

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 29 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, 2005-2009

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	14.4	2.2	2.4	2.1	17.0	18.0	16.0	2.5	2.7	2.2
Whites	16.1	17.2	15.0	2.3	2.4	2.2	17.9	19.0	16.7	2.5	2.8	2.3
Blacks	12.3	12.9	11.7	2.2	2.3	2.1	12.9	13.4	12.4	2.5	2.7	2.2
Bone & Joint	0.7	0.8	0.7	0.1	0.1	0.1	0.9	1.1	0.8	0.2	0.2	0.2
Brain & Other nervous	3.2	3.4	3.1	0.7	0.7	0.7	3.0	3.1	2.8	0.6	0.7	0.6
Hodgkin lymphoma	0.6	0.8	0.5	0.0	0.0	-	1.3	1.3	1.2	0.0	0.0	0.0
Kidney & Renal pelvis	0.8	0.8	0.9	0.1	0.1	0.1	0.7	0.6	0.7	0.1	0.1	0.1
Leukemia	5.0	5.5	4.5	0.7	0.7	0.6	4.5	5.0	4.0	0.7	0.8	0.6
Acute lymphocytic	4.0	4.4	3.6	0.3	0.3	0.3	3.4	3.8	3.0	0.3	0.4	0.3
Non-Hodgkin lymphoma	0.9	1.2	0.6	0.1	0.1	0.0	1.2	1.5	0.8	0.1	0.2	0.1
Soft tissue	1.0	1.1	1.0	0.1	0.1	0.1	1.1	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).

SEER 18 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, New Jersey and Georgia excluding ATL/RG).

^b 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, 1975-2009

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	2009
<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	14.1	14.8	14.1	15.3	14.5	15.4	15.7	15.4	13.0	15.0	16.4	14.2	14.3	15.4	15.5
Whites	12.1	13.2	15.6	14.3	16.2	13.9	15.3	14.5	14.9	15.0	14.7	16.3	15.7	16.7	17.0	16.8	13.8	15.8	17.3	14.8	14.9	15.6	16.0
Blacks	8.6	11.1	10.1	12.3	11.8	12.0	12.4	12.2	11.7	11.6	11.2	9.9	10.3	11.8	10.8	11.5	9.9	13.3	12.8	11.4	11.8	15.0	12.8
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	1.0
Brain & Other nervous	2.3	2.8	3.0	3.5	3.5	3.2	3.4	3.3	3.4	3.1	2.8	3.2	3.4	3.4	3.9	3.7	3.0	3.2	3.3	3.0	3.3	3.4	3.6
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	0.7	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	0.8
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	4.5	4.1	4.7	4.6
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	3.6	3.7
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	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	0.7	1.0	1.5	0.9	1.1	0.9	1.0
<u>Ages 0-19</u>																							
All Sites																							
All Races	13.0	14.4	15.9	15.7	16.4	16.1	16.2	15.6	15.8	16.2	15.7	16.3	15.7	16.8	17.0	17.4	15.6	16.3	17.6	15.6	16.7	17.4	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	16.6	17.5	18.9	16.3	17.7	17.8	18.3
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	11.0	12.7	11.4	11.4	11.4	13.2	12.9	12.2	12.8	15.0	12.8
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	1.1
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	2.9	2.7	3.0	3.1	3.2
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	1.4	1.3
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	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	4.3	4.6	4.0	4.0	4.2	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	3.4	2.8	3.2	3.3	3.0	3.1	3.1	3.0
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	1.4
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	1.0

^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, 1975-2009

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	2009
<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	2.1
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	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	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	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	0.6
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	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	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	0.2
<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	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	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	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	-	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	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	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	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	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	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, 1975-2009

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	2009
<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	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	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	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	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	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	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	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	0.2
<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	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	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	0.6
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	-	-	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	0.1	0.1
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	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	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	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	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, 1975-2009

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	2009
<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	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	0.8	0.7	0.7	0.7	0.7	0.5	0.6	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	0.5
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	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	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	2.4
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	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	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	0.5
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	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	-	-	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	0.3

^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,
1975-2009 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	2005-09
<u>Ages 0-14</u>													
All Sites													
All Races	1975-09	0.6*											0.6*
White	1975-09	0.6*											0.6*
Black	1975-09	0.5*											0.5*
Bone & Joint	1975-79	11.3	1979-09	-0.1									-0.1
Brain & Other nervous system	1975-90	2.1*	1990-09	0.0									0.0
Hodgkin lymphoma	1975-09	-0.7*											-0.7*
Kidney & Renal pelvis	1975-09	-0.3											-0.3
Leukemia	1975-09	0.6*											0.6*
Acute lymphocytic leukemia	1975-09	0.7*											0.7*
Non-Hodgkin lymphoma	1975-09	0.6*											0.6*
Soft tissue	1975-09	1.1*											1.1*
<u>Ages 0-19</u>													
All Sites													
All Races	1975-09	0.6*											0.6*
White	1975-09	0.7*											0.7*
Black	1975-94	0.9*	1994-98	-4.1	1998-09	1.9*							1.9*
Bone & Joint	1975-09	0.3											0.3
Brain & Other nervous system	1975-77	14.6	1977-83	-3.2	1983-86	11.0	1986-09	-0.1					-0.1
Hodgkin lymphoma	1975-09	-0.8*											-0.8*
Kidney & Renal pelvis	1975-09	0.0											0.0
Leukemia	1975-09	0.6*											0.6*
Acute lymphocytic leukemia	1975-09	0.8*											0.8*
Non-Hodgkin lymphoma	1975-09	1.0*											1.0*
Soft tissue	1975-09	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).

