

Table 29.1

Age-Adjusted and Age-Specific SEER Cancer Incidence Rates, 2010-2014<sup>a</sup>  
 By International Classification of Childhood Cancer (ICCC)<sup>b</sup> Group and Subgroup<sup>c</sup> and Age at Diagnosis  
 Including myelodysplastic syndromes and Group III benign brain/CNS tumors  
 All Races, Males and Females

ICCC Group and Subgroup	0-14	0-19	<1	1-4	5-9	10-14	15-19
All ICCC Groups Combined							
Excluding Group III benign brain/CNS tumors	162.9	179.2	234.4	219.3	127.6	141.7	227.6
Including Group III benign brain/CNS tumors <sup>d</sup>	175.3	196.8	244.7	227.7	138.8	158.8	260.6
I Leukemia (includes myelodysplastic syndromes)	54.2	49.5	51.3	93.4	44.3	34.8	35.6
I(a) Lymphoid leukemia	41.4	35.6	20.3	77.8	36.6	22.6	18.5
I(b) Acute myeloid leukemia	8.4	8.9	20.7	10.9	4.7	7.8	10.4
I(c) Chronic myeloproliferative diseases	1.4	2.1	-	0.8	0.9	2.2	4.1
I(d) Myelodysplastic syndrome and other myeloproliferative	1.3	1.3	4.8	1.6	0.7	1.0	1.3
I(e) Unspecified and other specified leukemias	1.8	1.7	3.7	2.3	1.5	1.3	1.3
II Lymphomas and reticuloendothelial neoplasms	16.4	24.7	-	8.4	15.9	25.6	49.4
II(a) Hodgkin lymphoma	5.4	11.7	-	0.9	3.9	11.3	30.4
II(b) Non-Hodgkin lymphoma (except Burkitt lymphoma)	8.3	10.1	-	5.9	8.1	11.6	15.6
II(c) Burkitt lymphoma	2.4	2.5	-	1.4	3.5	2.4	2.7
II(d) Miscellaneous lymphoreticular neoplasms	-	0.1	-	-	-	-	-
II(e) Unspecified lymphomas	0.2	0.3	-	-	-	-	0.6
III CNS and misc intracranial and intraspinal neoplasms <sup>d</sup>	45.5	48.0	41.9	50.0	45.0	43.1	55.5
III(a) Ependymomas and choroid plexus tumor	4.3	3.9	10.1	6.9	2.7	2.7	2.8
III(b) Astrocytoma	17.6	16.7	12.7	20.3	18.1	15.8	14.0
III(c) Intracranial and intraspinal embryonal tumors	7.1	5.9	9.9	10.3	7.2	4.0	2.5
III(d) Other gliomas	5.5	5.2	-	5.6	6.7	4.7	4.3
III(e) Other specified intracranial/intraspinal neoplasms	9.6	14.7	4.6	5.8	8.9	14.2	30.0
III(f) Unspecified intracranial and intraspinal neoplasms	1.5	1.6	-	1.1	1.4	1.6	1.9
IV Neuroblastoma and other peripheral nervous cell tumor	10.6	8.1	50.9	21.4	3.8	1.4	0.9
IV(a) Neuroblastoma and ganglioneuroblastoma	10.3	7.9	50.9	21.3	3.6	1.1	-
IV(b) Other peripheral nervous cell tumors	0.2	0.3	-	-	-	-	-
V Retinoblastoma	4.4	3.3	29.9	8.8	-	-	-
VI Renal tumors	8.3	6.8	13.8	19.7	5.7	1.3	2.2
VI(a) Nephroblastoma and other nonepithelial renal tumor	8.0	6.1	13.6	19.5	5.5	0.6	-
VI(b) Renal carcinoma	0.3	0.7	-	-	-	0.6	1.8
VI(c) Unspecified malignant renal tumors	-	-	-	-	-	-	-

<sup>a</sup> SEER 18 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 and Georgia excluding ATL/RG).

<sup>b</sup> International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005; Vol 103, No. 7, pg 1457-1467.

<sup>c</sup> Classifications are shown for invasive cases only except as noted. For ICCC groups and subgroups that include *in situ* behavior, only invasive cases are shown except as noted.

<sup>d</sup> Group III and Group III subgroups include benign brain/CNS tumors.

Rates are per 1,000,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

Table 29.1 - continued

Age-Adjusted and Age-Specific SEER Cancer Incidence Rates, 2010-2014<sup>a</sup>  
 By International Classification of Childhood Cancer (ICCC)<sup>b</sup> Group and Subgroup<sup>c</sup> and Age at Diagnosis  
 Including myelodysplastic syndromes and Group III benign brain/CNS tumors  
 All Races, Males and Females

<u>ICCC Group and Subgroup</u>	<u>0-14</u>	<u>0-19</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>
VII Hepatic tumors	3.2	2.6	13.1	6.7	0.8	1.0	0.9
VII(a) Hepatoblastoma	2.7	2.0	12.9	6.4	-	-	-
VII(b) Hepatic carcinoma	0.5	0.5	-	-	-	0.8	0.8
VII(c) Unspecified malignant hepatic tumors	-	-	-	-	-	-	-
VIII Malignant bone tumors	7.5	9.0	-	2.0	6.2	14.3	13.6
VIII(a) Osteosarcoma	4.2	5.2	-	-	3.5	8.5	8.0
VIII(b) Chondrosarcoma	0.3	0.4	-	-	-	0.6	0.7
VIII(c) Ewing tumor and related sarcomas of bone	2.6	2.9	-	1.2	2.2	4.6	3.6
VIII(d) Other specified malignant bone tumors	0.3	0.4	-	-	-	-	0.8
VIII(e) Unspecified malignant bone tumors	-	0.2	-	-	-	-	0.5
IX Soft tissue and other extraosseous sarcomas	11.1	12.3	16.1	11.4	8.7	12.4	15.9
IX(a) Rhabdomyosarcoma	5.2	4.7	4.1	7.9	4.5	4.0	3.5
IX(b) Fibrosarcoma, peripheral nerve & other fibrous	1.0	1.1	4.2	-	0.7	0.9	1.6
IX(c) Kaposi sarcoma	-	-	-	-	-	-	-
IX(d) Other specified soft tissue sarcomas	3.9	5.1	5.1	2.1	2.8	6.1	8.5
IX(e) Unspecified soft-tissue sarcomas	1.1	1.4	-	0.8	0.7	1.4	2.2
X Germ cell & trophoblastic tumors & neoplasms of gonads	5.8	12.2	20.5	3.5	3.2	7.3	31.5
X(a) Intracranial and intraspinal germ-cell tumors	2.2	2.4	3.9	0.9	2.2	2.9	2.8
X(b) Extracranial & extragonadal germ cell tumors	1.4	1.5	13.6	1.4	-	-	1.9
X(c) Malignant gonadal germ cell tumors	2.4	8.0	4.2	1.7	1.2	3.8	24.5
X(d) Gonadal carcinomas	-	0.5	-	-	-	-	1.6
X(e) Other and unspecified malignant gonadal tumors	-	0.3	-	-	-	-	0.9
XI Other malignant epithelial neoplasms and melanomas <sup>d</sup>	8.0	19.7	-	1.8	4.7	17.1	54.4
XI(a) Adrenocortical carcinoma	0.3	0.3	-	-	-	-	-
XI(b) Thyroid carcinoma	3.4	9.8	-	-	1.5	8.3	28.9
XI(c) Nasopharyngeal carcinoma	0.3	0.5	-	-	-	0.6	1.3
XI(d) Malignant melanoma	1.9	4.0	-	1.0	1.7	3.0	10.1
XI(e) Skin carcinoma	-	-	-	-	-	-	-
XI(f) Other and unspecified carcinomas <sup>d</sup>	2.1	5.0	-	-	1.0	4.8	13.6
XII Other and unspecified malignant neoplasms	0.5	0.6	-	-	-	-	0.7
XII(a) Other specified malignant tumors	0.3	0.3	-	-	-	-	-
XII(b) Other unspecified malignant tumors	0.2	0.2	-	-	-	-	-
Not classified by ICC	0.3	0.4	-	-	-	-	-

