

[MUSIC PLAYING]

**DEBORAH
MAYER:**

Thank you for inviting me, and this is a topic that's near and dear to my heart, because I've been an oncology nurse since 1975. And we didn't talk about survivorship then, and I'm going to give you a little historical context, because many of you didn't live through this to understand why we're where we are. And some of this will be a little redundant from what Lisa did earlier today, but I'm going to go over some cancer trends and then talk about what the unmet needs are of survivors. And then talk about some of the issues that we're facing, and we're going to be facing. And if we don't rethink how we deliver care, we're going to be in big trouble.

And so in case you tune out or need to leave or what have you, I'll give you the take-home messages first. Which is that we have more survivors, which is a good thing, but most of them have some degree of unmet needs. There's only about 10% of survivors who get away scot-free. Most people figure it out over time, but then there are some who have significant issues as time goes on. We have an insufficient workforce to meet those needs, and it's going to become more insufficient as we go on, because I know some of us in this room are thinking about retiring.

And so we have to really think about our current model of care, and you're there every day delivering care. It's very hard to lift your head up and get that view of, geez, we can't keep doing it like this anymore. Because we can't handle the volume, and because we're so busy trying to get through clinic or taking care of the patients we're seeing. And so I'm going to make the case that we have to start investing in research about triaging patients needs of risk based on a variety of factors and then delivering care on a risk-stratified basis. Because we can no longer-- we don't do it, but we can't give all things to all people.

And in the earlier days, when there weren't as many people with cancer, and they didn't live as long, we sort of thought we could. But we really can't do that anymore, and then talking about where we need to go with all that. Now, I've been in oncology, as I said, since '75, when only about 48% of people lived five years or longer. And now, that number is actually more like 72%, 73%, because the numbers always lag where we are at the time.

And in the early days, they were cancer victims, and everybody talked about-- I don't know if many of you remember that. But if you spoke of it [INAUDIBLE], if you didn't whisper it, it was talking about being a cancer victim. And that's one of the things that the National Coalition for Cancer Survivorship has really changed the language to survivorship. Even if a person doesn't want to consider themselves a survivor, they may want to call themselves something else-- like a patient or a thriver or a veteran or whatever. The field of survivorship came out of this education that there's a lot of people who are living beyond their cancer but with a lot of the residual issues of that.

And back in 2005 was the fundamental papers, or report, *Lost in Transition*. Have you heard of that before, the [INAUDIBLE] report? You can download it for free. It goes through what the issues are, and it's called *Lost in Transition*.

We used to call it treat them and street them, because when people entered treatment, we sent them home, and they would figure it out or not. And now, this was putting a stake in the ground to say, we can't do that anymore, because the unresolved issues are significant to getting people back to whatever their life is going to look like after. And then, the companion piece was *Cancer Care for the Whole Patient* which really looked at unmet psychosocial needs, and so it really helped spell out what was going on.

And these are going to be some of the same graphs that you saw with Lisa this morning. But I just wanted to bring out that this is a CDC map to show you that our country has been changing. Where the green is where people died of heart disease in 2000 and still in 2014, and the blue was when it was heart disease in 2000 and then cancer in 2014. In only one state it's been unchanged for cancer. Bottom line is, like in North Carolina, cancer is becoming the leading cause of death in most of the places we're living, and in the next few years, that whole map is going to look blue. And that's as much because we're making progress in heart disease as it is because more people are dying of cancer, because we know the boomers-- of which I am one-- are coming along.

The other part about this is that you can see the improvement over time, but what really is going on here is when you look at how uneven that improvement's been. Some of these are well into the 90%-- breast, prostate, melanoma, the skin, especially if it's early stage. But you still see other cancers that have not benefited as much-- lung cancer for sure, pancreatic cancer. Ovarian is getting a little bit better, but it's still not where we want them to be. So that the improvements have not been uniformly experienced by everybody with cancer.

And part of that is as we look at how we fund research and where it is. We certainly have put a lot of money into breast cancer research, not so much in some of the other cancers. And you can see the improvements as a result of that. And then we've had this graph for a long time, at least for the last 10 years. And what struck me is we're in the middle of this, and this number now it's out to 2040, and it's still just going higher and higher and higher. And that's because we have a fairly stable linear increase in people who are diagnosed with cancer, which is about 2% to 3% per year.

