

Section 32  
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 populations<sup>1</sup>. For this reason, a classification scheme has been proposed for tumors diagnosed in adolescents and young adults<sup>2</sup>. This classification scheme was updated based on site and histology codes of the International Classification of Diseases for Oncology, Third Edition<sup>3</sup>. 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-3<sup>4</sup>. 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 used<sup>5</sup>. 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.

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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.
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Worldwide web: (<https://seer.cancer.gov/tools/conversion/>) Accessed May 28, 2008.
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Worldwide web: ([https://seer.cancer.gov/csr/1975\\_2010/results\\_merged/topic\\_siterecode.pdf](https://seer.cancer.gov/csr/1975_2010/results_merged/topic_siterecode.pdf).)  
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Table 32.1

Age-Adjusted SEER Incidence<sup>a</sup>, by Age Group and Sex  
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
All Races, 2013-2017

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
All Sites Combined	17.5	16.1	57.1	94.0	1060.3	886.5
1. LEUKEMIAS	5.6	4.8	4.0	2.9	35.9	20.7
1.1 Acute lymphoid leukemia	4.4	3.8	1.3	0.7	1.3	1.0
1.2 Acute myeloid leukemia	0.9	0.8	1.3	1.3	11.2	7.2
1.3 Chronic myeloid leukemia	0.1	0.1	0.9	0.6	5.0	2.9
1.4 Other and unspecified leukemias	0.2	0.1	0.5	0.3	18.5	9.6
2. LYMPHOMAS	2.2	1.2	8.5	6.9	54.1	36.7
2.1 Non-Hodgkin Lymphoma	1.5	0.7	4.9	3.4	50.6	34.4
2.2 Hodgkin Lymphoma	0.7	0.5	3.6	3.5	3.5	2.3
3. CNS, INTRACRANIAL, INTRASPINAL	3.5	3.2	3.3	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	0.4	0.2	0.2
3.1.2 Glioblastoma and anaplastic astrocytoma	0.3	0.3	1.1	0.7	9.5	6.0
3.1.3 Astrocytoma, NOS	0.2	0.2	0.4	0.3	0.5	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	0.5	0.2	0.1	0.0	0.1
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	0.2	0.2
3.6 Unspecified intracranial and intraspinal neoplasms	0.0	0.0	0.1	0.0	0.7	0.6
4. OSSEOUS & CHONDROMATOUS NEOPLASMS	0.9	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	-	0.2	0.2	0.7	0.5
4.3 Ewing tumor	0.4	0.3	0.3	0.2	0.1	0.1
4.4 Other specified and unspecified bone tumors	0.0	0.0	0.1	0.1	0.5	0.3
5. SOFT TISSUE SARCOMAS	1.1	1.0	3.3	2.4	12.9	9.3
5.1 Fibromatous neoplasms	0.2	0.2	0.7	0.7	2.4	1.4
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	2.4	1.5	10.3	7.7
5.3.1 Specified soft tissue sarcoma	0.2	0.2	1.9	1.2	7.1	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	1.4	0.2
5.3.2 Unspecified soft tissue sarcoma	0.1	0.1	0.4	0.3	3.2	2.0
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	0.5	0.7	11.8	1.0	4.2	0.2
6.1 Germ cell and trophoblastic neoplasms of gonads	0.2	0.4	11.3	0.7	4.1	0.1
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	0.3	0.3	0.5	0.3	0.2	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).

- <sup>a</sup> 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).
- <sup>b</sup> 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 32.1 - continued

Age-Adjusted SEER Incidence<sup>a</sup>, by Age Group and Sex  
 By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
 All Races, 2013-2017

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
7. MELANOMA AND SKIN CARCINOMAS	0.2	0.3	4.9	8.5	70.4	38.7
7.1 Melanoma	0.2	0.3	4.8	8.4	66.0	36.5
7.2 Skin carcinomas	-	-	0.1	0.1	4.4	2.2
8. CARCINOMAS (excluding skin)	0.7	1.2	19.1	67.0	803.4	721.4
8.1 Thyroid carcinoma	0.2	0.6	4.8	20.9	14.6	35.9
8.2 Other carcinoma of head and neck	0.1	0.1	1.8	1.4	51.2	16.6
8.2.1 Nasopharyngeal carcinoma	0.0	-	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	35.7	12.7
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	0.2	0.1	13.6	3.3
8.3 Carcinoma of trachea, bronchus, and lung	-	0.0	0.9	1.0	129.9	103.3
8.4 Carcinoma of breast	-	-	0.1	22.4	2.8	276.6
8.5 Carcinoma of genitourinary tract	0.1	0.1	3.8	13.7	381.6	140.8
8.5.1 Carcinoma of kidney	0.1	0.0	2.6	1.9	45.7	21.4
8.5.2 Carcinoma of bladder	-	-	0.8	0.4	78.8	19.2
8.5.3 Carcinoma of gonads	-	-	0.0	1.9	0.0	20.6
8.5.4 Carcinoma of cervix and uterus	-	-	-	9.1	-	66.8
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	0.3	0.4	257.0	12.7
8.6 Carcinoma of gastrointestinal tract	0.2	0.3	7.4	7.2	209.6	136.2
8.6.1 Carcinoma of colon and rectum	0.2	0.3	4.9	4.9	98.3	76.7
8.6.2 Carcinoma of stomach	-	-	0.8	0.8	20.2	10.0
8.6.3 Carcinoma of liver and intrahepatic bile ducts	0.1	0.0	0.5	0.3	30.0	10.2
8.6.4 Carcinoma of pancreas	-	0.0	0.5	0.6	30.5	23.4
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.7	0.5	30.6	16.0
8.7 Carcinoma of other and ill-defined sites, NOS	-	0.0	0.4	0.5	13.9	12.2
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	13.7	11.9
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	2.9	3.0	0.9	1.4	28.5	23.7
9.1 Other pediatric and embryonal tumors, NOS	2.8	2.9	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	1.0	0.1	0.1	0.2	0.1
9.2 Other specified neoplasms, NOS	0.1	0.1	0.8	1.3	28.3	23.6
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	0.0	0.5
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	0.1	0.1	0.5	0.4	21.8	13.9
9.2.4 Other specified neoplasms, NOS	-	-	0.3	0.7	6.4	9.1
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.3	0.5	36.4	26.1

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

- <sup>a</sup> 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).
- <sup>b</sup> 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 32.2

Age-Adjusted SEER Incidence<sup>a</sup>, by Age Group and Sex  
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
White, 2013-2017

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
All Sites Combined	18.4	16.8	60.8	99.0	1069.0	913.9
1. LEUKEMIAS	6.1	5.1	4.2	3.0	38.1	21.9
1.1 Acute lymphoid leukemia	4.9	4.1	1.5	0.8	1.4	1.1
1.2 Acute myeloid leukemia	0.8	0.7	1.3	1.3	11.7	7.5
1.3 Chronic myeloid leukemia	0.1	0.1	0.9	0.6	5.1	2.9
1.4 Other and unspecified leukemias	0.2	0.1	0.5	0.3	19.9	10.4
2. LYMPHOMAS	2.3	1.2	8.6	7.2	56.9	38.8
2.1 Non-Hodgkin Lymphoma	1.6	0.7	4.8	3.3	53.3	36.4
2.2 Hodgkin Lymphoma	0.7	0.5	3.8	3.9	3.6	2.4
3. CNS, INTRACRANIAL, INTRASPINAL	3.7	3.4	3.6	2.8	14.2	9.7
3.1 Astrocytoma	1.8	1.9	2.1	1.6	11.4	7.4
3.1.1 Specified low-grade astrocytic tumors	1.3	1.4	0.5	0.4	0.2	0.2
3.1.2 Glioblastoma and anaplastic astrocytoma	0.3	0.3	1.2	0.8	10.7	6.7
3.1.3 Astrocytoma, NOS	0.3	0.2	0.4	0.4	0.6	0.4
3.2 Other glioma	0.6	0.6	0.9	0.8	1.5	1.1
3.3 Ependymoma	0.3	0.3	0.2	0.2	0.3	0.3
3.4 Medulloblastoma and other PNET	0.8	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	0.1	0.7	0.6
4. OSSEOUS & CHONDROMATOUS NEOPLASMS	1.0	0.9	1.2	0.9	1.6	1.1
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	0.5	0.4	0.4	0.2	0.1	0.1
4.4 Other specified and unspecified bone tumors	0.0	0.0	0.1	0.1	0.5	0.3
5. SOFT TISSUE SARCOMAS	1.0	1.0	2.7	2.3	13.2	9.0
5.1 Fibromatous neoplasms	0.2	0.1	0.5	0.6	2.5	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	0.4	2.0	1.5	10.5	7.4
5.3.1 Specified soft tissue sarcoma	0.2	0.2	1.6	1.2	7.2	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	0.3	3.3	2.0
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	0.5	0.6	14.1	0.9	4.9	0.2
6.1 Germ cell and trophoblastic neoplasms of gonads	0.2	0.4	13.6	0.6	4.8	0.1
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	0.3	0.3	0.5	0.3	0.2	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	0.2	0.1

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

- <sup>a</sup> 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).
- <sup>b</sup> 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 32.2 - continued

Age-Adjusted SEER Incidence<sup>a</sup>, by Age Group and Sex  
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
White, 2013-2017

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	82.5	46.3
7.1 Melanoma	0.2	0.3	6.0	10.7	77.6	44.0
7.2 Skin carcinomas	-	-	0.1	0.1	4.9	2.4
8. CARCINOMAS (excluding skin)	0.7	1.3	19.1	69.4	793.8	738.6
8.1 Thyroid carcinoma	0.2	0.7	5.2	22.9	15.4	37.0
8.2 Other carcinoma of head and neck	0.1	0.1	1.6	1.3	53.5	17.3
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	38.7	13.5
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	0.2	0.2	13.7	3.4
8.3 Carcinoma of trachea, bronchus, and lung	-	-	0.8	1.0	130.8	109.4
8.4 Carcinoma of breast	-	-	0.1	22.1	2.7	283.4
8.5 Carcinoma of genitourinary tract	0.1	0.1	3.9	14.4	373.5	146.3
8.5.1 Carcinoma of kidney	0.0	-	2.7	2.0	46.8	22.0
8.5.2 Carcinoma of bladder	-	-	0.9	0.4	86.3	20.9
8.5.3 Carcinoma of gonads	-	-	0.0	2.0	0.0	21.6
8.5.4 Carcinoma of cervix and uterus	-	-	-	9.5	-	68.1
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	0.2	0.4	240.4	13.6
8.6 Carcinoma of gastrointestinal tract	0.3	0.4	7.2	7.2	203.9	133.1
8.6.1 Carcinoma of colon and rectum	0.2	0.3	4.9	5.1	96.6	76.4
8.6.2 Carcinoma of stomach	-	-	0.8	0.7	18.3	8.8
8.6.3 Carcinoma of liver and intrahepatic bile ducts	0.1	-	0.4	0.3	26.9	9.2
8.6.4 Carcinoma of pancreas	-	0.0	0.5	0.6	30.8	23.2
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.7	0.4	31.3	15.5
8.7 Carcinoma of other and ill-defined sites, NOS	-	-	0.4	0.4	13.9	12.3
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	0.3	13.7	12.0
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	2.9	3.0	0.8	1.3	27.4	21.4
9.1 Other pediatric and embryonal tumors, NOS	2.8	2.9	0.1	0.1	0.2	0.2
9.1.1 Wilms tumor	0.7	0.9	-	-	0.0	0.0
9.1.2 Neuroblastoma	1.1	1.0	-	0.0	-	-
9.1.3 Other pediatric and embryonal tumors, NOS	1.0	1.0	0.1	0.1	0.2	0.1
9.2 Other specified neoplasms, NOS	0.1	0.1	0.7	1.2	27.2	21.3
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	0.0	0.4
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	0.1	0.1	0.4	0.4	20.6	12.4
9.2.4 Other specified neoplasms, NOS	-	-	0.2	0.7	6.4	8.4
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.3	0.5	36.3	26.9