<sup>a</sup> SEER 18 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 and Georgia excluding ATL/RG).

<sup>b</sup> International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005: Vol 103, No. 7, pg 1457-1467.

<sup>c</sup> Classifications are shown for invasive cases only except as noted. For ICC groups and subgroups that include *in situ* behavior, only invasive cases are shown except as noted.

<sup>d</sup> Includes *in situ* urinary bladder tumors.

Rates are per 1,000,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

Table 29.2

Age-Adjusted SEER Cancer Incidence Rates<sup>a</sup>  
 By International Classification of Childhood Cancer (ICCC)<sup>b</sup> Selected Group and Subgroup<sup>c</sup> and Year of Diagnosis  
 Excluding benign brain and myelodysplastic syndromes  
 All Races, Males and Females, Ages 0-19

<u>ICCC Group and Subgroup</u>	<u>1975-2014</u>	<u>1975-1984</u>	<u>1985-1994</u>	<u>1995-2004</u>	<u>2005-2014</u>
All ICCC Groups Combined	160.9	143.7	158.9	163.4	175.5
I Leukemia	39.4	34.9	37.9	40.8	43.2
I(a) Lymphoid leukemia	29.5	25.7	28.2	30.9	32.4
I(b) Acute myeloid leukemia	7.2	5.9	6.8	7.9	7.9
II Lymphomas and reticuloendothelial neoplasms	24.8	24.6	24.9	23.4	26.3
II(a) Hodgkin lymphoma	13.1	14.4	13.8	11.8	12.4
II(b,c,e) Non-Hodgkin lymphoma	11.2	9.5	10.4	11.2	13.4
III CNS & misc intracranial & intraspinal neoplasms	28.6	23.1	29.8	29.7	31.0
III(a) Ependymomas and choroid plexus tumor	2.4	1.8	2.5	2.5	2.8
III(b) Astrocytoma	14.5	11.7	15.6	14.5	15.9
III(c) Intracranial and intraspinal embryonal tumors	5.6	4.3	5.5	6.4	6.0
III(d) Other gliomas	5.2	4.4	5.1	5.6	5.5
IV Neuroblastoma and other peripheral nervous cell tumors	8.5	8.1	8.3	8.7	8.9
IV(a) Neuroblastoma and ganglioneuroblastoma	8.3	8.0	8.0	8.4	8.6
V Retinoblastoma	3.0	2.8	3.3	3.1	2.9
VI Renal tumors	6.7	6.5	7.0	6.5	6.6
VI(a) Nephroblastoma and other nonepithelial renal tumor	6.2	6.2	6.5	6.0	6.0
VII Hepatic tumors	1.9	1.3	1.6	2.2	2.5
VII(a) Hepatoblastoma	1.4	0.9	1.2	1.6	1.7
VIII Malignant bone tumors	8.6	8.2	9.1	8.4	8.9
VIII(a) Osteosarcoma	4.7	4.2	5.0	4.8	4.9
VIII(c) Ewing tumor and related sarcomas of bone	2.9	3.1	3.1	2.6	3.1
IX Soft tissue and other extraosseous sarcomas	11.6	10.4	10.9	12.2	12.7
IX(a) Rhabdomyosarcoma	4.5	4.1	4.7	4.7	4.5
X Germ cell & trophoblastic tumors & neoplasms of gonads	10.6	9.3	10.6	10.9	11.6
X(a) Intracranial and intraspinal germ-cell tumor	1.5	0.9	1.5	1.8	1.6
X(c) Malignant gonadal germ cell tumor	6.8	5.9	6.5	7.1	7.6
XI Other malignant epithelial neoplasms and melanomas <sup>d</sup>	16.6	13.7	15.0	17.0	20.4
XI(b) Thyroid carcinoma	6.4	4.9	5.2	6.2	9.1
XI(d) Malignant melanoma	5.1	3.9	5.2	5.8	5.3

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

Rates are per 1,000,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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<sup>c</sup> Classifications are shown for invasive cases only except as noted. For ICCC groups and subgroups that include *in situ* behavior, only invasive cases are shown except as noted.

<sup>d</sup> Includes *in situ* urinary bladder tumors.

