



May 10, 2019

Sarah Rankin, MPH, BSN, OCN
Public Health Nurse
Southwest Pennsylvania Environmental Health Project
2001 Waterdam Plaza Drive, Suite 201
McMurray, PA 15317

Dear Ms. Rankin,

Thank you very much for your questions about our report titled “Ewing’s Family of Tumors, Childhood Cancer, and Radiation Related Cancer Incidence Review for Washington County and Canon-McMillan School District in Pennsylvania”. We truly appreciate what you and your organization is doing for the community. We value all the inputs, feedbacks, and suggestions from local organizations and stakeholders like yours to better our service to the community. Please see below for our line by line responses to your questions in bold:

1. How were the three time periods used in your study selected? Your report chose to look at the data over three timeframes – from 1985 to 1994 (9 years), from 1995 to 2004 (9 years), and from 2005 to 2017 (12 years). Why are the time periods not uniform? Wouldn’t the reporting of more cases within a shorter time frame increase statistical significance?

We used three time periods for the analysis to assess any trend in incidence. The three-time periods were created as such so we can use the mid-time period Census population for the ratio calculation. For example, the 1990 Census population was used for the time period 1985-1994 to calculate the standard incidence ratio (SIR), the 2000 Census population for the time period 1995-2004 SIR calculation, and the 2010 Census population for the last period of 2005-2017. The first two time periods are both 10 years, and the last time period is 13 years. Typically, we would have used 2005 to 2014 which is also 10 years as the last time period for consistency. However, we incorporated the 2015 to 2017 data into the last time period for this analysis since residents were concerned with the recent case development. We would not suggest analyzing 2015-2017 (3 years) data as this would involve too short a period and very small numbers. In fact, there were no cases during this time period in the school district.

Using a shorter time period is not best practice for areas with extremely small incidence. In fact, small incidence within a shorter time period will decrease the statistical power to detect any statistical difference and results in wide confidence intervals.

2. Why hasn't the standardized incidence ratio pertaining to bone cancer within the Canon-McMillan school district been marked with a double asterisk to indicate statistical significance or been mentioned elsewhere in the report? There were 10 observed cases with 4.45 expected resulting in an SIR of 2.25 and a confidence interval of 1.08 to 4.13. If statistical significance is your test of whether or not further epidemiologic investigation is warranted, we would like to know why this is an exception. Or was this an oversight?

Thank you for catching that error. You are correct this confidence interval should have been double asterisk marked as statistically significant. In our interpretation of the data and of the overall trend, we did note this cancer as statistically significant. However, we did not mark it correctly in the table.

We do not base our interpretation on one significant finding. We assess and compare findings over the three time periods, and between genders, to determine the overall trend and any consistent findings.

3. Since Kyle Deliere's father has publicly confirmed that his son was in fact a resident of Cecil Township up to and including his time of diagnosis, what is your plan to update the analysis to include him?

We appreciate Mr. Deliere's valuable information. We checked our cancer registry data and did find Kyle's information. Both Kyle's addresses at time of diagnosis and listed as current address were not in the Canon-McMillan school district. If we change Kyle's address information to the school district, we will need to verify all other cases' addresses, so we do not introduce any bias into the address determination.

4. Being that time is of the essence, is there a reasonable method to estimate the state rate of Ewing sarcoma for 2018 so that you would be able to perform this analysis utilizing the two cases diagnosed in 2018 within the Canon-McMillan school district (Mitch Barton and David Cobb) that have been brought to light? We understand that your data source is the Pennsylvania Cancer Registry, for which there is a two-year lag. However, waiting a year to include local cases that can be verified today seems to place procedure over the need to get the facts on the table.

The Pennsylvania Cancer Registry made a number of updates to their software program and reporting protocols last year. Currently they have not received any 2018 cancer data yet. The registry has just operationalized the new software and are beginning to capture 2018 cancer cases from reporting facilities. It will take approximately 6 months or more to receive, analyze and validate the 2018 cancer data. We expect the 2018 cancer data file to be finalized in January 2020.

Ewing's sarcoma is a rare type of cancer, the statewide count has been varying from between 21 cases to 37 cases in the last 7 years. It is not possible to estimate or predict the state-wide case count given this fluctuation.

5. As has been recommended by Representative Tim O’Neal, is there a plan for a public meeting to clarify your message to the concerned community members of the Canon-McMillan area?

Given feedback from the community and local officials regarding the methodology and feedback, the Department of Health is seeking verification of the report from the CDC. While we are confident in the findings and methodology, confirmation from the CDC will address concerns raised. After this review we will revisit meeting with local officials about the findings.

I hope you will find those answers helpful. Again, thank you for contacting Pennsylvania Department of Health, Bureau of Epidemiology. Please do not hesitate to contact us at 717-787-3350 should you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'SMW', with a long horizontal flourish extending to the right.

Sharon M. Watkins, Ph.D.
State Epidemiologist
Director, Bureau of Epidemiology