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

- <sup>a</sup> 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).
- <sup>b</sup> 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 32.3

Age-Adjusted SEER Incidence<sup>a</sup>, by Age Group and Sex  
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
Black, 2013-2017

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
All Sites Combined	12.7	12.6	43.0	74.6	1155.2	840.2
1. LEUKEMIAS	3.1	3.1	3.2	2.7	27.5	16.9
1.1 Acute lymphoid leukemia	2.1	2.1	0.6	0.4	0.9	0.7
1.2 Acute myeloid leukemia	0.8	0.8	1.2	1.4	9.1	6.3
1.3 Chronic myeloid leukemia	-	-	0.9	0.6	4.4	2.9
1.4 Other and unspecified leukemias	-	-	0.4	0.3	13.1	7.1
2. LYMPHOMAS	1.8	1.2	9.0	6.7	39.9	28.2
2.1 Non-Hodgkin Lymphoma	1.1	0.7	5.5	3.6	36.0	25.6
2.2 Hodgkin Lymphoma	0.7	0.5	3.4	3.0	3.9	2.6
3. CNS, INTRACRANIAL, INTRASPINAL	2.6	2.5	2.0	1.7	7.4	5.1
3.1 Astrocytoma	1.3	1.3	1.1	0.8	5.6	3.6
3.1.1 Specified low-grade astrocytic tumors	0.8	0.9	0.3	0.3	0.1	0.1
3.1.2 Glioblastoma and anaplastic astrocytoma	0.3	0.2	0.6	0.4	5.1	3.3
3.1.3 Astrocytoma, NOS	-	0.2	0.2	0.2	0.4	0.2
3.2 Other glioma	0.5	0.6	0.5	0.4	0.7	0.6
3.3 Ependymoma	0.2	0.2	0.1	0.2	0.2	0.2
3.4 Medulloblastoma and other PNET	0.4	0.3	-	-	-	-
3.4.1 Medulloblastoma	0.2	0.2	-	-	-	-
3.4.2 Supratentorial PNET	0.2	-	-	-	-	-
3.5 Other specified intracranial and intraspinal neoplasms	-	-	-	-	0.3	0.2
3.6 Unspecified intracranial and intraspinal neoplasms	-	-	-	-	0.6	0.4
4. OSSEOUS & CHONDROMATOUS NEOPLASMS	0.6	0.7	0.9	0.7	1.2	0.8
4.1 Osteosarcoma	0.4	0.5	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	6.0	3.0	11.1	12.1
5.1 Fibromatous neoplasms	0.3	0.2	1.3	1.0	2.0	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	0.3	4.4	1.8	8.9	9.9
5.3.1 Specified soft tissue sarcoma	0.2	-	3.9	1.5	6.6	7.4
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.2	-	1.0	1.3	4.4	7.1
5.3.1.2 Kaposi sarcoma	-	-	2.9	0.2	2.2	0.3
5.3.2 Unspecified soft tissue sarcoma	0.2	-	0.5	0.4	2.3	2.5
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	-	0.2	0.2	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).

- <sup>a</sup> 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).
- <sup>b</sup> 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 32.3 - continued

Age-Adjusted SEER Incidence<sup>a</sup>, by Age Group and Sex  
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
Black, 2013-2017

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
7. MELANOMA AND SKIN CARCINOMAS	-	-	0.3	0.5	4.1	3.4
7.1 Melanoma	-	-	0.2	0.3	2.8	2.5
7.2 Skin carcinomas	-	-	-	0.2	1.2	0.9
8. CARCINOMAS (excluding skin)	0.5	0.5	17.2	55.5	971.4	703.1
8.1 Thyroid carcinoma	-	-	1.6	9.3	7.8	25.2
8.2 Other carcinoma of head and neck	-	-	1.5	1.2	47.3	14.1
8.2.1 Nasopharyngeal carcinoma	-	-	0.3	0.2	2.0	0.6
8.2.2 Other sites in lip, oral cavity and pharynx	-	-	0.8	0.9	26.8	9.3
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	0.3	-	18.4	4.1
8.3 Carcinoma of trachea, bronchus, and lung	-	-	1.3	1.0	151.0	94.1
8.4 Carcinoma of breast	-	-	0.2	24.7	4.0	265.4
8.5 Carcinoma of genitourinary tract	-	-	3.9	11.3	496.8	128.7
8.5.1 Carcinoma of kidney	-	-	3.0	1.7	51.5	24.6
8.5.2 Carcinoma of bladder	-	-	0.5	0.2	44.1	14.4
8.5.3 Carcinoma of gonads	-	-	-	1.3	-	15.6
8.5.4 Carcinoma of cervix and uterus	-	-	-	7.4	-	64.1
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	0.4	0.6	401.2	10.0
8.6 Carcinoma of gastrointestinal tract	-	0.2	8.1	7.4	248.9	161.9
8.6.1 Carcinoma of colon and rectum	-	-	5.3	4.7	116.1	86.6
8.6.2 Carcinoma of stomach	-	-	0.7	0.7	27.0	13.5
8.6.3 Carcinoma of liver and intrahepatic bile ducts	-	-	0.9	0.3	39.0	11.5
8.6.4 Carcinoma of pancreas	-	-	0.6	0.8	34.4	28.8
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.6	0.8	32.4	21.6
8.7 Carcinoma of other and ill-defined sites, NOS	-	-	0.6	0.7	15.7	13.8
8.7.1 Adrenocortical carcinoma	-	-	-	-	0.2	0.2
8.7.2 Carcinoma of other and ill-defined sites, NOS	-	-	0.6	0.7	15.5	13.6
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	2.7	2.9	1.4	2.0	45.9	44.3
9.1 Other pediatric and embryonal tumors, NOS	2.6	2.8	0.1	-	0.2	0.1
9.1.1 Wilms tumor	0.8	1.0	-	-	-	-
9.1.2 Neuroblastoma	0.9	0.9	-	-	-	-
9.1.3 Other pediatric and embryonal tumors, NOS	0.9	0.8	-	-	0.1	0.1
9.2 Other specified neoplasms, NOS	-	-	1.3	1.9	45.8	44.2
9.2.1 Paraganglioma and glomus tumors	-	-	-	-	-	0.3
9.2.2 Other specified gonadal tumors	-	-	-	0.3	-	1.0
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	-	-	0.8	0.7	38.5	27.8
9.2.4 Other specified neoplasms, NOS	-	-	0.3	0.8	7.1	15.1
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.3	0.7	45.2	25.9

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

- <sup>a</sup> 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).
- <sup>b</sup> 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 32.4  
Age-Specific SEER Incidence<sup>a</sup>, by Age Group and Sex  
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
All Races, 2013-2017

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	24.7	23.8	36.5	39.8	51.2	71.3	71.2	123.8	95.5	193.2
1. LEUKEMIAS	3.9	2.5	3.3	2.4	3.4	2.6	4.1	3.2	5.0	3.7
1.1 Acute lymphoid leukemia	2.4	1.2	1.4	0.7	1.0	0.6	0.8	0.6	1.0	0.6
1.2 Acute myeloid leukemia	1.0	1.0	1.2	1.2	1.2	1.2	1.5	1.4	1.6	1.7
1.3 Chronic myeloid leukemia	0.4	0.2	0.6	0.4	0.9	0.6	1.3	0.9	1.3	0.9
1.4 Other and unspecified leukemias	0.2	0.1	0.2	0.2	0.3	0.2	0.5	0.3	1.1	0.6
2. LYMPHOMAS	6.0	4.8	7.2	6.6	7.9	7.0	9.3	7.4	11.5	8.6
2.1 Non-Hodgkin Lymphoma	2.8	1.5	3.1	2.2	4.0	3.0	5.5	4.2	8.4	5.8
2.2 Hodgkin Lymphoma	3.2	3.3	4.0	4.5	3.9	4.0	3.7	3.3	3.1	2.7
3. CNS, INTRACRANIAL, INTRASPINAL	2.5	2.0	2.3	1.9	3.2	2.5	3.9	2.9	4.3	3.2
3.1 Astrocytoma	1.5	1.1	1.4	1.0	1.8	1.3	2.2	1.5	2.5	1.9
3.1.1 Specified low-grade astrocytic tumors	0.8	0.6	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	0.7	0.4	0.9	0.7	1.4	0.9	1.8	1.3
3.1.3 Astrocytoma, NOS	0.2	0.2	0.3	0.2	0.4	0.3	0.5	0.4	0.5	0.3
3.2 Other glioma	0.5	0.5	0.5	0.5	0.9	0.7	1.1	0.9	1.2	0.9
3.3 Ependymoma	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2
3.4 Medulloblastoma and other PNET	0.3	0.2	0.2	0.2	0.3	0.1	0.2	0.1	0.1	-
3.4.1 Medulloblastoma	0.2	0.1	0.1	0.1	0.2	0.1	0.1	-	0.1	-
3.4.2 Supratentorial PNET	0.1	-	-	-	0.1	-	-	-	-	-
3.5 Other specified intracranial and intraspinal neoplasms	-	-	-	-	-	0.1	0.1	-	-	-
3.6 Unspecified intracranial and intraspinal neoplasms	-	-	-	-	-	-	0.1	-	-	-
4. OSSEOUS & CHONDROMATOUS NEOPLASMS	2.1	1.3	1.1	0.8	0.8	0.8	0.7	0.7	0.9	0.8
4.1 Osteosarcoma	1.2	0.6	0.4	0.3	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	0.3	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	0.1	0.2
4.4 Other specified and unspecified bone tumors	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
5. SOFT TISSUE SARCOMAS	1.6	1.4	2.1	1.7	3.3	2.1	4.6	2.9	4.6	3.6
5.1 Fibromatous neoplasms	0.2	0.3	0.4	0.5	0.7	0.8	1.1	0.9	1.0	1.0
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	0.9	0.9	1.5	1.0	2.5	1.2	3.4	1.9	3.3	2.5
5.3.1 Specified soft tissue sarcoma	0.6	0.7	1.1	0.8	2.1	0.9	2.9	1.5	2.8	2.0
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.6	0.7	0.8	0.8	1.0	0.9	1.5	1.4	1.6	1.9
5.3.1.2 Kaposi sarcoma	-	-	0.4	-	1.1	-	1.5	0.1	1.2	-
5.3.2 Unspecified soft tissue sarcoma	0.3	0.2	0.4	0.2	0.4	0.3	0.5	0.4	0.5	0.5
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	4.3	1.1	11.4	1.0	15.5	1.2	15.5	1.0	12.5	0.6
6.1 Germ cell and trophoblastic neoplasms of gonads	3.6	0.9	10.8	0.8	15.0	0.8	15.0	0.5	12.3	0.3
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	0.7	0.2	0.7	0.2	0.5	0.4	0.5	0.5	0.2	0.3
6.2.1 Intracranial sites	0.5	0.1	0.3	-	0.1	-	0.1	-	-	-
6.2.2 Other nongonadal sites	0.2	0.1	0.4	0.2	0.4	0.4	0.4	0.4	0.2	0.3

Rates are per 100,000.

<sup>a</sup> 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).

