## **EPISODE 18:** Dr. Jack West Part 1: Why Time-Pressured Community Oncologists Aren’t Applying Precision Medicine

## Dr. Jack West | July 2019

Karan Cushman: Welcome to [*The Precision Medicine Podcast*](https://www.interventioninsights.com/precisionmedicinepodcast)*,* 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.

Jerome Madison: Thank you for tuning into another episode of The Precision Medicine Podcast. I'm Jerome Madison, Vice President of Provider Relations for Trapelo and the host of the podcast, and today, we are excited and delighted to have Dr. Jack West, Associate Clinical Professor at the City of Hope Comprehensive Cancer Center.

Jerome Madison: Some of you may not be strangers to Dr. West. You may know him from or be one of his many twenty-plus-thousand Twitter followers or from his contributions to Gemoncology or Medscape.

Jerome Madison: We want to thank and welcome Dr. West for being a guest on the podcast.

Dr. Jack West: No, it's my pleasure. Thank you so much.

Jerome Madison: Now, Dr. West, you recently...to back up…you're at the City of Hope, but I've followed you for some time, and I know those who are listeners who have followed you in the media for some time, you trained at the Fred Hutchinson Cancer Center in Seattle, and practiced there at the Swedish Cancer Institute for several years.

Jerome Madison: To me, in my mind, I still, when I hear that name, I think Seattle. Needless to say, your name is probably synonymous with those institutions. Now you're at City of Hope. Why the move? What your vision now as you step into your role there at City of Hope?

Dr. Jack West: I had a been in Seattle for, as you say, a little over twenty years. I trained at the Fred Hutchinson Cancer Center in the University of Washington, great program, and had really developed my interest in thoracic oncology there before switching over to nearby in Seattle, Swedish Cancer Institute where I was for a little over 16 years, and was able to do a lot of great clinical research, and of course, see patients and give excellent care.

Dr. Jack West: For me, it was time for a change after doing so much of really the same thing for so long. I was looking into second chapter things to do and potentially a change of scenery. I think Seattle is lovely, at least in the summertime, it's glorious, but certainly southern California has its appeals as a place to live, if, depending on what your commute is like.

Dr. Jack West: I think that was an appeal, but also, City of Hope really was to me the big draw that led me to come a little earlier than I was thinking about making a move. I was looking a few years into the future, but, for me, the more I learned about City of Hope and its momentum growing, not just a local/regionally but nationally and even, and their growing program in remote consults and telemedicine services. To me, that was the exciting opportunity.

Dr. Jack West: They were just so innovative and open to developing new opportunities, that I thought it was a great time and chance for me to practice medicine in a different way, especially as I just feel that cancer care is at a challenging crossroads, where the amount of information that molecular oncology introduces now makes it just increasingly difficult for general oncologists and really everybody to keep up with.

Dr. Jack West: I think we need to come up with new models of how to deliver that care and incorporate all this new information optimally.

Jerome Madison: Awesome. Hey Karen. Luticia, I think just joined in. Luticia, can you hear us?

Dr. Jack West: Yeah, it looks like she may be coming in and out. You may want to mute her.

Jerome Madison: Yeah, I want to make sure that we can kill the background noise.

Jerome Madison: Yeah, that's true. It records on separate tracks.

Dr. Jack West: Okay, cool beans.

Jerome Madison: Cool beans.

Dr. Jack West: Okay, next question. Dr. West, I wanted to center our discussion around a commentary that you wrote on Medscape. You certainly contribute quite frequently, but this one was about a recent report by Flatiron and Foundation Medicine, that analyzed over 4000 patients in your area of expertise, non-small cell lung cancer.

Dr. Jack West: The title of your commentary is *How Could We Fail So Miserably*? For those of you out there, it's May 16th on Medscape, you can go out and find that. Actually, the first person I heard talking about this was Dr. Jack Ramsey there from the Fred Hutchinson Cancer Center.

