

Section 28
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. Benign brain tumors(2004+) and myelodysplastic syndromes(2001+) are not included.

Childhood cancer is better categorized by groupings based on histologic type and site rather than primary site alone (see section XXIX 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 28.1

Age-Adjusted SEER Cancer Incidence^a and U.S. Death^b Rates, 2003-2007

By Primary Cancer Site

All Races, Males and Females

Site	Ages 0-14						Ages 0-19					
	Incidence			Mortality			Incidence			Mortality		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites												
All Races	15.2	16.1	14.2	2.4	2.6	2.2	16.7	17.6	15.7	2.6	2.9	2.3
Whites	15.9	17.0	14.7	2.4	2.6	2.3	17.6	18.8	16.4	2.7	3.0	2.4
Blacks	11.7	12.1	11.4	2.3	2.5	2.1	12.5	12.7	12.2	2.5	2.8	2.3
Bone & Joint	0.7	0.7	0.7	0.1	0.1	0.1	0.9	1.0	0.8	0.2	0.3	0.2
Brain & Other nervous	3.2	3.3	3.0	0.7	0.7	0.7	2.9	3.1	2.7	0.7	0.7	0.6
Hodgkin lymphoma	0.6	0.7	0.5	0.0	0.0	-	1.2	1.3	1.1	0.0	0.0	0.0
Kidney & Renal pelvis	0.8	0.7	0.8	0.1	0.1	0.1	0.6	0.5	0.7	0.1	0.1	0.1
Leukemia	5.1	5.6	4.5	0.7	0.8	0.6	4.6	5.1	4.0	0.8	0.9	0.7
Acute lymphocytic	4.0	4.5	3.6	0.3	0.4	0.3	3.5	3.9	3.0	0.4	0.4	0.3
Non-Hodgkin lymphoma	0.9	1.1	0.6	0.1	0.1	0.0	1.1	1.4	0.8	0.1	0.2	0.1
Soft tissue	1.0	1.0	1.0	0.1	0.1	0.1	1.0	1.0	1.0	0.2	0.2	0.2

^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). Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^b US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 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 28.2

Age-Adjusted SEER Cancer Incidence Rates^a, 1975-2007

By Primary Cancer Site

All Races, Males and Females

Year of Diagnosis

Age/Site	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<u>Ages 0-14</u>																					
All Sites																					
All Races	11.5	12.9	14.5	14.2	15.2	13.4	15.0	13.9	14.0	14.8	14.0	15.3	14.5	15.3	15.7	15.4	13.1	15.1	16.4	14.2	14.3
Whites	12.0	13.2	15.5	14.3	16.2	13.9	15.3	14.5	14.8	15.0	14.7	16.3	15.6	16.6	16.9	16.8	13.9	15.8	17.3	14.9	14.9
Blacks	8.6	11.1	10.1	12.3	11.6	12.0	12.4	12.2	11.5	11.6	11.2	10.0	10.3	11.8	10.7	11.5	9.9	13.6	13.1	11.0	11.7
Bone & Joint	0.5	0.7	0.8	0.7	0.9	0.6	0.6	0.8	0.8	0.5	0.9	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.6	0.6	0.6
Brain & Other nervous	2.3	2.8	3.0	3.5	3.5	3.2	3.4	3.3	3.3	3.1	2.8	3.2	3.4	3.4	3.9	3.7	3.0	3.2	3.3	3.0	3.2
Hodgkin lymphoma	0.7	0.5	0.7	0.7	0.6	0.5	0.6	0.5	-	0.6	0.6	0.6	0.4	0.6	0.5	0.5	0.4	0.5	0.5	0.6	0.6
Kidney & Renal pelvis	0.7	0.8	0.9	0.8	0.9	0.7	1.0	1.2	0.6	1.0	1.0	1.1	0.7	1.0	0.9	0.9	0.7	0.7	0.9	0.6	0.7
Leukemia	3.3	4.0	4.6	4.4	4.6	4.1	4.2	3.6	4.4	4.6	4.3	4.8	4.7	4.6	4.4	4.8	4.0	5.0	5.3	4.5	4.1
Acute lymphocytic	2.2	3.1	3.5	3.5	3.6	3.2	3.1	2.9	3.6	3.6	3.5	3.9	3.6	3.5	3.5	4.0	3.2	3.8	4.1	3.4	3.5
Non-Hodgkin lymphoma	1.0	0.7	0.7	0.8	0.9	0.8	0.8	1.0	0.9	0.6	0.9	0.9	0.8	1.0	1.0	1.0	0.9	0.8	1.1	0.8	1.0
Soft tissue	0.9	0.9	0.9	0.7	1.1	0.8	0.6	0.9	1.0	1.1	1.0	1.1	0.9	1.0	1.2	1.0	0.8	1.0	1.5	0.9	1.0
<u>Ages 0-19</u>																					
All Sites																					
All Races	12.9	14.4	15.9	15.7	16.4	16.1	16.2	15.5	15.7	16.2	15.7	16.3	15.6	16.8	17.0	17.4	15.7	16.4	17.6	15.5	16.7
Whites	13.4	14.9	17.0	16.0	17.6	16.8	16.7	16.2	16.7	16.6	16.8	17.4	16.7	18.3	18.5	19.3	16.8	17.5	18.8	16.3	17.6
Blacks	10.8	10.9	10.5	13.2	12.3	12.3	13.0	13.0	12.3	12.6	11.1	11.3	10.9	12.7	11.3	11.4	11.3	13.4	13.1	11.9	12.6
Bone & Joint	0.7	0.9	1.0	0.8	1.0	0.9	0.8	1.0	0.9	0.7	1.2	0.8	0.7	0.8	0.9	1.0	0.8	0.7	0.9	0.9	0.8
Brain & Other nervous	2.1	2.5	2.7	3.2	3.1	3.3	3.0	2.9	3.0	3.0	2.6	2.8	3.0	3.1	3.4	3.4	2.9	2.9	2.9	2.7	3.0
Hodgkin lymphoma	1.5	1.2	1.4	1.3	1.4	1.4	1.3	1.3	0.9	1.4	1.3	1.4	1.1	1.1	1.1	1.2	1.0	1.1	0.9	1.1	1.4
Kidney & Renal pelvis	0.5	0.6	0.7	0.6	0.7	0.6	0.9	0.9	0.5	0.7	0.8	0.8	0.6	0.8	0.7	0.7	0.6	0.6	0.7	0.5	0.6
Leukemia	3.0	3.5	4.0	3.9	4.1	3.7	3.7	3.4	3.9	4.0	3.7	4.1	4.1	4.1	4.0	4.5	3.8	4.4	4.6	4.0	4.0
Acute lymphocytic	1.9	2.5	2.9	2.9	3.0	2.6	2.6	2.5	3.1	2.9	2.9	3.3	3.0	3.0	2.9	3.5	2.8	3.2	3.4	3.0	3.2
Non-Hodgkin lymphoma	1.0	0.8	1.0	1.0	1.1	1.0	0.9	1.2	1.1	1.0	1.1	1.0	0.9	1.3	1.1	1.2	1.3	1.1	1.3	1.1	1.2
Soft tissue	0.8	0.9	0.9	0.8	1.1	0.7	0.7	0.7	1.1	1.0	1.0	1.1	1.0	1.2	1.1	1.0	0.8	1.0	1.5	1.0	1.1

^a SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta). Rates are per 100,000 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 28.3

Age-Adjusted Cancer U.S. Death Rates^a, 1975-2007

By Primary Cancer Site

All Races, Males and Females

Year of Death

Age/Site	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<u>Ages 0-14</u>																					
All Sites	4.9	4.3	3.6	3.1	3.1	3.0	3.0	2.8	2.7	2.6	2.6	2.4	2.5	2.5	2.5	2.6	2.5	2.5	2.4	2.2	2.3
Bone & Joint	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	0.1	0.1
Brain & Other nervous	1.0	0.9	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7
Hodgkin lymphoma	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	0.1
Leukemia	2.1	1.7	1.4	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7
Acute lymphocytic	1.2	0.9	0.8	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.4
Non-Hodgkin lymphoma	0.4	0.3	0.2	0.2	0.2	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
Soft tissue	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1
<u>Ages 0-19</u>																					
All Sites	5.1	4.6	3.8	3.4	3.4	3.3	3.3	3.1	3.0	2.9	2.9	2.7	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.5	2.5
Bone & Joint	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
Brain & Other nervous	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.6
Hodgkin lymphoma	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	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	0.1
Leukemia	2.0	1.8	1.4	1.2	1.2	1.2	1.1	1.1	1.0	0.9	1.0	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.8
Acute lymphocytic	1.0	0.9	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4
Non-Hodgkin lymphoma	0.4	0.3	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	0.1	0.1	0.1	0.1
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	0.2