<sup>b</sup> 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 32.4 - continued  
 Age-Specific SEER Incidence<sup>a</sup>, by Age Group and Sex  
 By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
 All Races, 2013-2017

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	1.2	1.8	4.2	3.7	8.2	7.2	12.8	10.1	14.9
7.1 Melanoma	0.7	1.1	1.8	4.1	3.7	8.2	7.1	12.6	9.9	14.8
7.2 Skin carcinomas	-	-	-	-	-	-	0.1	0.2	0.2	0.2
8. CARCINOMAS (excluding skin)	3.2	8.8	6.8	20.3	12.7	45.7	24.4	90.7	43.9	153.5
8.1 Thyroid carcinoma	1.1	5.7	2.6	12.3	4.2	20.0	6.5	28.8	8.9	35.2
8.2 Other carcinoma of head and neck	0.4	0.4	0.7	0.6	1.2	1.1	2.2	1.8	3.9	2.7
8.2.1 Nasopharyngeal carcinoma	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	0.2	0.4	0.4	0.5	0.9	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	-	0.1	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	1.0	1.2	2.3	2.7
8.4 Carcinoma of breast	-	-	-	1.5	-	9.7	0.1	29.0	0.2	63.7
8.5 Carcinoma of genitourinary tract	0.3	0.6	0.8	2.5	2.0	9.4	4.8	20.4	9.9	32.0
8.5.1 Carcinoma of kidney	0.1	0.2	0.5	0.5	1.3	1.1	3.4	2.7	7.0	4.4
8.5.2 Carcinoma of bladder	0.1	-	0.3	0.1	0.5	0.2	1.1	0.5	2.0	0.8
8.5.3 Carcinoma of gonads	-	0.3	-	0.8	-	1.5	-	2.5	-	4.2
8.5.4 Carcinoma of cervix and uterus	-	-	-	1.1	-	6.3	-	14.2	-	21.5
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	-	-	0.1	0.2	0.3	0.5	0.9	1.2
8.6 Carcinoma of gastrointestinal tract	1.2	1.7	2.3	2.8	4.4	4.5	9.3	8.9	17.7	16.1
8.6.1 Carcinoma of colon and rectum	1.0	1.3	1.6	2.0	3.1	3.2	6.2	6.2	11.5	10.8
8.6.2 Carcinoma of stomach	-	-	0.2	0.2	0.4	0.4	1.0	1.0	1.9	2.0
8.6.3 Carcinoma of liver and intrahepatic bile ducts	0.1	0.1	0.2	0.2	0.4	0.2	0.7	0.4	1.1	0.7
8.6.4 Carcinoma of pancreas	-	0.2	0.1	0.2	0.1	0.5	0.7	0.8	1.4	1.4
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	0.2	0.3	0.4	0.6	0.6	0.9	1.1
8.7.1 Adrenocortical carcinoma	-	-	-	-	-	-	-	-	-	0.1
8.7.2 Carcinoma of other and ill-defined sites, NOS	-	-	0.1	0.2	0.3	0.3	0.5	0.5	0.8	1.0
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	0.3	0.6	0.4	0.6	0.5	0.9	1.1	1.6	2.1	3.1
9.1 Other pediatric and embryonal tumors, NOS	0.2	0.2	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	-
9.2 Other specified neoplasms, NOS	0.2	0.4	0.3	0.5	0.4	0.8	1.0	1.6	1.9	3.0
9.2.1 Paraganglioma and glomus tumors	-	-	-	-	-	-	-	-	-	-
9.2.2 Other specified gonadal tumors	-	0.2	-	0.1	-	0.1	-	0.2	-	0.3
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	-	-	0.1	0.1	0.2	0.2	0.6	0.5	1.2	1.0
9.2.4 Other specified neoplasms, NOS <sup>c</sup>	-	0.1	0.1	0.2	0.2	0.5	0.3	0.9	0.6	1.6
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.1	0.3	0.2	0.4	0.3	0.6	0.6	1.1

Rates are per 100,000.

<sup>a</sup> 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).

<sup>b</sup> 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).

<sup>c</sup> 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 32.5  
Age-Specific SEER Incidence<sup>a</sup>, by Age Group and Sex  
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
White, 2013-2017

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	26.5	25.5	39.9	43.1	55.9	77.1	75.9	130.7	99.4	200.4
1. LEUKEMIAS	4.3	2.5	3.5	2.4	3.5	2.7	4.3	3.2	5.2	3.9
1.1 Acute lymphoid leukemia	2.8	1.3	1.5	0.7	1.1	0.7	0.9	0.6	1.0	0.6
1.2 Acute myeloid leukemia	1.0	0.9	1.2	1.2	1.2	1.2	1.5	1.4	1.6	1.7
1.3 Chronic myeloid leukemia	0.3	0.2	0.6	0.4	0.9	0.6	1.2	1.0	1.3	1.0
1.4 Other and unspecified leukemias	0.2	0.1	0.2	0.2	0.4	0.2	0.6	0.2	1.2	0.6
2. LYMPHOMAS	6.1	5.2	7.4	7.1	8.2	7.3	9.3	7.5	11.6	8.6
2.1 Non-Hodgkin Lymphoma	2.7	1.5	3.0	2.1	3.9	2.9	5.3	4.1	8.3	5.6
2.2 Hodgkin Lymphoma	3.4	3.7	4.3	5.0	4.3	4.5	3.9	3.4	3.3	2.9
3. CNS, INTRACRANIAL, INTRASPINAL	2.6	2.1	2.6	2.1	3.6	2.8	4.4	3.3	4.8	3.7
3.1 Astrocytoma	1.6	1.2	1.5	1.1	2.0	1.5	2.4	1.8	2.8	2.2
3.1.1 Specified low-grade astrocytic tumors	0.9	0.7	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3
3.1.2 Glioblastoma and anaplastic astrocytoma	0.4	0.3	0.7	0.5	1.1	0.8	1.5	1.1	2.0	1.5
3.1.3 Astrocytoma, NOS	0.3	0.3	0.4	0.3	0.5	0.4	0.6	0.4	0.5	0.4
3.2 Other glioma	0.5	0.5	0.6	0.6	0.9	0.9	1.3	1.1	1.3	1.0
3.3 Ependymoma	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2
3.4 Medulloblastoma and other PNET	0.3	0.2	0.2	0.2	0.3	0.1	0.2	-	0.2	-
3.4.1 Medulloblastoma	0.2	0.1	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	2.2	1.3	1.2	0.9	0.8	0.8	0.8	0.7	0.9	0.9
4.1 Osteosarcoma	1.2	0.6	0.4	0.4	0.2	0.3	0.2	0.2	0.2	0.2
4.2 Chondrosarcoma	0.1	-	0.2	0.2	0.2	0.2	0.4	0.2	0.4	0.3
4.3 Ewing tumor	0.8	0.5	0.6	0.2	0.2	0.2	0.2	0.1	0.1	0.1
4.4 Other specified and unspecified bone tumors	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
5. SOFT TISSUE SARCOMAS	1.5	1.4	1.7	1.6	2.6	2.0	3.6	2.8	4.0	3.3
5.1 Fibromatous neoplasms	0.2	0.2	0.3	0.4	0.5	0.7	0.8	0.8	0.8	0.9
5.2 Rhabdomyosarcoma	0.4	0.3	0.1	0.1	0.1	-	0.1	-	0.2	-
5.3 Other specified soft tissue sarcoma	0.9	0.9	1.3	1.1	2.0	1.2	2.7	1.8	3.0	2.4
5.3.1 Specified soft tissue sarcoma	0.6	0.7	0.9	0.8	1.6	0.9	2.2	1.4	2.5	1.9
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.6	0.7	0.7	0.8	1.0	0.9	1.4	1.4	1.7	1.9
5.3.1.2 Kaposi sarcoma	-	-	0.2	-	0.6	-	0.9	-	0.8	-
5.3.2 Unspecified soft tissue sarcoma	0.3	0.2	0.3	0.2	0.4	0.3	0.5	0.4	0.5	0.5
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	5.1	1.0	13.6	0.9	18.8	1.1	18.6	1.0	14.9	0.6
6.1 Germ cell and trophoblastic neoplasms of gonads	4.5	0.8	13.0	0.8	18.2	0.7	18.1	0.5	14.7	0.3
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	0.6	0.2	0.7	0.2	0.5	0.4	0.5	0.4	0.2	0.3
6.2.1 Intracranial sites	0.4	-	0.3	-	0.1	-	0.1	-	-	-
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.

<sup>a</sup> 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).

<sup>b</sup> 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 32.5 - continued  
 Age-Specific SEER Incidence<sup>a</sup>, by Age Group and Sex  
 By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
 White, 2013-2017

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	0.9	1.5	2.3	5.2	4.7	10.6	9.1	16.4	12.5	19.1
7.1 Melanoma	0.9	1.4	2.2	5.2	4.7	10.6	9.0	16.2	12.3	18.9
7.2 Skin carcinomas	-	-	-	-	-	-	-	0.2	0.2	0.1
8. CARCINOMAS (excluding skin)	3.4	9.8	7.1	22.1	13.2	48.5	24.6	93.8	43.1	156.6
8.1 Thyroid carcinoma	1.1	6.5	2.9	14.0	4.8	22.3	6.9	31.4	9.5	37.9
8.2 Other carcinoma of head and neck	0.4	0.4	0.6	0.6	1.0	1.1	2.1	1.7	3.5	2.6
8.2.1 Nasopharyngeal carcinoma	0.1	-	0.1	-	-	-	0.1	-	0.2	0.1
8.2.2 Other sites in lip, oral cavity and pharynx	0.2	0.3	0.5	0.5	0.9	0.9	1.7	1.5	2.6	2.1
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	0.2	0.3	0.5	0.6	1.0	1.2	2.1	2.6
8.4 Carcinoma of breast	-	-	-	1.5	-	9.6	-	28.6	0.2	62.9
8.5 Carcinoma of genitourinary tract	0.3	0.7	0.8	2.6	2.1	9.8	5.1	21.6	10.0	33.9
8.5.1 Carcinoma of kidney	0.1	0.2	0.5	0.5	1.3	1.2	3.6	2.9	7.1	4.8
8.5.2 Carcinoma of bladder	-	-	0.3	0.1	0.6	0.3	1.2	0.5	2.2	0.9
8.5.3 Carcinoma of gonads	-	0.3	-	0.8	-	1.6	-	2.6	-	4.4
8.5.4 Carcinoma of cervix and uterus	-	-	-	1.1	-	6.5	-	14.9	-	22.6
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	-	-	-	0.2	0.3	0.6	0.7	1.2
8.6 Carcinoma of gastrointestinal tract	1.4	2.0	2.3	3.0	4.5	4.8	9.0	9.0	17.1	15.8
8.6.1 Carcinoma of colon and rectum	1.1	1.6	1.7	2.2	3.2	3.5	6.3	6.4	11.3	10.9
8.6.2 Carcinoma of stomach	-	-	0.2	0.2	0.4	0.4	1.0	0.9	1.9	1.8
8.6.3 Carcinoma of liver and intrahepatic bile ducts	0.1	0.2	0.2	0.2	0.3	0.2	0.4	0.3	0.6	0.6
8.6.4 Carcinoma of pancreas	-	0.2	0.1	0.2	0.2	0.5	0.6	0.7	1.3	1.3
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.1	0.2	0.4	0.3	0.7	0.6	1.9	1.1
8.7 Carcinoma of other and ill-defined sites, NOS	-	-	0.2	0.2	0.3	0.4	0.5	0.5	0.8	0.9
8.7.1 Adrenocortical carcinoma	-	-	-	-	-	-	-	-	-	0.1
8.7.2 Carcinoma of other and ill-defined sites, NOS	-	-	0.1	0.1	0.2	0.3	0.5	0.4	0.7	0.8
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	0.3	0.6	0.4	0.5	0.4	0.9	1.0	1.6	1.8	2.8
9.1 Other pediatric and embryonal tumors, NOS	0.2	0.2	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	0.2	0.4	0.3	0.4	0.4	0.8	0.9	1.5	1.7	2.7
9.2.1 Paraganglioma and glomus tumors	-	-	-	-	-	-	-	-	-	-
9.2.2 Other specified gonadal tumors	-	0.2	-	-	-	0.1	-	0.2	-	0.3
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	-	-	0.1	0.1	0.2	0.2	0.5	0.4	1.0	0.9
9.2.4 Other specified neoplasms, NOS <sup>c</sup>	-	-	-	0.2	0.1	0.5	0.3	0.9	0.6	1.5
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.1	0.2	0.2	0.4	0.3	0.5	0.6	1.1

Rates are per 100,000.

<sup>a</sup> 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).

<sup>b</sup> 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).