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

Table 29.3

Age-Adjusted SEER Cancer Incidence Trends, 1975-2014<sup>a</sup>  
 By International Classification of Childhood Cancer (ICCC)<sup>b</sup> Selected Group and Subgroup<sup>c</sup>  
 Excluding benign brain and myelodysplastic syndromes  
 All Races, Males and Females

ICCC Group and Subgroup	Ages 0-14				Ages 0-19			
	% Change 1975-2014	APC 1975-2014	APC 1975-1994	APC 1995-2014	% Change 1975-2014	APC 1975-2014	APC 1975-1994	APC 1995-2014
All ICCC Groups Combined	37.6	0.6*	0.9*	0.6*	41.0	0.6*	0.9*	0.7*
I Leukemia	43.9	0.7*	0.7	0.5*	40.8	0.7*	0.7*	0.6*
I(a) Lymphoid leukemia	60.2	0.7*	0.8*	0.4	59.1	0.7*	0.9*	0.4
I(b) Acute myeloid leukemia	40.3	1.0*	1.3	0.2	24.8	1.0*	1.2	0.2
II Lymphomas and reticuloendothelial neo.	-0.7	0.3	-0.6	1.6* <sup>#</sup>	11.8	0.2	0.1	1.1* <sup>#</sup>
II(a) Hodgkin lymphoma	-33.3	-0.6*	-1.3*	0.8 <sup>#</sup>	-21.2	-0.5*	-0.4	0.4
II(b,c,e) Non-Hodgkin lymphoma	26.4	1.0*	0.0	2.2* <sup>#</sup>	64.5	1.2*	1.0*	1.8*
III CNS & misc intracranial & intraspinal neo.	51.1	0.8*	2.2*	0.4 <sup>#</sup>	59.0	0.8*	1.9*	0.5 <sup>#</sup>
III(a) Ependymomas and choroid plexus tumors	-	-	-	0.7	-	-	-	0.7
III(b) Astrocytoma	79.9	1.0*	3.1*	0.8 <sup>#</sup>	86.4	0.8*	2.5*	1.0* <sup>#</sup>
III(c) Intracranial and intraspinal embryonal tum.	119.4	0.8*	1.6	-0.7 <sup>#</sup>	147.7	0.9*	1.9*	-0.6 <sup>#</sup>
III(d) Other gliomas	-30.1	0.5	0.5	0.6	-24.2	0.6*	0.7	0.1
IV Neuroblastoma and other peripheral nervous cell tumors	-0.5	0.3	0.3	0.1	4.5	0.3	0.3	0.2
IV(a) Neuroblastoma and ganglioneuroblastoma	-2.2	0.3	0.3	0.1	-0.5	0.3	0.2	0.1
V Retinoblastoma	-18.5	0.0	1.7*	-0.8 <sup>#</sup>	-18.5	0.0	1.8*	-0.8 <sup>#</sup>
VI Renal tumors	70.2	0.0	1.1	0.1	59.9	0.1	1.2*	0.2
VI(a) Nephroblastoma and other nonepithelial renal tumors	72.2	-0.1	0.9	0.0	72.2	-0.1	1.0	0.0
VII Hepatic tumors	-	-	-	-	-	-	-	-
VII(a) Hepatoblastoma	-	-	-	-	-	-	-	-
VIII Malignant bone tumors	92.3	0.3	0.9	0.9	50.6	0.2	1.1*	0.5
VIII(a) Osteosarcoma	-	-	-	0.8	106.3	0.5	1.6*	0.3
VIII(c) Ewing tum. and related sarcomas of bone	81.8	-	-	-	20.4	-0.1	0.9	1.5
IX Soft tissue and other extrasosseous sarcomas	32.9	0.6*	0.6	0.5	47.0	0.6*	0.2	0.0
IX(a) Rhabdomyosarcoma	12.8	0.2	1.1	-0.3	23.7	0.2	1.0	-0.5
X Germ cell & trophoblastic tum. & neo. of gonads	20.0	0.9*	1.4	0.1	9.8	0.7*	1.6*	0.5
X(a) Intracranial and intraspinal germ-cell tum.	-	-	-	-	-	-	-	-
X(c) Malignant gonadal germ cell tumors	-11.0	-	-	-	32.1	0.8*	1.1	0.5
XI Other malignant epithelial neo. and melanomas <sup>d</sup>	94.8	1.4*	0.2	2.2* <sup>#</sup>	108.0	1.4*	0.7	2.2* <sup>#</sup>
XI(b) Thyroid carcinoma	201.6	-	-	-	242.8	2.3*	0.5	4.5* <sup>#</sup>
XI(d) Malignant melanoma	-	-	-	-	55.3	0.8*	1.7	-0.6 <sup>@</sup>

The APC is the Annual Percent Change over the time interval.

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

<sup>b</sup> International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005: Vol 103, No. 7, pg 1457-1467.

<sup>c</sup> Classifications are shown for invasive cases only except as noted. For ICCC groups and subgroups that include *in situ* behavior, only invasive cases are shown except as noted.

<sup>d</sup> Includes *in situ* urinary bladder tumors.

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

# The APC for 1995-2014 is significantly different from the APC for 1975-1994 (p<.05).

@ The APC for 1995-2014 is significantly different from the APC for 1975-1994 (p<.10).

- Statistic could not be calculated. Trend based on less than 10 cases for at least one year within the time interval.

Neoplasms are abbreviated as neo. Tumors are abbreviated as tum.

Table 29.4

Age-Adjusted SEER Cancer Incidence Trends, 1975-2014<sup>a</sup>  
 By International Classification of Childhood Cancer (ICCC)<sup>b</sup> Selected Group and Subgroup<sup>c</sup>  
 Excluding benign brain and myelodysplastic syndromes  
 All Races, Males

