

Cervical Cancer

What is the cervix?

The cervix is the lower narrow part of the uterus which is a hollow, pear-shaped organ located in the female's lower abdomen. The cervix forms a canal that opens into the vagina leading to the outside of the body.

What is cervical cancer?

Cancer of the cervix is different from cancer that begins in other parts of the uterus and requires different treatment. Cancers of the cervix are named for the type of cell in which they begin and most of them are squamous cell carcinoma. Squamous cells are the thin flat cells that form on the surface of the cervix. There are different terms used to describe the abnormal changes in the cervical cells. Low-grade squamous intraepithelial lesions refer to the early changes in the size, shape and number of cells that form on the cervical surface. High-grade squamous intraepithelial means that there are a large number of pre-cancerous cells and involve only the cervical surface. If abnormal cells spread deeper into the cervix or other tissues, the disease is then called invasive cervical cancer.

What are the risk factors?

The primary cause of cervical cancer is infection with certain types of human papilloma virus (HPV). HPV infections are common in healthy women and only rarely result in cervical cancer. The persistence of infection and progression to cancer may be influenced by many factors,

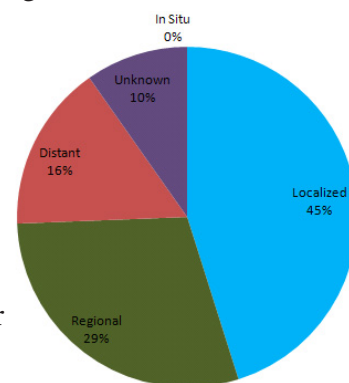
such as immunosuppression, cigarette smoking, and nutritional factors. Women who began having sexual intercourse before the age of 18 and women who have had many sexual partners have an increased risk of developing cervical cancer. Women are also at risk if their partners began having sexual intercourse at a young age or had many sexual partners.

What are the signs and symptoms?

Symptoms usually do not occur until abnormal cervical cells become cancerous and invade nearby tissue. When this happens, the most common symptom is abnormal bleeding. Bleeding may start and stop between regular menstrual periods, or it can occur after sexual intercourse, douching, or a cervical exam. Menstrual bleeding may last longer and be heavier than usual. Bleeding after menopause and increased vaginal discharge are other symptoms of cervical cancer.

Diagnosis

In the 2003-2007 time period, 45 percent of cervical cancers were diagnosed at the localized stage, 29 percent at regional stage, 16 percent at distant stage, 10 percent at unknown stage, and 0 percent at in situ stage. In situ stage disease is neither reportable nor collected.



How is it diagnosed?

A pelvic exam and a Pap Test (a simple procedure in which a small sample of cells is collected and examined under a microscope) allow the doctor to detect abnormal changes in the cervix. If these exams show an infection, the infection is treated and Pap is repeated. The results sometimes appear normal even when abnormal cells of the cervix are present, or sometimes appear abnormal when there are no abnormal lesions. Most cervical precancers develop slowly. Nearly all cases can be prevented if screening is performed regularly.

What are the common treatments?

Treatment for a pre-invasive lesion of the cervix depends on whether the lesion is low or high grade, whether the woman wants to have children in the future, and the woman's age and general health. A woman with low grade lesion may not need further treatment, especially if the abnormal area was completely removed by biopsy followed by regular Pap Tests and pelvic exams. When a pre-invasive cancer requires treatment, cryosurgery (freezing), cauterization (burning or diathermy), laser surgery, or local surgery will be used to destroy the abnormal area without harming nearby healthy tissue. Invasive cervical cancers are generally treated by surgery, radiation, or both, as well as chemotherapy in some cases.

What is the survival outcome?

Using 1999-2007 SEER data the national 5-year relative survival rate estimate is 69 percent. When diagnosed at localized stage, the 5-year relative survival rate is 91 percent. For regional and distant stages, the 5-year relative survival rates are 57 percent and 18 percent respectively. The survival rate when the stage of diagnosis could not be determined was estimated at 55 percent.