<sup>c</sup> 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 32.6  
Age-Specific SEER Incidence<sup>a</sup>, by Age Group and Sex  
By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
Black, 2013-2017

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	17.2	16.6	21.0	25.6	34.3	48.7	54.2	97.0	81.4	167.6
1. LEUKEMIAS	2.6	1.9	2.3	2.5	2.5	2.2	3.3	3.3	4.7	3.6
1.1 Acute lymphoid leukemia	1.1	-	0.6	0.5	0.5	-	-	-	-	-
1.2 Acute myeloid leukemia	0.9	1.0	1.2	1.2	1.0	1.1	1.2	1.8	1.8	1.8
1.3 Chronic myeloid leukemia	-	-	-	-	0.7	0.5	1.2	0.8	1.4	0.8
1.4 Other and unspecified leukemias	-	-	-	-	-	-	-	-	0.9	-
2. LYMPHOMAS	5.4	3.8	6.3	5.2	8.7	6.2	10.5	8.0	13.2	9.6
2.1 Non-Hodgkin Lymphoma	2.6	1.4	3.4	2.1	4.8	3.3	6.7	4.4	9.4	6.6
2.2 Hodgkin Lymphoma	2.8	2.5	2.9	3.1	3.8	3.0	3.8	3.6	3.8	3.0
3. CNS, INTRACRANIAL, INTRASPINAL	1.9	1.9	1.1	1.4	2.1	1.3	2.0	1.7	2.7	1.9
3.1 Astrocytoma	1.1	0.9	0.7	0.6	1.0	0.5	1.1	0.9	1.5	1.0
3.1.1 Specified low-grade astrocytic tumors	0.7	0.6	-	-	-	-	-	-	-	-
3.1.2 Glioblastoma and anaplastic astrocytoma	-	-	-	-	0.5	-	0.7	-	1.0	0.6
3.1.3 Astrocytoma, NOS	-	-	-	-	-	-	-	-	-	-
3.2 Other glioma	-	-	-	-	0.6	-	-	-	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	1.8	1.0	0.7	0.5	0.8	0.7	-	0.8	0.7	-
4.1 Osteosarcoma	1.3	0.8	-	-	-	-	-	-	-	-
4.2 Chondrosarcoma	-	-	-	-	-	-	-	-	-	-
4.3 Ewing tumor	-	-	-	-	-	-	-	-	-	-
4.4 Other specified and unspecified bone tumors	-	-	-	-	-	-	-	-	-	-
5. SOFT TISSUE SARCOMAS	1.9	1.8	3.6	2.1	6.9	2.5	9.6	3.9	7.6	4.6
5.1 Fibromatous neoplasms	-	-	0.7	0.8	1.4	1.2	2.2	1.3	1.7	1.1
5.2 Rhabdomyosarcoma	0.6	-	-	-	-	-	-	-	-	-
5.3 Other specified soft tissue sarcoma	1.0	0.9	2.7	1.1	5.4	1.2	7.3	2.5	5.7	3.2
5.3.1 Specified soft tissue sarcoma	0.6	0.8	2.2	0.8	4.9	0.8	6.7	2.1	4.9	2.6
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.6	0.8	0.7	0.7	0.9	0.8	1.6	1.6	1.2	2.2
5.3.1.2 Kaposi sarcoma	-	-	1.5	-	4.0	-	5.1	-	3.7	-
5.3.2 Unspecified soft tissue sarcoma	-	-	-	-	-	-	0.6	-	0.8	0.6
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	0.8	1.4	2.2	1.1	3.5	1.2	4.1	1.2	3.6	0.8
6.1 Germ cell and trophoblastic neoplasms of gonads	-	1.1	1.8	0.7	3.2	0.7	3.7	0.6	3.5	-
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	-	-	-	-	-	0.5	-	-	-	-
6.2.1 Intracranial sites	-	-	-	-	-	-	-	-	-	-
6.2.2 Other nongonadal sites	-	-	-	-	-	0.5	-	-	-	-

Rates are per 100,000.

<sup>a</sup> 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).

<sup>b</sup> 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 32.6 - continued  
 Age-Specific SEER Incidence<sup>a</sup>, by Age Group and Sex  
 By Adapted Classification Scheme for Tumors of Adolescents and Young Adults<sup>b</sup>  
 Black, 2013-2017

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	1.1
7.1 Melanoma	-	-	-	-	-	-	-	-	-	0.7
7.2 Skin carcinomas	-	-	-	-	-	-	-	-	-	-
8. CARCINOMAS (excluding skin)	2.1	4.0	4.1	11.4	9.1	32.7	21.2	74.6	44.2	139.3
8.1 Thyroid carcinoma	0.6	1.9	0.6	3.6	1.0	8.4	2.1	12.3	3.3	18.6
8.2 Other carcinoma of head and neck	-	0.5	0.6	0.5	1.2	0.9	1.3	1.7	3.7	2.0
8.2.1 Nasopharyngeal carcinoma	-	-	-	-	0.6	-	-	-	-	-
8.2.2 Other sites in lip, oral cavity and pharynx	-	-	-	-	-	0.8	0.8	1.3	2.3	1.5
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	-	-	-	-	-	-	0.9	-
8.3 Carcinoma of trachea, bronchus, and lung	-	-	-	-	0.5	-	1.6	1.3	3.6	2.6
8.4 Carcinoma of breast	-	-	-	1.9	-	11.1	-	32.0	-	70.0
8.5 Carcinoma of genitourinary tract	-	-	0.7	2.6	1.9	7.9	4.2	16.8	11.0	26.0
8.5.1 Carcinoma of kidney	-	-	0.6	0.7	1.6	1.1	3.3	2.3	8.1	3.8
8.5.2 Carcinoma of bladder	-	-	-	-	-	-	0.6	-	1.2	0.7
8.5.3 Carcinoma of gonads	-	-	-	0.5	-	0.8	-	1.8	-	3.0
8.5.4 Carcinoma of cervix and uterus	-	-	-	1.2	-	5.4	-	11.7	-	16.8
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	-	-	-	-	-	0.7	1.6	1.8
8.6 Carcinoma of gastrointestinal tract	0.7	0.8	1.6	2.3	4.1	3.6	10.9	9.7	20.8	18.4
8.6.1 Carcinoma of colon and rectum	0.6	-	1.1	1.4	2.9	2.3	6.8	6.7	13.5	11.6
8.6.2 Carcinoma of stomach	-	-	-	-	-	-	1.2	0.7	1.6	2.0
8.6.3 Carcinoma of liver and intrahepatic bile ducts	-	-	-	-	0.5	-	1.4	-	1.9	0.7
8.6.4 Carcinoma of pancreas	-	-	-	-	-	0.5	0.9	1.2	1.8	1.8
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	-	-	-	-	-	0.9	2.0	2.3
8.7 Carcinoma of other and ill-defined sites, NOS	-	-	-	-	-	0.5	1.0	0.8	1.4	1.7
8.7.1 Adrenocortical carcinoma	-	-	-	-	-	-	-	-	-	-
8.7.2 Carcinoma of other and ill-defined sites, NOS	-	-	-	-	-	-	1.0	0.8	1.3	1.7
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	-	0.6	-	0.8	-	1.1	1.9	2.0	3.3	4.8
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	-	-	-	0.6	-	1.0	1.8	2.0	3.2	4.7
9.2.1 Paraganglioma and glomus tumors	-	-	-	-	-	-	-	-	-	-
9.2.2 Other specified gonadal tumors	-	-	-	-	-	-	-	-	-	-
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	-	-	-	-	-	-	1.0	0.9	2.4	2.0
9.2.4 Other specified neoplasms, NOS <sup>c</sup>	-	-	-	-	-	-	0.6	0.7	-	2.1
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	-	0.5	-	0.5	-	1.0	0.7	1.4

Rates are per 100,000.

<sup>a</sup> 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).

<sup>b</sup> 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).

<sup>c</sup> 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 32.7

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

Both Sexes	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	16,836	21.1	0.7*	4,713	23.9	0.7*
1. Leukemias	2,011	2.5	0.9*	549	2.8	0.9*
2. Lymphomas	4,107	5.1	0.2	1,077	5.5	0.2
3. CNS, intracranial, intraspinal	1,633	2.0	0.6*	448	2.3	0.6*
4. Osseous & chondromatous neoplasms	1,284	1.6	0.5	335	1.7	0.5
5. Soft tissue sarcomas	1,197	1.5	0.2	289	1.5	0.2
6. Germ cell and trophoblastic neoplasms	1,986	2.5	0.6*	528	2.7	0.6*
7. Melanoma and skin carcinomas	1,193	1.5	-0.1	270	1.4	-3.4*
8. Carcinomas (excluding skin)	3,090	3.9	2.1*	1,121	5.7	5.6*
9. Miscellaneous specified neoplasms, NOS	273	0.3	0.8	88	0.4	0.8
10. Unspecified malignant neoplasms	62	0.1	-	-	-	-

  

Males	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	8,814	21.6	0.7*	2,447	24.2	0.7*
1. Leukemias	1,195	2.9	0.7*	316	3.1	0.7*
2. Lymphomas	2,221	5.5	0.4*	611	6.0	0.4*
3. CNS, intracranial, intraspinal	932	2.3	0.5	246	2.4	0.5
4. Osseous & chondromatous neoplasms	848	2.1	0.6*	231	2.3	0.6*
5. Soft tissue sarcomas	638	1.6	0.3	164	1.6	0.3
6. Germ cell and trophoblastic neoplasms	1,476	3.6	1.0*	414	4.1	1.0*
7. Melanoma and skin carcinomas	474	1.2	0.5	112	1.1	0.5
8. Carcinomas (excluding skin)	880	2.2	2.0*	305	3.0	2.0*
9. Miscellaneous specified neoplasms, NOS	122	0.3	-	44	0.4	-
10. Unspecified malignant neoplasms	28	0.1	-	-	-	-

  

Females	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	8,022	20.6	0.7*	2,266	23.5	0.7*
1. Leukemias	816	2.1	1.3*	233	2.4	1.3*
2. Lymphomas	1,886	4.8	-0.1	466	4.8	-0.1
3. CNS, intracranial, intraspinal	701	1.8	0.7*	202	2.1	0.7*
4. Osseous & chondromatous neoplasms	436	1.1	0.1	104	1.1	0.1
5. Soft tissue sarcomas	559	1.4	0.1	125	1.3	0.1
6. Germ cell and trophoblastic neoplasms	510	1.3	-0.5	114	1.2	-0.5
7. Melanoma and skin carcinomas	719	1.8	0.1	158	1.6	0.1
8. Carcinomas (excluding skin)	2,210	5.7	2.2*	816	8.5	6.1*
9. Miscellaneous specified neoplasms, NOS	151	0.4	-	44	0.5	-
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).

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

<sup>b</sup> 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).

<sup>c</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2017.

- 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 32.8

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

Both Sexes	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	28,659	35.0	0.7*	7,898	38.8	0.7*
1. Leukemias	1,856	2.3	0.8*	500	2.5	0.8*
2. Lymphomas	5,854	7.1	0.6*	1,462	7.2	-0.3
3. CNS, intracranial, intraspinal	1,860	2.3	0.1	472	2.3	-3.1*
4. Osseous & chondromatous neoplasms	753	0.9	0.9*	215	1.1	0.9*
5. Soft tissue sarcomas	1,716	2.1	0.8	416	2.0	-0.9*
6. Germ cell and trophoblastic neoplasms	4,492	5.5	0.8*	1,270	6.2	0.8*
7. Melanoma and skin carcinomas	3,497	4.3	0.2	868	4.3	-3.6*
8. Carcinomas (excluding skin)	8,149	9.9	0.8*	2,563	12.6	1.9*
9. Miscellaneous specified neoplasms, NOS	313	0.4	2.0*	103	0.5	2.0*
10. Unspecified malignant neoplasms	169	0.2	-	29	0.1	-

  

Males	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	14,106	33.9	0.6*	3,849	36.8	0.6*
1. Leukemias	1,072	2.6	0.7*	284	2.7	0.7*
2. Lymphomas	3,156	7.6	0.2	804	7.7	0.2
3. CNS, intracranial, intraspinal	1,045	2.5	0.0	254	2.4	0.0
4. Osseous & chondromatous neoplasms	442	1.1	0.6	128	1.2	0.6
5. Soft tissue sarcomas	1,021	2.5	0.8	241	2.3	-1.4*
6. Germ cell and trophoblastic neoplasms	4,026	9.7	0.8*	1,147	11.0	0.8*
7. Melanoma and skin carcinomas	1,192	2.9	-0.4	273	2.6	-2.9*
8. Carcinomas (excluding skin)	1,963	4.7	1.4*	658	6.3	4.6*
9. Miscellaneous specified neoplasms, NOS	127	0.3	-	47	0.4	-
10. Unspecified malignant neoplasms	62	0.1	-	-	-	-

  

Females	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	14,553	36.1	0.5*	4,049	40.8	-0.4
1. Leukemias	784	1.9	0.1	216	2.2	-0.2
2. Lymphomas	2,698	6.7	0.5	658	6.6	-2.0*
3. CNS, intracranial, intraspinal	815	2.0	1.0*	218	2.2	1.0*
4. Osseous & chondromatous neoplasms	311	0.8	1.1*	87	0.9	1.1*
5. Soft tissue sarcomas	695	1.7	0.4	175	1.8	0.4
6. Germ cell and trophoblastic neoplasms	466	1.2	0.3	123	1.2	0.3
7. Melanoma and skin carcinomas	2,305	5.7	0.5	595	6.0	-3.8*
8. Carcinomas (excluding skin)	6,186	15.3	0.7*	1,905	19.2	1.7*
9. Miscellaneous specified neoplasms, NOS	186	0.5	1.7*	56	0.6	1.7*
10. Unspecified malignant neoplasms	107	0.3	-	16	0.2	-

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

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

<sup>b</sup> 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).

