

Section XXVII
Childhood Cancer by Site
Incidence, Survival and Mortality

The site groupings used in this section correspond to those used in the rest of the Cancer Statistics Review. While these groupings are not as appropriate for children as they are for adults, they are necessary in order to be able to compare incidence to mortality.

Childhood cancer is better categorized by groupings based on histologic type and site rather than primary site alone (see section XXVIII for Childhood cancer by the International Classification of Childhood Cancer). For the leukemias and lymphomas, the categories are similar, but for solid tumors the categories can be quite different and the different terminology confusing. For example, in this section 'soft tissue' refers to any type of tumor that arises in connective or soft tissue in contrast to 'soft tissue sarcomas' in the other section, which refers to soft tissue sarcomas in any primary site.

Rates are presented per 100,000 children in this section. In contrast in the other childhood cancer section rates are presented per million children.

Some highlights are:

- ◆ While the overall rate for all childhood (under age 15 years) cancers combined has increased about 0.7 percent per year between 1973 and 1996, the incidence has not increased during the more recent part of the time period, between 1985 to 1996, -0.1 percent per year.
- ◆ For most of the cancers, the incidence trend for 1985-96 is decreasing more or increasing slower than the trend in the earlier years (1973-84). For example, the incidence of kidney and renal pelvis increased 2.2 percent per year from 1973 to 1984 and has only increased 0.1 percent per year from 1985 to 1996.
- ◆ Cancer mortality for children (<15 and <20) has decreased nearly 50 percent between 1973 and 1996. It has declined for both white children and black children. Declines have been seen for most sites.
- ◆ Childhood cancer survival rates have increased dramatically since the 1970s.

Table XXVII-1

AGE-ADJUSTED CANCER SEER INCIDENCE TRENDS, 1973-96, 1973-84, 1985-96§

By Primary Cancer Site

All Races, Males and Females

Site	Ages 0-14				Ages 0-19			
	% Change 1973-96	EAPC 73-96	EAPC 73-84	EAPC 85-96	% Change 1973-96	EAPC 73-96	EAPC 73-84	EAPC 85-96
All Sites								
All Races	7.5	0.7★	0.5	-0.1	12.1	0.8★	0.8★	0.1◆
Whites	4.8	0.6★	0.3	-0.5	10.3	0.7★	0.8★	-0.3◆
Blacks	9.5	1.1★	1.2	1.1	9.5	0.9★	1.1	1.1
Bone & Joint	-11.0	0.3	1.8	-1.8◇	-2.6	0.6	1.8	-1.0◇
Brain & Other nervous	25.2	1.6★	0.4	0.1	26.2	1.5★	0.5	0.0
Hodgkin's disease	-29.7	-1.4★	-1.6	-2.6	-8.1	-0.4	0.8	-1.6
Kidney & Renal pelvis	8.4	0.6	2.2	0.1	6.3	0.6	2.1	0.2
Leukemias	-0.5	0.4	0.0	-0.5	-1.6	0.4	0.1	-0.2
Acute lymphocytic	23.1	1.0★	2.1★	-0.5◆	22.3	1.0★	2.3★	-0.4◆
Non-Hodgkin's lymphomas	4.8	0.2	1.0	-0.4	34.1	1.1★	2.3★	0.5
Soft tissue	43.2	0.9	1.1	1.6	37.2	0.8	1.4	0.6

§ The EAPC is the Estimated Annual Percent Change over the time interval.
SEER Program.

★ The EAPC is significantly different from zero ($p < .05$).

◆ The EAPC for 1985-96 is significantly different from the EAPC for 1973-84 ($p < .05$).

◇ The EAPC for 1985-96 is significantly different from the EAPC for 1973-84 ($p < .10$).

- Statistic could not be calculated.

