

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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Worldwide web: (<https://seer.cancer.gov/tools/conversion/>) Accessed May 28, 2008.
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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, 2012-2016

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
All Sites Combined	17.4	16.0	56.6	93.4	1062.3	884.2
1. LEUKEMIAS	5.5	4.8	4.0	2.9	36.0	20.5
1.1 Acute lymphoid leukemia	4.3	3.8	1.3	0.7	1.3	1.0
1.2 Acute myeloid leukemia	0.8	0.8	1.3	1.3	11.2	7.2
1.3 Chronic myeloid leukemia	0.1	0.1	0.9	0.6	4.9	2.8
1.4 Other and unspecified leukemias	0.2	0.1	0.5	0.3	18.6	9.5
2. LYMPHOMAS	2.2	1.2	8.6	7.0	54.3	36.8
2.1 Non-Hodgkin Lymphoma	1.6	0.7	4.9	3.4	50.7	34.5
2.2 Hodgkin Lymphoma	0.7	0.5	3.7	3.5	3.6	2.3
3. CNS, INTRACRANIAL, INTRASPINAL	3.5	3.1	3.2	2.6	12.9	8.7
3.1 Astrocytoma	1.8	1.8	1.8	1.4	10.2	6.6
3.1.1 Specified low-grade astrocytic tumors	1.3	1.3	0.4	0.4	0.2	0.2
3.1.2 Glioblastoma and anaplastic astrocytoma	0.3	0.3	1.0	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	0.9	0.7	1.4	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	0.1	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	0.8	1.5	1.0
4.1 Osteosarcoma	0.4	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	0.3	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	12.8	9.3
5.1 Fibromatous neoplasms	0.2	0.2	0.7	0.7	2.5	1.5
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	10.2	7.6
5.3.1 Specified soft tissue sarcoma	0.2	0.2	2.0	1.2	7.1	5.6
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.2	0.2	1.1	1.2	5.6	5.4
5.3.1.2 Kaposi sarcoma	-	-	0.9	0.0	1.5	0.2
5.3.2 Unspecified soft tissue sarcoma	0.1	0.1	0.4	0.3	3.1	2.0
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	0.5	0.7	11.6	1.0	4.2	0.2
6.1 Germ cell and trophoblastic neoplasms of gonads	0.1	0.4	11.0	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, 2012-2016

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
7. MELANOMA AND SKIN CARCINOMAS	0.2	0.2	5.0	8.5	69.2	37.8
7.1 Melanoma	0.2	0.2	4.9	8.4	64.9	35.7
7.2 Skin carcinomas	-	-	0.1	0.1	4.3	2.2
8. CARCINOMAS (excluding skin)	0.6	1.1	18.7	66.3	807.1	720.4
8.1 Thyroid carcinoma	0.2	0.6	4.7	20.9	14.6	36.2
8.2 Other carcinoma of head and neck	0.1	0.1	1.7	1.4	51.2	16.6
8.2.1 Nasopharyngeal carcinoma	0.0	-	0.3	0.2	1.9	0.6
8.2.2 Other sites in lip, oral cavity and pharynx	0.1	0.1	1.2	1.0	35.4	12.6
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	0.2	0.1	14.0	3.4
8.3 Carcinoma of trachea, bronchus, and lung	-	0.0	0.9	1.0	132.9	103.9
8.4 Carcinoma of breast	-	-	0.1	22.1	2.8	274.4
8.5 Carcinoma of genitourinary tract	0.1	0.1	3.8	13.5	380.9	140.1
8.5.1 Carcinoma of kidney	0.0	0.0	2.6	1.8	45.1	21.2
8.5.2 Carcinoma of bladder	-	-	0.8	0.4	79.5	19.5
8.5.3 Carcinoma of gonads	-	-	0.0	1.9	0.0	21.1
8.5.4 Carcinoma of cervix and uterus	-	-	-	9.0	-	66.1
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	0.3	0.4	256.3	12.2
8.6 Carcinoma of gastrointestinal tract	0.2	0.3	7.0	6.8	210.4	136.4
8.6.1 Carcinoma of colon and rectum	0.1	0.2	4.6	4.7	99.6	77.5
8.6.2 Carcinoma of stomach	-	-	0.7	0.8	20.5	10.1
8.6.3 Carcinoma of liver and intrahepatic bile ducts	0.1	0.0	0.5	0.3	29.7	9.9
8.6.4 Carcinoma of pancreas	-	0.0	0.5	0.6	29.9	23.1
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.6	0.5	30.7	15.9
8.7 Carcinoma of other and ill-defined sites, NOS	0.0	0.0	0.4	0.5	14.3	12.7
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	14.1	12.4
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	2.9	3.0	0.9	1.4	28.2	23.4
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	0.0
9.1.2 Neuroblastoma	1.1	1.1	-	0.0	0.0	0.0
9.1.3 Other pediatric and embryonal tumors, NOS	1.0	1.0	0.1	0.0	0.2	0.1
9.2 Other specified neoplasms, NOS	0.1	0.1	0.8	1.3	28.0	23.2
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	0.5	0.4	21.4	13.6
9.2.4 Other specified neoplasms, NOS	-	-	0.2	0.7	6.4	9.1
10. UNSPECIFIED MALIGNANT NEOPLASMS	0.0	-	0.3	0.5	36.1	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, 2012-2016

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
All Sites Combined	18.3	16.7	60.3	98.4	1070.5	911.9
1. LEUKEMIAS	5.9	5.1	4.2	3.0	38.1	21.6
1.1 Acute lymphoid leukemia	4.8	4.2	1.5	0.8	1.4	1.1
1.2 Acute myeloid leukemia	0.8	0.7	1.3	1.3	11.7	7.4
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	19.9	10.3
2. LYMPHOMAS	2.3	1.2	8.7	7.2	57.0	38.9
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	3.9	3.9	3.7	2.4
3. CNS, INTRACRANIAL, INTRASPINAL	3.7	3.3	3.6	2.9	14.2	9.7
3.1 Astrocytoma	1.9	1.9	2.0	1.6	11.4	7.4
3.1.1 Specified low-grade astrocytic tumors	1.4	1.4	0.5	0.4	0.2	0.2
3.1.2 Glioblastoma and anaplastic astrocytoma	0.3	0.3	1.1	0.8	10.6	6.8
3.1.3 Astrocytoma, NOS	0.2	0.2	0.4	0.4	0.6	0.4
3.2 Other glioma	0.6	0.5	1.0	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	0.2	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	0.1	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	1.0	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	0.8	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	0.2	0.5	0.3
5. SOFT TISSUE SARCOMAS	1.1	0.9	2.7	2.2	13.1	9.0
5.1 Fibromatous neoplasms	0.2	0.2	0.5	0.6	2.5	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	2.0	1.4	10.4	7.4
5.3.1 Specified soft tissue sarcoma	0.2	0.2	1.6	1.1	7.2	5.4
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.2	0.2	1.1	1.1	5.9	5.3
5.3.1.2 Kaposi sarcoma	-	-	0.5	-	1.3	0.2
5.3.2 Unspecified soft tissue sarcoma	0.1	0.1	0.4	0.3	3.2	1.9
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	0.5	0.6	13.9	0.9	4.9	0.2
6.1 Germ cell and trophoblastic neoplasms of gonads	0.2	0.4	13.4	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, 2012-2016

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
7. MELANOMA AND SKIN CARCINOMAS	0.2	0.3	6.2	10.8	80.9	45.3
7.1 Melanoma	0.2	0.3	6.1	10.7	76.2	42.9
7.2 Skin carcinomas	-	-	0.1	0.1	4.7	2.3
8. CARCINOMAS (excluding skin)	0.6	1.2	18.8	68.8	797.4	738.2
8.1 Thyroid carcinoma	0.2	0.7	5.1	23.0	15.5	37.4
8.2 Other carcinoma of head and neck	0.1	0.1	1.6	1.3	53.5	17.2
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	38.2	13.4
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	0.2	0.2	14.2	3.5
8.3 Carcinoma of trachea, bronchus, and lung	-	-	0.8	1.0	133.7	110.0
8.4 Carcinoma of breast	-	-	0.1	21.8	2.8	281.7
8.5 Carcinoma of genitourinary tract	0.1	0.1	3.9	14.3	372.9	145.9
8.5.1 Carcinoma of kidney	0.0	0.0	2.7	2.0	46.2	21.8
8.5.2 Carcinoma of bladder	-	-	0.9	0.4	87.2	21.2
8.5.3 Carcinoma of gonads	-	-	0.0	2.1	0.0	22.2
8.5.4 Carcinoma of cervix and uterus	-	-	-	9.4	-	67.6
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	0.3	0.5	239.5	13.0
8.6 Carcinoma of gastrointestinal tract	0.2	0.3	6.9	6.9	204.6	133.1
8.6.1 Carcinoma of colon and rectum	0.2	0.2	4.7	4.9	97.9	77.1
8.6.2 Carcinoma of stomach	-	-	0.7	0.7	18.5	8.8
8.6.3 Carcinoma of liver and intrahepatic bile ducts	0.1	-	0.3	0.3	26.6	8.9
8.6.4 Carcinoma of pancreas	-	-	0.5	0.5	30.3	22.9
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.6	0.4	31.3	15.4
8.7 Carcinoma of other and ill-defined sites, NOS	-	-	0.4	0.4	14.4	12.8
8.7.1 Adrenocortical carcinoma	-	-	0.0	0.1	0.2	0.3
8.7.2 Carcinoma of other and ill-defined sites, NOS	-	-	0.3	0.3	14.2	12.5
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	3.0	3.0	0.8	1.3	27.1	21.1
9.1 Other pediatric and embryonal tumors, NOS	2.9	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	1.2	1.0	-	0.0	-	-
9.1.3 Other pediatric and embryonal tumors, NOS	1.0	1.0	0.1	0.0	0.2	0.1
9.2 Other specified neoplasms, NOS	0.1	0.1	0.7	1.2	26.9	21.0
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	20.3	12.1
9.2.4 Other specified neoplasms, NOS	-	-	0.2	0.6	6.5	8.4
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.3	0.5	36.1	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, 2012-2016

