

# **NPCR 2019 Program Review Meeting**

## **Cancer Cluster Resources: South Carolina**

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**10:15 am – 11:15 am**  
**April 25, 2019**

**South Carolina Central Cancer Registry**  
**Bureau of Health Improvement & Equity**  
**SC Department of Health & Environmental Control**  
**Deborah Hurley: [hurleydm@dhec.sc.gov](mailto:hurleydm@dhec.sc.gov)**  
**Susan Bolick: [bolicks@dhec.sc.gov](mailto:bolicks@dhec.sc.gov)**

**Division of Cancer Prevention and Control**

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# South Carolina

- Requests: average 50/year
  - Excludes 'bulk' requests for special grants/projects
  - 1 meaningful cluster event
- Challenges: High profile, Legal
  - Media: e.g., childhood brain
  - Legal: e.g., childhood brain, leukemia (Trevor's Law)
  - Internal Partners
  - External Partners
- Successes: Routine, High Profile, Legal
  - Follow CDC/CSTE guidelines?
  - Stat/Epid Support Staff
  - Internal Partners
    - Administration
    - Office of General Council
  - External Partners
    - State Senator's Office
    - CDC, NPCR
    - ATSDR, NCEH

# Community Cancer Assessment (CCA) Report

## Sample CCA Report



March 12, 2018

To whom it may concern:

Thank you for your inquiry to the DHEC South Carolina Central Cancer Registry expressing concern about the occurrence of cancer in your area, ZIP code 29072. Cancer is far too common an occurrence in our state and in the U.S. Some general information may help you better understand cancer and how it can affect communities.

#### What is cancer?

"Cancer" is one term that is used to refer to over 100 different diseases. These diseases have in common an uncontrolled growth of abnormal cells and the ability to spread to body parts that are distant from the original site. Cancer is a very commonly occurring group of diseases. Nationwide, it strikes three out of four families, causes one out of four deaths, and is estimated to occur in one out of two men and one out of three women in their lifetime.

#### Where do cancers form?

Cancers of different types represent entirely different diseases. Cancers can start in many different places in the body, and even in different tissues (cells) within a given area. Different cancers also spread to different body parts. For example, cancer can begin in the throat and is most likely to spread to the lungs, while cancer starting in the breast is more likely to go to a bone, and cancer originating in the colon may progress to the liver.

Cancer can also form in the blood-forming cells. These are called leukemia. These are considered systemic as they are present throughout the body.

#### What causes cancers to form?

Different cancers have different risk factors that promote their development. For example, cigarette smoking has been proven to cause lung cancer, overexposure to the sun has been shown to be associated with the development of skin cancer, and lack of dietary fiber may be related to colorectal cancer. The No. 1 risk factor for cancer is age. As we age, our chances of being diagnosed with cancer increase. Other risk factors that have been identified include alcohol use,

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other tobacco use, family history of cancer, and some specific occupational exposures. Smoking, alcohol use, and poor diet account for 80 percent of the cancer deaths that occur.

The degree to which environmental pollution causes cancer is not precisely known, but most experts agree that less than 5 percent of cancers are caused by pollution. Given that specific exposures are linked to specific rare cancer types, if an environmental exposure was suspected to have caused cancer, its effects would be present in the occurrence of cases of the same type of cancer.

#### How quickly does cancer develop?

Cancers also differ with respect to the time between exposure to one or more cancer-causing agents and the development of cancer. Generally speaking, cancers commonly take 10 to 30 years or more to develop to the point of being detectable. When looking for the cause of cancer, exposures that took place at least 10 years before the cancer was diagnosed must be considered.

#### How much cancer is too much?

One case of cancer is too much, especially if it is a loved one, neighbor, or friend. However, everyone has been or will be touched by cancer among their family or friends. Although it sometimes seems that cancer is occurring now with greater frequency, it is important to remember that cancers are primarily diseases of older ages and that the American population now includes a higher proportion of older persons than ever before, and people are living longer due to progress made in other diseases, such as heart disease and infections. Secondly, methods to diagnose cancer have greatly improved, especially in children. Finally, much of the stigma formerly associated with having cancer has disappeared, and cancer patients are more likely to talk about their illnesses than they once were.

