

Cancer

One of every 4 deaths in the United States and New York State is due to cancer. One in three people will be diagnosed with cancer at some point in their lifetime. Cancer occurs at any age, but most often in middle-aged and older people. The number of people diagnosed with cancer has increased over the past 40 years. Most of this is due to the increase in the population and because people are living longer.

Cancer is a group of more than 100 different diseases caused by abnormal growth of cells in the body. Therefore the cause, detection, treatment and cure vary among the many different cancers. The environment, lifestyle behaviors and genetics can contribute to an increased risk for cancer. Cigarette smoking is the leading preventable cause of cancer. And for those who do not use tobacco products, dietary choices and physical activity are the most important modifiable determinants of cancer risk demonstrated to date. Many cancer deaths can be prevented and the number of new cases can be reduced with early screening and treatment. It is commonly known that there is scientific agreement that cancer can be caused by long term contact with carcinogens. These include second-hand smoke, sunlight, x-rays, and certain chemicals that can be found in the air, water, food and workplace.

While Tompkins County is not generally considered a cancer hotspot, there are certain cancers for which the population may be considered to be at higher than average risk. This section will review available cancer data by cancer type, including lung, breast, cervical colorectal, and prostate cancers.

Four cancer sites: breast, prostate, lung and colorectal represent 57.2 percent of all cancer cases and 54.6 percent of all cancer deaths in Tompkins County, according to the American Cancer Society.

Data Analysis

Lung Cancer Mortality

• Avg. age-adj. rate per 100,000 pop, 2000–2002	
Tompkins	52.3
Cayuga	53.4
Cortland	53.7
Tioga.....	55.0
CNY	59.8
NYS	49.5
HP2010	44.9

Cancer Mapping

While the current lung cancer mortality rate in Tompkins County is in line with neighboring counties, it is slightly higher than the state as a whole, and more than 16 percent higher than the target rate established for Healthy People 2010 (HP2010.) The 10-year trend for Tompkins swings widely by single year, and even shows variability when viewed as 3-year averages (*see Figure 36, page 64.*)

Note that the values shown in Figure 36 are different than those displayed in the left column and in Figure 35. This is because the trend lines are based on crude rates, and the county-to-county comparisons are age adjusted to the 2000 U.S. Census. Age adjusted rates for Tompkins County are typically higher than the crude rates due to Tompkins' young, student-rich population (*see Figure 34, page 63.*)

The New York State Department of Health (NYSDOH) maps cancer incidence by ZIP code. The maps provide a comparison of actual to expected incidence of a specified cancer, both by ZIP code and for the state as a whole. Neither the maps, nor this document attempt to pro-

vide any explanation or speculation as to the reasons for the variations in cancer incidence displayed by the maps.

The NYSDOH web site defines “expected incidence” this way:

Expected incidence is the number of people in a given ZIP Code that would be expected to develop cancer within a five-year period if the ZIP Code had the same rate of cancer as the State as a whole. The cancer rate for the entire state and the number of people in a ZIP Code are used to estimate the expected incidence. Age and population size are also taken into account because you would expect to see more people develop cancer in a ZIP Code with a larger population or a higher percentage of older residents. This process is called age adjustment. For the prostate cancer maps, race is also taken into account in determining expected incidence.³

Lung Cancer Incidence

• Avg. age-adj. rate per 100,000 pop, 1997–2001.

Tompkins	61.3
Cayuga	74.2
Cortland.....	72.7
Tioga	70.7
CNY	81.4
NYS	67.2

Early Stage Diagnosis of Lung Cancer

• Pct cases, 1995–1999.

Tompkins	36.4
Cayuga	48.2
Cortland.....	44.6
CNY	34.4

Breast Cancer Mortality

• Avg. age-adj. rate per 100,000 female pop., 1998–2002

Tompkins	24.0
Cayuga	16.4
Cortland.....	22.8
Tioga	18.9
CNY	25.9
NYS	27.7
HP2010	22.3

A map of lung cancer incidence in males for Tompkins County ZIP codes is shown on page 65 (*Map 1*.) Map 2 (*page 66*) shows incidence for Tompkins females. The difficulty in interpreting these maps is demonstrated by the latter: Freeville (ZIP 13068) is shown to have lung cancer incidence more than 50% below expected, whereas bordering to the north, Groton (13073) shows incidence 50%–100% above expected.

Comparative values for lung cancer incidence in neighboring counties is shown in *Figure 37, page 65*.

When cancers are diagnosed at an early stage the chances for survival are greatly increased. The NYSDOH tracks early stage diagnosis of some cancers, and this data for lung cancer is shown in *Figure 38, page 66*.

Awareness of breast cancer as an important women’s health issue has risen dramatically over recent years. Breast cancer rates for mortality and incidence are gender specific and expressed per 100,000 of the gender-specific population. Rates for female populations are more commonly tracked than those for male populations

In Tompkins County, breast cancer mortality rates are very close — and likely statistically equal — to the HP2010 target rate of 22.3 deaths per 100,000 female population. Rates for Cortland County and for the 11 county Central New York region⁴ are also similar, while those for Cayuga County and Tioga County are somewhat lower. (*See*

³ <http://www.health.state.ny.us/nysdoh/cancer/csii/nyscsii.htm>. Accessed 3/25/05.

⁴ NYSDOH statistical regions close to Tompkins County are as follows (counties bordering Tompkins are in bold):
Region 3 (Central New York): **Cayuga, Cortland**, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St. Lawrence, **Tompkins**

Region 4 (New York-Penn): Broome, Chenango, **Tioga**

Region 2 (Finger Lakes): **Chemung**, Livingston, Monroe, Ontario, **Schuyler, Seneca**, Steuben, Wayne, Yates

Figure 39, page 67.)

The 10-year trend for breast cancer mortality in Tompkins County swings widely between 1993 and 2002. Even reviewing the 3-year averages to moderate the peaks and valleys does not show a steady trend. By contrast, the trend for Upstate suggests a steadily declining mortality rate across a wider portion of the state. *(See Figure 40, page 67.)* The decline in the mortality rate may be attributed to more effective treatment options that have become available in recent years.

Breast Cancer Incidence

• Avg. age-adj. rate per 100,000 female pop., 1997–2001

Tompkins	133.7
Cortland	124.6
Tioga.....	117.4
CNY	137.6
NYS	131.4

Incidence of breast cancer in Tompkins County tends to be at or slightly below that which would be expected based on the frequency of cases statewide. Regionally, the incidence rate for Tompkins County is below the total for Central New York, though higher than for neighboring counties, Cortland and Tioga. *(See Map 3, page 68, and Figure 41, page 68.)*

Similarly, while breast cancer in Tompkins County women is diagnosed early at a higher rate than for all CNY counties combined, the rate is not as favorable as that for either Cayuga or Cortland County. *(See Figure 42, page 69.)*

Cervical Cancer Mortality

• Avg. age-adj. rate per 100,000 female population, 1998–2002.