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
All Sites Combined	13.0	12.9	42.9	74.2	1168.4	841.6
1. LEUKEMIAS	3.0	3.0	3.2	2.8	28.1	16.8
1.1 Acute lymphoid leukemia	2.0	2.0	0.7	0.4	0.9	0.7
1.2 Acute myeloid leukemia	0.8	0.8	1.2	1.5	9.1	6.3
1.3 Chronic myeloid leukemia	-	-	0.8	0.6	4.3	2.8
1.4 Other and unspecified leukemias	-	-	0.5	0.3	13.7	6.9
2. LYMPHOMAS	2.0	1.3	9.2	6.9	39.7	28.0
2.1 Non-Hodgkin Lymphoma	1.3	0.8	5.7	3.7	35.8	25.5
2.2 Hodgkin Lymphoma	0.7	0.5	3.6	3.2	3.9	2.5
3. CNS, INTRACRANIAL, INTRASPINAL	2.7	2.5	2.1	1.7	7.7	5.0
3.1 Astrocytoma	1.4	1.4	1.1	0.8	5.6	3.5
3.1.1 Specified low-grade astrocytic tumors	0.9	0.9	0.3	0.3	0.2	0.1
3.1.2 Glioblastoma and anaplastic astrocytoma	0.4	0.3	0.6	0.4	5.1	3.2
3.1.3 Astrocytoma, NOS	-	0.2	0.2	0.2	0.4	0.2
3.2 Other glioma	0.5	0.5	0.6	0.4	0.8	0.5
3.3 Ependymoma	-	-	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	0.2	-	-	-	-
3.4.2 Supratentorial PNET	-	-	-	-	-	-
3.5 Other specified intracranial and intraspinal neoplasms	-	-	-	-	0.4	0.3
3.6 Unspecified intracranial and intraspinal neoplasms	-	-	-	-	0.7	0.4
4. OSSEOUS & CHONDROMATOUS NEOPLASMS	0.6	0.8	0.9	0.6	1.1	0.7
4.1 Osteosarcoma	0.4	0.6	0.5	0.3	0.3	0.3
4.2 Chondrosarcoma	-	-	0.2	0.2	0.5	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	1.0	6.3	3.2	11.1	12.0
5.1 Fibromatous neoplasms	0.3	0.2	1.3	1.0	2.0	1.7
5.2 Rhabdomyosarcoma	0.6	0.5	0.3	0.2	0.2	0.4
5.3 Other specified soft tissue sarcoma	0.4	0.2	4.7	2.0	8.9	9.9
5.3.1 Specified soft tissue sarcoma	0.2	-	4.2	1.6	6.7	7.5
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.2	-	1.0	1.4	4.4	7.2
5.3.1.2 Kaposi sarcoma	-	-	3.2	0.2	2.3	0.3
5.3.2 Unspecified soft tissue sarcoma	-	-	0.5	0.4	2.2	2.4
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	0.3	0.7	2.8	1.1	1.5	0.3
6.1 Germ cell and trophoblastic neoplasms of gonads	-	0.3	2.5	0.7	1.3	0.1
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	-	0.3	0.3	0.4	0.1	0.2
6.2.1 Intracranial sites	-	-	0.1	-	-	-
6.2.2 Other nongonadal sites	-	0.2	0.2	0.4	0.1	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, 2012-2016

Site	Ages 0-14		Ages 15-39		Ages 40+	
	Male	Female	Male	Female	Male	Female
7. MELANOMA AND SKIN CARCINOMAS	-	-	0.3	0.5	4.0	3.3
7.1 Melanoma	-	-	0.2	0.3	2.8	2.4
7.2 Skin carcinomas	-	-	-	0.1	1.2	0.9
8. CARCINOMAS (excluding skin)	0.5	0.5	16.5	54.8	983.9	705.2
8.1 Thyroid carcinoma	-	-	1.5	9.3	7.9	25.3
8.2 Other carcinoma of head and neck	-	-	1.4	1.1	48.1	14.4
8.2.1 Nasopharyngeal carcinoma	-	-	0.3	0.2	2.1	0.6
8.2.2 Other sites in lip, oral cavity and pharynx	-	-	0.8	0.9	27.1	9.5
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	0.3	-	19.0	4.3
8.3 Carcinoma of trachea, bronchus, and lung	-	-	1.4	1.0	156.0	95.8
8.4 Carcinoma of breast	-	-	-	24.2	4.1	263.9
8.5 Carcinoma of genitourinary tract	-	-	3.8	11.1	499.5	128.2
8.5.1 Carcinoma of kidney	-	-	2.9	1.7	51.2	24.6
8.5.2 Carcinoma of bladder	-	-	0.5	0.2	44.1	14.5
8.5.3 Carcinoma of gonads	-	-	-	1.2	-	15.9
8.5.4 Carcinoma of cervix and uterus	-	-	-	7.4	-	63.4
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	0.5	0.6	404.2	9.8
8.6 Carcinoma of gastrointestinal tract	-	-	7.7	7.2	252.5	163.5
8.6.1 Carcinoma of colon and rectum	-	-	4.9	4.7	119.0	88.7
8.6.2 Carcinoma of stomach	-	-	0.6	0.7	27.8	13.9
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	0.7	34.1	28.4
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.7	0.8	32.6	21.1
8.7 Carcinoma of other and ill-defined sites, NOS	-	-	0.6	0.8	15.8	14.1
8.7.1 Adrenocortical carcinoma	-	-	-	-	0.2	0.2
8.7.2 Carcinoma of other and ill-defined sites, NOS	-	-	0.6	0.8	15.6	13.9
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	2.7	3.1	1.2	1.9	45.5	43.8
9.1 Other pediatric and embryonal tumors, NOS	2.6	3.0	-	-	0.2	0.2
9.1.1 Wilms tumor	0.8	1.1	-	-	-	-
9.1.2 Neuroblastoma	0.9	0.9	-	-	-	-
9.1.3 Other pediatric and embryonal tumors, NOS	0.9	1.0	-	-	0.2	0.1
9.2 Other specified neoplasms, NOS	-	-	1.1	1.8	45.3	43.7
9.2.1 Paraganglioma and glomus tumors	-	-	-	-	0.1	0.2
9.2.2 Other specified gonadal tumors	-	-	-	0.3	-	0.9
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	-	-	0.8	0.6	38.1	27.6
9.2.4 Other specified neoplasms, NOS	-	-	0.3	0.8	7.0	14.9
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.3	0.7	45.9	26.4

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, 2012-2016

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	24.5	23.9	36.0	40.1	51.3	71.0	70.9	122.3	93.8	191.8
1. LEUKEMIAS	3.8	2.4	3.2	2.5	3.4	2.6	4.2	3.2	5.1	3.9
1.1 Acute lymphoid leukemia	2.4	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	0.9	1.1	1.2	1.2	1.3	1.5	1.5	1.6	1.7
1.3 Chronic myeloid leukemia	0.3	0.2	0.6	0.4	0.9	0.6	1.2	0.8	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	1.2	0.7
2. LYMPHOMAS	6.0	4.7	7.2	6.7	8.1	7.1	9.6	7.5	11.7	8.6
2.1 Non-Hodgkin Lymphoma	2.7	1.4	3.2	2.2	4.0	2.9	5.6	4.2	8.5	5.9
2.2 Hodgkin Lymphoma	3.3	3.2	4.0	4.6	4.0	4.1	3.9	3.3	3.2	2.8
3. CNS, INTRACRANIAL, INTRASPINAL	2.4	2.1	2.3	1.9	3.3	2.5	3.9	2.9	4.2	3.3
3.1 Astrocytoma	1.5	1.2	1.3	1.0	1.9	1.3	2.2	1.5	2.3	1.9
3.1.1 Specified low-grade astrocytic tumors	0.9	0.6	0.4	0.3	0.4	0.3	0.4	0.2	0.3	0.3
3.1.2 Glioblastoma and anaplastic astrocytoma	0.4	0.3	0.7	0.4	1.0	0.7	1.3	0.9	1.6	1.2
3.1.3 Astrocytoma, NOS	0.2	0.2	0.3	0.2	0.5	0.3	0.5	0.4	0.4	0.3
3.2 Other glioma	0.4	0.4	0.5	0.6	0.9	0.7	1.1	1.0	1.3	0.9
3.3 Ependymoma	0.2	0.2	0.2	0.2	0.2	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	0.1	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	-	-	-	-	-	-	-	-	-	-
3.6 Unspecified intracranial and intraspinal neoplasms	-	-	-	-	-	-	0.1	-	0.1	-
4. OSSEOUS & CHONDROMATOUS NEOPLASMS	2.1	1.3	1.1	0.7	0.8	0.8	0.8	0.6	0.8	0.8
4.1 Osteosarcoma	1.1	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2
4.2 Chondrosarcoma	0.1	-	0.2	0.1	0.2	0.2	0.3	0.2	0.3	0.3
4.3 Ewing tumor	0.8	0.4	0.5	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	0.2	0.1	0.2	0.2
5. SOFT TISSUE SARCOMAS	1.5	1.4	2.2	1.7	3.4	2.0	4.7	2.9	4.5	3.7
5.1 Fibromatous neoplasms	0.3	0.2	0.4	0.5	0.7	0.8	1.0	1.0	0.9	1.0
5.2 Rhabdomyosarcoma	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	-
5.3 Other specified soft tissue sarcoma	0.9	0.9	1.6	1.1	2.6	1.1	3.5	1.8	3.4	2.6
5.3.1 Specified soft tissue sarcoma	0.6	0.7	1.2	0.8	2.2	0.8	3.1	1.4	2.9	2.0
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.6	0.7	0.8	0.8	1.0	0.8	1.5	1.3	1.6	2.0
5.3.1.2 Kaposi sarcoma	-	-	0.4	-	1.2	-	1.6	-	1.3	-
5.3.2 Unspecified soft tissue sarcoma	0.3	0.2	0.4	0.2	0.4	0.3	0.4	0.4	0.5	0.5
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	4.5	1.1	11.0	1.2	15.3	1.1	15.2	1.0	12.2	0.7
6.1 Germ cell and trophoblastic neoplasms of gonads	3.7	1.0	10.3	0.9	14.7	0.7	14.7	0.6	12.0	0.3
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	0.7	0.2	0.7	0.3	0.5	0.4	0.5	0.4	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	0.1	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, 2012-2016

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	1.9	4.5	4.0	8.5	7.2	12.7	10.0	14.5
7.1 Melanoma	0.8	1.2	1.9	4.4	3.9	8.5	7.1	12.5	9.8	14.4
7.2 Skin carcinomas	-	-	-	-	-	-	0.1	0.2	0.2	0.2
8. CARCINOMAS (excluding skin)	3.0	8.9	6.6	20.1	12.5	45.1	24.0	89.3	42.8	152.2
8.1 Thyroid carcinoma	1.0	5.9	2.6	12.2	4.2	19.9	6.3	28.9	8.7	35.5
8.2 Other carcinoma of head and neck	0.5	0.4	0.7	0.7	1.1	1.1	2.2	1.7	3.9	2.6
8.2.1 Nasopharyngeal carcinoma	0.2	-	0.2	0.1	0.2	0.1	0.3	0.2	0.6	0.4
8.2.2 Other sites in lip, oral cavity and pharynx	0.3	0.4	0.4	0.5	0.8	0.9	1.6	1.4	2.6	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	1.0	1.2	2.4	2.7
8.4 Carcinoma of breast	-	-	-	1.5	-	9.7	-	28.6	0.2	62.9
8.5 Carcinoma of genitourinary tract	0.3	0.7	0.8	2.6	1.9	9.2	4.9	19.8	10.0	31.8
8.5.1 Carcinoma of kidney	0.2	0.2	0.4	0.5	1.3	1.1	3.5	2.6	6.9	4.4
8.5.2 Carcinoma of bladder	0.1	-	0.3	0.1	0.5	0.2	1.0	0.5	2.0	0.8
8.5.3 Carcinoma of gonads	-	0.3	-	0.7	-	1.5	-	2.6	-	4.0
8.5.4 Carcinoma of cervix and uterus	-	-	-	1.2	-	6.2	-	13.6	-	21.3
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	-	-	0.1	0.2	0.3	0.6	1.0	1.2
8.6 Carcinoma of gastrointestinal tract	1.0	1.6	2.2	2.6	4.4	4.3	9.0	8.5	16.8	15.7
8.6.1 Carcinoma of colon and rectum	0.8	1.2	1.5	1.8	3.0	2.9	5.9	5.9	10.7	10.7
8.6.2 Carcinoma of stomach	-	-	0.2	0.3	0.4	0.5	1.0	1.0	1.8	1.9
8.6.3 Carcinoma of liver and intrahepatic bile ducts	0.1	0.1	0.2	0.2	0.4	0.2	0.6	0.4	1.1	0.6
8.6.4 Carcinoma of pancreas	-	0.2	0.1	0.2	0.1	0.4	0.7	0.7	1.4	1.2
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.2	0.2	0.4	0.3	0.7	0.6	1.7	1.3
8.7 Carcinoma of other and ill-defined sites, NOS	0.1	0.1	0.2	0.2	0.3	0.4	0.5	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	0.5	0.5	0.9	1.0	1.6	2.0	3.0
9.1 Other pediatric and embryonal tumors, NOS	0.1	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	-	-	0.1	-	-	-	-	-	-	-
9.2 Other specified neoplasms, NOS	0.2	0.4	0.3	0.5	0.4	0.9	1.0	1.6	1.9	2.9
9.2.1 Paraganglioma and glomus tumors	-	-	-	-	-	-	-	-	-	0.1
9.2.2 Other specified gonadal tumors	-	0.2	-	0.1	-	0.2	-	0.2	-	0.3
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	0.1	-	0.1	0.1	0.2	0.2	0.6	0.4	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	0.5	1.5
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.1	0.3	0.2	0.4	0.4	0.6	0.6	1.2

