

Table 29.1

Age-Adjusted and Age-Specific SEER Cancer Incidence Rates, 2002-2006^a

By International Classification of Childhood Cancer (ICCC)^b Group and Subgroup^c and Age
Including Group III benign brain/CNS tumors (2004+) and myelodysplastic syndromes (2002-2006)
All Races, Males and Females

| <u>ICCC Group and Subgroup</u> | <u>0-14</u> | <u>0-19</u> | <u><1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> |
|---|-------------|-------------|--------------|------------|------------|--------------|--------------|
| All ICCC Groups Combined | | | | | | | |
| Excluding benign brain (2002-2006) | 151.9 | 167.2 | 241.1 | 209.8 | 112.1 | 130.7 | 212.9 |
| Including Group III benign brain/CNS tumors (2004+) | 163.4 | 180.5 | 250.7 | 217.9 | 122.0 | 146.8 | 231.4 |
| I Leukemia (includes myelodysplastic syndromes) | 51.8 | 47.1 | 53.0 | 92.7 | 40.7 | 31.7 | 33.0 |
| I(a) Lymphoid leukemia | 39.9 | 34.4 | 19.7 | 77.8 | 33.4 | 21.4 | 17.9 |
| I(b) Acute myeloid leukemia | 8.1 | 8.5 | 20.5 | 10.5 | 4.4 | 7.6 | 9.8 |
| I(c) Chronic myeloproliferative diseases | 1.0 | 1.5 | - | - | 0.8 | 1.2 | 3.0 |
| I(d) Myelodysplastic syndrome and other myeloproliferative | 1.7 | 1.6 | 6.4 | 2.4 | 1.1 | 0.7 | 1.3 |
| I(e) Unspecified and other specified leukemias | 1.2 | 1.2 | 3.8 | 1.5 | 1.0 | 0.7 | 1.1 |
| II Lymphomas and reticuloendothelial neo. | 15.4 | 23.6 | 8.0 | 8.7 | 13.3 | 24.0 | 47.9 |
| II(a) Hodgkin lymphoma | 5.7 | 11.6 | - | - | 4.5 | 11.7 | 29.0 |
| II(b) Non-Hodgkin lymphoma (except Burkitt lymphoma) | 6.2 | 8.5 | - | 3.9 | 5.2 | 9.7 | 15.4 |
| II(c) Burkitt lymphoma | 2.3 | 2.4 | - | 1.9 | 3.1 | 2.3 | 2.5 |
| II(d) Miscellaneous lymphoreticular neo. | 1.1 | 0.9 | 6.4 | 2.0 | - | - | - |
| II(e) Unspecified lymphomas | - | 0.2 | - | - | - | - | 0.7 |
| III CNS and misc intracranial and intraspinal neo. (2004+ only) | 39.9 | 40.5 | 40.3 | 46.8 | 38.7 | 35.8 | 42.1 |
| III(a) Ependymomas and choroid plexus tumor | 4.6 | 4.3 | 10.9 | 6.2 | 3.7 | 3.0 | 3.7 |
| III(b) Astrocytoma | 14.6 | 14.0 | 11.2 | 17.7 | 13.9 | 13.7 | 12.1 |
| III(c) Intracranial and intraspinal embryonal tumors | 6.9 | 5.9 | 10.0 | 11.6 | 6.3 | 3.4 | 2.8 |
| III(d) Other gliomas | 5.3 | 5.0 | - | 4.3 | 7.2 | 4.8 | 4.1 |
| III(e) Other specified intracranial/intraspinal neo. | 7.5 | 10.2 | - | 6.0 | 7.0 | 9.8 | 18.3 |
| III(f) Unspecified intracranial and intraspinal neo. | 1.0 | 1.0 | - | - | - | 1.1 | 1.2 |
| IV Neuroblastoma and other peripheral nervous cell tumor | 9.9 | 7.6 | 52.3 | 19.2 | 2.9 | 1.8 | 0.8 |
| IV(a) Neuroblastoma and ganglioneuroblastoma | 9.8 | 7.4 | 52.1 | 19.1 | 2.9 | 1.6 | - |
| IV(b) Other peripheral nervous cell tumors | - | 0.2 | - | - | - | - | - |
| V Retinoblastoma | 4.1 | 3.1 | 25.6 | 8.9 | - | - | - |
| VI Renal tumors | 7.4 | 5.9 | 14.8 | 18.3 | 4.1 | 1.0 | 1.5 |
| VI(a) Nephroblastoma and other nonepithelial renal tumor | 7.1 | 5.4 | 14.8 | 18.1 | 3.9 | - | - |
| VI(b) Renal carcinoma | 0.3 | 0.5 | - | - | - | - | 1.1 |
| VI(c) Unspecified malignant renal tumors | - | - | - | - | - | - | - |

^a SEER 17 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 and New Jersey).

^b 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.

^c 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.

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.

Neoplasms are abbreviated as neo.

Table 29.1 - continued

Age-Adjusted and Age-Specific SEER Cancer Incidence Rates, 2002-2006^a

By International Classification of Childhood Cancer (ICCC)^b Group and Subgroup^c and Age
Including Group III benign brain/CNS tumors (2004+) and myelodysplastic syndromes (2002-2006)
All Races, Males and Females