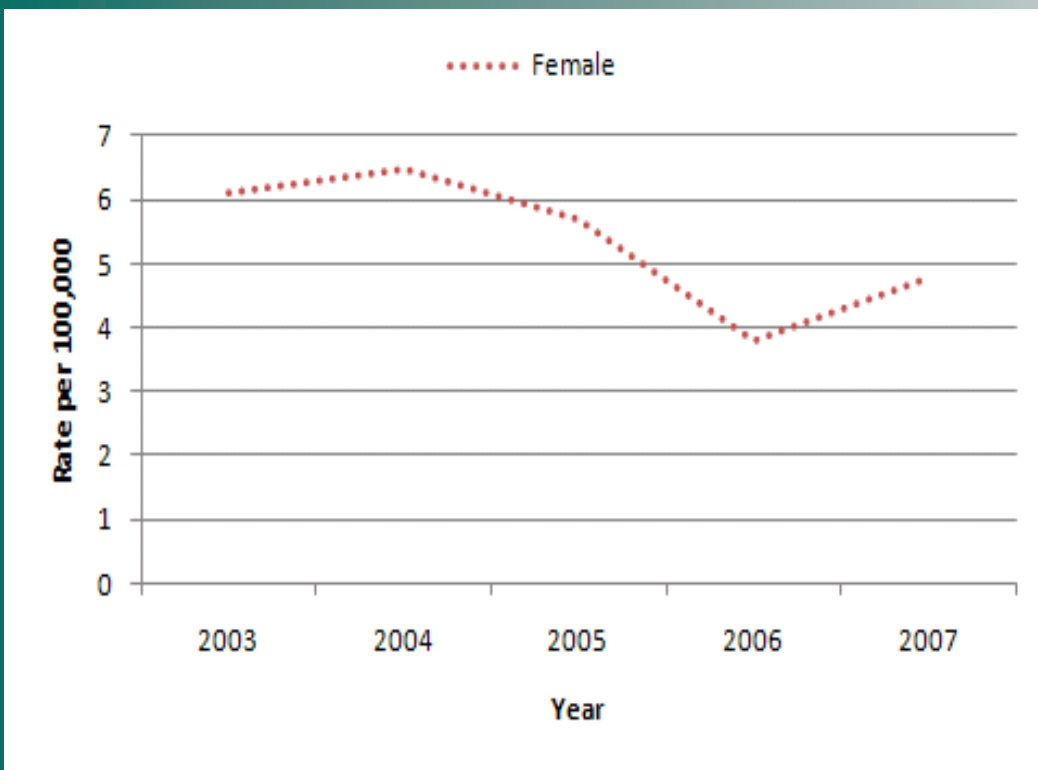
What can you tell me about this cancer in North Dakota?

| Summary Statistics 2003-2007 | ND | WNC | US |
|--|--|------|--------|
| INCIDENCE | | | |
| Annual age-adjusted incidence rates* | 5.2 | 7.1 | 8.1 |
| Average number of new cases | 16 | 722 | 12,642 |
| Percent of all new cancers | 0.48 | 0.72 | 0.88 |
| MORTALITY | | | |
| Annual age-adjusted mortality rates* | 1.7 | 2.1 | 2.4 |
| Average number of deaths each year | 6 | 232 | 3,938 |
| Percent of all cancer deaths | 0.47 | 0.59 | 0.71 |
| * 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:

