

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, 2004-2008

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	15.4	16.4	14.3	2.3	2.5	2.2	16.9	18.0	15.9	2.6	2.8	2.3
Whites	16.1	17.3	14.9	2.4	2.5	2.2	17.9	19.0	16.6	2.6	2.9	2.3
Blacks	12.1	12.7	11.4	2.3	2.5	2.1	12.8	13.2	12.3	2.5	2.8	2.3
Bone & Joint	0.7	0.8	0.7	0.1	0.1	0.1	0.9	1.0	0.8	0.2	0.2	0.2
Brain & Other nervous	3.1	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	1.2	0.0	0.0	0.0
Kidney & Renal pelvis	0.8	0.7	0.9	0.1	0.1	0.1	0.6	0.6	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	4.0	3.0	0.3	0.4	0.3
Non-Hodgkin lymphoma	0.9	1.2	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	1.1	1.0	0.2	0.2	0.2

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

^b 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).

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

- 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, 1975-2008

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	2008
<u>Ages 0-14</u>																						
All Sites																						
All Races	11.5	12.9	14.5	14.3	15.2	13.4	15.0	14.0	14.0	14.8	14.1	15.3	14.5	15.3	15.6	15.4	13.0	15.0	16.4	14.2	14.3	15.2
Whites	12.1	13.2	15.6	14.3	16.2	13.9	15.3	14.5	14.8	15.0	14.7	16.3	15.7	16.6	16.9	16.8	13.9	15.7	17.3	14.8	14.9	15.4
Blacks	8.6	11.1	10.1	12.3	11.8	12.0	12.4	12.2	11.5	11.6	11.2	9.9	10.3	11.8	10.7	11.5	9.9	13.1	12.8	11.3	11.7	14.5
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	0.7
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	3.3	3.3
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	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	1.0
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	4.9	5.2	4.4	4.1	4.7
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	3.7	4.0	3.4	3.5	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	0.9	1.0	1.1
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	0.9
<u>Ages 0-19</u>																						
All Sites																						
All Races	12.9	14.4	15.9	15.7	16.4	16.1	16.1	15.6	15.7	16.2	15.7	16.3	15.6	16.8	17.0	17.4	15.6	16.3	17.6	15.5	16.7	17.3
Whites	13.4	14.9	17.1	16.0	17.6	16.9	16.7	16.2	16.7	16.6	16.8	17.5	16.8	18.3	18.4	19.3	16.7	17.5	18.9	16.3	17.7	17.7
Blacks	10.8	10.9	10.5	13.2	12.4	12.3	13.0	13.0	12.3	12.6	11.1	11.2	10.9	12.7	11.4	11.4	11.3	13.1	12.9	12.1	12.7	14.6
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	1.0
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	3.3	2.9	2.9	3.0	2.7	3.0	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	1.2	1.1	1.2	1.0	1.1	0.9	1.1	1.4	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	0.8
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	4.3	4.6	4.0	4.0	4.2
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	3.4	2.8	3.2	3.3	2.9	3.1	3.1
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	1.2	1.2	1.3
Soft tissue	0.8	0.9	0.9	0.8	1.1	0.7	0.7	0.7	1.1	1.1	1.0	1.1	1.0	1.2	1.1	1.0	0.8	1.0	1.5	1.0	1.1	0.9

^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, 1975-2008

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	2008
<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	2.5	2.5	2.5	2.4	2.2	2.3	2.2
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	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	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	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	0.7	0.7	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	0.3	0.3
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	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	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	2.7	2.7	2.7	2.5	2.5	2.4
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	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	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	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	0.7
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	0.3
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	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	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, 1975-2008

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	2008
<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	2.2
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	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	0.7	0.8	0.7	0.7	0.7	0.8	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	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	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	0.3
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	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	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	2.7	2.7	2.5	2.6	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	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	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	0.1	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	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	0.7
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	0.3
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	0.1	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	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, 1975-2008

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	2008
<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	2.2
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	0.8	0.7	0.7	0.7	0.7	0.5	0.6
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	0.6
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	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	-	-	-	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	2.4	2.3	2.5
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	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	0.6
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	0.7	0.7	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	0.3
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	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,
1975-2008 With up to Five Joinpoints By Primary Cancer Site And Age At Diagnosis
Males and Females

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2004-08
<u>Ages 0-14</u>													
All Sites													
All Races	1975-08	0.5*											0.5*
White	1975-08	0.6*											0.6*
Black	1975-08	0.5*											0.5*
Bone & Joint	1975-79	12.7	1979-08	-0.5									-0.5
Brain & Other nervous system	1975-83	-0.4	1983-86	9.5	1986-08	-0.1							-0.1
Hodgkin lymphoma	1975-08	-0.8*											-0.8*
Kidney & Renal pelvis	1975-08	-0.2											-0.2
Leukemia	1975-08	0.6*											0.6*
Acute lymphocytic leukemia	1975-08	0.7*											0.7*
Non-Hodgkin lymphoma	1975-08	0.5*											0.5*
Soft tissue	1975-08	1.1*											1.1*
<u>Ages 0-19</u>													
All Sites													
All Races	1975-08	0.6*											0.6*
White	1975-08	0.6*											0.6*
Black	1975-90	1.2*	1990-02	-1.1	2002-08	3.5*							3.5*
Bone & Joint	1975-08	0.2											0.2
Brain & Other nervous system	1975-77	14.4	1977-83	-3.2	1983-86	11.3	1986-08	-0.2					-0.2
Hodgkin lymphoma	1975-08	-0.8*											-0.8*
Kidney & Renal pelvis	1975-08	0.0											0.0
Leukemia	1975-08	0.7*											0.7*
Acute lymphocytic leukemia	1975-08	0.8*											0.8*
Non-Hodgkin lymphoma	1975-08	1.0*											1.0*
Soft tissue	1975-08	1.2*											1.2*

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.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,
1975-2008 With up to Four Joinpoints By Primary Cancer Site and Age at Death
All Races, Both Sexes