| ICCC Group and Subgroup | 0-14 | 0-19 | <1 | 1-4 | 5-9 | 10-14 | 15-19 |
|--|------|------|------|------|-----|-------|-------|
| VII Hepatic tumors | 2.5 | 2.1 | 12.2 | 4.5 | 0.6 | 0.9 | 1.2 |
| VII(a) Hepatoblastoma | 2.0 | 1.5 | 11.9 | 4.4 | - | - | - |
| VII(b) Hepatic carcinoma | 0.4 | 0.6 | - | - | - | 0.7 | 1.1 |
| VII(c) Unspecified malignant hepatic tumors | - | - | - | - | - | - | - |
| VIII Malignant bone tumors | 6.8 | 8.9 | - | 1.5 | 5.7 | 13.2 | 15.2 |
| VIII(a) Osteosarcoma | 4.0 | 5.2 | - | - | 3.1 | 8.5 | 8.9 |
| VIII(b) Chondrosarcoma | 0.2 | 0.3 | - | - | - | - | 0.7 |
| VIII(c) Ewing tumor and related sarcomas of bone | 2.2 | 2.7 | - | 1.1 | 1.9 | 3.6 | 4.1 |
| VIII(d) Other specified malignant bone tumors | 0.3 | 0.6 | - | - | - | - | 1.2 |
| VIII(e) Unspecified malignant bone tumors | - | - | - | - | - | - | - |
| IX Soft tissue and other extraosseous sarcomas | 10.7 | 12.1 | 19.0 | 10.7 | 7.4 | 12.4 | 16.4 |
| IX(a) Rhabdomyosarcoma | 5.2 | 4.8 | 6.0 | 8.1 | 4.1 | 4.0 | 3.4 |
| IX(b) Fibrosarcoma, peripheral nerve & other fibrous | 1.3 | 1.4 | 6.2 | - | 0.7 | 1.5 | 1.8 |
| IX(c) Kaposi sarcoma | - | - | - | - | - | - | - |
| IX(d) Other specified soft tissue sarcomas | 3.4 | 5.0 | 5.5 | 1.7 | 2.2 | 5.5 | 9.7 |
| IX(e) Unspecified soft-tissue sarcomas | 0.8 | 0.9 | - | - | - | 1.4 | 1.5 |
| X Germ cell & trophoblastic tumors & neo. of gonads | 5.8 | 11.6 | 21.4 | 3.1 | 2.4 | 8.2 | 29.0 |
| X(a) Intracranial and intraspinal germ-cell tumors | 1.6 | 1.9 | - | - | 0.8 | 3.2 | 2.8 |
| X(b) Extracranial & extragonadal germ cell tumors | 1.6 | 1.7 | 15.5 | 1.6 | - | - | 1.9 |
| X(c) Malignant gonadal germ cell tumors | 2.4 | 7.5 | 3.5 | 1.4 | 1.4 | 4.1 | 22.4 |
| X(d) Gonadal carcinomas | - | 0.4 | - | - | - | - | 1.4 |
| X(e) Other and unspecified malignant gonadal tumors | - | 0.2 | - | - | - | - | - |
| XI Other malignant epithelial neo. and melanomas | 6.1 | 16.1 | - | 1.9 | 3.5 | 13.0 | 45.9 |
| XI(a) Adrenocortical carcinoma | - | 0.2 | - | - | - | - | - |
| XI(b) Thyroid carcinoma | 2.0 | 5.9 | - | - | 1.2 | 4.6 | 17.6 |
| XI(c) Nasopharyngeal carcinoma | 0.3 | 0.5 | - | - | - | 0.8 | 1.3 |
| XI(d) Malignant melanoma | 2.2 | 5.9 | - | 1.0 | 1.7 | 4.1 | 16.9 |
| XI(e) Skin carcinoma | - | - | - | - | - | - | - |
| XI(f) Other and unspecified carcinomas | 1.3 | 3.4 | - | - | - | 3.3 | 9.7 |
| XII Other and unspecified malignant neo. | 0.4 | 0.6 | - | - | - | 0.6 | 1.0 |
| XII(a) Other specified malignant tumors | 0.3 | 0.4 | - | - | - | - | 0.7 |
| XII(b) Other unspecified malignant tumors | - | 0.2 | - | - | - | - | - |
| Not classified by ICCC | 0.4 | 0.6 | - | - | - | - | 1.4 |

- ^a SEER 17 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 and New Jersey).
- ^b 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.
- ^c 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.
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.
Neoplasms are abbreviated as neo.

Table 29.2

Age-Adjusted SEER Cancer Incidence Rates, 1975-2006, 1975-1982, 1983-1990, 1991-1998, 1999-2006^a

By International Classification of Childhood Cancer (ICCC)^b Selected Group and Subgroup^c 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>1975-2006</u> | <u>1975-1982</u> | <u>1983-1990</u> | <u>1991-1998</u> | <u>1999-2006</u> |
|---|------------------|------------------|------------------|------------------|------------------|
| All ICCC Groups Combined | 155.5 | 141.7 | 155.6 | 159.5 | 163.9 |
| I Leukemia | 38.3 | 34.3 | 38.2 | 38.3 | 41.8 |
| I(a) Lymphoid leukemia | 28.6 | 25.0 | 28.9 | 28.9 | 31.0 |
| I(b) Acute myeloid leukemia | 7.0 | 5.9 | 6.3 | 7.3 | 8.2 |
| II Lymphomas and reticuloendothelial neo. | 24.1 | 24.3 | 25.0 | 24.2 | 23.0 |
| II(a) Hodgkin lymphoma | 13.0 | 14.3 | 14.2 | 13.0 | 10.8 |
| II(b,c,e) Non-Hodgkin lymphoma | 10.5 | 9.3 | 10.2 | 10.7 | 11.8 |
| III CNS & misc intracranial & intraspinal neo. | 27.4 | 23.1 | 27.9 | 28.7 | 29.4 |
| III(a) Ependymomas and choroid plexus tumor | 2.3 | 1.9 | 2.4 | 2.4 | 2.5 |
| III(b) Astrocytoma | 13.8 | 11.3 | 15.0 | 14.2 | 14.5 |
| III(c) Intracranial and intraspinal embryonal tumors | 5.5 | 4.4 | 4.9 | 6.1 | 6.3 |
| III(d) Other gliomas | 5.0 | 4.6 | 4.6 | 5.2 | 5.6 |
| IV Neuroblastoma and other peripheral nervous cell tumors | 8.4 | 8.1 | 8.2 | 8.7 | 8.7 |
| IV(a) Neuroblastoma and ganglioneuroblastoma | 8.2 | 7.9 | 7.9 | 8.4 | 8.4 |
| V Retinoblastoma | 3.1 | 2.7 | 3.1 | 3.3 | 3.1 |
| VI Renal tumors | 6.7 | 6.4 | 6.7 | 7.2 | 6.3 |
| VI(a) Nephroblastoma and other nonepithelial renal tumor | 6.2 | 6.0 | 6.4 | 6.6 | 5.7 |
| VII Hepatic tumors | 1.8 | 1.1 | 1.6 | 2.0 | 2.2 |
| VII(a) Hepatoblastoma | 1.3 | 0.7 | 1.2 | 1.4 | 1.6 |
| VIII Malignant bone tumors | 8.5 | 8.1 | 8.8 | 9.1 | 8.0 |
| VIII(a) Osteosarcoma | 4.6 | 4.1 | 4.9 | 5.1 | 4.3 |
| VIII(c) Ewing tumor and related sarcomas of bone | 2.9 | 3.0 | 3.0 | 3.0 | 2.6 |
| IX Soft tissue and other extrasosseous sarcomas | 11.3 | 10.2 | 11.3 | 11.1 | 12.4 |
| IX(a) Rhabdomyosarcoma | 4.5 | 4.1 | 4.8 | 4.5 | 4.7 |
| X Germ cell & trophoblastic tumors & neo. of gonads | 10.3 | 9.1 | 9.8 | 11.1 | 11.2 |
| X(a) Intracranial and intraspinal germ-cell tumor | 1.4 | 1.0 | 1.0 | 1.9 | 1.7 |
| X(c) Malignant gonadal germ cell tumor | 6.5 | 5.7 | 6.3 | 6.8 | 7.2 |
| XI Other malignant epithelial neo. and melanomas | 15.1 | 13.5 | 14.2 | 15.1 | 17.3 |
| XI(b) Thyroid carcinoma | 5.4 | 4.7 | 5.3 | 5.3 | 6.2 |
| XI(d) Malignant melanoma | 5.1 | 4.1 | 4.7 | 5.0 | 6.3 |