Because of these facts, in every community there is a certain number of cancer cases that is expected to occur just by chance. The Cancer Registry can look at cancer patterns in communities to assess whether cancer patterns there are unusually high or low compared to those expected numbers. Think of it this way: Are our cancer patterns similar to, or different from the rest of the state? If they are different, how different?

#### What is a true cancer cluster?

When the Cancer Registry receives reports of a group of cancers occurring among persons who live close together, they must examine the facts and conclude whether a true cluster exists. A true cancer cluster involves cases that are:

- 1) unusually high in number,
- 2) located in a specific area of the body and are a rare type of cancer, and
- 3) occur close together with respect to space and time.

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True clusters may be due to some identifiable factor or may occur simply by chance. This judgment is usually made on the basis of knowledge of disease patterns and probability statistics. The vast majority of apparent cancer clusters are chance events and not due to some identifiable common cause. In order to be linked to a common cause, it must be biologically possible for the substance not only to have been released into the environment, but also to have come into contact with persons in the surrounding area through a means that would present a risk and in a sufficient dose to cause illness. If all of these factors can be shown, the true cluster is then defined as a "meaningful cancer cluster" and further public health action may be warranted.

#### Guidelines the Cancer Registry follows to assess community cancer concerns

The Centers for Disease Control and Prevention (CDC) provides states with *Guidelines for Investigating Potential Cancer Clusters*. The guidelines take into consideration all of the criteria to determine a true cancer cluster: the number of cases, the level of the increase of the cases compared to what is expected for the community, and the type of cancer, whether cancers occurring are rare or common types. The probability statistics are then applied to the data from the most recent five years available in the Cancer Registry and results are assessed to determine if any excess of cancer cases or deaths is present in the area.

#### Cancer in ZIP Code 29072, South Carolina

In response to your specific concerns about cancer in ZIP code 29072, we looked at data for the most recent five years available from the Cancer Registry, 2011 - 2015. We examined the cases and deaths for all of the major cancer sites. We have provided the results of this assessment below. Please be aware that cancer cases at small area levels such as ZIP code fluctuate from year to year. Caution must be taken when small numbers are being used in these assessments. A small change can produce a large effect, so they may produce unstable results.

**Cancer Incidence:** The analysis revealed that no types of cancer showed any evidence of clustering. Therefore, no further action by DHEC is anticipated.

**Cancer deaths:** The analysis revealed that no types of cancer deaths showed any evidence of clustering. Therefore, no further action by DHEC is anticipated.

#### Summary

This overall assessment cannot tell us why the cancer patterns are high or low in any area, therefore no conclusions can be made. But it can guide us to look further when action is warranted based on scientific reasoning and when certain criteria are met.

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The development of cancer is a complex process that is not fully understood. Given the differences between the various types of cancer and the complexity of the development of cancer, when considering cancer causation, one must be careful not to think that all cancers are the same. Personal lifestyle factors account for most cases of cancer and are much more significant risk factors than are environmental exposures. Not all cancer can be prevented, but the best way to limit your risk is to avoid factors known to be related to cancer and to participate in routine screening programs in order to catch cancer in early stages, which increases the chances of a favorable outcome. Examples of these examinations include colonoscopy, Pap tests, breast self-examinations, and mammography. Further, the EPA recommends all homes be tested for radon, regardless of geographic location or the zone designation of the county in which they are located.

It is our sincere mission to provide the best cancer data possible to assist in assessing cancer patterns in our local South Carolina communities. I hope this information has been helpful, and, again, thank you for sharing your concerns with us.

Please contact me if you have any further concerns at (803) 898-8000 or (800) 817-4774.