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2004-08
<u>Ages 0-14</u>													
All Sites	1975-98	-2.9*	1998-03	0.2	2003-08	-2.8*							-2.8*
Bone & Joint	1975-89	-3.5*	1989-08	-0.5									-0.5
Brain & Other nervous system	1975-08	-1.0*											-1.0*
Hodgkin lymphoma	1975-08	-4.9*											-4.9*
Kidney & Renal pelvis	1975-08	-2.7*											-2.7*
Leukemia	1975-98	-4.0*	1998-08	-1.9*									-1.9*
Acute lymphocytic leukemia	1975-93	-5.3*	1993-08	-2.9*									-2.9*
Non-Hodgkin lymphoma	1975-08	-5.0*											-5.0*
Soft tissue	1975-77	24.7	1977-08	-1.4*									-1.4*
<u>Ages 0-19</u>													
All Sites	1975-96	-2.7*	1996-08	-1.3*									-1.3*
Bone & Joint	1975-89	-3.2*	1989-08	0.0									0.0
Brain & Other nervous system	1975-08	-1.1*											-1.1*
Hodgkin lymphoma	1975-08	-4.8*											-4.8*
Kidney & Renal pelvis	1975-08	-2.5*											-2.5*
Leukemia	1975-98	-3.5*	1998-08	-1.9*									-1.9*
Acute lymphocytic leukemia	1975-96	-4.4*	1996-08	-2.3*									-2.3*
Non-Hodgkin lymphoma	1975-08	-4.0*											-4.0*
Soft tissue	1975-79	9.1*	1979-08	-1.1*									-1.1*

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.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).

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

The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2008.

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

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

a
b
*
-

Table 28.7 - continued

Trends in U.S. Mortality^a Using the Joinpoint Regression Program,
1975-2008 With up to Four Joinpoints By Primary Cancer Site and Age at Death
White, Both Sexes

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d 2004-08
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	
<u>Ages 0-14</u>													
All Sites	1975-96	-3.0*	1996-08	-1.2*									-1.2*
Bone & Joint	1975-89	-3.1*	1989-08	-0.5									-0.5
Brain & Other nervous system	1975-08	-1.0*											-1.0*
Hodgkin lymphoma	-	-											-
Kidney & Renal pelvis	1975-08	-2.7*											-2.7*
Leukemia	1975-89	-4.6*	1989-08	-2.9*									-2.9*
Acute lymphocytic leukemia	1975-91	-5.5*	1991-08	-2.9*									-2.9*
Non-Hodgkin lymphoma	1975-08	-5.0*											-5.0*
Soft tissue	1975-79	12.7*	1979-95	-2.8*	1995-08	0.3							0.3
<u>Ages 0-19</u>													
All Sites	1975-96	-2.7*	1996-08	-1.2*									-1.2*
Bone & Joint	1975-89	-2.9*	1989-08	0.0									0.0
Brain & Other nervous system	1975-08	-1.0*											-1.0*
Hodgkin lymphoma	1975-08	-4.8*											-4.8*
Kidney & Renal pelvis	1975-08	-2.5*											-2.5*
Leukemia	1975-96	-3.7*	1996-08	-2.1*									-2.1*
Acute lymphocytic leukemia	1975-95	-4.5*	1995-08	-2.1*									-2.1*
Non-Hodgkin lymphoma	1975-08	-4.1*											-4.1*
Soft tissue	1975-79	10.0*	1979-08	-1.0*									-1.0*

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.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 1975-2008.

* 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,
1975-2008 With up to Four Joinpoints By Primary Cancer Site and Age at Death
Black, Both Sexes

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d 2004-08
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	
<u>Ages 0-14</u>													
All Sites	1975-97	-2.6*	1997-08	-0.9									-0.9
Bone & Joint	1975-81	-10.4*	1981-08	-0.6									-0.6
Brain & Other nervous system	1975-08	-1.2*											-1.2*
Hodgkin lymphoma	-	-											-
Kidney & Renal pelvis	1975-08	-2.7*											-2.7*
Leukemia	1975-08	-3.2*											-3.2*
Acute lymphocytic leukemia	1975-08	-4.7*											-4.7*
Non-Hodgkin lymphoma	1975-08	-4.6*											-4.6*
Soft tissue	1975-08	-1.3*											-1.3*
<u>Ages 0-19</u>													
All Sites	1975-08	-2.1*											-2.1*
Bone & Joint	1975-85	-6.3*	1985-08	0.0									0.0
Brain & Other nervous system	1975-08	-1.2*											-1.2*
Hodgkin lymphoma	-	-											-
Kidney & Renal pelvis	1975-08	-2.5*											-2.5*
Leukemia	1975-08	-2.7*											-2.7*
Acute lymphocytic leukemia	1975-08	-3.9*											-3.9*
Non-Hodgkin lymphoma	1975-08	-3.4*											-3.4*
Soft tissue	1975-08	-0.9*											-0.9*

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.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 1975-2008.

* 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	1996-2000	2001-2007
All Sites									
All Races	58.1	62.6	66.9	68.2	71.6	75.8	77.4	79.4	82.5 ^c
Whites	58.0	63.0	67.6	70.1	72.4	76.8	78.3	80.8	83.8 ^c
Blacks	57.3	57.7	62.2	56.6	65.3	71.1	73.0	73.6	76.3 ^c
Bone & Joint	49.9 ^d	47.8	56.8 ^d	57.3 ^d	66.8 ^d	67.1	74.1	68.3	78.5 ^c
Brain & ONS	56.9	57.5	56.3	61.8	64.1	64.6	70.5	73.7	75.2 ^c
Hodgkin lymphoma	80.5	86.8	88.0	90.9	87.1	96.8	94.6	96.3	95.6 ^c
Leukemia	50.3	58.3	62.9	63.9	71.0	75.6	76.0	80.5	85.8 ^c
Acute lymphocytic	57.5	66.1	71.3	72.6	77.8	83.3	83.8	86.8	90.5 ^c
Acute myeloid	18.8	25.8	26.7 ^d	30.5 ^d	37.1 ^d	41.6	41.7 ^d	52.1	63.6 ^c
Neuroblastoma ^a	52.5	56.9	54.5	52.6	62.9	76.4	67.3	68.0	73.3 ^c
Non-Hodgkin lymphoma	43.2	52.7	66.9	70.3	70.7	76.9	80.7	85.7	86.2 ^c
Soft tissue	61.0	74.9	69.2	72.9	66.4	79.7	76.7	73.8	81.7 ^c
Wilms' tumor ^b	73.1	79.0	86.6	90.7	92.2	91.9	91.7	92.6	90.2 ^c

