

Lung Cancer

What are the lungs?

The lungs are two sponge-type organs located in the chest cavity. The lungs are the vital organs of respiration. Their main function is to oxygenate the blood by bringing inspired air into close relation with the blood in the pulmonary capillaries. The right lung is divided into three sections, or lobes, and the left lung as two lobes.

What is lung cancer?

Most lung cancers start in the lining of the bronchi. It also can form in the glands below the lining of the bronchi. Lung cancer is thought to develop over a period of many years and can be either benign or malignant. Benign tumors can usually be removed and do not spread; whereas, malignant tumors grow aggressively and invade other tissues of the body.

What are the risk factors?

Tobacco smoking is the most important risk factor. Nonsmokers who breathe in second hand smoke (environmental tobacco smoke) also are at increased risk for lung cancer. Other factors include tuberculosis and exposure to certain industrial substances; certain organic chemicals; asbestos; radon; radiation from occupational, medical or environmental sources; and air pollution.

What are the signs and symptoms?

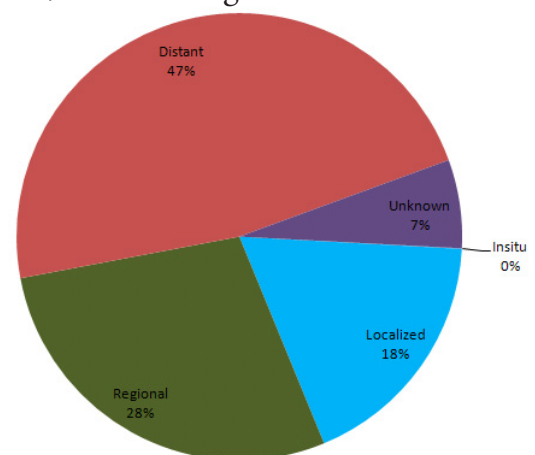
Persistent coughs, chest pain, shortness of breath, blood-streaked sputum, recurring pneumonia or bronchitis are symptoms of lung cancer.

How is it diagnosed?

Early detection of lung cancer is difficult. However, a physical examination, chest x-ray, CAT scan and biopsy can be performed

Diagnosis

In the 2003-2007 time period, none of lung cancers were diagnosed at in situ stage, 18 percent at localized stage, 28 percent at regional, stage, 47 percent at distant stage and 7 percent were of unknown stage of progression.



What are the common treatments?

Treatment options include: surgery, radiation therapy, and chemotherapy depending upon the type of lung cancer.

What are the survival outcomes?

Using 1999-2007 SEER data, the national 5-year relative survival rate estimate is 16 percent. When diagnosed at localized stage, the 5-year relative survival rate is 52 percent. For regional and distant stages, the 5-year relative survival rates are 24 percent and 4 percent respectively. The survival rate when the stage of diagnosis could not be determined was estimated at 8 percent.