<sup>c</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2017.

- 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 32.9

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

Both Sexes	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	48,812	56.8	0.5*	13,410	63.5	0.0
1. Leukemias	2,106	2.4	0.8*	596	2.8	0.8*
2. Lymphomas	7,135	8.3	0.4	1,759	8.3	-0.1
3. CNS, intracranial, intraspinal	2,491	2.9	0.0	640	3.0	-3.8
4. Osseous & chondromatous neoplasms	613	0.7	1.2*	183	0.9	1.2*
5. Soft tissue sarcomas	3,387	3.9	1.2	607	2.9	-0.7
6. Germ cell and trophoblastic neoplasms	6,263	7.3	1.2*	1,803	8.5	0.3
7. Melanoma and skin carcinomas	6,566	7.6	0.4	1,677	7.9	-2.5*
8. Carcinomas (excluding skin)	19,546	22.7	0.7*	5,944	28.2	1.6*
9. Miscellaneous specified neoplasms, NOS	472	0.5	1.5*	145	0.7	1.5*
10. Unspecified malignant neoplasms	233	0.3	-	56	0.3	-

  

Males	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	21,863	50.5	0.5	5,767	53.9	-0.7
1. Leukemias	1,211	2.8	0.5*	334	3.1	0.5*
2. Lymphomas	4,070	9.4	0.5	997	9.3	0.1
3. CNS, intracranial, intraspinal	1,360	3.1	0.7*	356	3.3	0.7*
4. Osseous & chondromatous neoplasms	342	0.8	0.3	92	0.9	0.3
5. Soft tissue sarcomas	2,465	5.7	1.4	389	3.6	-0.6
6. Germ cell and trophoblastic neoplasms	5,782	13.4	1.3*	1,679	15.7	-0.2
7. Melanoma and skin carcinomas	2,313	5.3	0.0	541	5.1	0.0
8. Carcinomas (excluding skin)	4,047	9.4	0.6	1,301	12.2	2.0*
9. Miscellaneous specified neoplasms, NOS	175	0.4	-	55	0.5	-
10. Unspecified malignant neoplasms	98	0.2	-	23	0.2	-

  

Females	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	26,949	63.1	0.7*	7,643	73.5	1.0*
1. Leukemias	895	2.1	1.2*	262	2.5	1.2*
2. Lymphomas	3,065	7.2	0.5	762	7.3	-0.5
3. CNS, intracranial, intraspinal	1,131	2.6	0.7*	284	2.7	0.7*
4. Osseous & chondromatous neoplasms	271	0.6	1.9*	91	0.9	1.9*
5. Soft tissue sarcomas	922	2.2	0.3	218	2.1	-1.5*
6. Germ cell and trophoblastic neoplasms	481	1.1	-0.1	124	1.2	-0.1
7. Melanoma and skin carcinomas	4,253	10.0	0.7*	1,136	10.9	-2.8*
8. Carcinomas (excluding skin)	15,499	36.3	0.8*	4,643	44.6	1.7*
9. Miscellaneous specified neoplasms, NOS	297	0.7	1.2*	90	0.9	1.2*
10. Unspecified malignant neoplasms	135	0.3	-	33	0.3	-

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

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

<sup>b</sup> 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).

<sup>c</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2017.

- 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 32.10

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

Both Sexes	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	75,090	87.6	1.0*	20,282	98.4	1.1*
1. Leukemias	2,531	3.0	0.8*	692	3.4	0.8*
2. Lymphomas	7,888	9.2	0.7	1,800	8.7	-3.3*
3. CNS, intracranial, intraspinal	2,949	3.4	0.4*	784	3.8	0.4*
4. Osseous & chondromatous neoplasms	559	0.7	0.6	140	0.7	0.6
5. Soft tissue sarcomas	5,532	6.5	1.1	796	3.9	-0.6
6. Germ cell and trophoblastic neoplasms	6,290	7.3	1.7*	1,764	8.6	0.7*
7. Melanoma and skin carcinomas	9,555	11.1	1.5*	2,553	12.4	0.3
8. Carcinomas (excluding skin)	38,562	45.0	0.8*	11,389	55.2	2.0*
9. Miscellaneous specified neoplasms, NOS	845	1.0	1.8*	273	1.3	1.8*
10. Unspecified malignant neoplasms	378	0.4	0.8	91	0.4	0.8

  

Males	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	30,631	71.4	0.9*	7,617	73.7	0.9*
1. Leukemias	1,456	3.4	0.7*	391	3.8	0.7*
2. Lymphomas	4,844	11.3	0.8	1,051	10.2	-3.4*
3. CNS, intracranial, intraspinal	1,719	4.0	0.4*	456	4.4	0.4*
4. Osseous & chondromatous neoplasms	314	0.7	0.7	82	0.8	0.7
5. Soft tissue sarcomas	4,379	10.2	1.2	503	4.9	-1.3*
6. Germ cell and trophoblastic neoplasms	5,887	13.7	1.7*	1,656	16.0	0.7*
7. Melanoma and skin carcinomas	3,757	8.8	0.1	926	9.0	0.1
8. Carcinomas (excluding skin)	7,808	18.2	0.9*	2,401	23.2	2.5*
9. Miscellaneous specified neoplasms, NOS	328	0.8	2.1*	111	1.1	2.1*
10. Unspecified malignant neoplasms	139	0.3	-	40	0.4	-

  

Females	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	44,459	103.8	0.8*	12,665	123.2	1.4*
1. Leukemias	1,075	2.5	0.8*	301	2.9	0.8*
2. Lymphomas	3,044	7.1	0.5	749	7.3	-2.9*
3. CNS, intracranial, intraspinal	1,230	2.9	0.5*	328	3.2	0.5*
4. Osseous & chondromatous neoplasms	245	0.6	-	58	0.6	-
5. Soft tissue sarcomas	1,153	2.7	0.2	293	2.9	0.2
6. Germ cell and trophoblastic neoplasms	403	0.9	0.2	108	1.1	0.2
7. Melanoma and skin carcinomas	5,798	13.5	2.0*	1,627	15.8	1.0*
8. Carcinomas (excluding skin)	30,754	71.8	0.8*	8,988	87.4	1.7*
9. Miscellaneous specified neoplasms, NOS	517	1.2	1.6*	162	1.6	1.6*
10. Unspecified malignant neoplasms	239	0.6	-	51	0.5	-

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

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

<sup>b</sup> 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).

<sup>c</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2017.

- 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 32.11

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

Both Sexes	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	109,304	134.7	0.7*	28,583	143.8	0.7*
1. Leukemias	3,132	3.9	0.5	884	4.4	1.9*
2. Lymphomas	8,946	11.0	1.2*	2,075	10.4	-1.3*
3. CNS, intracranial, intraspinal	3,198	3.9	-0.2	747	3.8	-0.2
4. Osseous & chondromatous neoplasms	551	0.7	1.2*	159	0.8	1.2*
5. Soft tissue sarcomas	6,469	8.0	0.7	901	4.5	-1.4*
6. Germ cell and trophoblastic neoplasms	4,884	6.0	1.5*	1,322	6.7	0.4
7. Melanoma and skin carcinomas	11,916	14.7	1.4*	3,192	16.1	0.4*
8. Carcinomas (excluding skin)	68,138	84.0	0.5*	18,719	94.2	0.5
9. Miscellaneous specified neoplasms, NOS	1,513	1.9	1.5*	462	2.3	1.5*
10. Unspecified malignant neoplasms	557	0.7	-0.4	122	0.6	-0.4

  

Males	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	40,437	100.0	0.5	9,601	96.9	0.1
1. Leukemias	1,805	4.5	0.3	488	4.9	0.3
2. Lymphomas	5,740	14.2	1.2*	1,205	12.2	-1.5*
3. CNS, intracranial, intraspinal	1,861	4.6	-0.3	429	4.3	-0.3
4. Osseous & chondromatous neoplasms	308	0.8	0.4	79	0.8	0.4
5. Soft tissue sarcomas	4,994	12.3	1.8	544	5.5	-2.1*
6. Germ cell and trophoblastic neoplasms	4,635	11.5	1.6*	1,250	12.6	0.4
7. Melanoma and skin carcinomas	5,111	12.6	1.0	1,253	12.7	-0.2
8. Carcinomas (excluding skin)	15,157	37.5	0.3*	4,138	41.8	1.2*
9. Miscellaneous specified neoplasms, NOS	611	1.5	1.1*	175	1.8	1.1*
10. Unspecified malignant neoplasms	215	0.5	-0.9	40	0.4	-0.9

  

Females	1975-2017			2008-2017		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	68,867	169.2	0.8*	18,982	190.4	1.0*
1. Leukemias	1,327	3.3	1.0	396	4.0	2.1*
2. Lymphomas	3,206	7.9	1.1*	870	8.7	-0.6
3. CNS, intracranial, intraspinal	1,337	3.3	-0.1	318	3.2	-0.1
4. Osseous & chondromatous neoplasms	243	0.6	-	80	0.8	-
5. Soft tissue sarcomas	1,475	3.6	-0.4	357	3.6	-0.4
6. Germ cell and trophoblastic neoplasms	249	0.6	0.1	72	0.7	0.1
7. Melanoma and skin carcinomas	6,805	16.7	1.9*	1,939	19.5	0.9*
8. Carcinomas (excluding skin)	52,981	130.2	0.5*	14,581	146.3	0.5
9. Miscellaneous specified neoplasms, NOS	902	2.2	1.7*	287	2.9	1.7*
10. Unspecified malignant neoplasms	342	0.8	-0.1	82	0.8	-0.1

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

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

<sup>b</sup> 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).

<sup>c</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2017.

