

## **Chapter 23**

# **Cancer of the Thyroid**



## Cancer of the Thyroid

### 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	20	2.2	~	0.5	33	3.2	~	0.6	53	2.7	10	0.5
1994	17	1.9	~	0.1	50	5.1	~	0.4	67	3.6	6	0.3
1995	21	2.3	9	1.0	66	6.6	6	0.5	87	4.5	15	0.7
1996	17	2.1	~	0.3	56	5.5	~	0.2	73	3.8	6	0.3
1997	22	2.4	~	0.3	96	9.8	~	0.3	118	6.3	7	0.3
1998	36	3.8	6	0.7	83	8.3	8	0.6	119	6.2	14	0.7
1999	31	3.4	5	0.6	109	11.2	8	0.6	140	7.4	13	0.6
2000	31	3.5	~	0.3	105	10.6	~	0.1	136	7.1	4	0.2
2001	40	4.2	6	0.7	109	10.9	8	0.7	149	7.7	14	0.7

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Number of new cases excludes in situ cases.

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

**Table 23.1**

### Overview

- Although cancer of the thyroid was a relatively rare disease in West Virginia in 1997-2001, it occurred more commonly among females (average annual incidence rate of 10.2 per 100,000 females versus 3.5 per 100,000 males). This was consistent with national data and suggests possible hormonal factors in development of this disease (Figures 1.3 and 1.4).
- Cancer of the thyroid occurred in all age groups in West Virginia in 1997-2001, and incidence generally increased with age up to age 65 (Figure 23.3).
- Three-quarters (75%) of all West Virginia cases diagnosed in 1997-2001 were identified as local disease (Figure 23.5).
- Deaths due to thyroid cancer were rare in West Virginia in 1997-2001 (Table 23.1). Average annual age-adjusted mortality rates for both men and women were 0.5 per 100,000. Only testicular cancer and Hodgkin's disease had lower mortality rates (Figures 1.3 and 1.4).

### Risk Factors

- Radiation exposure when young (most commonly for therapeutic purposes) is one identified risk factor for this disease.

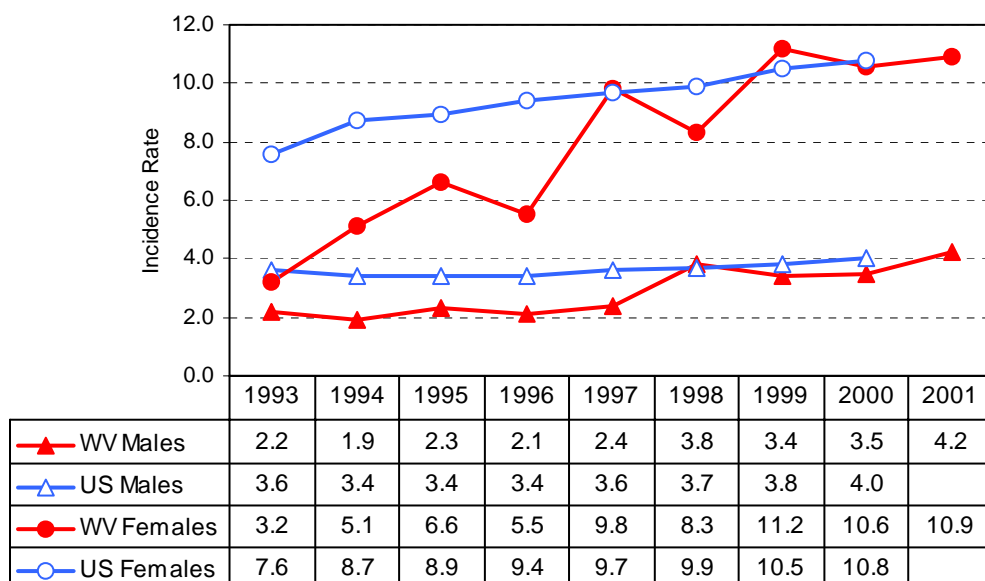
### Prevention

- Screening is most commonly directed at those with a history of radiation during childhood. The effectiveness of this practice is not known.