^a US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
Rates are per 100,000 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 28.4

Age-Adjusted Cancer U.S. Death Rates^a, 1975-2007

By Primary Cancer Site

Whites, Males and Females

Year of Death

Age/Site	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<u>Ages 0-14</u>																					
All Sites	5.0	4.4	3.7	3.2	3.2	3.1	3.1	2.8	2.7	2.7	2.7	2.5	2.5	2.6	2.5	2.6	2.6	2.5	2.4	2.3	2.4
Bone & Joint	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Brain & Other nervous	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.8
Hodgkin lymphoma	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	0.1
Leukemia	2.3	1.8	1.4	1.1	1.1	1.2	1.1	1.0	1.0	0.9	0.9	0.8	0.8	0.9	0.8	0.7	0.9	0.8	0.7	0.7	0.7
Acute lymphocytic	1.2	1.0	0.8	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4
Non-Hodgkin lymphoma	0.3	0.3	0.2	0.2	0.2	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
Soft tissue	0.1	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	0.2	0.1	0.2	0.1	0.1	0.1
<u>Ages 0-19</u>																					
All Sites	5.3	4.7	3.9	3.5	3.5	3.4	3.3	3.1	2.9	2.9	2.9	2.8	2.8	2.9	2.8	2.8	2.8	2.8	2.7	2.5	2.6
Bone & Joint	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	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2
Brain & Other nervous	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Hodgkin lymphoma	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0
Leukemia	2.1	1.8	1.4	1.2	1.2	1.2	1.2	1.1	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8
Acute lymphocytic	1.1	1.0	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Non-Hodgkin lymphoma	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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	0.2

^a US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
Rates are per 100,000 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 28.5

Age-Adjusted Cancer U.S. Death Rates^a, 1975-2007

By Primary Cancer Site

Blacks, Males and Females

Year of Death

Age/Site	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<u>Ages 0-14</u>																					
All Sites	4.5	3.8	3.3	3.0	3.0	2.7	2.6	2.8	2.9	2.5	2.5	2.4	2.5	2.3	2.3	2.6	2.4	2.4	2.5	2.2	2.1
Bone & Joint	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-
Brain & Other nervous	0.9	0.9	0.6	0.7	0.8	0.7	0.6	0.8	0.8	0.7	0.6	0.7	0.7	0.7	0.6	0.9	0.7	0.7	0.7	0.7	0.5
Hodgkin lymphoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kidney & Renal pelvis	-	-	0.2	-	-	-	0.2	-	-	-	0.2	-	-	-	0.2	-	-	-	-	-	-
Leukemia	1.6	1.2	1.2	0.9	1.0	0.8	0.9	0.8	1.0	0.8	0.7	0.7	0.7	0.5	0.8	0.6	0.6	0.6	0.7	0.6	0.7
Acute lymphocytic	0.8	0.6	0.7	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Non-Hodgkin lymphoma	0.4	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soft tissue	-	-	-	0.3	-	-	0.2	0.3	-	-	0.2	0.2	0.2	-	0.2	0.2	-	0.2	-	-	-
<u>Ages 0-19</u>																					
All Sites	4.8	4.2	3.5	3.4	3.3	3.0	3.1	3.2	3.1	2.9	2.9	2.6	3.0	2.8	2.6	2.9	2.5	2.8	2.6	2.5	2.3
Bone & Joint	0.4	0.3	0.2	0.2	-	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Brain & Other nervous	0.9	0.8	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.5	0.8	0.6	0.6	0.6	0.6	0.5
Hodgkin lymphoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kidney & Renal pelvis	0.2	-	0.2	-	-	-	0.1	-	-	-	0.1	0.1	-	0.1	0.2	-	-	-	-	-	-
Leukemia	1.6	1.4	1.1	1.0	1.1	0.8	1.0	1.0	1.1	0.8	0.8	0.7	0.8	0.8	0.8	0.7	0.6	0.7	0.8	0.7	0.7
Acute lymphocytic	0.7	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.5	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Non-Hodgkin lymphoma	0.4	0.3	0.2	0.2	0.2	-	0.2	0.1	0.2	0.1	0.2	-	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	-
Soft tissue	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2

^a US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
Rates are per 100,000 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 28.6

Trends in SEER Incidence^a Using the Joinpoint Regression Program,
1975-2007 With up to Four Joinpoints By Primary Cancer Site And Age At Diagnosis
Males and Females

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^b</u>
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2003-2007
<u>Ages 0-14</u>											
All Sites											
All Races	1975-2007	0.6*									0.6*
White	1975-2007	0.7*									0.7*
Black	1975-2007	0.3									0.3
Bone & Joint	1975-1979	12.8	1979-2007	-0.5							-0.5
Brain & Other nervous system	1975-1990	2.2*	1990-2007	-0.2							-0.2
Hodgkin lymphoma	1975-2007	-1.0*									-1.0*
Kidney & Renal pelvis	1975-2007	-0.3									-0.3
Leukemia	1975-2007	0.6*									0.6*
Acute lymphocytic leukemia	1975-2007	0.8*									0.8*
Non-Hodgkin lymphoma	1975-2007	0.4									0.4
Soft tissue	1975-2007	1.3*									1.3*
<u>Ages 0-19</u>											
All Sites											
All Races	1975-2007	0.6*									0.6*
White	1975-2007	0.7*									0.7*
Black	1975-2007	0.2									0.2
Bone & Joint	1975-2007	0.1									0.1
Brain & Other nervous system	1975-1977	14.5	1977-1983	-3.2	1983-1986	11.3	1986-2007	-0.2			-0.2
Hodgkin lymphoma	1975-2007	-0.9*									-0.9*
Kidney & Renal pelvis	1975-2007	-0.1									-0.1
Leukemia	1975-2007	0.7*									0.7*
Acute lymphocytic leukemia	1975-2007	0.9*									0.9*
Non-Hodgkin lymphoma	1975-2007	0.9*									0.9*
Soft tissue	1975-2007	1.3*									1.3*

Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

^b The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

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

- Joinpoint regression line analysis could not be performed on data series.

Table 28.7

Trends in U.S. Mortality^a Using the Joinpoint Regression Program,
1975-2007 With up to Four Joinpoints By Primary Cancer Site and Age at Death
All Races, Both Sexes

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^b</u>
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2003-2007
<u>Ages 0-14</u>											
All Sites	1975-1997	-2.9*	1997-2007	-1.0*							-1.0*
Bone & Joint	1975-1989	-3.6*	1989-2007	-0.3							-0.3
Brain & Other nervous system	1975-2007	-1.0*									-1.0*
Hodgkin lymphoma	1975-2007	-4.8*									-4.8*
Kidney & Renal pelvis	1975-1993	-3.8*	1993-2007	-0.9							-0.9
Leukemia	1975-1998	-4.0*	1998-2007	-1.7*							-1.7*
Acute lymphocytic leukemia	1975-1998	-5.0*	1998-2007	-1.3							-1.3
Non-Hodgkin lymphoma	1975-2007	-5.0*									-5.0*
Soft tissue	1975-1977	25.1	1977-2007	-1.5*							-1.5*
<u>Ages 0-19</u>											
All Sites	1975-1996	-2.7*	1996-2007	-1.2*							-1.2*
Bone & Joint	1975-1989	-3.2*	1989-2007	0.1							0.1
Brain & Other nervous system	1975-2007	-1.0*									-1.0*
Hodgkin lymphoma	1975-2007	-4.7*									-4.7*
Kidney & Renal pelvis	1975-1992	-3.7*	1992-2007	-0.9							-0.9
Leukemia	1975-1998	-3.5*	1998-2007	-1.7*							-1.7*
Acute lymphocytic leukemia	1975-1997	-4.4*	1997-2007	-1.8*							-1.8*
Non-Hodgkin lymphoma	1975-2007	-4.1*									-4.1*
Soft tissue	1975-1979	9.3*	1979-2007	-1.1*							-1.1*

Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^b The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2007.

