

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.

Table XXVII-1

AGE-ADJUSTED CANCER SEER INCIDENCE TRENDS, 1975-98, 1975-86, 1987-98§

By Primary Cancer Site

All Races, Males and Females

Site	Ages 0-14				Ages 0-19			
	% Change 1975-98	EAPC 75-98	EAPC 75-86	EAPC 87-98	% Change 1975-98	EAPC 75-98	EAPC 75-86	EAPC 87-98
All Sites								
All Races	20.9	0.8★	1.3★	0.5	18.2	0.8★	1.3★	0.3◆
Whites	20.5	0.8★	1.4★	0.4	19.3	0.7★	1.5★	0.2◆
Blacks	17.8	1.0★	1.0	-0.4	10.4	0.7★	0.8	-0.4
Bone & Joint	65.9	0.9	3.5★	1.0	56.3	0.9★	2.7★	0.9
Brain & Other nervous	24.9	1.2★	1.7	-0.8◆	19.3	1.1★	1.5	-1.0★◆
Hodgkin's disease	-10.8	-0.9	-1.7	-0.9	-4.7	-0.5	-0.4	-1.0
Kidney & Renal pelvis	32.7	0.7	1.3	1.5	30.3	0.8	1.2	1.5
Leukemias	25.4	0.8★	1.5★	0.5	20.5	0.8★	1.5★	0.5
Acute lymphocytic	47.7	1.1★	2.3★	0.7	45.5	1.1★	2.4★	0.7
Non-Hodgkin's lymphomas	2.9	0.2	0.2	0.3	19.1	0.9★	1.5	1.0
Soft tissue	31.2	1.2★	1.3	3.1	41.1	1.2★	2.0	2.6

§ 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 1987-98 is significantly different from the EAPC for 1975-86 ($p < .05$).

◇ The EAPC for 1987-98 is significantly different from the EAPC for 1975-86 ($p < .10$).

- Statistic could not be calculated.

Table XXVII-2

AGE-ADJUSTED CANCER U.S. MORTALITY TRENDS, 1975-98, 1975-86, 1987-98

By Race and Primary Cancer Site

Males and Females

Race/Site	Ages 0-14				Ages 0-19			
	% Change 1975-98	EAPC 75-98	EAPC 75-86	EAPC 87-98	% Change 1975-98	EAPC 75-98	EAPC 75-86	EAPC 87-98
<u>All Races</u>								
All Sites	-46.7	-2.8★	-2.9★	-2.6★	-43.9	-2.6★	-2.7★	-2.3★
Bone & Joint	-45.8	-2.7★	-2.8★	-0.8	-37.3	-2.2★	-2.6★	0.0♦
Brain & Other nervous	-25.3	-1.1★	-1.3★	-1.0	-24.4	-1.1★	-1.3★	-1.0★
Hodgkin's disease	-63.3	-4.9★	-5.1★	-2.5	-67.1	-4.6★	-3.3★	-5.7★◇
Kidney & Renal pelvis	-45.9	-3.3★	-3.5★	-1.8	-42.3	-3.0★	-3.3★	-1.1
Leukemias	-59.7	-4.0★	-4.6★	-3.6★♦	-55.3	-3.5★	-4.0★	-3.3★◇
Acute lymphocytic	-65.5	-4.9★	-4.9★	-3.8★◇	-60.5	-4.3★	-4.0★	-3.6★
Non-Hodgkin's lymphomas	-64.4	-4.8★	-4.4★	-5.4★	-58.4	-3.9★	-3.8★	-4.4★
Soft tissue	7.3	-1.1★	0.7	-3.1★♦	17.3	-0.4	1.0	-1.9★♦
<u>Whites</u>								
All Sites	-47.7	-2.9★	-3.0★	-2.8★	-44.8	-2.7★	-2.7★	-2.5★
Bone & Joint	-42.0	-2.5★	-2.3★	-1.4	-33.8	-2.0★	-2.2★	-0.2♦
Brain & Other nervous	-25.0	-1.0★	-1.1★	-1.0	-23.8	-1.0★	-1.0★	-1.0
Hodgkin's disease	-70.0	-5.9★	-6.3★	-5.0	-72.1	-5.1★	-3.9★	-7.3★◇
Kidney & Renal pelvis	-48.3	-3.3★	-4.0★	-2.4★	-43.4	-3.0★	-3.5★	-1.7
Leukemias	-60.9	-4.1★	-4.9★	-3.8★♦	-56.0	-3.6★	-4.2★	-3.4★◇
Acute lymphocytic	-64.9	-5.0★	-5.3★	-3.7★♦	-59.6	-4.3★	-4.3★	-3.4★◇
Non-Hodgkin's lymphomas	-64.3	-4.8★	-4.2★	-6.0★	-58.6	-3.8★	-3.7★	-4.6★
Soft tissue	8.0	-1.3★	1.2	-3.3★♦	17.1	-0.4	1.5	-2.0★♦
<u>Blacks</u>								
All Sites	-40.0	-2.4★	-2.3★	-1.6★	-37.8	-2.2★	-2.5★	-1.9★
Bone & Joint	-55.6	-2.7★	-6.0★	3.1♦	-42.4	-2.5★	-5.6★	2.4♦
Brain & Other nervous	-22.9	-1.1★	-2.2	-0.8	-26.4	-1.0★	-2.1★	-1.2
Hodgkin's disease	12.0	-	-2.2	-	-27.4	-2.4★	-0.3	-1.1
Kidney & Renal pelvis	-33.0	-3.0★	-1.5	0.5	-36.2	-2.7★	-2.5	1.3
Leukemias	-52.1	-3.2★	-2.5★	-1.6	-47.8	-2.6★	-2.3★	-2.5★
Acute lymphocytic	-68.0	-4.3★	-0.9	-4.5★♦	-62.2	-3.5★	-1.1	-4.8★♦
Non-Hodgkin's lymphomas	-65.2	-5.3★	-6.0★	-1.1	-57.2	-4.3★	-4.5★	-2.7
Soft tissue	-1.5	-0.8	-0.8	-3.8	9.9	-0.3	-1.1	-2.8

