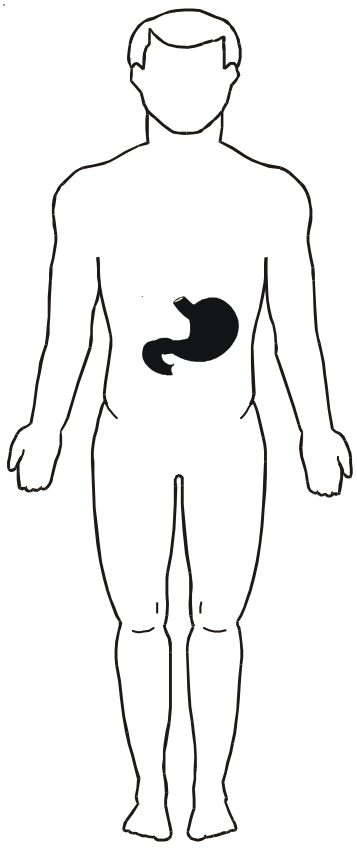
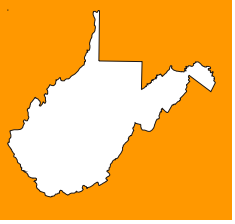
Cancer of the Stomach





Chapter 21

Cancer of the Stomach

Incidence and Mortality by Sex and Year

West Virginia Residents 1993 – 2001

	Male				Female				Total			
Year	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate
1993	86	10.6	63	7.7	47	3.7	36	3.0	133	6.5	99	4.9
1994	84	10.2	56	7.1	43	3.5	24	2.0	127	6.1	80	3.9
1995	93	11.3	59	7.5	60	5.0	35	2.8	153	7.4	94	4.5
1996	95	11.1	57	6.7	60	5.0	39	3.2	155	7.5	96	4.7
1997	81	9.6	60	7.5	60	4.9	39	3.1	141	6.7	99	4.8
1998	74	8.5	46	5.4	45	3.6	43	3.5	119	5.6	89	4.3
1999	66	7.8	49	5.7	43	3.5	30	2.4	109	5.1	79	3.7
2000	79	8.5	50	5.6	40	3.1	32	2.5	119	5.6	82	3.9
2001	78	8.7	42	5.0	52	4.3	28	2.3	130	6.2	70	3.3

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 21.1

Overview

- In 1997-2001 in West Virginia, incidence of cancer of the stomach increased markedly with age (Figure 21.3). Ninety-six percent (96%) of newly diagnosed cases occurred in individuals over the age of 45 and 70% in those over the age of 65 (Figure 21.5).
- Average annual age-adjusted incidence (1997-2001) among West Virginia men (8.6 per 100,000) was over twice the incidence among West Virginia women (3.9 per 100,000) (Figures 1.3 and 1.4).
- In 1997-2001, about one in five stomach cancers were identified as in situ or local disease; almost two-thirds were identified as regional or distant (Figure 21.5).
- As with incidence for this disease, mortality rates were higher among men. The 1997-2001 West Virginia average annual age-adjusted mortality rates for cancer of the stomach were 5.8 per 100,000 men and 2.8 per 100,000 women (Figures 1.3 and 1.4).
- Combined 1996-2000 mortality data suggest that West Virginia mortality rates for cancer of the stomach are somewhat lower than the national average (Appendix B).

Risk Factors

- Diets with large amounts of smoked foods, salted fish and meat, and pickled vegetables appear to increase risk of stomach cancer. On the other hand, eating whole grain products and fresh fruits and vegetables that contain vitamins A and C appears to lower the risk of stomach cancer.
- Smoking increases the risk of stomach cancer, especially cancers of the upper part of the stomach nearest to the esophagus.
- *Helicobacter pylori* infection is associated with increased risk of lymphoma of the stomach (see chapter on non-Hodgkin's lymphoma). Persons with adenocarcinoma of the stomach have a higher rate of *H. pylori* infection than do persons without cancer of the stomach.