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

- Joinpoint regression line analysis could not be performed on data series.

Table 28.7 - continued

Trends in U.S. Mortality^a Using the Joinpoint Regression Program,
1975-2007 With up to Four Joinpoints By Primary Cancer Site and Age at Death
White, Both Sexes

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^b</u>
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2003-2007
<u>Ages 0-14</u>											
All Sites	1975-1997	-3.0*	1997-2007	-0.9*							-0.9*
Bone & Joint	1975-1990	-3.0*	1990-2007	-0.3							-0.3
Brain & Other nervous system	1975-2007	-1.0*									-1.0*
Hodgkin lymphoma	1975-2007	-4.6*									-4.6*
Kidney & Renal pelvis	1975-2007	-2.7*									-2.7*
Leukemia	1975-1998	-4.1*	1998-2007	-1.6							-1.6
Acute lymphocytic leukemia	1975-1993	-5.4*	1993-2007	-2.4*							-2.4*
Non-Hodgkin lymphoma	1975-2007	-5.0*									-5.0*
Soft tissue	1975-1979	12.6*	1979-1995	-2.8*	1995-2007	0.3					0.3
<u>Ages 0-19</u>											
All Sites	1975-1996	-2.7*	1996-2007	-1.1*							-1.1*
Bone & Joint	1975-1989	-2.9*	1989-2007	0.0							0.0
Brain & Other nervous system	1975-2007	-1.0*									-1.0*
Hodgkin lymphoma	1975-2007	-4.7*									-4.7*
Kidney & Renal pelvis	1975-2007	-2.4*									-2.4*
Leukemia	1975-1996	-3.7*	1996-2007	-1.9*							-1.9*
Acute lymphocytic leukemia	1975-1996	-4.5*	1996-2007	-1.6*							-1.6*
Non-Hodgkin lymphoma	1975-2007	-4.2*									-4.2*
Soft tissue	1975-1979	10.3*	1979-2007	-1.1*							-1.1*

Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^b The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2007.

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

- Joinpoint regression line analysis could not be performed on data series.

Table 28.7 - continued

Trends in U.S. Mortality^a Using the Joinpoint Regression Program,
1975-2007 With up to Four Joinpoints By Primary Cancer Site and Age at Death
Black, Both Sexes

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^b</u>
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2003-2007
<u>Ages 0-14</u>											
All Sites	1975-1997	-2.7*	1997-2007	-0.8							-0.8
Bone & Joint	1975-1985	-6.9*	1985-2007	0.3							0.3
Brain & Other nervous system	1975-2007	-1.1*									-1.1*
Hodgkin lymphoma	-	-									-
Kidney & Renal pelvis	1975-2007	-3.0*									-3.0*
Leukemia	1975-2007	-3.2*									-3.2*
Acute lymphocytic leukemia	1975-2007	-4.7*									-4.7*
Non-Hodgkin lymphoma	1975-2007	-4.6*									-4.6*
Soft tissue	1975-2007	-1.3*									-1.3*
<u>Ages 0-19</u>											
All Sites	1975-2007	-2.1*									-2.1*
Bone & Joint	1975-1985	-6.5*	1985-2007	0.3							0.3
Brain & Other nervous system	1975-2007	-1.1*									-1.1*
Hodgkin lymphoma	-	-									-
Kidney & Renal pelvis	1975-2007	-2.6*									-2.6*
Leukemia	1975-2007	-2.7*									-2.7*
Acute lymphocytic leukemia	1975-2007	-4.0*									-4.0*
Non-Hodgkin lymphoma	1975-2007	-3.4*									-3.4*
Soft tissue	1975-2007	-1.0*									-1.0*

Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^b The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2007.

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

- Joinpoint regression line analysis could not be performed on data series.

Table 28.8

5-Year Relative Survival (Percent)
By Selected Primary Cancer Site and Year of Diagnosis
All Races, Males and Females

Site	Ages 0-14								
	1975-1977	1978-1980	1981-1983	1984-1986	1987-1989	1990-1992	1993-1995	1996-1998	1999-2006
All Sites									
All Races	58.2	62.6	66.9	68.2	71.6	75.8	77.4	79.1	81.5 ^c
Whites	58.1	63.1	67.6	70.1	72.3	76.8	78.3	80.5	82.9 ^c
Blacks	57.3	57.7	62.2	56.6	65.4	71.0	73.0	75.3	73.9 ^c
Bone & Joint	50.0 ^d	47.8	56.8 ^d	57.9 ^d	66.8 ^d	67.1	74.1	70.0	72.7 ^c
Brain & ONS	56.9	57.6	56.3	61.7	64.1	64.5	70.4	74.9	74.4 ^c
Hodgkin lymphoma	80.5	87.7	88.0	90.9	87.1	96.8	94.6	96.1	96.0 ^c
Leukemia	50.4	58.3	62.9	63.9	71.0	75.6	76.0	80.2	84.0 ^c
Acute lymphocytic	57.6	66.1	71.3	72.6	77.8	83.3	83.8	86.9	89.2 ^c
Acute myeloid	18.8	25.8	26.7 ^d	30.5 ^d	37.1 ^d	41.6	41.7 ^d	48.7	60.9 ^c
Neuroblastoma ^a	52.5	56.9	54.5	52.3	62.8	76.3	67.3	65.6	71.9 ^c
Non-Hodgkin lymphoma	43.5	52.7	66.9	70.3	70.7	76.9	80.7	83.3	86.6 ^c
Soft tissue	61.0	74.9	69.2	72.8	66.4	79.7	76.7	70.1	80.7 ^c
Wilms' tumor ^b	73.1	79.0	86.6	90.7	92.2	91.9	91.7	91.6	92.0 ^c
Site	Ages 0-19								
	1975-1977	1978-1980	1981-1983	1984-1986	1987-1989	1990-1992	1993-1995	1996-1998	1999-2006
All Sites									
All Races	61.7	65.3	68.3	70.6	73.5	76.3	77.8	79.6	81.4 ^c
Whites	61.5	65.9	69.1	72.5	75.0	77.6	78.6	81.0	82.7 ^c
Blacks	59.5	60.0	62.5	58.3	64.4	68.6	74.0	73.6	74.2 ^c
Bone & Joint	50.4	48.1	51.2	56.6	64.0	68.5	68.9	66.8	70.1 ^c
Brain & ONS	58.8	58.1	58.1	63.9	66.1	66.5	71.4	75.8	74.8 ^c
Hodgkin lymphoma	86.1	88.7	85.5	90.9	89.0	94.2	93.9	94.8	96.1 ^c
Leukemia	45.5	53.5	58.1	60.6	67.6	71.3	72.0	76.5	79.7 ^c
Acute lymphocytic	54.1	62.3	67.1	70.3	75.0	80.0	81.4	84.2	85.9 ^c
Acute myeloid	18.7	26.2	26.4	31.4	37.6	41.5	39.4	46.2	56.5 ^c
Neuroblastoma ^a	52.7	57.0	53.4	52.5	61.4	76.0	67.3	65.8	71.7 ^c
Non-Hodgkin lymphoma	44.6	53.4	63.8	67.7	70.4	72.7	77.9	81.5	84.1 ^c
Soft tissue	65.2	69.3	68.4	72.5	68.0	69.5	74.3	71.8	76.3 ^c
Wilms' tumor ^b	72.6	78.4	86.7	91.0	92.2	91.3	91.7	91.7	92.1 ^c

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

Based on follow-up of patients into 2007.

Note: Neuroblastoma and Wilms' tumor are not mutually exclusive from the other tumors presented in table.

^a Neuroblastoma is defined as histologies 9490-9509.

^b Wilms' tumor is defined as histologies 8959-8960.

^c The difference between 1975-1977 and 1999-2006 is statistically significant ($p < .05$).

