

**SPEAKER 1:** So now you have a patient in whom you've decided needs to be treated. And so you need, first off, to know which bug you intend to treat, because the therapeutic approach to treating MAC is very different than the approach to treating mycobacterium abscessus, for example. So I'm going to limit my conversation to the patients who have MAC lung disease, in which you've decided to initiate treatment.

And the ATS/IDSA guidelines offer recommendations. I'm going to share those with you, as well as talk about what we do at our center, which is just perhaps a bit different. But I think that the intent of them is still reasonable, in terms of the approach.

Now, the first key component is that it requires a multidrug regimen for a long period of time. And so at no time do we recommend monotherapy for the treatment of MAC. Now, something about that, in our patients who have bronchiectasis and COPD, we have been using chronic macrolides as a therapy to prevent exacerbations or to reduce some of the inflammatory changes in cough, and with actually great success.

But the caveat to that recommendation is that, that is not appropriate therapy in patients who have nontuberculosis mycobacteria present in cultures. And the reason for that is we don't want to select out a macrolide-resistant organism, because that is a terribly important component of our treatment regimen.

The ATS/IDSA guidelines recommend treatment based upon certain factors that are known about the patient. One is the extent of disease, meaning there is a difference between a patient who has a milder disease-- they have nodular bronchiectasis, compared to the patient with more progressive disease-- that patient who has cavitation.

There is also a difference in terms of whether the patient has been treated before. So in a patient who has recurrent disease, a relapsed infection, you might be more worried about the possibility of antibiotic resistance. In our hands, we send the bug off for susceptibility testing. We don't necessarily hold back on initial treatment waiting on those results because they may take weeks, but we do tailor our therapy towards the treatment of those patients based upon susceptibility.

In patients who have nodular bronchiectasis, a typical regimen will be a three-drug regimen, which includes a macrolide, like azithromycin or clarithromycin, or rifampin or rifabutin, and ethambutol. Now, the guidelines will recommend that you could use a three time a week regimen in those patients. That is one area in which we divert and we actually feel more comfortable with daily therapy based upon our interpretation of pharmacoeconomic principles.

Obviously, I think that the three times a week regimen is a function of patient's tolerability. For many of these patients, these medicines may be hard to take. And that was sort of a compromise, trying to find a level of therapy that patients could tolerate and still have meaningful success. There are patients who respond to three times a week dosing.

So in our typical patient, a regimen of azithromycin, ethambutol, and rifampin would be appropriate. We would adjust that based upon any other drug interactions or other comorbidities that might impact our use of those medications.