Dr. Jack West: A little background, it found that 50%, more than 50% of the patients who had an NCCN-recognized driver mutation, less than 50% were actually prescribed a targeted therapy by the treating physician.

Dr. Jack West: Just for more numbers, it noted that this was a fair representation. 86.7% had advanced disease and 85% were treated in the community setting, which, I've got another question, we'll get there in a minute.

Dr. Jack West: Now, it's one thing for a physician to actually do NGS testing to find the mutations, and there is data to suggest that this is not being done routinely. There are cases where a patient is profiled, got the results, and the treating physician didn't seem to act on the information. What are some of the challenges that you see or you hear about why physicians who do the testing and find the mutations don't prescribe the targeted therapies?

Dr. Jack West: I think one of the big issues is turnaround time and in some real world data, the actual time may be in the range of at least three weeks, sometimes four weeks. I think that is a real challenge, and I think that many oncologists in the community feel a time pressure more acutely than many academic oncologists do.

Dr. Jack West: I think that looking at some survey results that I've done, looking at patterns for academic oncologists versus general oncologists, I'm seeing that the community oncologists really feel like they need to get results in and start a treatment sooner than some of the academic folks do. I think it may be just because the specialists in thoracic oncology can reassure the patients more easily and with more certainty that it's okay to wait a couple of weeks, and in fact, really important to wait on having all of the data…and that you want to start the best treatment rather than just start the most rapid treatment.

Dr. Jack West: The fact is that I think many community oncologists, and to a lesser extent academic oncologists, feel that they really need to get those results back within a couple of weeks. I think that's part of it, but at the same time, there is a clamoring for certainly immunotherapy, people see the commercials on TV. A lot of the media discussion is about the miracle of immunotherapy for so many patients, and it is great for some patients, but it's not the right tool for the job in patients with these driver mutations by and large. I think that one of the issues is, we can't lump all of these patients with driver mutations as the same population.

Dr. Jack West: I think that patients are eager to get immunotherapy, very often based on what they've heard. There are certainly anecdotal reports from many people that I speak with about the oncologist saying, “You've got an EGFR mutation and there's a great pill for that,” and them saying, “I don't want that, I want the immunotherapy I saw on the commercial.”

Dr. Jack West: There's some education to do there. There are certainly challenges with payment, and I am talking more about the cost of these things, and that oral drugs may have copays that are just challenging, if not prohibitive, and may require working through various charitable funds for assistance or trying to get a free drug or a copay assistance program.

Dr. Jack West: These are all friction in the system when it is usually quite straightforward to prescribe an IV therapy that is the general standard of care for a broad population and just get that started in the next week.

Jerome Madison: Yeah. You point to some things that are beyond simple interpretation. There's other limitations that can cause a patient not to get a targeted therapy, even though they may have an aberration that qualifies them for it.

Dr. Jack West: I think that one of the other troubling findings is that, as you mentioned in the Singal paper from JAMA that described this, though it didn't really feature it, it was almost buried there in the results, but, really didn't get any meaningful discussion in the paper itself, nor the accompanying editorial. These patients didn't get the targeted therapy ever, it seems. Not just they didn't get it first. It would have been optimal and an appropriate standard of care for patients to get an EGFR tyrosine kinase inhibitor or an ALK inhibitor upfront.

Dr. Jack West: Not just did that not happen, but it seemed that about one third of those patients with an EGFR mutation or ALK rearrangement just never got these profoundly effective therapies. These are patients who we know had the mutation. It raises the question of whether the delays may have been an issue where the results came in when the patient is on their late, in their first cycle, or in their second cycle of chemo-immunotherapy or immunotherapy alone, and the results come in and get buried and forgotten.