^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,
1975-2009 With up to Five 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	2005-09
<u>Ages 0-14</u>													
All Sites	1975-98	-2.9*	1998-03	0.2	2003-09	-2.8*							-2.8*
Bone & Joint	1975-89	-3.5*	1989-09	-0.4									-0.4
Brain & Other nervous system	1975-09	-1.0*											-1.0*
Hodgkin lymphoma	1975-09	-4.7*											-4.7*
Kidney & Renal pelvis	1975-09	-2.8*											-2.8*
Leukemia	1975-98	-4.0*	1998-09	-2.1*									-2.1*
Acute lymphocytic leukemia	1975-93	-5.3*	1993-09	-2.9*									-2.9*
Non-Hodgkin lymphoma	1975-09	-5.0*											-5.0*
Soft tissue	1975-77	23.7	1977-09	-1.3*									-1.3*
<u>Ages 0-19</u>													
All Sites	1975-98	-2.7*	1998-03	0.0	2003-09	-2.7*							-2.7*
Bone & Joint	1975-89	-3.2*	1989-09	-0.1									-0.1
Brain & Other nervous system	1975-09	-1.0*											-1.0*
Hodgkin lymphoma	1975-09	-4.8*											-4.8*
Kidney & Renal pelvis	1975-09	-2.5*											-2.5*
Leukemia	1975-89	-3.9*	1989-92	-0.8	1992-98	-5.0*	1998-01	1.0	2001-09	-3.1*			-3.1*
Acute lymphocytic leukemia	1975-94	-4.5*	1994-09	-2.7*									-2.7*
Non-Hodgkin lymphoma	1975-09	-4.1*											-4.1*
Soft tissue	1975-79	8.9*	1979-09	-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).

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 1975-2009.

* 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,
1975-2009 With up to Five 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 2005-09
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	
<u>Ages 0-14</u>													
All Sites	1975-96	-3.0*	1996-09	-1.3*									-1.3*
Bone & Joint	1975-89	-3.1*	1989-09	-0.4									-0.4
Brain & Other nervous system	1975-09	-1.0*											-1.0*
Hodgkin lymphoma	-	-											-
Kidney & Renal pelvis	1975-09	-2.7*											-2.7*
Leukemia	1975-89	-4.6*	1989-09	-2.9*									-2.9*
Acute lymphocytic leukemia	1975-91	-5.5*	1991-09	-2.9*									-2.9*
Non-Hodgkin lymphoma	1975-09	-5.0*											-5.0*
Soft tissue	1975-79	12.7*	1979-95	-2.8*	1995-09	0.5							0.5
<u>Ages 0-19</u>													
All Sites	1975-96	-2.7*	1996-09	-1.3*									-1.3*
Bone & Joint	1975-89	-2.8*	1989-09	-0.1									-0.1
Brain & Other nervous system	1975-09	-1.0*											-1.0*
Hodgkin lymphoma	1975-09	-4.8*											-4.8*
Kidney & Renal pelvis	1975-09	-2.5*											-2.5*
Leukemia	1975-88	-4.1*	1988-09	-2.7*									-2.7*
Acute lymphocytic leukemia	1975-95	-4.5*	1995-09	-2.2*									-2.2*
Non-Hodgkin lymphoma	1975-09	-4.2*											-4.2*
Soft tissue	1975-79	9.8*	1979-09	-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 1975-2009.

* 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,
1975-2009 With up to Five 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 2005-09
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	
<u>Ages 0-14</u>													
All Sites	1975-97	-2.6*	1997-09	-1.1*									-1.1*
Bone & Joint	1975-81	-10.5*	1981-09	-0.5									-0.5
Brain & Other nervous system	1975-09	-1.2*											-1.2*
Hodgkin lymphoma	-	-											-
Kidney & Renal pelvis	1975-09	-2.8*											-2.8*
Leukemia	1975-09	-3.2*											-3.2*
Acute lymphocytic leukemia	1975-09	-4.7*											-4.7*
Non-Hodgkin lymphoma	1975-09	-4.7*											-4.7*
Soft tissue	1975-09	-1.1*											-1.1*
<u>Ages 0-19</u>													
All Sites	1975-09	-2.1*											-2.1*
Bone & Joint	1975-85	-6.3*	1985-09	0.0									0.0
Brain & Other nervous system	1975-09	-1.2*											-1.2*
Hodgkin lymphoma	-	-											-
Kidney & Renal pelvis	1975-09	-2.6*											-2.6*
Leukemia	1975-09	-2.7*											-2.7*
Acute lymphocytic leukemia	1975-09	-4.0*											-4.0*
Non-Hodgkin lymphoma	1975-09	-3.4*											-3.4*
Soft tissue	1975-09	-0.8*											-0.8*

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 1975-2009.

* 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	1999-2001	2002-2008
All Sites										
All Races	58.1	62.6	66.9	68.2	71.6	75.9	77.4	79.1	80.6	82.8 ^c
Whites	58.0	63.0	67.6	70.0	72.4	76.8	78.3	80.6	81.6	84.5 ^c
Blacks	57.3	57.7	62.2	56.7	65.3	71.1	73.0	75.2	73.9	75.5 ^c
Bone & Joint	49.9 ^d	47.8	56.8 ^d	57.3 ^d	66.8 ^d	67.4	74.1	70.3	70.0	78.8 ^c
Brain & ONS	56.9	57.7	56.3	61.8	64.2	64.6	70.6	75.0	73.7	74.5 ^c
Hodgkin lymphoma	80.7	86.8	88.0	90.9	87.1	96.8	94.6	96.1	94.4	97.4 ^c
Leukemia	50.3	58.3	62.9	63.9	71.0	75.6	76.0	80.2	82.6	86.6 ^c
Acute lymphocytic	57.5	66.1	71.3	72.6	77.8	83.3	83.8	86.9	88.4	91.2 ^c
Acute myeloid	18.8	25.8	26.7 ^d	30.5 ^d	37.1 ^d	41.6	41.7 ^d	48.6	58.1	64.2 ^c
Neuroblastoma ^a	52.5	56.9	54.5	52.3	62.9	76.4	67.3	65.8	72.7	73.5 ^c
Non-Hodgkin lymphoma	43.2	52.7	66.9	70.3	70.7	76.9	80.7	83.9	89.2	85.3 ^c
Soft tissue	61.0	74.9	69.2	72.9	66.4	79.8	76.7	70.1	76.9	82.0 ^c
Wilms' tumor ^b	73.1	79.0	86.7	90.7	92.2	91.9	91.7	91.6	93.8	90.1 ^c
	Ages 0-19									
Site	1975-1977	1978-1980	1981-1983	1984-1986	1987-1989	1990-1992	1993-1995	1996-1998	1999-2001	2002-2008
All Sites										
All Races	61.7	65.2	68.3	70.6	73.5	76.3	77.8	79.7	80.2	83.1 ^c
Whites	61.5	65.8	69.2	72.5	75.0	77.6	78.6	81.0	81.2	84.4 ^c
Blacks	59.5	60.0	62.5	58.3	64.4	68.7	74.0	73.6	74.4	75.9 ^c
Bone & Joint	50.4	48.1	51.2	56.6	64.0	68.8	68.9	67.0	66.7	73.0 ^c
Brain & ONS	58.9	58.1	58.0	63.9	65.9	66.5	71.5	75.9	74.2	75.0 ^c
Hodgkin lymphoma	86.1	88.4	85.5	90.8	89.0	94.2	93.9	95.2	95.0	96.9 ^c
Leukemia	45.5	53.5	58.0	60.5	67.6	71.4	72.0	76.5	77.5	83.6 ^c
Acute lymphocytic	54.1	62.2	67.1	70.3	75.0	80.0	81.4	84.3	84.6	88.7 ^c
Acute myeloid	18.7	26.2	26.4	31.4	37.6	41.5	39.4	46.2	51.6	63.2 ^c
Neuroblastoma ^a	53.1	57.0	53.4	52.5	61.5	76.1	67.3	66.0	72.4	73.6 ^c
Non-Hodgkin lymphoma	44.6	53.4	63.8	67.7	70.4	72.7	77.9	81.4	83.9	84.3 ^c
Soft tissue	65.2	69.3	68.4	72.6	68.0	69.6	74.3	72.0	72.9	77.5 ^c
Wilms' tumor ^b	72.6	78.4	86.8	91.0	92.2	91.3	91.7	91.7	93.8	89.8 ^c