Tompkins	1.5
Cayuga	1.3
Cortland	5.7
Tioga.....	0.0
CNY	2.3
NYS	2.8
HP2010	2.0

The picture for cervical cancer in Tompkins County is quite favorable. The age adjusted rates of both mortality and incidence are below those of neighboring counties, the CNY region and the state as a whole. In the case of mortality rates, Tompkins is 25 percent below the HP2010 target. *(See Figure 43, page 69, and Figure 45, page 70.)*

Cervical cancers are also diagnosed at an early stage significantly more frequently in Tompkins County than in bordering counties, the region or statewide. *(See Figure 46, page 71.)*

The 10-year trend for Tompkins County cervical cancer deaths goes almost year-by-year from zero to about 2 per 100,000 female population, and back to zero. As far as identifying a predictable trend, there is little more to be gained from studying the 3-year averages. *(See Figure 44, page 70.)*

Colorectal Cancer Mortality

• Avg. age-adj. rate per 100,000 population, 1998–2002.

Tompkins	23.4
CNY	22.8
HP2010	13.9

Colorectal cancer mortality in Tompkins County is declining. Three-year averages in crude mortality rates have dropped nearly 25 percent since the mid-nineties. *(See Figure 48, page 72.)* A comparison of age adjusted death rates within the region shows Tompkins at about the same level as other jurisdictions. Still, Tompkins County needs to cut colorectal cancer mortality by over 40 percent to reach the established HP2010 target. *(See Figure 47, page 71.)*

Incidence rates for colorectal cancer among Tompkins County residents are about what would be expected, based on statewide data. Actual age-adjusted rates indicate that cases of colorectal cancer are neither more nor less common in here than throughout the CNY region.

(See Figure 49, page 72; Map 4, page 73; and Map 5, page 73.)

Prostate Cancer Incidence

• Avg. rate per 100,000 pop, 1997–2001.	
Tompkins.....	204.5
Cayuga.....	99.3
Cortland.....	135.8
Tioga.....	175.0
NYS ex. NYC.....	166.7
NYS.....	163.6

The impact of prostate cancer in Tompkins County is not easy to assess using the available, sometimes inconsistent data. The most recent state cancer registry data shows that the mortality rate in Tompkins County is somewhat higher than neighboring counties — about 28 percent higher than Cortland County, and the incidence rate is considerably higher — about 51 percent higher than Cayuga County.

Comparing Tompkins County to the state exclusive of New York City, the local mortality rate is just over 10 percent higher and the incidence rate is close to 23 percent higher. However, the ratio of mortality rate to incidence rate is lower for Tompkins County than for Cortland County or the state. (See Figure 50, page 74.)

Where the interpretive uncertainty comes is when two cancer maps are compared. The map for prostate cancer incidence by ZIP code shows below expected incidence in the Town of Dryden on the eastern side of the county, and above expected incidence in the Town of Lansing to the north (see Map 6, page 74.) However, a second, more generalized map dedicated to late stage prostate cancer shows that the entire eastern side of Tompkins County has an above expected incidence, including, one would assume, the Town of Dryden (see Map 7, page 75.)

Community Resources

Tompkins County Health Department (TCHD)

The TCHD heads the local tobacco control partnership and participates in central New York regional efforts to reduce exposure to second-hand smoke, encourage tobacco cessation and reduce initiation of tobacco use. It adheres to the New York State Department of Health's Strategic Tobacco Control Plan to achieve these objectives. (see tobacco)

Healthy Living Partnership

New York State Department of Health provides funding for cervical screening for women over 18 years of age and includes clinical breast exams and mammogram screening for women over the age of 40 who are uninsured or underinsured. The program also provides colorectal screening for any man or woman over the age of 50 who are uninsured or underinsured. In Tompkins County, the Cayuga Medical Center is the lead agency for the partnership comprised of physicians, community agencies and other health care providers including TCHD. In the 2003–2004 grant year the Partnership exceeded its breast and cervical screening goal by 231%, screening 346 women. The colorectal screening target continues to be a challenge with only 35 people screened in the same time period. The program provides prostate cancer

Ithaca Breast Cancer Alliance (IBCA)	<p>information but not screening.</p> <p>is a local organization founded by a group of breast cancer survivors in 1994. IBCA's staff and volunteers provide support, guidance and information on breast cancer and treatment options. Women diagnosed with breast cancer or anyone concerned about or affected by breast cancer are welcomed. Services and programs include, support groups, professional counseling, peer information network, the "Helpline" and a library of books and resources and educational sessions.</p>
Hospicare	<p>Hospicare now offers palliative care services. These services address the needs of people with life-threatening illnesses who may still be pursuing curative care, or whose longer prognosis makes them ineligible for treatment. It is not limited to people with cancer. When I-CAN dissolved a few years ago, Hospicare accepted its library and facilitates support groups for people with cancer.</p>
Cayuga Medical Center at Ithaca (CMC)	<p>CMC opened a state-of-the-art radiation medicine facility in January 2005. It combines the expertise and resources of the medical center and Roswell Park Cancer Institute (RPCI) which has been designated a Comprehensive Cancer Center by the National Cancer Institute. This affiliation is linked by high-speed digital technology that allows physicians in both facilities to treat patients at CMC using the latest radiation protocols and treatments. CMC is in the process of recruiting more oncologists for other cancer services.</p>

Opportunities for Action

Tompkins County residents must do what they can to prevent cancer. This includes supporting smoke-free environments and quitting tobacco use. In order to assist in making better lifestyle choices such as healthy eating and physical activity, societal support structures must be in place. Schools, colleges, worksites, faith communities, local government, health care providers are all part of this effort.

When the Tompkins County population is viewed without the college students, the median age is 38.9 years. As stated earlier, cancer generally occurs in middle aged and older people. As the County's population ages — and assuming that retirees continue to find Tompkins County a desirable place to live — it is important to keep in mind the impact on the health care environment.

Figures and Tables

Figure 34 — Median age, Tompkins, Tompkins excluding students and regional comparison

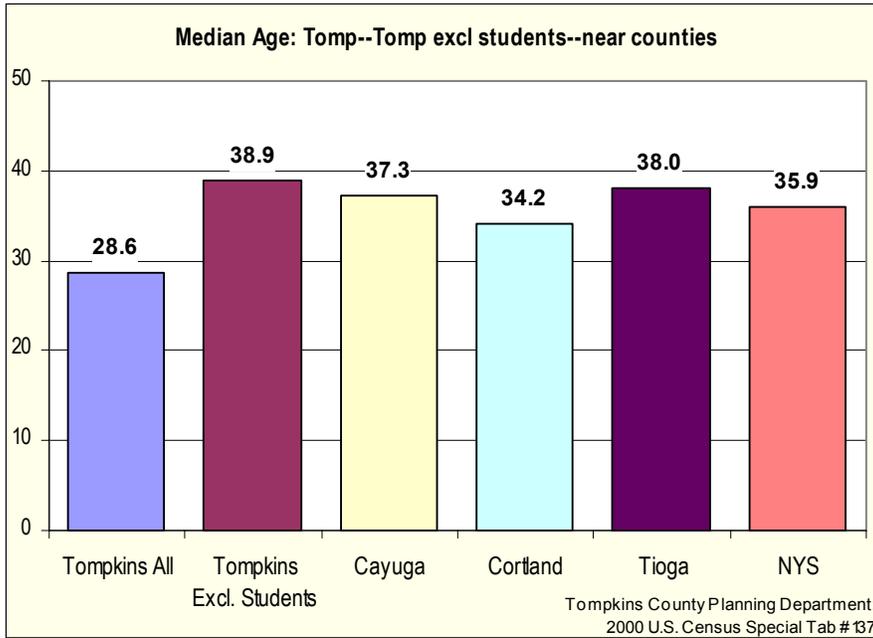


Figure 35 — Lung and bronchus cancer mortality, age adjusted rates, regional comparison

