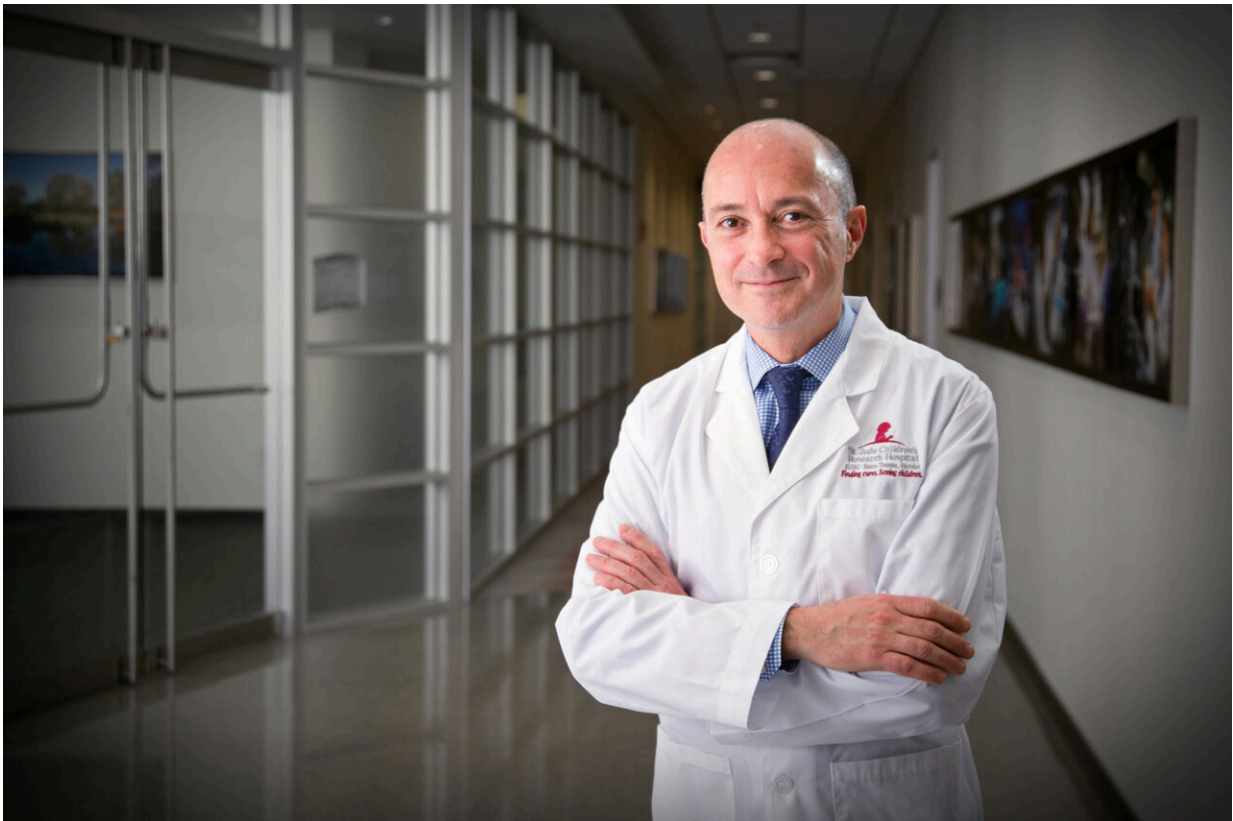


COVID-19 in children with cancer: Severe disease and disrupted treatment

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Carlos Rodriguez-Galindo, M.D., St. Jude Global director, issues a call to action to address inequities in access to protective and effective treatment measures against the COVID-19 pandemic worldwide. Credit: St. Jude Children's Research Hospital

Research from a large international effort shows that 20% of children

with cancer who are infected with SARS-CoV-2 develop severe infections. In studies of children overall, only 1-6% have reported severe infections. The results come from the Global Registry of COVID-19 in Childhood Cancer, which was launched by St. Jude Children's Research Hospital and the International Society of Paediatric Oncology (SIOP). The registry gathers data on the pandemic's effect on this unique patient population. The findings were published today in *The Lancet Oncology*.

Results from the registry indicated that in addition to more severe or critical infections, pediatric [cancer](#) patients were more likely to be hospitalized and die than were other [children](#). The pandemic also disrupted [cancer treatment](#). These effects were observed more significantly in low- and [middle-income countries](#), where the odds of severe or critical disease from COVID-19 were nearly 6 times higher than in high-income countries.

"The results clearly and definitively show that children with cancer fare worse with COVID-19 than children without cancer," said corresponding author Sheena Mukkada, M.D., St. Jude Departments of Global Pediatric Medicine and Infectious Diseases. "This [global collaboration](#) helps clinicians make evidence-based decisions about prevention and treatment, which, unfortunately, remain relevant as the pandemic continues."

A greater burden for childhood cancer patients

This is the first multinational study to describe the outcomes of a large cohort of children and adolescents with cancer or hematopoietic stem cell transplantation and laboratory diagnosis of COVID-19. The registry remains open and is enrolling children younger than 19 years old.

The analysis looked at 1,500 children from 131 hospitals in 45 countries from April 15, 2020, to February 1, 2021. This is prior to vaccinations

becoming available to [older children](#) in some areas of the globe, as well as prior to the emergence of certain disease variants, including delta, which are responsible for the new surge and have become a major global concern.

The study found that 65% of patients were hospitalized and 17% required admission or transfer to a higher level of care. It also showed that 4% of patients died due to COVID-19 infections, compared to 0.01-0.7% mortality reported among general pediatric patients. Cancer care was also affected. Cancer therapy was modified in 56% of patients and 45% had chemotherapy withheld while their infections were treated.

"By working together to create this global registry, we have enabled hospitals around the world to rapidly share and learn how COVID-19 is affecting children with cancer," said the paper's co-author, Professor Kathy Pritchard-Jones, SIOP president. "The results are reassuring that many children can continue their cancer treatment safely, but they also highlight important clinical features that may predict a more severe clinical course and the need for greater vigilance for some patients."

A global pandemic and a global response

The registry suggests biologic factors that likely influence how children with cancer respond to COVID-19. Those include immune system function and the underlying disease. Analysis also showed that outcomes vary around the world, although the registry does not pinpoint causes. This variation may be due to a multitude of factors, including disruptions from the pandemic, access to care and resources, or delays in infection diagnosis.

Results from the registry are a call to action to address inequities in access to protective and effective treatment measures against the

COVID-19 pandemic worldwide.

"Understanding a global crisis like COVID-19 requires our entire childhood cancer community around the world to come together to respond," said senior author Carlos Rodriguez-Galindo, M.D., St. Jude Global director. "The impact of this disease has been felt in every corner of the world, but particularly in low- and middle-income countries compared to high-income countries. There are critical differences based on where a child lives. This registry is a tool that is helping us understand what that means for children with cancer everywhere."

The [registry](#) is still enrolling patients and continues to add new countries. It includes freely available data-visualization tools so that anyone, anywhere, can access the information.

More information: Global Characteristics and Outcomes of SARS-CoV-2 Infection Among Children and Adolescents with Cancer (GRCCC): A cohort study, *The Lancet Oncology* (2021). [DOI: 10.1016/S1470-2045\(21\)00454-X](#)

Provided by St. Jude Children's Research Hospital

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