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

Based on follow-up of patients into 2009.

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 2002-2008 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	
	2005-2009 Num Cases	2005-2009 Rate	1975-2009 APC	1975-1992 APC	1993-2009 APC	2005-2009 Num Deaths	2005-2009 Rate	1975-2009 APC	1975-1992 APC	1993-2009 APC	1975-1977	2002-2008
Ages 0-4												
All Sites	6,275	20.9	0.6*	1.1*	0.0 [#]	2,229	2.1	-2.7*	-3.0*	-2.3* [#]	57.2	83.5 ^c
Soft tissue	465	1.5	1.0*	0.8	2.1	123	0.1	-1.9*	-1.5	-1.5	61.2 ^d	84.0 ^c
Kidney and Renal pelvis	540	1.8	-0.4	-0.2	-2.4* [@]	72	0.1	-3.8*	-6.3*	-3.6* [@]	71.9	90.0 ^c
Eye and Orbit	384	1.3	0.1	1.2	-2.1* [#]	19	0.0	-	-	-	87.2 ^d	97.5 ^c
Brain and Other nervous	1,160	3.9	1.0*	2.8*	0.4 [#]	569	0.5	-1.5*	-1.3*	-2.5* [#]	52.0	74.4 ^c
Other endocrine ^g	413	1.4	-	-	-	363	0.3	-	-	-	35.7 ^d	71.3 ^c
Leukemia	2,362	7.9	0.7*	0.8	0.4	719	0.7	-3.1*	-3.7*	-2.2* [#]	55.4	87.5 ^c
Acute lymphocytic	1,924	6.4	0.7*	1.1*	0.4	242	0.2	-4.2*	-5.7*	-1.8* [#]	63.2	92.1 ^c
Ages 5-9												
All Sites	3,387	11.8	0.3	0.8*	0.4	2,358	2.3	-2.6*	-3.3*	-1.3* [#]	58.7	80.5 ^c
Brain and Other nervous	923	3.2	0.4	1.3	0.2	903	0.9	-0.6*	-0.5	0.1	58.4	69.6 ^c
Leukemia	1,130	3.9	0.3	1.7*	-0.2 [#]	585	0.6	-4.7*	-5.4*	-3.5* [#]	52.3	89.2 ^c
Acute lymphocytic	959	3.3	0.5	1.9*	-0.3 [#]	320	0.3	-5.3*	-6.4*	-3.2* [#]	55.6	95.1 ^c
Ages 10-14												
All Sites	4,033	13.8	0.7*	1.1*	0.7	2,294	2.3	-2.1*	-2.5*	-1.3* [#]	58.7	83.5 ^c
Bone and Joint	413	1.4	0.2	1.3	-0.1	252	0.2	-1.4*	-3.0*	-0.3 [#]	52.8 ^d	78.7 ^c
Brain and Other nervous	772	2.6	0.9*	1.8*	-0.2 [@]	633	0.6	-1.1*	-1.4*	-0.4 [@]	59.5	80.5 ^c
Hodgkin lymphoma	373	1.3	-0.6*	-0.6	0.3	17	0.0	-	-	-	78.7	98.7 ^c
Leukemia	980	3.4	0.8*	1.5	1.9*	756	0.7	-2.9*	-3.1*	-2.5*	34.9	80.7 ^c
Acute lymphocytic	669	2.3	1.1*	2.6*	2.3*	362	0.4	-3.3*	-3.3*	-2.9*	43.0 ^d	83.3 ^c
Ages 15-19												
All Sites	6,537	21.8	0.6*	1.2*	0.9*	3,408	3.2	-1.9*	-2.2*	-1.6* [#]	68.1	83.7 ^c
Bone and Joint	462	1.5	0.4	0.8	-0.1	572	0.5	-1.0*	-2.7*	0.1 [#]	51.0 ^d	66.4 ^c
Melanoma of the skin	401	1.3	1.3*	2.4*	1.3	34	0.0	-	-	-	76.2 ^d	97.8 ^c
Testis(males)	577	3.7	1.4*	2.1	1.8*	36	0.1	-	-	-	66.0 ^d	95.3 ^c
Brain and Other nervous	636	2.1	0.2	2.1*	0.5	539	0.5	-1.2*	-1.1*	-1.2*	65.3	77.1 ^c
Thyroid	640	2.1	1.6*	1.1	2.8*	-	-	-	-	-	100.0	97.7
Hodgkin lymphoma	957	3.2	-0.8*	0.3	-0.6	73	0.1	-4.7*	-3.5*	-5.1*	89.0	96.6 ^c
Non-Hodgkin lymphoma	552	1.8	1.7*	2.7*	1.6	230	0.2	-2.8*	-2.2*	-3.1*	47.7 ^d	82.8 ^c
Leukemia	927	3.1	0.9*	0.5	1.5	1,000	0.9	-2.1*	-1.9*	-2.2*	24.5	69.1 ^c
Acute lymphocytic	529	1.8	1.3*	1.6	2.7*	396	0.4	-2.2*	-1.3*	-2.1*	30.0 ^d	72.0 ^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 SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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 2002-2008 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 incidence cases between 2005-2009.

^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 1993-2009 is significantly different from the APC for 1975-1992 (p<.05).