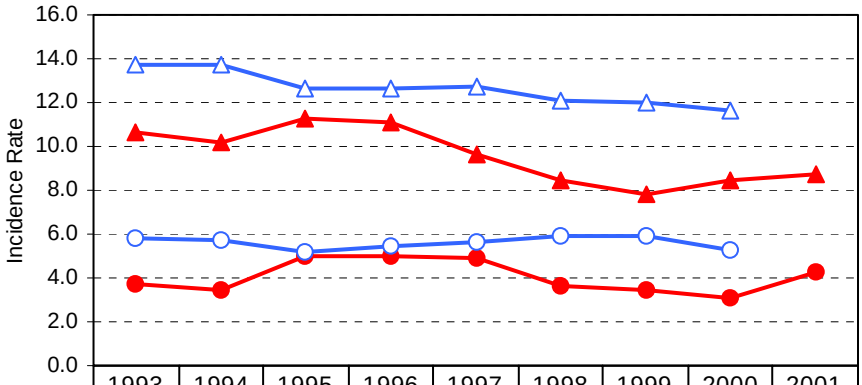
Prevention

- A diet high in fresh fruits and vegetables can lower stomach cancer risk.
- It is not yet known if people without symptoms whose stomach linings are chronically infected with the bacteria *H. pylori* should be treated.

Cancer of the Stomach

Incidence Rates*, Age-Adjusted

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



	1993	1994	1995	1996	1997	1998	1999	2000	2001
WV Males	10.6	10.2	11.3	11.1	9.6	8.5	7.8	8.5	8.7
US Males	13.7	13.7	12.6	12.6	12.7	12.1	12.0	11.6	
WV Females	3.7	3.5	5.0	5.0	4.9	3.6	3.5	3.1	4.3
US Females	5.8	5.7	5.2	5.5	5.6	5.9	5.9	5.3	

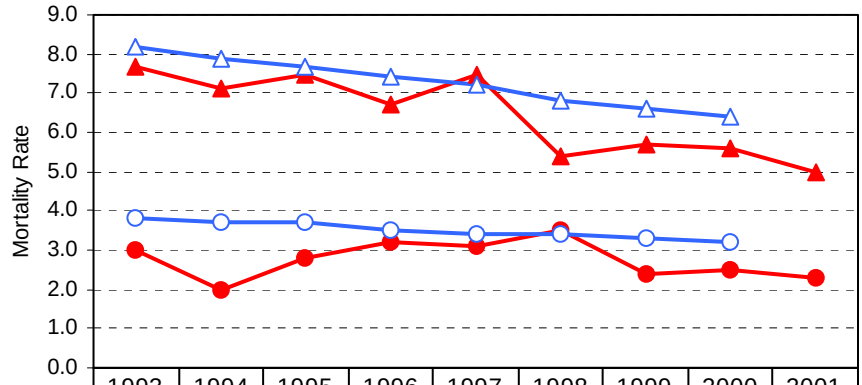
Figure 21.1

*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 Stomach

Mortality Rates*, Age-Adjusted

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



	1993	1994	1995	1996	1997	1998	1999	2000	2001
WV Males	7.7	7.1	7.5	6.7	7.5	5.4	5.7	5.6	5.0
US Males	8.2	7.9	7.7	7.4	7.2	6.8	6.6	6.4	
WV Females	3.0	2.0	2.8	3.2	3.1	3.5	2.4	2.5	2.3
US Females	3.8	3.7	3.7	3.5	3.4	3.4	3.3	3.2	

