoma | 4.5 | -0.1 | 4.1 | -0.1 | 0.4 | -4.7* | 0.1 | -7.3* |
| <u>Ages 30-34</u> | | | | | | | | |
| All Malignant Cancers | 104.9 | 0.9* | 125.5 | 1.4* | 15.0 | -1.1* | 11.8 | 0.3 |
| Breast | 27.1 | 0.3* | 28.9 | 0.3* | 4.0 | -1.5* | 2.7 | 0.5 |
| Thyroid | 16.6 | 2.6* | 27.7 | 1.3 | 0.0 | - | 0.0 | - |
| Melanoma of the Skin | 13.2 | 2.1* | 15.6 | 1.0* | 0.7 | -2.6* | 0.4 | -2.6* |
| Cervix Uteri | 11.3 | -1.5* | 9.5 | -0.9* | 1.7 | -0.7* | 1.4 | 2.0* |
| Colon and Rectum | 3.9 | 1.4* | 5.7 | 3.2* | 1.0 | -0.2 | 1.0 | 1.1* |
| <u>Ages 35-39</u> | | | | | | | | |
| All Malignant Cancers | 170.6 | 0.7* | 192.3 | 0.3 | 29.2 | -1.3* | 22.3 | -0.4 |
| Breast | 63.3 | 0.4* | 64.3 | 0.3* | 9.5 | -1.4* | 6.6 | -0.3 |
| Thyroid | 19.4 | 3.1* | 32.7 | -0.5 | 0.1 | -1.1* | 0.0 | -1.1* |
| Melanoma of the Skin | 16.2 | 1.8* | 18.4 | 0.8* | 1.0 | -2.5* | 0.6 | -2.5* |
| Cervix Uteri | 13.9 | -1.1* | 12.1 | -1.1* | 2.8 | -1.1* | 2.3 | 0.0 |
| Colon and Rectum | 7.3 | 1.3* | 9.8 | 3.1* | 1.9 | -0.5* | 2.0 | 0.8* |

Rates are per 100,000.

^a SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b US Mortality Files, National Center for Health Statistics, CDC.

^c Top 5 cancer sites selected based on 1975-2018 rates for the age group.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2018.

- Statistic could not be calculated. Count and rate based on less than 16 cases for the time interval. AAPC could not be calculated due to insufficient data.

* The AAPC is significantly different from zero ($p < .05$).

Table 3.20

SEER^a 5-Year Relative Survival for the Top 5 Cancer Sites^b by Age
All Races, Both Sexes, 1975-2017