Site	Ages 0-19								
	1975-1977	1978-1980	1981-1983	1984-1986	1987-1989	1990-1992	1993-1995	1996-2000	2001-2007
All Sites									
All Races	61.7	65.2	68.3	70.7	73.5	76.3	77.8	79.5	82.6 ^c
Whites	61.5	65.8	69.2	72.6	75.0	77.6	78.6	80.9	83.7 ^c
Blacks	59.5	60.0	62.5	58.3	64.3	68.7	74.0	72.9	76.4 ^c
Bone & Joint	50.4	48.1	51.2	56.6	64.0	68.6	68.9	65.8	72.9 ^c
Brain & ONS	58.8	57.9	58.1	63.9	65.8	66.5	71.4	74.4	75.7 ^c
Hodgkin lymphoma	86.1	88.4	85.5	90.9	89.0	94.2	93.9	95.7	95.8 ^c
Leukemia	45.5	53.5	58.0	60.5	67.6	71.3	71.9	76.2	82.2 ^c
Acute lymphocytic	54.1	62.2	67.1	70.3	75.0	80.0	81.4	83.5	87.9 ^c
Acute myeloid	18.7	26.2	26.4	31.4	37.6	41.5	39.4	48.4	60.4 ^c
Neuroblastoma ^a	53.1	57.0	53.4	52.8	61.5	76.0	67.3	68.0	73.3 ^c
Non-Hodgkin lymphoma	44.6	53.4	63.8	67.7	70.4	72.7	77.9	81.5	84.7 ^c
Soft tissue	65.2	69.3	68.4	72.6	68.0	69.5	74.3	72.7	77.4 ^c
Wilms' tumor ^b	72.6	78.4	86.7	91.0	92.2	91.3	91.7	92.7	89.9 ^c

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

Based on follow-up of patients into 2008.

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 2001-2007 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	
	2004-2008 Num Cases	2004-2008 Rate	1975-2008 APC	1975-1991 APC	1992-2008 APC	2004-2008 Num Deaths	2004-2008 Rate	1975-2008 APC	1975-1991 APC	1992-2008 APC	1975-1977	2001-2007
Ages 0-4												
All Sites	5,872	21.2	0.6*	1.3*	0.1 [#]	2,278	2.2	-2.7*	-2.9*	-2.2* [#]	57.2	83.0 ^c
Soft tissue	435	1.6	1.0*	1.3	2.6	127	0.1	-1.9*	-1.3	-1.5	61.2 ^d	82.3 ^c
Kidney and Renal pelvis	476	1.7	-0.3	0.2	-2.0*	83	0.1	-3.7*	-6.2*	-2.4 [#]	71.9	88.7 ^c
Eye and Orbit	363	1.3	0.2	1.2	-1.8 [@]	24	0.0	-	-	-	87.2 ^d	96.2 ^c
Brain and Other nervous	1,067	3.9	1.0*	3.2*	0.3 [#]	594	0.6	-1.4*	-1.2*	-2.0*	52.0	74.9 ^c
Other endocrine ^g	380	1.4	-	-	-	375	0.4	-	-	-	35.7 ^d	70.5 ^c
Leukemia	2,245	8.1	0.7*	1.2*	0.7	717	0.7	-3.1*	-3.9*	-2.5* [#]	55.4	86.7 ^c
Acute lymphocytic	1,823	6.6	0.7*	1.5*	0.6	246	0.2	-4.2*	-5.8*	-1.8* [#]	63.2	91.5 ^c
Ages 5-9												
All Sites	3,042	11.5	0.2	1.2*	0.6	2,407	2.4	-2.7*	-3.3*	-1.4* [#]	58.6	81.2 ^c
Brain and Other nervous	815	3.1	0.3	1.5	0.0	896	0.9	-0.7*	-0.4	0.0	58.4	71.4 ^c
Leukemia	1,051	4.0	0.4	2.0*	0.2 [@]	624	0.6	-4.8*	-5.6*	-3.8* [#]	52.3	89.3 ^c
Acute lymphocytic	890	3.4	0.6	2.4*	0.2 [#]	341	0.3	-5.4*	-6.7*	-3.7* [#]	55.6	93.4 ^c
Ages 10-14												
All Sites	3,746	13.6	0.7*	1.1*	0.5	2,368	2.3	-2.1*	-2.5*	-1.3* [#]	58.7	82.7 ^c
Bone and Joint	379	1.4	0.0	2.0*	-0.4 [@]	254	0.2	-1.5*	-3.1*	-0.3 [#]	52.8 ^d	79.9 ^c
Brain and Other nervous	693	2.5	0.9*	1.8	-0.4 [@]	659	0.6	-1.1*	-1.5*	-0.3 [@]	59.5	79.9 ^c
Hodgkin lymphoma	356	1.3	-0.7*	-0.4	0.1	18	0.0	-	-	-	78.7	96.8 ^c
Leukemia	891	3.2	0.7*	1.5	1.4*	785	0.8	-2.9*	-3.2*	-2.5* [@]	34.9	79.4 ^c
Acute lymphocytic	626	2.3	1.1*	2.5	1.6*	365	0.4	-3.4*	-3.2*	-3.0*	43.0 ^d	83.2 ^c
Ages 15-19												
All Sites	5,965	21.6	0.6*	0.9*	0.5	3,495	3.3	-1.9*	-2.3*	-1.6* [#]	68.0	82.8 ^c
Bone and Joint	414	1.5	0.3	0.4	-0.4	584	0.5	-1.0*	-2.9*	0.2 [#]	51.0 ^d	66.7 ^c
Melanoma of the skin	414	1.5	1.4*	2.5	1.2	41	0.0	-	-	-	76.2 ^d	98.7 ^c
Testis(males)	526	3.7	1.4*	1.7	1.4	41	0.1	-	-	-	66.0 ^d	95.0 ^c
Brain and Other nervous	605	2.2	0.3	1.0	-1.0	528	0.5	-1.2*	-1.2*	-1.6*	65.0	78.0 ^c
Thyroid	552	2.0	1.4*	0.9	1.9	-	-	-	-	-	100.0	96.6
Hodgkin lymphoma	840	3.0	-0.8*	0.1	-1.2	75	0.1	-4.7*	-3.3*	-5.1*	89.0	96.0 ^c
Non-Hodgkin lymphoma	504	1.8	1.7*	3.0*	1.3	249	0.2	-2.8*	-2.4*	-3.2*	47.7 ^d	82.6 ^c
Leukemia	866	3.1	1.1*	0.3	1.9*	1,038	1.0	-2.1*	-1.9*	-2.0*	24.5	65.0 ^c
Acute lymphocytic	502	1.8	1.5*	2.0	3.7*	423	0.4	-2.1*	-1.2	-2.0*	30.0 ^d	69.1 ^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 2001-2007 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 2004-2008.