Table XXVII-2
AGE-ADJUSTED CANCER U.S. MORTALITY TRENDS, 1973-96, 1973-84, 1985-96

By Race and Primary Cancer Site

Males and Females

Race/Site	Ages 0-14				Ages 0-19			
	% Change 1973-96	EAPC 73-96	EAPC 73-84	EAPC 85-96	% Change 1973-96	EAPC 73-96	EAPC 73-84	EAPC 85-96
<u>All Races</u>								
All Sites	-49.7	-2.9★	-3.1★	-2.6★	-47.4	-2.7★	-2.9★	-2.3★♦
Bone & Joint	-49.9	-3.0★	-3.2★	-1.9	-42.5	-2.6★	-3.1★	-0.9♦
Brain & Other nervous	-24.4	-1.1★	-1.5★	-0.6	-24.7	-1.1★	-1.5★	-0.7
Hodgkin's disease	-85.7	-6.9★	-9.1★	-7.9	-67.8	-4.9★	-4.4★	-5.4★
Kidney & Renal pelvis	-60.2	-3.9★	-4.5★	-4.1★	-54.6	-3.6★	-4.1★	-3.0★
Leukemias	-58.6	-4.0★	-4.8★	-3.4★♦	-55.9	-3.5★	-4.1★	-3.0★♦
Acute lymphocytic	-63.1	-4.9★	-4.5★	-4.2★	-59.1	-4.3★	-3.7★	-3.8★
Non-Hodgkin's lymphomas	-70.7	-5.0★	-5.9★	-5.4★	-63.5	-4.1★	-4.9★	-4.3★
Soft tissue	-19.7	-0.8	3.0★	-2.4★♦	-4.5	0.0	2.9★	-1.0♦
<u>Whites</u>								
All Sites	-50.9	-3.0★	-3.1★	-2.8★	-48.5	-2.8★	-2.9★	-2.4★
Bone & Joint	-52.2	-2.9★	-2.9★	-2.1	-43.2	-2.4★	-2.8★	-1.0♦
Brain & Other nervous	-22.1	-1.0★	-1.2★	-0.7	-22.2	-1.0★	-1.2★	-0.9
Hodgkin's disease	-88.5	-7.5★	-10.0★	-9.4★	-73.7	-5.4★	-5.1★	-6.6★
Kidney & Renal pelvis	-60.3	-3.8★	-4.6★	-3.5★	-56.0	-3.5★	-4.0★	-2.7★
Leukemias	-61.1	-4.2★	-5.0★	-3.6★♦	-58.3	-3.7★	-4.3★	-3.2★♦
Acute lymphocytic	-65.3	-5.1★	-4.8★	-4.1★	-61.9	-4.4★	-3.9★	-3.8★
Non-Hodgkin's lymphomas	-73.7	-5.1★	-5.7★	-5.9★	-63.7	-4.0★	-4.7★	-4.4★
Soft tissue	-20.7	-0.9	3.0★	-3.1★♦	-5.8	0.0	3.0★	-1.3♦
<u>Blacks</u>								
All Sites	-41.5	-2.5★	-2.3★	-1.8★	-39.5	-2.3★	-2.6★	-1.4★♦
Bone & Joint	-32.5	-3.1★	-3.9★	0.7	-31.8	-2.9★	-4.8★	0.8♦
Brain & Other nervous	-30.7	-1.4★	-3.1★	0.1♦	-31.9	-1.3★	-3.3★	0.0♦
Hodgkin's disease	-67.4	-	-7.4	-	-27.3	-2.6★	-0.8	-2.3
Kidney & Renal pelvis	-61.1	-4.2★	-4.5★	-5.1	-51.0	-3.5★	-5.2★	-2.8
Leukemias	-44.4	-3.2★	-2.7★	-2.3★	-40.1	-2.5★	-2.3★	-1.6
Acute lymphocytic	-41.3	-3.8★	-0.6	-5.6★♦	-30.9	-3.0★	-0.3	-4.3★♦
Non-Hodgkin's lymphomas	-47.2	-5.2★	-6.8★	-4.1	-56.4	-4.4★	-5.1★	-3.3
Soft tissue	-9.7	0.0	3.9	-1.0	-4.9	0.1	2.6	-1.2

The EAPC is the Estimated Annual Percent Change over the time interval.

★ The EAPC is significantly different from zero ($p < .05$).

♦ The EAPC for 1985-96 is significantly different from the EAPC for 1973-84 ($p < .05$).

◊ The EAPC for 1985-96 is significantly different from the EAPC for 1973-84 ($p < .10$).

- Statistic could not be calculated.