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> 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, 2012-2016

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	26.3	25.7	39.5	43.8	56.0	76.2	75.6	129.0	97.8	199.3
1. LEUKEMIAS	4.1	2.5	3.5	2.5	3.4	2.6	4.3	3.2	5.2	3.9
1.1 Acute lymphoid leukemia	2.7	1.3	1.6	0.7	1.1	0.6	0.9	0.6	1.0	0.7
1.2 Acute myeloid leukemia	1.0	0.9	1.1	1.2	1.2	1.2	1.6	1.4	1.7	1.6
1.3 Chronic myeloid leukemia	0.3	0.2	0.6	0.4	0.8	0.6	1.2	0.9	1.3	1.0
1.4 Other and unspecified leukemias	0.2	0.1	0.2	0.2	0.3	0.2	0.6	0.3	1.2	0.7
2. LYMPHOMAS	6.2	5.1	7.4	7.2	8.2	7.3	9.6	7.6	11.6	8.7
2.1 Non-Hodgkin Lymphoma	2.6	1.4	3.1	2.1	3.9	2.8	5.4	4.1	8.3	5.8
2.2 Hodgkin Lymphoma	3.6	3.6	4.3	5.0	4.4	4.6	4.2	3.5	3.3	2.9
3. CNS, INTRACRANIAL, INTRASPINAL	2.6	2.3	2.6	2.1	3.7	2.8	4.3	3.3	4.5	3.7
3.1 Astrocytoma	1.6	1.3	1.5	1.1	2.1	1.5	2.4	1.8	2.5	2.1
3.1.1 Specified low-grade astrocytic tumors	0.9	0.7	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3
3.1.2 Glioblastoma and anaplastic astrocytoma	0.4	0.4	0.7	0.5	1.1	0.9	1.4	1.0	1.7	1.3
3.1.3 Astrocytoma, NOS	0.3	0.3	0.4	0.3	0.5	0.3	0.5	0.4	0.5	0.4
3.2 Other glioma	0.4	0.5	0.6	0.6	0.9	0.9	1.3	1.1	1.4	1.1
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	0.1	0.1	-
3.4.1 Medulloblastoma	0.2	0.1	0.1	0.1	0.2	0.1	0.2	-	-	-
3.4.2 Supratentorial PNET	0.1	-	-	-	0.1	-	-	-	-	-
3.5 Other specified intracranial and intraspinal neoplasms	-	-	-	-	-	-	-	-	-	-
3.6 Unspecified intracranial and intraspinal neoplasms	-	-	-	-	-	-	0.1	-	-	-
4. OSSEOUS & CHONDROMATOUS NEOPLASMS	2.3	1.4	1.2	0.8	0.8	0.8	0.9	0.7	0.9	0.8
4.1 Osteosarcoma	1.2	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2
4.2 Chondrosarcoma	-	-	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.3
4.3 Ewing tumor	0.9	0.5	0.6	0.2	0.3	0.2	0.2	-	0.1	0.1
4.4 Other specified and unspecified bone tumors	0.1	0.2	-	0.1	0.1	0.1	0.2	0.1	0.2	0.2
5. SOFT TISSUE SARCOMAS	1.5	1.4	1.7	1.6	2.6	1.9	3.8	2.6	4.0	3.3
5.1 Fibromatous neoplasms	0.2	0.2	0.3	0.4	0.5	0.7	0.8	0.9	0.8	0.8
5.2 Rhabdomyosarcoma	0.3	0.3	0.1	0.2	0.1	-	0.1	-	0.2	-
5.3 Other specified soft tissue sarcoma	0.9	0.9	1.3	1.1	2.0	1.1	2.8	1.7	3.0	2.3
5.3.1 Specified soft tissue sarcoma	0.6	0.7	0.9	0.9	1.7	0.8	2.4	1.3	2.5	1.9
5.3.1.1 Specified (excluding Kaposi sarcoma)	0.6	0.7	0.7	0.9	1.1	0.8	1.4	1.2	1.6	1.8
5.3.1.2 Kaposi sarcoma	-	-	0.2	-	0.6	-	1.0	-	0.9	-
5.3.2 Unspecified soft tissue sarcoma	0.3	0.2	0.4	0.2	0.3	0.3	0.4	0.4	0.6	0.5
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	5.3	1.0	13.3	1.1	18.4	1.1	18.2	0.9	14.5	0.6
6.1 Germ cell and trophoblastic neoplasms of gonads	4.6	0.9	12.6	0.9	17.9	0.7	17.7	0.5	14.3	0.3
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	0.7	0.2	0.7	0.2	0.5	0.4	0.6	0.4	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	0.3	0.5	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, 2012-2016

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	1.0	1.5	2.3	5.7	5.0	10.9	9.0	16.2	12.4	18.4
7.1 Melanoma	1.0	1.5	2.3	5.7	4.9	10.9	8.9	16.0	12.2	18.3
7.2 Skin carcinomas	-	-	-	-	-	-	0.1	0.1	0.2	0.1
8. CARCINOMAS (excluding skin)	3.1	9.9	7.0	22.0	13.2	47.4	24.1	92.3	42.3	156.1
8.1 Thyroid carcinoma	1.1	6.7	2.9	13.9	4.8	22.1	6.8	31.5	9.1	38.4
8.2 Other carcinoma of head and neck	0.4	0.4	0.6	0.7	1.0	1.1	2.1	1.6	3.6	2.5
8.2.1 Nasopharyngeal carcinoma	0.1	-	-	-	-	-	0.1	-	0.3	0.1
8.2.2 Other sites in lip, oral cavity and pharynx	0.2	0.4	0.4	0.5	0.9	0.9	1.7	1.3	2.7	2.0
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	-	-	-	-	0.3	0.2	0.6	0.4
8.3 Carcinoma of trachea, bronchus, and lung	-	0.2	0.2	0.3	0.5	0.6	0.8	1.1	2.3	2.7
8.4 Carcinoma of breast	-	-	-	1.5	-	9.5	-	28.1	0.2	62.4
8.5 Carcinoma of genitourinary tract	0.3	0.7	0.8	2.7	2.1	9.4	5.2	21.1	10.1	33.9
8.5.1 Carcinoma of kidney	0.2	0.2	0.4	0.5	1.3	1.1	3.7	2.8	7.0	4.8
8.5.2 Carcinoma of bladder	-	-	0.3	0.1	0.6	0.2	1.2	0.5	2.2	0.9
8.5.3 Carcinoma of gonads	-	0.4	-	0.8	-	1.6	-	2.8	-	4.3
8.5.4 Carcinoma of cervix and uterus	-	-	-	1.2	-	6.3	-	14.3	-	22.5
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	-	-	-	0.2	0.3	0.6	0.8	1.3
8.6 Carcinoma of gastrointestinal tract	1.2	1.8	2.2	2.7	4.5	4.4	8.6	8.5	16.2	15.3
8.6.1 Carcinoma of colon and rectum	0.9	1.4	1.6	2.0	3.2	3.1	6.0	6.1	10.7	10.8
8.6.2 Carcinoma of stomach	-	-	0.2	0.2	0.4	0.4	1.0	0.9	1.8	1.7
8.6.3 Carcinoma of liver and intrahepatic bile ducts	0.1	0.2	0.2	0.2	0.4	0.2	0.4	0.3	0.6	0.5
8.6.4 Carcinoma of pancreas	-	0.2	0.1	0.2	0.2	0.4	0.6	0.6	1.4	1.2
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	0.1	0.1	0.4	0.3	0.7	0.6	1.8	1.1
8.7 Carcinoma of other and ill-defined sites, NOS	-	-	0.2	0.2	0.3	0.3	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	0.4	0.4	0.7	0.8
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	0.3	0.6	0.4	0.5	0.5	1.0	0.9	1.6	1.8	2.7
9.1 Other pediatric and embryonal tumors, NOS	0.1	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	0.9	0.8	1.5	1.7	2.6
9.2.1 Paraganglioma and glomus tumors	-	-	-	-	-	-	-	-	-	-
9.2.2 Other specified gonadal tumors	-	0.1	-	-	-	0.2	-	0.2	-	0.3
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	-	-	0.1	-	0.2	0.2	0.5	0.4	1.1	0.9
9.2.4 Other specified neoplasms, NOS <sup>c</sup>	-	-	-	0.2	0.2	0.5	0.2	0.9	0.5	1.4
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	0.1	0.2	0.2	0.4	0.4	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 32.6  
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, 2012-2016