ICCC Group and Subgroup	Ages 0-14				Ages 0-19			
	% Change 1975-2014	APC 1975-2014	APC 1975-1994	APC 1995-2014	% Change 1975-2014	APC 1975-2014	APC 1975-1994	APC 1995-2014
All ICCG Groups Combined	26.5	0.6*	1.0*	0.4 <sup>#</sup>	32.4	0.6*	1.0*	0.5* <sup>#</sup>
I Leukemia	28.6	0.7*	0.6	0.3	27.7	0.6*	0.5	0.3
I(a) Lymphoid leukemia	45.4	0.7*	0.9	0.1	50.1	0.7*	0.9*	0.2
I(b) Acute myeloid leukemia	40.3	-	-	0.0	11.0	1.0*	0.4	-0.3
II Lymphomas and reticuloendothelial neo.	-8.1	0.1	-0.6	1.7* <sup>#</sup>	13.3	0.2	-0.1	1.3* <sup>#</sup>
II(a) Hodgkin lymphoma	-21.9	-	-	-	-15.7	-0.5*	-0.8	1.0 <sup>#</sup>
II(b,c,e) Non-Hodgkin lymphoma	1.4	0.6*	-0.1	1.8* <sup>#</sup>	50.3	0.9*	0.7	1.6*
III CNS & misc intracranial & intraspinal neo.	55.0	0.8*	2.5*	-0.1 <sup>#</sup>	53.6	0.7*	2.2*	0.1 <sup>#</sup>
III(a) Ependymomas and choroid plexus tumors	-	-	-	-	-	-	-	-
III(b) Astrocytoma	41.6	0.8*	3.1*	0.3 <sup>#</sup>	44.9	0.6*	2.5*	0.6 <sup>#</sup>
III(c) Intracranial and intraspinal embryonal tum.	-	-	-	-1.1	-	-	-	-1.0
III(d) Other gliomas	-16.1	-	-	-0.3	-8.0	-	-	-0.5
IV Neuroblastoma and other peripheral nervous cell tumors	-4.2	0.2	1.0	-0.3	6.5	0.3	1.1	-0.2
IV(a) Neuroblastoma and ganglioneuroblastoma	-7.8	0.2	0.9	-0.3	-4.0	0.2	0.9	-0.3
V Retinoblastoma	-	-	-	-	-	-	-	-
VI Renal tumors	59.6	-0.1	1.9*	-0.2 <sup>@</sup>	49.4	0.0	1.7*	-0.2
VI(a) Nephroblastoma and other nonepithelial renal tumors	68.1	-0.1	1.8*	-0.3 <sup>@</sup>	68.1	-0.1	1.7*	-0.3 <sup>@</sup>
VII Hepatic tumors	-	-	-	-	-	-	-	-
VII(a) Hepatoblastoma	-	-	-	-	-	-	-	-
VIII Malignant bone tumors	53.2	0.5	1.3	0.2	47.5	0.4	1.7*	0.0
VIII(a) Osteosarcoma	-	-	-	-	-	-	-	-0.8
VIII(c) Ewing tum. and related sarcomas of bone	-	-	-	-	3.8	-	-	-
IX Soft tissue and other extrasosseous sarcomas	59.7	0.7*	0.5	0.5	62.1	0.7*	0.5	0.2
IX(a) Rhabdomyosarcoma	46.0	-	-	-0.6	54.3	-	-	-0.3
X Germ cell & trophoblastic tum. & neo. of gonads	-	-	-	-	30.4	1.0*	1.8*	0.4
X(a) Intracranial and intraspinal germ-cell tum.	-	-	-	-	-	-	-	-
X(c) Malignant gonadal germ cell tum. (testis)	-	-	-	-	65.4	1.1*	1.1	1.0
XI Other malignant epithelial neo. and melanomas <sup>d</sup>	85.7	-	-	-	66.7	1.3*	1.0	2.0* <sup>#</sup>
XI(b) Thyroid carcinoma	-	-	-	-	-	-	-	-
XI(d) Malignant melanoma	-	-	-	-	21.3	-	-	-

The APC is the Annual Percent Change over the time interval.

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

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<sup>d</sup> Includes *in situ* urinary bladder tumors.

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

<sup>#</sup> The APC for 1995-2014 is significantly different from the APC for 1975-1994 (p<.05).

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Table 29.5

Age-Adjusted SEER Cancer Incidence Trends, 1975-2014<sup>a</sup>  
 By International Classification of Childhood Cancer (ICCC)<sup>b</sup> Selected Group and Subgroup<sup>c</sup>  
 Excluding benign brain and myelodysplastic syndromes  
 All Races, Females

ICCC Group and Subgroup	Ages 0-14				Ages 0-19			
	% Change 1975-2014	APC 1975-2014	APC 1975-1994	APC 1995-2014	% Change 1975-2014	APC 1975-2014	APC 1975-1994	APC 1995-2014
All ICCC Groups Combined	51.5	0.7*	0.8*	0.9*	51.1	0.6*	0.8*	1.0*
I Leukemia	67.9	0.6*	0.8	0.8*	61.1	0.7*	1.0*	0.8*
I(a) Lymphoid leukemia	81.8	0.8*	0.8	0.8*	72.1	0.8*	0.8	0.8*
I(b) Acute myeloid leukemia	40.2	0.7	1.5	0.5	42.9	0.9*	2.2*	0.9
II Lymphomas and reticuloendothelial neo.	13.9	0.5	-0.7	1.3* <sup>#</sup>	9.5	0.2	0.4	0.7
II(a) Hodgkin lymphoma	-	-	-	-	-28.1	-0.6*	0.0	-0.2
II(b,c,e) Non-Hodgkin lymphoma	99.2	-	-	-	94.4	1.7*	1.3	2.3*
III CNS & misc intracranial & intraspinal neo.	47.5	0.9*	1.8*	0.9	64.7	0.9*	1.5*	1.1*
III(a) Ependymomas and choroid plexus tumors	-	-	-	-	-	-	-	-
III(b) Astrocytoma	116.6	1.2*	3.1*	1.3	132.6	1.0*	2.5*	1.6*
III(c) Intracranial and intraspinal embryonal tum.	-	-	-	-	-	-	-	-0.1
III(d) Other gliomas	-42.8	-	-	-	-41.3	-	-	-
IV Neuroblastoma and other peripheral nervous cell tumors	2.6	0.4	-0.5	0.2	2.6	0.4	-0.7	0.3
IV(a) Neuroblastoma and ganglioneuroblastoma	2.6	0.4	-0.7	0.2	2.6	0.3	-0.8	0.2
V Retinoblastoma	-	-	-	-	-	-	-	-
VI Renal tumors	82.3	0.0	0.4	0.3	72.3	0.1	0.9	0.4
VI(a) Nephroblastoma and other nonepithelial renal tumors	76.3	-0.1	0.2	0.2	76.3	-0.1	0.4	0.2
VII Hepatic tumors	-	-	-	-	-	-	-	-
VII(a) Hepatoblastoma	-	-	-	-	-	-	-	-
VIII Malignant bone tumors	147.9	-	0.9	-	54.3	-0.2	0.3	1.2
VIII(a) Osteosarcoma	-	-	-	-	83.1	0.3	0.9	1.9
VIII(c) Ewing tum. and related sarcomas of bone	-	-	-	-	-	-	-	-
IX Soft tissue and other extrasosseous sarcomas	2.8	0.5*	0.8	0.5	29.8	0.5	0.0	-0.3
IX(a) Rhabdomyosarcoma	-	-	-	-	-12.7	-	-	-
X Germ cell & trophoblastic tum. & neo. of gonads	81.3	-	-	1.3	-7.2	0.3	1.1	0.8
X(a) Intracranial and intraspinal germ-cell tum.	-	-	-	-	-	-	-	-
X(c) Malignant gonadal germ cell tum. (ovary)	-	-	-	-	-5.1	-	-	-0.4
XI Other malignant epithelial neo. and melanomas <sup>d</sup>	101.6	-	-	1.7*	132.4	1.5*	0.5	2.4* <sup>#</sup>
XI(b) Thyroid carcinoma	-	-	-	-	279.3	2.4*	0.8	4.4* <sup>#</sup>
XI(d) Malignant melanoma	-	-	-	-	93.0	-	-	-0.7

The APC is the Annual Percent Change over the time interval.

