

## **Summary of Cancer Incidence and Mortality for Zip Code 29483 (Summerville, SC)**

### ***Cancer Incidence in Zip Code 29483***

The first step in the analysis of cancer data for zip code 29483 was to look at the number of new cancer cases diagnosed in the zip code and compare this to the number of cancer cases expected (see Table 1). This first step determines if there is anything unusual with cancer patterns in the area. The number of "expected" cancer cases is calculated by using South Carolina cancer rates and applying them to the population of the zip code.

Table 1 shows what types of cancer occurred in zip code 29483 from 1996-1999, and how many cases of each type of cancer were expected. Overall, there were fewer cases of cancer than expected, which is encouraging news. A total of 695 cases of cancer occurred in the zip code, while 697 cases were expected. The most common types of cancer were lung, female breast, prostate and colorectal cancers. These four types of cancer are also the most common cancers occurring across all of South Carolina.

The analysis revealed that there were no specific cancer sites where the number of cancer cases occurring was significantly higher than expected.

### ***Cancer Deaths in Zip Code 29483***

To assess cancer deaths in this zip code, cancer mortality data from 1996-2000 was used. This is the most current death data available. The same process used to analyze new cancer cases was also used to analyze cancer deaths. Table 2 shows the number of cancer deaths that occurred and the number expected in the zip code. A total of 406 cancer deaths occurred in this zip code, while 391 deaths were expected. There were more cancer deaths than expected; however, this difference was not significantly higher than expected.

There was one type of cancer (**lung**) where the number of cancer deaths was significantly higher than expected. A total of 137 lung cancer deaths occurred while 114 were expected.

Factors that can increase a person's risk of developing lung cancer include exposure to second-hand smoke, asbestos, and radon, as well as exposure to cancer-causing agents in the workplace, such as uranium, arsenic, vinyl chloride, nickel chromates, coal products, fuels, and diesel exhaust. In addition, recurring inflammation, such as from tuberculosis or pneumonia, can leave scarring on the lungs, increasing the risk of developing lung cancer. However, these risk factors are related to a smaller percentage of lung cancers. By far, the most important risk factor for lung cancer is smoking. We know that tobacco use accounts for almost 87% of all lung cancers<sup>1</sup>.

### ***Conclusions***

To summarize, fewer cancer cases occurred in zip code 29483 than expected. There were more cancer deaths than expected in the zip code; however, this difference was not significantly higher than expected. Analysis of specific cancer sites showed that lung cancer deaths were significantly higher than expected. However, we know that the majority of lung cancers are associated with a person's lifestyle (i.e. smoking).

Overall, there is no evidence of cancer clustering or of cancers resulting from environmental exposures. A cancer cluster exists when the number of cancers occurring is more than would be expected by chance. A cancer cluster is more likely to involve rarer cancers, like brain, rather than more common cancers, like lung or breast.

For questions about this report, please contact Laura Sanders at the SC Central Cancer Registry.

*Report provided by:*

SC Central Cancer Registry  
Department of Health and Environmental Control  
2600 Bull St.  
Columbia, SC 29201  
Phone: (800) 817-4774 or (803) 898-3696

**References**

1. American Cancer Society, 2001. [www.cancer.org](http://www.cancer.org)

Information on cancer incidence provided by the SC Central Cancer Registry, Office of Public Health Statistics and Information Services, SC Dept. of Health and Environmental Control.

Information on cancer mortality provided by the Division of Biostatistics, Office of Public Health Statistics and Information Services, SC Dept. of Health and Environmental Control.

7/25/02 lcs

**Table 1. Analysis of New Cancer Cases in Zip Code 29483, 1996-1999**

<b>Cancer Site</b>	<b>Observed No. of Cases</b>	<b>Expected No. of Cases</b>	<b>Observed/Expected</b>	<b>Chi-SquareTest*</b>
Lung/Bronchus	119	106.1	1.12	1.56
Breast (Female)	113	110.4	1.02	0.06
Prostate	98	106.2	0.92	0.63
Colon/Rectum	73	77.9	0.94	0.30
Bladder	24	25.8	0.93	0.13
Non-Hodgkin's Lymphoma	22	23.0	0.96	0.05
Melanoma	21	26.2	0.80	1.05
Oral/Pharynx	20	21.0	0.95	0.05
Uterus	19	17.2	1.10	0.18
Kidney/Renal Pelvis	17	17.9	0.95	0.05
Leukemia	17	13.9	1.22	0.68
Ovary	16	12.1	1.32	1.25
Pancreas	14	15.0	0.93	0.07
Stomach	11	10.7	1.03	0.01
Multiple Myeloma	10	7.6	1.32	0.78
Larynx	9	8.8	1.03	0.01
Cervix	8	11.4	0.70	1.02
Thyroid	8	8.6	0.93	0.04
Esophagus	7	9.6	0.73	0.70
Brain/CNS	4	10.3	0.39	3.88
Unknown Primary Site	16	NA	NA	NA
All Sites	695	696.6	1.00	0.00

NA = "Not Available"

Excludes in situ cases of cancer to allow for comparison.

Excludes cancer sites with less than 5 cases of cancer expected due to the unreliability of statistical tests based on small numbers.

\*The Chi-Square statistical test allows us to determine if the difference between what is observed and what is expected is significant. If the value is greater than 3.84, then we are 95% confident that the observed number of cases is significantly different from the expected number of cases.

Prepared by: SC Central Cancer Registry, Office of Public Health Statistics and Information Services, Department of Health and Environmental Control, 2600 Bull St., Columbia, SC 29201  
July 18, 2002 lcs

**Table 2. Analysis of Cancer Deaths in Zip Code 29483, 1996-2000**

<u>Cancer Site</u>	<u>Observed No. of Deaths</u>	<u>Expected No. of Deaths</u>	<u>Observed/Expected</u>	<u>Chi-SquareTest*</u>
Lung/Bronchus	137	113.6	1.21	4.81
Colon/Rectum	36	38.4	0.94	0.15
Prostate	27	23.3	1.16	0.58
Breast (Female)	26	31.0	0.84	0.80
Pancreas	22	21.2	1.04	0.03
Esophagus	15	9.9	1.52	2.63
Non-Hodgkin's Lymphoma	15	14.1	1.06	0.06
Leukemia	14	13.8	1.01	0.00
Brain/CNS	12	10.8	1.11	0.14
Ovary	10	9.1	1.10	0.09
Bladder	8	6.9	1.15	0.16
Kidney/Renal Pelvis	8	8.1	0.99	0.00
Liver	8	7.5	1.07	0.03
Oral/Pharynx	8	7.9	1.01	0.00
Stomach	7	10.0	0.70	0.89
Multiple Myeloma	5	8.6	0.58	1.51
Unknown Primary Site	27	NA	NA	NA
All Sites	406	391.2	1.04	0.56

NA = "Not Available"

Excludes cancer sites with less than 5 cancer deaths expected due to the unreliability of statistical tests based on small numbers.

\*The Chi-Square statistical test allows us to determine if the difference between what is observed and what is expected is significant. If the value is greater than 3.84, then we are 95% confident that the observed number of deaths is significantly different from the expected number of deaths.

Prepared by: SC Central Cancer Registry, Office of Public Health Statistics and Information Services, Department of Health and Environmental Control, 2600 Bull St., Columbia, SC 29201  
July 18, 2002 lcs