^g APCs suppressed because of inconsistent classification across ICD: ICD-8 (1975-1978), ICD-9 (1979-1998), ICD-10 (1999-2008).

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

[#] The APC for 1992-2008 is significantly different from the APC for 1975-1991 ($p < .05$).

[@] The APC for 1992-2008 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	2007
Survival Time																					
1-year	81.3	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	94.0	91.8
2-year	71.1	75.8	78.4	81.8	82.6	84.1	82.3	84.7	84.8	86.3	84.8	84.3	85.4	85.8	87.0	87.4	89.3	88.3	88.4	89.0	
3-year	65.4	70.8	74.3	77.6	79.4	81.1	79.0	81.7	81.3	83.6	82.4	81.6	82.9	83.4	83.8	83.8	85.9	85.1	85.0		
4-year	62.0	67.6	71.8	75.5	76.6	78.7	78.1	79.0	78.8	80.6	80.4	78.8	81.1	81.5	82.2	82.0	85.0	83.6			
5-year	59.9	65.9	70.7	74.4	75.5	77.6	76.5	78.4	77.4	80.2	79.2	77.9	79.2	80.5	81.7	80.9	83.8				
6-year	58.2	64.7	69.7	73.6	74.9	76.3	76.1	78.1	76.4	79.5	78.4	76.4	78.7	79.3	80.6	80.0					
7-year	57.1	63.8	68.7	72.7	74.3	75.8	75.6	77.4	75.8	78.9	77.9	76.0	77.9	78.8	79.5						
8-year	56.4	63.1	68.1	72.3	73.5	75.7	75.0	77.1	74.9	78.4	76.8	75.5	77.7	78.0							
9-year	56.0	62.5	67.7	71.8	73.2	75.6	74.6	76.2	74.5	78.0	76.6	74.9	77.0								
10-year	55.7	62.0	67.3	71.4	73.1	75.5	74.6	76.0	74.5	77.8	75.9	74.5									
11-year	55.4	61.7	67.0	70.9	72.7	75.4	74.5	75.3	74.2	77.4	75.6										
12-year	55.1	61.2	66.7	70.7	72.5	75.3	74.5	74.7	74.0	77.3											
13-year	54.9	60.8	66.5	70.1	72.4	75.0	74.3	74.4	73.9												
14-year	54.5	60.5	66.1	69.8	72.2	74.7	73.8	74.3													
15-year	54.3	60.3	65.9	69.5	71.8	74.4	73.8														
16-year	53.9	60.0	65.6	69.0	71.8	74.1															
17-year	53.5	59.8	65.4	68.5	71.5																
18-year	53.3	59.4	65.3	68.1																	
19-year	53.0	59.2	65.2																		
20-year	52.8	59.0																			

^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	2007
Survival Time																					
1-year	83.1	86.3	88.8	90.6	91.4	90.5	89.8	90.7	90.3	93.2	91.7	92.1	91.3	92.3	92.5	94.1	92.5	92.8	94.2	93.0	
2-year	73.2	77.5	80.4	83.1	83.7	83.5	82.9	84.3	84.9	87.4	85.1	85.4	85.8	84.2	87.3	87.5	89.2	88.0	88.9	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	83.0	82.0	84.0	84.0	86.2	84.4	86.1		
4-year	64.9	69.6	73.9	76.5	77.9	78.2	78.4	78.8	79.9	82.2	80.3	80.0	81.1	80.2	82.2	82.0	85.0	83.3			
5-year	62.9	67.9	72.9	75.2	76.7	77.0	76.7	78.1	78.5	81.6	78.7	78.8	79.5	79.1	81.6	80.8	83.9				
6-year	61.2	66.5	71.9	74.2	76.0	75.7	76.3	77.7	77.4	80.9	77.7	77.6	79.1	78.2	80.8	79.8					
7-year	60.3	65.7	71.0	73.3	75.2	75.2	75.9	77.0	76.9	80.4	77.3	77.3	78.6	77.5	79.7						
8-year	59.5	64.9	70.4	72.7	74.6	75.0	75.2	76.7	76.0	79.8	76.6	76.9	78.3	77.0							
9-year	58.9	64.2	70.0	72.2	74.3	74.9	74.9	75.9	75.7	79.4	76.4	76.4	77.9								
10-year	58.6	63.8	69.5	72.0	73.9	74.8	74.8	75.6	75.5	79.2	75.9	76.0									
11-year	58.2	63.4	69.3	71.3	73.4	74.8	74.6	75.1	75.4	78.9	75.4										
12-year	57.9	63.0	69.0	71.2	73.1	74.7	74.6	74.7	75.1	78.8											
13-year	57.7	62.6	68.7	70.5	72.9	74.3	74.2	74.5	75.1												
14-year	57.4	62.3	68.2	70.2	72.8	74.1	73.7	74.3													
15-year	57.2	62.0	68.0	69.9	72.6	73.7	73.7														
16-year	56.8	61.6	67.6	69.4	72.4	73.6															
17-year	56.5	61.3	67.5	68.6	72.3																
18-year	56.2	61.1	67.2	68.3																	
19-year	56.0	60.8	67.0																		
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, 2008
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 <18 ^e	0 to <33 ^e	>=33 ^f	Complete ^g	
Race	Sex											
All Races ^b	Both Sexes	58,522	51,832	45,147	39,508	33,666	28,341	179,963	271,858	+	+	
	Males	31,328	26,794	23,733	20,786	17,027	13,701	94,953	140,000	+	+	
	Females	27,194	25,038	21,414	18,722	16,639	14,640	85,010	131,858	+	+	
White ^b	Both Sexes	48,265	43,997	37,972	33,839	29,595	25,098	151,158	231,868	+	+	
	Males	26,095	22,716	19,963	17,928	15,058	12,245	80,090	119,939	+	+	
	Females	22,170	21,281	18,009	15,911	14,537	12,853	71,068	111,929	+	+	
Black ^b	Both Sexes	6,456	4,944	4,472	3,658	2,628	2,280	18,093	25,644	+	+	
	Males	3,304	2,517	2,266	1,858	1,242	976	9,231	12,654	+	+	
	Females	3,152	2,427	2,206	1,800	1,386	1,304	8,862	12,990	+	+	
Asian/ Pacific Islander ^c	Both Sexes	2,280	1,849	1,570	+	+	+	6,519	+	+	+	
	Males	1,202	996	846	+	+	+	3,439	+	+	+	
	Females	1,078	853	724	+	+	+	3,080	+	+	+	
Hispanic ^d	Both Sexes	11,317	8,598	6,535	+	+	+	29,844	+	+	+	
	Males	6,408	4,539	3,531	+	+	+	16,402	+	+	+	
	Females	4,909	4,059	3,004	+	+	+	13,442	+	+	+	

^a US 2008 cancer prevalence counts are based on 2008 cancer prevalence proportions from the SEER registries and 1/1/2008 US population estimates based on the average of 2007 and 2008 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: 33 years for 1975-2008 SEER 9 data; 18 years for 1990-2008 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

^{f g} (f) Cases diagnosed more than 33 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 <33 and >=33.

