Direct from the World Conference on Lung Cancer 2015

What is the Current Role of Serum Based Biomarker Testing?

TRANSCRIPT
**Dr. West:** At the World Lung meeting, we saw more new data and materials being promoted about serum-based testing of biomarkers – certainly more than I’ve seen at a prior meeting, and it seems like the technology is approaching a cusp of true clinical utility. What are your thoughts – how are you using serum-based testing, or even urine-based testing, I’ve seen little bit of work one, is that something that you’re using at all now, is it something that you think is fast-approaching, or still kind of in the distant future and inferior to tissue-based testing? Ben, I’ll start with you.

**Dr. Solomon:** Yes, so, I think a challenge with lung cancer patients is getting serial biopsies, and now we’re in a situation where getting a repeat biopsy can actually change treatment, and the example of that is a patient with an EGFR mutation who’s progressing on what we now call first-generation EGFR inhibitors. If these patients have another biopsy of their disease that has progressed, that shows a T790m mutation, then they’re likely to benefit from a third generation inhibitor. But, for a lot of patients, these biopsies are difficult to get, and I think that’s the real place that plasma DNA testing is likely to first make a clinical impact, and things like T790m change over time. Technology like blood-based testing allows us to follow that in a patient in a very non-invasive manner, so I think that’s probably the first place that...

**Dr. West:** And these drugs are really coming out, hopefully in the next few months, where there’s going to be a much greater demand for repeat biopsies of some type, whether it is tissue biopsies, or a so-called liquid biopsy – a blood serum test. Leora, what are your thoughts here?
Dr. Horn: So, Lecia Sequist had really nice data at ASCO, showing that there was good sensitivity with a blood-based testing for T790m. So, I think that it is something that’s going to be more readily used. It’s easier for patients, especially in smaller community settings where there may not be an interventional radiologist or an interventional pulmonologist who can readily go get tissue, and patients, if they know their disease is progressing, will want to switch. I think where it will get a little bit difficult is if we start using them routinely, and you see a patient on an EGFR inhibitor has now developed T790m in their blood, but their CT scan looks good, you know, are we going to be using this for monitoring, and what do you do in that situation?

Dr. West: Yeah, I think that’s a different question of using it sequentially to monitor impending progression, or, you know, serum-based progression versus clinical progression. I personally feel like that would be a real mistake. We don’t have enough good therapies that we should discard any effective therapy too early based on a number that doesn’t have any good clinical correlate. To me, it’s like looking at a telescope and seeing a meteor coming in, you know, thirty years and freaking out about it now. Already, you could do things like PET scanning all the time, or use something as old as CEA levels – and sometimes we see people get taken off of chemotherapy, or a targeted therapy, that they’re tolerating well and their scans don’t change, but their CEA went from 33 to 40, and that triggered what I would say is an ill advised change, and I’d be afraid of someone seeing T790m on a blood test and making a change too early.
Dr. Solomon: I agree, there is no current data that supports changing from a first generation EGFR inhibitor to a third generation, just based on the presence of a T790m mutation in blood, in the absence of disease progression, on the basis of the current data.

Dr. Horn: I agree with you, but you’re going to see it, and that’s what I worry about.

Dr. West: No doubt, we already see people getting taken off of treatments based on CEA levels or a PET scan – to me it seems like you’re just changing lanes in traffic, it’s not getting you anywhere faster, it’s just – don’t just stand there, do something, as if that’s a reason to make a change.
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