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	17.1	16.3	21.7	25.4	34.7	50.6	54.2	95.7	79.9	166.2
1. LEUKEMIAS	2.5	1.5	2.2	2.6	2.8	2.4	3.3	3.3	4.8	4.2
1.1 Acute lymphoid leukemia	1.2	-	0.6	0.5	-	-	-	-	0.7	-
1.2 Acute myeloid leukemia	0.7	0.8	1.1	1.4	1.0	1.2	1.5	1.9	1.6	2.0
1.3 Chronic myeloid leukemia	-	-	-	-	1.0	-	0.9	0.8	1.3	1.0
1.4 Other and unspecified leukemias	-	-	-	-	-	-	-	-	1.1	0.7
2. LYMPHOMAS	5.5	3.6	6.5	5.4	8.7	6.6	10.6	8.2	14.0	10.0
2.1 Non-Hodgkin Lymphoma	2.8	1.2	3.5	2.0	4.8	3.4	6.7	4.7	9.8	6.6
2.2 Hodgkin Lymphoma	2.8	2.4	3.0	3.4	3.9	3.2	3.9	3.5	4.2	3.4
3. CNS, INTRACRANIAL, INTRASPINAL	2.1	2.0	1.1	1.3	2.1	1.3	2.1	1.8	2.9	1.9
3.1 Astrocytoma	1.2	1.0	0.7	0.5	1.0	0.6	1.3	0.9	1.4	1.0
3.1.1 Specified low-grade astrocytic tumors	0.8	0.7	-	-	-	-	-	-	-	-
3.1.2 Glioblastoma and anaplastic astrocytoma	-	-	0.5	-	-	-	0.7	-	1.0	0.7
3.1.3 Astrocytoma, NOS	-	-	-	-	-	-	-	-	-	-
3.2 Other glioma	-	-	-	-	0.7	-	-	0.7	0.9	-
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	0.9	0.8	-	0.6	0.7	-	0.6	0.8	-
4.1 Osteosarcoma	1.2	0.7	0.5	-	-	-	-	-	-	-
4.2 Chondrosarcoma	-	-	-	-	-	-	-	-	-	-
4.3 Ewing tumor	-	-	-	-	-	-	-	-	-	-
4.4 Other specified and unspecified bone tumors	-	-	-	-	-	-	-	-	-	-
5. SOFT TISSUE SARCOMAS	1.8	1.7	4.4	1.9	7.6	2.4	9.8	4.0	7.7	5.5
5.1 Fibromatous neoplasms	0.5	-	0.8	0.8	1.6	1.0	2.0	1.3	1.7	1.5
5.2 Rhabdomyosarcoma	0.5	-	-	-	-	-	-	-	-	-
5.3 Other specified soft tissue sarcoma	0.8	1.0	3.3	0.9	5.9	1.3	7.7	2.6	5.8	3.8
5.3.1 Specified soft tissue sarcoma	-	0.8	2.7	0.6	5.5	0.9	7.2	2.2	5.2	3.1
5.3.1.1 Specified (excluding Kaposi sarcoma)	-	0.8	0.9	0.6	1.0	0.9	1.6	1.7	1.2	2.8
5.3.1.2 Kaposi sarcoma	-	-	1.8	-	4.6	-	5.5	-	4.0	-
5.3.2 Unspecified soft tissue sarcoma	-	-	0.5	-	-	-	-	-	-	0.7
6. GERM CELL AND TROPHOBLASTIC NEOPLASMS	0.7	1.6	2.0	1.1	3.2	1.2	4.2	1.3	3.6	0.7
6.1 Germ cell and trophoblastic neoplasms of gonads	-	1.3	1.8	0.7	2.9	0.7	3.9	0.7	3.4	-
6.2 Germ cell and trophoblastic neoplasms of nongonadal sites	-	-	-	-	-	-	-	-	-	-
6.2.1 Intracranial sites	-	-	-	-	-	-	-	-	-	-
6.2.2 Other nongonadal sites	-	-	-	-	-	-	-	-	-	-

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, 2012-2016

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	0.8	1.0
7.1 Melanoma	-	-	-	-	-	-	-	-	-	0.7
7.2 Skin carcinomas	-	-	-	-	-	-	-	-	-	-
8. CARCINOMAS (excluding skin)	2.1	4.3	4.2	11.4	8.9	34.2	21.1	73.1	41.8	135.9
8.1 Thyroid carcinoma	-	2.1	0.6	3.5	0.9	8.8	1.9	12.1	3.5	18.6
8.2 Other carcinoma of head and neck	-	-	0.6	0.5	1.0	0.8	1.3	1.6	3.3	2.2
8.2.1 Nasopharyngeal carcinoma	-	-	-	-	-	-	-	-	-	-
8.2.2 Other sites in lip, oral cavity and pharynx	-	-	-	-	-	0.8	0.7	1.2	2.0	1.6
8.2.3 Nasal cavity, middle ear, sinuses, larynx, other ill-defined head/neck	-	-	-	-	-	-	-	-	1.0	-
8.3 Carcinoma of trachea, bronchus, and lung	-	-	0.5	-	0.6	-	1.8	1.2	3.4	2.5
8.4 Carcinoma of breast	-	-	-	2.0	-	11.4	-	31.9	-	67.5
8.5 Carcinoma of genitourinary tract	-	0.6	0.8	2.7	1.8	8.2	4.2	16.2	10.8	25.4
8.5.1 Carcinoma of kidney	-	-	0.6	0.7	1.6	1.1	3.4	2.1	7.6	3.8
8.5.2 Carcinoma of bladder	-	-	-	-	-	-	-	-	1.3	-
8.5.3 Carcinoma of gonads	-	-	-	0.5	-	0.6	-	1.7	-	2.8
8.5.4 Carcinoma of cervix and uterus	-	-	-	1.3	-	5.9	-	11.6	-	16.6
8.5.5 Carcinoma of other and ill-defined sites, genitourinary tract	-	-	-	-	-	-	-	0.6	1.9	1.7
8.6 Carcinoma of gastrointestinal tract	0.7	0.7	1.6	2.3	4.0	4.1	10.8	9.1	19.0	17.8
8.6.1 Carcinoma of colon and rectum	0.5	-	1.0	1.3	2.7	2.6	7.0	6.3	11.9	11.4
8.6.2 Carcinoma of stomach	-	-	-	-	-	-	1.1	0.7	1.5	1.7
8.6.3 Carcinoma of liver and intrahepatic bile ducts	-	-	-	-	0.6	-	1.2	-	2.1	0.8
8.6.4 Carcinoma of pancreas	-	-	-	-	-	0.6	0.8	0.9	1.6	1.6
8.6.5 Carcinoma of other and ill-defined sites, gastrointestinal tract	-	-	-	-	-	-	0.7	0.8	2.0	2.3
8.7 Carcinoma of other and ill-defined sites, NOS	-	-	-	-	-	0.6	0.9	1.0	1.3	1.9
8.7.1 Adrenocortical carcinoma	-	-	-	-	-	-	-	-	-	-
8.7.2 Carcinoma of other and ill-defined sites, NOS	-	-	-	-	-	0.5	0.9	0.9	1.3	1.8
9. MISCELLANEOUS SPECIFIED NEOPLASMS, NOS	-	0.6	-	0.7	-	1.1	1.8	2.0	2.8	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	-	0.9	1.7	2.0	2.8	4.7
9.2.1 Paraganglioma and glomus tumors	-	-	-	-	-	-	-	-	-	-
9.2.2 Other specified gonadal tumors	-	-	-	-	-	-	-	-	-	0.7
9.2.3 Myeloma, mast cell, miscellaneous lymphoreticular neoplasms, NOS	-	-	-	-	-	-	1.1	0.9	2.1	1.8
9.2.4 Other specified neoplasms, NOS <sup>c</sup>	-	-	-	-	-	-	-	0.7	-	2.0
10. UNSPECIFIED MALIGNANT NEOPLASMS	-	-	-	0.5	-	-	-	0.9	0.8	1.6

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	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	16,354	21.0	0.7*	4,709	23.8	0.7*
1. Leukemias	1,949	2.5	0.9*	558	2.8	0.9*
2. Lymphomas	3,999	5.1	0.2	1,087	5.5	0.2
3. CNS, intracranial, intraspinal	1,582	2.0	0.6*	441	2.2	0.6*
4. Osseous & chondromatous neoplasms	1,254	1.6	0.5*	338	1.7	0.5*
5. Soft tissue sarcomas	1,163	1.5	0.2	286	1.4	0.2
6. Germ cell and trophoblastic neoplasms	1,944	2.5	0.7*	542	2.7	0.7*
7. Melanoma and skin carcinomas	1,171	1.5	0.0	283	1.4	-3.3*
8. Carcinomas (excluding skin)	2,967	3.8	2.1*	1,082	5.5	6.1*
9. Miscellaneous specified neoplasms, NOS	264	0.3	0.7	84	0.4	0.7
10. Unspecified malignant neoplasms	61	0.1	-	-	-	-

  

Males	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	8,558	21.5	0.7*	2,432	24.0	0.7*
1. Leukemias	1,155	2.9	0.6*	309	3.0	0.6*
2. Lymphomas	2,165	5.4	0.4*	610	6.0	0.4*
3. CNS, intracranial, intraspinal	897	2.3	0.3	237	2.3	0.3
4. Osseous & chondromatous neoplasms	827	2.1	0.7*	234	2.3	0.7*
5. Soft tissue sarcomas	616	1.5	0.2	155	1.5	0.2
6. Germ cell and trophoblastic neoplasms	1,443	3.6	1.1*	430	4.2	1.1*
7. Melanoma and skin carcinomas	465	1.2	0.6	116	1.1	0.6
8. Carcinomas (excluding skin)	846	2.1	1.9*	298	2.9	1.9*
9. Miscellaneous specified neoplasms, NOS	117	0.3	-	39	0.4	-
10. Unspecified malignant neoplasms	27	0.1	-	-	-	-

  

Females	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	7,796	20.5	0.7*	2,277	23.6	0.7*
1. Leukemias	794	2.1	1.3*	249	2.6	1.3*
2. Lymphomas	1,834	4.8	-0.1	477	4.9	-0.1
3. CNS, intracranial, intraspinal	685	1.8	0.8*	204	2.1	0.8*
4. Osseous & chondromatous neoplasms	427	1.1	0.1	104	1.1	0.1
5. Soft tissue sarcomas	547	1.4	0.2	131	1.4	0.2
6. Germ cell and trophoblastic neoplasms	501	1.3	-0.5	112	1.2	-0.5
7. Melanoma and skin carcinomas	706	1.9	0.2	167	1.7	0.2
8. Carcinomas (excluding skin)	2,121	5.6	2.2*	784	8.1	6.7*
9. Miscellaneous specified neoplasms, NOS	147	0.4	-	45	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 1975-2016.

- 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	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	27,843	34.8	0.7*	7,804	38.6	0.7*
1. Leukemias	1,804	2.3	0.8*	502	2.5	0.8*
2. Lymphomas	5,716	7.2	0.6*	1,470	7.3	-0.2
3. CNS, intracranial, intraspinal	1,810	2.3	0.0	470	2.3	-3.3*
4. Osseous & chondromatous neoplasms	732	0.9	0.9*	206	1.0	0.9*
5. Soft tissue sarcomas	1,676	2.1	0.8	416	2.1	-0.9*
6. Germ cell and trophoblastic neoplasms	4,345	5.4	0.8*	1,253	6.2	0.8*
7. Melanoma and skin carcinomas	3,425	4.3	0.4	888	4.4	-2.9*
8. Carcinomas (excluding skin)	7,866	9.8	0.7*	2,470	12.2	1.9*
9. Miscellaneous specified neoplasms, NOS	303	0.4	2.0*	99	0.5	2.0*
10. Unspecified malignant neoplasms	166	0.2	-	30	0.1	-

  

Males	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	13,678	33.7	0.5*	3,786	36.5	0.5*
1. Leukemias	1,037	2.6	0.6*	277	2.7	0.6*
2. Lymphomas	3,078	7.6	0.2	803	7.7	0.2
3. CNS, intracranial, intraspinal	1,020	2.5	0.1	256	2.5	0.1
4. Osseous & chondromatous neoplasms	432	1.1	0.7	123	1.2	0.7
5. Soft tissue sarcomas	1,003	2.5	0.9	249	2.4	-1.3*
6. Germ cell and trophoblastic neoplasms	3,885	9.6	0.8*	1,121	10.8	0.8*
7. Melanoma and skin carcinomas	1,168	2.9	0.0	280	2.7	0.0
8. Carcinomas (excluding skin)	1,873	4.6	1.3*	622	6.0	4.5*
9. Miscellaneous specified neoplasms, NOS	121	0.3	-	43	0.4	-
10. Unspecified malignant neoplasms	61	0.2	-	-	-	-

  

Females	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	14,165	36.0	0.5*	4,018	40.8	-0.3
1. Leukemias	767	2.0	0.2	225	2.3	0.0
2. Lymphomas	2,638	6.7	0.6	667	6.8	-1.9*
3. CNS, intracranial, intraspinal	790	2.0	0.2	214	2.2	-5.6
4. Osseous & chondromatous neoplasms	300	0.8	1.1*	83	0.8	1.1*
5. Soft tissue sarcomas	673	1.7	0.3	167	1.7	0.3
6. Germ cell and trophoblastic neoplasms	460	1.2	0.4	132	1.3	0.4
7. Melanoma and skin carcinomas	2,257	5.7	0.7	608	6.2	-3.4
8. Carcinomas (excluding skin)	5,993	15.2	0.7*	1,848	18.8	1.7*
9. Miscellaneous specified neoplasms, NOS	182	0.5	1.8*	56	0.6	1.8*
10. Unspecified malignant neoplasms	105	0.3	-	18	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 1975-2016.