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

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

♦ The EAPC for 1987-98 is significantly different from the EAPC for 1975-86 ($p < .05$).

◇ The EAPC for 1987-98 is significantly different from the EAPC for 1975-86 ($p < .10$).

- Statistic could not be calculated.

Table XXVII-3

AGE-ADJUSTED CANCER SEER INCIDENCE RATES§, 1975-98

By Primary Cancer Site

All Races, Males and Females

Year of Diagnosis

<u>Age/Site</u>	<u>1975</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
<u>Ages 0-14</u>																				
All Sites																				
All Races	11.4	12.7	12.3	12.8	12.7	13.7	14.3	14.1	14.0	13.3	14.9	14.0	14.9	13.4	14.8	13.9	14.1	14.7	14.1	15.2
Whites	11.8	12.8	12.3	12.9	13.4	14.1	15.3	14.7	14.4	13.7	15.3	14.0	15.8	13.8	14.8	14.2	14.6	14.8	14.6	15.7
Blacks	8.5	11.0	13.0	11.8	9.9	10.3	9.9	10.7	11.6	11.8	13.6	12.2	11.7	12.4	12.8	12.9	12.1	11.8	12.4	10.7
Bone & Joint	0.5	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	0.9	0.7
Brain & Other nervous	2.3	2.8	2.5	2.4	2.2	2.8	2.9	3.4	3.1	3.3	3.2	3.4	3.4	3.2	3.4	3.3	3.3	3.1	2.8	3.0
Hodgkin's disease	0.7	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	0.7	0.7
Kidney & Renal pelvis	0.6	0.8	0.9	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	1.0	1.0
Leukemias	3.2	3.9	3.9	3.7	3.6	4.4	4.5	4.0	4.3	4.0	4.6	4.3	4.5	4.0	4.1	3.6	4.4	4.6	4.2	4.8
Acute lymphocytic	2.1	3.0	3.1	2.9	2.9	3.4	3.4	3.2	3.3	3.2	3.8	3.3	3.4	3.1	3.0	2.8	3.6	3.5	3.5	3.9
Non-Hodgkin's lymph	1.0	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	0.9	1.0
Soft tissue	0.8	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	1.0	1.1	1.0	1.1
<u>Ages 0-19</u>																				
All Sites																				
All Races	12.8	14.2	13.8	14.4	14.4	15.4	15.7	15.7	15.2	15.1	16.6	15.5	16.2	16.0	16.1	15.6	15.8	16.2	15.6	16.1
Whites	13.2	14.6	14.1	14.9	15.2	15.9	16.8	16.5	16.1	15.5	17.2	15.7	17.3	16.7	16.3	16.0	16.5	16.3	16.4	16.8
Blacks	10.7	11.0	12.9	11.8	11.1	12.1	10.5	12.2	11.3	12.9	13.9	12.9	12.4	12.8	13.4	13.5	12.5	12.8	11.9	11.7
Bone & Joint	0.7	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	1.0	0.7	1.2	0.9
Brain & Other nervous	2.1	2.4	2.3	2.3	2.2	2.6	2.6	3.2	2.9	3.0	3.0	3.1	3.0	3.2	3.0	2.9	3.0	3.0	2.6	2.6
Hodgkin's disease	1.5	1.2	1.3	1.5	1.5	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	1.4	1.4
Kidney & Renal pelvis	0.5	0.6	0.7	0.7	0.8	0.6	0.7	0.7	0.7	0.6	0.8	0.6	0.7	0.6	0.8	0.9	0.5	0.7	0.8	0.8
Leukemias	3.0	3.4	3.6	3.3	3.4	3.9	4.0	3.6	3.6	3.5	4.1	3.7	4.0	3.6	3.7	3.4	3.9	3.9	3.7	4.2
Acute lymphocytic	1.9	2.4	2.7	2.5	2.5	2.9	2.8	2.7	2.7	2.7	3.3	2.8	2.9	2.6	2.5	2.4	3.0	2.9	2.9	3.3
Non-Hodgkin's lymph	1.0	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	1.1	1.0	1.1	1.1
Soft tissue	0.8	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	0.7	1.1	1.1	1.0	1.1

§ 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 RATES⁵, 1975-98

By Primary Cancer Site

All Races, Males and Females

Year of Death

<u>Age/Site</u>	<u>1975</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
<u>Ages 0-14</u>																				
All Sites	4.9	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	2.7	2.7	2.7	2.5
Bone & Joint	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	0.1	0.1
Brain & Other nervous	1.0	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	0.7	0.7
Hodgkin's disease	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	0.1	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	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	0.9	0.8
Acute lymphocytic	1.2	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	0.4	0.4
Non-Hodgkin's lymph	0.4	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	0.1	0.1
Soft tissue	0.1	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	0.2	0.1
<u>Ages 0-19</u>																				
All Sites	5.1	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	2.9	2.8
Bone & Joint	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	0.2	0.2
Brain & Other nervous	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	0.7	0.8	0.7	0.7	0.8	0.7	0.7
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	0.0	0.0	0.1	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
Leukemias	2.0	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	1.0	0.9
Acute lymphocytic	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	0.4	0.4
Non-Hodgkin's lymph	0.4	0.3	0.3	0.3	0.3	0.2	0.2	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
Soft tissue	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

⁵ 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^δ, 1975-98

By Primary Cancer Site

Whites, Males and Females

Year of Death

<u>Age/Site</u>	<u>1975</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
<u>Ages 0-14</u>																				
All Sites	5.0	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	2.7	2.5
Bone & Joint	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	0.1	0.1
Brain & Other nervous	1.0	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	0.8	0.7
Hodgkin's disease	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	0.1	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	2.3	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	0.9	0.8
Acute lymphocytic	1.2	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	0.5	0.4
Non-Hodgkin's lymph	0.4	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	0.1	0.1
Soft tissue	0.1	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	0.2	0.1
<u>Ages 0-19</u>																				
All Sites	5.2	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	2.9	2.9	2.8
Bone & Joint	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	0.2	0.2
Brain & Other nervous	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	0.7	0.7	0.8	0.7	0.7
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	0.0	0.0	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
Leukemias	2.1	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	1.0	0.9
Acute lymphocytic	1.1	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	0.5	0.5
Non-Hodgkin's lymph	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	0.2	0.2
Soft tissue	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	0.2	0.2	0.2

