What Role Does Genetic Testing Play in Hodgkin Lymphoma Care?

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Esther Schorr:
I have one other technical question. What about genetic testing?

Andrew Schorr:
Oh, right.

Esther Schorr:
So, we've talked about that on some of the other leukemias and lymphomas. Where does that fit in the initial diagnosis, and then deciding on treatment?

Andrew Schorr:
What's your genomic version of Hodgkin's, or does it matter?

Dr. Evens:
It's there. Go ahead, Josh.

Dr. Brody:
So, we have a lot of understanding of the genomics of Hodgkin's lymphoma. I'll mention first that those studies have been trickier because there's one very interesting, weird thing about Hodgkin's lymphoma. If you look at a tumor of Hodgkin's lymphoma, the Hodgkin's lymphoma cell itself is sort of a 1-in-1,000 cell. Most cancers—if you look at lung cancer, it's mostly lung cancer. If you look in these tumors—and, this is why the diagnosis can sometimes be difficult, because you have to look very closely, you have to look at the 999 cells that are not the actual cancer cell, and then find this crucial cell we call a "Reed-Sternberg cell," the actual Hodgkin's lymphoma cell.

So, those studies of the genomics have been a little difficult because we first had to learn how to dissect out that one cell to do the genomic studies, but in the past few years, a few groups have done this with great success. There are a lot of things

known about the genomics. I'll just mention one thing that's relevant to the therapies. There are changes in one of the chromosomes—so, we have 23 mom chromosomes, 23 dad chromosomes, and these cancer cells—one of their chromosomes can undergo changes.

In Hodgkin's lymphoma, frequently, the ninth chromosome in a little part at the short end of the ninth we call 9p1—part of that chromosome can undergo either amplifications—you get more copies of it—or translocations—that chromosome moves over to another chromosome—and the result of that is we get more of a couple of these things we mentioned before: The checkpoint blockade ligands, the things that turn off the immune cells—so, these are things called PD-L1, PD-L2, and these 9p1 amplifications cause the immune system to be quiet and not attack the cancer cell. That's why the checkpoint blockade can be so effective.

So, it's a known feature, but it's not that we so much use that information to decide which therapy is best for which patient because so many people have it and it probably wouldn't be worth checking for on every person. Most people do have those things, and we probably wouldn't know how to treat them differently—yet, anyway.

Andrew Schorr:
That's what I wanted to get to. So, if Esther's the mom, I'm the dad, or it's our parents or grandparents, not our children, should we be saying, "Hey, are you doing this test?" It sounds like the genomic test is not so critical.

Esther Schorr:
It's different than in other...

Andrew Schorr:
…so, what should we be advocating for or what question should we be asking, Andrew, so that we—so, what you've been seeing at the convention center next door or even clinical trial opportunities are brought to bear for our loved one?

Dr. Evens:
Right now, in the otherwise healthy patient, there isn't a screening test—and, I wouldn't raise an alarm, so to speak, and in terms of that. Certainly, as Dr. Brody had mentioned at the beginning, if there is a persistent lymph node that isn't going away or unusual symptoms like those B symptoms, that should be worked up, but other than that, there aren't a lot of prevention or screening tests right now for Hodgkin's.

Andrew Schorr:
Okay. But, then again, now we want to get the benefit of these changes in the alphabet soup of treatments you're using. So, how do we know and what should we –

Dr. Evens:
Once you're diagnosed, you mean?

Andrew Schorr:
Once you're diagnosed, what about a treatment plan?

Dr. Evens:
Sure, yeah. And, I would say there are very common themes, and common treatments, and platforms, and all of that, but I really—and, I think Dr. Brody feels the same way—it's not one size fits all. You have a body of data, and whether it falls into any of the groups we talked about—early-stage, advanced-stage, relapsed—certainly, there are more-common-than-not treatment platforms, but of course, you try to individualize it. We don't quite yet incorporate genetic, but obviously, how old the patient is, any comorbidities, and their preference.

You can be more aggressive than not aggressive, you could try to be less aggressive than more aggressive, more targeted, and I think it's really that discussion with the patient, whether young or old, and say, "Here's the more common platform, and here's Option 1, but here might be Option 1b as well," and really help try to choose the pros and the cons between that.

Esther Schorr:
It sounds like that dialogue is critical.

Dr. Evens:
The only thing I'll mention is where it gets a little tricky or really just kind of encompasses the discussion is especially for younger patients who are newly diagnosed because when you have that cure rate that's north of 90 percent, we obviously hope they're gonna live another 50 to 60 years, and there's something we call late effects. Whether it's radiation or even chemotherapy, we know there are, unfortunately, side effects that can happen later in life—20 to 30 years later, whether a second cancer, heart disease, et cetera. And so, we think about that, we talk about that, we incorporate that into the decision-making.