^a 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).

^b International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P.

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^c 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.

- Statistic could not be calculated. Rate based on less than 16 cases for the time interval. Neoplasms are abbreviated as neo.

Table 29.3

Age-Adjusted SEER Cancer Incidence Trends, 1975-2006, 1975-1990, 1991-2006^a

By International Classification of Childhood Cancer (ICCC)^b Selected Group and Subgroup^c
 Excluding benign brain and myelodysplastic syndromes
 All Races, Males and Females

| ICCC Group and Subgroup | Ages 0-14 | | | | Ages 0-19 | | | |
|---|-----------------------|------------------|------------------|-------------------|-----------------------|------------------|------------------|--------------------|
| | % Change 1975-2006 | APC 1975-2006 | APC 1975-1990 | APC 1991-2006 | % Change 1975-2006 | APC 1975-2006 | APC 1975-1990 | APC 1991-2006 |
| All ICCG Groups Combined | 21.6 | 0.6* | 1.1* | 0.3 [®] | 18.5 | 0.6* | 1.1* | 0.2 [#] |
| I Leukemia | 36.8 | 0.7* | 1.4* | 0.9* | 33.0 | 0.7* | 1.2* | 1.0* |
| I(a) Lymphoid leukemia | 48.8 | 0.8* | 1.8* | 0.8 | 51.2 | 0.8* | 1.8* | 1.0* |
| I(b) Acute myeloid leukemia | 63.3 | 1.4* | 1.2 | 1.2 | 37.2 | 1.3* | 0.6 | 1.0 |
| II Lymphomas and reticuloendothelial neo. | -9.4 | -0.2 | -0.6 | 0.7 [®] | -10.1 | -0.2 | 0.2 | -0.5 |
| II(a) Hodgkin lymphoma | -0.7 | -1.1* | -0.6 | 0.0 | -28.0 | -1.1* | -0.2 | -2.0* [#] |
| II(b,c,e) Non-Hodgkin lymphoma | -14.8 | 0.5 | -0.3 | 1.2 | 16.9 | 0.9* | 0.8 | 1.2 |
| III CNS & misc intracranial & intraspinal neo. | 27.8 | 0.9* | 2.6* | -0.3 [#] | 23.0 | 0.8* | 2.3* | -0.3 [#] |
| III(a) Ependymomas and choroid plexus tumors | - | - | - | -0.3 | - | - | - | 0.2 |
| III(b) Astrocytoma | 19.7 | 1.0* | 3.9* | -0.5 [#] | 13.5 | 0.7* | 3.4* | -0.5 [#] |
| III(c) Intracranial and intraspinal embryonal tum. | 164.7 | 1.2* | 1.3 | -0.3 | 178.5 | 1.4* | 1.3 | -0.2 |
| III(d) Other gliomas | -13.3 | 0.5 | -0.6 | 0.3 | -14.7 | 0.7 | -0.7 | -0.1 |
| IV Neuroblastoma and other peripheral nervous cell tumors | -0.8 | 0.4 | -0.1 | 0.4 | -0.7 | 0.4 | 0.1 | 0.4 |
| IV(a) Neuroblastoma and ganglioneuroblastoma | -0.8 | 0.5 | -0.3 | 0.5 | -2.3 | 0.4 | -0.2 | 0.5 |
| V Retinoblastoma | 7.9 | 0.5 | 1.1 | -0.8 | 7.9 | 0.5 | 1.2 | -0.9 |
| VI Renal tumors | 1.2 | -0.1 | 0.8 | -1.6 [®] | 1.2 | 0.1 | 0.7 | -1.5 |
| VI(a) Nephroblastoma and other nonepithelial renal tumors | 7.7 | -0.2 | 0.8 | -1.6 [®] | 10.6 | -0.2 | 0.8 | -1.7 [®] |
| VII Hepatic tumors | - | - | - | - | - | - | - | - |
| VII(a) Hepatoblastoma | - | - | - | - | - | - | - | - |
| VIII Malignant bone tumors | 20.3 | -0.1 | 1.3 | -1.4 [#] | 15.9 | 0.0 | 1.2 | -1.2 [#] |
| VIII(a) Osteosarcoma | - | - | - | -1.5 | 19.6 | 0.4 | 2.7* | -1.2 [#] |
| VIII(c) Ewing tum. and related sarcomas of bone | 20.5 | - | - | - | 11.5 | -0.5 | 0.5 | -1.5 |
| IX Soft tissue and other extraosseous sarcomas | 25.3 | 0.6* | 1.4 | 0.7 | 45.5 | 0.8* | 1.3 | 1.5* |
| IX(a) Rhabdomyosarcoma | 31.7 | 0.4 | 2.4* | 0.2 | 32.2 | 0.4 | 2.5* | 0.5 |
| X Germ cell & trophoblastic tum. & neo. of gonads | 49.7 | 1.3* | 1.5 | 0.8 | 10.4 | 0.9* | 1.0 | -0.2 |
| X(a) Intracranial and intraspinal germ-cell tum. | - | - | - | - | - | - | - | - |
| X(c) Malignant gonadal germ cell tumors | - | - | - | - | 29.6 | - | - | - |
| XI Other malignant epithelial neo. and melanomas | 32.8 | 1.0* | -0.9 | 1.6 [#] | 35.1 | 1.0* | 0.6 | 1.2 |
| XI(b) Thyroid carcinoma | 22.7 | - | - | - | 52.2 | 0.9* | 0.7 | 1.0 |
| XI(d) Malignant melanoma | - | - | - | - | 79.0 | 1.7* | 2.3 | 2.3* |

