# CANTON CITY HEALTH DEPARTMENT

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Canton City Health District

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Health Commissioner

Cancer Cluster Assessment Report
Census Tract 713100 – Canton Ohio (Georgetown Road NE)
May 19, 2017

This Cancer Cluster Assessment is the result of a concern expressed regarding a perceived high rate of cancer among residents near a steel production facility in Census Tract (CT) 713100. This analysis focuses on CT 713100 in Stark County, Ohio. CT 713100 covers 13.66 sq. mile and presents with a population of 5,903 residents.

In a public meeting held on April 4, 2017, the Canton City Health Department requested residents to complete a survey regarding their concerns. Once the data was collected, a protocol provided by the Ohio Department of Health was used to determine the need for further action. This protocol indicates that further action may be warranted if the concern involves the following:
- Multiple cases of one type of cancer or related cancers (similar types, common risk factors)
- Unusual types of cancer in a particular population or age group
- An unusual spatial (geographic) or temporal (time) pattern is suggested
- An exposure pathway to a cancer-causing agent is plausible
- A biologically plausible explanation for an increase in cancer cases has been determined

**Active Cancer Data Collection (Community Cancer Concern Forms)**
The Canton City Health Department, along with help from the community, collected Community Cancer Concern Forms from community members over a period of 26 days to identify previous and current cancer diagnoses. The collection of forms resulted in:
- Twelve completed forms with cancer data to the Canton City Health Department;
- An additional seven forms that included either no cancer diagnosis or listed non-cancer related health conditions;
- Eight different types/sites of cancer were reported;
- The median (average) time at a current residence among respondents was 14 years;
- Six residents reported a diagnosis address and current address as both in CT 713100, with 5 different cancer sites/types identified.
- Five residents reported a diagnosis address outside of CT 713100, but a current address in CT 713100, with 5 different cancer site/types identified.
- One resident reported a diagnosis address and current address both outside of CT 713100.
- There were 3 breast cancer cases reported, the diagnoses ranged over 4 decades; 3 prostate cases were also reported, with year of diagnoses ranging from "before 2005" to 2012.
- The other dates of cancer diagnoses reported ranged from "the 1990s" through 2016, with two reported as unknown.
- Forms postmarked or received after the May 1st deadline were not included in this analysis (n=1).

- **The types of cancer reported to was varied (breast, brain, pancreas, liver, throat, prostate, blood/bone) and do not represent multiple cases of one particular type of cancer.**

**Passive Cancer Surveillance (Cancer Incidence (New Cases) in CT 713100**
According to 2010 – 2014 data from the Ohio Cancer Incidence Surveillance System (OCISS), Ohio's central cancer registry:
- 10,680 cancer cases were diagnosed during this time period, averaging 2,136 cases each year among residents of **Stark County**;
- The average number of new cancer diagnoses in CT 713100 per year is almost 39 cases among a population of 5,903 residents;
- The population in CT 713100 is about 1.6 percent of the total population of Stark County; thus, it can be roughly estimated that we would expect to observe 35 new cases on average each year in CT 713100.

The observed number of cases (O) in CT 713100 for all cancer sites/types combined was compared to the number expected (E) based on 2010 – 2014 SEER rates for the general population. SEER, or The Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute provides information on cancer statistics in an effort to reduce the cancer burden among the U.S. population.

The expected number of cancer diagnoses in 713100, based on 2010 – 2014 SEER rates for the general population, also estimated 35 cases per year, which falls in line with the population distribution of CT 713100.
- The 194 observed cases in CT 713100 for 2010 – 2014 were determined to be not significantly higher than the 173 expected cases. Standardized Incident Ratio (SIR) was used to compare the number of observed cases to expected cases.
  (SIR = O/E. 713100 SIR for 2010-2014 = 1.1 (95% CI 0.969 - 1.291)).

When reviewing the data for new cancer diagnoses in CT 713100, OCISS was again used to gather data on all new diagnoses of invasive cancers to provide some background for residents. A total of 194 cases of invasive cancer were diagnosed and reported among residents of CT 713100 for the 5 year span of 2010 through 2014. This equates to almost 39 cases per year among a population of 5,903 residents.
- 52.6% (102) of cases were reported in men, 47.4% (92) reported in women, which is comparable to the distribution of the population at 50% male and 50% female.
- Cases were unequally distributed among races, with a little over 92% being white and almost 8% being black; however, this is comparable to the racial makeup of the population of 713100, as 90% of the residents report being white and 7.6% of the residents report being black.
- The greatest number of cases were diagnosed in two age groups: 65-69 with 14.4% (28) and 70-74 with 15.9% (30), making up almost 1/3 of all diagnoses.
- The most commonly diagnosed cancer site was lung and bronchus 15% (29), followed by breast 13.4% (26), colon and rectum 11.3% (22) and prostate 11.3% (22), which are the four leading cancer sites/types in both Ohio and the United States. These four types make up 51% of new cases in CT 713100. The remaining 49% are made up of 19 other cancers/sites/types and are as follows: Bladder 7.7%; Non-Hodgkin's Lymphoma 6.2%; Uterus 4.6%; Kidney and Renal 4.1%; Melanoma of the Skin 3.6%; Thyroid 3.1%; Oral Cavity and Pharynx 2.6%; Liver and Intrahepatic Bile Duct 2.1%; Larynx 1.5%; Cervix, Esophagus, Leukemia, and Stomach 1% each; Brain and

