

## Chapter 11

**Leukemias**



# Leukemias

## Incidence and Mortality by Sex and Year

West Virginia Residents 1993 – 2001

Year	Male				Female				Total			
	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate
1993	129	14.9	89	10.8	91	7.9	68	6.0	220	11.1	157	8.0
1994	129	15.5	83	10.3	113	9.7	80	6.9	242	12.1	163	8.2
1995	130	15.6	104	12.7	116	9.8	88	7.2	246	12.2	192	9.5
1996	143	16.5	86	10.4	102	9.2	73	6.3	245	12.3	159	7.8
1997	153	17.9	101	11.8	96	8.4	73	6.1	249	12.3	174	8.5
1998	131	14.8	86	9.8	124	11.0	80	6.6	255	12.6	166	8.1
1999	150	17.4	96	11.1	125	10.7	78	6.4	275	13.5	174	8.4
2000	138	15.8	101	11.9	120	10.3	86	7.0	258	12.6	187	9.0
2001	139	15.6	90	10.4	101	8.7	75	6.1	240	11.6	165	7.9

Rates are per 100,000 West Virginia residents and are age-adjusted to the 2000 U.S. standard population.

**Table 11.1**

### Overview

- While leukemias occurred in all age groups in 1997-2001, incidence tended to increase with age. The highest average annual age-specific incidence (55.2 per 100,000) occurred among West Virginians 65 years of age and older (Figure 11.3).
- There are several types of leukemia. Different types predominate at different ages.
- Leukemia is one of the few cancers that occur in children. In 1997-2001, this disease was the most commonly diagnosed cancer in both males and females under age 15 (Table 1.2).
- State-specific data (1996-2000) rank West Virginia women highest in the nation and men fifth highest in age-adjusted mortality from leukemia (Appendix B). The reasons for this ranking are unclear.

### Risk Factors

- Causes of most cases are unknown.
- Persons with certain genetic abnormalities, such as Down's syndrome, are at increased risk of acute leukemias. Adults with a history of malignancies such as multiple myeloma, ovarian cancer, and Hodgkin's disease may be at increased risk for this disease as well.
- Cigarette smoking increases the risk for myeloid leukemia.
- Other risk factors include excessive exposure to ionizing radiation and certain chemicals such as benzene.
- Human T-cell leukemia/lymphoma virus I (HTLV-I) is associated with adult T-cell leukemia.

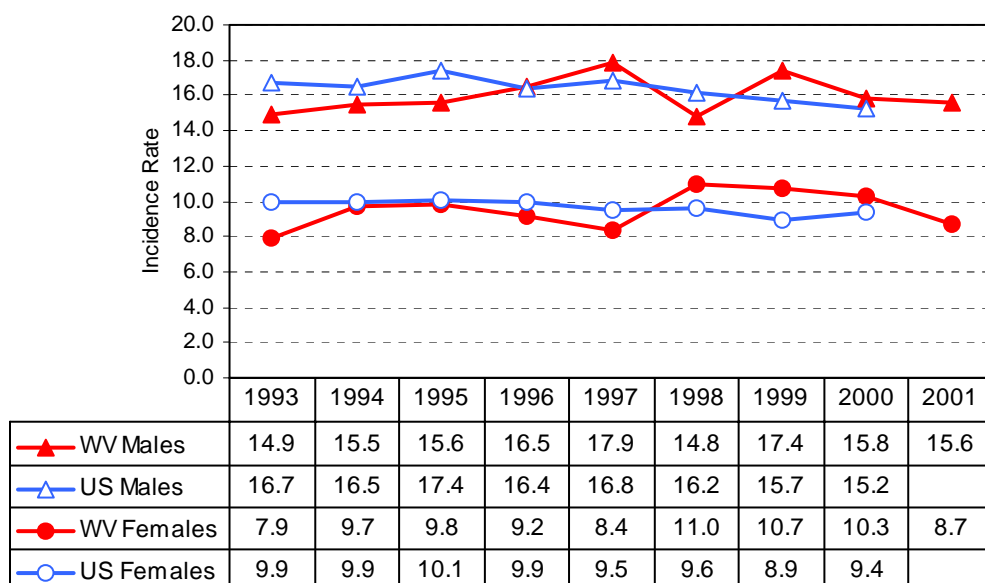
### Prevention

- Other than avoidance of the environmental and behavioral risks noted above, few effective methods of prevention or early detection are currently available.

