



Precision Medicine Podcast, Season 3, Episode 47

Bill Bonello and Clynt Taylor Examine the Future of Precision Medicine and How to Provide Better Access to More Patients

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Karan Cushman, Producer:

Welcome to Season Three of the Precision Medicine Podcast sponsored by Trapelo. This is the podcast where experts come to discuss the problems oncologists, reference labs, and payers face as precision medicine grows and consider solutions for advancing the quality of patient-centered cancer care. Be sure to subscribe at precisionmedicinepodcast.com to get the latest episodes delivered straight to your inbox.

Jerome Madison, Host:

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Welcome to another episode of the precision medicine podcast. I'm Jerome Madison. And today we have bill Bonello, president of NeoGenomics Informatics and also Clynt Taylor, CEO of Trapelo Health. Thank you both for joining us on the Precision Medicine Podcast.

Clynt Taylor:

Thank you, Jerome.

Jerome Madison:

Bill and Clynt, by now, many of our listeners and other folks in the market have heard about the acquisition of Trapelo Health by NeoGenomics Informatics and many know NeoGenomics to be a clinical laboratory, but Bill, can you explain Neo's mission on the clinical side and why the development of a separate bioinformatics company became so important to the company's vision?

Bill Bonello:

Sure. I'd be delighted to do that, Jerome. First of all, I'd stress that NeoGenomics has three divisions, clinical services division, a pharma services division, and an informatics divisions. And we all share a common purpose or mission, which is to save lives by improving patient care. We



may arrive at that mission through a different set of activities. So on the clinical side, we are the largest cancer testing lab in the United States. On the pharma services side, we provide cancer testing for pharmaceutical companies for research and development and clinical trials. And on the informatics side, we're trying to use our data and our position in the marketplace to develop additional solutions that will help to improve cancer care.

Jerome Madison:

Bill, tell me a little bit about some of the challenges that you see in delivering on the promise of precision medicine.

Bill Bonello:

Well, for precision medicine to work, patients must be tested for the appropriate biomarkers and the same situation exists for clinical trials. There may be biomarkers that aren't necessarily in guidelines, but would be helpful in matching a patient to an appropriate clinical trial. At NeoGenomics, we are the largest oncology lab in the nation and, unfortunately, we know from experience that testing does not always happen. We test for ourselves, for more than half a million patients each year and perform more than a million tests. And we know from analysis of our own data that patients aren't always tested for the biomarkers that are currently indicated in guidelines or the latest literature.

Jerome Madison:

Can you give me some real life examples that you see at NeoGenomics?

Bill Bonello:

Sure. One example is with therapies for non-small cell lung cancer. We happen to be the number one provider of PDL testing in the nation, so we see a tremendous number of lung cancer patients. It's pretty commonly understood that many of these patients are candidates for immune checkpoint inhibitors, often referred to as immunotherapies. However, an immunotherapy isn't always the most appropriate course for a patient. We know that up to 35% of patients with non-small cell lung cancer have actionable genetic mutations and up to 55% of patients with metastatic non-small cell lung cancer have clinically relevant mutations. Nevertheless, less than 25% of non-small cell lung cancer patients receive testing for all four of the most common biomarkers, which are EGFR, ALK, RS1 and BRAF, and just 7% of patients receive testing for all seven genes that are included in clinical guidelines. And that's just one example.

Jerome Madison:

I think a lot of people will be surprised to learn that patients don't always receive the appropriate tests. Why do you think that happens?

Bill Bonello:

Well, I think about 80% of treatment occurs in the community and most of these oncologists are seeing a very broad range of cancers, making it next to impossible to keep up with the most current science and even the guidelines. Also, the guidelines alone change at a pretty rapid clip. I think sometimes a guideline for a specific cancer can change as much as six times over the course of a year. And while laboratories like NeoGenomics are doing their very best to keep the



oncologists up to date, those efforts just simply aren't always enough to change testing behavior. It's just a tremendous amount of information for those physicians to have to keep up with.

Jerome Madison:

You've detailed the challenges around selecting the right tests for the right patient. But what about selecting therapies? Because there's still a gap between patients who have a positive test for a mutation and actually getting the drug. What are some of the challenges that you see there?