@ The APC for 1993-2009 is significantly different from the APC for 1975-1992 (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	2008
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	91.3	92.5	92.1	91.8	94.1	92.9	92.5	94.1	92.2	93.0
2-year	71.1	75.8	78.4	81.8	82.7	84.1	82.3	84.7	84.8	86.4	84.8	84.4	85.3	85.9	87.1	87.5	89.3	88.4	88.5	89.3	88.1	
3-year	65.4	70.8	74.3	77.7	79.4	81.1	79.0	81.7	81.3	83.7	82.4	81.7	82.8	83.5	83.9	83.9	86.0	85.1	85.1	88.0		
4-year	62.1	67.6	71.8	75.5	76.7	78.7	78.2	79.0	78.9	80.7	80.5	78.9	81.1	81.6	82.3	82.1	85.1	83.6	83.5			
5-year	59.9	65.9	70.7	74.4	75.6	77.6	76.6	78.4	77.4	80.3	79.2	78.0	79.2	80.7	81.9	81.0	83.9	82.7				
6-year	58.2	64.8	69.7	73.6	74.9	76.3	76.1	78.1	76.4	79.6	78.4	76.5	78.7	79.5	80.9	80.2	83.5					
7-year	57.1	63.9	68.7	72.7	74.3	75.9	75.6	77.4	75.9	79.0	77.9	76.1	78.0	79.0	79.8	79.7						
8-year	56.4	63.2	68.1	72.3	73.6	75.8	75.0	77.1	75.0	78.5	76.7	75.6	77.7	78.3	79.8							
9-year	56.0	62.6	67.7	71.8	73.2	75.6	74.7	76.2	74.6	78.1	76.5	75.0	77.1	78.1								
10-year	55.8	62.1	67.3	71.4	73.1	75.5	74.7	76.0	74.5	77.9	75.9	74.7	76.7									
11-year	55.4	61.7	67.0	70.9	72.8	75.4	74.5	75.4	74.3	77.7	75.6	74.2										
12-year	55.1	61.2	66.7	70.8	72.6	75.3	74.5	74.7	74.0	77.6	75.2											
13-year	54.9	60.9	66.5	70.2	72.4	75.1	74.3	74.5	74.0	77.5												
14-year	54.5	60.6	66.1	70.0	72.2	74.7	73.8	74.4	74.0													
15-year	54.3	60.3	66.0	69.7	71.9	74.4	73.8	74.3														
16-year	53.9	60.0	65.7	69.2	71.8	74.2	73.4															
17-year	53.5	59.8	65.5	68.7	71.6	73.9																
18-year	53.3	59.5	65.3	68.3	71.5																	
19-year	53.0	59.3	65.2	68.2																		
20-year	52.9	59.1	64.9																			

^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	2008
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	91.2	91.3	92.3	92.5	94.1	92.5	92.8	94.3	93.2	94.2
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	84.3	87.3	87.6	89.2	88.1	89.0	89.0	88.6	
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	84.1	84.1	86.2	84.5	86.2	87.4		
4-year	64.9	69.6	73.9	76.5	78.0	78.3	78.4	78.9	79.9	82.2	80.4	80.0	81.1	80.3	82.3	82.1	85.1	83.3	84.6			
5-year	62.9	67.9	72.9	75.2	76.7	77.0	76.8	78.2	78.5	81.6	78.7	78.8	79.5	79.2	81.7	80.9	84.0	82.2				
6-year	61.2	66.5	71.9	74.2	76.0	75.7	76.3	77.7	77.4	81.0	77.8	77.6	79.1	78.3	81.0	79.9	83.5					
7-year	60.3	65.7	71.0	73.3	75.2	75.2	75.9	77.1	76.9	80.6	77.3	77.3	78.6	77.7	79.9	79.5						
8-year	59.5	64.9	70.4	72.7	74.6	75.1	75.2	76.8	76.0	80.0	76.6	76.9	78.4	77.1	79.8							
9-year	58.9	64.2	70.0	72.2	74.3	74.9	74.9	76.1	75.7	79.6	76.3	76.4	78.0	76.9								
10-year	58.6	63.8	69.6	72.0	73.9	74.9	74.8	75.7	75.5	79.4	75.8	76.1	77.6									
11-year	58.3	63.4	69.3	71.3	73.5	74.8	74.6	75.2	75.4	79.1	75.4	75.6										
12-year	57.9	63.0	69.0	71.2	73.1	74.7	74.6	74.8	75.1	79.0	75.2											
13-year	57.8	62.7	68.7	70.5	73.0	74.4	74.3	74.6	75.1	78.9												
14-year	57.4	62.3	68.2	70.3	72.8	74.1	73.8	74.4	75.0													
15-year	57.2	62.0	68.0	70.0	72.6	73.8	73.8	74.4														
16-year	56.9	61.6	67.7	69.5	72.5	73.6	73.4															
17-year	56.5	61.4	67.5	68.7	72.4	73.5																
18-year	56.3	61.1	67.3	68.5	72.2																	
19-year	56.0	60.9	67.0	68.4																		
20-year	55.7	60.6	66.7																			

^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, 2009
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 <19 ^e	0 to <34 ^e	>=34 ^f	Complete ^g
<u>Race</u>	<u>Sex</u>										
All Races ^b	Both Sexes	61,498	53,571	46,779	41,740	35,040	29,378	195,592	288,648	+	+
	Males	32,966	27,910	24,725	21,880	17,388	14,625	103,297	148,843	+	+
	Females	28,532	25,661	22,054	19,860	17,652	14,753	92,295	139,805	+	+
White ^b	Both Sexes	49,984	45,279	39,437	35,403	30,616	25,968	163,294	244,939	+	+
	Males	26,941	23,719	20,732	18,754	15,222	13,059	86,564	126,824	+	+
	Females	23,043	21,560	18,705	16,649	15,394	12,909	76,730	118,115	+	+
Black ^b	Both Sexes	7,323	5,314	4,626	4,044	2,867	2,398	20,502	28,256	+	+
	Males	3,865	2,628	2,435	2,032	1,342	1,092	10,540	14,036	+	+
	Females	3,458	2,686	2,191	2,012	1,525	1,306	9,962	14,220	+	+
Asian/ Pacific Islander ^c	Both Sexes	2,435	1,862	1,643	+	+	+	7,069	+	+	+
	Males	1,249	1,023	897	+	+	+	3,709	+	+	+
	Females	1,186	839	746	+	+	+	3,360	+	+	+
Hispanic ^d	Both Sexes	11,982	8,894	6,969	+	+	+	32,515	+	+	+
	Males	6,784	4,826	3,616	+	+	+	17,865	+	+	+
	Females	5,198	4,068	3,353	+	+	+	14,650	+	+	+

^a US 2009 cancer prevalence counts are based on 2009 cancer prevalence proportions from the SEER registries and 1/1/2009 US population estimates based on the average of 2008 and 2009 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: 34 years for 1975-2009 SEER 9 data; 19 years for 1990-2009 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

^{f g} (f) Cases diagnosed more than 34 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 <34 and >=34.

