



COVID-19 Updates for the LAM Community: Outcomes, Omicron, and Other Options

Nishant Gupta, MD | January 10, 2022

Another new year comes with a new wave of COVID-19 infections brought on by another variant of the SARS-CoV-2 virus. This new variant, named Omicron, carries several different mutations in the spike protein compared to the prior variants, and is highly transmissible. While there is a lot of uncertainty regarding the severity of infections from this variant, the degree of protection afforded by the current vaccinations, and the future with regards to COVID-19, the basic rules regarding protection from severe disease are still the same. The following summarizes and updates key concepts related to COVID-19 that are **relevant to individuals with LAM**.

Outcomes following COVID-19 infection in patients with LAM

An international group of investigators compiled and analyzed data from patients with LAM around the world looking at outcomes following COVID-19 infection. This study included 91 women with LAM; 77 with Sporadic-LAM and 14 with TSC-LAM. The study was a true international representation of the LAM community and included patients from the United States, Brazil, Europe, and Japan. About half of the patients in this analysis were on an mTOR inhibitor (sirolimus or everolimus) at the time of their infection, at an average sirolimus dose of 2mg daily. Somewhat unsurprisingly, patients on mTOR inhibitors had worse lung function compared with untreated patients (patients with more severe disease tend to be prescribed mTOR inhibitors more commonly than patients with mild disease).

The major findings from this study were:

1. the overall outcomes following COVID-19 in patients with LAM were similar to the general population, with an approximately 1% risk of mortality,
2. reduced diffusion capacity was associated with an increased risk of hospitalization or the need for supplemental oxygen following COVID-19 infection, and
3. the overall outcomes were similar in patients who were taking mTOR inhibitors versus those not on mTOR inhibitors.

These data were derived prior to the widespread availability of vaccines and the advent of other antiviral treatment options, and likely represent an assessment of the complications following infection with the alpha variant (the first wave of COVID-19). While the implications of these results for the current variants (delta and omicron) are not fully known, the availability of vaccines and current treatment options should translate to improved, or at least no worse, outcomes for patients with LAM as compared with the above-mentioned data.

Omicron variant

The Omicron variant is highly transmissible and is spreading rapidly. The pace of this spread is likely to remain high during the next few weeks of winter. Please be mindful of your local community's spread of COVID-19 and continue to take all precautions such as social distancing, wearing a mask, avoiding crowded spaces, and frequent hand washing. Upgrading from cloth masks to a surgical mask or a N95 type mask is a good idea, especially when coming in contact with other people in indoor settings. As was the case with the Delta variant, **vaccination remains the best strategy to reduce the chances of acquiring severe illness**. If you haven't been vaccinated, please do so as soon as possible. If you have completed the initial series of vaccination, but haven't received the booster dose, you should seriously consider getting the booster dose. More details on COVID-19 vaccinations can be found [here](#) and [here](#).

What to do if you have tested positive

Isolate yourself from other family members. Most patients with COVID-19 have mild disease and are able to recover at home. Take plenty of rest, stay hydrated, and use over-the-counter medications such as acetaminophen for symptom control. Inform your physician(s) about your diagnosis so they can guide you towards the best next steps taking into account your disease severity and other medical conditions.

Monoclonal antibodies: Unlike naturally produced antibodies, monoclonal antibodies are made in a laboratory and are designed to bind to the circulating SARS-CoV-2 virus. These antibodies are given as a single dose via an intravenous infusion, and can help reduce the chance of progressing to severe disease. This therapy is recommended for patients with mild-moderate COVID-19 who have one or more **conditions** that predispose them to a high risk of progression to severe illness. The antibodies are most efficacious if taken early in the disease course, and should be administered as soon as possible after a positive test and within 10 days of symptom onset. More information on Sotrovimab, one of the monoclonal antibodies, is available [here](#).

Antivirals: Two oral antiviral medications, Paxlovid (nirmatrelvir plus ritonavir) and Molnupiravir have recently received emergency use authorization by the United States Food and Drug Administration for the treatment of COVID-19. Similar to monoclonal antibodies, these drugs are meant for the treatment of adults with mild-to-moderate COVID-19 who are at **high risk** for progressing to severe illness, and have the highest efficacy if taken early in the disease course. These drugs should be administered as soon as possible after a positive test and within 5 days of symptom onset. More information on these drugs is available [here](#) and [here](#).

The choice between the above treatment approaches is likely to be dictated by several factors such as the duration of symptom onset, other comorbidities, concomitant medications, and local availability. It is possible that there might be potential drug-drug interactions between the antiviral medications and your other medications (including sirolimus). As such, please carefully consider and seek guidance from your healthcare providers when making decisions regarding monoclonal antibodies and antiviral medications.

Lastly, while it is nice to have these options in our arsenal to combat COVID-19, vaccines remain the best public health measure to protect people from COVID-19, slow transmission, and reduce the likelihood of new variants emerging.

We will continue to closely monitor the COVID-19 situation and will provide regular updates as new developments arise.



About Nishant Gupta, MD: *Dr. Gupta is Scientific and Medical Director of The LAM Foundation and holds The LAM Foundation Professorship for LAM Research at the University of Cincinnati (UC). He is an Associate Professor in the Division of Pulmonary, Critical Care and Sleep Medicine at UC, where he serves as the director of the interstitial and rare lung diseases program. Dr. Gupta's clinical and research focus is on the field of rare lung diseases such as LAM, and his work is aimed at better defining the natural history, improving detection, and developing novel treatment modalities and monitoring strategies for LAM patients.*

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