^δ 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 RATES⁵, 1975-98

By Primary Cancer Site

Blacks, Males and Females

Year of Death

<u>Age/Site</u>	<u>1975</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
<u>Ages 0-14</u>																				
All Sites	4.5	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	2.6	2.6
Bone & Joint	0.3	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	0.1	0.2
Brain & Other nervous	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	0.7	0.8
Hodgkin's disease	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	0.0	0.0
Kidney & Renal pelvis	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	0.2	0.1
Leukemias	1.6	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	0.8	0.7
Acute lymphocytic	0.8	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	0.3	0.2
Non-Hodgkin's lymph	0.4	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	0.1	0.1
Soft tissue	0.2	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	0.2	0.2
<u>Ages 0-19</u>																				
All Sites	4.7	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	3.0	2.7
Bone & Joint	0.4	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	0.1	0.3
Brain & Other nervous	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	0.7	0.7
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	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Kidney & Renal pelvis	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	0.1	0.1
Leukemias	1.6	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	0.8	0.8
Acute lymphocytic	0.7	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	0.3	0.2
Non-Hodgkin's lymph	0.4	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	0.2	0.1
Soft tissue	0.2	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	0.3	0.2

⁵ 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 INCIDENCES AND U.S. MORTALITY RATES, 1994-98

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	14.4	15.4	13.4	2.7	3.0	2.4	15.9	16.7	15.0	3.0	3.3	2.6
Whites	14.8	15.6	13.9	2.7	3.0	2.4	16.4	17.2	15.6	3.0	3.4	2.6
Blacks	12.0	13.0	10.9	2.8	2.9	2.6	12.5	13.3	11.7	3.1	3.2	2.9
Bone & Joint	0.7	0.9	0.6	0.1	0.1	0.1	1.0	1.2	0.7	0.2	0.3	0.2
Brain & Other nervous	3.1	3.4	2.8	0.8	0.8	0.7	2.8	3.1	2.5	0.7	0.8	0.6
Hodgkin's disease	0.6	0.6	0.6	0.0	0.0	0.0	1.3	1.2	1.4	0.0	0.0	0.0
Kidney & Renal pelvis	0.9	0.9	1.0	0.1	0.1	0.1	0.7	0.7	0.8	0.1	0.1	0.1
Leukemias	4.3	4.7	3.9	0.9	1.0	0.8	3.8	4.2	3.4	1.0	1.1	0.8
Acute lymphocytic	3.5	3.8	3.1	0.4	0.5	0.4	2.9	3.2	2.5	0.4	0.5	0.4
Non-Hodgkin's lymphomas	0.9	1.3	0.5	0.1	0.2	0.1	1.1	1.6	0.7	0.2	0.2	0.1
Soft tissue	1.0	0.9	1.1	0.1	0.2	0.1	1.0	1.0	1.0	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.