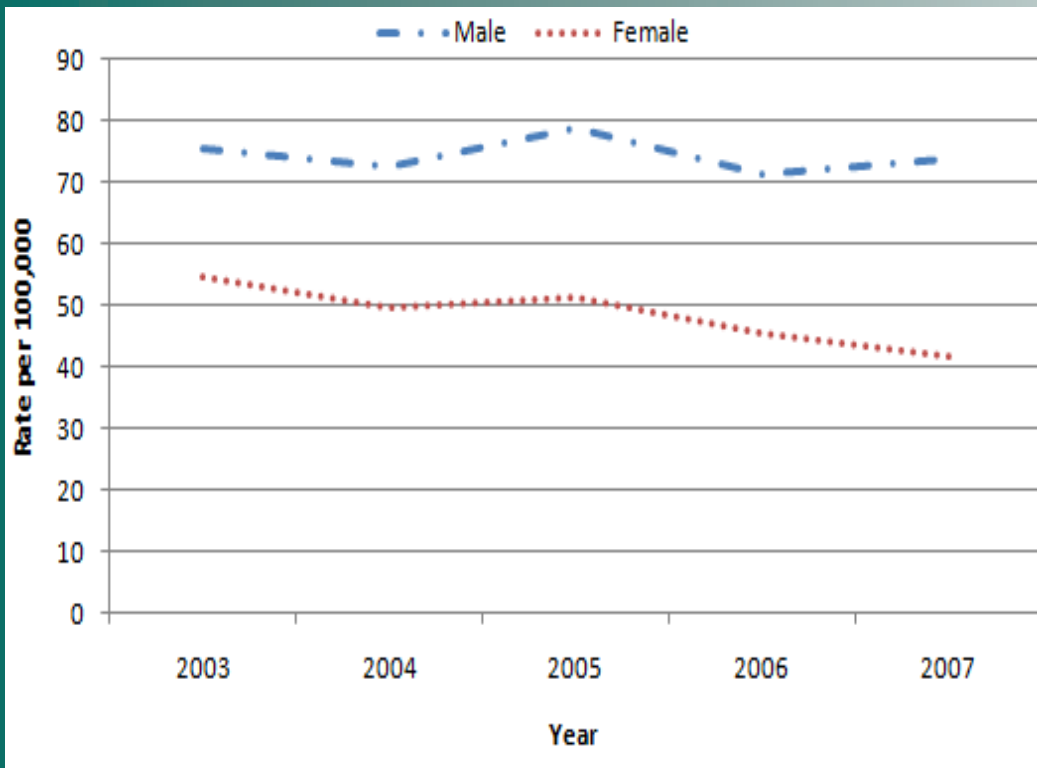
What can you tell me about this cancer in North Dakota?

Summary Statistics 2003-2007	ND	WNC	US
INCIDENCE			
Annual age-adjusted incidence rates*	59.0	68.6	68.1
Average number of new cases	420	14,395	204,085
Percent of all new cancers	12.55	14.39	14.16
MORTALITY			
Annual age-adjusted mortality rates*	45.1	53.3	52.5
Average number of deaths each year	328	11,255	158,499
Percent of all cancer deaths	25.02	28.47	28.38
* Rates per 100,000 and standardized to U.S. year 2000 population.	WNC and US data source: http://apps.nccd.cdc.gov/uscs		

☞ The West North Central (WNC) regions include the following states: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota.

INCIDENCE:

Incidence Rates by Gender, North Dakota 2003-2007

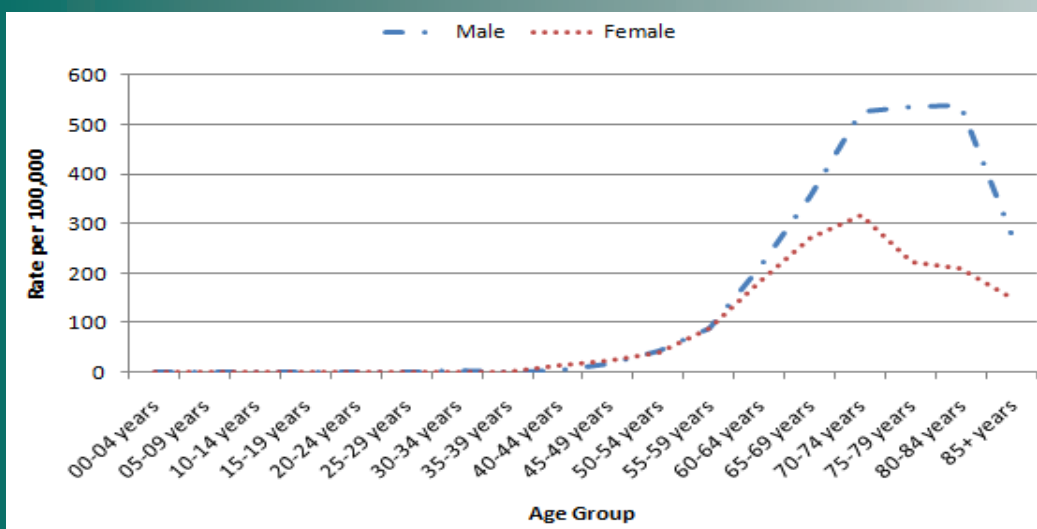


☞ An average of 420 new cases of lung cancer are diagnosed each year in North Dakota, which is about 13 percent of all cancers diagnosed in the state.