Table XXVII-3

AGE-ADJUSTED CANCER SEER INCIDENCE RATES§, 1975-96

By Primary Cancer Site

All Races, Males and Females

Year of Diagnosis

Age/Site	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<u>Ages 0-14</u>																						
All Sites																						
All Races	11.3	12.9	12.7	13.0	12.9	12.7	12.3	12.8	12.8	13.7	14.3	14.0	14.0	13.2	14.8	14.0	14.9	13.4	14.7	14.0	13.5	14.1
Whites	11.8	13.3	13.3	13.5	13.5	12.8	12.3	12.9	13.4	14.2	15.3	14.7	14.4	13.7	15.3	14.0	15.8	13.8	14.7	14.3	13.9	13.9
Blacks	8.5	11.1	8.3	9.8	10.4	11.0	13.0	11.8	9.9	10.3	9.9	10.5	11.4	11.8	13.6	12.2	11.7	12.4	12.9	12.9	11.2	11.4
Bone & Joint	0.5	0.5	0.6	0.7	0.8	0.7	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.7	0.9	0.6	0.6	0.8	0.8	0.5
Brain & Other nervous	2.3	2.4	3.0	2.7	2.8	2.8	2.5	2.4	2.2	2.8	2.9	3.4	3.1	3.3	3.2	3.4	3.5	3.2	3.4	3.3	3.2	2.9
Hodgkin's disease	0.7	0.8	0.7	0.7	0.9	0.5	0.6	0.5	0.7	0.7	0.7	0.5	0.7	0.6	0.8	0.7	0.6	0.5	0.6	0.6	0.3	0.7
Kidney & Renal pelvis	0.6	0.9	0.7	0.9	0.9	0.8	0.8	0.9	1.1	0.7	0.8	0.9	0.8	0.7	1.1	0.7	0.9	0.7	0.9	1.1	0.6	0.9
Leukemias	3.2	4.0	3.8	3.7	3.6	3.9	3.9	3.7	3.6	4.4	4.5	4.0	4.3	4.0	4.6	4.3	4.5	3.9	4.1	3.6	4.1	4.4
Acute lymphocytic	2.1	2.9	3.0	2.9	2.7	3.0	3.1	2.9	2.9	3.4	3.4	3.2	3.3	3.2	3.8	3.3	3.4	3.0	3.0	2.9	3.4	3.4
Non-Hodgkin's lymph	1.0	0.8	0.8	1.0	0.8	0.7	0.7	0.9	0.9	0.9	0.7	1.0	1.1	0.7	0.8	0.8	0.9	0.8	0.8	1.0	0.9	0.7
Soft tissue	0.8	0.7	0.7	0.8	0.6	0.9	0.7	0.9	0.9	0.7	0.8	0.9	0.8	0.6	0.9	0.8	1.0	0.7	0.6	0.9	0.9	1.1
<u>Ages 0-19</u>																						
All Sites																						
All Races	12.8	14.1	14.1	14.4	14.5	14.2	13.8	14.4	14.4	15.4	15.7	15.7	15.2	15.0	16.5	15.4	16.2	16.0	16.0	15.6	15.4	15.5
Whites	13.2	14.7	14.7	15.0	15.1	14.6	14.0	14.9	15.2	15.9	16.8	16.4	16.0	15.5	17.1	15.7	17.3	16.7	16.1	16.0	16.0	15.4
Blacks	10.5	10.7	10.4	10.8	12.6	11.0	12.9	11.8	11.1	12.1	10.5	12.0	11.2	12.9	14.0	12.7	12.4	12.8	13.5	13.5	11.8	12.4
Bone & Joint	0.7	0.6	0.7	0.9	0.9	0.9	1.0	0.8	0.8	0.9	1.0	0.9	1.0	0.8	0.9	0.8	1.0	0.9	0.9	1.0	0.9	0.7
Brain & Other nervous	2.1	2.2	2.9	2.5	2.5	2.4	2.3	2.2	2.2	2.6	2.6	3.2	2.8	3.0	2.9	3.1	3.1	3.2	3.0	2.9	2.9	2.8
Hodgkin's disease	1.5	1.4	1.4	1.5	1.6	1.2	1.3	1.5	1.4	1.5	1.4	1.3	1.4	1.4	1.7	1.3	1.4	1.4	1.3	1.3	1.0	1.4
Kidney & Renal pelvis	0.5	0.7	0.6	0.7	0.7	0.6	0.6	0.7	0.8	0.6	0.7	0.7	0.7	0.6	0.8	0.6	0.7	0.5	0.8	0.9	0.5	0.7
Leukemias	3.0	3.6	3.4	3.4	3.2	3.4	3.6	3.4	3.4	3.9	4.0	3.6	3.6	3.5	4.1	3.7	4.0	3.6	3.7	3.3	3.8	3.8
Acute lymphocytic	1.9	2.4	2.5	2.5	2.3	2.4	2.7	2.5	2.5	2.9	2.8	2.7	2.7	2.7	3.3	2.8	2.9	2.5	2.5	2.4	2.9	2.8
Non-Hodgkin's lymph	1.0	0.9	0.8	1.0	0.9	0.9	1.0	1.0	1.1	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.1	1.0	0.9	1.3	1.2	1.0
Soft tissue	0.8	0.7	0.7	0.9	0.7	0.9	0.7	1.0	1.0	0.7	0.9	0.9	0.9	0.7	0.9	0.8	1.0	0.7	0.7	0.8	1.1	1.0

§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Each rate has been age-adjusted by 5-year age groups.

