

**Mission:**

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



**Ron DeSantis**  
Governor

**Scott A. Rivkees, MD**  
State Surgeon General

**Vision:** To be the **Healthiest State** in the Nation

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December 3, 2020

### **Final Report: Bayshore High School Cancer Study**

The Florida Department of Health (DOH) takes health concerns brought forward by the community very seriously.

While no documented environmental exposure link could be found for the area of the old Bayshore High School, DOH proceeded to review data from the state cancer registry, the Florida Cancer Data System (FCDS), to address community concerns received by DOH in Manatee County.

FCDS data were reviewed for three time periods: 1986 to 1995, 1996 to 2005, and 2006 to 2015 for eight (8) cancer types in ZIP code 34210.

Cancer data from the FCDS and population data from the United States (U.S.) Census were used to calculate a standardized incidence ratio (SIR) respectively for each cancer type, allowing comparisons between the number of observed cases versus the number of expected cases to determine if the occurrence of these cancer types are higher or lower than one would expect given the population size and demographics of the local area in question.

The cancer types reviewed were: brain & other nervous system, breast, colorectal, Hodgkin's lymphoma, kidney and renal pelvis, leukemia, prostate, and thyroid.

A preliminary data summary is provided below:

- For the time period of 1986 to 1995, a statistically significant lower number of observed cases than expected was found for breast (expected 144.3 cancers, 116 cancers occurred) and leukemia (expected 11.6 cancers, 5 cancers occurred) in females and colorectal in males (expected 90.1 cancers, 72 cancers occurred).
- For the time period of 1996 to 2005, a statistically significant lower number of observed cases than expected was found for breast (expected 177.4 cancers, 152 cancers occurred), colorectal (expected 84 cancers, 63 cancers occurred), leukemia (expected 16.6 cancers, 9 cancers occurred), and thyroid (expected 9.2 cancers, 2 cancers occurred) in females and prostate (expected 252.3 cancers, 203 cancers occurred) in males.
- For the time period of 2006 to 2015, a statistically significant lower number of observed cases than expected was found for breast (expected 176.7 cancers, 129 cancers occurred) and thyroid (expected 17.2 cancers, 6 cancers occurred) in females and colorectal (expected 68.7 cancers, 49 cancers occurred), kidney & renal pelvis (expected 28 cancers, 19 cancers occurred), prostate (expected 190.8 cancers, 138 cancers occurred), and thyroid (expected 6.2 cancers, 2 cancers occurred) in males.

There are important contributing factors that are not included in an analysis of the SIR, such as the lifestyle factors and personal and family medical history of persons diagnosed with the respective

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cancer type and the length of time the person was living within that ZIP code. The SIR was adjusted for age and stratified by gender, but other factors, such as personal and family history and lifestyle factors, that increase or decrease one's risk of developing cancer could not be adjusted for.

Additionally, there are limitations to using FCDS data to address community cancer concerns. Although the FCDS data can be provided by select geographical areas (based at the time of diagnosis), these data represent a retrospective account of the burden of cancer for the area of concern. The FCDS collects outcome data; the FCDS does not collect environmental exposures, complete genetic data, nor residential history. The data submitted by reporters to the FCDS describes "who", "what", "when" and "where" of the cancer case. However, the FCDS does not collect data as to "why" nor can analyses of FCDS data alone determine why the occurrence of cancer in a specific area or population is happening.

For more information, please refer to Frequently Asked Questions (FAQs) document or the DOH website on cancer concerns: <http://www.floridahealth.gov/diseases-and-conditions/cancer/cancerregistry/cancer-concerns/index.html>

**Table 1.  
Standardized  
Incidence Ratio  
(SIR) by Cancer  
Site among  
Females, Zip  
Code 34210,  
Manatee County,  
Florida, 1986-1995**

Cancer Site	Observed*	Expected**	SIR (95% CI)†	Significant††
Brain & ONS	3	5.7	0.52 (0.00, 1.11)	No
Breast	116	144.3	0.80 (0.66, 0.95)	Yes
Colorectal	57	71.5	0.80 (0.59, 1.00)	No
Hodgkin's Lymphoma	1	1.6	0.63 (0.00, 1.86)	No
Kidney & Renal Pelvis	7	9.3	0.75 (0.19, 1.31)	No
Leukemia	5	11.6	0.43 (0.05, 0.81)	Yes
Prostate	---	---	---	---
Thyroid	4	4.2	0.96 (0.02, 1.90)	No
*Number of cancers found within the Florida Cancer Data System				
**Number of expected cases are calculated using the state-specific rate for the respective cancer type and 2000 U.S. Census population for the respective ZIP Code/ZCTA				
†Confidence Interval				
††If the Confidence Interval includes the value '1', then not statistically significant				

**Table 2.  
Standardized  
Incidence Ratio  
(SIR) by Cancer  
Site among  
Females, Zip  
Code 34210,  
Manatee County,  
Florida, 1996-2005**