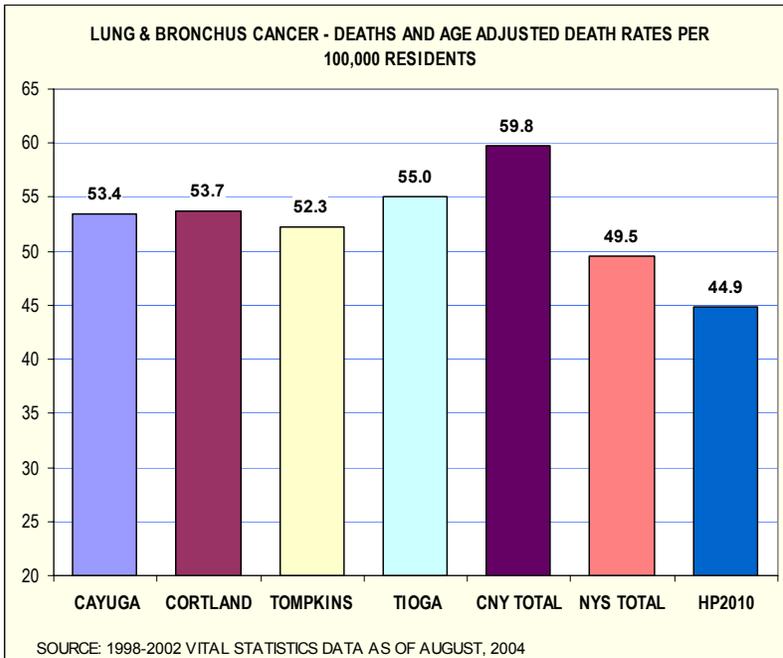


Figure 36 — Lung and bronchus mortality, crude rates, 10-year trend

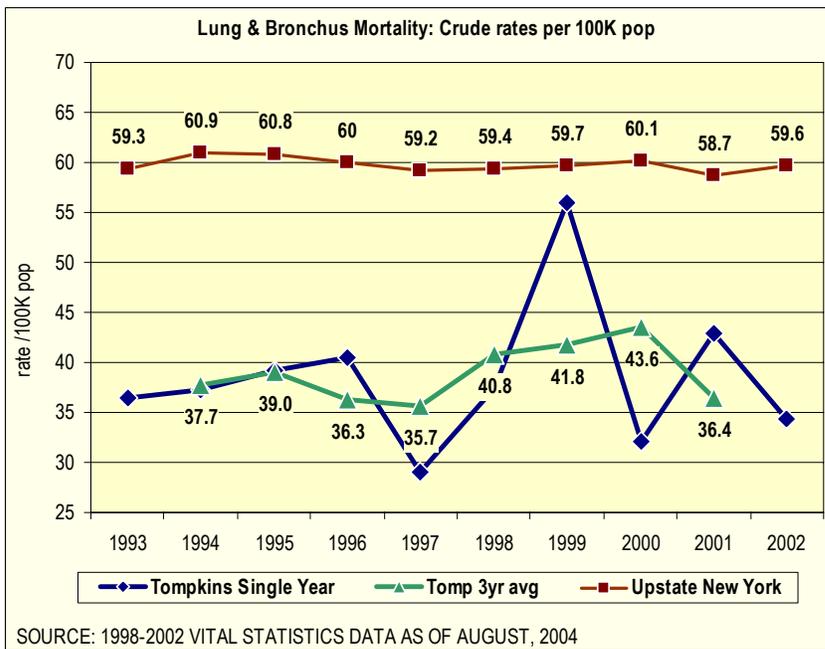
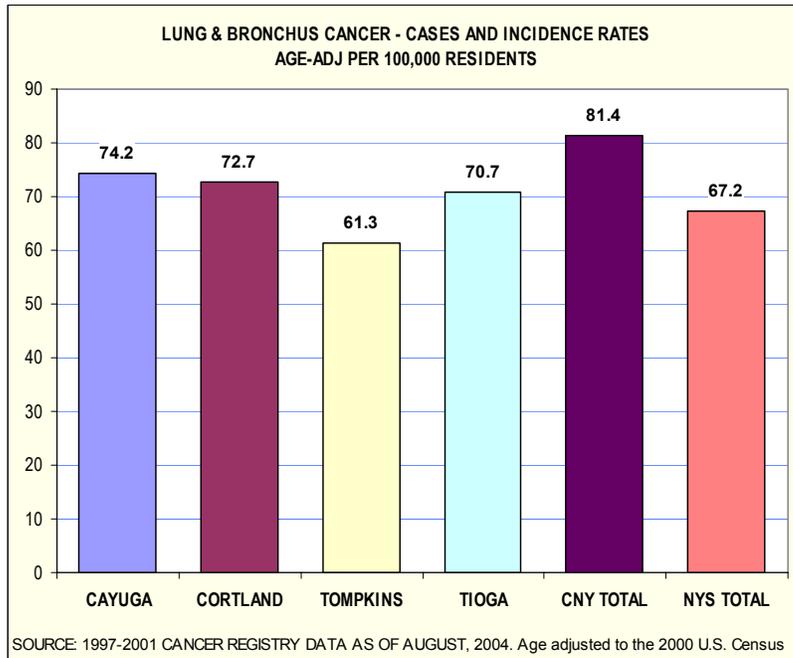
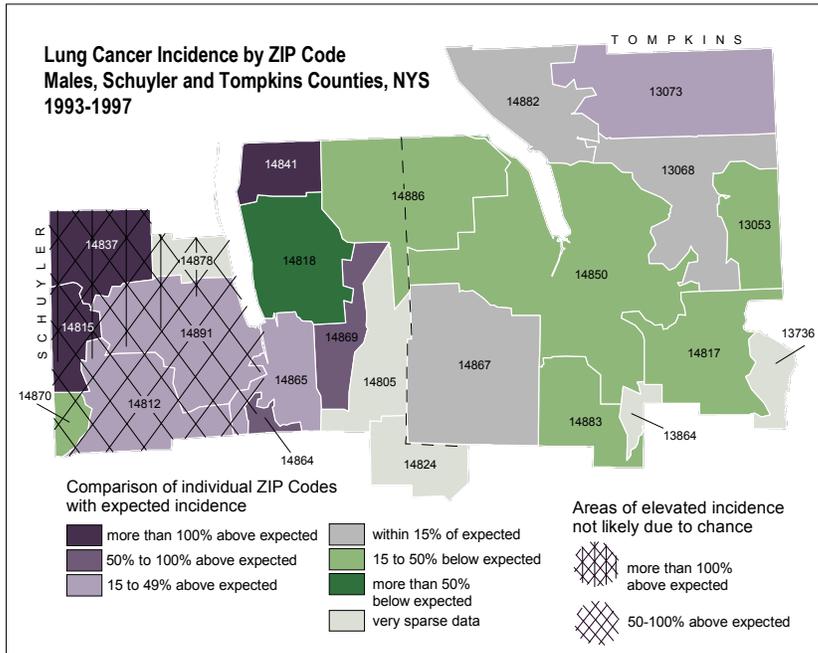