Table XXVII-4

AGE-ADJUSTED CANCER U.S. MORTALITY RATES*, 1975-96

By Primary Cancer Site

All Races, Males and Females

Year of Diagnosis

Age/Site	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<u>Ages 0-14</u>																						
All Sites	4.9	4.9	4.7	4.3	4.4	4.3	4.2	4.2	4.1	3.6	3.6	3.5	3.4	3.3	3.3	3.1	3.1	3.0	3.0	2.8	2.8	2.7
Bone & Joint	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1
Brain & Other nervous	1.0	1.0	1.0	0.8	0.9	0.9	0.9	1.0	0.9	0.8	0.8	0.9	0.7	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.8
Hodgkin's disease	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kidney & Renal pelvis	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leukemias	2.1	2.1	2.0	1.9	1.8	1.7	1.6	1.6	1.5	1.3	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.1	1.1	1.0	1.0	0.9
Acute lymphocytic	1.2	1.2	1.1	1.0	1.0	0.9	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.4
Non-Hodgkin's lymph	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1
Soft tissue	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
<u>Ages 0-19</u>																						
All Sites	5.1	5.1	5.0	4.5	4.6	4.6	4.4	4.5	4.3	3.9	3.8	3.8	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.0	2.9
Bone & Joint	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Brain & Other nervous	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8
Hodgkin's disease	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0
Kidney & Renal pelvis	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leukemias	2.0	2.1	2.0	1.8	1.8	1.8	1.6	1.6	1.5	1.4	1.4	1.3	1.4	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.0
Acute lymphocytic	1.0	1.1	1.0	0.9	1.0	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.4
Non-Hodgkin's lymph	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Soft tissue	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Each rate has been age-adjusted by 5-year age groups.

Table XXVII-5

AGE-ADJUSTED CANCER U.S. MORTALITY RATES*, 1975-96

By Primary Cancer Site

Whites, Males and Females

Year of Diagnosis

Age/Site	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<u>Ages 0-14</u>																						
All Sites	5.0	5.0	4.8	4.3	4.5	4.4	4.2	4.3	4.1	3.7	3.6	3.6	3.5	3.3	3.4	3.2	3.2	3.1	3.1	2.8	2.7	2.7
Bone & Joint	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Brain & Other nervous	1.0	1.0	1.0	0.8	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.8
Hodgkin's disease	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kidney & Renal pelvis	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leukemias	2.3	2.3	2.1	1.9	1.9	1.8	1.7	1.6	1.6	1.4	1.4	1.4	1.4	1.2	1.2	1.1	1.1	1.2	1.1	1.0	1.0	0.9
Acute lymphocytic	1.2	1.3	1.2	1.1	1.1	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.4
Non-Hodgkin's lymph	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1
Soft tissue	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
<u>Ages 0-19</u>																						
All Sites	5.2	5.2	5.1	4.6	4.7	4.7	4.4	4.5	4.4	4.0	3.9	3.9	3.7	3.6	3.6	3.4	3.5	3.4	3.3	3.2	3.0	3.0
Bone & Joint	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2
Brain & Other nervous	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8
Hodgkin's disease	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Kidney & Renal pelvis	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leukemias	2.1	2.2	2.1	1.9	1.9	1.8	1.7	1.7	1.6	1.4	1.4	1.4	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.0	1.0
Acute lymphocytic	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
Non-Hodgkin's lymph	0.5	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Soft tissue	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Each rate has been age-adjusted by 5-year age groups.

Table XXVII-6

AGE-ADJUSTED CANCER U.S. MORTALITY RATES*, 1975-96

By Primary Cancer Site

Blacks, Males and Females

Year of Diagnosis

Age/Site	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<u>Ages 0-14</u>																						
All Sites	4.5	4.2	4.2	4.1	4.0	3.8	4.2	4.0	3.9	3.5	3.3	3.4	3.0	3.2	3.2	3.0	3.1	2.7	2.7	2.9	3.0	2.6
Bone & Joint	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Brain & Other nervous	0.9	1.0	1.0	0.8	0.9	0.9	1.0	0.8	0.8	0.7	0.6	0.9	0.7	1.0	0.8	0.7	0.8	0.7	0.6	0.8	0.8	0.8
Hodgkin's disease	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0
Kidney & Renal pelvis	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Leukemias	1.6	1.6	1.4	1.5	1.3	1.2	1.6	1.5	1.2	1.3	1.2	1.1	1.0	0.9	1.0	0.9	1.0	0.8	0.9	0.8	1.1	0.8
Acute lymphocytic	0.8	0.8	0.7	0.6	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4
Non-Hodgkin's lymph	0.4	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Soft tissue	0.2	0.2	0.2	0.2	0.3	0.1	0.3	0.3	0.3	0.2	0.2	0.1	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.1	0.2
<u>Ages 0-19</u>																						
All Sites	4.7	4.5	4.7	4.5	4.3	4.2	4.5	4.3	3.8	3.7	3.5	3.7	3.6	3.5	3.5	3.4	3.4	3.0	3.1	3.3	3.3	3.0
Bone & Joint	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2
Brain & Other nervous	0.9	0.9	0.9	0.7	0.9	0.8	0.9	0.8	0.7	0.7	0.6	0.8	0.7	0.9	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7
Hodgkin's disease	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Kidney & Renal pelvis	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Leukemias	1.6	1.5	1.4	1.5	1.4	1.4	1.5	1.5	1.1	1.3	1.1	1.1	1.2	1.0	1.1	1.0	1.1	0.9	1.0	1.0	1.1	0.9
Acute lymphocytic	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.5	0.4
Non-Hodgkin's lymph	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
Soft tissue	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2

* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Each rate has been age-adjusted by 5-year age groups.