^d The standard error is between 5 and 10 percentage points.

^e The standard error is greater than 10 percentage points.

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

Table 28.9

Childhood Cancer
SEER Incidence Rates, U.S. Death Rates and 5-Year Relative Survival Percentages
For Top Cancer Sites^f By 5-Year Age Groups
All Races, Males and Females

Age/Site	SEER Incidence ^a					US Mortality ^b					5-year Relative Survival ^a	
	2003-2007 Num Cases	2003-2007 Rate	1975-2007 APC	1975-1991 APC	1992-2007 APC	2003-2007 Num Deaths	2003-2007 Rate	1975-2007 APC	1975-1991 APC	1992-2007 APC	1975-1977	1999-2006
Ages 0-4												
All Sites	5,765	21.2	0.7*	1.3*	0.2 [#]	2,281	2.3	-2.7*	-2.9*	-2.2* [#]	57.3	82.3 ^c
Soft tissue	433	1.6	1.2*	1.3	3.6*	118	0.1	-2.0*	-1.3	-1.5	61.2 ^d	82.9 ^c
Kidney and Renal pelvis	451	1.7	-0.4	0.2	-2.5* [@]	85	0.1	-3.7*	-6.2*	-1.8 [#]	71.9	91.4 ^c
Eye and Orbit	355	1.3	0.4	1.2	-1.4	26	0.0	-	-	-	87.2 ^d	95.9 ^c
Brain and Other nervous	1,056	3.9	1.1*	3.2*	0.3 [#]	586	0.6	-1.4*	-1.2*	-2.2* [@]	52.5	72.7 ^c
Other endocrine ^g	370	1.4	-	-	-	376	0.4	-	-	-	35.7 ^d	67.3 ^c
Leukemia	2,227	8.2	0.8*	1.2*	1.0	730	0.7	-3.1*	-3.9*	-2.6* [#]	55.4	85.7 ^c
Acute lymphocytic	1,799	6.7	0.8*	1.5*	1.0	264	0.3	-4.3*	-5.8*	-1.9* [#]	63.2	90.8 ^c
Ages 5-9												
All Sites	2,977	11.3	0.2	1.2*	0.6	2,466	2.5	-2.7*	-3.3*	-1.3* [#]	58.5	80.0 ^c
Brain and Other nervous	813	3.1	0.3	1.5	-0.1	897	0.9	-0.6*	-0.4	0.1	58.0	71.1 ^c
Leukemia	1,045	4.0	0.4	2.0*	0.3 [@]	680	0.7	-4.8*	-5.6*	-3.6* [#]	52.3	87.6 ^c
Acute lymphocytic	893	3.4	0.6*	2.4*	0.3 [@]	371	0.4	-5.4*	-6.7*	-3.4* [#]	55.6	90.7 ^c
Ages 10-14												
All Sites	3,682	13.2	0.7*	1.1*	0.5	2,495	2.4	-2.1*	-2.5*	-1.2* [#]	58.9	81.6 ^c
Bone and Joint	359	1.3	-0.1	2.0*	-1.1 [#]	273	0.3	-1.4*	-3.1*	0.0 [#]	52.8 ^d	71.7 ^c
Brain and Other nervous	705	2.5	1.0*	1.7	-0.3 [@]	695	0.7	-1.1*	-1.5*	-0.2 [@]	59.5	80.5 ^c
Hodgkin lymphoma	338	1.2	-0.9*	-0.4	-0.8	22	0.0	-	-	-	78.7	97.4 ^c
Leukemia	869	3.1	0.6	1.5	1.1	819	0.8	-2.9*	-3.2*	-2.6* [#]	35.2	74.1 ^c
Acute lymphocytic	603	2.2	1.0*	2.6	1.4	387	0.4	-3.4*	-3.2*	-2.9* [#]	43.6 ^d	81.6 ^c
Ages 15-19												
All Sites	5,833	21.2	0.6*	0.9*	0.3	3,500	3.3	-1.9*	-2.3*	-1.6* [#]	67.8	81.3 ^c
Bone and Joint	398	1.4	0.2	0.4	-1.0	568	0.5	-1.1*	-2.9*	0.1 [#]	51.0 ^d	66.7 ^c
Melanoma of the skin	435	1.6	1.5*	2.5	1.5	44	0.0	-	-	-	76.2 ^d	98.9 ^c
Testis(males)	498	3.5	1.4*	1.7	1.3	42	0.1	-	-	-	65.4 ^d	94.7 ^c
Brain and Other nervous	589	2.1	0.3	1.0	-1.2	543	0.5	-1.2*	-1.2*	-1.5* [#]	65.0	76.5 ^c
Thyroid	519	1.9	1.2*	0.9	1.1	-	-	-	-	-	100.0	98.1
Hodgkin lymphoma	798	2.9	-0.9*	0.1	-1.7 [@]	78	0.1	-4.6*	-3.3*	-4.8* [#]	88.9	96.2 ^c
Non-Hodgkin lymphoma	504	1.8	1.7*	2.9*	1.3	248	0.2	-2.8*	-2.4*	-3.5* [#]	46.9 ^d	80.0 ^c
Leukemia	848	3.1	1.1*	0.3	2.4* [@]	1,025	1.0	-2.1*	-1.9*	-1.9* [#]	24.4	57.5 ^c
Acute lymphocytic	485	1.8	1.5*	2.0	4.1* [#]	428	0.4	-2.1*	-1.2	-1.7* [#]	29.5 ^d	60.7 ^c

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

Note: Incidence and death rates are per 100,000 and are age-adjusted (as appropriate) to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Incidence data used in calculating the rates are from the 17 SEER 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 data used in calculating the trends and survival estimates are from the 9 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

^b US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^c The difference between 1975-1977 and 1999-2006 is statistically significant ($p < .05$).

^d The standard error is between 5 and 10 percentage points.

^e The standard error is greater than 10 percentage points.

^f Sites were chosen based on more than 100 SEER incident cases between 2003-2007.

^g APCs suppressed because of inconsistent classification across ICD: ICD-8 (1975-1978), ICD-9 (1979-1998), ICD-10 (1999-2007).

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

The APC for 1992-2007 is significantly different from the APC for 1975-1991 ($p < .05$).

@ The APC for 1992-2007 is significantly different from the APC for 1975-1991 ($p < .10$).

- Statistic not shown. Age-adjusted rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval. Survival rate based on less than 25 cases for the time interval.

Table 28.10
All Cancer Sites (Invasive)

SEER^a Relative Survival (Percent)
By Year of Diagnosis

All Races, Males and Females

Ages 0-14

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Survival Time																				
1-year	81.4	85.0	87.3	89.5	91.0	91.1	88.6	90.6	90.5	92.9	91.2	91.0	91.4	92.5	92.0	91.8	94.1	92.8	92.5	94.2
2-year	71.2	75.8	78.4	81.8	82.6	84.1	82.2	84.7	84.8	86.4	84.8	84.3	85.4	85.8	87.0	87.4	89.2	88.4	88.4	
3-year	65.5	70.8	74.3	77.6	79.3	81.1	78.9	81.7	81.3	83.6	82.3	81.5	82.8	83.5	83.7	83.8	85.9	85.1		
4-year	62.1	67.6	71.8	75.4	76.6	78.7	78.1	79.0	78.8	80.6	80.4	78.8	81.1	81.5	82.1	82.0	85.0			
5-year	60.0	65.9	70.6	74.4	75.5	77.6	76.5	78.3	77.4	80.3	79.1	77.8	79.1	80.6	81.7	80.9				
6-year	58.3	64.8	69.7	73.6	74.8	76.3	76.0	78.1	76.4	79.5	78.4	76.4	78.6	79.4	80.6					
7-year	57.2	63.8	68.7	72.6	74.2	75.8	75.5	77.3	75.8	78.9	77.8	75.9	77.9	78.9						
8-year	56.5	63.1	68.1	72.2	73.5	75.7	74.9	77.1	74.9	78.4	76.8	75.4	77.6							
9-year	56.1	62.6	67.7	71.7	73.1	75.6	74.6	76.2	74.5	78.1	76.5	74.8								
10-year	55.8	62.1	67.3	71.3	73.0	75.5	74.6	75.9	74.4	77.8	75.8									
11-year	55.5	61.7	67.0	70.8	72.6	75.4	74.4	75.3	74.2	77.4										
12-year	55.2	61.2	66.7	70.7	72.4	75.3	74.4	74.6	73.9											
13-year	55.0	60.9	66.4	70.1	72.3	75.0	74.2	74.4												
14-year	54.6	60.6	66.0	69.8	72.1	74.6	73.7													
15-year	54.4	60.3	65.9	69.4	71.8	74.3														
16-year	54.0	60.0	65.6	68.9	71.7															
17-year	53.6	59.8	65.4	68.4																
18-year	53.4	59.4	65.2																	
19-year	53.1	59.2																		
20-year	52.9	59.1																		