Dr. Jack West: I think that, stuff with this is almost inexplicably bad, except that there was actually also a presentation of a poster at ASCO by doctors Gearman and colleagues that was Abstract 1585 for people who want to look it up, but it looked at a large database of over 1200 patients with stage three B or four advanced non-small cell lung cancer, and looked at the testing rates, and then the actual administration of targeted therapies in over 1200 patients from five community-based practices in this database.

Dr. Jack West: It showed that the testing topped out at 54% for EGFR-

Jerome Madison: Wow.

Dr. Jack West: ... but it dropped from there, and only 22% of the patients got all four of the treatments that are clearly recommended in the NCCN guidelines, and have strong data and an FDA-approved agent to go with them. Namely EGFR, ALK, ROS1 and BRAF v600e.

Dr. Jack West: Then, if you add three others, RIT, MET, HER2 that are also listed in the guidelines as emerging therapies and do have data, if not as strong as these others. Only 7% of the patients in that large sample got all of those tested. Then again, a disturbing proportion of the patients never got treatment with the targeted therapy, even when the mutations were found.

Dr. Jack West: It really corroborates what was seen in the JAMA article and suggests that this is real, and we just are doing a very poor job of executing once you do testing, and even getting the testing done is also a shortfall. For all of the promise that we have with precision medicine and molecular oncology for transforming outcomes for many of our patients, we aren't getting the job done in getting this information out or getting the required interventions completed properly in the broader community.

Jerome Madison: Yeah. We're talking about that number of physicians who actually do order the testing, but there's still a contingency of physicians out there that may not be sold on molecular profiling or have differing views on how and when to use NGS profiling.

Jerome Madison: What are you hearing from some of your peers? I know that you're a leader in using these, but we talked about it before we came on, those who are ... espouse the virtues of molecular profiling and it's their favorite condiment, it should be for everybody, versus those who will only do it in maybe a third or refractory setting. What are you hearing about some of the unreadiness that some physicians may have?

Dr. Jack West: I think we should acknowledge that we don't know that it is clearly critical for it to be done in everybody. I wouldn't say that 100% testing should be considered the unequivocal gold standard, because these studies that include patients with squamous histology may ... we don't have guidelines or evidence to say that NGS is clearly high-value in these patients.

Dr. Jack West: Now, I think that is only likely to change and become more broadly useful for broad testing once we have treatments that target even things like KRAS, G12C, which now has some data from ASCO 2019, that there may even be an effective therapy for this group. I wouldn't say that it necessarily should be 100% testing in everybody, but for patients who have tissue available, we shouldn't be cherry-picking just based on never-smokers or minimal smoking status, that you definitely can find many patients with relevant driver mutations who have some smoking history, and just anything within the range of non-squamous, and some patients with squamous histology.

Dr. Jack West: I think that one of the real objections is the turnaround time that I mentioned. That should only get better, but I think that one of the real challenges is that there can often be a delay of several days or a week, or even more, from the time an oncologist requests that the pathology department sends out material to Foundation or whatever outside lab and when the pathology department actually sends that off.

Dr. Jack West: That that needs to be tightened up. That's a delay that just becomes a critical problem, because as the labs get better about shortening that turnaround time, they still can't account for the delay of a week in actually getting the tissue right. There are issues with tissue collection, and I think the further you are from the bigger centers, the academic centers, the more scant tissue often is. I think that is a limitation that can potentially be overcome increasingly by doing serum-based tests, or plasma-based tests, that ...

Dr. Jack West: We have more data from Gardant that has come out, and there are other molecular oncology or blood-based labs that are looking at this and showing that, even if the sensitivity isn't at the same level, at least for patients who have a larger, I'm sorry, let me state that again.

Dr. Jack West: There is increasing data that even if the sensitivity is not as high as tissue-based testing, particularly for patients who have a lower tumor burden in their body, this is still potentially going to be a rapid turnaround and pretty good yield, and you can definitely trust a positive result if you get a result from the plasma testing that shows an EGFR mutation, that is as reliable as a tissue-based result, and you can treat based on that and expect very comparable outcomes.

