

**SPEAKER:** So while monitoring patients and looking for what actually triggers that decision to treat, it actually isn't the culture data that defines that. It's not that your patient has gone from two plus to three plus on the smear and that's the trigger. The microbiologic data are only informing you what bugs that you have present in the lower airways.

So it's either a change in their symptoms or it's a change in the radiographic features. So where we see changes in symptoms, it's either when it is clearly evident that the symptoms they've been dealing with are getting worse. They're losing weight. Some people really focus on the presence of night sweats. Others, it's the cough. How much is it interfering with life? And certainly, hemoptysis would be a very striking finding.

Radiographically, what you're looking for is evidence of progression. Cavities are a clear sign of destructive lung disease. And so, a patient who shows up on presentation and they have cavitary lung disease, we're not waiting to see if there's going to be additional change. If there's no other explanation for cavitary lung disease, that's a clear sign that the person has a more progressive disease.

In those patients who don't have cavities, what you're looking for is an expansion of nodules. Now, a caveat to that is that the nodules don't necessarily mean that's the mycobacterium. There are other reasons for people to have nodules. And aspiration is probably the one we think of the most.

And so, a very common finding when you look at repeated CT imaging on patients is sometimes nodules improve. And if you're on therapy, you'd say, well, that's great. My therapy is working. But then, how do you explain it that there are new nodules in another part of the lung?

And so, when we look at nodules, we're looking for whether they are persisting, whether they've increased in number, or they've increased in area, and trying to make sure that we've worked out whether or not their risk of aspiration has been mitigated. So if I'm seeing on the X-ray that the patient has progression with more nodules, expansion of bronchiectasis, or any evidence of cavitation, however small, that, to me, is a sign this patient needs to be treated.