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

Table 28.11
All Cancer Sites (Invasive)

SEER^a Relative Survival (Percent)
By Year of Diagnosis

All Races, Males and Females

Ages 0-19

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Survival Time																				
1-year	83.1	86.3	88.7	90.6	91.4	90.5	89.8	90.8	90.3	93.2	91.7	92.1	91.3	91.3	92.3	92.5	94.1	92.5	92.8	94.3
2-year	73.2	77.5	80.4	83.1	83.7	83.5	82.9	84.3	84.9	87.4	85.1	85.3	85.8	84.2	87.2	87.6	89.2	88.0	88.9	
3-year	68.1	72.5	76.5	78.7	80.1	80.5	79.8	80.9	81.6	85.1	82.0	82.6	82.9	82.0	84.0	84.1	86.1	84.4		
4-year	64.9	69.6	73.9	76.5	77.9	78.2	78.4	78.8	79.9	82.2	80.3	79.9	81.0	80.2	82.2	82.0	85.1			
5-year	62.9	67.9	72.9	75.2	76.7	77.0	76.7	78.1	78.5	81.6	78.7	78.7	79.4	79.1	81.5	80.9				
6-year	61.2	66.5	71.9	74.2	76.0	75.7	76.2	77.7	77.4	80.9	77.7	77.5	79.0	78.2	80.7					
7-year	60.3	65.7	71.0	73.3	75.2	75.2	75.8	77.0	76.9	80.4	77.3	77.2	78.5	77.5						
8-year	59.5	64.9	70.4	72.7	74.6	75.0	75.1	76.7	76.0	79.8	76.6	76.8	78.2							
9-year	58.9	64.2	69.9	72.2	74.2	74.9	74.8	75.9	75.7	79.4	76.4	76.3								
10-year	58.6	63.8	69.5	72.0	73.8	74.8	74.7	75.5	75.5	79.2	75.8									
11-year	58.3	63.4	69.2	71.3	73.4	74.8	74.5	75.1	75.3	78.8										
12-year	57.9	63.0	69.0	71.2	73.0	74.7	74.5	74.7	75.1											
13-year	57.8	62.7	68.7	70.5	72.9	74.3	74.1	74.4												
14-year	57.4	62.3	68.2	70.2	72.7	74.1	73.6													
15-year	57.2	62.0	68.0	69.8	72.4	73.7														
16-year	56.9	61.6	67.6	69.4	72.3															
17-year	56.5	61.4	67.4	68.5																
18-year	56.3	61.1	67.2																	
19-year	56.0	60.8																		
20-year	55.7	60.6																		

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

Table 28.12
Childhood Cancer (Invasive, <20 Years old at diagnosis)

Estimated United States Cancer Prevalence Counts^a on January 1, 2007
By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis		0 to <5	5 to <10	10 to <15	15 to <20	20 to <25	25 to <30	0 to <17 ^e	0 to <32 ^e	>=32 ^f	Complete ^g
<u>Race</u>	<u>Sex</u>										
All Races ^b	Both Sexes	59,446	51,673	46,411	39,623	34,031	28,556	174,233	269,403	+	+
	Males	32,002	26,696	24,162	20,563	17,099	13,472	91,836	138,408	+	+
	Females	27,444	24,977	22,249	19,060	16,932	15,084	82,397	130,995	+	+
White ^b	Both Sexes	49,454	43,811	38,884	33,972	29,965	25,297	146,398	229,853	+	+
	Males	26,852	22,546	20,340	17,716	15,170	12,095	77,505	118,610	+	+
	Females	22,602	21,265	18,544	16,256	14,795	13,202	68,893	111,243	+	+
Black ^b	Both Sexes	6,466	5,019	4,741	3,695	2,687	2,332	17,784	25,775	+	+
	Males	3,305	2,601	2,354	1,820	1,250	921	9,017	12,643	+	+
	Females	3,161	2,418	2,387	1,875	1,437	1,411	8,767	13,132	+	+
Asian/ Pacific Islander ^c	Both Sexes	2,130	1,725	1,609	+	+	+	5,985	+	+	+
	Males	1,146	952	817	+	+	+	3,184	+	+	+
	Females	984	773	792	+	+	+	2,801	+	+	+
Hispanic ^d	Both Sexes	10,268	7,723	6,255	+	+	+	26,354	+	+	+
	Males	5,698	4,077	3,403	+	+	+	14,393	+	+	+
	Females	4,570	3,646	2,852	+	+	+	11,961	+	+	+

^a US 2007 cancer prevalence counts are based on 2007 cancer prevalence proportions from the SEER registries and 1/1/2007 US population estimates based on the average of 2006 and 2007 population estimates from the US Bureau of the Census.

^{b c d} Prevalence was calculated using the First Malignant Primary Only for a person. Statistics based on (b) SEER 9 Areas (c) SEER 11 Areas and Rural Georgia (d) NHIA for Hispanic for SEER 11 Areas and Rural Georgia.

^e Maximum limited-duration prevalence: 32 years for 1975-2007 SEER 9 data; 17 years for 1990-2007 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

^{f g} (f) Cases diagnosed more than 32 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000). (g) Complete prevalence is obtained by summing 0 to <32 and >=32.

- Statistic not shown. Statistic based on fewer than 5 cases estimated alive in SEER for the time interval.

+ Not available.

Table 28.13
Age-Specific Rates^a and Counts for the Top 5 Cancer Sites^b by Single Year of Age at Diagnosis
SEER Cancer Incidence^c 2003-2007

Age <1			Age 1			Age 2		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	23.4	1,300	All Sites	22.0	1,202	All Sites	23.1	1,254
Leukemia	4.9	270	Leukemia	7.2	394	Leukemia	10.6	578
Acute Lymphocytic Leukemia	2.2	122	Acute Lymphocytic Leukemia	5.0	274	Acute Lymphocytic Leukemia	9.2	503
Brain and ONS ^d	3.7	208	Brain and ONS ^d	4.2	230	Brain and ONS ^d	3.7	199
Soft Tissue	3.7	207	Kidney and Renal Pelvis	2.0	111	Kidney and Renal Pelvis	2.1	116
Eye and Orbit	2.6	144	Soft Tissue	1.7	94	Eye and Orbit	1.4	76
Other Endocrine	2.4	135	Eye and Orbit	1.7	94	Other Endocrine	1.2	64
Age 3			Age 4			Age 5		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	20.0	1,074	All Sites	17.7	935	All Sites	14.0	730
Leukemia	10.1	544	Leukemia	8.3	441	Leukemia	5.6	295
Acute Lymphocytic Leukemia	9.3	500	Acute Lymphocytic Leukemia	7.6	400	Acute Lymphocytic Leukemia	5.1	268
Brain and ONS ^d	3.9	211	Brain and ONS ^d	3.9	208	Brain and ONS ^d	3.6	190
Kidney and Renal Pelvis	1.6	86	Kidney and Renal Pelvis	1.3	70	Kidney and Renal Pelvis	1.0	54
Other Endocrine	1.0	52	Non-Hodgkin Lymphoma	0.9	45	Non-Hodgkin Lymphoma	1.0	52
Soft Tissue	0.8	45	Soft Tissue	0.6	34	Soft Tissue	0.6	33
Age 6			Age 7			Age 8		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	11.8	617	All Sites	11.2	584	All Sites	9.8	518
Leukemia	4.3	223	Leukemia	4.0	208	Leukemia	3.0	160
Acute Lymphocytic Leukemia	3.9	203	Acute Lymphocytic Leukemia	3.4	178	Acute Lymphocytic Leukemia	2.5	132
Brain and ONS ^d	3.2	169	Brain and ONS ^d	3.0	157	Brain and ONS ^d	2.9	154
Non-Hodgkin Lymphoma	0.9	46	Non-Hodgkin Lymphoma	0.9	45	Non-Hodgkin Lymphoma	0.8	41
Kidney and Renal Pelvis	0.7	37	Soft Tissue	0.6	31	Bones and Joints	0.6	34
Soft Tissue	0.6	31	Bones and Joints	0.5	25	Hodgkin Lymphoma	0.6	31
Age 9			Age 10			Age 11		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	9.9	528	All Sites	10.6	578	All Sites	12.4	686
Leukemia	3.0	159	Leukemia	2.9	160	Leukemia	3.5	194
Acute Lymphocytic Leukemia	2.1	112	Acute Lymphocytic Leukemia	2.2	121	Acute Lymphocytic Leukemia	2.7	149
Brain and ONS ^d	2.7	143	Brain and ONS ^d	2.3	125	Brain and ONS ^d	2.5	137
Non-Hodgkin Lymphoma	0.7	40	Non-Hodgkin Lymphoma	1.1	58	Bones and Joints	1.2	65
Bones and Joints	0.7	38	Bones and Joints	0.8	44	Non-Hodgkin Lymphoma	1.1	58
Hodgkin Lymphoma	0.7	38	Soft Tissue	0.6	34	Hodgkin Lymphoma	0.9	50