<b>Cancer Site</b>	<b>Observed*</b>	<b>Expected**</b>	<b>SIR (95% CI)†</b>	<b>Significant††</b>
Brain & ONS	8	7.4	1.09 (0.33, 1.84)	No
Breast	152	177.4	0.86 (0.72, 0.99)	Yes
Colorectal	63	84	0.75 (0.56, 0.94)	Yes
Hodgkin's Lymphoma	1	2	0.51 (0.00, 1.50)	No
Kidney & Renal Pelvis	13	14.1	0.92 (0.42, 1.43)	No
Leukemia	9	16.6	0.54 (0.19, 0.90)	Yes
Prostate	---	---	---	---
Thyroid	2	9.2	0.22 (0.00, 0.52)	Yes
*Number of cancers found within the Florida Cancer Data System				
**Number of expected cases are calculated using the state-specific rate for the respective cancer type and 2000 U.S. Census population for the respective ZIP Code/ZCTA				
†Confidence Interval				
††If the Confidence Interval includes the value '1', then not statistically significant				

**Table 3.  
Standardized  
Incidence Ratio  
(SIR) by Cancer  
Site among  
Females, Zip  
Code 34210,  
Manatee County,  
Florida, 2006-2015**

<b>Cancer Site</b>	<b>Observed*</b>	<b>Expected**</b>	<b>SIR (95% CI†)</b>	<b>Significant††</b>
Brain & ONS	9	7.4	1.21 (0.42, 2.00)	No
Breast	129	176.7	0.73 (0.60, 0.86)	Yes
Colorectal	52	63.6	0.82 (0.60, 1.04)	No
Hodgkin's Lymphoma	3	2.4	1.23 (0.00, 2.63)	No
Kidney & Renal Pelvis	12	16.4	0.73 (0.32, 1.15)	No
Leukemia	19	21.6	0.88 (0.48, 1.28)	No
Prostate	---	---	---	---
Thyroid	6	17.2	0.35 (0.07, 0.63)	Yes
*Number of cancers found within the Florida Cancer Data System				
**Number of expected cases are calculated using the state-specific rate for the respective cancer type and 2000 U.S. Census population for the respective ZIP Code/ZCTA				
†Confidence Interval				
††If the Confidence Interval includes the value '1', then not statistically significant				

**Table 4.  
Standardized  
Incidence Ratio  
(SIR) by Cancer  
Site among Males,  
Zip  
Code 34210,  
Manatee County,  
Florida, 1986-1995**

<b>Cancer Site</b>	<b>Observed*</b>	<b>Expected**</b>	<b>SIR (95% CI†)</b>	<b>Significant††</b>
Brain & ONS	6	7.3	0.82 (0.16, 1.48)	No
Breast	---	---	---	
Colorectal	72	90.1	0.80 (0.61, 0.98)	Yes
Hodgkin's Lymphoma	3	2	1.47 (0.00, 3.14)	No
Kidney & Renal Pelvis	12	16.9	0.71 (0.31, 1.11)	No
Leukemia	23	17.4	1.32 (0.78, 1.86)	No
Prostate	212	221.7	0.96 (0.83, 1.09)	No
Thyroid	1	2.1	0.48 (0.00, 1.43)	No
*Number of cancers found within the Florida Cancer Data System				
**Number of expected cases are calculated using the state-specific rate for the respective cancer type and 2000 U.S. Census population for the respective ZIP Code/ZCTA				
†Confidence Interval				
††If the Confidence Interval includes the value '1', then not statistically significant				

**Table 5.  
Standardized  
Incidence Ratio  
(SIR) by Cancer  
Site among Males,  
Zip Code 34210,  
Manatee County,  
Florida, 1996-2005**

<b>Cancer Site</b>	<b>Observed*</b>	<b>Expected**</b>	<b>SIR (95% CI)†</b>	<b>Significant††</b>
Brain & ONS	7	8.9	0.78 (0.20, 1.36)	No
Breast	---	---	---	
Colorectal	85	97.1	0.88 (0.69, 1.06)	No
Hodgkin's Lymphoma	2	2.4	0.83 (0.00, 1.97)	No
Kidney & Renal Pelvis	23	24.7	0.93 (0.55, 1.31)	No
Leukemia	24	25.4	0.94 (0.57, 1.32)	No
Prostate	203	252.3	0.80 (0.69, 0.92)	Yes
Thyroid	4	3.8	1.05 (0.02, 2.07)	No
*Number of cancers found within the Florida Cancer Data System				
**Number of expected cases are calculated using the state-specific rate for the respective cancer type and 2000 U.S. Census population for the respective ZIP Code/ZCTA				
†Confidence Interval				
††If the Confidence Interval includes the value '1', then not statistically significant				

**Table 6.  
Standardized  
Incidence Ratio  
(SIR) by Cancer  
Site among Males,  
Zip Code 34210,  
Manatee County,  
Florida, 2006-2015**

<b>Cancer Site</b>	<b>Observed*</b>	<b>Expected**</b>	<b>SIR (95% CI†)</b>	<b>Significant††</b>
Brain & ONS	8	8.8	0.91 (0.28, 1.54)	No
Breast	---	---	---	
Colorectal	49	68.7	0.71 (0.51, 0.91)	Yes
Hodgkin's Lymphoma	5	2.9	1.74 (0.21, 3.26)	No
Kidney & Renal Pelvis	19	28	0.68 (0.37, 0.98)	Yes
Leukemia	27	30.1	0.90 (0.56, 1.24)	No
Prostate	138	190.8	0.72 (0.60, 0.84)	Yes
Thyroid	2	6.2	0.32 (0.00, 0.77)	Yes
*Number of cancers found within the Florida Cancer Data System				
**Number of expected cases are calculated using the state-specific rate for the respective cancer type and 2000 U.S. Census population for the respective ZIP Code/ZCTA				
†Confidence Interval				
††If the Confidence Interval includes the value '1', then not statistically significant				