But the number of people who are surviving it is going up. So it's exponential in the number of survivors, which we don't take into account into how we deliver care, which I'll come back to. And this is the number of five year or more survivors is one of the largest growing groups of patients. If you see this light orange number, that's the number of new cancer patients in the first year, which is basically when people are undergoing treatment. But these other groups are growing much farther, and you've seen this one before as well.

I want to tell you that if you haven't studied gerontology, you better start taking some CE in Gero, because 73% of survivors are going to be over 65. I'm going to be retired in 2040, for sure, but many of you may not be. So you need to think about the fact that you're going to be dealing with a lot of older people.

But the other thing I want to point out here is in 2007, ASCO, the American Society for Clinical Oncology, did a workforce report about these numbers, and I'll come back to showing you that. That was 10 years ago, and I can't say that we've made much progress in what the report came out to say. And that was very physician-centric, so it was really about were there enough oncologists see the number of cancer patients, not the rest of our services, and I'll talk more about that.

So here are the number of new cases. We're now, in 2018, up to 1.7 million, but this number is continuing to go up. So you see the number of survivors is going up way more than the number of new cases. And that brings us back to how care is delivered, which is when people are in that first year, and they're being diagnosed and treated for their cancer. That's that sort of purplish-blue line, the light blue line.

This middle line is the follow-up visits, and then these lighter lines are the last year of life for one reason or another, whether they're dying of cancer. So the volume of the patients we see are not newly diagnosed cancer patients. They are follow-up patients. Does that reflect what you're seeing clinically as well? That most of the patients are a year or more beyond, and they're not-- they may be on an oral anti-estrogen or other kind of ongoing therapies, but they're really doing their follow-up visits. And then the largest volume of survivors, not surprising there, are breast and prostate, but the greatest group of needs among survivors is over here in head and neck and lung cancer.

And so you have that 80-20 rule. About 20% of your patients using up 80% of your resources or needing to. But then you have this large group of survivors of breast and prostate who are also consuming large amounts of the resources that we have. Which may or may not be the right size to what their needs are versus what head and neck and lung cancer patients are. So again, it's uneven. Who's benefiting from all these good statistics, and who has greater unmet needs?

So when we think about this, it's when you start developing programs for screening of issues or developing intervention programs of management. You have to be very clear, survivorship isn't just one big field. It's what kind of survivors are you're talking about? What kind of subpopulations are you talking about? Where and how are you targeting them? Because a one-size-fits-all approach is not going to work when you develop programs and resources for this.

So I'm just going to briefly go through some survivorship needs. That could be a whole other talk in and of itself. And there's an exhibit with the Lilly folks that they have the cartoons, but their artwork-- if you've never been online to Lilly Oncology on Canvas, there's a contest every two years with providers, caregivers, and survivors who could submit artwork. And some of this artwork is from that, and I really thought this captures that before cancer and after cancer. The new normal that patients hate to hear about, which is when life is sewn back together again, it has changed. Very few people are unscathed by their cancer experience,

And this is a model of quality of life that Betty Ferrell and Marcia Grant from City of Hope have made very well known, but we talk about the different buckets of quality of life. So you may have some physical impairments, but you have made strides in psychosocial issues or spiritual well-being. As [INAUDIBLE] was a good example of that, where he may score very well on a quality of life issue, even if he has a lot of physical symptoms. Because some of these other things were really benefited from his cancer experience, even if some of the physical things may not have. And so when I talk to people about balancing of the buckets, because one might not be so good, but there are others that may be able to be made better in different ways.

In *Lancet Oncology*, in December, they had a whole issue on cancer care and survivorship issues. And so this is a model that just talks about the potential side effects or long term and late effects of people with cancer may have and then how it may affect somebody's quality of life. And about half of these are really psychosocially-grounded issues.

So I want to share one study that I thought was very representative, which this was from the UK, and it was a population-based study that captured people before they were diagnosed with cancer. They followed them zero to two years before they were diagnosed, zero to two after they were diagnosed. And then four years and beyond and compared it to an age in matched and controlled group in the same study. This was a population study in the UK.

