

# Clinical trial tests oral cancer drug to combat respiratory symptoms of COVID-19

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This scanning electron microscope image shows SARS-CoV-2 (yellow)—also known as 2019-nCoV, the virus that causes COVID-19—isolated from a patient, emerging from the surface of cells (blue/pink) cultured in the lab. Credit: NIAID-RML

Researchers at The Ohio State University Comprehensive Cancer

Center—Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC—James) and The Ohio State University Wexner Medical Center are conducting a new clinical trial to determine if an oral cancer drug called ibrutinib can also help patients with cancer or other immunocompromised conditions recover from COVID-19.

For this phase II clinical trial, physicians at the OSUCCC—James will enroll up to 78 patients with cancer or a precancerous condition who have been hospitalized as a result of a COVID-19 infection. Patients will be randomized to receive either 14 days of [standard treatment](#) plus the study drug ibrutinib, or standard treatment alone.

Ibrutinib is an oral therapy in a class of drugs known as Bruton's [tyrosine kinase](#) (BTK) inhibitors. These drugs work by blocking specific chemical reactions in the body involved in cellular processes. Use of this drug is considered experimental for this study; however, ibrutinib is approved by the U.S. Food and Drug Administration for the treatment of certain cancers, including [mantle cell lymphoma](#), [chronic lymphocytic leukemia](#)/small lymphocytic lymphoma and others.

Jennifer Woyach, MD, an OSUCCC—James hematologist and co-principal investigator of the study, says preliminary data suggests ibrutinib has the potential to reduce rates of respiratory failure and death in COVID-19-infected patients.

"Ibrutinib targets and blocks a specific kinase related to lung inflammation, so we believe it could have real potential to help decrease this inflammation by shutting down the inappropriate cytokine release we see in COVID-19—a sort of overreaction from the [immune system](#) that can cause many problems, including life-threatening respiratory challenges," explains Woyach.

Patients will be monitored throughout study treatment with bloodwork to

measure inflammatory markers, immune response and other bodily functions.

"Individuals with cancer or certain precancerous conditions can have lower immunity to diseases and infection, due to treatment or the nature of the disease. It is critically important that we perform [clinical trials](#) to try to improve COVID-19 care in these patients, because a COVID-19 infection can be even more dangerous for those who are immunocompromised," says Zeinab El Boghdadly, MBBCh, Infectious Disease physician at the Ohio State University Wexner Medical Center and co-principal Investigator for the trial.

Provided by Ohio State University Medical Center

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