- 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 2004-2008

Age <1			Age 1			Age 2		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	23.5	1,321	All Sites	22.3	1,241	All Sites	22.4	1,233
Leukemia	4.9	273	Leukemia	7.1	395	Leukemia	10.5	579
Acute Lymphocytic Leukemia	2.3	127	Acute Lymphocytic Leukemia	5.0	278	Acute Lymphocytic Leukemia	9.2	509
Brain and ONS ^d	3.7	206	Brain and ONS ^d	4.5	251	Brain and ONS ^d	3.5	194
Soft Tissue	3.6	203	Kidney and Renal Pelvis	2.0	112	Kidney and Renal Pelvis	2.1	116
Eye and Orbit	2.6	147	Soft Tissue	1.8	103	Eye and Orbit	1.3	71
Other Endocrine	2.6	147	Eye and Orbit	1.8	102	Other Endocrine	1.1	62
Age 3			Age 4			Age 5		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	20.2	1,108	All Sites	17.8	969	All Sites	13.6	731
Leukemia	10.0	552	Leukemia	8.2	446	Leukemia	5.5	293
Acute Lymphocytic Leukemia	9.2	505	Acute Lymphocytic Leukemia	7.4	404	Acute Lymphocytic Leukemia	4.9	260
Brain and ONS ^d	3.8	211	Brain and ONS ^d	3.8	205	Brain and ONS ^d	3.5	185
Kidney and Renal Pelvis	1.7	95	Kidney and Renal Pelvis	1.4	77	Kidney and Renal Pelvis	1.0	54
Other Endocrine	1.1	59	Non-Hodgkin Lymphoma	1.0	52	Non-Hodgkin Lymphoma	1.0	54
Soft Tissue	0.8	44	Other Endocrine	0.7	39	Soft Tissue	0.7	37
Age 6			Age 7			Age 8		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	12.2	645	All Sites	11.4	597	All Sites	10.2	532
Leukemia	4.4	234	Leukemia	3.9	203	Leukemia	3.0	158
Acute Lymphocytic Leukemia	4.1	215	Acute Lymphocytic Leukemia	3.3	172	Acute Lymphocytic Leukemia	2.4	125
Brain and ONS ^d	3.2	171	Brain and ONS ^d	3.1	162	Brain and ONS ^d	3.0	157
Kidney and Renal Pelvis	0.8	43	Non-Hodgkin Lymphoma	0.9	47	Non-Hodgkin Lymphoma	0.8	41
Non-Hodgkin Lymphoma	0.8	40	Soft Tissue	0.6	34	Bones and Joints	0.7	38
Soft Tissue	0.6	34	Bones and Joints	0.5	27	Hodgkin Lymphoma	0.7	34
Age 9			Age 10			Age 11		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	10.2	537	All Sites	11.4	607	All Sites	12.8	690
Leukemia	3.1	163	Leukemia	3.1	163	Leukemia	3.6	194
Acute Lymphocytic Leukemia	2.2	118	Acute Lymphocytic Leukemia	2.3	121	Acute Lymphocytic Leukemia	2.7	145
Brain and ONS ^d	2.7	140	Brain and ONS ^d	2.4	128	Brain and ONS ^d	2.3	127
Bones and Joints	0.8	41	Bones and Joints	1.1	58	Bones and Joints	1.3	73
Non-Hodgkin Lymphoma	0.8	40	Non-Hodgkin Lymphoma	1.1	58	Non-Hodgkin Lymphoma	1.1	59
Hodgkin Lymphoma	0.7	35	Soft Tissue	0.7	36	Soft Tissue	1.0	53

^a Rates are per 100,000 per year.

^b Top 5 cancer sites were determined based on the 2004-2008 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 2004-2008

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	13.3	731	All Sites	14.1	787	All Sites	16.5	931
Leukemia	3.0	167	Leukemia	3.0	168	Leukemia	3.5	199
Acute Lymphocytic Leukemia	2.1	114	Acute Lymphocytic Leukemia	2.1	115	Acute Lymphocytic Leukemia	2.3	131
Brain and ONS ^d	2.7	148	Brain and ONS ^d	2.6	143	Brain and ONS ^d	2.6	147
Bones and Joints	1.6	89	Hodgkin Lymphoma	1.7	95	Hodgkin Lymphoma	1.9	109
Non-Hodgkin Lymphoma	1.4	75	Bones and Joints	1.4	76	Non-Hodgkin Lymphoma	1.8	103
Hodgkin Lymphoma	1.2	66	Non-Hodgkin Lymphoma	1.2	68	Bones and Joints	1.5	83
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	1,046	All Sites	19.9	1,124	All Sites	21.6	1,213
Leukemia	3.3	185	Leukemia	3.4	192	Leukemia	3.1	172
Acute Lymphocytic Leukemia	2.2	127	Acute Lymphocytic Leukemia	2.2	123	Acute Lymphocytic Leukemia	1.7	94
Hodgkin Lymphoma	2.5	144	Brain and ONS ^d	2.7	152	Hodgkin Lymphoma	2.7	150
Brain and ONS ^d	2.3	128	Hodgkin Lymphoma	2.6	148	Brain and ONS ^d	2.1	120
Bones and Joints	1.9	108	Non-Hodgkin Lymphoma	1.7	97	Testis	2.1	119
Non-Hodgkin Lymphoma	1.8	102	Thyroid	1.7	96	Non-Hodgkin Lymphoma	2.1	116
Age 18			Age 19					
	<u>Rate</u>	<u>Cases</u>		<u>Rate</u>	<u>Cases</u>			
All Sites	23.1	1,256	All Sites	25.4	1,326			
Hodgkin Lymphoma	3.3	179	Hodgkin Lymphoma	4.2	219			
Leukemia	3.2	173	Testis	3.4	180			
Acute Lymphocytic Leukemia	1.7	93	Leukemia	2.8	144			
Thyroid	2.6	142	Acute Lymphocytic Leukemia	1.2	65			
Testis	2.3	125	Thyroid	2.7	139			
Melanoma of the Skin	1.9	105	Melanoma of the Skin	2.3	120			

^a Rates are per 100,000 per year.