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

<sup>b</sup> International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005: Vol 103, No. 7, pg 1457-1467.

<sup>c</sup> Classifications are shown for invasive cases only except as noted. For ICCC groups and subgroups that include *in situ* behavior, only invasive cases are shown except as noted.

<sup>d</sup> Includes *in situ* urinary bladder tumors.

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

# The APC for 1995-2014 is significantly different from the APC for 1975-1994 (p<.05).

@ The APC for 1995-2014 is significantly different from the APC for 1975-1994 (p<.10).

- Statistic could not be calculated. Trend based on less than 10 cases for at least one year within the time interval.

Neoplasms are abbreviated as neo. Tumors are abbreviated as tum.

Table 29.6

5-Year Relative Survival (Percent), 2007-2013<sup>a</sup>By International Classification of Childhood Cancer (ICCC)<sup>b</sup> Selected Group and Subgroup<sup>c</sup> and Sex and Age  
Excluding benign brain and myelodysplastic syndromes

ICCC Group & Subgroup	Ages 0-19 by Sex			Both Sexes by Age					
	Total	Male	Female	<1	1-4	5-9	10-14	15-19	0-14
All ICCC Groups Combined	83.4	82.3	84.7	79.2	84.7	82.7	82.6	84.2	83.0
I Leukemia	83.5	83.4	83.6	61.9	90.5	89.6	78.6	71.5	86.1
I(a) Lymphoid leukemia	88.3	87.8	88.9	61.6	94.1	92.7	82.5	74.2	90.5
I(b) Acute myeloid leukemia	64.0	63.8	64.2	62.1	68.1	67.3	61.7	61.5	65.1
II Lymphomas and reticuloendothelial neo.	93.1	92.8	93.4	81.0 <sup>d</sup>	92.2	94.0	93.4	92.9	93.2
II(a) Hodgkin lymphoma	96.6	96.3	97.0	-	94.5 <sup>d</sup>	98.2	97.6	96.1	97.6
II(b,c,e) Non-Hodgkin lymphoma	89.2	89.8	88.0	-	91.3	92.1	89.6	87.1	90.6
III CNS & misc intracranial & intraspinal neo.	73.7	72.8	74.6	61.9	73.0	69.3	78.9	78.9	72.5
III(a) Ependymomas and choroid plexus tumor	75.8	75.1	76.5	61.1 <sup>e</sup>	72.4	76.6 <sup>d</sup>	83.8 <sup>d</sup>	85.2 <sup>d</sup>	74.2
III(b) Astrocytoma	82.1	80.7	83.5	87.0	90.2	78.8	80.9	77.3	83.3
III(c) Intracranial and intraspinal embryonal tumors	63.9	62.3	66.3	31.1 <sup>d</sup>	57.8	70.9	76.7	72.6	62.8
III(d) Other gliomas	59.6	64.8	54.3	-	49.8	41.7	72.6	83.7	53.6
IV Neuroblastoma and other peripheral nervous cell tumors	78.5	76.8	80.6	93.1	72.6	70.5	80.5 <sup>d</sup>	62.8 <sup>d</sup>	79.0
IV(a) Neuroblastoma and ganglioneuroblastoma	78.6	76.9	80.5	93.1	72.6	70.0	81.4 <sup>d</sup>	-	79.0
V Retinoblastoma	95.2	94.4	96.0	96.9	93.3	-	-	-	95.2
VI Renal tumors	90.5	88.0	92.7	93.7	93.0	89.8	81.1 <sup>d</sup>	72.7 <sup>d</sup>	91.8
VI(a) Nephroblastoma and other nonepithelial renal tumor	92.4	90.5	94.2	93.7	93.2	91.3	87.3 <sup>d</sup>	-	92.7
VII Hepatic tumors	75.0	73.8	77.1	88.7	82.7	64.8 <sup>d</sup>	44.5 <sup>e</sup>	50.9 <sup>d</sup>	79.0
VII(a) Hepatoblastoma	84.2	82.0	87.9	88.4	82.7	-	-	-	84.5
VIII Malignant bone tumors	71.5	70.5	72.9	-	78.5 <sup>d</sup>	77.2	72.2	67.9	73.9
VIII(a) Osteosarcoma	68.0	66.7	69.8	-	-	72.3	69.1	65.5	69.8
VIII(c) Ewing tumor and related sarcomas of bone	72.0	70.4	74.9	-	94.5	81.1	72.8	61.5	77.7
IX Soft tissue and other extraosseous sarcomas	72.4	70.5	74.8	66.1	76.0	78.1	73.9	68.2	74.6
IX(a) Rhabdomyosarcoma	65.4	65.4	65.4	60.9 <sup>d</sup>	71.6	77.9	60.3	45.9	69.8
X Germ cell & trophoblastic tumors & neo. of gonads	92.1	92.3	91.9	87.6	91.8	99.1	92.4	92.0	92.4
X(a) Intracranial and intraspinal germ-cell tumor	88.8	89.5	86.5	-	-	98.5	89.6	88.5	89.0
X(c) Malignant gonadal germ cell tumor	96.5	95.9	97.7	100.0	98.4	100.0	98.8	95.6	99.1
XI Other malignant epithelial neo. and melanomas <sup>f</sup>	92.1	87.2	94.4	-	93.9	91.9	93.0	92.0	92.5
XI(b) Thyroid carcinoma	99.5	99.2	99.5	-	-	97.8	99.7	99.5	99.4
XI(d) Malignant melanoma	93.7	91.2	95.5	-	91.6 <sup>d</sup>	96.1	94.6	94.0	93.3

<sup>a</sup> SEER 18 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 and Georgia excluding ATL/RG).

Based on follow-up of patients into 2014.

<sup>b</sup> International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005: Vol 103, No. 7, pg 1457-1467.

<sup>c</sup> Classifications are shown for invasive cases only. For ICCC groups and subgroups that include *in situ* behavior, only invasive cases are shown except as noted.

<sup>d</sup> The standard error is between 5 and 10 percentage points.