Table XXVII-7

AGE-ADJUSTED CANCER SEER INCIDENCE§ AND U.S. MORTALITY* RATES, 1992-96

By Primary Cancer Site

All Races, Males and Females

Site	<u>Ages 0-14</u>						<u>Ages 0-19</u>					
	<u>Incidence</u>			<u>Mortality</u>			<u>Incidence</u>			<u>Mortality</u>		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites												
All Races	13.9	14.9	12.9	2.9	3.2	2.5	15.7	16.4	14.9	3.1	3.5	2.7
Whites	14.1	15.1	13.2	2.9	3.2	2.5	16.0	16.8	15.2	3.2	3.6	2.7
Blacks	12.2	12.8	11.5	2.8	2.9	2.7	12.8	13.1	12.5	3.2	3.3	2.9
Bone & Joint	0.6	0.7	0.6	0.1	0.1	0.1	0.9	1.0	0.7	0.2	0.3	0.2
Brain & Other nervous	3.2	3.4	2.9	0.8	0.8	0.7	2.9	3.2	2.7	0.7	0.8	0.7
Hodgkin's disease	0.5	0.5	0.5	0.0	0.0	0.0	1.3	1.2	1.4	0.0	0.0	0.1
Kidney & Renal pelvis	0.9	0.9	0.9	0.1	0.1	0.1	0.7	0.7	0.7	0.1	0.1	0.1
Leukemias	4.0	4.4	3.6	1.0	1.2	0.9	3.6	4.0	3.2	1.1	1.2	0.9
Acute lymphocytic	3.1	3.4	2.8	0.5	0.5	0.4	2.6	2.9	2.3	0.5	0.6	0.4
Non-Hodgkin's lymphomas	0.9	1.2	0.5	0.1	0.2	0.1	1.1	1.4	0.7	0.2	0.3	0.1
Soft tissue	0.9	0.9	0.9	0.1	0.2	0.1	0.9	0.9	0.8	0.2	0.2	0.2

§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Each rate has been age-adjusted by 5-year age groups.

* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Each rate has been age-adjusted by 5-year age groups.

Table XXVII-8

5-YEAR RELATIVE SURVIVAL RATES (Percent)

By Selected Primary Cancer Site and Year Of Diagnosis

All Races, Males and Females

Site	Ages 0-14						Ages 0-19					
	1974-76	1977-79	1980-82	1983-85	1986-88	1989-95	1974-76	1977-79	1980-82	1983-85	1986-88	1989-95
All Sites												
All Races	55.6	61.5	64.9	67.7	70.0	74.5 S	58.4	63.9	66.5	69.7	72.7	74.9 S
Whites	55.7	61.9	65.3	69.4	71.3	75.5 S	58.7	64.5	67.4	71.4	74.4	76.4 S
Blacks	56.8	57.7	61.3	57.4	62.2	70.0 S	56.7	60.3	61.2	58.7	62.6	68.4 S
Bone & Joint	53.0 [†]	53.3 [†]	54.0 [†]	57.1 [†]	62.4 [†]	67.3 S	50.0	50.6	50.1	52.6	61.2	65.4 S
Brain & Other nervous	54.7	55.9	55.3	61.7	62.6	63.8 S	55.6	56.4	56.7	63.3	65.4	65.4 S
Hodgkin's disease	78.3	83.5	90.9	89.6	89.9	93.1 S	84.8	88.0	87.0	88.2	89.3	92.5 S
Leukemias	45.0	59.1	62.6	61.0	70.2	74.0 S	40.8	53.6	57.9	58.2	66.1	69.9 S
Acute lymphocytic	53.2	66.9	71.1	69.3	78.2	81.1 S	49.3	62.7	67.3	66.7	75.3	77.9 S
Acute myeloid	13.7	28.4 [†]	21.1 [†]	31.5 [†]	31.6 [†]	42.6 S	16.0	27.6	22.1	34.3 [†]	31.7 [†]	42.2 S
Neuroblastoma	52.6	53.8	52.8	54.6	59.1	70.6 S	52.1	53.8	53.0	53.8	58.3	69.6 S
Non-Hodgkin's lymphomas	43.9	50.7	60.9	71.2	69.6	77.3 S	43.3	49.7	58.7	67.0	73.0	73.3 S
Soft tissue	60.7	68.9	64.6	75.8	66.0	77.1 S	62.0	65.2	64.3	73.9	68.0	69.5 S
Wilms' tumor	74.4	77.5	87.0	86.4	90.8	92.7 S	73.6	77.1	86.4	86.8	90.9	92.3 S