## Cancer of the Thyroid

### Incidence Rates\*, Age-Adjusted

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



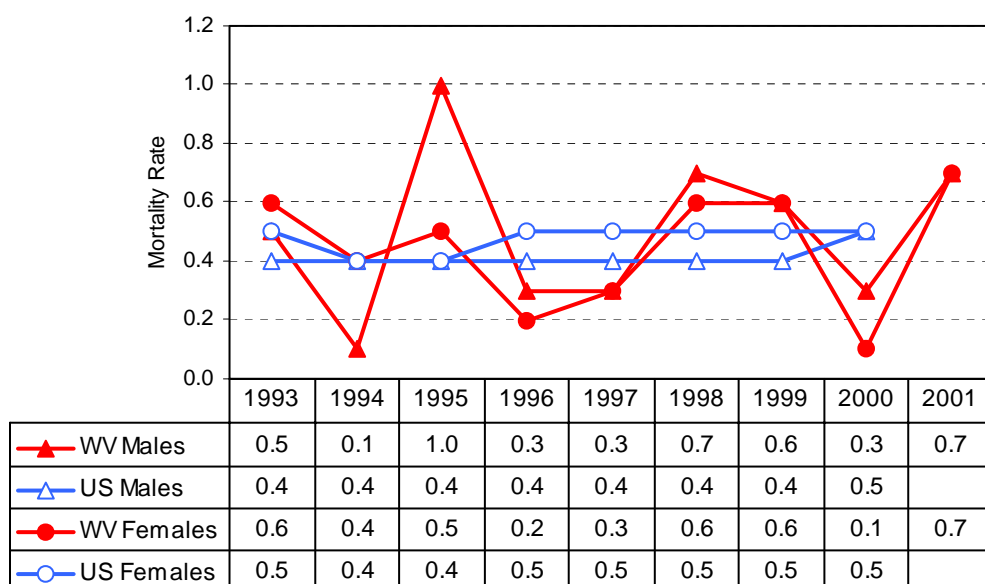
**Figure 23.1**

\*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).

## Cancer of the Thyroid

### Mortality Rates\*, Age-Adjusted

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

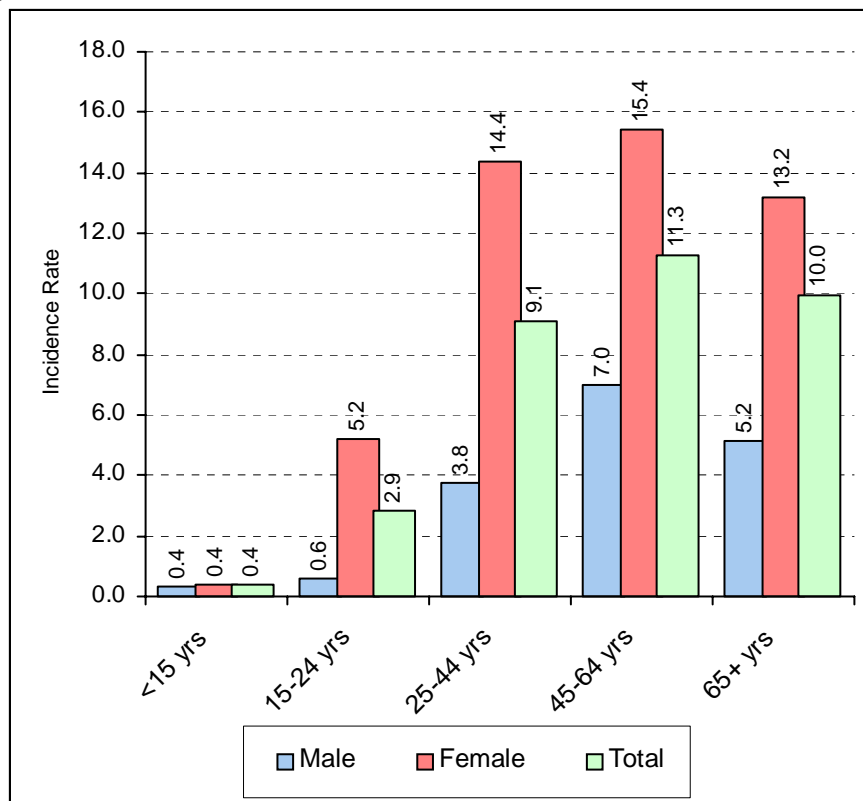


**Figure 23.2**

\*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).

## Cancer of the Thyroid

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



**Figure 23.3**

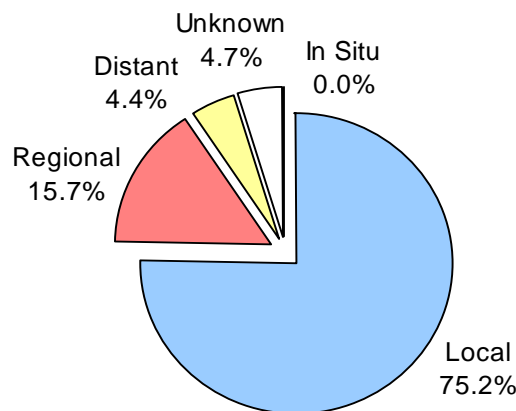
\*Five-year average annual rate per 100,000 West Virginia residents

### Cancer of the Thyroid Most Frequent Histologies West Virginia Residents 1997 – 2001

ICD-O Code	Histology	% of Invasive Cases
805	Papillary Carcinoma	44.1
834	Papillary Carcinoma, Follicular Variant	31.1
833	Follicular Adenocarcinoma	9.7
826	Adenocarcinoma (Papillary or in Villous Adenoma)	5.7
829	Oxyphilic Adenocarcinoma	3.9
800	Malignant Neoplasm	1.2
801	Carcinoma	1.2
802	Carcinoma, Undifferentiated	1.2