^b Top 5 cancer sites were determined based on the 2004-2008 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 2004-2008

Age <1			Age 1			Age 2		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	1.7	367	All Sites	1.9	402	All Sites	2.3	479
Leukemia	0.6	124	Leukemia	0.7	149	Leukemia	0.8	174
Acute Lymphocytic Leukemia	0.2	39	Acute Lymphocytic Leukemia	0.2	42	Acute Lymphocytic Leukemia	0.3	64
Brain and ONS ^d	0.4	79	Brain and ONS ^d	0.5	97	Brain and ONS ^d	0.5	102
Other Endocrine	0.2	36	Other Endocrine	0.3	56	Other Endocrine	0.4	88
Soft Tissue	0.1	20	Liver & IBD ^d	0.1	24	Liver & IBD ^d	0.2	34
Liver & IBD ^d	0.1	18	Soft Tissue	0.1	21	Soft Tissue	0.1	25
Age 3			Age 4			Age 5		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.5	516	All Sites	2.5	514	All Sites	2.4	489
Leukemia	0.8	156	Brain and ONS ^d	0.8	173	Brain and ONS ^d	0.9	187
Acute Lymphocytic Leukemia	0.2	51	Leukemia	0.6	114	Leukemia	0.5	100
Brain and ONS ^d	0.7	143	Acute Lymphocytic Leukemia	0.2	50	Acute Lymphocytic Leukemia	0.3	51
Other Endocrine	0.5	101	Other Endocrine	0.5	94	Other Endocrine	0.4	84
Soft Tissue	0.2	35	Kidney and Renal Pelvis	0.1	29	Soft Tissue	0.1	30
Liver & IBD ^d	0.1	22	Soft Tissue	0.1	26	Kidney and Renal Pelvis	0.1	30
Age 6			Age 7			Age 8		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.4	477	All Sites	2.6	523	All Sites	2.4	467
Brain and ONS ^d	0.9	176	Brain and ONS ^d	1.0	208	Brain and ONS ^d	0.8	163
Leukemia	0.6	112	Leukemia	0.6	127	Leukemia	0.7	137
Acute Lymphocytic Leukemia	0.3	61	Acute Lymphocytic Leukemia	0.3	69	Acute Lymphocytic Leukemia	0.4	77
Other Endocrine	0.4	77	Other Endocrine	0.4	79	Other Endocrine	0.3	54
Kidney and Renal Pelvis	0.2	32	Soft Tissue	0.2	31	Soft Tissue	0.1	26
Soft Tissue	0.1	28	Non-Hodgkin Lymphoma	0.1	21	Non-Hodgkin Lymphoma	0.1	21
Age 9			Age 10			Age 11		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.3	451	All Sites	2.1	414	All Sites	2.2	438
Brain and ONS ^d	0.8	162	Leukemia	0.7	149	Leukemia	0.7	144
Leukemia	0.7	148	Acute Lymphocytic Leukemia	0.4	76	Acute Lymphocytic Leukemia	0.4	80
Acute Lymphocytic Leukemia	0.4	83	Brain and ONS ^d	0.7	130	Brain and ONS ^d	0.7	134
Other Endocrine	0.2	34	Other Endocrine	0.2	33	Bones and Joints	0.2	42
Bones and Joints	0.2	30	Bones and Joints	0.2	30	Other Endocrine	0.1	29
Soft Tissue	0.1	24	Soft Tissue	0.1	23	Soft Tissue	0.1	23

^a Rates are per 100,000 per year. Deaths are for the entire United States over the time period 2004-2008.

^b Top 5 cancer sites were determined based on the 2004-2008 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.

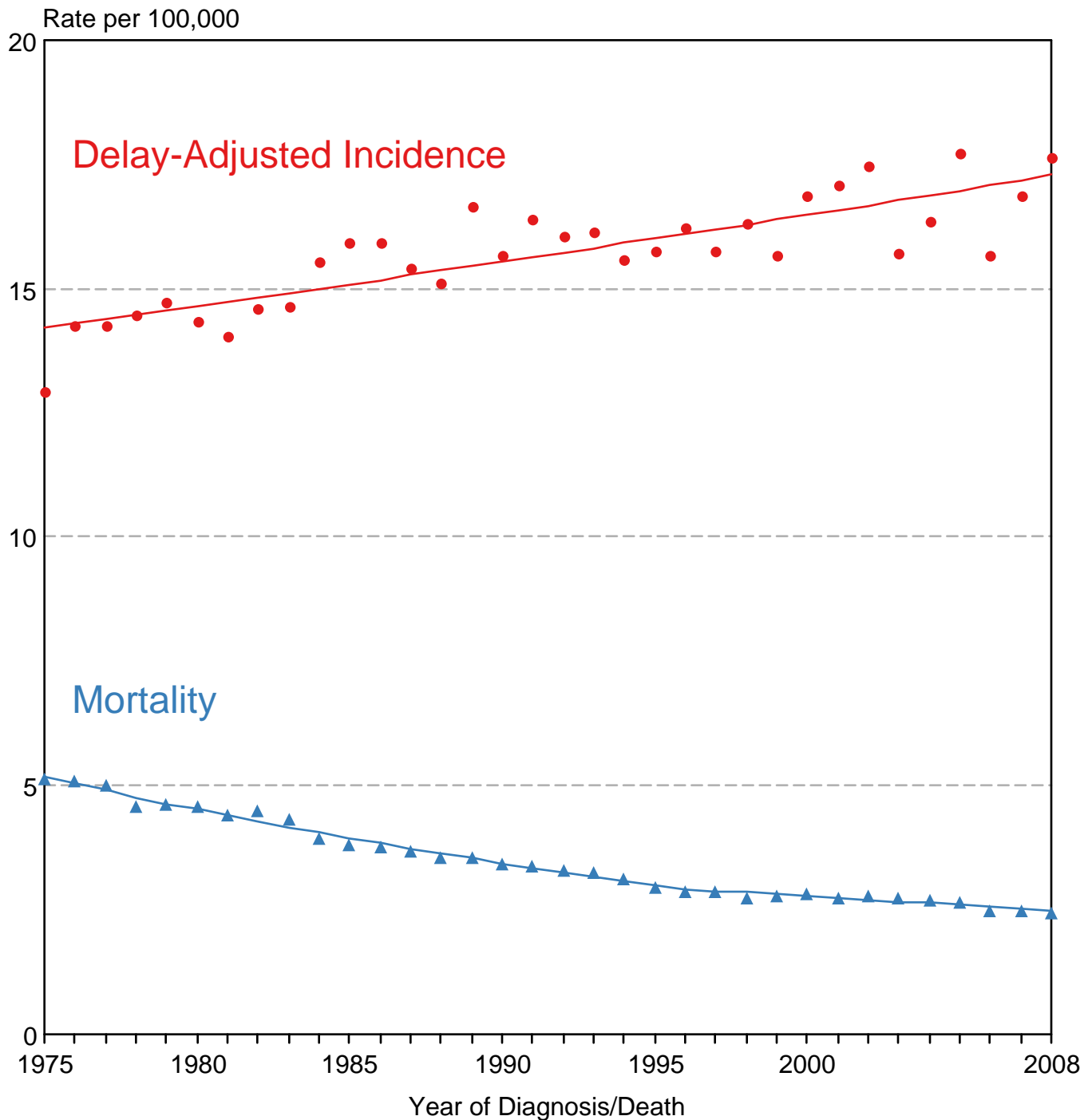
Table 28.14 - continued
Age-Specific Rates^a and Deaths for the Top 5 Cancer Sites^b by Single Year of Age at DeathU.S. Mortality^c 2004-2008