^a Rates are per 100,000 per year.

^b Top 5 cancer sites were determined based on the 2003-2007 age-specific rate.

^c 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).

^d ONS = Other Nervous System. IBD = Intrahepatic Bile Duct.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 28.13 - continued
Age-Specific Rates^a and Counts for the Top 5 Cancer Sites^b by Single Year of Age at Diagnosis

SEER Cancer Incidence^c 2003-2007

Age 12			Age 13			Age 14		
	<u>Rate</u>	<u>Cases</u>		<u>Rate</u>	<u>Cases</u>		<u>Rate</u>	<u>Cases</u>
All Sites	12.7	710	All Sites	14.0	794	All Sites	16.1	914
Leukemia	3.0	169	Leukemia	2.8	156	Leukemia	3.3	190
Acute Lymphocytic Leukemia	1.9	109	Acute Lymphocytic Leukemia	1.8	102	Acute Lymphocytic Leukemia	2.1	122
Brain and ONS ^d	2.5	141	Brain and ONS ^d	2.7	154	Brain and ONS ^d	2.6	148
Bones and Joints	1.4	81	Hodgkin Lymphoma	1.6	89	Hodgkin Lymphoma	2.0	112
Non-Hodgkin Lymphoma	1.2	68	Bones and Joints	1.5	85	Non-Hodgkin Lymphoma	1.7	94
Hodgkin Lymphoma	1.0	57	Non-Hodgkin Lymphoma	1.1	64	Bones and Joints	1.5	84
Age 15			Age 16			Age 17		
	<u>Rate</u>	<u>Cases</u>		<u>Rate</u>	<u>Cases</u>		<u>Rate</u>	<u>Cases</u>
All Sites	18.4	1,039	All Sites	19.3	1,076	All Sites	21.5	1,188
Leukemia	3.3	187	Leukemia	3.3	183	Leukemia	2.9	160
Acute Lymphocytic Leukemia	2.3	128	Acute Lymphocytic Leukemia	2.1	115	Acute Lymphocytic Leukemia	1.6	88
Hodgkin Lymphoma	2.5	139	Brain and ONS ^d	2.4	136	Hodgkin Lymphoma	2.6	141
Brain and ONS ^d	2.2	124	Hodgkin Lymphoma	2.4	134	Non-Hodgkin Lymphoma	2.2	123
Bones and Joints	1.9	108	Bones and Joints	1.7	96	Brain and ONS ^d	2.2	119
Non-Hodgkin Lymphoma	1.7	96	Non-Hodgkin Lymphoma	1.7	94	Testis	2.0	111
Age 18			Age 19					
	<u>Rate</u>	<u>Cases</u>		<u>Rate</u>	<u>Cases</u>			
All Sites	22.4	1,229	All Sites	24.6	1,301			
Leukemia	3.2	173	Hodgkin Lymphoma	4.1	217			
Acute Lymphocytic Leukemia	1.6	88	Testis	3.1	163			
Hodgkin Lymphoma	3.0	167	Leukemia	2.7	145			
Thyroid	2.5	136	Acute Lymphocytic Leukemia	1.2	66			
Testis	2.4	131	Thyroid	2.5	132			
Melanoma of the Skin	2.1	114	Melanoma of the Skin	2.4	127			

^a Rates are per 100,000 per year.

^b Top 5 cancer sites were determined based on the 2003-2007 age-specific rate.

^c 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).

^d ONS = Other Nervous System. IBD = Intrahepatic Bile Duct.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 28.14
Age-Specific Rates^a and Deaths for the Top 5 Cancer Sites^b by Single Year of Age at Death

U.S. Mortality^c 2003-2007

Age <1			Age 1			Age 2		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	1.8	372	All Sites	1.9	395	All Sites	2.4	480
Leukemia	0.6	127	Leukemia	0.7	144	Leukemia	0.9	174
Acute Lymphocytic Leukemia	0.2	38	Acute Lymphocytic Leukemia	0.2	48	Acute Lymphocytic Leukemia	0.3	66
Brain and ONS ^d	0.4	86	Brain and ONS ^d	0.5	99	Brain and ONS ^d	0.5	98
Other Endocrine	0.2	34	Other Endocrine	0.3	54	Other Endocrine	0.5	94
Liver & IBD ^d	0.1	23	Liver & IBD ^d	0.1	25	Liver & IBD ^d	0.2	33
Soft Tissue	0.1	20	Soft Tissue	0.1	20	Soft Tissue	0.1	21
Age 3			Age 4			Age 5		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.5	511	All Sites	2.6	523	All Sites	2.5	501
Leukemia	0.8	164	Brain and ONS ^d	0.8	162	Brain and ONS ^d	0.9	183
Acute Lymphocytic Leukemia	0.3	57	Leukemia	0.6	121	Leukemia	0.6	111
Brain and ONS ^d	0.7	141	Acute Lymphocytic Leukemia	0.3	55	Acute Lymphocytic Leukemia	0.3	67
Other Endocrine	0.5	92	Other Endocrine	0.5	102	Other Endocrine	0.5	93
Soft Tissue	0.2	33	Kidney and Renal Pelvis	0.2	32	Soft Tissue	0.2	32
Liver & IBD ^d	0.1	20	Soft Tissue	0.1	24	Kidney and Renal Pelvis	0.1	27
Age 6			Age 7			Age 8		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.5	495	All Sites	2.7	533	All Sites	2.4	462
Brain and ONS ^d	0.9	177	Brain and ONS ^d	1.0	202	Brain and ONS ^d	0.8	163
Leukemia	0.7	128	Leukemia	0.7	139	Leukemia	0.7	141
Acute Lymphocytic Leukemia	0.3	67	Acute Lymphocytic Leukemia	0.4	73	Acute Lymphocytic Leukemia	0.4	80
Other Endocrine	0.4	78	Other Endocrine	0.4	81	Other Endocrine	0.3	55
Kidney and Renal Pelvis	0.2	35	Soft Tissue	0.1	24	Soft Tissue	0.1	25
Soft Tissue	0.1	26	Kidney and Renal Pelvis	0.1	22	Non-Hodgkin Lymphoma	0.1	19
Age 9			Age 10			Age 11		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.4	475	All Sites	2.2	451	All Sites	2.2	441
Brain and ONS ^d	0.9	172	Leukemia	0.8	158	Leukemia	0.7	136
Leukemia	0.8	161	Acute Lymphocytic Leukemia	0.4	87	Acute Lymphocytic Leukemia	0.4	73
Acute Lymphocytic Leukemia	0.4	84	Brain and ONS ^d	0.7	149	Brain and ONS ^d	0.6	132
Other Endocrine	0.2	41	Other Endocrine	0.2	33	Bones and Joints	0.2	43
Bones and Joints	0.1	26	Soft Tissue	0.1	29	Other Endocrine	0.2	31
Soft Tissue	0.1	23	Bones and Joints	0.1	28	Soft Tissue	0.1	27

^a Rates are per 100,000 per year. Deaths are for the entire United States over the time period 2003-2007.