Other CNS, Hodgkin's Lymphoma, Multiple Myeloma, Ovary and Pancreases 0.5% each, and Other Sites/Types 6.7%.

Our analysis **does not** suggest that the burden of cancer in CT 713100 consists of an unusual geographic or time pattern.

Unfortunately, cancer is not a rare disease. One out of two males and one out of three females will develop cancer in their lifetime. Thus, it is not unusual to find multiple cases of cancer on one street or in a neighborhood. Also, cancer is not just one disease but more than 100 different diseases that have different risk factors.

Cancer risk factors may increase a person's chance of developing cancer. Some risk factors, such as tobacco use, can be changed, and others, such as age, cannot. Having a risk factor for cancer means a person is more likely to develop the disease at some point in his or her life. However, having one or more risk factors does not always mean a person will get cancer. Some people with one or more risk factors never develop the disease, while other people who develop cancer have no apparent risk factors. The known and suspect risk factors for some of the cancer types reported include:

- **Bladder Cancer**: Tobacco smoking is the greatest risk factor for bladder cancer—smokers are more than twice as likely to develop bladder cancer compared to nonsmokers. Other risk factors include: exposure to certain industrial chemicals among workers in the dye, rubber, chemical, metal, textile and leather industries; arsenic in drinking water; certain chemotherapy drugs; radiation to the pelvis; personal history of bladder cancer; and family history of bladder cancer.

- **Breast Cancer**: Approximately 10 percent of female breast cancers are linked to genetic factors, including mutations of the BRCA1 and BRCA2 genes. Other risk factors include: family history of breast cancer; personal history of breast cancer, ductal carcinoma *in situ*, benign breast disease or high breast tissue density; radiation to the chest as a child or young adult; menstruating before age 12 or starting menopause after age 55; not having children or having a first child after age 35; being obese; excess alcohol consumption; and long-term use of hormone replacement therapy.

- **Liver Cancer:** Factors that increase the risk of primary liver cancer include chronic infection with Hepatitis B or C, cirrhosis of the liver, diabetes, excessive alcohol consumption and certain inherited liver diseases.

- **Pancreatic Cancer**: For an unknown reason, men are somewhat more likely to develop pancreatic cancer than women. Almost 90% of cases are found in people 55 years or older. Having obesity, diabetes, chronic pancreatitis, cirrhosis of the liver and *H. pylori* (bacteria) infection can increase your risk, as well. Cigarette smoking are linked to 1/3 of all pancreatic cancer cases as well. It is also believed that about 10% of cases can be linked to genetic factors.

- **Prostate Cancer**: Several risk factors may contribute to the development of prostate cancer: older age; black race; having a father, brother or son with prostate cancer; inherited mutations in several genes (such as BRCA1 and BRCA2); abnormal prostate cells; and the use of Vitamin E.

- **Throat Cancer:** Throat cancer risk factors include tobacco use, both smoking and chewing tobacco, excessive alcohol use, the HPV virus, a diet lacking in fruits and vegetables and gastroesophageal reflux disease (GERD).

In summary, risk factors for these cancer types are varied and have few commonalities. In addition, there are very few known environmental risk factors for these specific cancer types. Reducing tobacco use, alcohol use and obesity rates in the community will help to prevent new cases of cancer from occurring in the future.

Taking all of this information into account, **there is no evidence to suggest that further action is warranted based on our cancer assessment protocol or the additional data analysis presented**.

The data provided to the CCHD by the community has been helpful in determining that there are not multiple cases of one type of cancer or related cancers, thus there is no reason to suspect that one common risk factor is contributing to the cancer burden in your neighborhood. It has also been determined that CT 713100 does not present with a higher burden of cancer than what would be expected in a population of your size.  We express our sympathy for all that your family and neighbors have endured. We hope this information is helpful to you, and suggest that you contact us if you have additional questions regarding the health of your community.


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