δ 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						
	74-76	77-79	80-82	83-85	86-88	89-91	92-97	74-76	77-79	80-82	83-85	86-88	89-91	92-97
All Sites														
All Races	55.7	61.6	65.1	67.6	70.2	73.3	77.1 Ω	58.5	64.1	66.6	69.7	72.8	74.5	77.5 Ω
Whites	55.8	62.0	65.5	69.3	71.5	74.5	78.5 Ω	58.8	64.6	67.5	71.4	74.5	76.3	78.8 Ω
Blacks	56.8	58.0	61.4	57.4	62.4	66.1	72.6 Ω	56.9	60.6	61.3	58.9	62.9	64.9	72.1 Ω
Bone & Joint	53.3 \uparrow	53.3 \uparrow	54.6 \uparrow	56.6	63.4 \uparrow	62.2	72.6 Ω	50.2	50.6	50.0	52.4	62.2	64.3	68.6 Ω
Brain & ONS	54.8	56.1	55.5	61.6	62.9	62.2	68.6 Ω	55.6	56.5	56.9	63.1	65.6	64.3	69.5 Ω
Hodgkin's disease	78.3	83.4	91.0	89.6	89.9	94.0	92.2 Ω	84.8	88.3	87.1	88.2	89.3	93.5	93.1 Ω
Leukemias	45.2	59.4	62.7	61.0	70.3	72.8	77.2 Ω	40.9	53.8	57.9	58.2	66.1	69.4	73.1 Ω
Acute lymphocytic	53.2	67.1	71.1	69.2	78.3	80.3	85.3 Ω	49.2	62.9	67.3	66.7	75.4	77.3	82.8 Ω
Acute myeloid	13.7	29.5 \uparrow	21.1 \uparrow	31.5 \uparrow	32.2 \uparrow	35.4 \uparrow	45.0 Ω	16.0	28.3	22.1	34.4 \uparrow	31.7 \uparrow	38.5	41.1 Ω
Neuroblastoma	52.6	53.8	53.1	54.9	59.6	68.3	71.1 Ω	52.2	53.8	53.2	54.2	58.9	67.0	70.9 Ω
Non-Hodgkin's lymphomas	43.9	50.2	61.5	70.9	69.7	74.8	80.2 Ω	43.3	49.5	59.0	66.9	73.2	70.2	77.7 Ω
Soft tissue	60.7	68.3	65.1	75.8	66.5	78.1	74.0 Ω	62.0	64.9	64.7	74.2	68.3	69.4	72.3 Ω
Wilms' tumor	74.4	77.5	87.1	86.5	90.8	92.6	91.8 Ω	73.6	77.1	86.5	86.8	90.9	92.0	91.8 Ω

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 1998.

Ω The difference in rates between 1974-76 and 1992-97 is statistically significant ($p < .05$).

\uparrow The standard error of the survival rate is between 5 and 10 percentage points.