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

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

^c International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P.

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^d Classifications are shown for invasive cases only except as noted. For ICCG groups and subgroups that include *in situ* behavior, only invasive cases are shown.

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

The APC for 1991-2006 is significantly different from the APC for 1975-1990 (p<.05).

® The APC for 1991-2006 is significantly different from the APC for 1975-1990 (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, 1975-2006, 1975-1990, 1991-2006^a

By International Classification of Childhood Cancer (ICCC)^b Selected Group and Subgroup^c
 Excluding benign brain and myelodysplastic syndromes
 All Races, Males

| ICCC Group and Subgroup | Ages 0-14 | | | | Ages 0-19 | | | |
|---|-----------------------|------------------|------------------|---------------------|-----------------------|------------------|------------------|---------------------|
| | % Change 1975-2006 | APC 1975-2006 | APC 1975-1990 | APC 1991-2006 | % Change 1975-2006 | APC 1975-2006 | APC 1975-1990 | APC 1991-2006 |
| All ICCG Groups Combined | 14.4 | 0.6* | 1.4* | 0.3 [#] | 16.0 | 0.6* | 1.3* | 0.3 [#] |
| I Leukemia | 15.2 | 0.8* | 1.3* | 0.9 | 16.5 | 0.8* | 1.0* | 1.1 |
| I(a) Lymphoid leukemia | 30.9 | 0.8* | 1.7* | 0.7 | 37.0 | 0.8* | 1.8* | 0.9 |
| I(b) Acute myeloid leukemia | 22.0 | - | - | 1.5 | 17.6 | 1.6* | -0.2 | 2.1* |
| II Lymphomas and reticuloendothelial neo. | -19.9 | -0.5* | -0.1 | 0.2 | -13.7 | -0.3 | 0.3 | -0.3 |
| II(a) Hodgkin lymphoma | -6.2 | - | - | - | -20.2 | -1.1* | 0.2 | -0.6 |
| II(b,c,e) Non-Hodgkin lymphoma | -26.8 | -0.1 | -0.6 | -0.4 | -5.6 | 0.5 | 0.5 | -0.1 |
| III CNS & misc intracranial & intraspinal neo. | 44.8 | 1.0* | 3.1* | -0.3 [#] | 30.7 | 0.9* | 2.6* | -0.4 [#] |
| III(a) Ependymomas and choroid plexus tumors | - | - | - | - | - | - | - | - |
| III(b) Astrocytoma | 23.8 | 0.9* | 4.2* | -0.8 [#] | 16.3 | 0.7 | 3.4* | -0.7 [#] |
| III(c) Intracranial and intraspinal embryonal tum. | - | - | - | -0.1 | - | - | - | -0.1 |
| III(d) Other gliomas | -4.7 | - | - | - | -23.4 | - | - | 0.3 |
| IV Neuroblastoma and other peripheral nervous cell tumors | 7.7 | 0.4 | 0.4 | -0.4 | 4.0 | 0.4 | 0.9 | -0.4 |
| IV(a) Neuroblastoma and ganglioneuroblastoma | 7.7 | 0.4 | 0.2 | -0.3 | 4.0 | 0.4 | 0.5 | -0.2 |
| V Retinoblastoma | 15.5 | - | - | - | 15.5 | - | - | - |
| VI Renal tumors | -8.6 | 0.0 | 1.3 | -2.4** [#] | -17.1 | 0.1 | 0.9 | -2.1** [#] |
| VI(a) Nephroblastoma and other nonepithelial renal tumors | 3.1 | 0.0 | 1.5 | -2.2** [#] | 3.1 | 0.0 | 1.3 | -2.3** [#] |
| VII Hepatic tumors | - | - | - | - | - | - | - | - |
| VII(a) Hepatoblastoma | - | - | - | - | - | - | - | - |
| VIII Malignant bone tumors | 22.4 | 0.0 | 2.4 | -1.5 [@] | 24.5 | 0.2 | 2.3* | -1.9 [#] |
| VIII(a) Osteosarcoma | - | - | - | - | - | - | - | -1.6 |
| VIII(c) Ewing tum. and related sarcomas of bone | - | - | - | - | -8.4 | - | - | - |
| IX Soft tissue and other extraosseous sarcomas | 28.9 | 0.7* | 1.5 | 1.1 | 41.8 | 0.8* | 1.8 | 1.6* |
| IX(a) Rhabdomyosarcoma | 48.0 | - | - | - | 41.0 | - | - | 0.3 |
| X Germ cell & trophoblastic tum. & neo. of gonads | -16.8 | - | - | - | 18.9 | 1.3* | 0.8 | 0.2 |
| X(a) Intracranial and intraspinal germ-cell tum. | - | - | - | - | - | - | - | - |
| X(c) Malignant gonadal germ cell tum. (testis) | - | - | - | - | - | - | - | - |
| XI Other malignant epithelial neo. and melanomas | 35.7 | - | - | - | 53.1 | 1.2* | 0.9 | 2.1* |
| XI(b) Thyroid carcinoma | - | - | - | - | - | - | - | - |
| XI(d) Malignant melanoma | - | - | - | - | 43.7 | - | - | - |

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

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

^b International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P.

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^c Classifications are shown for invasive cases only except as noted. For ICCG groups and subgroups that include *in situ* behavior, only invasive cases are shown.