Figure 37 — Lung and bronchus cancer incidence, age-adjusted rates, regional comparison



Map 1 — Lung cancer incidence in males, by ZIP code, Tompkins & Schuyler Counties



Map 2 — Lung cancer incidence in females, by ZIP code, Tompkins & Schuyler Counties

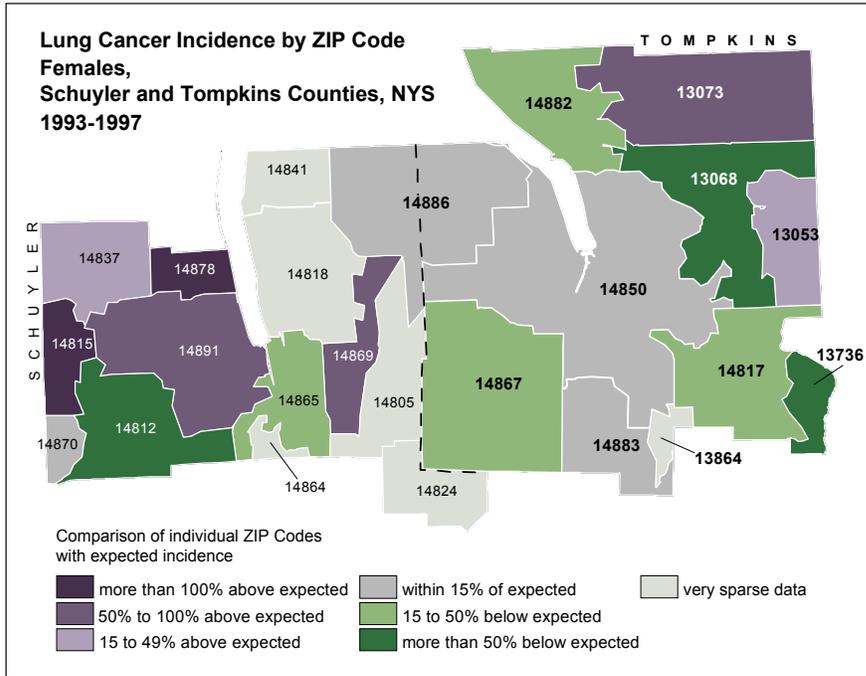


Figure 38 — Lung and bronchus cancer, early stage diagnosis, regional comparison

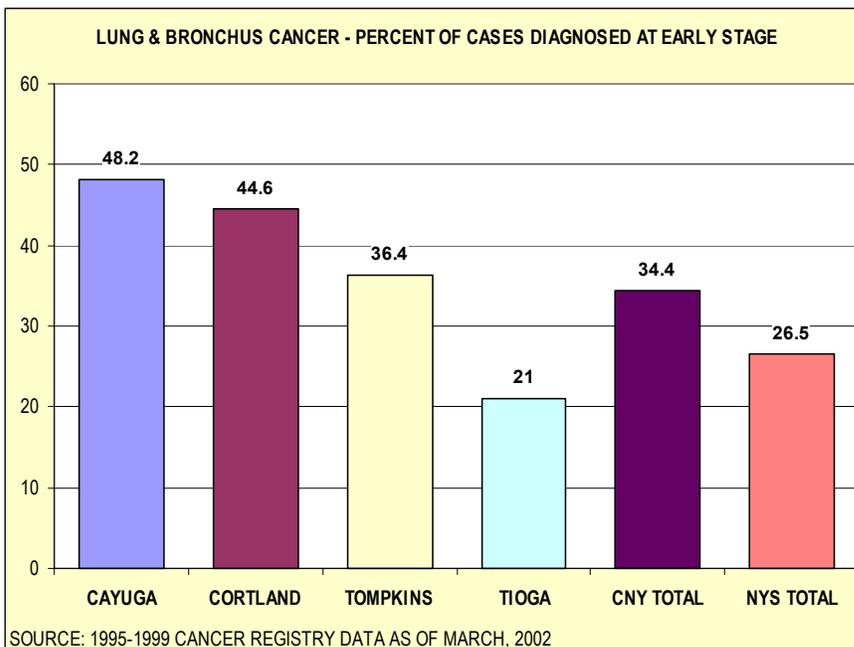


Figure 39 — Breast cancer mortality in females, age-adjusted rate, regional comparison