Rates are from the SEER Program. They are based on data from population-based registries in Connecticut, New Mexico, Utah, Iowa, Hawaii, Atlanta, Detroit, Seattle-Puget Sound and San Francisco-Oakland. Rates are based on follow-up of patients through 1996.

S The difference in rates between 1974-76 and 1989-95 is statistically significant ($p < .05$).

[†] The standard error of the survival rate is between 5 and 10 percentage points.

^{††} The standard error of the survival rate is greater than 10 percentage points.

Table XXVII-9

CHILDHOOD CANCER
SEER Incidence, U.S. Mortality and 5-Year Relative Survival Rates
For Top Cancer Sites ⊕ By 5-Year Age Groups
All Races, Males and Females

Age/Site	SEER Incidences§					US Mortality*					Survivals§	
	1992-96 Num Cases	Rate	73-96 EAPC	73-84 EAPC	85-96 EAPC	1992-96 Num Cases	Rate	73-96 EAPC	73-84 EAPC	85-96 EAPC	1974-76	1989-95
Ages 0-4												
All Sites	1,890	20.4	0.9★	0.6	0.5	2,830	2.9	-3.0★	-2.9★	-2.9★	56.3	74.0S
Soft tissue	127	1.4	1.2	3.1	0.5	130	0.1	-2.4★♦	0.5♦	-5.0◇	57.7↑	82.3S
Kidney and Renal pelvis	193	2.1	0.7	2.4	1.9	99	0.1	-5.3★♦	-6.5★♦	-2.8◇	74.2	90.9S
Eye and Orbit	125	1.3	0.6	1.7	-1.2	43	0.0	-4.2★	-6.8★	-7.3★	89.6	93.3
Brain and Other nervous	356	3.8	2.3★	2.9	-0.1◇	736	0.8	-1.1★	-1.3★	0.0	51.2	54.6
Other endocrine	134	1.4	-	-	-	496	0.5	-	-	-	32.8↑	62.3S
Leukemias	633	6.8	0.4	-1.2	-0.0	943	1.0	-3.6★	-4.7★	-2.7★♦	50.9	76.2S
Acute lymphocytic	504	5.4	0.9★	0.9	-0.4	305	0.3	-5.4★	-6.1★	-4.7★	58.4	83.2S
Ages 5-9												
All Sites	898	10.1	0.4	0.4	-1.6★♦	2,728	2.9	-3.3★	-3.6★	-2.8★	55.4	74.5S
Brain and Other nervous	267	3.0	0.9	-0.3	-2.0	868	0.9	-0.9★	-1.6	-0.8	54.4	66.1S
Leukemias	290	3.3	0.5	0.1	-1.1	958	1.0	-5.2★	-6.0★	-4.4★♦	46.7	76.4S
Acute lymphocytic	236	2.7	1.2★	2.7	-0.8◇	524	0.6	-6.0★	-5.7★	-4.8★	53.8	81.9S
Ages 10-14												
All Sites	1,082	12.3	0.7★	0.4	0.6	2,573	2.8	-2.5★	-2.6★	-2.1★	54.8	75.6S
Bone and Joint	103	1.2	-0.0♦	0.3♦	-2.8	246	0.3	-3.1★♦	-3.2★♦	-1.5	51.9↑	69.0S
Brain and Other nervous	251	2.9	1.6★	-1.6	2.8★♦	635	0.7	-1.3★	-1.4	-0.8	58.7	75.1S
Hodgkin's disease	105	1.2	-1.0	-1.3	-1.2	35	0.0	-6.4★	-7.3★	-7.9	74.9↑	94.0S
Leukemias	215	2.4	0.5	2.8	-0.6	983	1.1	-3.0★	-3.3★	-2.9★	28.8	63.5S
Acute lymphocytic	146	1.7	1.2	4.2	0.2	496	0.5	-3.2★	-1.9★	-3.5★	37.2↑	72.2S
Ages 15-19												
All Sites	1,756	21.0	0.9★	1.6★	0.3♦	3,558	4.0	-2.2★	-2.4★	-1.6★♦	63.8	75.8S
Bone and Joint	136	1.6	0.9♦	1.9♦	-0.1	474	0.5	-2.2★♦	-3.1★♦	-0.3♦	46.6↑	63.0S
Melanomas of skin	129	1.5	2.4★	0.4	0.4	42	0.0	-4.6★	-4.9★	-7.2	76.7↑	93.1S
Ovary(females)	103	2.5	3.3★	-3.5	3.1♦	36	0.1	-6.5★	-5.7★	-7.7★	69.7↑	90.9S
Testis(males)	135	3.2	2.3★♦	7.3★♦	2.2	53	0.1	-8.0★	-9.6★	-3.0♦	55.3↑	91.5S
Brain and Other nervous	178	2.1	1.0	0.9	-0.9	537	0.6	-1.1★	-1.6★	-1.3	58.9↑	74.6S
Thyroid	136	1.6	0.9	1.5	0.3	-	-	-	-	-	100.0	99.3
Hodgkin's disease	288	3.4	0.1	2.2	-1.2♦	131	0.1	-4.4★	-2.7★	-5.3★	88.4	92.2
Non-Hodgkin's lymphomas	143	1.7	2.9★♦	5.4★♦	2.3	306	0.3	-2.6★	-3.3★	-2.9★	41.7↑	66.6S
Leukemias	201	2.4	0.1	0.6	1.5	1,100	1.2	-2.2★	-2.0★	-2.0★	21.5	45.6S
Acute lymphocytic	93	1.1	0.8	4.0★	0.2	455	0.5	-1.9★	0.1	-2.4★♦	21.2↑	49.7S↑