- 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 2005-2009

Age <1			Age 1			Age 2		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	22.9	1,397	All Sites	21.1	1,281	All Sites	22.2	1,335
Leukemia	4.7	284	Leukemia	6.2	376	Leukemia	10.3	623
Acute Lymphocytic Leukemia	2.1	130	Acute Lymphocytic Leukemia	4.3	259	Acute Lymphocytic Leukemia	9.2	555
Brain and ONS ^d	3.7	225	Brain and ONS ^d	4.5	274	Brain and ONS ^d	3.7	225
Soft Tissue	3.4	208	Kidney and Renal Pelvis	2.2	132	Kidney and Renal Pelvis	2.0	123
Eye and Orbit	2.7	165	Soft Tissue	1.8	109	Eye and Orbit	1.3	76
Other Endocrine	2.6	159	Eye and Orbit	1.5	92	Other Endocrine	1.1	65
Age 3			Age 4			Age 5		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	20.5	1,220	All Sites	17.6	1,042	All Sites	13.2	775
Leukemia	10.1	601	Leukemia	8.1	478	Leukemia	4.9	288
Acute Lymphocytic Leukemia	9.2	548	Acute Lymphocytic Leukemia	7.3	432	Acute Lymphocytic Leukemia	4.3	253
Brain and ONS ^d	3.8	225	Brain and ONS ^d	3.6	211	Brain and ONS ^d	3.7	219
Kidney and Renal Pelvis	1.9	112	Kidney and Renal Pelvis	1.5	90	Non-Hodgkin Lymphoma	1.1	62
Other Endocrine	1.2	70	Non-Hodgkin Lymphoma	0.9	56	Kidney and Renal Pelvis	1.0	60
Soft Tissue	0.8	48	Soft Tissue	0.7	44	Soft Tissue	0.7	40
Age 6			Age 7			Age 8		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	12.6	728	All Sites	11.7	669	All Sites	10.7	609
Leukemia	4.4	255	Leukemia	4.0	231	Brain and ONS ^d	3.1	176
Acute Lymphocytic Leukemia	4.0	231	Acute Lymphocytic Leukemia	3.4	192	Leukemia	2.9	166
Brain and ONS ^d	3.3	189	Brain and ONS ^d	3.2	185	Acute Lymphocytic Leukemia	2.4	136
Kidney and Renal Pelvis	0.9	54	Non-Hodgkin Lymphoma	0.9	53	Non-Hodgkin Lymphoma	1.0	54
Non-Hodgkin Lymphoma	0.8	49	Soft Tissue	0.6	35	Bones and Joints	0.8	43
Soft Tissue	0.6	35	Bones and Joints	0.5	31	Hodgkin Lymphoma	0.7	39
Age 9			Age 10			Age 11		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	10.8	606	All Sites	11.2	635	All Sites	12.9	743
Leukemia	3.4	190	Leukemia	3.1	178	Leukemia	3.7	211
Acute Lymphocytic Leukemia	2.6	147	Acute Lymphocytic Leukemia	2.3	128	Acute Lymphocytic Leukemia	2.6	148
Brain and ONS ^d	2.7	154	Brain and ONS ^d	2.4	139	Brain and ONS ^d	2.6	148
Bones and Joints	0.9	52	Bones and Joints	1.0	57	Bones and Joints	1.5	85
Non-Hodgkin Lymphoma	0.8	46	Non-Hodgkin Lymphoma	1.0	54	Non-Hodgkin Lymphoma	1.1	65
Soft Tissue	0.7	39	Soft Tissue	0.8	45	Hodgkin Lymphoma	0.9	52

^a Rates are per 100,000 per year.

^b Top 5 cancer sites were determined based on the 2005-2009 age-specific rate.

^c SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

^e The rates for sex-specific cancer sites are calculated using the population for both sexes combined.

- 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 2005-2009

Age 12			Age 13			Age 14		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	13.1	763	All Sites	14.6	864	All Sites	17.1	1,028
Leukemia	2.9	169	Leukemia	3.2	187	Leukemia	3.9	235
Acute Lymphocytic Leukemia	2.0	118	Acute Lymphocytic Leukemia	2.1	124	Acute Lymphocytic Leukemia	2.5	151
Brain and ONS ^d	2.8	162	Brain and ONS ^d	2.7	160	Brain and ONS ^d	2.7	163
Bones and Joints	1.6	91	Hodgkin Lymphoma	1.9	110	Hodgkin Lymphoma	2.0	119
Non-Hodgkin Lymphoma	1.3	75	Bones and Joints	1.5	86	Non-Hodgkin Lymphoma	1.8	111
Hodgkin Lymphoma	1.1	63	Non-Hodgkin Lymphoma	1.2	69	Bones and Joints	1.6	94
Age 15			Age 16			Age 17		
	Rate	Cases		Rate	Cases		Rate	Cases
All Sites	18.9	1,150	All Sites	20.0	1,225	All Sites	22.2	1,360
Leukemia	3.3	199	Leukemia	3.3	205	Hodgkin Lymphoma	3.1	191
Acute Lymphocytic Leukemia	2.1	128	Acute Lymphocytic Leukemia	2.0	125	Leukemia	2.9	177
Hodgkin Lymphoma	2.5	151	Hodgkin Lymphoma	2.7	168	Acute Lymphocytic Leukemia	1.6	100
Brain and ONS ^d	2.2	135	Brain and ONS ^d	2.5	156	Brain and ONS ^d	2.3	138
Bones and Joints	2.1	126	Thyroid	1.9	114	Testis ^e	2.2	135
Non-Hodgkin Lymphoma	2.0	119	Non-Hodgkin Lymphoma	1.7	102	Thyroid	2.2	135
Age 18			Age 19					
	Rate	Cases		Rate	Cases			
All Sites	22.9	1,366	All Sites	24.9	1,436			
Hodgkin Lymphoma	3.4	205	Hodgkin Lymphoma	4.2	242			
Leukemia	3.2	189	Testis ^e	3.3	191			
Acute Lymphocytic Leukemia	1.6	96	Leukemia	2.7	157			
Thyroid	2.7	159	Acute Lymphocytic Leukemia	1.4	80			
Testis ^e	2.4	142	Thyroid	2.6	151			
Non-Hodgkin Lymphoma	1.8	107	Melanoma of the Skin	2.0	114			

^a Rates are per 100,000 per year.