- 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	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	47,401	56.6	0.8*	13,246	63.7	1.0*
1. Leukemias	2,034	2.4	0.8*	591	2.8	0.8*
2. Lymphomas	6,960	8.3	0.5	1,761	8.5	0.2
3. CNS, intracranial, intraspinal	2,439	2.9	0.8*	647	3.1	0.8*
4. Osseous & chondromatous neoplasms	595	0.7	1.3*	188	0.9	1.3*
5. Soft tissue sarcomas	3,327	4.0	1.3	612	2.9	-0.5
6. Germ cell and trophoblastic neoplasms	6,059	7.2	1.3*	1,761	8.5	1.5*
7. Melanoma and skin carcinomas	6,428	7.7	0.6*	1,737	8.4	-1.5
8. Carcinomas (excluding skin)	18,874	22.6	0.7*	5,755	27.7	1.6*
9. Miscellaneous specified neoplasms, NOS	455	0.5	1.6*	139	0.7	1.6*
10. Unspecified malignant neoplasms	230	0.3	-	55	0.3	-

  

Males	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	21,274	50.5	0.7*	5,740	54.6	0.0
1. Leukemias	1,170	2.8	0.4	329	3.1	0.4
2. Lymphomas	3,965	9.4	0.5	993	9.4	0.3
3. CNS, intracranial, intraspinal	1,345	3.2	0.9*	377	3.6	0.9*
4. Osseous & chondromatous neoplasms	334	0.8	0.4	96	0.9	0.4
5. Soft tissue sarcomas	2,425	5.8	1.5	402	3.8	-0.4
6. Germ cell and trophoblastic neoplasms	5,597	13.3	1.3*	1,644	15.6	-0.2
7. Melanoma and skin carcinomas	2,273	5.4	0.2	555	5.3	0.2
8. Carcinomas (excluding skin)	3,897	9.3	0.6	1,265	12.0	2.0*
9. Miscellaneous specified neoplasms, NOS	170	0.4	-	54	0.5	-
10. Unspecified malignant neoplasms	98	0.2	-	25	0.2	-

  

Females	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	26,127	62.8	0.7*	7,506	73.1	1.1*
1. Leukemias	864	2.1	1.2*	262	2.6	1.2*
2. Lymphomas	2,995	7.2	0.6	768	7.5	-0.4
3. CNS, intracranial, intraspinal	1,094	2.6	0.6*	270	2.6	0.6*
4. Osseous & chondromatous neoplasms	261	0.6	2.0*	92	0.9	2.0*
5. Soft tissue sarcomas	902	2.2	0.4	210	2.0	-1.5*
6. Germ cell and trophoblastic neoplasms	462	1.1	-0.4	117	1.1	-0.4
7. Melanoma and skin carcinomas	4,155	10.0	0.9*	1,182	11.5	-2.3
8. Carcinomas (excluding skin)	14,977	36.0	0.8*	4,490	43.7	1.7*
9. Miscellaneous specified neoplasms, NOS	285	0.7	1.3*	85	0.8	1.3*
10. Unspecified malignant neoplasms	132	0.3	-	30	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 1975-2016.

- 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	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	72,887	87.2	1.0*	19,847	97.7	1.3*
1. Leukemias	2,432	2.9	0.6*	653	3.2	0.6*
2. Lymphomas	7,737	9.3	1.1	1,848	9.1	-0.6
3. CNS, intracranial, intraspinal	2,867	3.4	0.5*	757	3.7	0.5*
4. Osseous & chondromatous neoplasms	537	0.6	0.5	130	0.6	0.5
5. Soft tissue sarcomas	5,453	6.5	1.2	802	3.9	-0.5
6. Germ cell and trophoblastic neoplasms	6,082	7.3	1.7*	1,730	8.5	0.6*
7. Melanoma and skin carcinomas	9,274	11.1	1.5*	2,507	12.3	0.3
8. Carcinomas (excluding skin)	37,322	44.7	0.8*	11,063	54.5	2.0*
9. Miscellaneous specified neoplasms, NOS	812	1.0	1.8*	260	1.3	1.8*
10. Unspecified malignant neoplasms	370	0.4	1.0	97	0.5	1.0

  

Males	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	29,833	71.3	1.0*	7,491	73.6	1.0*
1. Leukemias	1,398	3.3	0.6*	363	3.6	0.6*
2. Lymphomas	4,766	11.4	0.7	1,083	10.6	-0.6
3. CNS, intracranial, intraspinal	1,676	4.0	0.4*	447	4.4	0.4*
4. Osseous & chondromatous neoplasms	302	0.7	0.6	77	0.8	0.6
5. Soft tissue sarcomas	4,321	10.3	1.2	498	4.9	-1.5*
6. Germ cell and trophoblastic neoplasms	5,693	13.6	1.7*	1,624	16.0	0.6*
7. Melanoma and skin carcinomas	3,659	8.7	0.1	932	9.2	0.1
8. Carcinomas (excluding skin)	7,564	18.1	1.0*	2,314	22.7	3.0*
9. Miscellaneous specified neoplasms, NOS	316	0.8	2.1*	110	1.1	2.1*
10. Unspecified malignant neoplasms	138	0.3	-	43	0.4	-

  

Females	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	43,054	103.1	0.8*	12,356	121.9	1.5*
1. Leukemias	1,034	2.5	0.6*	290	2.9	0.6*
2. Lymphomas	2,971	7.1	0.7*	765	7.5	-1.8*
3. CNS, intracranial, intraspinal	1,191	2.9	0.5*	310	3.1	0.5*
4. Osseous & chondromatous neoplasms	235	0.6	-	53	0.5	-
5. Soft tissue sarcomas	1,132	2.7	0.4	304	3.0	0.4
6. Germ cell and trophoblastic neoplasms	389	0.9	0.1	106	1.0	0.1
7. Melanoma and skin carcinomas	5,615	13.4	2.0*	1,575	15.5	1.0*
8. Carcinomas (excluding skin)	29,758	71.3	0.8*	8,749	86.3	1.8*
9. Miscellaneous specified neoplasms, NOS	496	1.2	1.6*	150	1.5	1.6*
10. Unspecified malignant neoplasms	232	0.6	-	54	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 1975-2016.

- 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	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	106,218	134.4	0.8*	28,394	143.3	0.7*
1. Leukemias	3,041	3.8	0.5	856	4.3	2.2*
2. Lymphomas	8,749	11.1	1.2*	2,115	10.7	-1.3*
3. CNS, intracranial, intraspinal	3,123	4.0	-0.2	752	3.8	-0.2
4. Osseous & chondromatous neoplasms	535	0.7	1.2*	162	0.8	1.2*
5. Soft tissue sarcomas	6,376	8.1	0.7	913	4.6	-1.4*
6. Germ cell and trophoblastic neoplasms	4,734	6.0	1.5*	1,293	6.5	0.4
7. Melanoma and skin carcinomas	11,576	14.6	1.4*	3,165	16.0	0.4*
8. Carcinomas (excluding skin)	66,094	83.6	0.5*	18,570	93.7	0.6*
9. Miscellaneous specified neoplasms, NOS	1,445	1.8	1.4*	445	2.2	1.4*
10. Unspecified malignant neoplasms	545	0.7	-0.3	123	0.6	-0.3

  

Males	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	39,392	100.0	0.5	9,574	97.0	0.1
1. Leukemias	1,751	4.4	0.3	474	4.8	0.3
2. Lymphomas	5,621	14.3	1.1*	1,233	12.5	-2.4*
3. CNS, intracranial, intraspinal	1,825	4.6	-0.2	442	4.5	-0.2
4. Osseous & chondromatous neoplasms	296	0.8	0.3	78	0.8	0.3
5. Soft tissue sarcomas	4,942	12.5	1.9	566	5.7	-2.0*
6. Germ cell and trophoblastic neoplasms	4,492	11.4	1.7*	1,225	12.4	0.4
7. Melanoma and skin carcinomas	4,988	12.7	1.0	1,253	12.7	-0.2
8. Carcinomas (excluding skin)	14,680	37.3	0.3	4,089	41.4	1.2*
9. Miscellaneous specified neoplasms, NOS	584	1.5	1.1*	172	1.7	1.1*
10. Unspecified malignant neoplasms	213	0.5	-0.9	42	0.4	-0.9

  

Females	1975-2016			2007-2016		
	No.	Rate	AAPC <sup>c</sup>	No.	Rate	AAPC <sup>c</sup>
All Sites Combined	66,826	168.5	0.8*	18,820	189.4	1.1*
1. Leukemias	1,290	3.3	1.1	382	3.8	2.3*
2. Lymphomas	3,128	7.9	1.1*	882	8.9	-0.4
3. CNS, intracranial, intraspinal	1,298	3.3	-0.2	310	3.1	-0.2
4. Osseous & chondromatous neoplasms	239	0.6	-	84	0.8	-
5. Soft tissue sarcomas	1,434	3.6	-0.4	347	3.5	-0.4
6. Germ cell and trophoblastic neoplasms	242	0.6	0.1	68	0.7	0.1
7. Melanoma and skin carcinomas	6,588	16.6	1.8*	1,912	19.2	0.6*
8. Carcinomas (excluding skin)	51,414	129.7	0.6*	14,481	145.7	1.2*
9. Miscellaneous specified neoplasms, NOS	861	2.2	1.5*	273	2.7	1.5*
10. Unspecified malignant neoplasms	332	0.8	0.0	81	0.8	0.0

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 1975-2016.