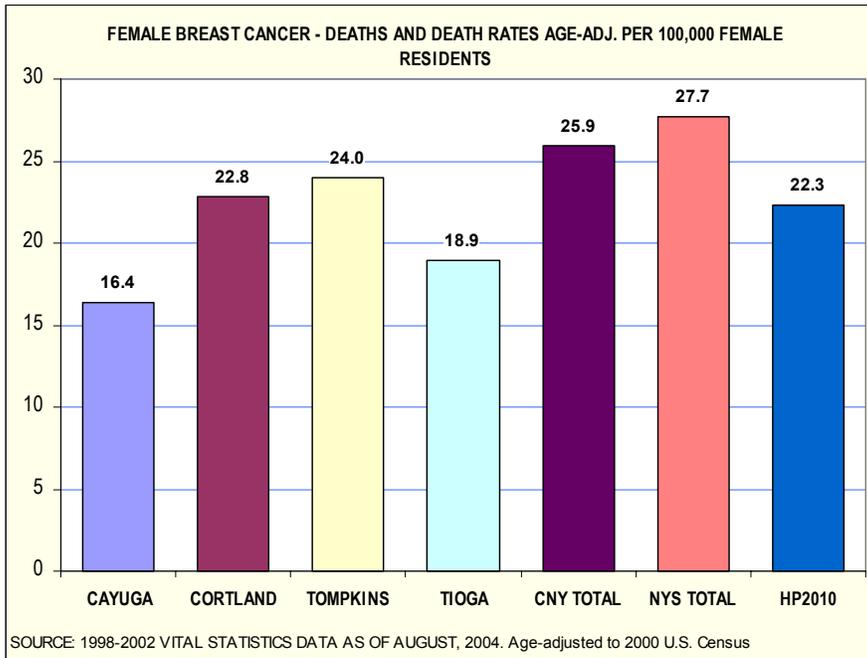


Figure 40 — Breast cancer in females, crude rate, 10-year trend

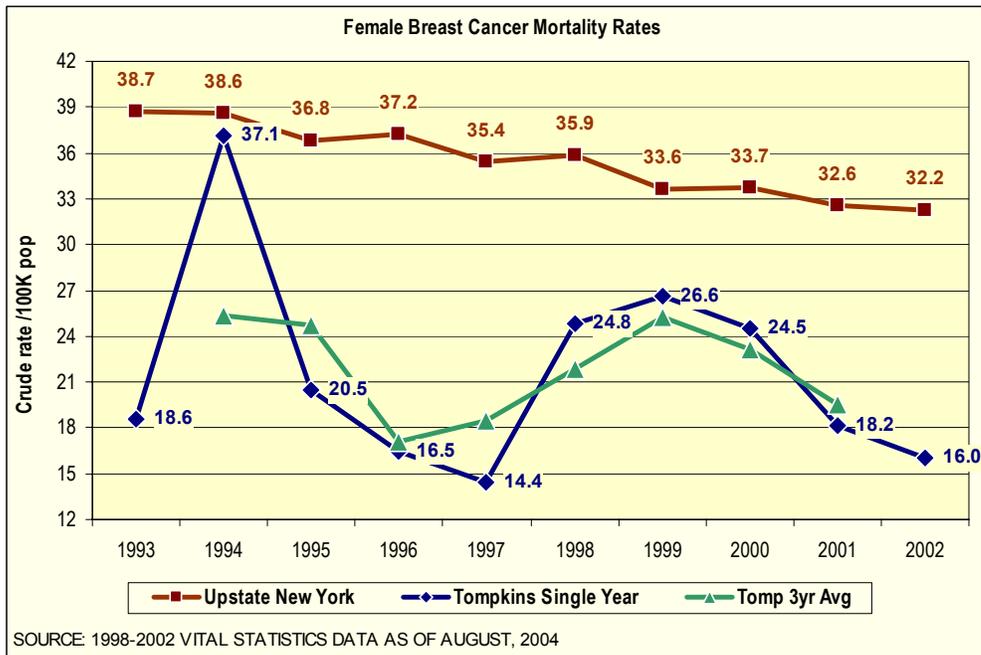
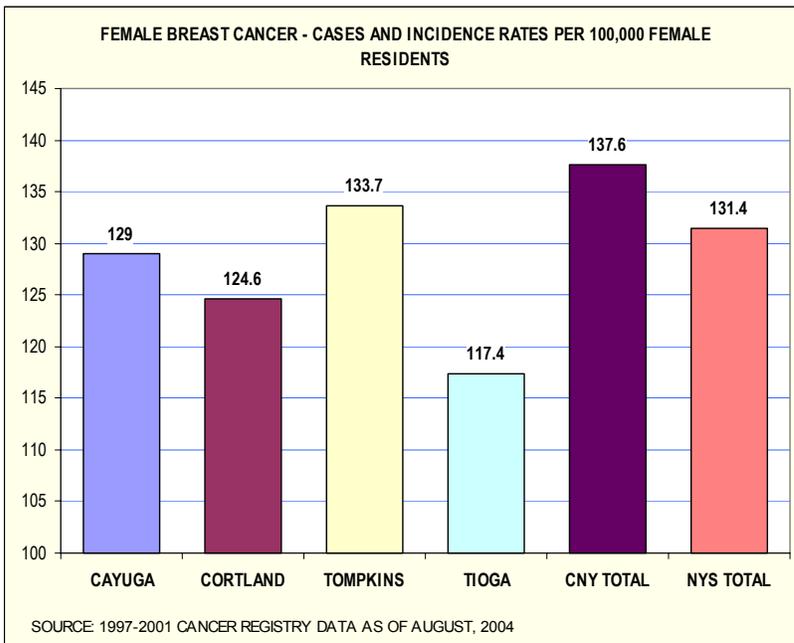


Figure 41 — Breast cancer incidence in females, regional comparison



Map 3 — Breast cancer incidence in females, by ZIP code, Tompkins & Schuyler

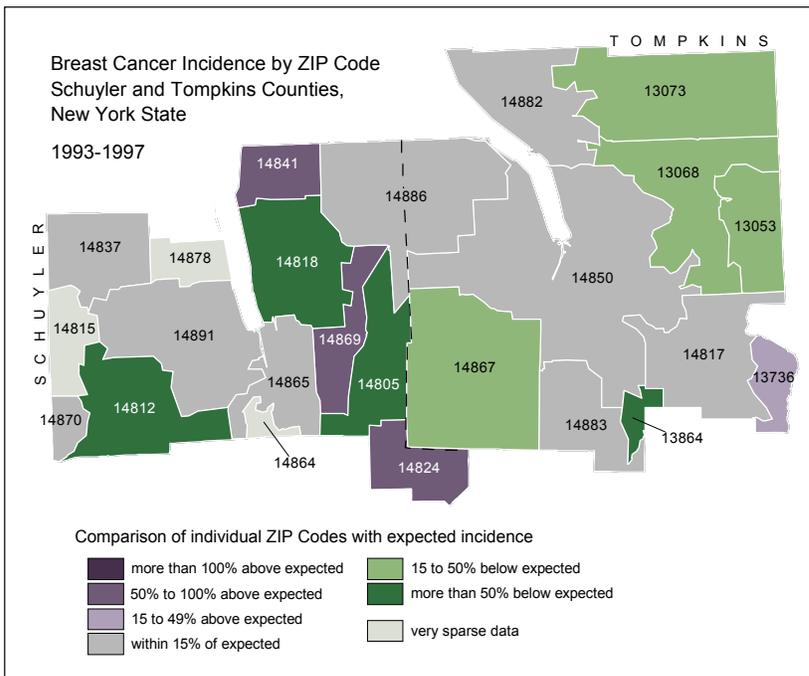


Figure 42 — Breast cancer incidence in females, early diagnosis, regional comparison

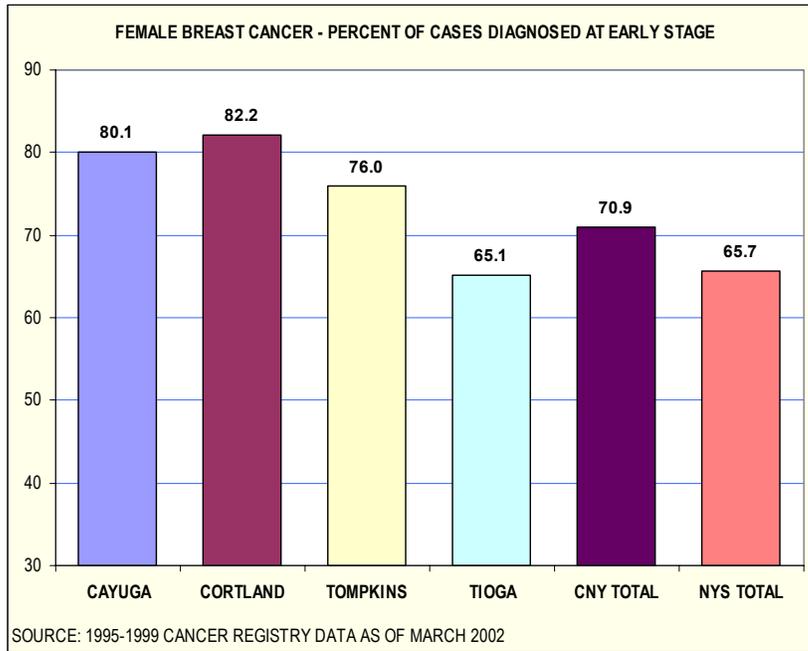


Figure 43 — Cervical cancer mortality in females, age-adjusted rates, regional comparison