**Table 23.2**

### Cancer of the Thyroid Stage of Disease at Diagnosis West Virginia Residents 1997 – 2001

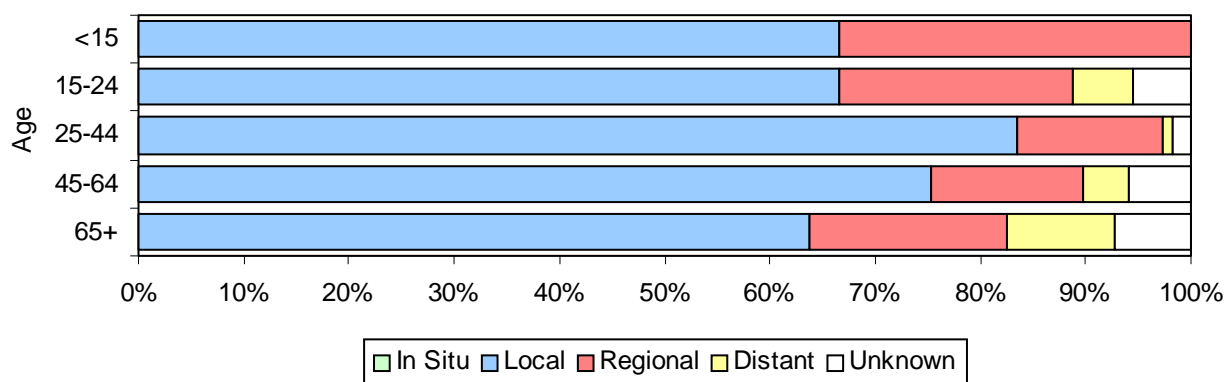


**Figure 23.4**

## Cancer of the Thyroid

### Stage of Disease at Diagnosis by Age

#### West Virginia Residents 1997 – 2001



Age	In Situ		Local		Regional		Distant		Unknown		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
<15	0	0.0%	4	66.7%	~	~	0	0.0%	0	0.0%	~	100.0%
15-24	0	0.0%	24	66.7%	8	22.2%	~	~	~	~	~	100.0%
25-44	0	0.0%	192	83.5%	~	~	~	~	~	~	230	100.0%
45-64	0	0.0%	190	75.4%	36	14.3%	11	4.4%	15	6.0%	252	100.0%
65+	0	0.0%	88	63.8%	26	18.8%	14	10.1%	10	7.2%	138	100.0%
Total	0	0.0%	498	75.2%	104	15.7%	29	4.4%	31	4.7%	662	100.0%

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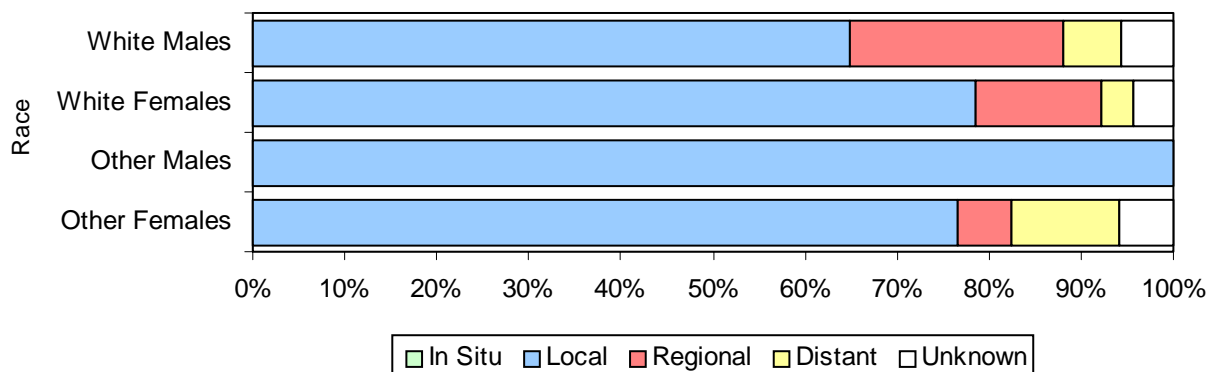
Total may not add to 100% due to rounding.

**Figure 23.5**

## Cancer of the Thyroid

### Stage of Disease at Diagnosis by Race and Sex

#### West Virginia Residents 1997 – 2001



Race/Sex	In Situ		Local		Regional		Distant		Unknown		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
White Males	0	0.0%	103	64.8%	37	23.3%	10	6.3%	9	5.7%	159	100.0%
White Females	0	0.0%	381	78.6%	66	13.6%	17	3.5%	21	4.3%	485	100.0%
Other Males	0	0.0%	~	~	~	~	~	~	~	~	~	100.0%
Other Females	0	0.0%	~	~	~	~	~	~	~	~	~	100.0%
Total	0	0.0%	498	75.2%	104	15.7%	29	4.4%	31	4.7%	662	100.0%

~ Suppressed due to small cell size

Total may not add to 100% due to rounding.

**Figure 23.6**