Bill Bonello:

Well, to start, obviously, choosing the right therapy is predicated on having performed the correct test. If the right testing isn't happening, the right therapy is probably not being selected. But the challenge, as you mentioned, is greater than that, greater than just getting the right test. Again, the pace of science and the evolution of treatment is happening at such a rapid clip that it's just very difficult for oncologists to keep up with all of that information, in terms of what the latest and most appropriate therapies are.

Bill Bonello:

Also, with the advent of larger panels on the testing side, the quantity of information that a physician receives in a test result can be absolutely overwhelming. It becomes really challenging for the physician to make sense of all the inputs that are coming in a test result and to then clearly know the most appropriate course of action to take based on all of that information. And remember, these are physicians that are incredibly busy. I mean, they may be seeing a different patient every 15 minutes throughout the course of a day. To sit and read a gigantic test result with information about dozens of different biomarkers is incredibly time consuming.

Jerome Madison:

Yeah, I understand. Do you see similar challenges when it comes to identifying appropriate clinical trials?

Bill Bonello:

Absolutely. The challenge with trials is even greater. Trial markers aren't included in guidelines. Physicians may not even be aware that a particular trial is happening, certainly that a particular biomarker would be relevant to that trial.

Jerome Madison:

Bill, you mentioned that 80% of patients are treated in the community setting, and I know that NeoGenomics has a significant presence among community oncologists and pathologists, but can you talk about the difference in the practice between community and academic settings?

Bill Bonello:

Yeah. In an academic center, the clinicians are awfully highly specialized and typically involved in research, and as such, they are in a better position to keep up with the most recent scientific developments in their area of expertise. I'm not saying that it's a guarantee that every physician in an academic setting is going to be ordering the right tests and prescribing the right therapies, but they certainly are positioned to be more specialized in that way. But as I mentioned earlier,



something like 80% of care actually happens in the community and most of those physicians aren't specialized, and it's a huge challenge for them to keep up.

Bill Bonello:

Interestingly, the barrier is not access to testing. Companies such as NeoGenomics have cutting edge test menus that provide community physicians with access to the most up-to-date testing methodologies. We, for instance, are constantly updating our panels to include relevant biomarkers as science evolves as publications come out. The challenges with the education, and frankly, with the lack of a system that makes it easy for physicians to know what tests to order at the time that they're actually making an order.

Jerome Madison:

So how is NeoGenomics trying to overcome these challenges?

Bill Bonello:

We are trying to make clinical decision support for both diagnostic test selection, or test selection, as well as therapies broadly available to oncologists and pathologists across the country, again, with a particular focus on those physicians practicing in the community. Our first step is going to be to incorporate the Trapelo solution into our own online ordering solutions, so that physicians who ordered directly from NeoGenomics will have the benefit of that guidance. But critically, we also want to maintain a lab agnostic version that physicians could use to order from any laboratory they wish, not just NeoGenomics. And we know that for a solution like Trapelo Health to become ubiquitous, which is our vision, it has to be extremely easy for a provider to implement. And it also has to be aligned with the policies and prior authorization approaches of payers. So we're working with Trapelo to build that out as well.

Jerome Madison:

NeoGenomics performs more testing for cancer patients than just about all the other specialty labs in the space. And that involves thousands of physicians, hundreds of payers, and even collaborates across the pharma industry. Bill, what's been the response from the announcement that you are buying Trapelo?

Bill Bonello:

Yeah, sure. The response has been outstanding. We have been inundated with outreach from providers, payers, and pharmaceutical companies wanting to know how we're going to be working with Trapelo, what the plan is for implementation, how can we accelerate the pace of getting the solution out into the community and in the hands of physicians? So there just seems to be a tremendous amount of excitement over this announcement, not only among our existing clinical clients, but among practices that we aren't currently providing testing for. And again, as I said, also with payers and pharma.

Jerome Madison:

Do you see opportunities to partner with other stakeholders, such as payers and pharma, as you just mentioned, to bring the solution to market?

