Lung Cancer Q&A: Can Mutations Change Over Time?

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Andrew Schorr:
So, somebody might have a lung biopsy. Get some tissue. That goes to Dr. Boyle and her colleagues.

Dr. Gray:
Yes.

Andrew Schorr:
Wherever in the world you get treatment. And they're taking a look at it to see where in this wheel—what comes up for them?

Dr. Gray:
Correct.

Andrew Schorr:
And then also there's a—in that purple bubble there it says, "Tumor testing can happen at any point." And so, we talked about driver genes.

Dr. Gray:
Yes.

Andrew Schorr:
And then Dr. Boyle mentioned passenger genes.

Dr. Gray:
Yes.

Andrew Schorr:
Well, they can change over time, right?

Dr. Gray:
Correct.

Andrew Schorr:
There's an argument for having testing again at some later time, right?

Dr. Gray:
Absolutely. And so, for example, if you have an EGFR mutation and I give you an EGFR inhibitor, you then have a chance that your tumor can mutate against that specific drug that I'm giving you. And you can acquire a different mutation. And so, how do I know what's going on? I need to get more tissue or—I don't know when we're planning on talking about it, but this is a good segue into liquid biopsies.

So, a liquid biopsy is getting a blood sample from patients and looking—specifically looking again at this wheel, looking at those mutations to see if we can identify them.

Andrew Schorr:
Okay.

Dr. Gray:
And so, it is very, very important to keep monitoring patients, getting their blood, getting their tissue over time so we can make educated decisions. Again, just to relate this to something I think we're all very familiar with is infections. If you keep giving the infection the same antibiotic, what happens? It develops resistance. And these drugs are no different and cancer's no different. It's just we have to stay ahead of the game and try to keep trying to outsmart the tumor.