**SPEAKER 1:** Who has a pathologist working with them directly? OK. Terrific.

I will tell you those of you that if you're fighting the fight to get rows or someone says, I don't know if that's a resource we need, et cetera, there is a wealth of literature and guidelines that support that you are better at your job when you have the pathologist there with you. This is a collaborative effort, and it is becoming the standard.

So frequently, this involves resources. This involves someone in administration having to push a button. If you need that equivalent, it's becoming more and more the norm. And the pathology societies are getting behind this as well.

**SPEAKER 2:** Right. The people that do have rows onsite, do they have a-- how many have-- are able to see what the pathologist is seeing on the screen. Is there anybody?

**SPEAKER 1:** A handful, OK.

**SPEAKER 2:** Because I think that also has a-- makes a big difference. It has an impact.

**SPEAKER 1:** But these are all images from our BronchSuite, as I'll show you in a minute. So we have a digital scope. So what Jeff is looking at up on the same-- on one of our monitors, I'm looking at as well and so that we can be having a dialogue about what we're seeing and having a debate even. And also, important, because when he says, look, I think-- I see a tumor here, for example, but you don't have a lot. And that's not nearly enough for us to do any form of a molecular analysis-- which we'll talk about-- so that I can see what he's talking about when it comes to adequacy.

But what's considered diagnostic? Because cancer obviously is easy. That's cancer. Next. But what else?

**SPEAKER 2:** So adequacy-- a smear being adequate would be evidence that you've got the targeted lesion, whether it's a lymph node or the tumor itself. And here are some examples. All of these three pictures are actual cases that we had, and they're all adequate.

The bottom-left is another lymph node with a antcharotic pigment. And antcharotic pigment can also cause adenopathy It can cause enlargement of the nodes.

The histiocytes can cause-- that are eating the pigment can cause positive PET scan because of the metabolic activity. And the upper-right is a lymph node, but in the middle, there's a granuloma. And again, it's the histiocytes and the granuloma can also cause an adenopathy.

So that's evidence that you are in the nodes. So that is considered adequate. And in the bottom-right is just a benign lymph node.

**SPEAKER 1:** So a great example, when we first started doing EBUS-TBNAs and we didn't have onsite pathology, it turns out our friends down in pathology didn't like how we were collecting our samples. We were collecting some and putting them into like cores and putting them into a tea bag to drop into formalin. And they said, why are you doing that?

Why are you wasting all that? Put everything in the CytoLite. We're going to spin it down. We'll do smears at the bedside when they started coming. We changed our technique of sample preparation simply by listening to the person who was going to be reviewing them.

It's actually it sounds so easy and simple, but let me give you another example. When I navigate to the periphery, I don't use brushes anymore. And the reason I don't use brushes is that three out of my five cytopathologists hate them. Flat out tell me that they will never make a cancer call a of a brush. So guess who doesn't use brushes anymore?

Now I know plenty of people who work in other institutions. That's their favorite instrument. The only reason I modified what I do is the guy who has to tell me whether I've got cancer or not says I'll never call it off a brush.

OK. I'll use a needle. I'll use the forceps. Communication. Would you agree?

**SPEAKER 2:** Definitely.

**SPEAKER 1:** And Jeff was not the guy. He likes brushes.

**SPEAKER 2:** I do. And another reason I think that communication working together is so critical, sometimes these lesions, we go in expecting to get tumor, and we get something that looks infectious. So we need to change what we're doing right then and start putting it in a culture medium, or we may see something that looks like a lymphoma. And then we need to put it into RPMI. So it's really important that we're working together.

**SPEAKER 1:** Yeah, that has been key, because frequently, you know, you come in with some level of a pre-test probability. But clearly, if you knew 100%, you couldn't have been biopsying them in the first place, right. So why don't we go through our ROSE workflow? Jeff, I'll build through this build. And then you can tell it to everybody.

**SPEAKER 2:** So where we are, we have the advantage of having a cytopathologist always on-call, onsite for all bronchoscopy, all endoscopy, MCT. And we go-- they call when they are ready for us. We go right into the room-- usually, cytopathologist and the cytotech.

They make the smear-- or they hand us a slide with the material. We make the smear. We stain it with DiffQuick, quick look under the microscope, and then we communicate right away what we're seeing. But we're also looking at it at the same time.

**SPEAKER 1:** So we'll put one drop onto the slide and the rest goes into the CytoLite as well, ultimately then for cell block and analysis or obviously into a culture media if we think something infectious [INAUDIBLE] right.

**SPEAKER 2:** Right. Exactly.

**SPEAKER 1:** So here's one example what our suite looks like. You can see the two large monitors. We can change the input. And then we prepare the samples there. There's yours truly working with my technician. And then over into the radiology and slash cytology bay is the digital scope that will ultimately project on.

A great example of this was a case from about a week ago. Just to make another plug for why we adequately stage, this was a person who had a right-sided lesion. So we started it at 4L, 7 millimeter node. And this was-- this is very representative of the entire slide. But, Jeff.

**SPEAKER 2:** Yeah, there's plenty of tumor there. That's a very adequate smear. It's adequate for diagnosis, but it also likely is adequate for molecular studies. This field probably has around 1,000 cells. You start to get a feel for estimating the number of cells present.

**SPEAKER 1:** So ultimately, this slide was covered in it. But it's another great example of it. So there's the team.