Age 12			Age 13			Age 14		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.2	462	All Sites	2.5	523	All Sites	2.5	531
Leukemia	0.8	155	Leukemia	0.8	162	Leukemia	0.8	175
Acute Lymphocytic Leukemia	0.3	65	Acute Lymphocytic Leukemia	0.4	74	Acute Lymphocytic Leukemia	0.3	70
Brain and ONS ^d	0.6	132	Brain and ONS ^d	0.7	138	Brain and ONS ^d	0.6	125
Bones and Joints	0.2	51	Bones and Joints	0.3	61	Bones and Joints	0.3	70
Soft Tissue	0.2	31	Soft Tissue	0.2	39	Soft Tissue	0.2	50
Non-Hodgkin Lymphoma	0.1	20	Other Endocrine	0.1	28	Non-Hodgkin Lymphoma	0.1	24
Age 15			Age 16			Age 17		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.9	611	All Sites	3.1	662	All Sites	3.0	651
Leukemia	1.0	217	Leukemia	0.9	194	Leukemia	0.9	195
Acute Lymphocytic Leukemia	0.4	89	Acute Lymphocytic Leukemia	0.3	73	Acute Lymphocytic Leukemia	0.4	90
Brain and ONS ^d	0.5	115	Bones and Joints	0.6	118	Bones and Joints	0.6	122
Bones and Joints	0.4	79	Brain and ONS ^d	0.5	102	Brain and ONS ^d	0.4	96
Soft Tissue	0.3	54	Soft Tissue	0.3	71	Soft Tissue	0.3	67
Non-Hodgkin Lymphoma	0.2	40	Non-Hodgkin Lymphoma	0.2	46	Non-Hodgkin Lymphoma	0.2	34
Age 18			Age 19					
	Rate	Deaths		Rate	Deaths			
All Sites	3.5	748	All Sites	3.9	823			
Leukemia	1.0	212	Leukemia	1.0	220			
Acute Lymphocytic Leukemia	0.4	80	Acute Lymphocytic Leukemia	0.4	91			
Bones and Joints	0.6	127	Bones and Joints	0.7	138			
Brain and ONS ^d	0.5	103	Brain and ONS ^d	0.5	112			
Soft Tissue	0.3	70	Soft Tissue	0.3	73			
Non-Hodgkin Lymphoma	0.3	61	Non-Hodgkin Lymphoma	0.3	68			

^a Rates are per 100,000 per year. Deaths are for the entire United States over the time period 2004-2008.^b Top 5 cancer sites were determined based on the 2004-2008 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.

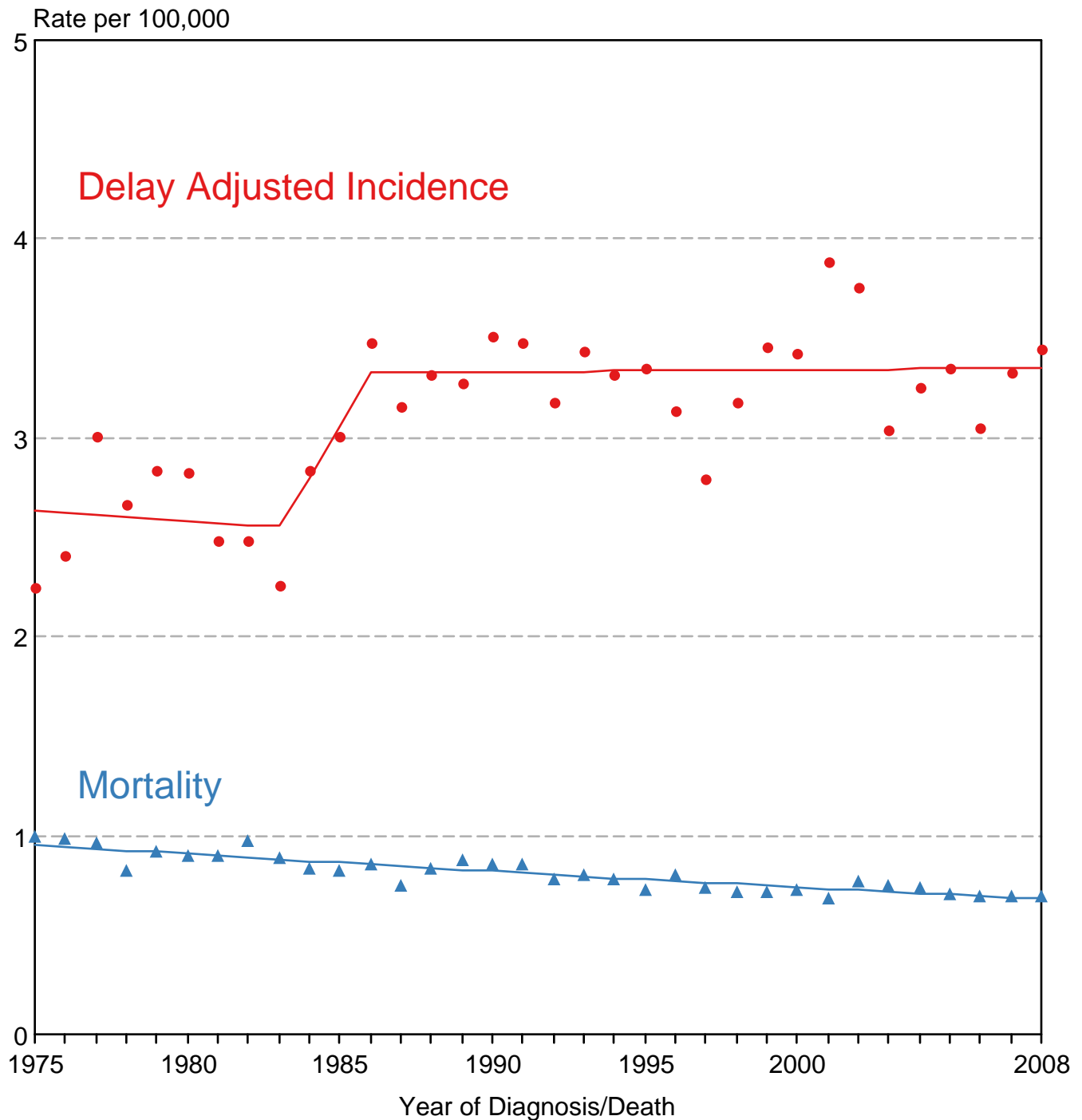
- Statistic not shown. Rate based on less than 16 cases for the time interval.