Note: The EAPC is the Estimated Annual Percent Change over the time interval.
 Incidence and mortality rates are per 100,000. Survival rates are expressed as percents.
 § SEER Program.
 * NCHS public use tape.
 ★ The EAPC is significantly different from zero (p<.05).
 ♦ The EAPC for 1985-96 is significantly different from the EAPC for 1973-84 (p<.05).
 ◇ The EAPC for 1985-96 is significantly different from the EAPC for 1973-84 (p<.10).
 S The difference in rates between 1974-76 and 1989-95 is statistically significant (p<.05).
 ↑ The standard error of the survival rate is between 5 and 10 percentage points.
 ⊕ The standard error of the survival rate is greater than 10 percentage points.
 - Sites were chosen based on more than 100 SEER incident cases between 1992-96.
 - Statistic could not be calculated.

Table XXVII-10
ALL SITES (Invasive)INCIDENCE, MORTALITY, AND SURVIVAL RATES

By Year of Diagnosis/Death

All Races, Males and Females

Ages 0-14

Year of Diagnosis/Death

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Incidence																						
SEER	11.3	12.9	12.7	13.0	12.9	12.7	12.3	12.8	12.8	13.7	14.3	14.0	14.0	13.2	14.8	14.0	14.9	13.4	14.7	14.0	13.5	14.1
Mortality																						
U.S.	4.9	4.9	4.7	4.3	4.4	4.3	4.2	4.2	4.1	3.6	3.6	3.5	3.4	3.3	3.3	3.1	3.1	3.0	3.0	2.8	2.8	2.7
SEER	5.0	4.7	4.9	4.3	4.6	4.2	4.1	4.3	4.5	3.6	4.0	4.1	3.8	3.6	2.8	3.2	3.4	2.8	3.1	2.6	2.7	2.5
Relative Survival Rates (SEER)																						
1-year	79.9	80.5	82.3	81.9	81.9	84.1	84.2	85.7	84.6	86.3	87.0	85.6	85.8	88.6	88.6	89.2	90.8	90.9	88.4	90.7	89.7	
2-year	66.6	70.2	71.1	73.6	73.2	74.8	74.8	76.2	76.5	75.8	78.1	76.1	76.6	80.1	79.9	81.5	81.8	83.8	81.7	84.4		
3-year	61.0	63.8	64.9	69.3	67.1	68.5	70.2	71.0	72.2	70.8	73.8	72.1	72.2	76.4	75.4	77.0	78.2	80.4	78.0			
4-year	58.5	60.2	61.7	65.5	63.4	64.9	66.0	69.6	69.6	66.7	70.5	70.6	70.1	73.2	72.8	74.7	75.3	78.1				
5-year	55.5	58.0	59.4	63.4	61.7	62.4	64.4	67.8	67.3	66.0	69.6	68.2	69.5	72.3	71.3	73.5	74.2					
6-year	53.2	56.6	58.1	61.6	60.1	60.6	63.4	66.2	66.4	65.2	68.2	67.3	68.1	71.8	70.2	72.5						
7-year	51.4	55.3	56.9	61.0	58.9	59.5	62.0	65.5	66.1	64.0	67.1	67.0	66.8	70.9	68.5							
8-year	50.3	54.9	56.5	60.3	57.8	58.6	61.2	65.0	65.4	62.9	65.9	66.7	66.8	70.4								
9-year	50.0	54.6	56.2	59.5	57.6	57.6	60.3	64.7	65.3	62.3	65.3	66.1	66.5									
10-year	49.4	54.3	56.0	59.2	57.3	57.1	60.0	64.1	64.8	61.7	64.4	66.0										
11-year	49.4	54.3	55.5	58.7	56.7	57.0	59.2	63.8	64.3	61.4	63.6											
12-year	48.9	53.7	55.2	58.4	56.4	56.7	58.3	63.1	63.6	61.1												
13-year	48.9	53.4	55.1	58.4	56.0	56.5	58.3	63.0	63.0													
14-year	48.9	53.3	54.4	57.6	55.5	55.8	58.3	62.8														
15-year	48.9	53.0	54.3	57.3	54.8	55.8	58.3															
16-year	48.9	52.1	53.6	56.8	54.7	55.5																
17-year	48.5	51.6	53.5	56.6	54.0																	
18-year	48.1	51.3	52.9	56.6																		
19-year	48.1	50.5	52.5																			
20-year	48.1	50.4																				
21-year	48.1																					