Bill Bonello:



Absolutely, we do. The solution can be incredibly beneficial to payers in ensuring that patients end up on the appropriate therapy, as we've talked about many times during this podcast. If you don't get the right testing, the odds that you're going to get the right therapy are pretty darn low. And from a practical standpoint to a payer, not only does that mean that their members aren't getting the highest quality of care, it means that they're incurring all sorts of potentially unnecessary expenses related to a patient getting an effective therapy. And so we anticipate that there's going to be great interest in collaboration from the payers, particularly along the FastPath idea that that Clynt talked about earlier during the podcast, and similarly with pharma companies. Oftentimes they have very targeted therapeutics, and the only way that that therapeutic is going to get deployed into the marketplace is if patients are being tested for the appropriate biomarkers. And so they have concerted interest in working with us to get the solution into the hands of as many physicians as quickly as possible.

Jerome Madison:

One of the big challenges that we hear that hinders the adoption of routine biomarker testing is routine reimbursement. In fact, it's all over the place. Bill, what's your experience dealing with payers in this area?

Bill Bonello:

Reimbursement is certainly a challenge. I would say over the past several years, I think there's been a lot of progress made. Payers are developing a much better understanding of biomarker testing and what's appropriate in specific situations. But even then, there's a tremendous amount of prior authorization work that's required. There are still a tremendous amount of denials for testing that we would consider to be appropriate for a patient, and you have to work through an appeal process to that denial. And that involves a, a lot of effort and doesn't always come out successfully. So we think there's a huge opportunity to implement an evidence-driven system, such as Trapelo, where the payers see upfront that the testing algorithm is based on guidelines and the latest clinical literature. And they agree that that's appropriate testing for the specific patients involved and work with us to create something like FastPath that then significantly reduces the amount of denials that are happening, and even the prior authorization work that's involved.

Jerome Madison:

Excellent. Clynt, the foundation of Trapelo is a robust precision medicine knowledge base, but it's really an entire system. Clynt, can you break down, for our listeners, why that is so important to the value of Trapelo?

Clynt Taylor:

Sure. Well, Bill set it up really well because he described what most of us recognize as the problem. And I think it's really what's connected us in this whole thing is that as we've gotten to know NeoGenomics over the past couple of years, as we've been working in the market. And we share this the same understanding and appreciation for the complexities and the mission of doing something about that and making precision medicine accessible to more people. And they began to realize, as we have always been very focused on our knowledge base, they recognized the value of our knowledge system and our knowledge base. We've had a lot of conversations about that, but we took an approach and that started, actually, before I got here. Our approach was let's make sure that we're curating all of the most current published clinical information that supports



the appropriate use of precision medicine to help testing and treatment. We feel those are related and they rely on each other.

Clynt Taylor:

So that knowledge system, that knowledge base, both the process to get the right data into the system and then to make it available to applications like Trapelo is really core to what we've been doing. So that's really why this is such an important... that's why the value system, I guess, or I should say the knowledge system, Jerome, is so important to Trapelo.

Jerome Madison:

Clynt, what was it like to go from having a new partner to being acquired by that partner and then why was this the right time?

Clynt Taylor:

Well, that's a good question because we had, just for clarification for the people who are listening, we had been talking to NeoGenomics about a partnership about them becoming an equity partner in the company. And the more we talked together and the deeper that NeoGenomics dug into Trapelo and began to understand the work that we've done for the last decade, the more it became clear that this was just a really, really good match. And for those of you who know NeoGenomics and you've heard Bill's vision for, and the company's vision for NeoGenomics Informatics and you know what we do, you can see that.

Clynt Taylor:

So I have to say we are ecstatic. We really are excited about this because we work really hard to gain access to payers and to get their attention and to have them see what we do and to providers and letting oncologists see the value of Trapelo. And now to have a partner like NeoGenomics to continue to see this vision grow and expand and be realized in this bigger picture, this bigger vision that NeoGenomics has is really, really exciting. For those people who've watched companies get swallowed up and then tossed away and [inaudible 00:17:29], that's not what we're doing here. And that was what was so exciting to us is that the folks at NeoGenomics kept saying, "You guys are doing what we think we should be doing together." And like Bill said, we think this is such a complimentary partnership that, why not do it together? So we're thrilled, Jerome, it's really exciting and we see the opportunity to be part of a much bigger vision as something that's really exciting for us.