SEER Delay-Adjusted Incidence and US Mortality All Childhood Cancers, Under 20 Years of Age Both Sexes, All Races, 1975-2008



Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC). 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 3.5, April 2011, National Cancer Institute.

SEER Delay-Adjusted Incidence and US Mortality Brain and CNS, Under 15 Years of Age Both Sexes, All Races, 1975-2008



Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC). 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 3.5, April 2011, National Cancer Institute.

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

Joinpoint Analyses for Whites and Blacks from 1975-2008 and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2008

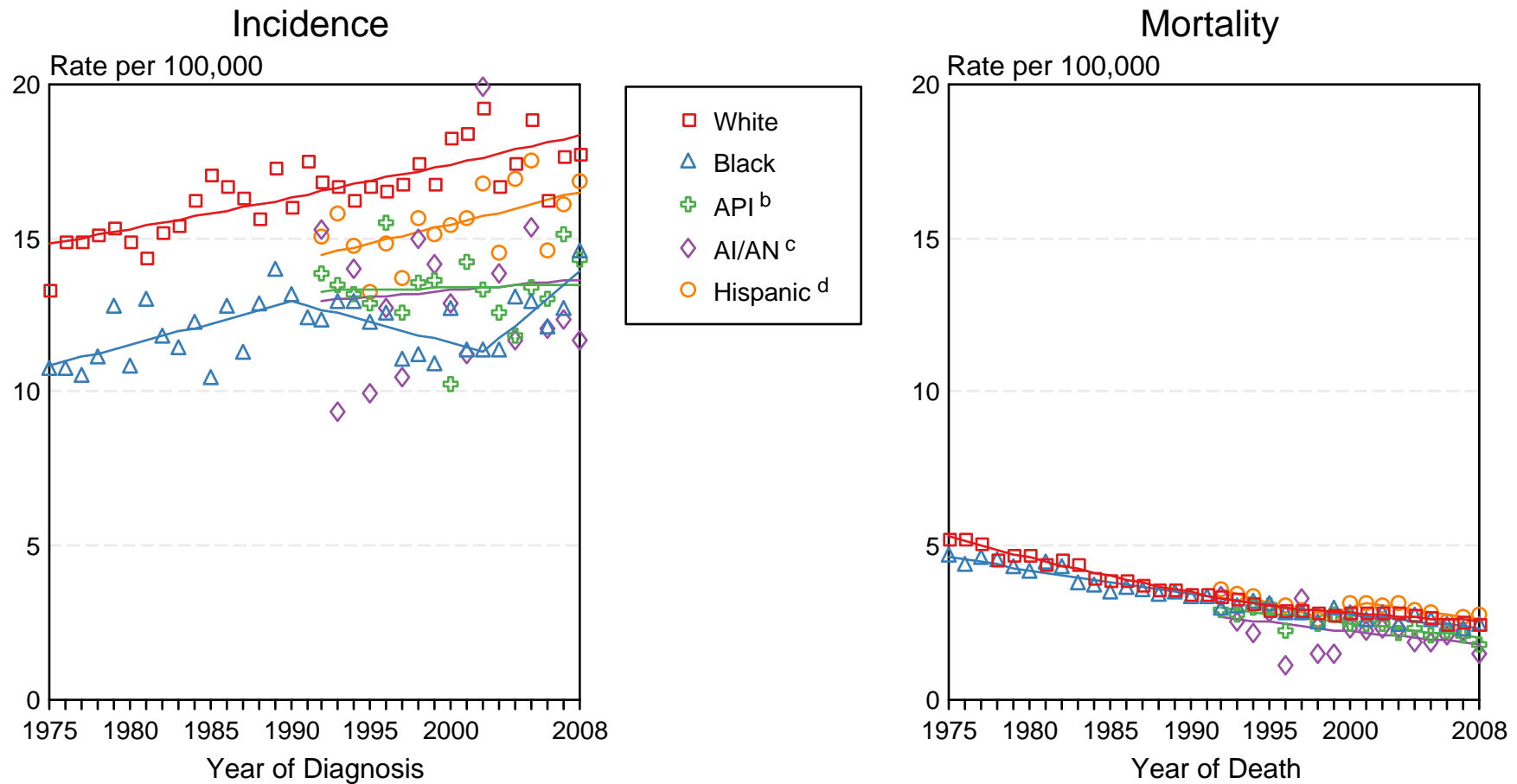


Figure 28.3

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 3.5, April 2011, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2008 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 1992-2008 allow a maximum of 3 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.