## Leukemias

### Incidence Rates\*, Age-Adjusted

West Virginia Residents 1993 – 2001, U.S. Residents 1993 – 2000



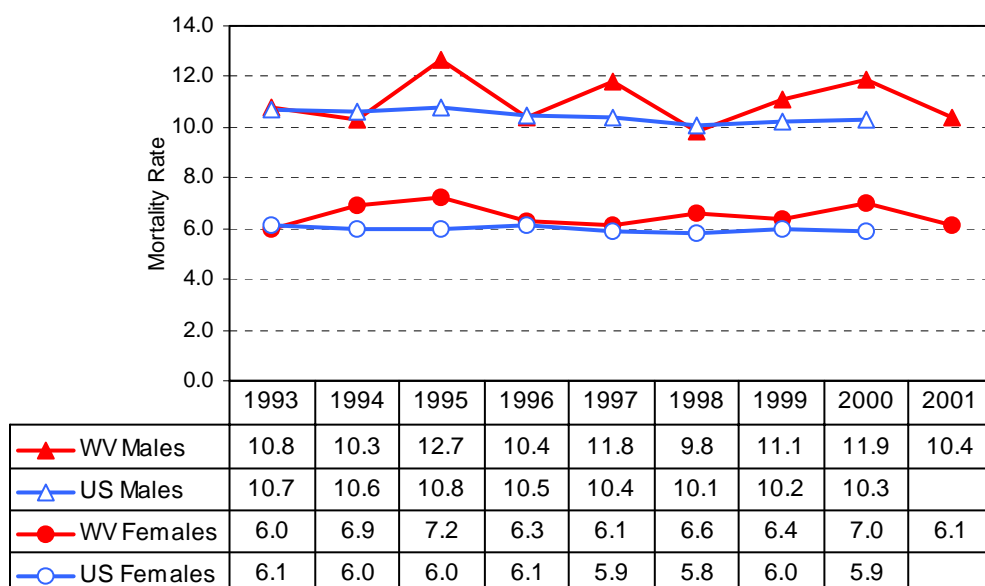
**Figure 11.1**

\*Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population.  
U.S. rates are from SEER (Ries et al., 2003).

## Leukemias

### Mortality Rates\*, Age-Adjusted

West Virginia Residents 1993 – 2001, U.S. Residents 1993 – 2000

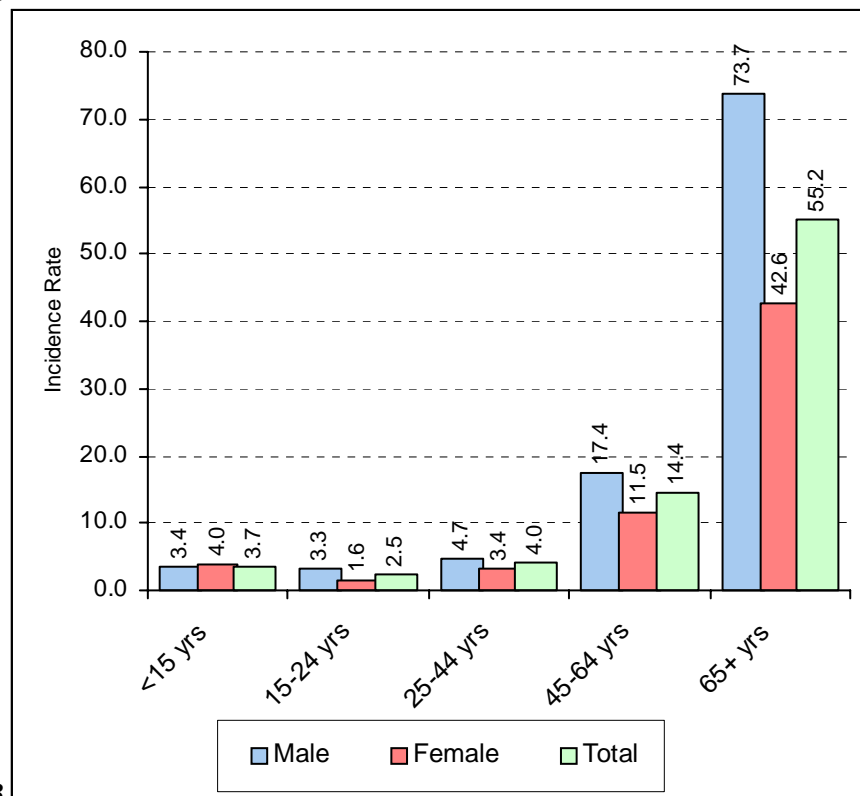


**Figure 11.2**

\*Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population.  
U.S. rates are from SEER (Ries et al., 2003).

## Leukemias

Incidence Rates\*, Age-Specific  
West Virginia Residents 1997 – 2001



**Figure 11.3**

\*Five-year average annual rate per 100,000 West Virginia residents