<sup>e</sup> The standard error is greater than 10 percentage points.

<sup>f</sup> Includes *in situ* urinary bladder tumors.

- Statistic could not be calculated due to fewer than 25 cases during the time period.  
Neoplasms are abbreviated as neo.

Table 29.7  
U.S. Childhood Cancer Survivors at January 1, 2014  
Number of People Previously Diagnosed with Cancer as Children (Ages 0-19 Years) in the United States and Alive January 1, 2014  
By International Classification of Childhood Cancer (ICCC)<sup>a</sup> Selected Group and Subgroup, Age Group, and Sex

Site	Sex	Complete Prevalence Counts by Age at Prevalence							All Ages		
		0-19	20-29	30-39	40-49	50-59	60+	All Ages	Diagnosed between 1975-2013	Diagnosed before 1975	% <sup>b</sup>
									Count	Count	% <sup>b</sup>
All Sites	Both	117,572	103,558	70,818	56,108	45,829	25,461	419,346	348,520	70,826	17
	Male	62,560	54,527	35,264	25,960	19,059	12,162	209,532	179,151	30,381	14
	Female <sup>c</sup>	55,012	49,031	35,554	30,148	26,770	13,299	209,814	169,369	40,445	19
I Leukemia	Both	37,029	23,282	13,980	7,126	2,678	487	84,582	80,028	4,554	5
	Male	20,271	12,628	7,085	3,640	1,257	206	45,087	43,121	1,966	4
	Female	16,758	10,654	6,895	3,486	1,421	281	39,495	36,907	2,588	7
Acute lymphocytic leukemia <sup>d</sup>	Both	31,024	19,100	11,726	6,347	1,433	38	69,668	66,335	3,333	5
	Male	16,816	10,542	6,044	3,447	800	21	37,670	35,955	1,715	5
	Female	14,208	8,558	5,682	2,900	633	17	31,998	30,380	1,618	5
I(b) Acute myeloid leukemia	Both	4,327	2,918	1,349	1,024	900	622	11,140	9,352	1,788	16
	Male	2,305	1,417	589	462	439	326	5,538	4,665	873	16
	Female	2,022	1,501	760	562	461	296	5,602	4,687	915	16
II(a) Hodgkin lymphoma	Both	4,737	9,479	8,166	7,675	5,983	2,305	38,345	33,108	5,237	14
	Male	2,525	5,045	3,920	3,982	2,884	1,189	19,545	16,765	2,780	14
	Female	2,212	4,434	4,246	3,693	3,099	1,116	18,800	16,343	2,457	13
II(b,c,e) Non-Hodgkin lymphoma	Both	7,021	8,051	5,152	3,627	2,187	1,694	27,732	24,083	3,649	13
	Male	4,910	5,212	3,487	2,405	1,142	969	18,125	16,150	1,975	11
	Female	2,111	2,839	1,665	1,222	1,045	725	9,607	7,933	1,674	17
III CNS and misc intracranial & intraspinal neoplasms	Both	21,595	16,114	10,255	8,405	6,353	2,709	65,431	54,568	10,863	17
	Male	11,466	8,866	5,666	4,196	2,926	1,217	34,337	29,386	4,951	14
	Female	10,129	7,248	4,589	4,209	3,427	1,492	31,094	25,182	5,912	19
IV Neuroblastoma & other peripheral nervous cell tumor	Both	9,904	4,373	2,740	1,815	1,731	1,272	21,835	17,429	4,406	20
	Male	4,927	2,328	1,308	643	604	280	10,090	8,726	1,364	14
	Female	4,977	2,045	1,432	1,172	1,127	992	11,745	8,703	3,042	26
VI Renal tumors	Both	7,618	5,146	3,937	4,403	3,447	1,488	26,039	17,533	8,506	33
	Male	3,634	2,468	1,746	2,454	1,868	873	13,043	8,195	4,848	37
	Female	3,984	2,678	2,191	1,949	1,579	615	12,996	9,338	3,658	28
VIII Malignant bone tumors	Both	3,856	4,635	3,441	2,576	2,607	1,484	18,599	15,029	3,570	19
	Male	2,266	2,662	1,925	1,366	1,139	758	10,116	8,469	1,647	16
	Female	1,590	1,973	1,516	1,210	1,468	726	8,483	6,560	1,923	23
VIII(a) Osteosarcoma	Both	2,048	2,585	1,772	1,440	1,323	1,077	10,245	8,163	2,082	20
	Male	1,144	1,396	1,022	762	574	509	5,407	4,464	943	17
	Female	904	1,189	750	678	749	568	4,838	3,699	1,139	24
VIII(c) Ewing tumor & related sarcomas of bone	Both	1,487	1,482	1,115	692	450	258	5,484	4,876	608	11
	Male	902	901	564	321	193	102	2,983	2,761	222	7
	Female	585	581	551	371	257	156	2,501	2,115	386	15
IX Soft tissue & other extraosseous sarcomas	Both	7,192	7,049	4,903	4,621	5,041	6,240	35,046	23,759	11,287	32
	Male	3,948	3,773	2,527	2,339	2,432	3,514	18,533	12,577	5,956	32
	Female	3,244	3,276	2,376	2,282	2,609	2,726	16,513	11,182	5,331	32
X Germ cell & trophoblastic tumors & neoplasms of gonads	Both	5,236	8,494	5,893	6,021	7,021	8,755	41,420	26,988	14,432	35
	Male	2,669	5,564	3,643	3,254	3,442	3,897	22,469	15,983	6,486	29
	Female	2,567	2,930	2,250	2,767	3,579	4,858	18,951	11,005	7,946	42

<sup>a</sup> International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005: Vol 103, No. 7, pg 1457-1467.

<sup>b</sup> Percent diagnosed before 1975 of all ages complete prevalence counts.

<sup>c</sup> All sites females excludes breast cancer.