$\uparrow\uparrow$ 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 Incidence§					US Mortalityδ					Survival§	
	1994-98 Num Cases	1994-98 Rate	75-98 EAPC	75-86 EAPC	87-98 EAPC	1994-98 Num Cases	1994-98 Rate	75-98 EAPC	75-86 EAPC	87-98 EAPC	1974-76	1992-97
<u>Ages 0-4</u>												
All Sites	1,883	20.6	0.9★	1.4★	0.6	2,618	2.7	-3.0★	-2.6★	-3.1★	56.5	76.8Ω
Soft tissue	127	1.4	0.1	1.5	-0.2	129	0.1	-1.9★♦	-0.1♦	-3.8	57.7↑	81.1Ω
Kidney and Renal pelvis	207	2.3	0.7	-0.2	1.8	110	0.1	-4.4★◇	-6.3★◇	0.2♦	74.2	90.1Ω
Eye and Orbit	113	1.2	0.8	2.9	0.1	32	0.0	-3.6★◇	-2.7	-6.6	89.6	97.7
Brain and Other nervous	345	3.8	1.6★	4.3★	-0.7♦	690	0.7	-1.0★	-1.1	-0.4	51.4	61.7Ω
Other endocrine	126	1.4	-	-	-	454	0.5	-	-	-	32.8↑	61.1Ω
Leukemias	669	7.3	0.9★	0.9	0.6	849	0.9	-3.5★	-4.3★	-3.4★	51.2	80.1Ω
Acute lymphocytic	557	6.1	1.1★	1.5★	0.8	278	0.3	-5.4★	-6.1★	-4.7★	58.4	87.3Ω
<u>Ages 5-9</u>												
All Sites	990	10.9	0.5	1.0	-0.3	2,623	2.7	-3.2★	-3.5★	-3.0★	55.3	77.5Ω
Brain and Other nervous	273	3.0	0.6	1.4	-1.0	857	0.9	-0.8★	-0.8	-1.7★	54.4	70.9Ω
Leukemias	322	3.5	0.9★	0.4	-0.7	855	0.9	-5.2★	-6.0★	-5.0★	46.7	79.2Ω
Acute lymphocytic	272	3.0	1.2★	2.2	0.3	471	0.5	-6.1★	-6.2★	-4.7★	53.8	86.8Ω
<u>Ages 10-14</u>												
All Sites	1,138	12.7	1.0★	1.5★	1.0	2,527	2.7	-2.4★	-2.5★	-1.8★	55.0	77.2Ω
Bone and Joint	125	1.4	0.9	3.2	-0.2	240	0.3	-2.4★◇	-2.4★◇	-0.5	51.9↑	70.0Ω
Brain and Other nervous	238	2.7	1.3★	-1.4	-0.7	656	0.7	-1.4★	-2.2★	-0.6	58.7	76.1Ω
Hodgkin's disease	113	1.3	-0.4	-1.0	0.2	32	0.0	-4.1★	-3.7	-0.9	74.8↑	92.0Ω
Leukemias	230	2.6	0.9	4.8★	1.5	946	1.0	-2.9★	-3.1★	-2.3★	28.8	66.0Ω
Acute lymphocytic	156	1.7	1.4	4.8★	0.4	491	0.5	-3.2★	-2.1★	-2.5★	37.2↑	76.0Ω
<u>Ages 15-19</u>												
All Sites	1,791	20.3	0.7★	1.4★	-0.1♦	3,522	3.8	-2.1★	-2.3★	-1.7★◇	63.7	78.3Ω
Bone and Joint	144	1.6	0.8	1.5	0.7	492	0.5	-1.8★◇	-2.5★◇	0.6♦	46.6↑	63.6Ω
Melanomas of skin	118	1.3	1.1	1.0	-1.5	43	0.0	-3.0★	-4.0★	-4.7	76.3↑	91.3Ω
Ovary(females)	92	2.1	2.4★	-0.5	-2.3	29	0.1	-6.5★	-3.3	-5.1★	69.7↑	92.0Ω
Testis(males)	139	3.1	1.3	3.7	1.9	43	0.1	-8.0★	-10.8★	-4.7◇	55.3↑	89.5Ω
Brain and Other nervous	166	1.9	0.5	1.0	-2.0	533	0.6	-1.1★	-1.1	-1.0	58.9↑	74.2Ω
Thyroid	147	1.7	1.0	1.4	0.8	-	-	-	-	-	100.0	99.3
Hodgkin's disease	301	3.4	-0.3	0.3	-1.1	122	0.1	-4.4★	-2.5	-6.5★◇	88.4	93.5
Non-Hodgkin's lymphomas	160	1.8	2.1★	4.2★	1.9	288	0.3	-2.5★◇	-2.7★◇	-3.1★	41.7↑	73.8Ω
Leukemias	204	2.3	0.3	1.1	0.8	1,069	1.1	-2.2★	-2.0★	-2.6★	21.5	49.4Ω