Dr. Jack West: There are some challenges to overcome, but I also think that one of the biggest issues has been, do I need to send off a broad test for NGS panel, if I'm really just looking for EGFR or EGFR and ALK? I think nowadays, when there's at least four and now, more accurately, six, seven, eight targets that we have treatments for right now that look extremely good or are imminently approved.

Dr. Jack West: Once you get past five, six, seven, it doesn't make sense to do individual testing when you add up those costs, when you add up the time and the tissue required to do all those tests serially. Just doing a broad panel makes more sense. I think that that's where things are going to go and should go, that we should anticipate that we will all want to be doing broader panels at least in the setting of advanced non-small cell and other settings where there's more than two or three targets that are worth knowing about.

Jerome Madison: Yeah. You're in that area where…you just led me into my next thought, and that is, when you look at physicians who are pro-profiling, they have this as a part of their routine practice. There seems to be two different paradigms, where there are some advocates that, they want the broad-based molecular profile, and their perspective may be, you can't find these aberrations if you don't look for them.

Jerome Madison: For instance, a year ago, it was Intract, even though we didn't have an FDA approved therapy, they wanted to profile every patient to see if they were in that 1% that maybe had that Interact fusion. Then there are those who say, we only need maybe 10 genes to manage the lifetime of a given patient.

Jerome Madison: It's a broad spectrum, but, where are the benefits and the pitfalls? You spoke to some of them just a second ago, but what are the benefits and maybe pitfalls that clinicians and patients should be aware of when considering those two different paradigms?

Dr. Jack West: I think the biggest pitfall for NGS testing is the turnaround time required that, if I have a patient who is a never-smoker with an adenocarcinoma or has a minimal smoking history, and particularly has a high tumor burden, very symptomatic, I may really hope to get a quick answer about the highest-yield things like EGFR and ALK.

Dr. Jack West: You can do a one-off ad hoc test for EGFR mutation or ALK rearrangement and get those results back within a matter of a couple or three, four days, instead of a couple of weeks for NGS testing. When time is really critical, I would say that the individual tests will have a shorter turnaround time, but in fact, that's really a minority of patients who have a clear, dire need to start treatment within the week, rather than two to three weeks later.

Dr. Jack West: I think that if we all take a sober look and really assess how urgent it really is in most cases, it's better to just take the time to get a full panel of results back and make the best decision in the light of day, rather than just scramble.

Dr. Jack West: Turnaround time is one. There are questions about whether it would be more efficient to just test for two or three or four things upfront, particularly if you find them and then don't need to look for other things, that may be more cost effective. I think that the issue of the economy of tissue is also a really important factor now. We want to be as efficient as possible with the tissue available, and that tends to favor NGS testing. That's with tissue of course. With plasma, you can do that without exhausting tissue.

Dr. Jack West: Then, I would say that, looking just for what is relevant the day the patient is diagnosed is pretty limiting. Though it is growing all the time, we don't know what will be valuable in six or twelve months.

Dr. Jack West: For instance at ASCO 2019, we saw sensational data for various MET Exon 14 inhibitors, Capmatinib and Tepotinib. We saw very strong data with BLU-667, for patients with RIT fusions, and this is on top of data we've already seen in LOXO-292 in the same population.

Dr. Jack West: These are all agents that I hope and expect are going to be commercially available in the near future. I would love to know that my patient has this in advance, so that I can prescribe these agents whether on an expanded access or commercially available basis, as soon as possible.

Dr. Jack West: Then there's even things like Exon 20, we have more data on that, that has looked really good with TAK-788, and Poziotinib has also looked strong in the past. These agents have some toxicity issues, but there's new targets. I already mentioned KRAS G12C, which has only shown early data. That is not today an actionable mutation. If I had access to a clinical trial with AMG-510 that was just presented at ASCO for this KRAS mutation, that's seen in 13% of non-small cell, not a small trivial amount.