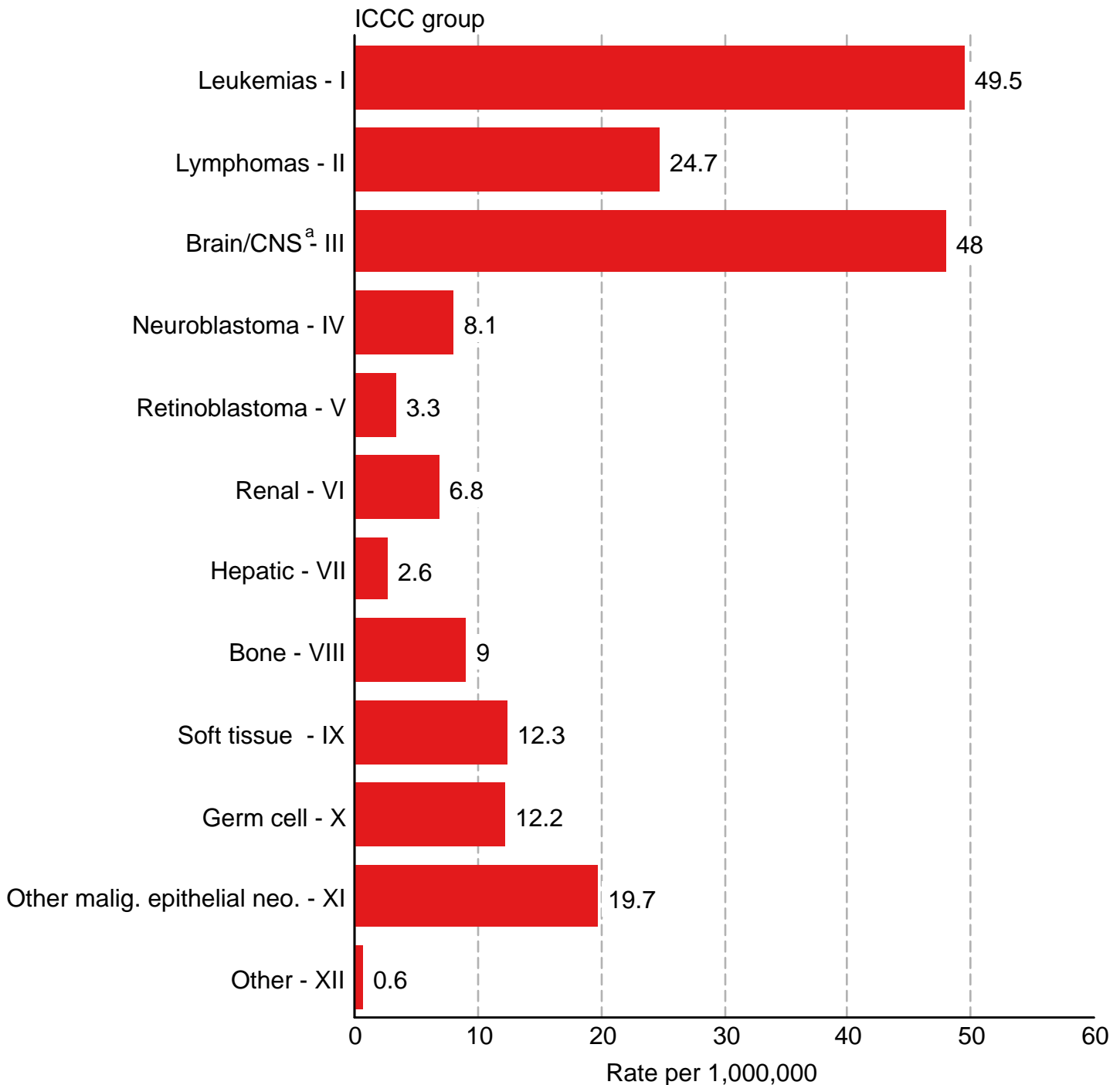
<sup>d</sup> SEER site recode Acute Lymphocytic Leukemia was used instead of the ICCC classification lymphocytic leukemia (Ia) because of statistical modeling requirements.

For more information regarding the modeling of the prevalence estimates, see Mariotto et al. Long-Term Survivors of Childhood Cancers in the United States. Cancer Epidemiol Biomarkers Prev 2009, page 1034.



Figure 29.1

## Childhood Cancer : SEER Incidence Rates 2010-2014 by ICCC Group (includes myelodysplastic syndromes and Group III benign brain) Under 20 Years of Age, Both Sexes, All Races



Source: SEER 18 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 and Georgia excluding ATL/RG).

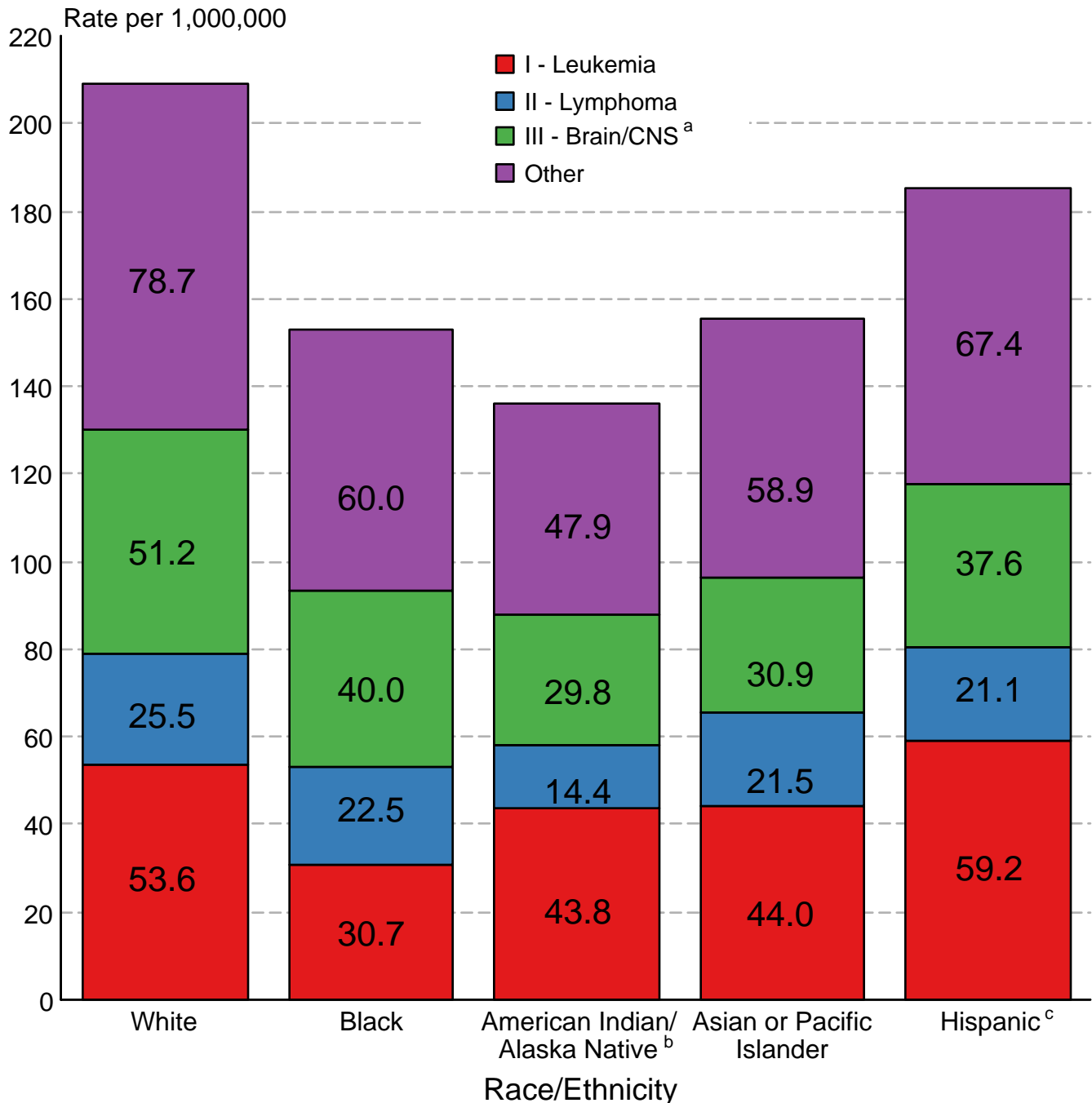
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005; Vol 103, No. 7, pg 1457-1467.