Acute lymphocytic	104	1.2	0.7	3.8★	0.2	448	0.5	-2.1★	-0.5	-3.1★◇	21.2↑	58.1Ω

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.
δ NCHS public use tape.
★ The EAPC is significantly different from zero ($p < .05$).
♦ The EAPC for 1987-98 is significantly different from the EAPC for 1975-86 ($p < .05$).
◇ The EAPC for 1987-98 is significantly different from the EAPC for 1975-86 ($p < .10$).
Ω The difference in rates between 1974-76 and 1992-97 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 1994-98.
- 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	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Incidence																				
SEER	11.4	12.7	12.3	12.8	12.7	13.7	14.3	14.1	14.0	13.3	14.9	14.0	14.9	13.4	14.8	13.9	14.1	14.7	14.1	15.2
Mortality																				
U.S.	4.9	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	2.7	2.7	2.7	2.5
SEER	5.0	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	2.6	2.5	2.5	2.7
Relative Survival Rates (SEER)																				
1-year	79.9	84.1	84.2	85.8	84.6	86.2	87.1	85.7	85.9	88.7	88.7	89.2	90.9	91.0	88.4	90.4	90.2	92.9	91.0	
2-year	66.7	75.0	74.8	76.3	76.5	75.7	78.2	76.4	76.8	80.2	80.1	81.5	82.3	83.9	81.8	84.5	84.3	86.3		
3-year	61.1	68.6	70.3	71.2	72.1	70.8	73.8	72.4	72.5	76.4	75.7	77.1	78.7	80.6	78.2	81.3	80.8			
4-year	58.7	65.1	66.0	69.8	69.6	66.7	70.4	70.9	70.4	73.2	73.1	74.8	75.9	78.2	77.4	78.4				
5-year	55.7	62.6	64.5	68.2	67.3	66.0	69.5	68.7	69.8	72.3	71.7	73.7	74.7	77.0	75.6					
6-year	53.4	60.8	63.5	66.6	66.3	65.2	68.2	67.8	68.4	71.8	70.6	72.7	74.1	75.4						
7-year	51.6	59.7	61.9	65.9	66.0	64.0	67.1	67.5	67.2	70.9	69.0	71.6	73.7							
8-year	50.5	58.9	61.3	65.5	65.4	62.9	65.9	67.2	67.2	70.3	68.0	71.1								
9-year	50.2	57.9	60.4	65.2	65.3	62.3	65.3	66.6	66.9	70.0	67.5									
10-year	49.7	57.4	60.0	64.5	64.8	61.7	64.6	66.5	66.2	69.7										
11-year	49.7	57.3	59.3	64.2	64.3	61.4	63.8	66.5	65.9											
12-year	49.2	57.0	58.5	63.6	63.7	61.1	63.5	65.7												
13-year	49.0	56.8	58.5	63.5	63.2	60.3	63.3													
14-year	49.0	56.2	58.5	63.4	62.7	60.0														
15-year	49.0	56.2	58.5	63.2	62.3															
16-year	49.0	55.7	58.5	62.9																
17-year	48.4	55.4	58.3																	
18-year	48.1	54.6																		
19-year	48.1																			
20-year	48.1																			
21-year	48.1																			
22-year	47.5																			
23-year	47.3																			