Figure 21.2

*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 Stomach

Incidence Rates*, Age-Specific

West Virginia Residents 1997 - 2001

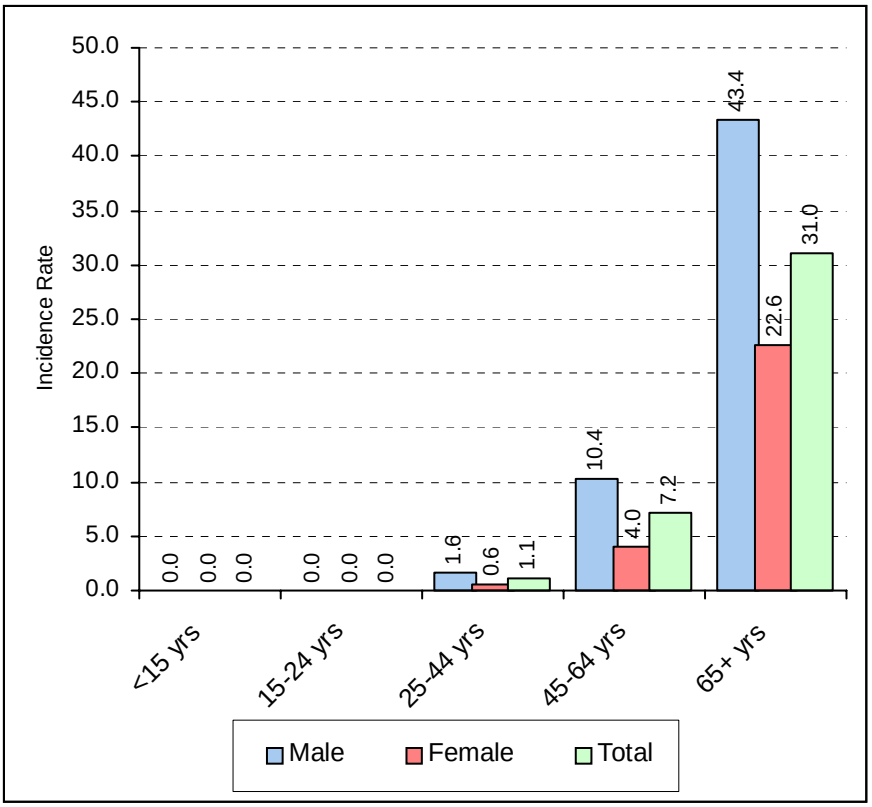


Figure 21.3

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

Cancer of the Stomach

Most Frequent Histologies

West Virginia Residents 1997 - 2001

ICD-O Code	Histology	% of Invasive Cases
8140	Adenocarcinoma	61.3
8490	Signet Ring Cell Carcinoma	13.1
8010	Carcinoma	4.4
8000	Malignant Neoplasm	3.9
8480	Mucinous Adenocarcinoma	2.9
8144	Adenocarcinoma, Intestinal Type	2.4
8240	Carcinoid Tumor	2.3
8481	Mucin-producing Adenocarcinoma	1.3
8936	Gastrointestinal Stromal Sarcoma	1.1
8070	Squamous Cell Carcinoma, NOS	1.0

Table 21.2

Cancer of the Stomach

Stage of Disease at Diagnosis

West Virginia Residents 1997 - 2001

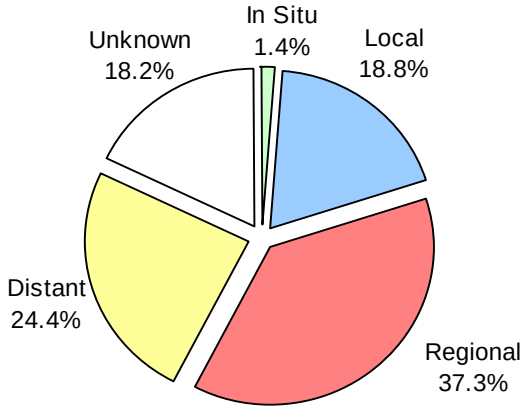
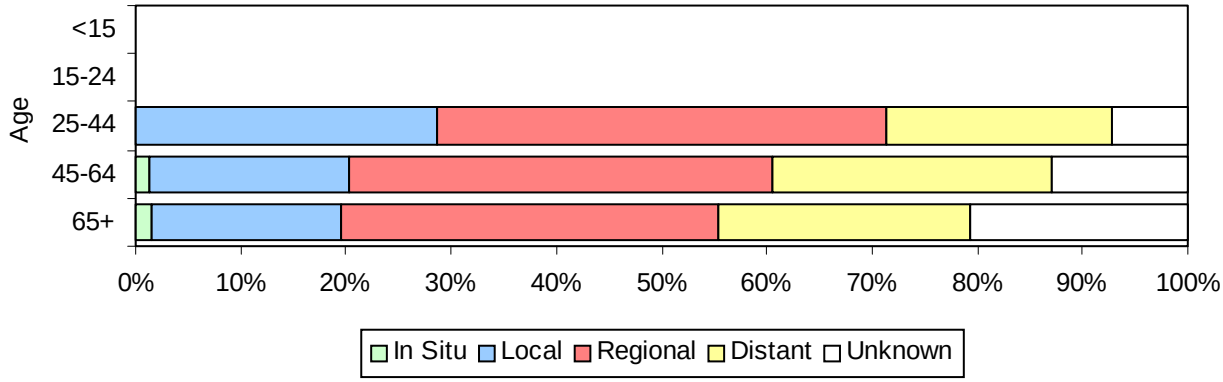


