Children with cancer are not at a higher risk for COVID-19 infection or morbidity

May 13 2020

Credit: CC0 Public Domain

Researchers from MSK Kids at Memorial Sloan Kettering Cancer Center (MSK) found that children with cancer are not at a higher risk of being affected by COVID-19. This new research led by Andrew Kung,

MD, Ph.D., Chair of MSK Kids and his colleagues was published today in *JAMA Oncology*. MSK Kids is one of the largest pediatric cancer programs in the United States with a patient population that includes children, adolescents and young adults with cancer and a small proportion with non-oncological diseases such as bone marrow failure and immunodeficiencies.

Pediatric cancer patients are no more vulnerable than other children to COVID-19 infection or morbidity resulting from COVID-19. Of all children with cancer infected with COVID-19, 95 percent had mild symptoms and did not require hospitalization. MSK Kids clinicians also tested asymptomatic children with cancer finding only a 2.5 percent rate of positivity compared to nearly 15 percent in their adult caregivers. Only half of the children with COVID-19 positive caregivers were themselves also COVID-19 positive. The researchers also found a very significant sex skewing with the vast majority of COVID-19 infections occurring in males. Together, these results suggest that children with cancer are not more susceptible than other children to infection or symptoms resulting from COVID-19, and that children are not an unrecognized reservoir of asymptomatic COVID-19 infection.

From March 10 through April 12, 2020, MSK Kids researchers instituted a screening and testing plan to mitigate risk associated with infection with COVID-19. MSK Kids patients were screened for exposure to contacts with known COVID-19 infection or for the presence of symptoms of COVID-19 illness at MSK. Researches performed COVID-19 testing on pediatric patients and their adult caregivers. Of the 178 unique pediatric cancer patients tested, the rate of positivity for COVID-19 was 29.3 percent in children with symptoms, but only 2.5 percent in asymptomatic children. Of the 20 patients who tested positive for COVID-19, only 3 were female.

Only one patient with COVID-19 illness required non-critical care

hospitalization for COVID-19 associated symptoms. All other pediatric patients had mild disease symptoms and were managed at home. Of the 74 adult caregivers tested, 13 caregivers of 10 patients were found to be positive for COVID-19, including a 14.7 percent rate of COVID-19 infection in asymptomatic caregivers. Only half of the patients with COVID-19 positive caregivers were themselves also COVID-19 positive, suggesting low infectivity in children despite close household contacts.

While the overall numbers in the study are small, the data confirms that the overall morbidity of COVID-19 illness in pediatric cancer patients is low with only 5 percent requiring hospitalization for symptoms of COVID-19 infection; and that the rate of COVID-19 infection among asymptomatic pediatric patients is very low.

"COVID-19 in Children with Cancer in New York City" was published in the May 13, 2020 edition of *JAMA Oncology*.

"We are encouraged by these latest findings that kids with cancer are not more endangered by COVID-19 and their symptoms are mild like in healthy children," said Andrew Kung, MD, Ph.D., and corresponding author on the study. "These findings allow us to continue lifesaving cancer-directed therapy with standard precautions and safeguards but without heightened concern about adverse effects from COVID-19 infection."

Provided by Memorial Sloan Kettering Cancer Center