Dr. Jack West: I would hope to have my patient get the opportunity to pursue that, and there's potentially going to be a lot of other targets out there that would be worth knowing are relevant for your patients. I would cast a wider net now. This is not the view I had three or four years ago, but we are further down the road, and I would say that there are enough targets that it just makes sense to look more broadly today.

Jerome Madison: Before we let you go, make sure that those of our listeners, can you tell them your Twitter, your social media platforms where they can connect with you?

Dr. Jack West: Sure. I'm on Twitter at JackWestMD, and I love to connect with people there. Please follow. I put out everything, and there's lots of opportunity for vibrant discussion. My content is largely put out at Beacon Medical Interchange, and that is at BeaconMedIC, one word, .com. That's where my podcast materials are, both video and audio. I'm also findable through the website, JackWestMd.com.

Dr. Jack West: Thanks very much for having me. It's been great.

Jerome Madison: Absolutely. Now, I don't want to step on the fact that your podcast, it's very much an honor in addition to you being an academic oncologist researcher and an immediate contributor, you're also a podcaster.

Dr. Jack West: Yeah, that's right. I didn't even, I forgot to mention, though, it is available at BeaconMedIC.com. The audio podcast, which is a big focus of what I'm doing now, is West Wind, or The West Wind, and that's just because I think it's a novel, interesting way to reach people. I like the format of a back and forth discussion, just as we've had. I've been enjoying connecting with people I don't get to necessarily speak with routinely, and, in the setting of West Wind, often have a more personal discussion of their background, what led them into the field, and as well, talking about more substantive policy issues or the latest data.

Dr. Jack West: Thank you for bringing it up. It's enjoyable. I think that having such a range of podcasts out there just lifts all boats. It just creates an ecosystem where you can increasingly think about spending your time commuting or other things that you do, listening to a podcast and having it be interesting and learn something.

Jerome Madison: Yeah, it is excellent. I've listened, I say you were doing podcasts before medical podcasts were cool.

Dr. Jack West: Yeah, thanks.

Jerome Madison: Again, once again, thank you Dr. Jack West for being a guest on The Precision Medicine Podcast.

Dr. Jack West: No, it's my pleasure. Take care.

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**About Our Guest: Dr. Jack West**

Dr. West is an Associate Clinical Professor in Medical Oncology, a specialist in thoracic oncology, and serves as Executive Director of Employer Services at City of Hope. He was previously Medical Director of the Thoracic Oncology Program at the Swedish Cancer Institute in Seattle.

Dr. West received an MPhil in Experimental Biology from Cambridge University on a Fulbright Scholarship and a medical degree (magna cum laude) from Harvard Medical School, where Dr. West also conducted research as a Howard Hughes Medical Student Fellow. His postdoctoral training included an internship and residency in internal medicine at the Harvard-affiliated Brigham and Women’s Hospital Boston, MA, followed by a fellowship in medical oncology at the Fred Hutchinson Cancer Research Center/University of Washington in Seattle, WA.

In late, 2002, he moved to Swedish Cancer Institute in Seattle, where he served for over 16 years as Medical Director of the Thoracic Oncology Program, overseeing a broad array of clinical care and research responsibilities. In March, 2019, he moved to the Los Angeles area to dedicate his focus on innovative approaches to delivering sub-specialist expertise across a broader geography, using tools such as remote case reviews and telemedicine consultations.

He has authored dozens of papers and chairs several CME programs and symposia internationally on thoracic oncology, novel educational approaches, and social media in cancer care.

In addition to these activities, he is the Founder & President of Global Resource for Advancing Cancer Education ([GRACE](https://cancergrace.org/)); Web Editor for [JAMA Oncology](https://jamanetwork.com/journals/jamaoncology); regular correspondent for [Medscape](https://www.medscape.com/); and contributing author and section editor in Lung Cancer for [UpToDate](https://www.uptodate.com/).

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