Sincerely,

Susan Bolick, Director, MSPH, CTR  
South Carolina Central Cancer Registry

# Sample CCA Report: Summary

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- What is cancer?
- Where do cancers form?
- What causes cancer to form?
- How quickly does cancer develop?
- How much cancer is too much?
- What is a true cancer cluster?
- Guidelines the Cancer Registry Follows to assess community cancer concerns
- **Key findings of analysis**

# Results Tables for CCA Reports

site	Period	Observed	Expected	SMR	LowerCI	UpperCI	Summary
All Cancer Sites	2011-2015	1199	1099.1	1.1	1	1.2	Data do not support further action
Female Breast	2011-2015	223	171.9	1.3	1.1	1.5	Data do not support further action
Lung & Bronchus	2011-2015	145	160	0.9	0.8	1.1	Data do not support further action
Prostate	2011-2015	140	114.9	1.2	1	1.4	Data do not support further action
Colon & Rectum	2011-2015	89	89.6	1	0.8	1.2	Data do not support further action
Melanoma of Skin	2011-2015	63	65.8	1	0.7	1.2	Data do not support further action
Urinary Bladder	2011-2015	47	48	1	0.7	1.3	Data do not support further action
Leukemia	2011-2015	46	32.2	1.4	1	1.9	Data do not support further action
Pancreas	2011-2015	43	28.7	1.5	1.1	2	Data do not support further action
Non-Hodgkin Lymphoma	2011-2015	42	41.1	1	0.7	1.4	Data do not support further action
Kidney & Renal Pelvis	2011-2015	39	41.3	0.9	0.7	1.3	Data do not support further action
Non-invasive Brain & Other Nervous System	2011-2015	36	28.4	1.3	0.9	1.8	Data do not support further action
Uterus/Corpus/NOS	2011-2015	34	31.1	1.1	0.8	1.5	Data do not support further action
Oral Cavity & Pharynx	2011-2015	32	33.3	1	0.7	1.4	Data do not support further action
Thyroid	2011-2015	31	31.2	1	0.7	1.4	Data do not support further action
Brain & Other Nervous System	2011-2015	22	16.9	1.3	0.8	2	Data do not support further action
Myeloma	2011-2015	22	15.3	1.4	0.9	2.2	Data do not support further action

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Name	Date modified	Type	Size
CCA_29072_Mar2019_Report	3/27/2019 4:29 PM	Microsoft Excel 97...	40 KB
CCA_29072_Mar2019_Sig	3/27/2019 4:29 PM	Microsoft Excel 97...	78 KB
CCA_29072_Mar2019_All	3/27/2019 4:29 PM	Microsoft Excel 97...	305 KB
CCA_29072_Dec2017_All	12/21/2017 1:35 PM	Microsoft Excel 97...	248 KB
CCA_29072_Dec2017_Report	12/21/2017 1:35 PM	Microsoft Excel 97...	40 KB
CCA_29072_Dec2017_Sig	12/21/2017 1:35 PM	Microsoft Excel 97...	67 KB
CCA_29072_Feb2017_Report	12/21/2017 1:12 PM	Microsoft Excel 97...	39 KB
CCA_29072_Feb2017_Sig	12/21/2017 1:12 PM	Microsoft Excel 97...	60 KB
CCA_29072_Feb2017_All	12/21/2017 1:12 PM	Microsoft Excel 97...	228 KB
CCA_29072_Nov2017_AllChild	11/15/2017 10:20 ...	Microsoft Excel 97...	225 KB
CCA_29072_Nov2017_ReportChild	11/15/2017 10:20 ...	Microsoft Excel 97...	39 KB
CCA_29072_Nov2017_SigChild	11/15/2017 10:20 ...	Microsoft Excel 97...	21 KB
CCA_29072_Mar2016_All	3/11/2016 4:01 PM	Microsoft Excel 97...	207 KB
CCA_29072_Mar2016_Report	3/11/2016 4:01 PM	Microsoft Excel 97...	39 KB
CCA_29072_Mar2016_Sig	3/11/2016 4:01 PM	Microsoft Excel 97...	67 KB
CCA_29072_May2015_All	5/28/2015 12:28 PM	Microsoft Excel 97...	207 KB
CCA_29072_May2015_Report	5/28/2015 12:28 PM	Microsoft Excel 97...	39 KB
CCA_29072_May2015_Sig	5/28/2015 12:28 PM	Microsoft Excel 97...	69 KB

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Go to the official source of cancer prevention information: [www.cdc.gov/cancer](http://www.cdc.gov/cancer).

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



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