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

[#] The APC for 1991-2006 is significantly different from the APC for 1975-1990 (p<.05).

[@] The APC for 1991-2006 is significantly different from the APC for 1975-1990 (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 29.5

Age-Adjusted SEER Cancer Incidence Trends, 1975-2006, 1975-1990, 1991-2006^a

By International Classification of Childhood Cancer (ICCC)^b Selected Group and Subgroup^c
 Excluding benign brain and myelodysplastic syndromes
 All Races, Females

| ICCC Group and Subgroup | Ages 0-14 | | | | Ages 0-19 | | | |
|---|-----------------------|------------------|------------------|-------------------|-----------------------|------------------|------------------|--------------------|
| | % Change 1975-2006 | APC 1975-2006 | APC 1975-1990 | APC 1991-2006 | % Change 1975-2006 | APC 1975-2006 | APC 1975-1990 | APC 1991-2006 |
| All ICCC Groups Combined | 30.6 | 0.6* | 0.9* | 0.4 | 21.4 | 0.5* | 0.8* | 0.2 |
| I Leukemia | 71.4 | 0.6* | 1.6* | 0.9 | 58.7 | 0.7* | 1.4 | 0.8 |
| I(a) Lymphoid leukemia | 75.4 | 0.7* | 1.8* | 0.9 | 71.6 | 0.8* | 1.8* | 1.2* |
| I(b) Acute myeloid leukemia | 115.7 | 1.0* | 1.6 | 0.7 | 63.1 | 1.0* | 1.6 | -0.3 |
| II Lymphomas and reticuloendothelial neo. | 11.2 | 0.3 | -1.6 | 1.6 [#] | -4.8 | -0.1 | -0.1 | -0.6 |
| II(a) Hodgkin lymphoma | 6.7 | - | - | - | -38.0 | -1.0* | -0.6 | -3.3* [#] |
| II(b,c,e) Non-Hodgkin lymphoma | 19.0 | - | - | - | 64.2 | 1.8* | 1.3 | 3.8* |
| III CNS & misc intracranial & intraspinal neo. | 12.1 | 0.8* | 1.9 | -0.3 [@] | 14.6 | 0.7* | 1.9* | -0.2 [#] |
| III(a) Ependymomas and choroid plexus tumors | - | - | - | - | - | - | - | - |
| III(b) Astrocytoma | 15.7 | 1.2* | 3.5* | -0.2 [#] | 10.2 | 0.8 | 3.4* | -0.3 [#] |
| III(c) Intracranial and intraspinal embryonal tum. | - | - | - | -0.7 | - | - | - | -0.4 |
| III(d) Other gliomas | -21.1 | - | - | - | -5.6 | - | - | - |
| IV Neuroblastoma and other peripheral nervous cell tumors | -8.0 | 0.5 | -0.8 | 1.3 | -5.0 | 0.4 | -0.9 | 1.3 |
| IV(a) Neuroblastoma and ganglioneuroblastoma | -8.0 | 0.5 | -1.0 | 1.4 | -8.0 | 0.4 | -1.1 | 1.3 |
| V Retinoblastoma | - | - | - | - | - | - | - | - |
| VI Renal tumors | 12.3 | -0.3 | 0.1 | -1.1 | 23.0 | -0.1 | 0.4 | -1.1 |
| VI(a) Nephroblastoma and other nonepithelial renal tumors | 12.3 | -0.4 | 0.2 | -1.2 | 18.2 | -0.3 | 0.3 | -1.2 |
| VII Hepatic tumors | - | - | - | - | - | - | - | - |
| VII(a) Hepatoblastoma | - | - | - | - | - | - | - | - |
| VIII Malignant bone tumors | 17.1 | - | 0.2 | - | 5.0 | -0.2 | -0.2 | -0.5 |
| VIII(a) Osteosarcoma | - | - | - | - | -11.0 | 0.0 | 0.3 | -1.1 |
| VIII(c) Ewing tum. and related sarcomas of bone | - | - | - | - | - | - | - | - |
| IX Soft tissue and other extraosseous sarcomas | 21.1 | 0.5 | 1.3 | 0.2 | 49.5 | 0.7 | 0.8 | 1.6 |
| IX(a) Rhabdomyosarcoma | - | - | - | - | 21.3 | - | - | - |
| X Germ cell & trophoblastic tum. & neo. of gonads | 117.4 | - | - | 1.1 | 3.6 | 0.2 | 1.2 | -0.5 |
| X(a) Intracranial and intraspinal germ-cell tum. | - | - | - | - | - | - | - | - |
| X(c) Malignant gonadal germ cell tum. (ovary) | - | - | - | - | - | - | - | - |
| XI Other malignant epithelial neo. and melanomas | 30.8 | - | - | 1.8 | 25.9 | 0.9* | 0.4 | 0.8 |
| XI(b) Thyroid carcinoma | - | - | - | - | 42.3 | 1.0* | 1.3 | 0.7 |
| XI(d) Malignant melanoma | - | - | - | - | 118.1 | - | - | 1.5 |

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

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

^c 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.

^d 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.

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

The APC for 1991-2006 is significantly different from the APC for 1975-1990 (p<.05).

