SPEAKER 1: This is an exciting time in the treatment and diagnosis of NTM lung disease. Through better molecular and better laboratory techniques, we understand there's over 200 species of NTM. Fortunately, the majority of these do not make us sick. But today we understand better what types of bacteria are out there, and what to do about them when they make people ill.

I would say this is a great time, because we're looking at more advances and more research into drug studies. We understand that inhaled drugs do work for NTM, and that they can be used for MAC lung disease and avoid some of the systemic toxicities of intravenous medications. We're also trying to investigate how maybe one or two drugs could work, instead of having people on multiple drugs, even three or four sometimes.

So I think that as we move forward in this day and age in NTM and in the treatment of the most common NTM, MAC, I think we understand that it's important to diagnose. I think we see better physician input and physician interest in actually making the diagnosis with a low index of suspicion for people that chronically cough. For patients with nodular bronchiectasis with few side effects and that have never been treated or are naive to therapy, the majority of these patients can be treated with three times weekly therapy with a macrolide, weight based ethambutol, and a rifamycin, such as rifampin.

Sputum should be serially monitored, and if the patient remains culture negative after six months, inhaled amikacin could be added, such as arikayse, or the liposomal form, or therapy could be changed to include intravenous aminoglycocides, such as IV amikacin. Other tips is that you can also switch the refampin to rifabutin if the patient can tolerate this. There are other drugs on the market that are being investigated, and that some subspecialists in this disease process reach for, such as clofazimine, bedaquiline, sometimes linezolid or tedizolid.

But really those are usually used at the hands of an experienced clinician. In contrast, I think that with cavitray disease, we take a very aggressive approach, the same way that we do with refractory MAC lung disease, or resistant lung disease. We use daily therapy in these types of patients with a macrolyde, again, weight based ethambutol, and azithromycin, with the addition of an aminoglycocide.

Often that is intravenous amikacin, but more and more often we're starting to actually reach for inhaled amikacin. And the CONVERT study that looked at the liposomal form actually had some cases of cavitary disease in the study. We need to better understand cavitary disease and when to use intravenous versus an inhaled product.