☞ The incidence of lung cancer is higher among men than women.

☞ The average annual incidence rate for men is 74.4 per 100,000 men, and the average annual incidence rate for women is 48.3 per 100,000 women.

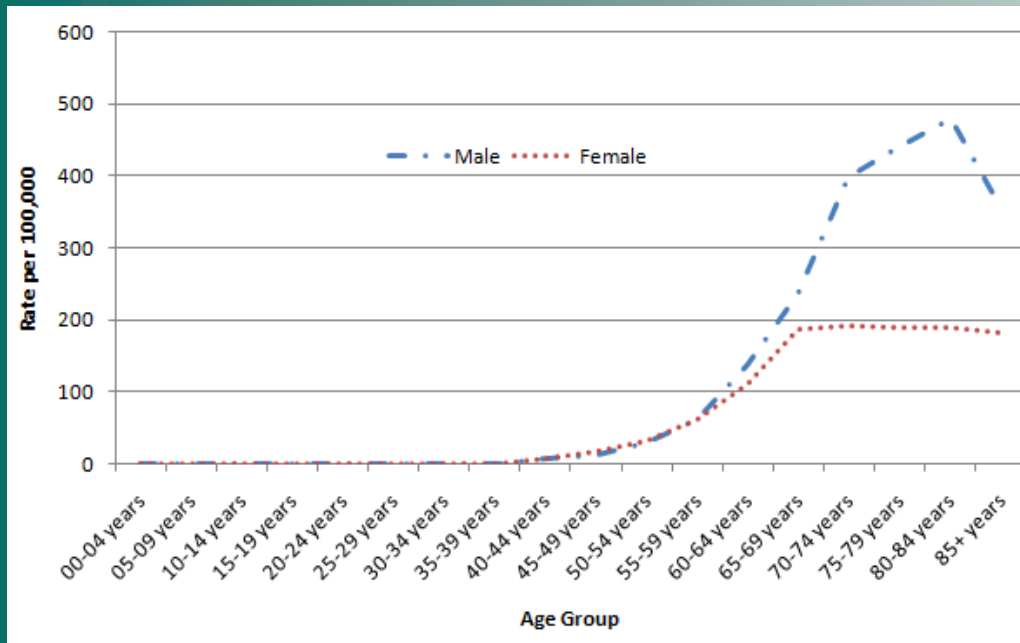
Age-Specific Incidence Rates, North Dakota 2003-2007



☞ Since the incidence is higher among men than women, the age-specific rates for men are higher.

☞ The annual incidence rate increases with age.

Age-Specific Mortality Rates, North Dakota 2003-2007



☞ An average of 328 deaths due to lung cancer occur each year in North Dakota, which is about 25 percent of all cancer deaths in the state.

☞ The average annual death rate for men is 58.6 per 100,000 men, and for women is 35.1 per 100,000 women.

☞ Death rate of lung cancer increases with age.

Glossary of Cancer Terminology

- ☞ **Age-adjusted rate:** Since cancer rates tend to vary with age, and since populations vary with respect to their age-distribution, incidence and mortality rates are age-adjusted to allow comparison of rates between different populations (i.e. county or regional boundaries).
- ☞ **Age-specific rate:** The number of new cases diagnosed per 100,000 individuals over a specified time period for a specified age-group.
- ☞ **Incidence:** The number of new cases of a given type of cancer diagnosed during the year.
- ☞ **Mortality:** The number of deaths attributed to the particular type of cancer that occurred during the year. Includes deaths of patients diagnosed in earlier years, individuals newly diagnosed during the year, and patients for whom a diagnosis of cancer is made only after death.
- ☞ **Risk factor:** Anything that increases a person's chance of getting a disease.
- ☞ **Stage at diagnosis:** How far a cancer has spread from its site of origin when it is diagnosed. There are several different systems for the staging of cancers. This report uses the general summary stage system. The stages, in order of increasing spread, are in situ, localized, regional and distant. Cancers diagnosed at the localized, regional or distant stage are referred to as invasive.



For more information, visit
www.ndhealth.gov/cancerregistry/
 or call 701.328.2306