@ The APC for 1991-2006 is significantly different from the APC for 1975-1990 (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 Rates, 1999-2005^aBy International Classification of Childhood Cancer (ICCC)^b Selected Group and Subgroup^c 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 | 79.4 | 77.9 | 81.1 | 73.2 | 82.2 | 78.8 | 79.0 | 79.1 | 79.5 |
| I Leukemia | 77.9 | 76.9 | 79.2 | 55.1 | 88.3 | 84.5 | 72.9 | 56.2 | 82.1 |
| I(a) Lymphoid leukemia | 83.8 | 82.5 | 85.4 | 51.7 | 92.3 | 88.2 | 77.7 | 60.2 | 87.1 |
| I(b) Acute myeloid leukemia | 56.7 | 55.9 | 57.5 | 50.7 ^d | 65.0 | 63.6 | 60.5 | 45.6 | 60.9 |
| II Lymphomas and reticuloendothelial neo. | 88.0 | 88.0 | 88.0 | 71.8 ^d | 85.0 | 90.3 | 88.1 | 88.2 | 87.7 |
| II(a) Hodgkin lymphoma | 94.5 | 95.4 | 93.5 | - | 96.0 | 92.4 | 94.4 | 94.7 | 94.0 |
| II(b,c,e) Non-Hodgkin lymphoma | 81.7 | 82.1 | 81.0 | - | 82.8 | 89.1 | 82.2 | 77.4 | 84.5 |
| III CNS & misc intracranial & intraspinal neo. | 70.9 | 69.8 | 72.2 | 47.3 | 71.8 | 68.6 | 78.0 | 71.4 | 70.8 |
| III(a) Ependymomas and choroid plexus tumor | 69.6 | 65.3 | 74.6 | 39.4 ^e | 62.4 ^d | 68.3 ^d | 80.8 ^d | 92.4 | 65.7 |
| III(b) Astrocytoma | 82.6 | 81.1 | 84.4 | 71.9 ^d | 92.2 | 82.3 | 82.4 | 72.4 | 85.0 |
| III(c) Intracranial and intraspinal embryonal tumors | 61.8 | 61.8 | 61.9 | 24.0 ^d | 55.8 | 74.3 | 72.1 | 58.4 ^d | 62.3 |
| III(d) Other gliomas | 52.8 | 55.4 | 50.2 | - | 44.2 | 33.3 | 69.3 | 76.2 | 47.3 |
| IV Neuroblastoma and other peripheral nervous cell tumors | 73.3 | 70.3 | 76.3 | 90.0 | 68.2 | 52.1 ^d | 68.3 ^d | - | 73.6 |
| IV(a) Neuroblastoma and ganglioneuroblastoma | 73.2 | 70.3 | 76.1 | 90.2 | 68.1 | 52.0 ^d | 65.5 ^d | - | 73.6 |
| V Retinoblastoma | 97.3 | 97.4 | 97.0 | 100.0 | 95.2 | - | - | - | 97.3 |
| VI Renal tumors | 87.1 | 87.8 | 86.2 | 80.4 | 90.7 | 87.2 | 66.7 ^d | 80.9 ^d | 87.4 |
| VI(a) Nephroblastoma and other nonepithelial renal tumor | 87.9 | 89.3 | 86.4 | 80.4 | 91.0 | 86.3 | - | - | 87.9 |
| VII Hepatic tumors | 59.6 | 55.8 | 64.6 | 73.0 ^d | 71.9 | - | 20.9 ^e | 27.2 ^d | 64.7 |
| VII(a) Hepatoblastoma | 69.2 | 63.1 | 78.1 | 74.3 ^d | 71.3 | - | - | - | 69.5 |
| VIII Malignant bone tumors | 68.0 | 65.8 | 70.8 | - | 63.5 ^d | 74.7 | 68.6 | 65.2 | 70.0 |
| VIII(a) Osteosarcoma | 67.1 | 63.4 | 71.8 | - | - | 72.8 ^d | 68.4 | 64.4 | 69.1 |
| VIII(c) Ewing tumor and related sarcomas of bone | 63.1 | 62.8 | 63.7 | - | 71.3 ^d | 73.0 ^d | 63.4 ^d | 56.4 ^d | 67.2 |
| IX Soft tissue and other extraosseous sarcomas | 69.9 | 69.2 | 70.7 | 63.3 | 72.4 | 73.7 | 74.3 | 65.0 | 72.4 |
| IX(a) Rhabdomyosarcoma | 61.4 | 62.8 | 59.5 | 52.6 ^e | 72.5 | 67.0 | 58.2 | 41.6 | 66.1 |
| X Germ cell & trophoblastic tumors & neo. of gonads | 89.5 | 88.7 | 91.0 | 83.7 | 87.0 | 86.4 | 91.3 | 90.3 | 88.1 |
| X(a) Intracranial and intraspinal germ-cell tumor | 83.0 | 85.5 | 75.4 ^d | - | - | 87.1 ^d | 86.6 | 82.5 | 83.3 |
| X(c) Malignant gonadal germ cell tumor | 94.7 | 93.0 | 97.9 | 100.0 | 88.6 ^d | 94.2 | 98.4 | 94.0 | 96.2 |
| XI Other malignant epithelial neo. and melanomas | 90.9 | 86.2 | 93.4 | - | 97.7 | 88.9 | 90.2 | 91.1 | 90.4 |
| XI(b) Thyroid carcinoma | 98.7 | 95.4 | 99.4 | - | - | 100.0 | 97.6 | 98.9 | 98.1 |
| XI(d) Malignant melanoma | 93.9 | 92.2 | 95.0 | - | 96.2 | 93.4 | 91.4 | 94.4 | 92.3 |

^a SEER 17 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 and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005. The remaining 13 SEER Areas contribute cases for the entire period 1999-2005. Rates are based on follow-up of patients into 2006.

^b 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.

^c Classifications are shown for invasive cases only. For ICCC groups and subgroups that include *in situ* behavior, only invasive cases are shown.

^d The standard error of the survival rate is between 5 and 10 percentage points.

^e The standard error of the survival rate is greater than 10 percentage points.

