

Researchers launch clinical trial to help reduce severity of COVID-19 illness in men

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UCLA researchers have launched a new clinical trial that uses a hormone suppresser commonly used to treat men with prostate cancer to help improve clinical outcomes for men infected with COVID-19.

The phase 2 trial will assess if temporarily suppressing [male hormones](#) will reduce the severity of COVID-19 illness by helping patients get out of the hospital faster, decrease the need for intubation and improve mortality. The UCLA-led study is being conducted at the Veterans Affairs Greater Los Angeles Healthcare System and other VA sites across the country.

"It's becoming pretty clear that men are more likely than women to die from COVID-19 and we think there is a connection between [prostate cancer](#) research and our understanding of COVID-19 research," said principal investigator Matthew Rettig, MD, professor of medicine and urology at the David Geffen School of Medicine at UCLA and member of the UCLA Jonsson Comprehensive Cancer Center.

Recent data from New York City, the epicenter of infections in the United States, show that men are not only infected in greater numbers, but they are also dying at nearly twice the rate of women.

The convergence between prostate [cancer](#) research and COVID-19 research begins with a [protein receptor](#) called TMPRSS2, which is abnormal in about half of all prostate cancer patients and plays a role in the development and progression of prostate cancer.

This is the same receptor that researchers believe the virus uses to enter the lungs and attack lung tissue. The receptor is regulated by male hormones in [prostate](#) cancer, and researchers believe it may also be regulated in lung tissue by male hormones.

"It's kind of like a lock and key," said Rettig, who is also the chief of hematology/oncology at the Veterans Affairs Greater Los Angeles Healthcare System. "If the virus was the key and its receptor is the lock, then the virus inserts into the lock and can gain entry into the lung while the male hormones makes that lock more accessible to the virus. By suppressing the male hormones, it's kind of like putting a piece of masking tape over the lock so that the key won't fit in."

In the UCLA-led clinical trial, researchers will suppress male hormones using the FDA-approved medication known as degarelix, to temporarily shut down the production of TMPRSS2 and block the virus from entering lung tissue.

"We're hoping this will not only help men with COVID-19 get out of the hospital faster, but ultimately, see less men dying from the virus," said Rettig.

More information: Xinchun Wang et al. Transcriptional Inhibition of Host Viral Entry Proteins as a Therapeutic Strategy for SARS-CoV-2. [DOI: 10.20944/preprints202003.0360.v1](https://doi.org/10.20944/preprints202003.0360.v1)

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