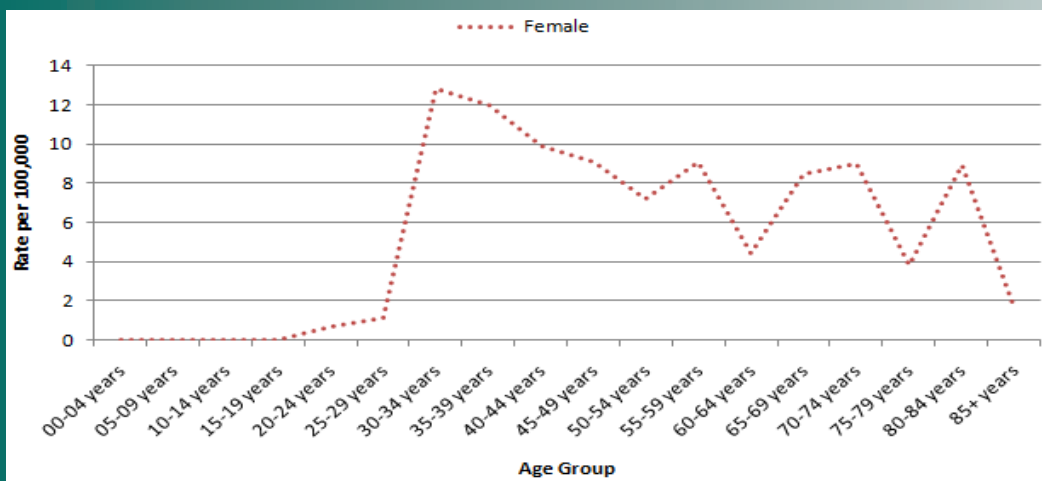
Incidence Rates by Gender, North Dakota 2003-2007



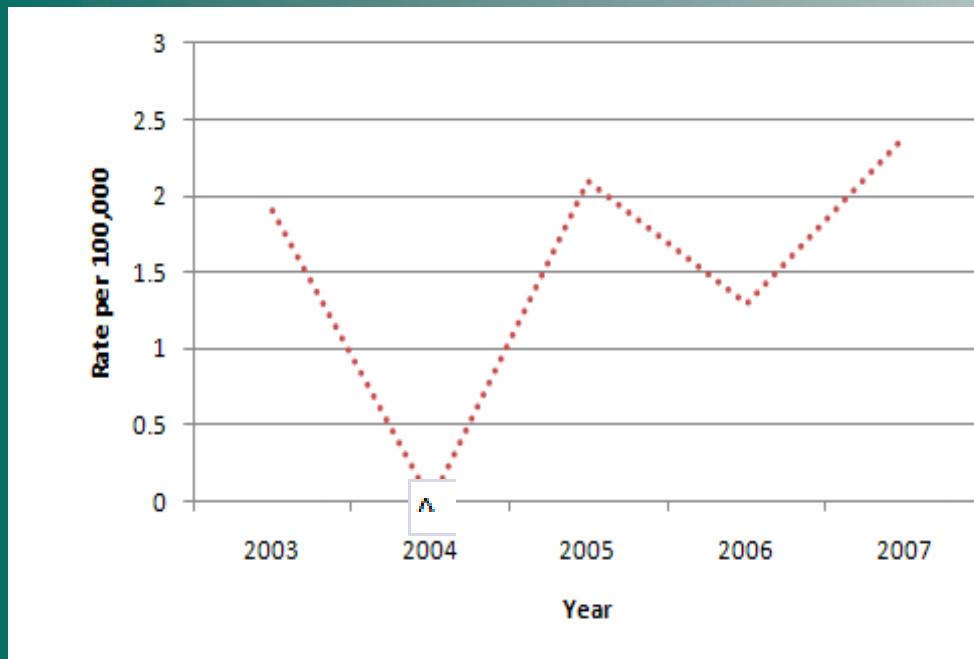
☞ An average of 16 new cases of cervical cancer are diagnosed each year in North Dakota, which is about 0.5 percent of all cancers diagnosed in the state.

☞ The state's average annual incidence rate for women is 5.2 per 100,000 women. This is lower than the incidence of cervical cancer in the U.S. and West North Central region.

Age-Specific Incidence Rates, North Dakota 2003-2007



☞ Cervical cancer incidence rates rapidly rose for women ages 30 to 34 before a gradual downward trend was observed.

Age-Specific Mortality Rates, North Dakota 2003-2007

☞ An average of 6 deaths due to cervical cancer occur each year in North Dakota, which is about 0.5 percent of all cancer deaths in the state.

☞ The state's average annual death rate from cervical cancer (1.7 per 100,000 women) is lower than the death rate for the US and West North Central region.

^ Statistic not displayed due to fewer than five cases.

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