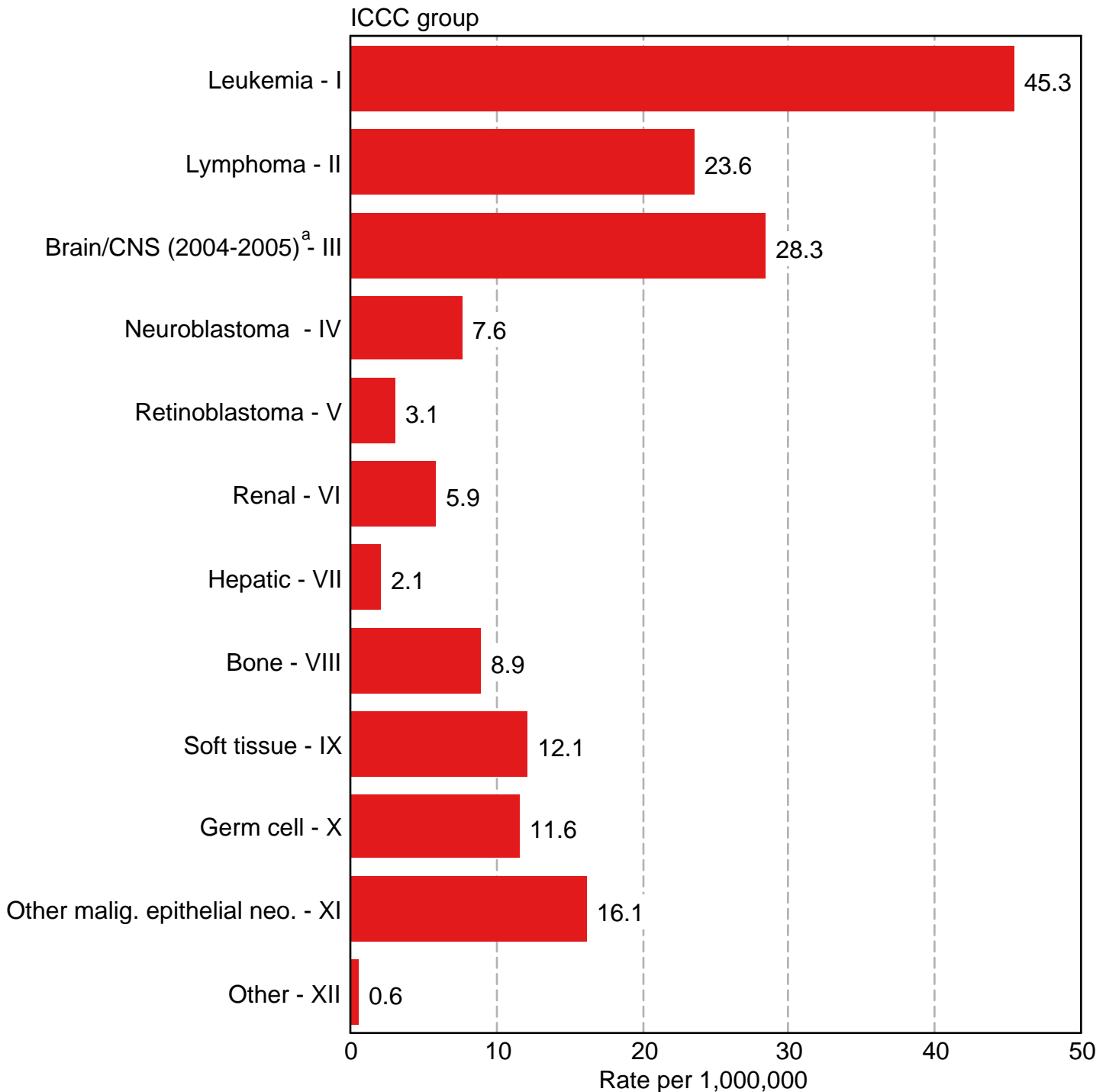
- Statistic could not be calculated due to fewer than 25 cases during the time period.

Neoplasms are abbreviated as neo.

Survival rates are relative rates expressed as percents.

Figure 29.1

Childhood Cancer : SEER Incidence Rates 2002-2006 by ICCC Group (includes Group III benign brain (2004-2006) and myelodysplastic syndromes) Under 20 Years of Age, Both Sexes, All Races



Source: SEER 17 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, and New Jersey). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

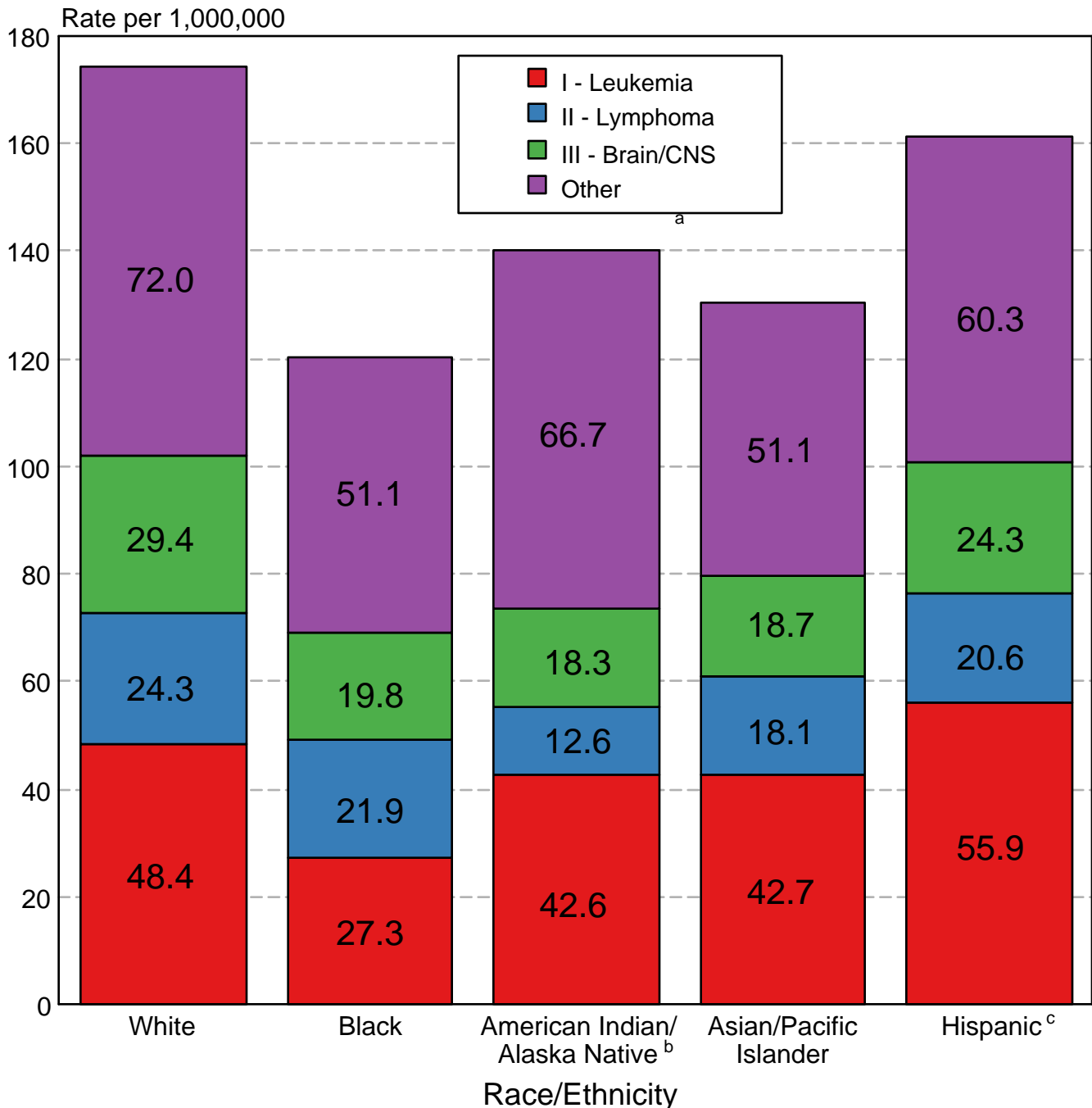
International Classification of Childhood Cancer is based on ICD-O-3. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P.