Jerome Madison:

Yeah. You know, Clynt and Karan, I always joke that, and it's not a joke actually that Clint is a futurist, because our goal here was to create a podcast that talked about the challenges with the scale and access to precision medicine for patients. And what we've been able to do with this conversation here is talk to many different experts across the healthcare landscape to use this as kind of a GoFundMe, a kind of a crowdsourcing of ideas on how we're going to solve these challenges. And we've really been able to accomplish that.

Jerome Madison:

So Clynt, we recently spoke to Rob Metcalf, the CEO of Concert Genetics, on a podcast, and it was titled "The Future of Precision Medicine Is Coming Faster Than You Think." And to date, it's



one of our most popular episodes by downloads, by the way, listeners, you can go get access to these transcripts on precisionmedicinepodcast.com, just saying. Clynt, you mentioned that in that conversation that the explosive growth of precision medicine has created new problems that need to be solved with a greater sense of urgency. So, this question is really for you and Bill, what does the future look like now that this acquisition has taken place?

Clynt Taylor:

So just before I go there, let me just, I guess the pre-answer to that answer, in my opinion, is that there are a lot of companies today that are looking at what, I don't mean to call them the easier problems, but the problems that are more easily solved, you can usually find a path to get things going, to make money. You know that we have taken on some of the harder problems, which is to resolve what we think are the biggest barriers to the appropriate use of precision medicine. It involves effecting workflow. Nobody wants to try to affect workflow. That's a hard thing to do. Revise a process. How do we resolve the complexities of prior authorization? That's a hard problem.

But what we always have said is that you have to solve the hard problems in order to really realize the benefits that precision medicine has to offer. So when I look at the future, I think the future is super bright for us. As Trapelo, we just got supercharged with a great partner who sees it the way we do, which is why you heard Bill say, we want to see all boats rise as more oncologists use Trapelo to make the right testing and treatment decisions. That's super exciting to me because when I think about patients who are seeing doctors, many of whom are still getting their arms around the use of testing and the use of these targeted therapies, and we can really provide a easy-to-access, easy-to-use resource for that and give that patient what they really need, which is the best chance to get the right testing and the right treatment or the right trial. That to me, is what is super exciting.

So the future that I see is one where doctors start with Trapelo, because it's the place that you would go first to know is testing required? Where should I have it done? What trials should I be looking for? Where are those trials? How easily accessible are those? Does my patient have the inclusion, exclusion? Are they going to meet the exclusion, inclusion criteria to get into one of those trials? Am I sending the test order off to the right place for one of those trials? And this is happening in small communities all over the country. That to me is the future, and that's what I get really excited about, especially why I think this makes so much sense for us today.

Jerome Madison:

Bill, what are your thoughts on the future of NeoGenomics Informatics now that you've acquired Trapelo?

Bill Bonello:

Yeah, I would absolutely agree with Clynt that, again, I'll underscore that I think the key to driving precision medicine for patients is to make the solution ubiquitous. And the way to do that is to incorporate it easily into the provider workflow. So one of the things that we would like to do is to work on a suite of solutions that make it as easy as possible for a provider to actually access the Trapelo solution as part of their ordering process, make it as easy as possible for a payer to participate in the process, and make it as easy as possible for a laboratory to participate, in terms of the way that it receives orders from Trapelo and the way that it's able to deliver results back to Trapelo. And we have the benefit of years and years of experience in that continuum of care between providers and laboratories and payers. And we think that a combined with their Trapelo

team, we can work to make the product that exists today even better, and again, to get a much broader adoption of the solution.