- 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, 2012-2016  
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	24.5	26.3	17.1	20.1	24.6	3.4	3.4	3.1	3.6	3.8
Leukemia	3.8	4.1	2.5	3.2	5.2	0.9	0.9	0.6	1.2	1.2
Lymphoma	6.0	6.2	5.5	5.3	4.3	0.2	0.2	0.2	-	0.2
Hodgkin Lymphoma	3.3	3.6	2.8	2.2	2.3	0.0	0.0	-	-	-
Non-Hodgkin Lymphoma	2.7	2.6	2.8	3.1	2.0	0.2	0.2	0.2	-	-
Brain and Other Nervous System	2.6	2.7	2.2	2.1	1.9	0.6	0.6	0.7	0.8	0.5
Bones and Joints	1.9	2.0	1.8	1.4	1.8	0.7	0.7	0.5	-	0.8
Soft Tissue including Heart	1.3	1.3	1.1	1.0	1.3	0.3	0.3	0.4	-	0.4
Skin excluding Basal and Squamous	0.9	1.1	-	-	-	-	-	-	-	-
Respiratory System	0.4	0.4	-	-	0.5	0.1	0.0	-	-	-
Male Genital System	3.9	4.8	0.5	2.0	6.2	0.1	0.1	-	-	0.2
Digestive System	1.1	1.3	0.7	-	1.1	0.1	0.1	0.2	-	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	23.9	25.7	16.3	18.6	21.1	2.4	2.4	2.4	2.2	2.3
Leukemia	2.4	2.5	1.5	3.3	3.1	0.6	0.6	0.4	0.6	0.9
Lymphoma	4.7	5.1	3.6	3.4	3.8	0.1	0.1	0.2	-	-
Hodgkin Lymphoma	3.2	3.6	2.4	1.6	2.3	-	-	-	-	-
Non-Hodgkin Lymphoma	1.4	1.4	1.2	1.8	1.5	0.1	0.1	-	-	-
Brain and Other Nervous System	2.1	2.3	2.0	1.3	1.4	0.5	0.5	0.4	0.6	0.4
Bones and Joints	1.2	1.2	0.9	1.3	1.0	0.4	0.4	0.4	-	0.3
Soft Tissue including Heart	1.2	1.2	1.1	-	1.4	0.3	0.3	0.3	-	0.2
Skin excluding Basal and Squamous	1.3	1.6	-	-	0.5	-	-	-	-	-
Respiratory System	0.2	0.3	-	-	-	0.0	-	-	-	-
Breast	0.2	0.1	-	-	-	-	-	-	-	-
Female Genital System	1.8	1.7	2.1	1.2	1.9	0.1	0.1	-	-	-
Digestive System	1.7	1.9	0.9	1.0	1.4	0.1	0.1	-	-	-

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 32.13

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rate Comparison by Race/Ethnicity, 2012-2016  
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	36.0	39.5	21.7	25.1	34.0	4.6	4.7	4.6	4.2	5.5
Leukemia	3.2	3.5	2.2	2.9	4.8	1.1	1.1	1.0	1.2	1.9
Lymphoma	7.2	7.4	6.5	5.3	5.1	0.4	0.4	0.5	0.4	0.4
Hodgkin Lymphoma	4.0	4.3	3.0	2.8	2.7	0.1	0.1	-	-	0.1
Non-Hodgkin Lymphoma	3.2	3.1	3.5	2.5	2.4	0.3	0.3	0.4	0.4	0.3
Brain and Other Nervous System	2.4	2.8	1.1	1.7	1.6	0.6	0.7	0.4	-	0.5
Bones and Joints	1.0	1.1	0.8	-	1.0	0.6	0.6	0.4	-	0.6
Soft Tissue including Heart	1.4	1.2	1.9	1.5	1.3	0.4	0.4	0.5	-	0.4
Skin excluding Basal and Squamous	2.0	2.4	0.5	-	0.5	0.1	0.1	-	-	-
Respiratory System	0.8	0.7	0.7	1.3	0.9	0.1	0.1	0.2	-	-
Male Genital System	10.5	12.8	1.9	4.7	13.4	0.3	0.4	-	-	0.6
Digestive System	2.4	2.5	1.9	2.0	2.1	0.5	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	40.1	43.8	25.4	28.7	32.2	3.2	3.3	3.5	2.6	3.3
Leukemia	2.5	2.5	2.6	1.5	2.7	0.6	0.7	0.7	-	1.1
Lymphoma	6.7	7.2	5.4	4.7	5.2	0.3	0.3	0.4	-	0.2
Hodgkin Lymphoma	4.6	5.0	3.4	2.6	3.3	0.1	0.1	-	-	-
Non-Hodgkin Lymphoma	2.2	2.1	2.0	2.1	1.9	0.2	0.2	0.3	-	0.2
Brain and Other Nervous System	1.9	2.1	1.3	1.4	1.3	0.5	0.5	0.3	-	0.4
Bones and Joints	0.6	0.7	-	-	0.6	0.3	0.3	0.2	-	0.2
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	4.6	5.8	0.6	-	1.0	0.1	0.1	-	-	-
Respiratory System	0.4	0.4	-	-	0.4	0.1	0.1	-	-	-
Breast	1.6	1.6	2.1	1.1	1.4	0.1	0.1	-	-	-
Female Genital System	3.5	3.5	3.5	2.9	4.0	0.3	0.3	0.3	-	0.3
Digestive System	2.8	2.9	2.3	1.9	2.3	0.4	0.4	0.4	0.4	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, 2012-2016  
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	51.3	56.0	34.7	33.2	41.9	6.6	6.8	6.6	5.0	6.6
Leukemia	3.4	3.4	2.8	3.1	4.0	1.1	1.1	1.0	0.8	1.4
Lymphoma	8.1	8.2	8.7	6.0	5.6	0.7	0.6	1.0	0.4	0.6
Hodgkin Lymphoma	4.0	4.4	3.9	2.4	2.5	0.2	0.2	0.3	-	0.2
Non-Hodgkin Lymphoma	4.0	3.9	4.8	3.7	3.0	0.5	0.4	0.7	-	0.4
Brain and Other Nervous System	3.3	3.6	2.2	2.4	2.4	0.9	1.0	0.6	0.7	0.6
Bones and Joints	0.7	0.7	0.6	0.7	0.7	0.4	0.4	0.4	-	0.3
Soft Tissue including Heart	1.7	1.6	2.0	1.2	1.6	0.5	0.5	0.6	-	0.5
Skin excluding Basal and Squamous	4.2	5.1	0.9	0.7	0.9	0.3	0.4	-	-	0.2
Respiratory System	1.0	1.0	1.0	1.4	1.0	0.3	0.3	0.2	-	0.3
Male Genital System	15.0	18.2	3.0	6.3	15.5	0.5	0.6	-	-	0.9
Digestive System	4.6	4.8	4.3	4.1	3.9	1.2	1.1	1.4	1.3	1.2
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	71.0	76.2	50.6	50.1	60.5	5.8	5.8	6.9	3.8	5.6
Leukemia	2.6	2.6	2.4	2.1	3.1	0.7	0.8	0.7	0.5	1.0
Lymphoma	7.1	7.3	6.6	4.9	5.9	0.4	0.4	0.6	-	0.4
Hodgkin Lymphoma	4.1	4.6	3.2	2.3	3.1	0.1	0.1	0.2	-	-
Non-Hodgkin Lymphoma	2.9	2.8	3.4	2.6	2.8	0.3	0.2	0.4	-	0.3
Brain and Other Nervous System	2.5	2.8	1.3	1.6	2.2	0.5	0.6	0.4	-	0.5
Bones and Joints	0.6	0.6	0.8	-	0.5	0.2	0.2	-	-	-
Soft Tissue including Heart	1.3	1.3	1.5	0.9	1.4	0.3	0.4	0.4	-	0.3
Skin excluding Basal and Squamous	8.9	11.1	0.8	0.8	2.1	0.2	0.3	-	-	-
Respiratory System	0.7	0.8	-	0.8	0.5	0.2	0.1	-	-	0.2
Breast	9.9	9.7	11.7	8.5	8.3	0.7	0.6	1.4	0.5	0.6
Female Genital System	9.7	9.8	8.8	7.7	11.1	1.1	1.2	0.9	0.5	1.2
Digestive System	4.5	4.7	4.3	3.2	4.6	0.8	0.7	1.1	0.9	0.8

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, 2012-2016  
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	70.9	75.6	54.2	46.9	54.3	10.1	10.2	11.4	7.3	8.3
Leukemia	4.2	4.3	3.3	3.8	4.5	1.2	1.2	1.3	0.9	1.4
Lymphoma	9.6	9.6	10.6	6.5	7.6	0.9	0.8	1.6	0.6	0.8
Hodgkin Lymphoma	3.9	4.2	3.9	2.1	2.6	0.2	0.2	0.4	-	0.2
Non-Hodgkin Lymphoma	5.6	5.4	6.7	4.5	5.0	0.7	0.6	1.2	0.4	0.7
Brain and Other Nervous System	3.9	4.4	2.1	2.4	2.8	1.4	1.6	0.7	0.6	0.7
Bones and Joints	0.7	0.7	-	-	0.8	0.3	0.3	0.2	-	0.2
Soft Tissue including Heart	2.3	2.1	3.0	1.8	2.2	0.6	0.5	0.7	0.4	0.5
Skin excluding Basal and Squamous	7.6	9.3	1.4	0.9	1.5	0.6	0.7	-	-	0.2
Respiratory System	1.8	1.7	2.7	1.5	1.6	0.6	0.5	1.1	0.6	0.4
Male Genital System	15.2	18.2	4.4	5.9	13.3	0.5	0.5	0.2	-	0.7
Digestive System	9.5	9.1	11.2	9.0	8.0	2.6	2.4	3.4	2.6	2.2

  

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	122.3	129.0	95.7	93.5	101.9	11.7	11.4	15.6	7.8	10.6
Leukemia	3.2	3.2	3.3	2.5	3.4	0.8	0.8	1.0	0.7	0.9
Lymphoma	7.5	7.6	8.2	5.4	6.0	0.5	0.5	0.8	-	0.5
Hodgkin Lymphoma	3.3	3.5	3.5	1.8	2.4	0.1	0.1	0.2	-	0.2
Non-Hodgkin Lymphoma	4.2	4.1	4.7	3.7	3.6	0.4	0.3	0.6	-	0.4
Brain and Other Nervous System	2.9	3.3	1.8	1.5	2.0	0.9	1.0	0.5	0.6	0.6
Bones and Joints	0.5	0.6	-	-	0.7	0.2	0.2	-	-	0.2
Soft Tissue including Heart	1.7	1.6	1.9	1.5	1.6	0.4	0.4	0.6	-	0.4
Skin excluding Basal and Squamous	13.0	16.4	1.4	0.9	3.3	0.4	0.5	-	-	-
Respiratory System	1.5	1.4	1.6	1.8	1.3	0.4	0.4	0.5	0.6	0.3
Breast	29.0	28.4	32.5	26.2	24.0	2.8	2.5	5.0	1.3	2.1
Female Genital System	18.8	19.6	16.4	13.8	20.7	2.2	2.2	2.7	1.4	2.3
Digestive System	8.9	8.9	9.7	7.4	8.8	2.0	1.9	2.8	1.7	2.2