- 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 32.12

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rate Comparison by Race/Ethnicity, 2013-2017  
Ages 15-19

Males	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	24.7	26.5	17.2	20.0	24.7	3.3	3.3	3.0	3.3	3.7
Leukemia	3.9	4.3	2.6	3.0	5.4	0.9	0.9	0.7	1.1	1.3
Lymphoma	6.0	6.1	5.4	5.2	4.5	0.2	0.2	0.2	-	0.2
Hodgkin Lymphoma	3.2	3.4	2.8	2.0	2.3	0.0	0.0	-	-	-
Non-Hodgkin Lymphoma	2.8	2.7	2.6	3.2	2.2	0.2	0.2	0.2	-	-
Brain and Other Nervous System	2.6	2.8	2.0	2.2	1.8	0.6	0.6	0.6	0.7	0.5
Bones and Joints	1.9	1.9	1.8	1.7	1.7	0.7	0.7	0.5	0.6	0.8
Soft Tissue including Heart	1.4	1.4	1.3	1.0	1.3	0.3	0.3	0.3	-	0.3
Skin excluding Basal and Squamous	0.9	1.0	-	-	0.3	0.0	-	-	-	-
Respiratory System	0.4	0.4	-	-	0.5	0.1	0.1	-	-	-
Male Genital System	3.8	4.6	0.6	1.7	5.8	0.1	0.1	-	-	-
Digestive System	1.4	1.6	0.7	-	1.4	0.1	0.1	-	-	-

  

Females	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	23.8	25.5	16.6	18.6	21.3	2.3	2.4	2.4	2.3	2.3
Leukemia	2.5	2.5	1.9	3.1	3.3	0.6	0.6	0.4	0.7	0.9
Lymphoma	4.8	5.2	3.8	3.3	3.9	0.1	0.1	0.2	-	0.1
Hodgkin Lymphoma	3.3	3.7	2.5	1.8	2.5	0.0	-	-	-	-
Non-Hodgkin Lymphoma	1.5	1.5	1.4	1.5	1.5	0.1	0.1	-	-	-
Brain and Other Nervous System	2.1	2.2	1.9	1.3	1.3	0.5	0.5	0.4	0.7	0.4
Bones and Joints	1.1	1.2	1.0	1.0	0.9	0.4	0.4	0.4	-	0.3
Soft Tissue including Heart	1.2	1.2	1.2	0.9	1.4	0.3	0.3	0.4	-	0.2
Skin excluding Basal and Squamous	1.3	1.5	-	-	0.5	-	-	-	-	-
Respiratory System	0.2	0.2	-	-	-	0.0	0.0	-	-	-
Breast	0.2	0.1	-	-	-	-	-	-	-	-
Female Genital System	1.7	1.6	1.9	1.3	2.0	0.1	0.1	-	-	-
Digestive System	1.9	2.1	1.0	1.0	1.8	0.1	0.1	0.2	-	-

Rates are per 100,000.

<sup>a</sup> 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).<sup>b</sup> US Mortality Files, National Center for Health Statistics, CDC.<sup>c</sup> Asian/Pacific Islander<sup>d</sup> 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 32.13

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rate Comparison by Race/Ethnicity, 2013-2017  
Ages 20-24

Males	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	36.5	39.9	21.0	27.3	35.7	4.6	4.7	4.5	4.1	5.6
Leukemia	3.3	3.5	2.3	3.2	5.0	1.1	1.1	1.0	1.1	1.9
Lymphoma	7.2	7.4	6.3	5.5	5.2	0.4	0.4	0.6	0.4	0.4
Hodgkin Lymphoma	4.0	4.3	2.9	2.7	2.7	0.1	0.1	-	-	0.1
Non-Hodgkin Lymphoma	3.1	3.0	3.4	2.8	2.5	0.3	0.3	0.5	0.4	0.3
Brain and Other Nervous System	2.4	2.7	1.2	1.9	1.7	0.6	0.7	0.4	-	0.5
Bones and Joints	1.0	1.1	0.7	-	1.0	0.5	0.6	0.3	-	0.6
Soft Tissue including Heart	1.3	1.2	1.5	1.3	1.4	0.4	0.4	0.5	0.4	0.4
Skin excluding Basal and Squamous	2.0	2.3	0.6	-	0.5	0.1	0.1	-	-	-
Respiratory System	0.8	0.8	0.7	1.3	1.0	0.1	0.1	0.2	-	0.1
Male Genital System	11.0	13.2	2.0	5.4	14.4	0.3	0.4	-	-	0.6
Digestive System	2.5	2.6	1.8	2.5	2.2	0.4	0.4	0.5	0.6	0.4

  

Females	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	39.8	43.1	25.6	29.5	32.6	3.1	3.1	3.4	2.6	3.2
Leukemia	2.4	2.4	2.5	1.7	2.7	0.6	0.6	0.6	-	1.0
Lymphoma	6.6	7.1	5.2	4.7	5.0	0.3	0.2	0.4	-	0.2
Hodgkin Lymphoma	4.5	5.0	3.1	2.5	3.1	0.1	0.1	-	-	-
Non-Hodgkin Lymphoma	2.2	2.1	2.1	2.2	1.8	0.2	0.1	0.3	-	-
Brain and Other Nervous System	1.9	2.1	1.5	1.4	1.4	0.5	0.5	0.3	-	0.3
Bones and Joints	0.7	0.7	0.5	-	0.7	0.3	0.3	0.2	-	0.3
Soft Tissue including Heart	1.2	1.2	1.4	-	1.1	0.3	0.3	0.4	-	0.2
Skin excluding Basal and Squamous	4.4	5.3	0.8	-	1.0	0.1	0.1	-	-	-
Respiratory System	0.5	0.5	-	-	0.4	0.1	0.1	-	-	-
Breast	1.6	1.6	2.0	1.1	1.5	0.1	0.1	0.2	-	-
Female Genital System	3.3	3.2	3.4	2.9	3.8	0.3	0.3	0.4	-	0.3
Digestive System	3.0	3.2	2.4	2.1	2.7	0.4	0.3	0.4	0.5	0.4

Rates are per 100,000.

<sup>a</sup> 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).<sup>b</sup> US Mortality Files, National Center for Health Statistics, CDC.<sup>c</sup> Asian/Pacific Islander<sup>d</sup> 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 32.14

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rate Comparison by Race/Ethnicity, 2013-2017  
Ages 25-29

Males	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	51.2	55.9	34.3	33.9	43.3	6.3	6.5	6.6	4.6	6.6
Leukemia	3.4	3.5	2.5	3.5	4.1	1.0	1.1	1.0	0.6	1.5
Lymphoma	7.9	8.2	8.7	5.1	5.4	0.6	0.6	0.9	0.4	0.5
Hodgkin Lymphoma	3.9	4.3	3.8	1.8	2.5	0.2	0.2	0.2	-	0.2
Non-Hodgkin Lymphoma	4.0	3.9	4.8	3.3	2.9	0.4	0.4	0.7	-	0.3
Brain and Other Nervous System	3.2	3.5	2.2	2.2	2.4	0.9	1.0	0.6	0.6	0.6
Bones and Joints	0.7	0.7	0.8	0.8	0.7	0.4	0.4	0.3	-	0.4
Soft Tissue including Heart	1.7	1.6	1.9	1.5	1.6	0.5	0.5	0.6	-	0.5
Skin excluding Basal and Squamous	3.9	4.8	0.8	0.6	0.9	0.3	0.4	-	-	0.2
Respiratory System	1.1	1.0	1.1	1.6	1.0	0.2	0.2	0.2	-	0.2
Male Genital System	15.2	18.5	3.3	6.3	16.5	0.5	0.6	-	-	0.9
Digestive System	4.7	4.7	4.4	4.3	4.1	1.1	1.1	1.4	1.3	1.0

  

Females	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	71.3	77.1	48.7	51.5	61.7	5.7	5.7	6.8	4.0	5.5
Leukemia	2.6	2.7	2.2	2.4	3.1	0.7	0.7	0.7	0.5	0.9
Lymphoma	7.0	7.3	6.2	5.1	5.9	0.4	0.4	0.5	0.4	0.4
Hodgkin Lymphoma	4.0	4.5	3.0	2.3	3.0	0.1	0.1	-	-	-
Non-Hodgkin Lymphoma	3.0	2.9	3.3	2.7	2.9	0.2	0.2	0.3	-	0.3
Brain and Other Nervous System	2.5	2.8	1.3	1.5	2.0	0.5	0.6	0.5	-	0.5
Bones and Joints	0.7	0.6	0.7	-	0.6	0.2	0.2	0.2	-	-
Soft Tissue including Heart	1.4	1.4	1.6	1.0	1.6	0.3	0.4	0.3	-	0.3
Skin excluding Basal and Squamous	8.6	10.8	1.0	0.9	2.2	0.2	0.3	-	-	-
Respiratory System	0.8	0.8	-	0.8	0.7	0.2	0.1	0.2	-	0.2
Breast	10.0	9.9	11.4	8.4	8.7	0.7	0.6	1.5	0.4	0.6
Female Genital System	9.8	10.0	8.5	7.9	10.9	1.0	1.1	1.0	0.6	1.1
Digestive System	4.7	5.0	3.7	3.4	4.7	0.8	0.8	1.1	1.0	0.9

Rates are per 100,000.

<sup>a</sup> 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).<sup>b</sup> US Mortality Files, National Center for Health Statistics, CDC.<sup>c</sup> Asian/Pacific Islander<sup>d</sup> 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 32.15

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rate Comparison by Race/Ethnicity, 2013-2017  
Ages 30-34

Males	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	71.2	75.9	54.2	48.0	55.0	9.9	10.0	11.4	6.7	8.3
Leukemia	4.1	4.3	3.3	3.6	4.5	1.1	1.2	1.2	0.9	1.4
Lymphoma	9.3	9.3	10.5	6.6	7.6	0.9	0.8	1.6	0.6	0.8
Hodgkin Lymphoma	3.7	3.9	3.8	2.1	2.7	0.2	0.2	0.4	-	0.2
Non-Hodgkin Lymphoma	5.5	5.3	6.7	4.6	5.0	0.7	0.6	1.2	0.5	0.7
Brain and Other Nervous System	3.9	4.4	2.0	2.8	2.8	1.4	1.6	0.7	0.7	0.7
Bones and Joints	0.6	0.7	-	-	0.7	0.3	0.3	0.3	-	0.2
Soft Tissue including Heart	2.4	2.2	3.2	2.3	2.1	0.6	0.6	0.7	-	0.5
Skin excluding Basal and Squamous	7.6	9.2	1.6	0.9	1.5	0.6	0.7	-	-	0.2
Respiratory System	1.8	1.8	2.4	1.3	1.4	0.5	0.5	1.1	0.5	0.4
Male Genital System	15.5	18.5	4.2	6.2	13.8	0.5	0.6	0.2	-	0.7
Digestive System	9.8	9.5	11.5	9.0	8.4	2.6	2.4	3.5	2.3	2.3

  

Females	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	123.8	130.7	97.0	93.6	105.5	11.7	11.5	15.0	8.2	11.0
Leukemia	3.2	3.2	3.3	2.7	3.3	0.8	0.8	1.0	0.7	0.9
Lymphoma	7.4	7.5	8.0	5.2	6.2	0.5	0.4	0.7	-	0.5
Hodgkin Lymphoma	3.3	3.4	3.6	1.6	2.4	0.1	0.1	-	-	0.2
Non-Hodgkin Lymphoma	4.2	4.1	4.4	3.7	3.8	0.3	0.3	0.6	-	0.3
Brain and Other Nervous System	2.9	3.3	1.6	1.6	2.0	0.9	1.0	0.5	0.6	0.6
Bones and Joints	0.6	0.6	0.6	-	0.8	0.2	0.2	-	-	0.2
Soft Tissue including Heart	1.7	1.7	2.0	1.4	1.9	0.4	0.4	0.5	-	0.3
Skin excluding Basal and Squamous	13.0	16.4	1.3	1.0	3.5	0.4	0.5	-	-	-
Respiratory System	1.5	1.5	1.6	1.7	1.3	0.4	0.4	0.5	0.6	0.3
Breast	29.4	28.9	32.5	26.1	24.8	2.8	2.5	4.8	1.4	2.2
Female Genital System	19.2	20.0	16.5	14.2	21.4	2.2	2.3	2.5	1.4	2.6
Digestive System	9.5	9.5	10.4	7.1	9.9	2.0	1.9	2.7	1.9	2.3

Rates are per 100,000.

