Biomarkers in IPF and Other ILDs

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One of the exciting pieces of data had to do with prognostication, which as we know, is so important and interstitial lung disease in general and specifically in IPF. But this study was a multi-center study with UC Davis as well as University of Chicago. And what they did was they collected patients not with IPF, because they previously looked at some plasma biomarker serum biomarkers and IPF that they showed discriminated future survival, but what they wanted to do is look at those same four biomarkers and apply them to different groups of interstitial lung disease. And they looked at chronic hypersensitivity pneumonitis, they looked at connective tissue disease ILD patients, and they looked at unclassifiable ILD patients and they, again, simple concept, a tube of blood, run the biomarkers and then they had clinical data were able to follow the patients out over time. And it seemed like the four candidate molecules that had been previously shown some discrimination and IPF also played a role in the subsets as well. And then specifically, MMPy and CXCL13. So for those of us seeing patients in clinical practice, and we don't have commercially available assays or our hospital doesn't run those tests, it's not live for prime time in terms of helping us sort out the prognosis. But I think that it really paves the way that there are going to be more biomarkers in these diseases as we gather more data over time that eventually will translate into doing a blood test that may tell us more than just lung function, six minute walk test, and really help us partner with patients and counseling them on their future.

I think prognosis for patients diagnosed with IPF remains an area of a lot of frustration for both patients and physicians like predicting how well someone's going to do. And so I think various groups are trying to pin down what are important prognostic indicators. And there was some expert data that something as simple as a white blood cell count that's routinely measured and CBC's, both in the outpatient setting in the inpatient setting, looking at that white blood cell count. And those with a higher than average white blood cell count, if you sort of take the median of a group of IPF patients, and you have those over the median, below the median, and the data that that I'm speaking of for all IPF patients together, that seemed to be about a white blood cell count of 8.2. So for those who had white blood cell count over that, or under it, there seemed to be separation and how they did over the long term. And this was interesting when it was repeated. So that was at baseline. But then if you repeat it, at least three months later, and I think the study was about a median of 5.8 months later, if you repeat in those same patients, another white blood cell count, those who started out high, didn't do as well as those who had a normal or reduced white blood cell count. But if you repeat it later, the ones who started out high were further at risk if their white blood cell count went higher. It seemed to be primarily driven on neutrophils in terms of what was driving that relationship. And we can't say if that relationship exists because those patients are infected, if they're more inflamed, exactly why, but what we can say is in a clinical Gestalt, pay attention to the white blood cell count. There may be more information there than we initially realized.