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 32.16

SEER Incidence<sup>a</sup> and U.S. Mortality<sup>b</sup> Rate Comparison by Race/Ethnicity, 2012-2016  
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	93.8	97.8	79.9	64.9	71.0	16.4	16.4	19.4	12.6	12.4
Leukemia	5.1	5.2	4.8	3.6	5.5	1.4	1.4	1.5	1.1	1.6
Lymphoma	11.7	11.6	14.0	7.4	9.8	1.0	1.0	1.6	0.5	0.9
Hodgkin Lymphoma	3.2	3.3	4.2	1.2	2.4	0.2	0.2	0.3	-	0.2
Non-Hodgkin Lymphoma	8.5	8.3	9.8	6.1	7.4	0.9	0.8	1.4	0.5	0.7
Brain and Other Nervous System	4.2	4.5	3.0	3.4	2.9	2.1	2.3	1.2	1.2	1.2
Bones and Joints	0.7	0.8	0.8	-	0.7	0.2	0.2	0.2	-	0.2
Soft Tissue including Heart	2.3	2.4	2.2	1.7	2.4	0.7	0.7	0.8	0.5	0.6
Skin excluding Basal and Squamous	10.3	12.4	1.6	1.6	1.9	1.0	1.2	-	-	0.3
Respiratory System	3.4	3.3	4.8	2.6	2.5	1.5	1.4	2.3	1.1	0.8
Male Genital System	13.0	15.3	5.3	4.6	10.3	0.5	0.5	0.3	-	0.4
Digestive System	17.5	16.9	20.1	16.4	15.7	5.6	5.3	7.3	5.3	4.6

  

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	191.8	199.3	166.2	155.3	160.0	22.1	21.5	28.9	16.7	18.7
Leukemia	3.9	3.9	4.2	2.9	4.0	1.0	1.0	1.2	0.9	1.1
Lymphoma	8.6	8.7	10.0	6.0	7.3	0.6	0.6	1.2	0.4	0.7
Hodgkin Lymphoma	2.8	2.9	3.4	1.2	1.8	0.1	0.1	0.3	-	-
Non-Hodgkin Lymphoma	5.9	5.8	6.6	4.8	5.4	0.5	0.4	0.9	-	0.6
Brain and Other Nervous System	3.3	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	0.3	-	-
Soft Tissue including Heart	2.0	1.8	2.6	1.8	2.2	0.5	0.4	0.7	-	0.4
Skin excluding Basal and Squamous	14.8	18.5	1.7	1.6	3.7	0.6	0.8	-	-	0.2
Respiratory System	3.2	3.3	3.0	3.3	2.3	1.2	1.2	1.3	1.4	0.8
Breast	63.6	63.0	68.6	58.8	50.7	6.6	6.0	10.8	4.3	5.2
Female Genital System	29.3	30.5	25.1	23.2	32.2	4.0	4.1	4.7	2.9	3.8
Digestive System	16.4	16.0	18.9	14.5	14.7	4.0	3.8	4.9	3.8	4.0

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, 1975-2016

	<u>Incidence</u>				<u>Mortality</u>			
	<u>1975-2016</u>		<u>2007-2016</u>		<u>1975-2016</u>		<u>2007-2016</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	21.0	0.7*	23.8	0.7*	4.0	-1.8*	2.9	-0.9*
Hodgkin Lymphoma	3.5	-0.5*	3.4	-0.5*	0.2	-5.1*	0.0	-6.0*
Brain and Other Nervous System	2.1	0.4	2.2	0.4	0.6	-0.7*	0.5	1.4
Thyroid	2.0	2.7*	3.2	6.7*	0.0	-	0.0	-
Non-Hodgkin Lymphoma	1.7	1.5*	2.0	1.5*	0.3	-3.2*	0.2	-3.9*
Testis	1.6	1.1*	1.9	1.1*	0.1	-5.1*	0.0	-2.7*
<u>Ages 20-24</u>								
All Malignant Cancers	34.8	0.7*	38.6	0.7*	5.4	-1.6*	4.3	-2.4*
Hodgkin Lymphoma	4.9	0.1	4.6	-0.7*	0.4	-4.9*	0.2	-8.9*
Thyroid	4.6	2.2*	6.5	4.2*	0.0	-	0.0	-
Testis	4.6	1.1	5.3	0.1	0.2	-3.5*	0.2	-0.6
Melanoma of the Skin	4.1	0.4	4.2	-3.0*	0.2	-4.5*	0.1	-9.7*
Brain and Other Nervous System	2.3	0.5*	2.4	0.5*	0.6	-0.7*	0.5	-0.7*
<u>Ages 25-29</u>								
All Malignant Cancers	56.6	0.8*	63.7	1.0*	8.1	-1.5*	6.4	-1.5*
Melanoma of the Skin	7.5	0.7*	8.2	-1.6	0.5	-2.9*	0.3	-2.9*
Thyroid	7.5	2.1*	11.6	3.7*	0.0	-	0.0	-
Testis	6.5	1.1*	7.7	1.1*	0.3	-2.9*	0.2	0.7
Hodgkin Lymphoma	4.8	-0.1	4.5	-0.1	0.5	-4.3*	0.2	-4.3*
Breast	4.2	0.4	4.7	2.1*	0.5	-1.7*	0.3	0.7
<u>Ages 30-34</u>								
All Malignant Cancers	87.2	1.0*	97.7	1.3*	14.1	-1.3*	10.9	-0.4
Breast	13.5	0.2	14.4	0.8*	2.0	-1.4*	1.4	0.7
Melanoma of the Skin	10.7	1.5*	12.0	0.3	0.8	-2.3*	0.5	-2.5*
Thyroid	9.8	2.7*	16.6	3.1*	0.0	-1.3*	0.0	-1.3*
Testis	6.7	1.8*	7.9	0.7*	0.3	-2.5*	0.2	-0.3
Cervix Uteri	5.7	-1.2*	4.5	-1.2*	0.9	-0.9*	0.7	0.9
<u>Ages 35-39</u>								
All Malignant Cancers	134.4	0.8*	143.3	0.7*	26.2	-1.5*	19.7	-0.8*
Breast	31.7	0.4*	32.1	0.3*	4.9	-1.4*	3.4	-0.7
Melanoma of the Skin	14.1	1.4*	15.4	0.4*	1.3	-2.9*	0.8	-3.7
Thyroid	11.9	3.2*	20.2	2.0*	0.1	-0.5	0.0	-0.5
Non-Hodgkin Lymphoma	7.9	1.7	7.7	-0.6	1.4	-1.8*	0.8	-3.3*
Colon and Rectum	7.5	1.1*	9.5	2.5*	2.1	-0.4*	2.2	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 1975-2016 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 1975-2016.

- 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, 1975-2016

	<u>Incidence</u>				<u>Mortality</u>			
	<u>1975-2016</u>		<u>2007-2016</u>		<u>1975-2016</u>		<u>2007-2016</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	21.5	0.7*	24.0	0.7*	4.7	-1.8*	3.4	-0.8
Hodgkin Lymphoma	3.3	-0.4	3.4	-0.4	0.2	-5.2*	0.0	-5.2*
Testis	3.2	1.1*	3.7	1.1*	0.1	-5.2*	0.1	-2.7*
Brain and Other Nervous System	2.4	0.3	2.4	0.3	0.7	-0.9*	0.6	-0.9*
Non-Hodgkin Lymphoma	2.1	1.5*	2.6	1.5*	0.4	-3.3*	0.2	-3.3*
Bones and Joints	1.9	0.4	2.1	0.4	0.7	-1.1*	0.6	0.2
<u>Ages 20-24</u>								
All Malignant Cancers	33.7	0.5*	36.5	0.5*	6.4	-1.6*	5.1	-1.2*
Testis	9.0	1.0	10.4	0.1	0.5	-3.6*	0.3	-0.7
Hodgkin Lymphoma	4.9	-0.4*	4.6	-0.4*	0.4	-4.5*	0.2	-4.5*
Melanoma of the Skin	2.8	0.0	2.6	0.0	0.2	-4.4*	0.1	-11.4*
Non-Hodgkin Lymphoma	2.7	1.3*	3.2	1.3*	0.6	-2.5*	0.4	-5.2*
Brain and Other Nervous System	2.6	0.2	2.6	0.2	0.7	-0.7*	0.6	-0.7*
<u>Ages 25-29</u>								
All Malignant Cancers	50.5	0.7*	54.6	0.0	8.6	-1.5*	6.8	-1.0*
Testis	12.9	1.1*	15.2	1.1*	0.6	-3.0*	0.5	0.7
Melanoma of the Skin	5.2	0.2	5.1	0.2	0.6	-3.5*	0.3	-5.5*
Hodgkin Lymphoma	5.0	-0.3	4.8	-0.3	0.6	-4.6*	0.2	-4.6*
Non-Hodgkin Lymphoma	4.4	1.3	4.6	0.7	0.9	-2.0*	0.5	-5.0*
Kaposi sarcoma	3.6	-	1.4	-	-	-	-	-
<u>Ages 30-34</u>								
All Malignant Cancers	71.3	1.0*	73.6	1.0*	13.1	-1.4*	10.1	-0.9*
Testis	13.3	1.8*	15.7	0.7*	0.6	-2.6*	0.4	-0.3
Melanoma of the Skin	8.4	0.2	8.9	0.2	1.0	-2.4*	0.6	-2.6*
Kaposi sarcoma	7.7	-	2.0	-	-	-	-	-
Non-Hodgkin Lymphoma	7.1	2.0*	6.1	-0.5	1.3	-1.5	0.7	-3.2*
Hodgkin Lymphoma	4.3	0.1	4.5	0.1	0.7	-4.4*	0.3	-5.2*
<u>Ages 35-39</u>								
All Malignant Cancers	100.0	0.5	97.0	0.1	22.8	-1.5*	16.9	-0.7*
Melanoma of the Skin	12.2	0.6	12.2	-0.5	1.5	-2.5*	0.9	-1.9*
Testis	11.2	1.8*	12.3	0.5*	0.5	-2.6*	0.4	-1.2*
Non-Hodgkin Lymphoma	10.6	2.1	9.2	-0.9	1.9	-1.8*	1.0	-2.8*
Kaposi sarcoma	9.2	-	2.1	-	-	-	-	-
Colon and Rectum	7.9	1.1*	10.0	2.1*	2.3	-0.3	2.5	1.5

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 1975-2016 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 1975-2016.

