



## **Transbronchial Cryobiopsy for the Diagnosis of ILD**

Sapana Panday: Hello. The PILOT team is here in Toronto at the Chest Annual Conference. I'm here with Dr Paul Noble. Dr. Noble, I heard you just attended a great session on cryobiopsy. Can you tell us a little bit about it?

Dr. Paul Noble: Sure, it's my pleasure. Working as a clinician in the field of interstitial lung diseases, one of the big challenges we face is to decide whether we need to get a tissue biopsy in patients, and it's been known for a long time that transbronchial biopsies do not provide enough tissue to be able to make an interstitial lung disease diagnosis. So one of the procedures that's been developing over the last few years is a cryobiopsy. So, where a probe is placed through the bronchus into the meat of the lung, tissue is frozen, not crushed, frozen, and then removed for pathologic evaluation.

So, I had the good fortune to listen to two outstanding lectures. One was from Dr. Poletti, from Italy, who probably has the world's largest experience with cryobiopsies, performing over 700 of those. He described his approach and importantly, talked about the diagnostic yield as well as the complication rate. The big challenge with interstitial lung disease is determining whether one has usual interstitial pneumonia or they don't. What he reported was that in his experience, about 80% of the time they are able to establish a confident diagnosis when the patient is presented to a multidisciplinary conference.

So, if you compare this to the transbronchial biopsy, where the yield is generally less than 20%, it's a major advance. However, there are significant complications that can occur; bleeding is the main one. The pneumothorax rate also can be a bit higher. The real crux of the matter though is comparing the cryobiopsy to the surgical, or the video assisted thoracoscopic biopsy. Dr. Tom Colby, who is one of the leading interstitial lung disease pathologists in the world, described his experience, largely reviewing many of the cases that were performed in Italy, and there were some very, very important points made. First of all, the minimum size of the biopsy is probably half a centimeter. Now that's significantly smaller than what you get with a surgical lung biopsy, but larger than what you get with a transbronchial biopsy. The incidence of a non-diagnostic procedure is about 10%. So, this represents a major advance over transbronchial biopsies. Now the size of the biopsies and the diagnostic yield are not quite as high as the video assisted thoracoscopic surgical biopsy, but on the other hand, the complication rate is different, and particularly many patients

have pain after a surgical procedure and some patients will have worsening disease.

So, my take home message from this was that this is a procedure that is likely to be around for some time and as individuals get skilled and gain more experience, it may substantially decrease the number of surgical biopsies that are needed. The conclusion was it would not replace surgical lung biopsy, but in an individual patient situation, it may well be the procedure of choice.