Figure 21.4

Cancer of the Stomach

Stage of Disease at Diagnosis by Age

West Virginia Residents 1997 - 2001



Age	In Situ #	In Situ %	Local #	Local %	Regional #	Regional %	Distant #	Distant %	Unknown #	Unknown %	Total #	Total %
<15	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
15-24	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
25-44	0	0.0%	8	28.6%	12	42.9%	~		~		28	100.0%
45-64	~		31	19.1%	65	40.1%	~		21	13.0%	162	100.0%
65+	~		79	18.0%	157	35.8%	104	23.7%	~		438	100.0%
Total	9	1.4%	118	18.8%	234	37.3%	153	24.4%	114	18.2%	628	100.0%

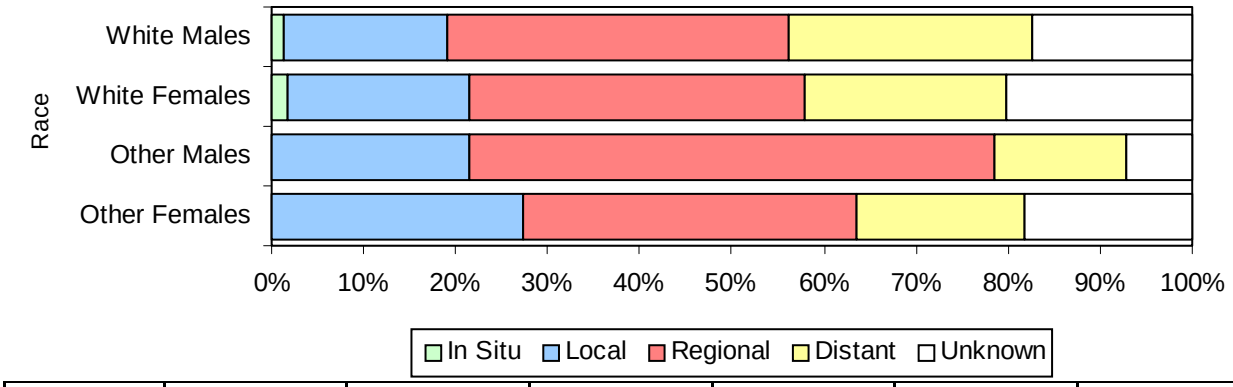
~ Suppressed due to small cell size
Total may not add to 100% due to rounding.

Figure 21.5

Cancer of the Stomach

Stage of Disease at Diagnosis by Race and Sex

West Virginia Residents 1997 - 2001



Race/Sex	In Situ #	In Situ %	Local #	Local %	Regional #	Regional %	Distant #	Distant %	Unknown #	Unknown %	Total #	Total %
White Males	5	1.4%	66	17.8%	137	37.0%	98	26.5%	64	17.3%	370	100.0%
White Females	4	1.7%	46	19.7%	85	36.5%	51	21.9%	47	20.2%	233	100.0%
Other Males	0	0.0%	~		8	57.1%	~		~		14	100.0%
Other Females	0	0.0%	~		4	36.4%	~		~		11	100.0%
Total	9	1.4%	118	18.8%	234	37.3%	153	24.4%	114	18.2%	628	100.0%

~ Suppressed due to small cell size
Total may not add to 100% due to rounding.

Figure 21.6