^a International Classification of Childhood Cancer, Third Edition. Cancer. April 1, 2005; Vol 103, No. 7, pg 1457-1467.

Rate for Group III (Brain/CNS) includes benign brain tumors and is based only on cases diagnosed in 2004-2006.

Figure 29.2

Childhood Cancer: SEER Incidence Rates 2002-2006 by ICCC Group (includes Group III benign brain (2004-2006) and myelodysplastic syndromes) and Race/Ethnicity Both Sexes, Under 20 Years of Age



Source: SEER 17 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, and New Jersey). Incidence rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) and are not shown for fewer than 10 cases for the time period.

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.

^a Rate for Group III (Brain/CNS) includes benign brain tumors and is based only on cases diagnosed in 2004-2006.

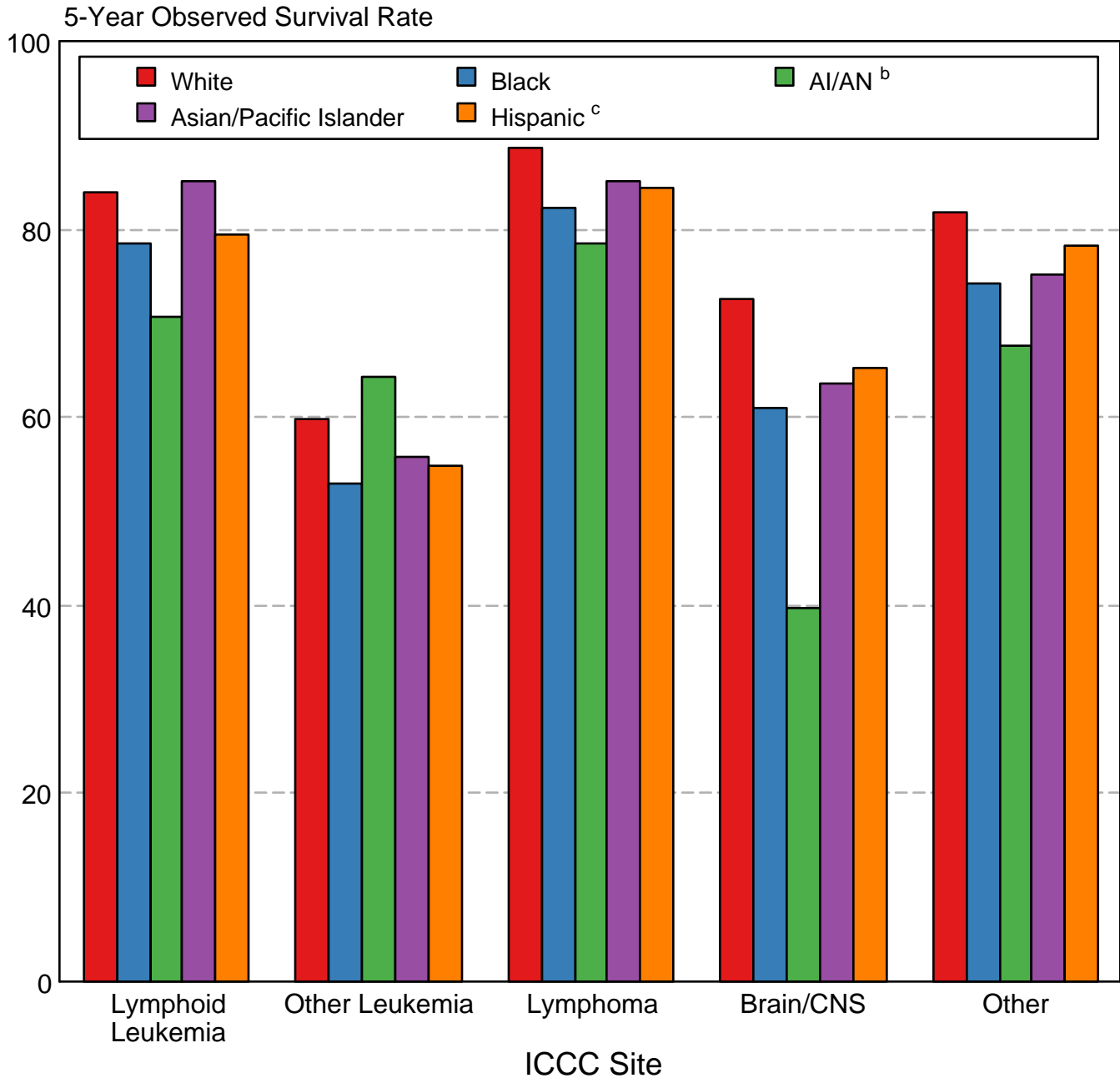
^b Incidence rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

^c 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 and Kentucky.

Figure 29.3

Childhood Cancer: SEER Survival Rates 1999-2005

5-Year Observed Survival Rates by ICCC Group^a and Race/Ethnicity Both Sexes, Under 20 Years of Age



Source: SEER 17 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, and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2006. The remaining 13 SEER Areas contribute cases for the entire period 1999-2005.

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.

^a Excludes myelodysplastic syndromes (MDS) and benign brain tumors.

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

^c 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 and Kentucky.