^b Top 5 cancer sites were determined based on the 2003-2007 age-specific rate.

^c US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^d ONS = Other Nervous System. IBD = Intrahepatic Bile Duct.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

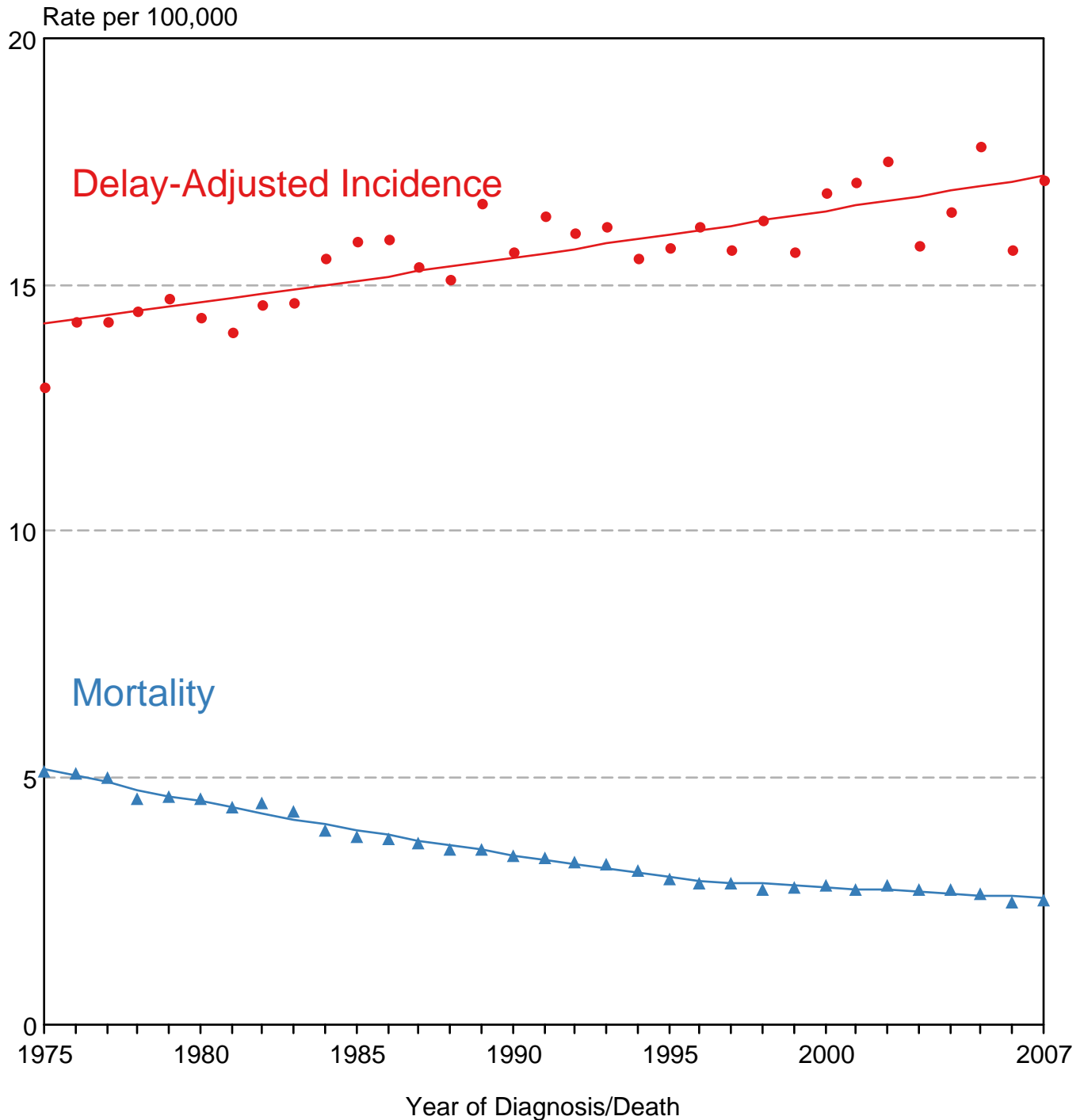
Table 28.14 - continued
Age-Specific Rates^a and Deaths for the Top 5 Cancer Sites^b by Single Year of Age at DeathU.S. Mortality^c 2003-2007

Age 12			Age 13			Age 14		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.3	473	All Sites	2.7	564	All Sites	2.7	566
Leukemia	0.8	167	Leukemia	0.8	176	Leukemia	0.9	182
Acute Lymphocytic Leukemia	0.3	72	Acute Lymphocytic Leukemia	0.4	78	Acute Lymphocytic Leukemia	0.4	77
Brain and ONS ^d	0.6	131	Brain and ONS ^d	0.7	148	Brain and ONS ^d	0.6	135
Bones and Joints	0.3	54	Bones and Joints	0.3	68	Bones and Joints	0.4	80
Soft Tissue	0.1	25	Soft Tissue	0.2	44	Soft Tissue	0.2	48
Non-Hodgkin Lymphoma	0.1	23	Non-Hodgkin Lymphoma	0.2	32	Non-Hodgkin Lymphoma	0.1	24
Age 15			Age 16			Age 17		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.8	594	All Sites	3.2	670	All Sites	3.1	652
Leukemia	1.0	203	Leukemia	1.0	203	Leukemia	0.9	188
Acute Lymphocytic Leukemia	0.4	87	Acute Lymphocytic Leukemia	0.4	84	Acute Lymphocytic Leukemia	0.4	83
Brain and ONS ^d	0.5	108	Bones and Joints	0.5	110	Bones and Joints	0.6	121
Bones and Joints	0.4	75	Brain and ONS ^d	0.5	109	Brain and ONS ^d	0.5	109
Soft Tissue	0.3	54	Soft Tissue	0.3	67	Soft Tissue	0.3	64
Non-Hodgkin Lymphoma	0.2	42	Non-Hodgkin Lymphoma	0.2	45	Non-Hodgkin Lymphoma	0.2	36
Age 18			Age 19					
	Rate	Deaths		Rate	Deaths			
All Sites	3.7	759	All Sites	4.0	825			
Leukemia	1.1	220	Leukemia	1.0	211			
Acute Lymphocytic Leukemia	0.4	83	Acute Lymphocytic Leukemia	0.4	91			
Bones and Joints	0.6	120	Bones and Joints	0.7	142			
Brain and ONS ^d	0.5	106	Brain and ONS ^d	0.5	111			
Soft Tissue	0.3	69	Soft Tissue	0.4	78			
Non-Hodgkin Lymphoma	0.3	62	Non-Hodgkin Lymphoma	0.3	63			

^a Rates are per 100,000 per year. Deaths are for the entire United States over the time period 2003-2007.^b Top 5 cancer sites were determined based on the 2003-2007 age-specific rate.^c US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.^d ONS = Other Nervous System. IBD = Intrahepatic Bile Duct.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