- 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, 1975-2016

	<u>Incidence</u>				<u>Mortality</u>			
	<u>1975-2016</u>		<u>2007-2016</u>		<u>1975-2016</u>		<u>2007-2016</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	20.5	0.7*	23.6	0.7*	3.2	-1.8*	2.4	-1.8*
Hodgkin Lymphoma	3.6	-0.6*	3.5	-0.6*	0.1	-6.0*	0.0	-10.0*
Thyroid	3.4	2.8*	5.3	6.4*	0.0	-	-	-
Brain and Other Nervous System	1.8	0.6	2.0	0.6	0.5	-0.9*	0.4	0.5
Melanoma of the Skin	1.8	0.3	1.6	0.3	0.0	-	0.0	-
Ovary	1.5	-0.2	1.4	-0.2	0.1	-3.6*	0.1	-0.8
<u>Ages 20-24</u>								
All Malignant Cancers	36.0	0.5*	40.8	-0.3	4.3	-1.3*	3.4	-1.3*
Thyroid	7.8	2.3*	11.2	2.3*	0.0	-	-	-
Melanoma of the Skin	5.6	0.7	6.0	-3.5*	0.2	-3.3*	0.1	-2.5*
Hodgkin Lymphoma	4.9	0.6	4.7	-0.9*	0.3	-4.6*	0.1	-9.5*
Brain and Other Nervous System	2.0	0.2	2.2	-5.3	0.5	-0.7*	0.5	-0.7*
Cervix Uteri	1.9	-3.3	1.0	-5.4*	0.2	-2.1*	0.1	-4.5*
<u>Ages 25-29</u>								
All Malignant Cancers	62.8	0.7*	73.1	1.1*	7.6	-1.4*	5.9	-1.4*
Thyroid	12.4	2.3*	19.6	3.9*	0.0	-	0.0	-
Melanoma of the Skin	9.7	1.0*	11.3	-2.2	0.4	-2.7*	0.2	-2.7*
Breast	8.5	0.5	9.5	2.3*	1.0	-1.5*	0.7	1.5
Cervix Uteri	6.8	-1.2	4.7	2.9	0.7	-1.4*	0.6	-1.4*
Hodgkin Lymphoma	4.6	0.0	4.3	0.0	0.4	-3.9*	0.2	-3.9*
<u>Ages 30-34</u>								
All Malignant Cancers	103.1	0.8*	121.9	1.5*	15.1	-1.3*	11.7	-0.3
Breast	27.0	0.2*	28.7	0.2*	4.0	-1.3*	2.7	0.7
Thyroid	16.0	3.0*	27.4	4.6*	0.0	-	0.0	-
Melanoma of the Skin	13.1	2.1*	15.2	1.0*	0.7	-2.6*	0.4	-2.6*
Cervix Uteri	11.3	-1.2*	9.1	-1.2*	1.7	-0.9*	1.3	0.9
Colon and Rectum	3.7	1.3*	5.3	3.2*	0.9	-0.2	1.0	1.1*
<u>Ages 35-39</u>								
All Malignant Cancers	168.5	0.8*	189.4	1.1*	29.6	-1.3*	22.5	-0.8
Breast	63.1	0.4*	63.7	0.3*	9.7	-1.4*	6.7	-0.7
Thyroid	18.8	3.5*	32.9	2.1*	0.1	-0.9	0.0	-0.9
Melanoma of the Skin	16.1	1.9*	18.5	0.9*	1.0	-2.4*	0.7	-2.4*
Cervix Uteri	14.0	-1.2*	12.3	-1.2*	2.8	-1.2*	2.3	-0.4
Corpus and Uterus, NOS	7.1	1.0*	9.2	2.5*	0.5	-0.4	0.6	3.1*

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 1975-2016 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 1975-2016.

- 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, 1975-2015

	5-year Relative Survival (Percent)					
	1975-2015	1975-1983	1984-1992	1993-2000	2001-2008	2009-2015
<u>Ages 15-19</u>						
All Malignant Cancers	79.0	69.6	76.8	79.5	83.3	86.4
Hodgkin Lymphoma	92.7	87.5	91.1	94.9	96.4	96.8
Brain and Other Nervous System	73.7	63.2	74.1	77.5	76.6	77.9
Thyroid	99.1	99.1	99.0	99.4	97.9	99.8
Non-Hodgkin Lymphoma	74.2	54.3	66.3	74.3	82.6	89.2
Testis	90.7	79.2	92.0	91.5	94.3	95.1
<u>Ages 20-24</u>						
All Malignant Cancers	81.7	74.7	79.2	82.4	85.5	87.7
Hodgkin Lymphoma	91.2	85.2	90.6	91.4	95.2	95.8
Thyroid	99.7	99.7	99.7	99.2	99.7	100.0
Testis	92.9	84.5	92.0	95.7	96.0	96.4
Melanoma of the Skin	93.3	85.2	92.9	95.1	96.6	96.9
Brain and Other Nervous System	68.4	57.6	64.4	69.9	73.9	79.2
<u>Ages 25-29</u>						
All Malignant Cancers	80.5	76.8	73.0	80.7	85.8	87.9
Melanoma of the Skin	93.6	88.4	91.9	94.5	96.5	96.8
Thyroid	99.7	99.4	99.7	99.7	99.7	99.5
Testis	95.2	89.1	94.6	97.4	97.1	96.8
Hodgkin Lymphoma	90.7	85.7	89.4	92.7	93.1	94.6
Breast	75.3	68.8	69.0	76.5	83.8	82.7
<u>Ages 30-34</u>						
All Malignant Cancers	77.0	73.2	67.8	75.7	84.6	86.3
Breast	78.0	69.6	74.2	78.9	85.0	84.9
Melanoma of the Skin	92.9	86.4	91.3	94.1	96.6	95.6
Thyroid	99.8	99.5	99.5	99.8	99.9	99.8
Testis	95.8	92.0	95.7	95.7	96.7	97.6
Cervix Uteri	85.0	84.0	83.7	86.8	84.9	86.8
<u>Ages 35-39</u>						
All Malignant Cancers	74.9	68.2	65.7	74.6	82.4	84.5
Breast	82.1	75.0	77.5	83.5	87.3	87.7
Melanoma of the Skin	92.7	87.6	90.4	93.5	95.5	95.8
Thyroid	99.5	98.9	99.4	99.2	99.7	99.7
Non-Hodgkin Lymphoma	65.6	65.7	49.9	58.3	77.3	85.2
Colon and Rectum	64.1	55.6	57.0	63.9	70.2	68.5

<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 1975-2015 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, 1975-2015

	5-year Relative Survival (Percent)					
	1975-2015	1975-1983	1984-1992	1993-2000	2001-2008	2009-2015
<u>Ages 15-19</u>						
All Malignant Cancers	74.8	63.7	71.9	74.9	80.8	83.2
Hodgkin Lymphoma	91.8	86.0	90.1	93.5	96.6	95.8
Testis	90.7	79.2	92.0	91.5	94.3	95.1
Brain and Other Nervous System	70.7	59.7	70.5	73.5	76.3	74.9
Non-Hodgkin Lymphoma	72.6	49.6	67.2	70.7	81.0	88.9
Bones and Joints	58.3	42.2	59.6	59.9	67.2	61.4
<u>Ages 20-24</u>						
All Malignant Cancers	77.4	69.5	73.2	78.9	82.6	84.7
Testis	92.9	84.5	92.0	95.7	96.0	96.4
Hodgkin Lymphoma	89.6	83.2	87.9	89.7	95.4	95.6
Melanoma of the Skin	87.2	76.0	85.3	91.3	92.7	94.4
Non-Hodgkin Lymphoma	67.6	56.7	52.8	65.1	80.9	79.2
Brain and Other Nervous System	66.8	54.7	63.0	71.4	74.0	74.5
<u>Ages 25-29</u>						
All Malignant Cancers	74.6	71.5	63.4	75.3	82.1	85.0
Testis	95.2	89.1	94.6	97.4	97.1	96.8
Melanoma of the Skin	88.8	82.5	87.7	90.1	92.9	92.0
Hodgkin Lymphoma	88.9	84.5	85.7	90.7	92.0	94.6
Non-Hodgkin Lymphoma	60.6	59.0	41.7	56.8	75.5	80.5
Kaposi sarcoma	17.1	29.7	7.4	18.6	56.4	65.5
<u>Ages 30-34</u>						
All Malignant Cancers	69.1	68.2	54.9	67.0	81.2	83.1
Testis	95.8	92.0	95.7	95.7	96.7	97.6
Melanoma of the Skin	88.8	79.3	87.0	90.9	94.2	93.2
Kaposi sarcoma	19.4	24.7	7.6	28.8	62.1	71.1
Non-Hodgkin Lymphoma	56.3	69.3	36.6	46.5	76.6	81.4
Hodgkin Lymphoma	87.6	79.8	83.9	88.3	93.7	92.3
<u>Ages 35-39</u>						
All Malignant Cancers	65.2	59.7	50.9	64.7	76.7	79.9
Melanoma of the Skin	88.7	82.1	85.7	90.0	92.2	94.1
Testis	96.3	91.9	95.7	97.3	96.9	96.9
Non-Hodgkin Lymphoma	58.1	62.2	41.7	50.8	71.4	81.5
Kaposi sarcoma	20.0	14.1	7.0	28.9	65.8	75.1
Colon and Rectum	62.6	54.1	54.5	62.4	70.1	65.2

<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 1975-2015 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, 1975-2015

	5-year Relative Survival (Percent)					
	1975-2015	1975-1983	1984-1992	1993-2000	2001-2008	2009-2015
<u>Ages 15-19</u>						
All Malignant Cancers	83.6	76.0	82.2	84.4	86.2	89.5
Hodgkin Lymphoma	93.6	89.0	92.0	96.0	96.1	97.9
Thyroid	99.4	99.1	99.6	99.2	98.8	99.7
Brain and Other Nervous System	77.9	68.2	79.2	83.0	77.0	81.1
Melanoma of the Skin	95.6	87.9	95.8	95.2	99.5	98.5
Ovary	88.4	80.1	89.6	89.7	93.2	89.9
<u>Ages 20-24</u>						
All Malignant Cancers	85.8	80.0	85.4	85.7	88.1	90.3
Thyroid	99.8	99.4	99.6	99.6	99.9	99.9
Melanoma of the Skin	96.5	91.4	96.9	97.1	98.2	97.9
Hodgkin Lymphoma	92.8	87.7	93.0	93.2	94.9	96.0
Brain and Other Nervous System	70.3	61.9	66.2	67.5	73.9	84.9
Cervix Uteri	87.9	89.0	88.9	86.1	88.3	84.0
<u>Ages 25-29</u>						
All Malignant Cancers	85.3	80.7	82.3	85.3	88.7	90.2
Thyroid	99.7	99.5	99.8	99.8	99.8	99.4
Melanoma of the Skin	96.3	92.3	94.6	96.9	98.2	99.0
Breast	75.3	68.8	68.8	76.7	84.0	82.6
Cervix Uteri	87.2	89.0	86.5	86.8	87.0	85.3
Hodgkin Lymphoma	92.8	87.1	93.4	95.0	94.2	94.5
<u>Ages 30-34</u>						
All Malignant Cancers	82.6	76.1	79.3	82.5	86.7	88.3
Breast	78.0	69.5	74.1	78.8	84.9	85.1
Thyroid	99.8	99.3	99.7	99.9	99.7	99.8
Melanoma of the Skin	95.7	91.8	94.4	96.1	98.2	97.1
Cervix Uteri	85.0	84.0	83.7	86.8	84.9	86.8
Colon and Rectum	66.0	62.8	60.0	65.3	67.3	72.7
<u>Ages 35-39</u>						
All Malignant Cancers	80.8	72.7	76.5	81.2	85.6	86.8
Breast	82.1	75.0	77.5	83.5	87.3	87.7
Thyroid	99.8	99.1	99.5	99.5	99.8	99.9
Melanoma of the Skin	95.9	92.7	94.5	96.2	97.7	96.8
Cervix Uteri	81.7	79.6	79.7	84.2	83.8	81.6
Corpus and Uterus, NOS	90.3	91.4	90.3	90.5	89.4	90.3

<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 1975-2015 SEER 9 Incidence rates for the age group.

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