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
Survival rates are relative rates expressed as percents.

Table XXVII-11
ALL SITES (Invasive)INCIDENCE, MORTALITY, AND SURVIVAL RATES

By Year of Diagnosis/Death

All Races, Males and Females

Ages 0-19

Year of Diagnosis/Death

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Incidence																						
SEER	12.8	14.1	14.1	14.4	14.5	14.2	13.8	14.4	14.4	15.4	15.7	15.7	15.2	15.0	16.5	15.4	16.2	16.0	16.0	15.6	15.4	15.5
Mortality																						
U.S.	5.1	5.1	5.0	4.5	4.6	4.6	4.4	4.5	4.3	3.9	3.8	3.8	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.0	2.9
SEER	5.4	5.2	4.9	4.4	5.0	4.4	4.4	4.7	4.8	3.8	4.2	4.3	3.9	3.8	3.1	3.6	3.5	3.3	3.5	3.1	2.9	2.7
Relative Survival Rates (SEER)																						
1-year	81.4	82.3	83.9	83.2	84.0	86.2	85.0	85.8	86.7	87.5	87.8	88.0	87.9	90.1	89.6	90.3	91.2	90.3	89.7	90.8	89.6	
2-year	69.2	73.0	73.8	73.9	74.5	76.8	75.0	77.6	79.2	77.6	78.7	78.9	79.6	82.4	81.3	82.8	83.1	83.1	82.3	84.2		
3-year	64.1	67.5	68.4	69.5	69.4	70.4	70.1	72.4	74.9	73.0	75.2	75.3	75.2	78.3	77.2	78.2	79.1	79.9	78.8			
4-year	61.3	63.9	65.0	66.5	66.1	68.1	66.4	70.4	72.1	68.9	72.4	73.5	72.6	75.6	74.0	75.7	76.9	77.7				
5-year	58.5	62.2	62.9	64.5	64.3	66.0	64.9	68.7	69.6	67.9	71.5	71.6	72.0	74.7	72.7	74.3	75.6					
6-year	56.1	60.6	61.7	63.0	62.3	64.3	63.4	67.3	68.4	66.5	70.3	70.9	70.8	74.1	71.4	73.2						
7-year	54.8	59.4	60.9	62.4	61.2	63.5	62.5	66.7	67.8	65.5	69.1	70.4	69.6	73.1	70.3							
8-year	54.1	58.8	60.3	61.8	59.7	62.9	61.9	66.1	66.7	64.3	68.2	70.0	69.2	72.1								
9-year	53.4	58.4	59.5	60.9	59.6	62.2	61.2	65.2	66.2	63.6	67.6	69.4	68.5									
10-year	52.9	57.9	59.0	60.7	59.5	61.8	60.9	64.6	65.8	63.0	66.8	69.1										
11-year	52.9	57.6	58.6	60.2	58.9	61.5	60.2	64.2	65.5	62.8	66.0											
12-year	52.4	57.1	58.5	59.9	58.4	61.3	59.4	63.7	64.7	62.5												
13-year	52.4	56.9	58.4	59.8	58.1	61.0	59.4	63.4	64.1													
14-year	52.2	56.8	57.8	59.2	57.8	60.2	59.2	63.0														
15-year	52.1	56.6	57.4	59.1	57.3	59.9	59.0															
16-year	52.1	56.0	56.8	58.5	56.9	59.0																
17-year	51.9	55.5	56.8	58.2	56.6																	
18-year	51.4	55.2	56.3	57.7																		
19-year	51.4	54.7	56.1																			
20-year	51.2	54.2																				
21-year	51.2																					

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
Survival rates are relative rates expressed as percents.