<sup>a</sup> 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).<sup>b</sup> US Mortality Files, National Center for Health Statistics, CDC.<sup>c</sup> Asian/Pacific Islander<sup>d</sup> 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 32.16

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rate Comparison by Race/Ethnicity, 2013-2017  
Ages 35-39

Males	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	95.5	99.4	81.4	66.6	73.9	16.6	16.5	20.1	12.4	12.6
Leukemia	5.0	5.2	4.7	3.4	5.3	1.3	1.3	1.5	1.0	1.6
Lymphoma	11.5	11.6	13.2	7.4	10.1	1.0	1.0	1.6	0.5	0.9
Hodgkin Lymphoma	3.1	3.3	3.8	1.3	2.2	0.2	0.2	0.3	-	0.1
Non-Hodgkin Lymphoma	8.4	8.3	9.4	6.1	7.8	0.9	0.8	1.3	0.5	0.8
Brain and Other Nervous System	4.3	4.8	2.7	3.3	3.2	2.1	2.3	1.2	1.1	1.2
Bones and Joints	0.7	0.8	0.7	-	0.7	0.2	0.2	0.3	-	0.2
Soft Tissue including Heart	2.4	2.4	2.2	2.1	2.4	0.7	0.7	0.9	0.5	0.6
Skin excluding Basal and Squamous	10.4	12.6	1.6	1.6	2.0	0.9	1.2	-	-	0.2
Respiratory System	3.3	3.1	4.8	2.9	2.4	1.4	1.3	2.4	1.0	0.8
Male Genital System	13.3	15.5	5.2	4.5	10.8	0.5	0.5	0.3	-	0.5
Digestive System	18.6	17.9	22.0	16.8	17.4	5.8	5.5	7.8	5.7	4.7
Females	Incidence					Mortality				
	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>	All Races	White	Black	API <sup>c</sup>	Hispanic <sup>d</sup>
All Malignant Cancers	193.2	200.4	167.6	157.7	163.4	22.1	21.7	28.5	16.5	19.5
Leukemia	3.7	3.9	3.6	2.9	3.9	1.1	1.0	1.2	0.9	1.2
Lymphoma	8.6	8.6	9.6	6.2	7.3	0.6	0.5	1.0	0.4	0.7
Hodgkin Lymphoma	2.7	2.9	3.0	1.2	2.0	0.1	0.1	-	-	-
Non-Hodgkin Lymphoma	5.8	5.6	6.6	5.0	5.3	0.5	0.4	0.8	-	0.6
Brain and Other Nervous System	3.2	3.7	1.9	2.3	2.6	1.4	1.5	0.8	0.8	0.8
Bones and Joints	0.7	0.7	0.6	-	0.7	0.2	0.2	-	-	-
Soft Tissue including Heart	1.9	1.8	1.8	1.8	2.2	0.5	0.5	0.7	-	0.5
Skin excluding Basal and Squamous	15.2	19.2	1.6	1.6	4.1	0.6	0.8	0.2	-	0.2
Respiratory System	3.3	3.2	2.9	3.9	2.3	1.2	1.1	1.4	1.3	0.8
Breast	64.4	63.5	71.0	58.8	52.3	6.6	6.1	10.7	4.0	5.5
Female Genital System	29.4	30.5	25.3	24.2	32.6	4.1	4.2	4.6	3.1	4.1
Digestive System	17.0	16.5	19.6	15.0	15.5	4.1	3.9	4.9	3.8	4.1

Rates are per 100,000.

<sup>a</sup> 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).<sup>b</sup> US Mortality Files, National Center for Health Statistics, CDC.<sup>c</sup> Asian/Pacific Islander<sup>d</sup> 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 32.17

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rates and Trends for the Top 5 Cancer Sites<sup>c</sup> by Age  
All Races, Both Sexes, 1975-2017

	<u>Incidence</u>				<u>Mortality</u>			
	<u>1975-2017</u>		<u>2008-2017</u>		<u>1975-2017</u>		<u>2008-2017</u>	
	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>
<u>Ages 15-19</u>								
All Malignant Cancers	21.1	0.7*	23.9	0.7*	4.0	-1.9*	2.9	-1.7*
Hodgkin Lymphoma	3.4	-0.5*	3.3	-0.5*	0.2	-5.1*	0.0	-5.1*
Brain and Other Nervous System	2.1	0.5*	2.3	0.5*	0.6	-1.2	0.5	-1.0
Thyroid	2.0	2.1*	3.2	3.4	0.0	-	0.0	-
Non-Hodgkin Lymphoma	1.7	1.6*	2.1	1.6*	0.3	-3.5*	0.2	-4.8*
Testis	1.6	1.0*	1.8	1.0*	0.1	-5.0*	0.0	-2.6*
<u>Ages 20-24</u>								
All Malignant Cancers	35.0	0.7*	38.8	0.7*	5.3	-1.7*	4.2	-2.6*
Hodgkin Lymphoma	4.9	0.1	4.5	-0.7*	0.4	-5.0*	0.1	-9.8*
Thyroid	4.7	2.1*	6.8	2.1*	0.0	-	0.0	-
Testis	4.6	1.2	5.4	0.5	0.2	-3.4*	0.2	-0.6
Melanoma of the Skin	4.1	0.2	4.1	-3.3*	0.2	-4.7*	0.1	-11.2*
Brain and Other Nervous System	2.3	0.5*	2.4	0.5*	0.6	-0.7*	0.6	-0.7*
<u>Ages 25-29</u>								
All Malignant Cancers	56.8	0.5*	63.5	0.0	8.0	-1.5*	6.3	-1.5*
Thyroid	7.6	2.0*	11.7	3.4*	0.0	-	0.0	-
Melanoma of the Skin	7.4	0.4	7.8	-2.6*	0.5	-3.0*	0.3	-3.0*
Testis	6.5	1.4*	7.8	0.9*	0.3	-2.8*	0.2	1.1
Hodgkin Lymphoma	4.8	-0.2	4.4	-0.2	0.5	-5.7*	0.2	-10.8*
Breast	4.2	0.4	4.8	2.0*	0.5	-1.7*	0.4	0.4
<u>Ages 30-34</u>								
All Malignant Cancers	87.6	1.0*	98.4	1.1*	14.0	-1.3*	10.9	-0.4
Breast	13.6	0.2	14.5	0.8*	2.0	-1.5*	1.4	0.4
Melanoma of the Skin	10.8	1.5*	12.1	0.2	0.8	-2.3*	0.5	-2.6*
Thyroid	10.0	2.5*	16.8	2.0*	0.0	-1.4*	0.0	-1.4*
Testis	6.7	1.8*	7.9	0.7*	0.3	-2.4*	0.2	-0.1
Cervix Uteri	5.7	-1.2*	4.6	-1.2*	0.9	-0.8*	0.7	1.5
<u>Ages 35-39</u>								
All Malignant Cancers	134.7	0.7*	143.8	0.7*	26.0	-1.4*	19.6	-0.8*
Breast	31.8	0.4*	32.3	0.3*	4.9	-1.4*	3.3	-0.6
Melanoma of the Skin	14.2	1.4*	15.5	0.4*	1.2	-2.9*	0.8	-4.1*
Thyroid	12.1	2.6*	20.4	0.9	0.1	-0.5	0.1	-0.5
Non-Hodgkin Lymphoma	7.8	1.6	7.5	-0.7	1.4	-1.8*	0.7	-3.2*
Colon and Rectum	7.6	1.2*	9.9	2.7*	2.1	-0.4*	2.3	1.2*

Rates are per 100,000.

<sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, CDC.

<sup>c</sup> Top 5 cancer sites selected based on 1975-2017 SEER 9 Incidence rates for the age group.

<sup>d</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2017.

- 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 32.18

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rates and Trends for the Top 5 Cancer Sites<sup>c</sup> by Age  
All Races, Males, 1975-2017

	<u>Incidence</u>				<u>Mortality</u>			
	<u>1975-2017</u>		<u>2008-2017</u>		<u>1975-2017</u>		<u>2008-2017</u>	
	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>
<u>Ages 15-19</u>								
All Malignant Cancers	21.6	0.7*	24.2	0.7*	4.7	-2.0*	3.3	-1.7*
Hodgkin Lymphoma	3.3	-0.4*	3.3	-0.4*	0.2	-5.3*	0.0	-5.3*
Testis	3.1	1.0*	3.5	1.0*	0.1	-5.0*	0.1	-2.6*
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	1.6*	2.8	1.6*	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	0.2
<u>Ages 20-24</u>								
All Malignant Cancers	33.9	0.6*	36.8	0.6*	6.3	-1.6*	5.0	-1.3*
Testis	9.1	1.1	10.5	0.5	0.5	-3.4*	0.3	-0.4
Hodgkin Lymphoma	4.9	-0.4*	4.5	-0.4*	0.4	-4.5*	0.2	-4.5*
Melanoma of the Skin	2.7	-0.4	2.5	-3.1*	0.2	-4.5*	0.1	-10.6*
Non-Hodgkin Lymphoma	2.7	1.3*	3.2	1.3*	0.6	-2.5*	0.3	-5.2*
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	50.5	0.5	53.9	-0.7	8.5	-1.5*	6.7	-1.1*
Testis	13.0	1.1	15.3	-0.2	0.6	-2.5*	0.5	0.8
Melanoma of the Skin	5.2	0.0	4.9	0.0	0.5	-3.6*	0.3	-5.9*
Hodgkin Lymphoma	5.0	-0.3	4.7	-0.3	0.6	-4.6*	0.2	-4.6*
Non-Hodgkin Lymphoma	4.4	1.2	4.6	0.5	0.9	-2.1*	0.5	-5.0*
Kaposi sarcoma	3.5	-	1.4	-	-	-	-	-
<u>Ages 30-34</u>								
All Malignant Cancers	71.4	0.9*	73.7	0.9*	13.0	-1.4*	10.0	-0.9*
Testis	13.4	1.8*	15.8	0.7*	0.6	-2.4*	0.4	-0.1
Melanoma of the Skin	8.4	0.2	8.7	0.2	1.0	-2.5*	0.6	-2.7*
Kaposi sarcoma	7.6	-	2.0	-	-	-	-	-
Non-Hodgkin Lymphoma	7.0	1.8*	5.9	-0.9	1.3	-1.5	0.7	-3.1*
Hodgkin Lymphoma	4.3	0.0	4.2	0.0	0.7	-4.5*	0.3	-5.3*
<u>Ages 35-39</u>								
All Malignant Cancers	100.0	0.5	96.9	0.1	22.6	-1.5*	16.9	-0.6*
Melanoma of the Skin	12.2	0.5	12.2	-0.5*	1.5	-2.5*	0.9	-2.1*
Testis	11.3	1.8*	12.6	0.5*	0.5	-2.5*	0.4	-1.0*
Non-Hodgkin Lymphoma	10.5	2.1	9.0	-1.0*	1.9	-1.8*	0.9	-2.7*
Kaposi sarcoma	9.0	-	1.9	-	-	-	-	-
Colon and Rectum	8.0	1.1*	10.4	2.2*	2.3	-0.3	2.5	1.1

Rates are per 100,000.

<sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, CDC.

<sup>c</sup> Top 5 cancer sites selected based on 1975-2017 rates for the age group.

<sup>d</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2017.