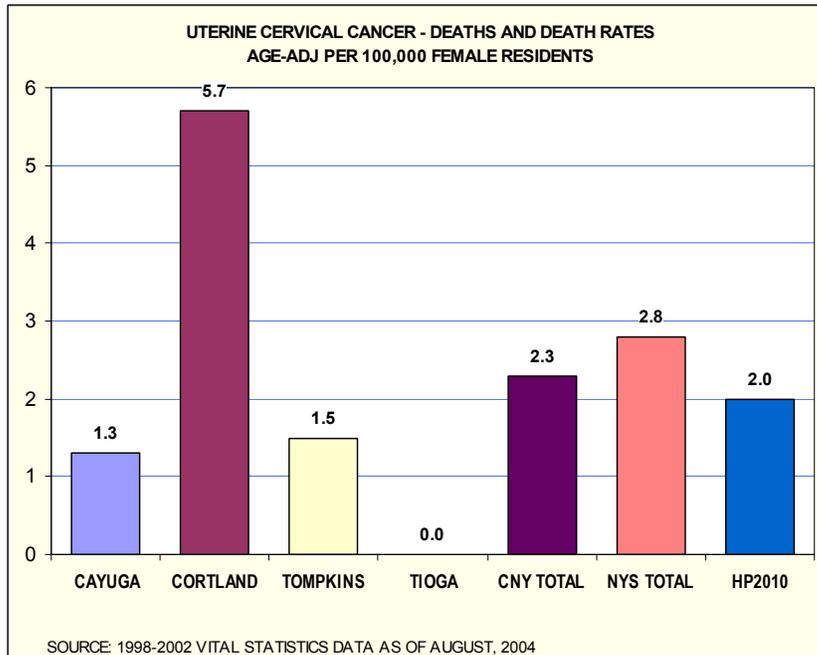


Figure 44 — Cervical cancer mortality in females, crude rates, 10-year trend

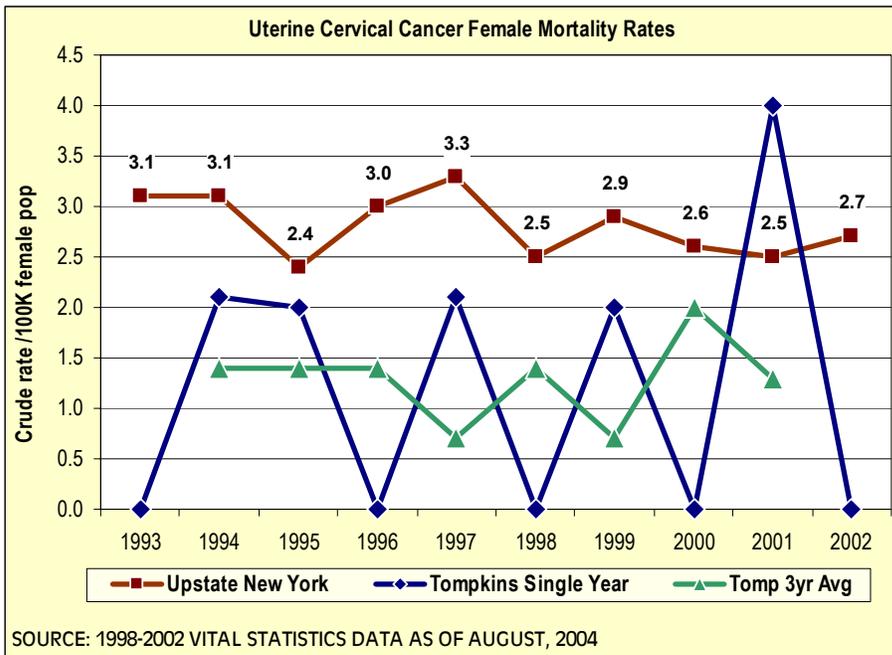


Figure 45 — Cervical cancer incidence in females, age-adjusted rates, regional comparison

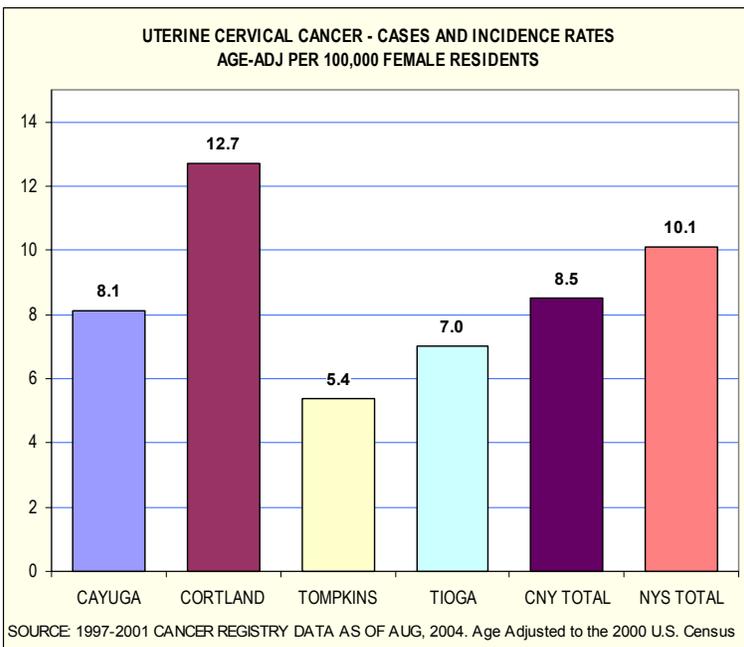


Figure 46 — Cervical cancer incidence in females, early diagnosis, regional comparison