| | 5-year Relative Survival (Percent) | | | | | |
|--------------------------------|------------------------------------|-----------|-----------|-----------|-----------|-----------|
| | 1975-2017 | 1975-1983 | 1984-1992 | 1993-2001 | 2002-2010 | 2011-2017 |
| <u>Ages 15-19</u> | | | | | | |
| All Malignant Cancers | 79.6 | 69.6 | 76.9 | 79.8 | 84.2 | 87.1 |
| Hodgkin Lymphoma | 92.9 | 87.5 | 91.1 | 94.7 | 96.7 | 96.9 |
| Brain and Other Nervous System | 74.6 | 63.2 | 74.1 | 78.1 | 76.7 | 80.4 |
| Thyroid | 99.2 | 99.1 | 99.0 | 99.2 | 98.4 | 100.0 |
| Non-Hodgkin Lymphoma | 74.9 | 54.3 | 66.3 | 75.2 | 83.7 | 87.1 |
| Testis | 90.7 | 79.2 | 92.0 | 92.5 | 93.9 | 94.0 |
| <u>Ages 20-24</u> | | | | | | |
| All Malignant Cancers | 82.3 | 74.7 | 79.2 | 82.9 | 85.9 | 88.6 |
| Hodgkin Lymphoma | 91.5 | 85.2 | 90.6 | 91.6 | 95.1 | 97.1 |
| Thyroid | 99.7 | 99.7 | 99.7 | 99.1 | 100.0 | 99.7 |
| Testis | 93.2 | 84.5 | 92.0 | 95.7 | 95.9 | 97.2 |
| Melanoma of the Skin | 93.6 | 85.3 | 92.9 | 95.2 | 96.3 | 98.1 |
| Brain and Other Nervous System | 69.0 | 57.6 | 64.4 | 71.0 | 74.6 | 79.5 |
| <u>Ages 25-29</u> | | | | | | |
| All Malignant Cancers | 81.1 | 76.8 | 73.0 | 81.0 | 86.6 | 88.7 |
| Thyroid | 99.7 | 99.4 | 99.7 | 99.7 | 99.5 | 99.6 |
| Melanoma of the Skin | 93.8 | 88.4 | 91.9 | 94.7 | 96.9 | 97.0 |
| Testis | 95.4 | 89.1 | 94.6 | 97.3 | 97.1 | 97.4 |
| Hodgkin Lymphoma | 91.1 | 85.7 | 89.4 | 92.3 | 94.0 | 96.0 |
| Breast | 75.8 | 68.8 | 69.0 | 76.8 | 83.8 | 82.8 |
| <u>Ages 30-34</u> | | | | | | |
| All Malignant Cancers | 77.8 | 73.2 | 67.8 | 76.4 | 85.2 | 87.6 |
| Breast | 78.7 | 69.6 | 74.2 | 79.3 | 85.6 | 86.3 |
| Melanoma of the Skin | 93.2 | 86.4 | 91.3 | 94.4 | 96.2 | 96.8 |
| Thyroid | 99.8 | 99.5 | 99.5 | 99.8 | 99.9 | 99.8 |
| Testis | 95.9 | 92.0 | 95.7 | 95.5 | 97.4 | 97.3 |
| Cervix Uteri | 85.0 | 84.0 | 83.7 | 86.9 | 84.5 | 86.6 |
| <u>Ages 35-39</u> | | | | | | |
| All Malignant Cancers | 75.7 | 68.2 | 65.7 | 75.1 | 83.3 | 85.5 |
| Breast | 82.5 | 75.0 | 77.5 | 83.7 | 87.4 | 89.2 |
| Melanoma of the Skin | 93.1 | 87.7 | 90.4 | 93.7 | 95.3 | 97.1 |
| Thyroid | 99.6 | 98.9 | 99.4 | 99.2 | 99.8 | 99.5 |
| Non-Hodgkin Lymphoma | 66.6 | 65.7 | 49.9 | 59.5 | 79.9 | 86.0 |
| Colon and Rectum | 64.6 | 55.6 | 57.0 | 63.4 | 71.1 | 68.8 |

^a SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta). [Expected survival rates](#) are derived from the U.S. Annual Life Tables.

^b Top 5 cancer sites selected based on 1975-2017 SEER 9 Incidence rates for the age group.

- Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 3.21

SEER^a 5-Year Relative Survival for the Top 5 Cancer Sites^b by Age
All Races, Males, 1975-2017