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	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Incidence																				
SEER	12.8	14.2	13.8	14.4	14.4	15.4	15.7	15.7	15.2	15.1	16.6	15.5	16.2	16.0	16.1	15.6	15.8	16.2	15.6	16.1
Mortality																				
U.S.	5.1	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	2.9	2.8
SEER	5.4	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	2.7	2.8
Relative Survival Rates (SEER)																				
1-year	81.4	86.2	85.0	85.7	86.7	87.4	87.9	88.1	88.0	90.0	89.7	90.4	91.3	90.3	89.7	90.6	90.1	93.2	91.6	
2-year	69.2	76.9	75.0	77.6	79.2	77.5	78.8	79.1	79.7	82.3	81.4	82.9	83.4	83.2	82.5	84.1	84.4	87.2		
3-year	64.2	70.5	70.2	72.4	74.9	73.0	75.3	75.6	75.4	78.0	77.4	78.3	79.6	80.1	79.2	80.4	81.1			
4-year	61.3	68.1	66.5	70.5	72.1	68.9	72.4	73.8	72.8	75.3	74.2	75.9	77.3	77.9	77.7	78.2				
5-year	58.6	66.1	65.0	68.7	69.7	67.9	71.4	71.9	72.2	74.4	72.9	74.5	76.0	76.6	75.8					
6-year	56.4	64.4	63.6	67.4	68.4	66.5	70.2	71.2	71.1	73.9	71.7	73.4	75.3	75.1						
7-year	55.0	63.6	62.7	66.8	67.8	65.6	69.1	70.8	69.9	72.9	70.7	72.4	74.6							
8-year	54.3	63.0	62.0	66.2	66.8	64.4	68.2	70.4	69.5	71.9	70.0	71.6								
9-year	53.6	62.3	61.1	65.4	66.3	63.7	67.6	69.8	68.9	71.7	69.3									
10-year	53.1	61.9	60.8	64.7	65.9	63.1	66.9	69.4	68.5	71.0										
11-year	53.1	61.6	60.2	64.3	65.6	62.8	66.2	69.2	68.1											
12-year	52.6	61.4	59.4	63.9	64.9	62.5	65.9	68.7												
13-year	52.5	61.1	59.4	63.5	64.4	61.9	65.6													
14-year	52.3	60.4	59.3	63.1	64.0	61.5														
15-year	52.3	60.1	59.1	63.1	63.6															
16-year	52.2	59.2	59.0	62.3																
17-year	51.9	58.8	58.5																	
18-year	51.4	58.2																		
19-year	51.4																			
20-year	51.3																			
21-year	51.3																			
22-year	50.5																			
23-year	50.3																			

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.