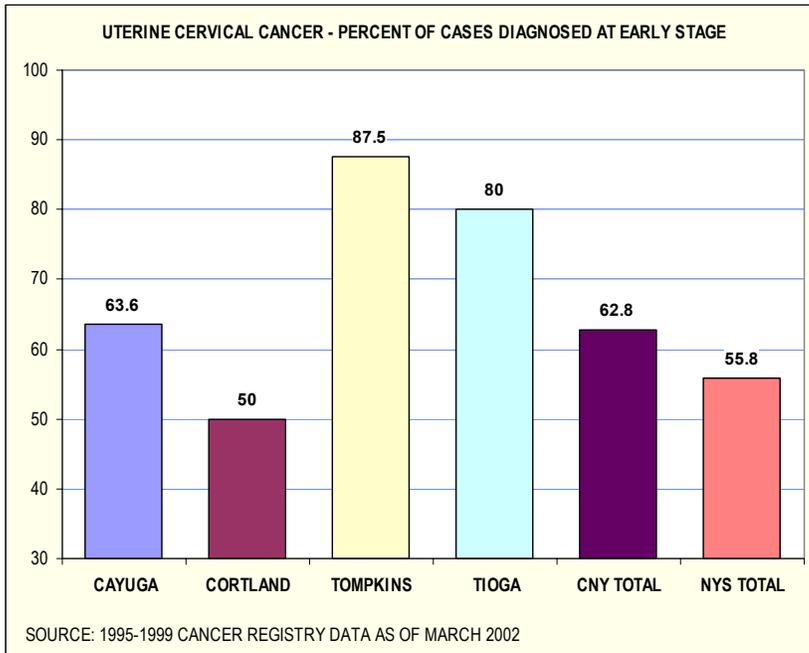


Figure 47 — Colorectal cancer mortality, age-adjusted rates, regional comparison

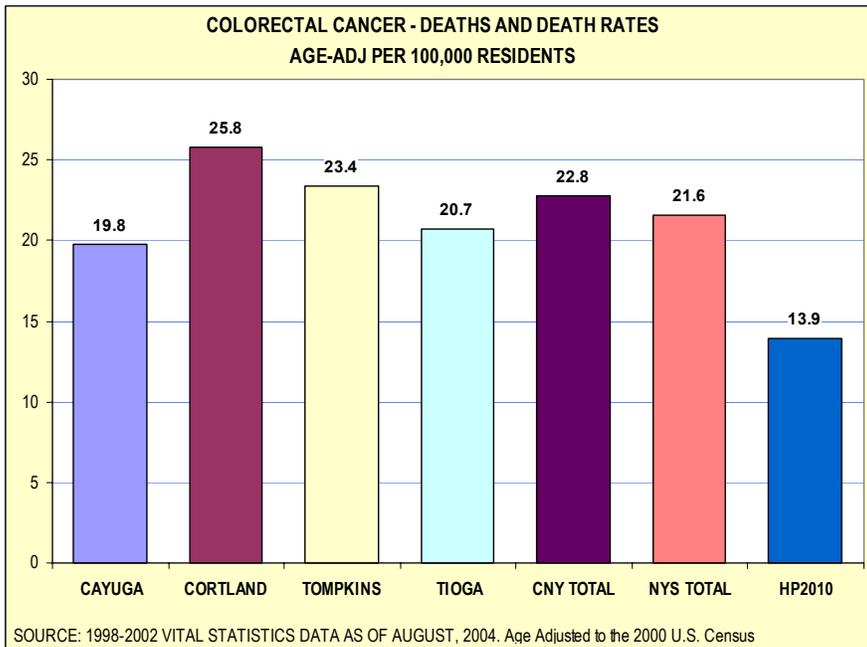


Figure 48 — Colorectal cancer mortality, crude rates, 10-year trend

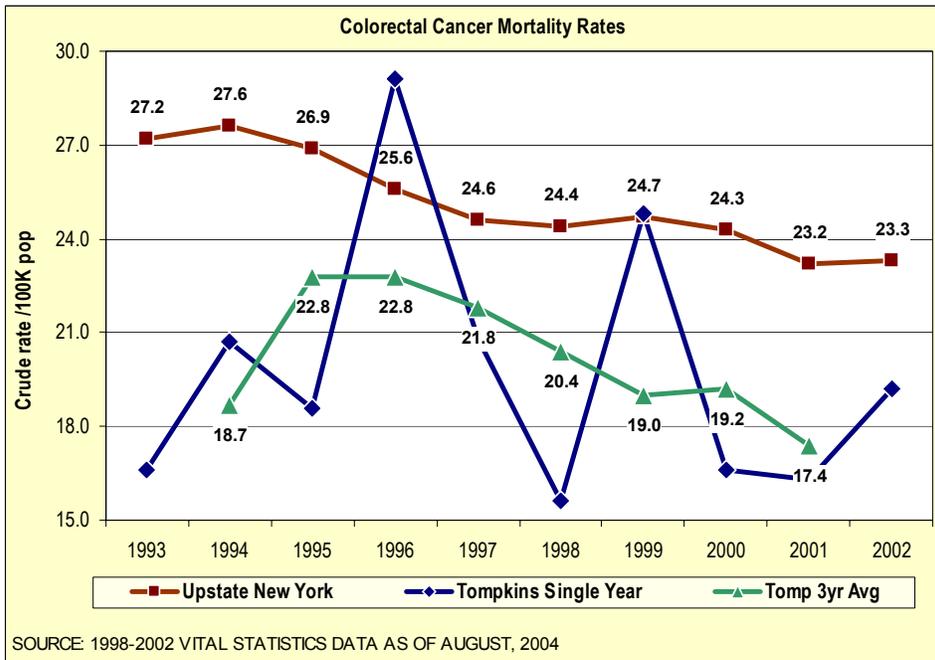
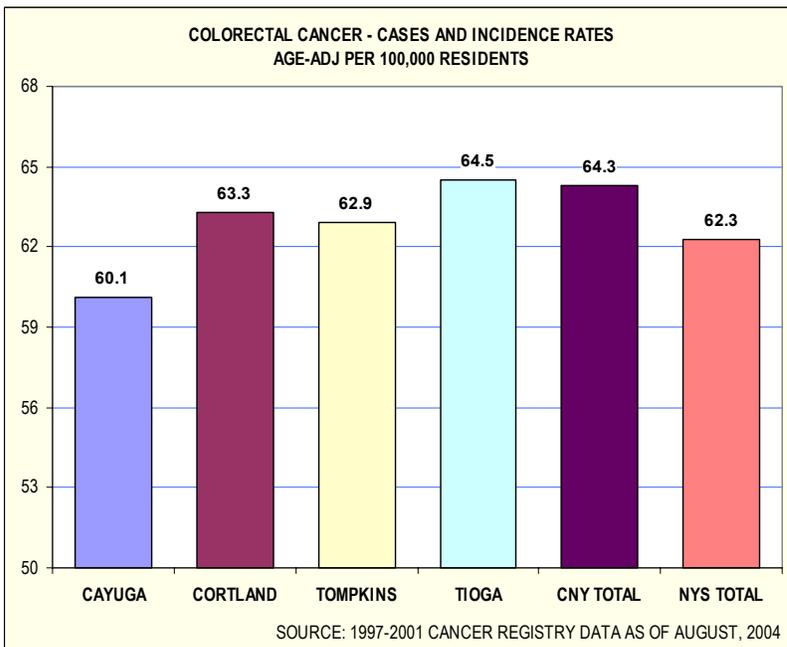
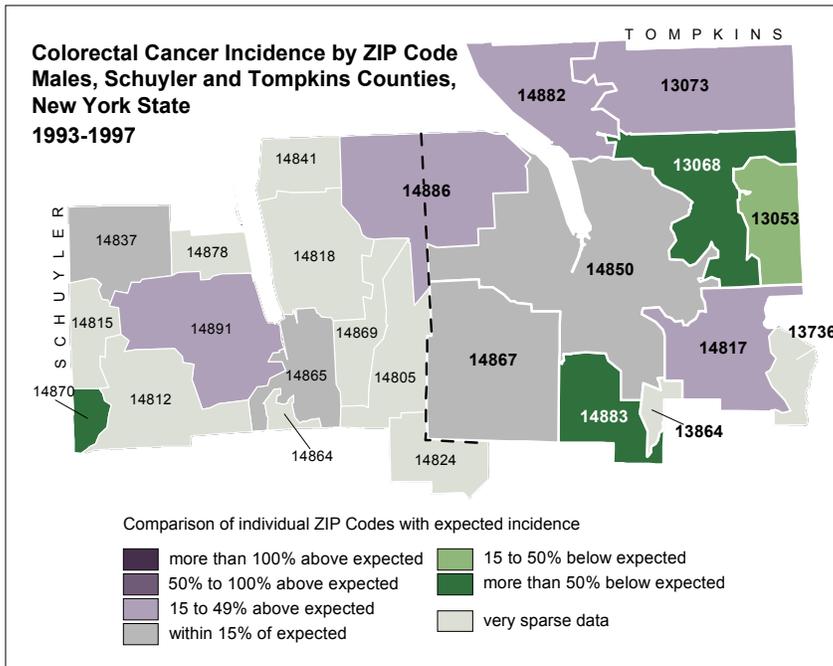