^b Top 5 cancer sites were determined based on the 2005-2009 age-specific rate.

^c SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

^e The rates for sex-specific cancer sites are calculated using the population for both sexes combined.

- 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 2005-2009

Age <1			Age 1			Age 2		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	1.7	367	All Sites	1.8	388	All Sites	2.3	479
Leukemia	0.6	128	Leukemia	0.7	154	Leukemia	0.8	164
Acute Lymphocytic Leukemia	0.2	43	Acute Lymphocytic Leukemia	0.2	42	Acute Lymphocytic Leukemia	0.3	60
Brain and ONS ^d	0.3	72	Brain and ONS ^d	0.4	88	Brain and ONS ^d	0.5	109
Other Endocrine	0.2	33	Other Endocrine	0.2	51	Other Endocrine	0.4	90
Liver & IBD ^d	0.1	26	Liver & IBD ^d	0.1	20	Liver & IBD ^d	0.2	33
Soft Tissue	0.1	18	Soft Tissue	-	-	Soft Tissue	0.1	28
Age 3			Age 4			Age 5		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.4	502	All Sites	2.4	493	All Sites	2.3	478
Leukemia	0.8	164	Brain and ONS ^d	0.8	162	Brain and ONS ^d	0.9	190
Acute Lymphocytic Leukemia	0.3	52	Leukemia	0.5	109	Leukemia	0.5	95
Brain and ONS ^d	0.7	138	Acute Lymphocytic Leukemia	0.2	45	Acute Lymphocytic Leukemia	0.2	51
Other Endocrine	0.5	96	Other Endocrine	0.5	93	Other Endocrine	0.4	77
Soft Tissue	0.2	35	Soft Tissue	0.1	27	Kidney and Renal Pelvis	0.1	30
Liver & IBD ^d	0.1	19	Kidney and Renal Pelvis	0.1	24	Soft Tissue	0.1	27
Age 6			Age 7			Age 8		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.3	471	All Sites	2.5	503	All Sites	2.3	458
Brain and ONS ^d	0.9	173	Brain and ONS ^d	1.0	206	Brain and ONS ^d	0.8	166
Leukemia	0.5	107	Leukemia	0.6	120	Leukemia	0.6	128
Acute Lymphocytic Leukemia	0.3	55	Acute Lymphocytic Leukemia	0.4	71	Acute Lymphocytic Leukemia	0.4	71
Other Endocrine	0.4	77	Other Endocrine	0.3	69	Other Endocrine	0.3	50
Soft Tissue	0.2	31	Soft Tissue	0.2	33	Soft Tissue	0.1	27
Kidney and Renal Pelvis	0.2	31	Bones and Joints	0.1	16	Non-Hodgkin Lymphoma	0.1	19
Age 9			Age 10			Age 11		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.3	448	All Sites	2.0	406	All Sites	2.2	446
Brain and ONS ^d	0.8	168	Leukemia	0.8	149	Brain and ONS ^d	0.7	142
Leukemia	0.7	135	Acute Lymphocytic Leukemia	0.4	75	Leukemia	0.7	139
Acute Lymphocytic Leukemia	0.4	72	Brain and ONS ^d	0.6	128	Acute Lymphocytic Leukemia	0.4	76
Other Endocrine	0.2	34	Other Endocrine	0.2	33	Bones and Joints	0.2	41
Bones and Joints	0.1	29	Bones and Joints	0.2	30	Other Endocrine	0.2	33
Soft Tissue	0.1	27	Soft Tissue	0.1	22	Non-Hodgkin Lymphoma	0.1	23

^a Rates are per 100,000 per year. Deaths are for the entire United States over the time period 2005-2009.

^b Top 5 cancer sites were determined based on the 2005-2009 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.

^e The rates for sex-specific cancer sites are calculated using the population for both sexes combined.

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

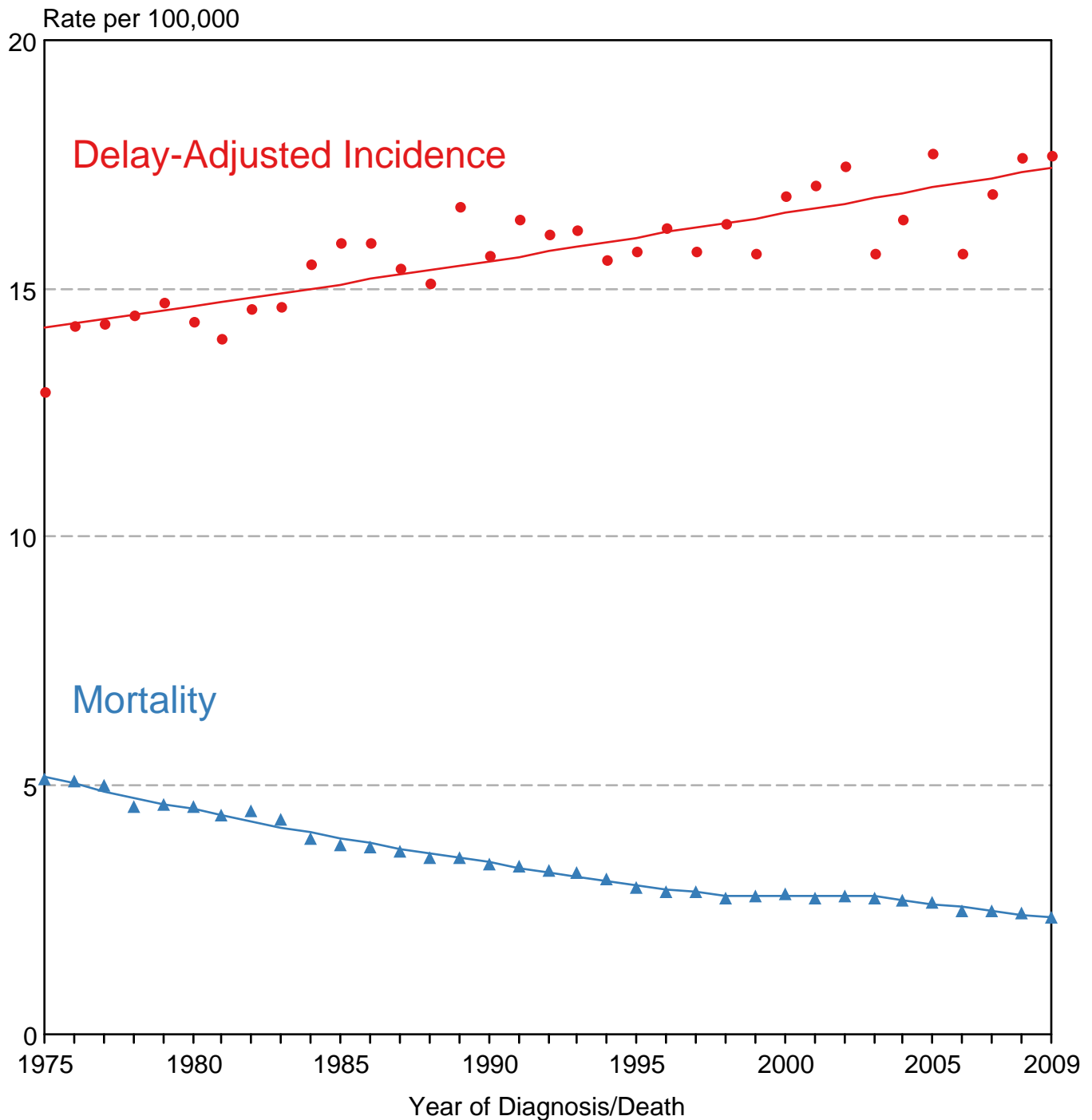
Table 28.14 - continued
Age-Specific Rates^a and Deaths for the Top 5 Cancer Sites^b by Single Year of Age at DeathU.S. Mortality^c 2005-2009

