

NEW YORK

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The New York State Environmental Facilities and Cancer Map

NATIONAL PROGRAM OF CANCER REGISTRIES SUCCESS STORY

SUMMARY: In 2018, the New York State Cancer Registry updated its Environmental Facilities and Cancer Map web application. Here, users can see cancer counts by cancer site for small areas within the state along with the locations of regulated environmental facilities. The updated application includes many new features designed to be intuitive and user-friendly.

CHALLENGE: Citizens of New York State are interested in understanding more about the cancer burden in their communities. Although 1 in 3 women and 1 in 2 men will be diagnosed with cancer in their lifetimes, there remains a public perception that cancer is a rare condition that is mainly found in areas affected by environmental contamination. In 2010, New York State passed legislation mandating that cancer data be presented at the census block group level.

SOLUTION: In the web application users can obtain 5-year counts for 23 different types of cancer in over 13,000 small areas of about 1,500 people each. Exact locations are also provided for 15 types of regulated facilities, such as hazardous waste generators and Superfund sites. A separate feature depicts larger zones of unusually high or low incidence determined by a spatial scan statistic. OpenStreetMap, a detailed map of the world created entirely by volunteers and in the public domain, is used as the backdrop.

RESULTS: The web application highlights the ubiquitous nature of cancer, with some 600,000 cancers tallied. The small areas average over 40 cancers each, regardless of whether they are in the city or the country, upstate or downstate. (A minimum of 6 male and 6 female cancers was set to protect patient confidentiality, but few areas are near this threshold). The layers showing unusually high or low incidence reveal a modest tendency for some areas to differ from the state average by 50%. It is rare for an area to have cancer rates that are twice as high as the state rate. These can be difficult concepts to explain to a citizen concerned that their own neighborhood is uniquely afflicted with cancer, but this application demonstrates that a picture can be worth a thousand words.

SUSTAINING SUCCESS: The Environmental Facilities and Cancer Map web application is an important element in the Cancer Research Initiative announced by Governor Andrew Cuomo in late 2017. The goal of the initiative is to examine patterns, trends and potential causes contributing to cancer incidence in New York State while connecting New Yorkers with diagnostic and preventive services and treatment. The initiative is focused on four diverse areas in New York where cancer rates are elevated, either overall or for specific cancer types. The web application has been instrumental in helping identify, characterize and communicate information about these study areas to the public. New York is fortunate to be the only state in the nation with this type of cancer data reporting resource.