Figure 49 — Colorectal cancer incidence, age-adjusted rates, regional comparison



Map 4 — Colorectal cancer incidence in males, by ZIP code, Tompkins & Schuyler



Map 5 — Colorectal cancer incidence in females, by ZIP code, Tompkins & Schuyler

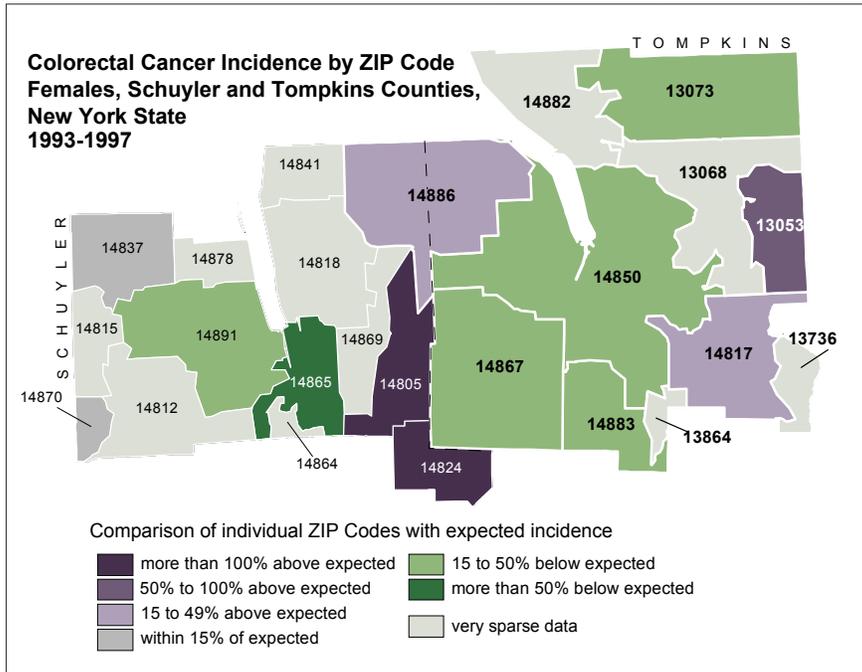
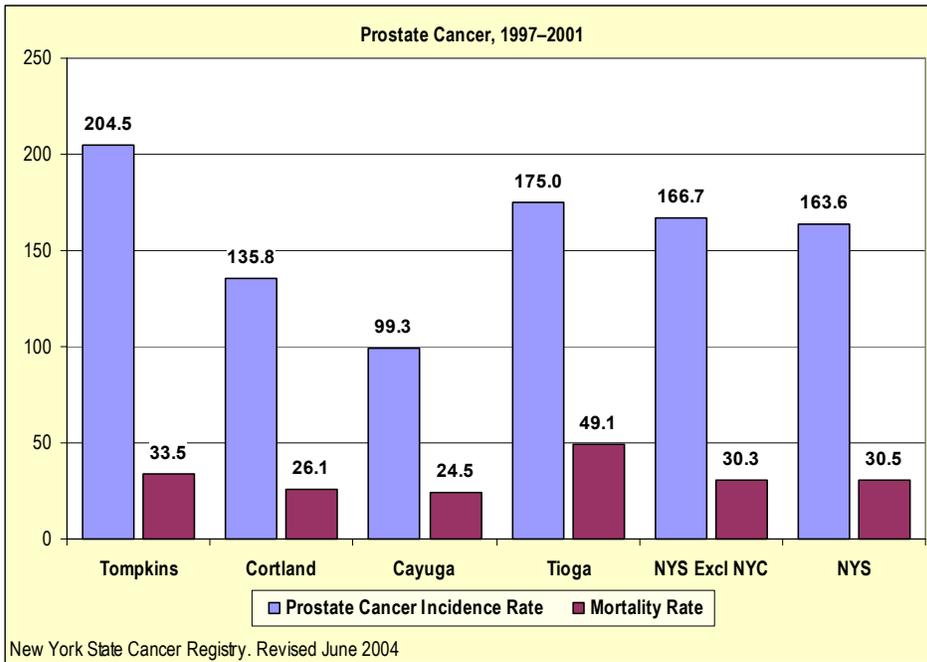
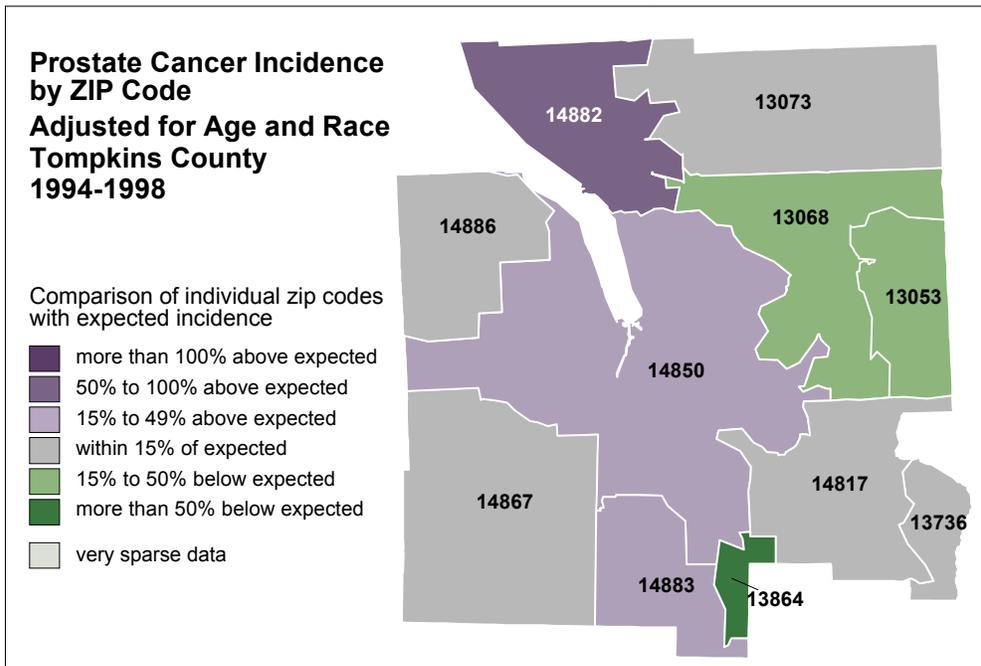


Figure 50 — Prostate cancer incidence and mortality, regional comparison



Map 6 — Prostate cancer incidence, by ZIP code, Tompkins County



Map 7 — Prostate cancer, areas with elevated late stage incidence, adjusted for age and race

