

Lung and Bronchus Cancer In Ohio, 1996-2000

November 2003



This Report on Lung and Bronchus Cancer Contains:

- Invasive Case Counts and Rates by County of Residence
- Distant and Unstaged/Unknown Stage Cases by Age Group
- Proportion of Cases and Survival by Stage at Diagnosis
- Invasive Rates by Gender and Race
- Risk Factors
- Sources of Additional Information

Lung and Bronchus Cancer Incidence and Mortality in Ohio

Cancers of the lung and bronchus make up the greatest percentage of incident (newly diagnosed) cancers reported to the Ohio Cancer Incidence Surveillance System (OCISS), comprising 16.3 percent of incident cancers in Ohio in 1996-2000 (Table 1). From 1996 to 2000, the average annual age-adjusted lung and bronchus cancer incidence rate was 75.5 cases per 100,000 residents, which is about 21 percent higher than the average annual age-adjusted U.S. (SEER¹) incidence rate of 62.6 cases per 100,000 residents. Reporting of invasive lung and bronchus cancer in Ohio is estimated to be complete (100 percent) in 1996-2000, giving stability to the data presented in this report. Similar to incidence, the 1996-2000 Ohio age-adjusted mortality rate for lung and bronchus cancer of 63.4 deaths per 100,000 residents is higher (12 percent) than the 1996-2000 U.S. (NCHS²) mortality rate of 56.8 per 100,000 residents.

[1] SEER: Surveillance, Epidemiology and End Results Program, National Cancer Institute.

[2] NCHS: National Center for Health Statistics.

Table 1: Average Annual Number and Percent of New Invasive Cancer Cases by Site/Type in Ohio, 1996-2000

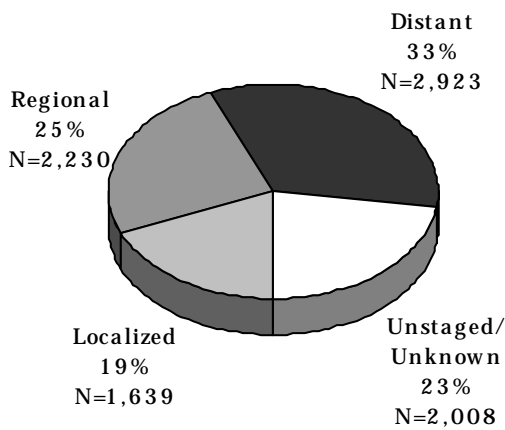
	Avg Annual Number	Percent		Avg Annual Number	Percent
All Sites/Types	53,883				
Lung and Bronchus	8,800	16.3%	Ovary	962	1.8%
Breast (Female)	8,266	15.3%	Stomach	777	1.4%
Prostate	7,169	13.3%	Brain and Other Nervous System	759	1.4%
Colon and Rectum	6,672	12.4%	Thyroid	631	1.2%
Urinary Bladder	2,591	4.8%	Esophagus	613	1.1%
Non-Hodgkin's Lymphoma	2,173	4.0%	Multiple Myeloma	594	1.1%
Corpus and Uterus, NOS	1,706	3.2%	Larynx	565	1.0%
Melanomas of the Skin	1,539	2.9%	Cervix	548	1.0%
Kidney and Renal Pelvis	1,318	2.4%	Liver and Intrahepatic Bile Duct	418	0.8%
Leukemias	1,235	2.3%	Hodgkin's Lymphoma	318	0.6%
Pancreas	1,170	2.2%	Testis	289	0.5%
Oral Cavity and Pharynx	1,102	2.0%	Other Sites/Types	3,669	6.8%

Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2003.

Technical Note: Lung and bronchus cancer cases were defined as follows: International Classification of Diseases for Oncology, Second Edition (ICD-O-2), codes C340-C349, excluding histology types 9590-9989.

Lung and Bronchus Cases and Survival by Stage at Diagnosis

Figure 2:
Cancer of the Lung and Bronchus:
Average Annual Cases (N) by Stage
at Diagnosis in Ohio, 1996-2000



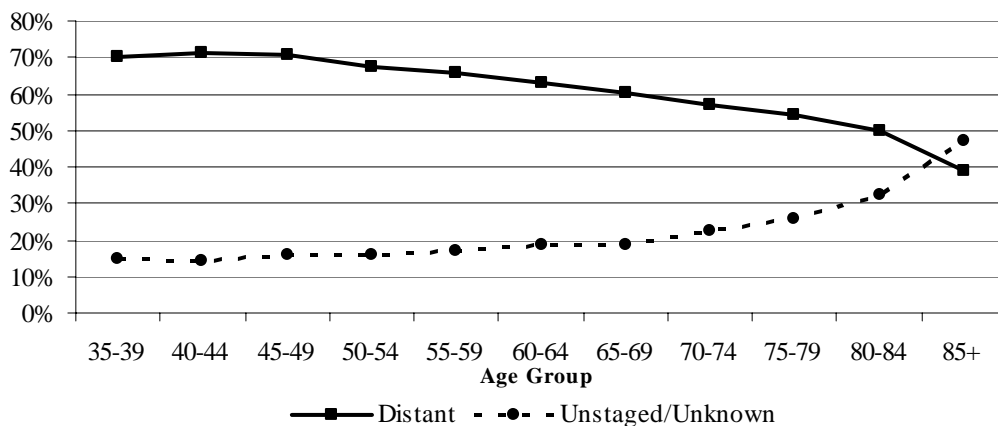
Note: <1% of cases were diagnosed as in situ (N=11).

Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2003.

Five-year survival source: SEER Cancer Statistics Review 1975-2000, National Cancer Institute, 2003.

The stage at diagnosis of lung and bronchus cancer is an important determinant of survival, with the earliest stages often leading to better prognoses. Figure 2 shows the distribution of lung and bronchus cancer cases in Ohio by stage at diagnosis. For in situ cancers, the tumor has not invaded or penetrated surrounding tissue. In the localized stage, the tumor is confined to the organ in which it originated. In the regional stage, the tumor has spread to surrounding tissues. In the distant stage, the malignancy has spread, or metastasized, to other organs. This figure reveals that only about 19 percent of lung and bronchus cancers were diagnosed at the earliest (in situ and localized) stages, whereas one-third were diagnosed at the distant stage and 23 percent were reported unstaged or with an unknown stage at diagnosis. Based on the follow-up of individuals diagnosed with lung and bronchus cancer in the U.S. during the years 1992-1999, survival five years after diagnosis was approximately 14.9 percent. Five-year survival probabilities were 48.7 percent for the localized stage, 16.0 percent for the regional stage and 2.1 percent for cases with distant stage tumors. The five-year survival probability for all stages combined was slightly lower among Blacks (12.4 percent) compared to Whites (15.1 percent).

Figure 3: Cancer of the Lung and Bronchus: Percentage of Cases by Age Group (35 to 85+) for Distant Stage and Unstaged/Unknown Stage Diagnoses, Ohio, 1996-2000



Did you know?

According to the American Cancer Society, tobacco smoking is responsible for **8 out of 10** lung cancer cases.

Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2003.

The stage at which a cancer is diagnosed often varies with the age of the patient. As shown in Figure 3, the percentage of lung and bronchus cancer cases diagnosed at the distant stage is highest for the 40-44 age group and decreases with advancing age. However, also shown in Figure 3, as individuals age the percentage of cases that are unstaged or have an unknown stage at diagnosis increases. It is likely that a number of unstaged/unknown stage cases in the older age categories have distant stage disease, accounting for the decline in distant stage cases with advancing age.

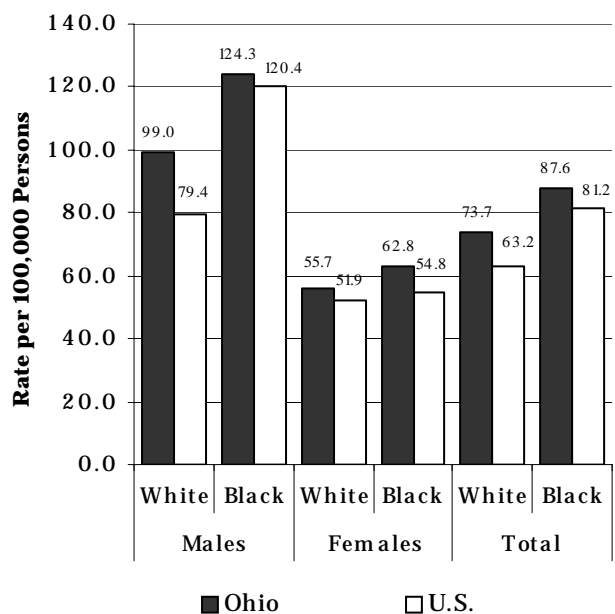


Figure 4: Cancer of the Lung and Bronchus: Average Annual Age-Adjusted Incidence Rates, per 100,000 Persons, by Gender and Race in Ohio, with Comparison to the U.S., 1996-2000

Figure 4 shows that the lung and bronchus cancer age-adjusted incidence rates among males are greater than those of females for both Whites and Blacks. A comparison of the data by race reveals that the rates are greater among Blacks, compared to Whites, especially for males. The Ohio lung and bronchus cancer incidence rates are higher than the rates for the U.S. (SEER) for each gender/race category, with the greatest percent difference (25 percent) between white males in Ohio as compared to white males in the U.S.

Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2003, and SEER Cancer Statistics Review 1975-2000, National Cancer Institute, 2003.

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Risk Factors for Lung and Bronchus Cancer

- **Tobacco smoking** — Dramatically increases lung and bronchus cancer risk, causing between 80 and 85 percent of lung and bronchus cancers.
- **Exposure to environmental (or “second-hand”) tobacco smoke.**
- **Exposure to radon** — A gas produced during the naturally occurring breakdown of uranium.
- **Exposure to asbestos.**
- **Medical history** — History of tuberculosis (TB) and some types of pneumonia.
- **Family history** — Having a first-degree relative who has had lung cancer.
- **Occupational exposure** — Mining or working with talc may increase risk.

Sources: American Cancer Society and National Cancer Institute.

Sources of Additional Information

- **Ohio Cancer Incidence Surveillance System:**
http://www.odh.state.ohio.us/ODHPrograms/CI_SURV/ci_surv1.htm
- **National Cancer Institute:**
http://www.nci.nih.gov/cancer_information/cancer_type/lung/
- **American Cancer Society:**
http://www.cancer.org/docroot/LRN/LRN_0.asp