- 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 32.19

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rates and Trends for the Top 5 Cancer Sites<sup>c</sup> by Age  
All Races, Females, 1975-2017

	<u>Incidence</u>				<u>Mortality</u>			
	<u>1975-2017</u>		<u>2008-2017</u>		<u>1975-2017</u>		<u>2008-2017</u>	
	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>	Rate	AAPC <sup>d</sup>
<u>Ages 15-19</u>								
All Malignant Cancers	20.6	0.7*	23.5	0.7*	3.2	-1.8*	2.4	-1.8*
Hodgkin Lymphoma	3.6	-0.5*	3.4	-0.5*	0.1	-4.5*	0.0	-5.7*
Thyroid	3.4	2.0*	5.5	2.8	0.0	-	-	-
Brain and Other Nervous System	1.8	0.5	2.0	0.5	0.5	-1.0*	0.4	-1.0*
Melanoma of the Skin	1.8	-0.4	1.5	-4.6*	0.0	-	0.0	-
Ovary	1.5	-0.2	1.5	-0.2	0.1	-3.6*	0.1	-1.1
<u>Ages 20-24</u>								
All Malignant Cancers	36.1	0.5*	40.8	-0.4	4.3	-1.6*	3.3	-3.0*
Thyroid	7.9	2.3*	11.5	2.3*	0.0	-	-	-
Melanoma of the Skin	5.5	0.5	5.8	-3.9*	0.2	-4.2*	0.1	-6.5*
Hodgkin Lymphoma	4.9	0.5	4.6	-0.9*	0.3	-4.8*	0.1	-9.5*
Brain and Other Nervous System	2.0	1.0*	2.2	1.0*	0.5	-0.7*	0.5	-0.7*
Ovary	1.9	-0.4	1.8	-0.4	0.2	-2.0*	0.2	-0.8*
<u>Ages 25-29</u>								
All Malignant Cancers	63.1	0.7*	73.5	1.0*	7.5	-1.4*	5.9	-1.4*
Thyroid	12.6	1.9*	19.8	1.5	0.0	-	0.0	-
Melanoma of the Skin	9.7	0.8*	10.7	-2.8*	0.4	-2.7*	0.2	-2.7*
Breast	8.5	0.5	9.7	2.3*	1.0	-1.6*	0.7	0.4
Cervix Uteri	6.7	-1.3	4.8	1.5	0.7	-1.3*	0.6	-1.3*
Hodgkin Lymphoma	4.6	-0.1	4.1	-0.1	0.4	-4.7*	0.2	-7.8*
<u>Ages 30-34</u>								
All Malignant Cancers	103.8	0.8*	123.2	1.4*	15.0	-1.2*	11.7	0.0
Breast	27.1	0.3*	29.0	0.3*	4.0	-1.4*	2.7	0.4
Thyroid	16.3	2.7*	27.5	2.1*	0.0	-	0.0	-
Melanoma of the Skin	13.2	2.1*	15.5	1.0*	0.7	-2.6*	0.4	-2.6*
Cervix Uteri	11.3	-1.2*	9.3	-1.2*	1.7	-0.8*	1.3	1.7
Colon and Rectum	3.8	1.6*	5.5	3.5*	0.9	-0.2	1.0	1.1*
<u>Ages 35-39</u>								
All Malignant Cancers	169.2	0.8*	190.4	1.0*	29.4	-1.3*	22.4	-0.6
Breast	63.2	0.4*	64.1	0.3*	9.6	-1.4*	6.6	-0.6
Thyroid	19.1	3.2*	32.9	0.6	0.1	-1.0*	0.0	-1.0*
Melanoma of the Skin	16.2	1.9*	18.7	0.9*	1.0	-2.5*	0.6	-2.5*
Cervix Uteri	13.9	-1.2*	12.0	-1.2*	2.8	-1.1	2.3	0.1
Corpus and Uterus, NOS	7.2	1.1*	9.3	2.5*	0.5	-0.3	0.6	3.2*

Rates are per 100,000.

<sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, CDC.

<sup>c</sup> Top 5 cancer sites selected based on 1975-2017 rates for the age group.

<sup>d</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2017.

- 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 32.20

SEER<sup>a</sup> 5-Year Relative Survival for the Top 5 Cancer Sites<sup>b</sup> by Age  
All Races, Both Sexes, 1975-2016

	5-year Relative Survival (Percent)					
	1975-2016	1975-1983	1984-1992	1993-2000	2001-2008	2009-2016
<u>Ages 15-19</u>						
All Malignant Cancers	79.3	69.6	76.9	79.5	83.3	86.7
Hodgkin Lymphoma	92.8	87.5	91.1	94.9	96.4	96.8
Brain and Other Nervous System	74.0	63.2	74.1	77.5	76.6	79.0
Thyroid	99.1	99.1	99.0	99.4	97.9	99.9
Non-Hodgkin Lymphoma	74.6	54.3	66.3	74.3	82.7	88.5
Testis	90.7	79.2	92.0	91.6	94.3	94.6
<u>Ages 20-24</u>						
All Malignant Cancers	82.0	74.7	79.2	82.4	85.5	88.0
Hodgkin Lymphoma	91.3	85.2	90.5	91.4	95.2	96.0
Thyroid	99.7	99.7	99.7	99.2	99.7	99.8
Testis	93.1	84.5	92.0	95.7	96.0	96.8
Melanoma of the Skin	93.5	85.2	92.9	95.2	96.6	97.4
Brain and Other Nervous System	68.8	57.6	64.4	69.9	74.0	79.5
<u>Ages 25-29</u>						
All Malignant Cancers	80.8	76.8	73.0	80.7	85.8	88.2
Thyroid	99.7	99.4	99.7	99.7	99.7	99.5
Melanoma of the Skin	93.7	88.4	91.9	94.5	96.5	96.9
Testis	95.3	89.1	94.6	97.4	97.1	97.2
Hodgkin Lymphoma	90.8	85.6	89.3	92.7	92.8	95.6
Breast	75.6	68.9	69.0	76.5	83.8	82.6
<u>Ages 30-34</u>						
All Malignant Cancers	77.4	73.2	67.8	75.7	84.7	86.9
Breast	78.4	69.6	74.1	78.9	85.0	86.0
Melanoma of the Skin	93.1	86.4	91.3	94.1	96.7	96.0
Thyroid	99.8	99.5	99.5	99.8	99.9	99.8
Testis	95.8	92.0	95.7	95.7	96.7	97.5
Cervix Uteri	85.1	84.0	83.7	86.8	84.9	87.4
<u>Ages 35-39</u>						
All Malignant Cancers	75.3	68.2	65.7	74.6	82.4	84.8
Breast	82.3	75.0	77.5	83.5	87.3	88.1
Melanoma of the Skin	92.9	87.6	90.4	93.4	95.5	96.2
Thyroid	99.6	98.9	99.4	99.2	99.7	99.8
Non-Hodgkin Lymphoma	66.1	65.7	49.9	58.3	77.2	85.8
Colon and Rectum	64.1	55.6	57.0	63.9	70.3	67.9

<sup>a</sup> 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.

<sup>b</sup> Top 5 cancer sites selected based on 1975-2016 SEER 9 Incidence rates for the age group.

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

Table 32.21

SEER<sup>a</sup> 5-Year Relative Survival for the Top 5 Cancer Sites<sup>b</sup> by Age  
All Races, Males, 1975-2016

	5-year Relative Survival (Percent)					
	1975-2016	1975-1983	1984-1992	1993-2000	2001-2008	2009-2016
<u>Ages 15-19</u>						
All Malignant Cancers	75.1	63.7	72.0	74.9	80.8	83.5
Hodgkin Lymphoma	91.8	86.0	90.1	93.5	96.6	95.4
Testis	90.7	79.2	92.0	91.6	94.3	94.6
Brain and Other Nervous System	71.0	59.7	70.5	73.5	76.3	76.1
Non-Hodgkin Lymphoma	73.0	49.6	67.2	70.7	81.0	88.6
Bones and Joints	59.0	42.2	59.9	60.0	67.2	65.0
<u>Ages 20-24</u>						
All Malignant Cancers	77.8	69.5	73.2	78.9	82.6	85.3
Testis	93.1	84.5	92.0	95.7	96.0	96.8
Hodgkin Lymphoma	89.7	83.2	87.7	89.7	95.4	95.6
Melanoma of the Skin	87.5	76.0	85.3	91.3	92.7	95.5
Non-Hodgkin Lymphoma	68.0	56.7	52.8	64.9	80.8	79.9
Brain and Other Nervous System	67.0	54.7	63.0	71.4	74.0	73.8
<u>Ages 25-29</u>						
All Malignant Cancers	74.9	71.5	63.3	75.3	82.1	85.3
Testis	95.3	89.1	94.6	97.4	97.1	97.2
Melanoma of the Skin	89.0	82.5	87.7	90.2	92.9	92.9
Hodgkin Lymphoma	89.0	84.5	85.7	90.7	91.5	95.6
Non-Hodgkin Lymphoma	61.5	59.0	41.7	56.8	75.6	81.3
Kaposi sarcoma	17.7	29.7	7.5	18.9	56.4	64.4
<u>Ages 30-34</u>						
All Malignant Cancers	69.6	68.2	54.9	67.0	81.2	83.8
Testis	95.8	92.0	95.7	95.7	96.7	97.5
Melanoma of the Skin	89.0	79.3	87.0	90.9	94.2	93.7
Kaposi sarcoma	19.7	24.7	7.6	28.9	62.1	68.9
Non-Hodgkin Lymphoma	57.2	69.3	36.5	46.5	76.7	82.6
Hodgkin Lymphoma	87.8	79.8	83.9	88.3	93.7	92.5
<u>Ages 35-39</u>						
All Malignant Cancers	65.6	59.7	50.9	64.7	76.7	80.3
Melanoma of the Skin	88.9	82.1	85.6	89.9	92.2	94.8
Testis	96.3	91.9	95.7	97.3	96.9	97.0
Non-Hodgkin Lymphoma	58.7	62.2	41.7	50.8	71.4	82.1
Kaposi sarcoma	20.4	14.1	7.0	29.0	65.9	77.5
Colon and Rectum	62.8	54.1	54.5	62.2	70.1	66.0

<sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

<sup>b</sup> Top 5 cancer sites selected based on 1975-2016 SEER 9 Incidence rates for the age group.

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

Table 32.22

SEER<sup>a</sup> 5-Year Relative Survival for the Top 5 Cancer Sites<sup>b</sup> by Age  
All Races, Females, 1975-2016

	5-year Relative Survival (Percent)					
	1975-2016	1975-1983	1984-1992	1993-2000	2001-2008	2009-2016
<u>Ages 15-19</u>						
All Malignant Cancers	83.8	76.1	82.2	84.4	86.2	89.9
Hodgkin Lymphoma	93.8	89.0	92.0	96.0	96.1	98.2
Thyroid	99.4	99.1	99.6	99.2	98.8	99.8
Brain and Other Nervous System	78.2	68.2	79.2	83.0	77.1	82.3
Melanoma of the Skin	95.7	87.9	95.8	95.2	99.5	98.8
Ovary	88.4	80.1	89.6	89.7	93.2	90.4
<u>Ages 20-24</u>						
All Malignant Cancers	86.0	80.0	85.4	85.8	88.1	90.4
Thyroid	99.7	99.4	99.6	99.6	99.9	99.7
Melanoma of the Skin	96.6	91.4	96.9	97.1	98.2	98.3
Hodgkin Lymphoma	92.9	87.7	93.0	93.2	94.9	96.3
Brain and Other Nervous System	71.0	61.9	66.2	67.5	74.0	86.4
Ovary	84.2	81.2	84.3	83.2	83.9	89.9
<u>Ages 25-29</u>						
All Malignant Cancers	85.5	80.7	82.3	85.3	88.7	90.4
Thyroid	99.7	99.5	99.8	99.8	99.8	99.4
Melanoma of the Skin	96.3	92.4	94.6	97.0	98.2	98.8
Breast	75.6	68.9	68.9	76.7	84.1	82.8
Cervix Uteri	87.2	89.0	86.5	86.8	87.1	85.8
Hodgkin Lymphoma	92.8	86.8	93.2	94.9	94.2	95.5
<u>Ages 30-34</u>						
All Malignant Cancers	82.9	76.1	79.3	82.5	86.8	88.8
Breast	78.4	69.5	74.1	78.9	84.9	86.1
Thyroid	99.8	99.3	99.7	99.9	99.7	99.8
Melanoma of the Skin	95.8	91.8	94.4	96.1	98.2	97.4
Cervix Uteri	85.1	84.0	83.7	86.8	84.9	87.4
Colon and Rectum	66.5	62.8	59.6	65.3	67.5	73.9
<u>Ages 35-39</u>						
All Malignant Cancers	81.1	72.7	76.5	81.1	85.6	87.0
Breast	82.3	75.0	77.5	83.5	87.3	88.1
Thyroid	99.8	99.1	99.5	99.5	99.8	99.9
Melanoma of the Skin	96.0	92.7	94.6	96.2	97.7	97.2
Cervix Uteri	81.7	79.6	79.7	84.2	83.8	80.9
Corpus and Uterus, NOS	90.3	91.4	90.3	90.5	89.4	90.0

<sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

<sup>b</sup> Top 5 cancer sites selected based on 1975-2016 SEER 9 Incidence rates for the age group.

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