| | 5-year Relative Survival (Percent) | | | | | |
|--------------------------------|------------------------------------|-----------|-----------|-----------|-----------|-----------|
| | 1975-2017 | 1975-1983 | 1984-1992 | 1993-2001 | 2002-2010 | 2011-2017 |
| <u>Ages 15-19</u> | | | | | | |
| All Malignant Cancers | 75.5 | 63.7 | 72.0 | 75.5 | 81.7 | 84.0 |
| Hodgkin Lymphoma | 91.8 | 86.0 | 90.1 | 93.8 | 96.6 | 94.1 |
| Testis | 90.7 | 79.2 | 92.0 | 92.5 | 93.9 | 94.0 |
| Brain and Other Nervous System | 71.8 | 59.7 | 70.5 | 74.5 | 75.0 | 79.8 |
| Non-Hodgkin Lymphoma | 73.4 | 49.6 | 67.2 | 71.7 | 82.3 | 87.5 |
| Bones and Joints | 59.4 | 42.6 | 59.9 | 60.5 | 67.9 | 66.3 |
| <u>Ages 20-24</u> | | | | | | |
| All Malignant Cancers | 78.1 | 69.5 | 73.2 | 79.3 | 82.8 | 86.0 |
| Testis | 93.2 | 84.5 | 92.0 | 95.7 | 95.9 | 97.2 |
| Hodgkin Lymphoma | 89.9 | 83.2 | 87.9 | 90.3 | 94.7 | 96.9 |
| Non-Hodgkin Lymphoma | 68.5 | 56.7 | 52.8 | 67.0 | 80.4 | 79.8 |
| Melanoma of the Skin | 87.5 | 76.1 | 85.3 | 91.9 | 91.4 | 96.2 |
| Brain and Other Nervous System | 67.0 | 54.7 | 63.0 | 72.6 | 72.6 | 74.4 |
| <u>Ages 25-29</u> | | | | | | |
| All Malignant Cancers | 75.3 | 71.5 | 63.4 | 75.7 | 83.2 | 85.8 |
| Testis | 95.4 | 89.1 | 94.6 | 97.3 | 97.1 | 97.4 |
| Melanoma of the Skin | 89.2 | 82.5 | 87.7 | 90.4 | 93.0 | 93.8 |
| Hodgkin Lymphoma | 89.2 | 84.5 | 85.7 | 90.0 | 93.3 | 96.2 |
| Non-Hodgkin Lymphoma | 62.3 | 59.0 | 41.7 | 57.7 | 79.0 | 83.1 |
| Kaposi sarcoma | 18.0 | 29.7 | 7.5 | 20.2 | 56.7 | 63.1 |
| <u>Ages 30-34</u> | | | | | | |
| All Malignant Cancers | 70.1 | 68.2 | 54.9 | 68.1 | 81.7 | 84.8 |
| Testis | 95.9 | 92.0 | 95.7 | 95.5 | 97.4 | 97.3 |
| Melanoma of the Skin | 89.1 | 79.3 | 87.0 | 91.2 | 93.7 | 94.4 |
| Kaposi sarcoma | 20.0 | 24.7 | 7.6 | 29.6 | 64.4 | 69.8 |
| Non-Hodgkin Lymphoma | 57.7 | 69.2 | 36.5 | 48.6 | 78.6 | 84.3 |
| Hodgkin Lymphoma | 88.0 | 79.7 | 83.9 | 88.3 | 93.5 | 95.1 |
| <u>Ages 35-39</u> | | | | | | |
| All Malignant Cancers | 66.2 | 59.7 | 50.9 | 65.4 | 78.1 | 81.1 |
| Melanoma of the Skin | 89.1 | 82.1 | 85.7 | 90.2 | 92.6 | 95.1 |
| Testis | 96.3 | 91.9 | 95.7 | 97.1 | 97.1 | 96.6 |
| Non-Hodgkin Lymphoma | 59.3 | 62.2 | 41.7 | 51.6 | 74.7 | 83.0 |
| Kaposi sarcoma | 20.7 | 14.1 | 7.0 | 30.5 | 66.5 | 83.8 |
| Colon and Rectum | 63.1 | 54.1 | 54.5 | 62.5 | 69.5 | 68.4 |

^a SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b Top 5 cancer sites selected based on 1975-2017 SEER 9 Incidence rates for the age group.

- Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 3.22

SEER^a 5-Year Relative Survival for the Top 5 Cancer Sites^b by Age
All Races, Females, 1975-2017

| | 5-year Relative Survival (Percent) | | | | | |
|--------------------------------|------------------------------------|-----------|-----------|-----------|-----------|-----------|
| | 1975-2017 | 1975-1983 | 1984-1992 | 1993-2001 | 2002-2010 | 2011-2017 |
| <u>Ages 15-19</u> | | | | | | |
| All Malignant Cancers | 84.1 | 76.0 | 82.2 | 84.4 | 87.1 | 90.3 |
| Hodgkin Lymphoma | 93.9 | 89.0 | 92.0 | 95.4 | 96.8 | 99.5 |
| Thyroid | 99.5 | 99.1 | 99.6 | 99.3 | 98.8 | 100.0 |
| Brain and Other Nervous System | 78.5 | 68.2 | 79.2 | 83.2 | 79.0 | 81.2 |
| Melanoma of the Skin | 95.7 | 87.9 | 95.8 | 95.8 | 99.6 | 98.4 |
| Ovary | 88.3 | 80.1 | 89.6 | 91.4 | 90.1 | 90.5 |
| <u>Ages 20-24</u> | | | | | | |
| All Malignant Cancers | 86.3 | 80.0 | 85.4 | 86.2 | 88.7 | 91.0 |
| Thyroid | 99.7 | 99.4 | 99.6 | 99.5 | 100.0 | 99.6 |
| Melanoma of the Skin | 96.7 | 91.4 | 96.9 | 96.9 | 98.4 | 98.8 |
| Hodgkin Lymphoma | 93.0 | 87.7 | 93.0 | 93.1 | 95.4 | 97.1 |
| Brain and Other Nervous System | 71.5 | 61.9 | 66.2 | 68.4 | 76.6 | 85.8 |
| Ovary | 84.2 | 81.2 | 84.3 | 84.9 | 85.4 | 86.6 |
| <u>Ages 25-29</u> | | | | | | |
| All Malignant Cancers | 85.8 | 80.7 | 82.3 | 85.4 | 89.3 | 90.9 |
| Thyroid | 99.7 | 99.5 | 99.8 | 99.9 | 99.5 | 99.6 |
| Melanoma of the Skin | 96.4 | 92.4 | 94.6 | 97.0 | 98.7 | 98.5 |
| Breast | 75.9 | 68.8 | 68.9 | 76.9 | 84.0 | 83.0 |
| Cervix Uteri | 87.2 | 89.0 | 86.5 | 87.3 | 86.8 | 83.8 |
| Hodgkin Lymphoma | 93.1 | 87.2 | 93.4 | 94.9 | 94.6 | 95.8 |
| <u>Ages 30-34</u> | | | | | | |
| All Malignant Cancers | 83.1 | 76.1 | 79.3 | 82.7 | 87.4 | 89.3 |
| Breast | 78.7 | 69.5 | 74.1 | 79.3 | 85.6 | 86.4 |
| Thyroid | 99.8 | 99.3 | 99.7 | 99.9 | 99.8 | 99.8 |
| Melanoma of the Skin | 95.9 | 91.8 | 94.4 | 96.3 | 97.9 | 98.1 |
| Cervix Uteri | 85.0 | 84.0 | 83.7 | 86.9 | 84.5 | 86.6 |
| Colon and Rectum | 67.0 | 62.8 | 60.0 | 65.7 | 68.6 | 74.8 |
| <u>Ages 35-39</u> | | | | | | |
| All Malignant Cancers | 81.4 | 72.7 | 76.5 | 81.4 | 86.2 | 87.7 |
| Breast | 82.5 | 75.0 | 77.5 | 83.7 | 87.4 | 89.2 |
| Thyroid | 99.8 | 99.1 | 99.5 | 99.6 | 99.9 | 99.8 |
| Melanoma of the Skin | 96.1 | 92.8 | 94.6 | 96.5 | 97.1 | 98.4 |
| Cervix Uteri | 81.7 | 79.6 | 79.8 | 84.6 | 82.7 | 81.5 |
| Colon and Rectum | 66.2 | 57.1 | 59.6 | 64.6 | 72.8 | 69.3 |

^a SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

^b Top 5 cancer sites selected based on 1975-2017 SEER 9 Incidence rates for the age group.

- Statistic could not be calculated due to fewer than 25 cases during the time period.