Bill Bonello:

The other thing that we're really excited about is we do believe that patients should have access to a lot of this information directly. And historically NeoGenomics' relationship has been with providers. Even though we perform tests for more than half a million patients a year, we don't have a tremendously robust relationship with those patients. But as I mentioned, we are trying to create a patient portal, the heart of which would be a place where a patient could come and get a patient-friendly version of their laboratory result that they could learn about their cancer. They could learn about the diagnostic tests that they have, but also, ideally, it would be a place where they could learn about clinical trial opportunities and they could learn about therapies that might be appropriate given their situation. And we could envision creating access to some of the Trapelo decision support for the patients themselves to help them be more educated that when they go in and they have conversations with their providers. And we're very excited about that potential going forward.

Jerome Madison:

Yeah. I was on a recent podcast that was called Healthcare Goes Digital with with Natalie Eaton. And we really came down to what's going to accelerate access to precision medicine for patients is aligning the incentives of all stakeholders. And Clynt, this is something you talked about two years ago before Trapelo as a platform or product was even deployed. We started the conversation with the podcast, by the way, this is not a post-mortem on the podcast. We will continue having these great conversations. So if you're listening, if you've got great ideas, please follow us on LinkedIn. You can also Google precisionmedicinepodcast.com and look at all our back episodes.

But one of the things that we talked about, guys, is there's no question that COVID has changed how we collectively deliver care to patients, because it has accelerated the use of technology to communicate not only with patients, but across the healthcare ecosystem. So the things we've been talking about in this conversation, Bill, you mentioned payer lab, pharma. Clynt, you've echoed those things, but the ultimate goal here is greater access for patients.

Clynt Taylor:

Yeah. That is the goal, and we've talked about that for a long time, because we know that that's at the heart of our mission. In some of the earliest conversations I had with the team at NeoGenomics, one of the very first things they said was, "Our goal and our focus is to get more patients access to the treatments that give them the best outcomes." And I said, "I couldn't have said it better." That's exactly what we want to do. And I think we're just in a really exciting time. I know you mentioned, Jerome, you mentioned COVID and how it's changed so many things. I think one of the things it's changed is it's brought to the forefront, the need for us to be aggressive in finding solutions and pushing those solutions into the marketplace, making them available so that we can have a real effect.

We've never in our lifetime seen such a mobilization of science and access. That same sense of urgency, that same passion to get treatments that are good for patients on the cancer side should be pursued with the same, I think with the same enthusiasm. And now we've seen, I guess, pathways opened up to get treatments out faster. I'm excited to see what happens over the next few years as we apply some of those same principles and that same energy. And I think as we've

probably already said too many times today, getting the right workflow for oncologists and for payers and for labs and the right data for pharma to be able to move these treatments along faster, it should be a real priority. And I think it is.

Jerome Madison:

Yeah. And Bill, it looks like the acquisition of Trapelo Health and really standing up this dynamic division of NeoGenomics informatics is really going to accelerate access for patients.

Bill Bonello:

That's absolutely our objective, Jerome.

Jerome Madison:

Well, the forward-looking vision is excited, and I know that many of our listeners, and most of all patients, are looking forward to what the combination of these companies can do to improve outcomes and create greater access to precision medicine. So thank you guys for coming on the podcast and talking about the merger.

Bill Bonello:

Thank you very much for inviting us.

Clynt Taylor:

Yeah. Thank you, Jerome. Thank you, Karen. Great to have you on this podcast, Bill. I'm looking forward to us doing this again as we have the opportunity to tell about some of the great things that we're doing together.

Bill Bonello:

Thanks, Clynt. Me too.

Jerome Madison:

Bill Bonello, president of NeoGenomics Informatics. Thank you both for being a guest on the podcast.

Karan Cushman, Ex Producer:

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About Our Guest

William Bonello, President NeoGenomics Informatics

Mr. Bonello serves as Chief Strategy and Corporate Development Officer at NeoGenomics where he helped formulate the company's growth strategy. Bill also recently served as Director of Investor Relations. Prior to joining NeoGenomics, Bill worked as a healthcare equity analyst covering diagnostic services and product stocks at Craig-Hallum and at a variety of firms and was also Senior Vice President for Investor Relations at LabCorp. Mr. Bonello received his B.A. degree from Carleton College and his MBA from the Kellogg School of Management at Northwestern University.