Age 12			Age 13			Age 14		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.1	429	All Sites	2.5	509	All Sites	2.4	504
Leukemia	0.7	142	Leukemia	0.8	162	Leukemia	0.8	164
Acute Lymphocytic Leukemia	0.3	65	Acute Lymphocytic Leukemia	0.4	77	Acute Lymphocytic Leukemia	0.3	69
Brain and ONS ^d	0.6	120	Brain and ONS ^d	0.6	130	Brain and ONS ^d	0.5	113
Bones and Joints	0.2	47	Bones and Joints	0.3	59	Bones and Joints	0.4	75
Soft Tissue	0.2	37	Soft Tissue	0.2	35	Soft Tissue	0.2	48
Non-Hodgkin Lymphoma	0.1	17	Non-Hodgkin Lymphoma	0.2	34	Non-Hodgkin Lymphoma	0.1	20
Age 15			Age 16			Age 17		
	Rate	Deaths		Rate	Deaths		Rate	Deaths
All Sites	2.8	590	All Sites	3.0	648	All Sites	3.0	639
Leukemia	1.0	205	Leukemia	0.9	191	Leukemia	0.9	184
Acute Lymphocytic Leukemia	0.4	78	Acute Lymphocytic Leukemia	0.3	68	Acute Lymphocytic Leukemia	0.4	79
Brain and ONS ^d	0.5	112	Bones and Joints	0.5	110	Bones and Joints	0.6	127
Bones and Joints	0.3	71	Brain and ONS ^d	0.5	109	Brain and ONS ^d	0.5	97
Soft Tissue	0.2	52	Soft Tissue	0.3	71	Soft Tissue	0.3	61
Non-Hodgkin Lymphoma	0.2	40	Non-Hodgkin Lymphoma	0.2	41	Non-Hodgkin Lymphoma	0.2	33
Age 18			Age 19					
	Rate	Deaths		Rate	Deaths			
All Sites	3.3	719	All Sites	3.8	812			
Leukemia	1.0	216	Leukemia	1.0	204			
Acute Lymphocytic Leukemia	0.4	87	Acute Lymphocytic Leukemia	0.4	84			
Bones and Joints	0.6	131	Bones and Joints	0.6	133			
Brain and ONS ^d	0.4	94	Brain and ONS ^d	0.6	127			
Soft Tissue	0.3	70	Soft Tissue	0.4	81			
Non-Hodgkin Lymphoma	0.2	46	Non-Hodgkin Lymphoma	0.3	70			

^a Rates are per 100,000 per year. Deaths are for the entire United States over the time period 2005-2009.^b Top 5 cancer sites were determined based on the 2005-2009 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.^e The rates for sex-specific cancer sites are calculated using the population for both sexes combined.