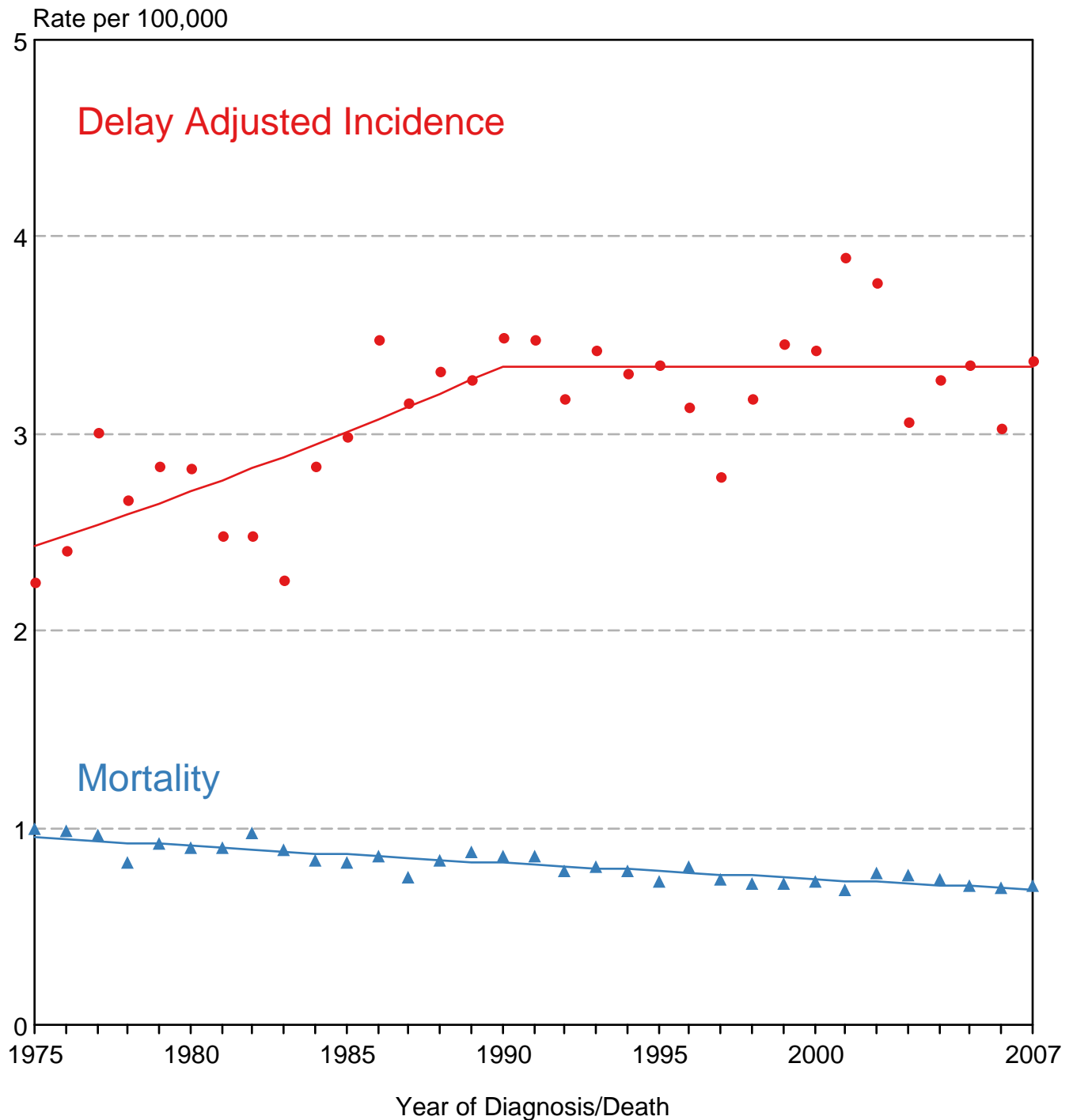
SEER Delay-Adjusted Incidence and US Mortality All Childhood Cancers, Under 20 Years of Age Both Sexes, All Races, 1975-2007



Source: SEER 9 areas and US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines are calculated using the Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute.

Figure 28.2

SEER Delay-Adjusted Incidence and US Mortality Brain and CNS, Under 15 Years of Age Both Sexes, All Races, 1975-2007



Source: SEER 9 areas and US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines are calculated using the Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute.

SEER Incidence and US Death Rates^a All Cancer Sites, Ages <20, Both Sexes

Joinpoint Analyses for Whites and Blacks from 1975-2007
and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2007

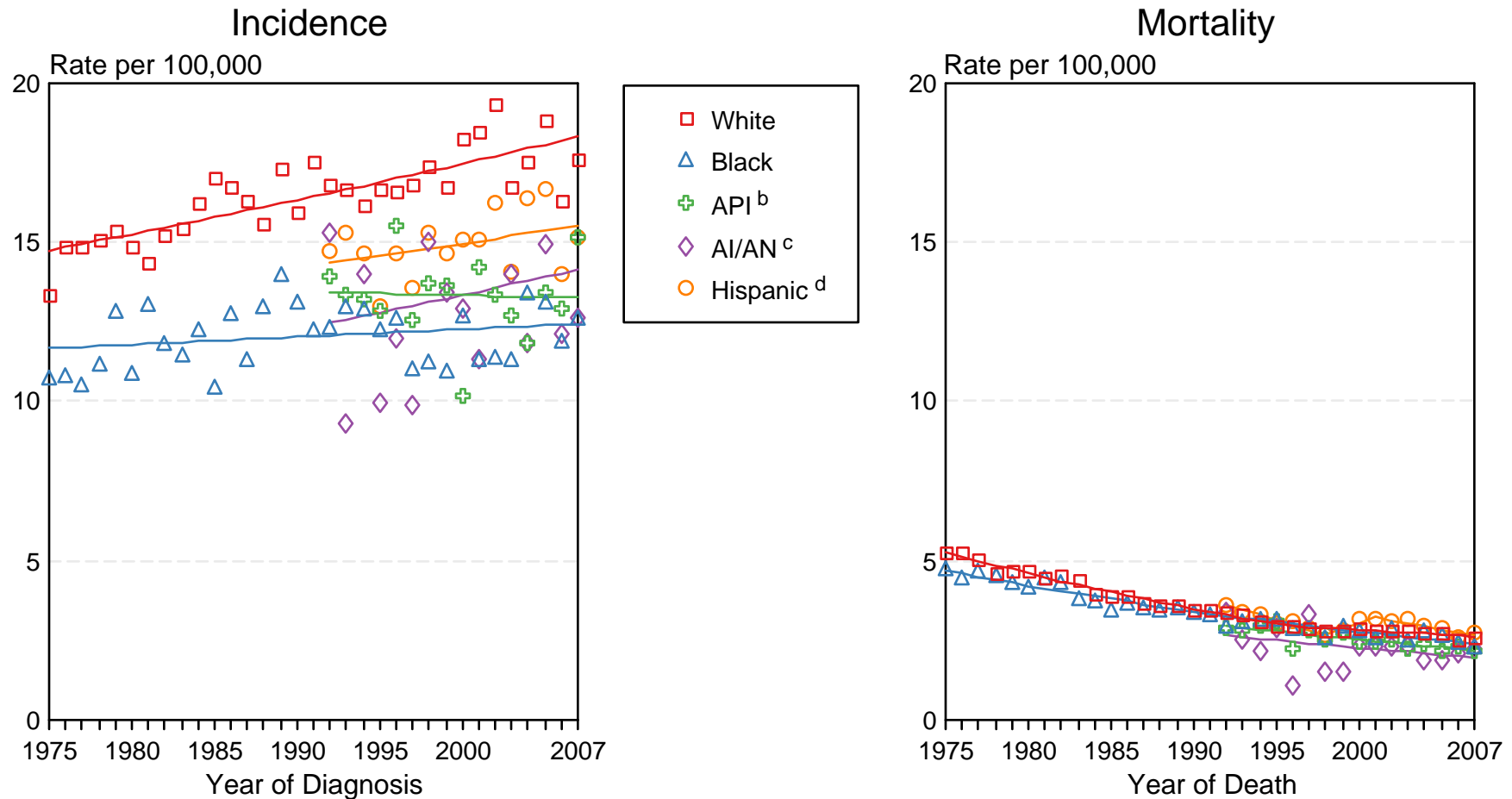


Figure 28.3

Source: Incidence data for whites and blacks are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta). Incidence data for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics are from the SEER 13 Areas (SEER 9 Areas, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Mortality data are from US Mortality Files, National Center for Health Statistics, CDC.

^a Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

Regression lines are calculated using the Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2007 period allow a maximum of 4 joinpoints. Analyses for other ethnic groups during the period 1992-2007 allow a maximum of 2 joinpoints.

^b API = Asian/Pacific Islander.

^c AI/AN = American Indian/Alaska Native. Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

^d 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. Mortality data for Hispanics exclude cases from Connecticut, the District of Columbia, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, and Vermont.