<sup>a</sup> Rate for Group III (Brain/CNS) includes benign brain tumors.

Figure 29.2

## Childhood Cancer: SEER Incidence Rates 2010- 2014 by ICCC Group and Race/Ethnicity (includes myelodysplastic syndromes and Group III benign brain) Both Sexes, Under 20 Years of Age



Source: SEER 18 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 and Georgia excluding ATL/RG). Incidence rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005; Vol 103, No. 7, pg 1457-1467.

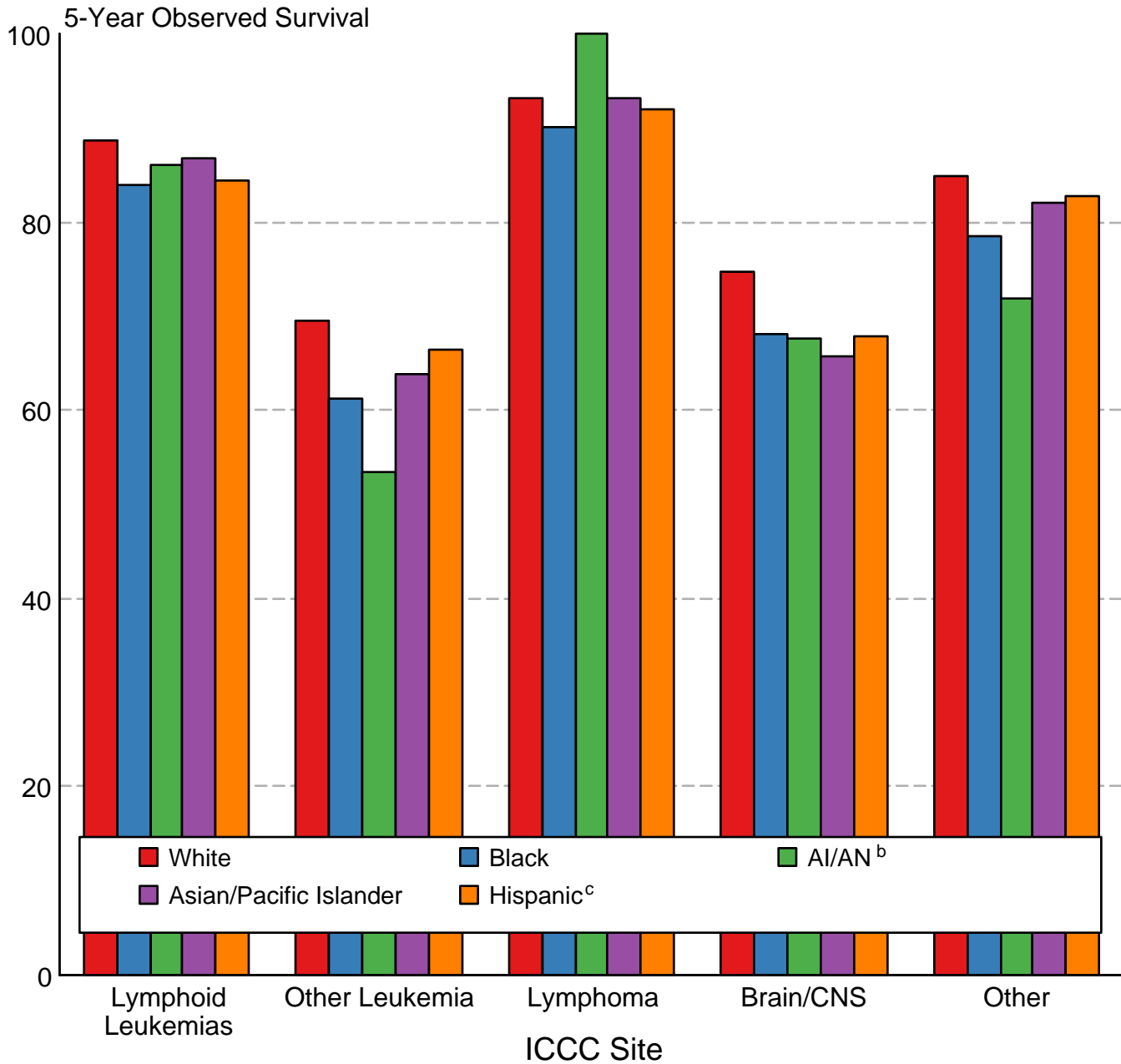
<sup>a</sup> Rate for Group III (Brain/CNS) includes benign brain tumors.

<sup>b</sup> Incidence rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

<sup>c</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

Figure 29.3

## Childhood Cancer 5-Year Observed Survival (%) by ICCC Group<sup>a</sup> and Race/Ethnicity Both Sexes, Under 20 Years of Age, 2007-2013



Source: SEER 18 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 and Georgia excluding ATL/RG).

International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005; Vol 103, No. 7, pg 1457-1467.

<sup>a</sup> Excludes myelodysplastic syndromes (MDS) and benign brain tumors.

<sup>b</sup> American Indian/Alaska Native. Survival data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>c</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Survival data for Hispanics are based on NHIA and excludes cases from the Alaska Native Registry.