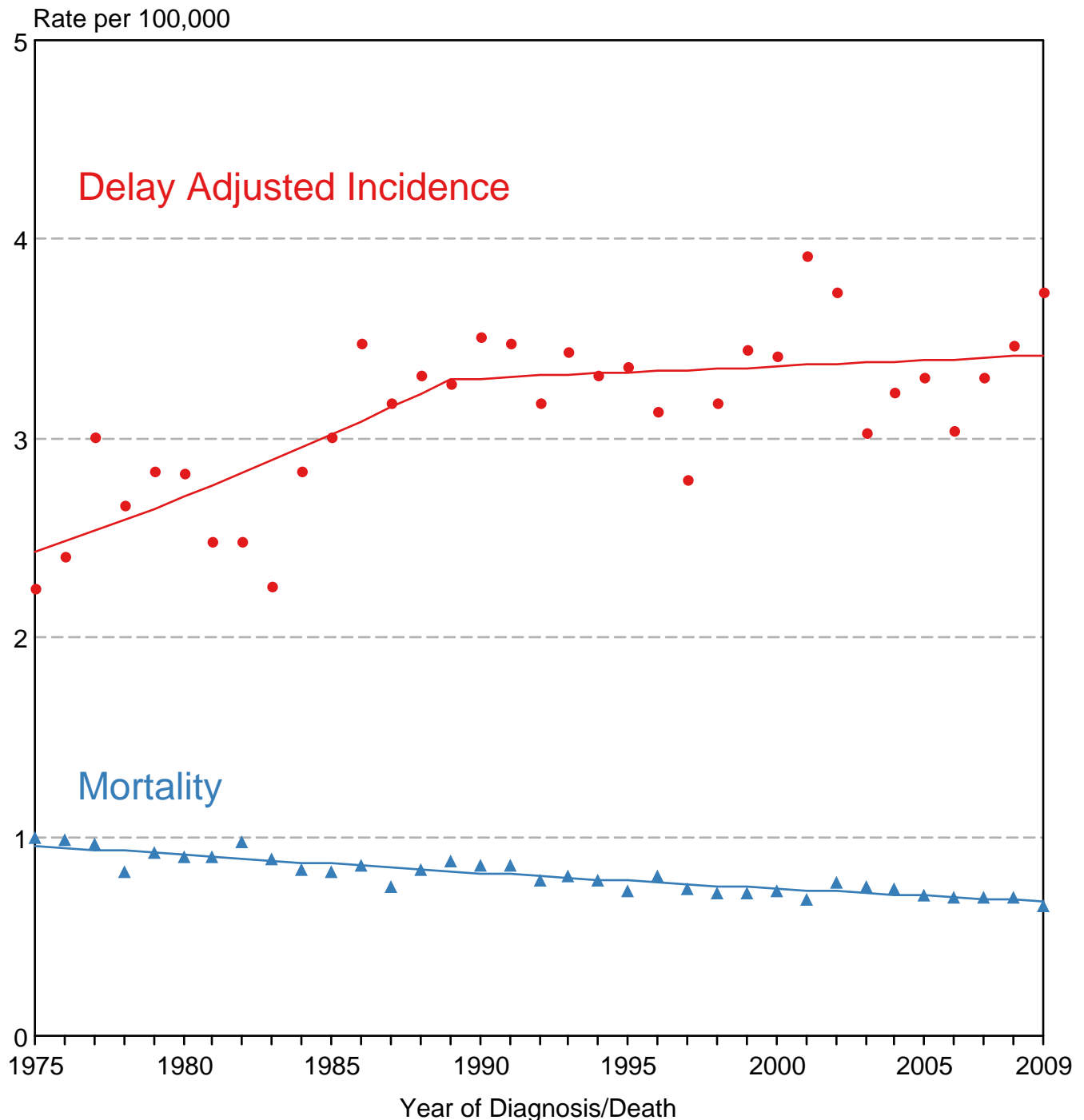
- Statistic not shown. Rate based on less than 16 cases for the time interval.

SEER Delay-Adjusted Incidence and US Mortality All Childhood Cancers, Under 20 Years of Age Both Sexes, All Races, 1975-2009



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, 1975-2009



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 1975-2009 and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2009

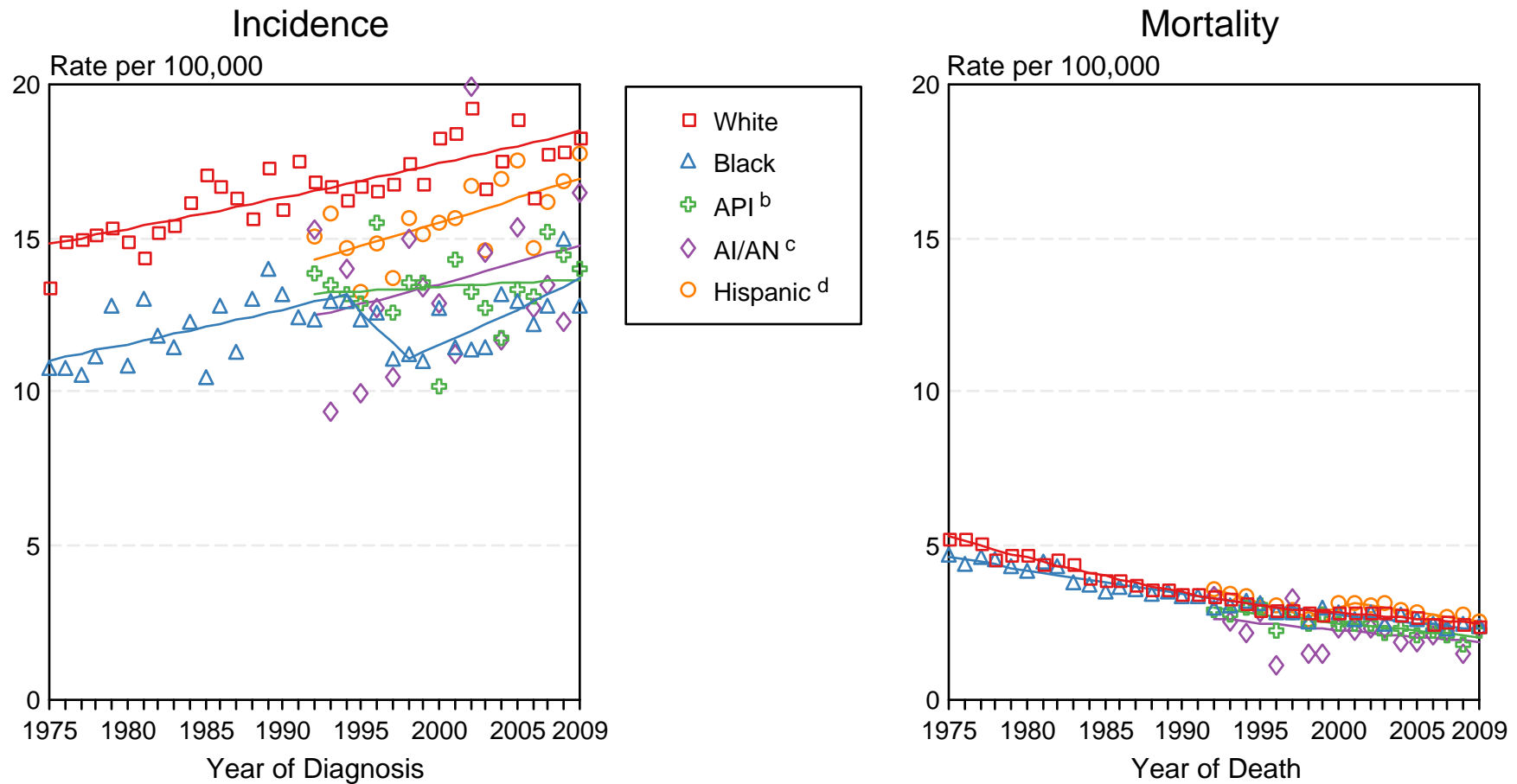


Figure 28.3

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 1975-2009 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 1992-2009 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, South Carolina, Oklahoma, and Vermont.