And what they found was that survivors, as a group, had poor self-rated health, quality of life, and life satisfaction. They had greater depressive symptoms and impairments and mobility and activities of daily living, and you know that those things go hand in hand. If somebody is declining in their ability to take care of themselves, they may get more depressed, and then when their functional ability is interfered with. And the interesting thing was, all these markers got worse over time. It wasn't like the worst was the first two years after diagnosis. It continued to get worse as time went on.

And this was another study, and Lisa again referred to it this morning, which was looking at co-morbid conditions in a group of survivors. These were with solid tumors, and on average they had five co-morbid conditions, two of which developed after the diagnosis of cancer. Talk about adherence to medications. We're not just talking cancer meds. We're talking about diabetes, hypertension, a number of other things.

And if we have poor adherence and poor management of these co-morbid conditions, you can imagine why that may be contributing to some of the poor outcomes we're seeing. And that the patients who are at higher risk were older, had breast cancer, were living alone, had higher BMI. Some were more inactive. So getting people to be more active, more socially interactive with people. I know a lot of my patients go to SilverSneakers, where they go out, and they do exercise programs a couple times a week. It's as important socially as it is physically to encourage those kind of programs.

This was another American Cancer Society study that looked at survivors, and it was really shocking. Because it was a cross-sectional study of two 5 and 10 years, that the people at 10 years did not have less needs than the people of two years. And we may think, oh, they're here for a 10-year follow up appointment, they're not going to have any questions. But many of them still had unresolved information needs about what happened to them.

Now, I deliver-- I do a lot on survivorship care plans-- and when I develop and deliver a survivorship care plan, oftentimes, I have to review the pathology. Because women-- and I see mostly breast patients-- women, it's all fog. The first year is all about putting one foot in from the other and getting through treatment. And then, they start saying, well, am I triple negative, or what's this mean for my daughter? There's other times to ask those questions, and that may go on forever.

And so whenever somebody comes in for a follow-up visit, to ask them what kinds of questions or issues do they have. Because it's not just to come back to get their mammogram, to get the blessing that everything looks fine or not. And that there weren't gender or age differences or for the time since diagnosis. So don't presume, if somebody is 5 or 10 years out, that they're doing fine. We need to ask them about that, and that's just a summary of those.

So I want to spend the most of my time talking about the care delivery piece, because you all are going to be able to push back on some of the things that we're doing. And maybe sit at the table to help redesign what we're doing, or do research about that, or to influence health policy about that, or talk to payers about that. In 2011, a group of us-- there were about 150 of us-- tried to say, if you can't throw all things at all people, how do we figure that out? And they came up using a Delphi survey of these three different tiers.

But in many ways, this is sort of outdated already. If we were to visit this, it doesn't really hold true in quite the same way anymore. But even so, there is never any clarity about who gets-- do all patients get tier one, and does nobody get tier three, or how do you manage all this? And so it really comes up about this whole need for this risk-stratification algorithms, so that you know who should be doing that.

Have any of you use a cardiovascular risk factor calculator? You put in about five or six items into it, and then it gives you a percentage of risk. And if you deal with breast cancer, like something like Oncotype DX, it gives you a percentage of risk of recurrence with or without treatment. We don't have that for survivors.

My fantasy is someday we would have enough that at the end of treatment you could put in these five or six things, and you would be able to triage. Oh, this is a group that's going to be in the 70% that needs some support for self-management. And you're the 10%, you're never going to leave us, and we need to see you regularly. And the 20% that needs a little extra, but not for a long term.

And then, we also need different projections than we currently have, because we have no idea what the staffing needs are of all providers as well as caregiver needs. How many caregivers do we need, or how many services do we need for the kinds of people who are surviving cancer? And RAND Corporation just published a paper that I thought would be a good model for cancer which was looking at that for Alzheimer's.

And they did it not just by how many doctors are needed, but how many PET scanners are needed, and how many caregivers are needed? How many kinds of beds are needed for people who have Alzheimer's in our country? And they basically said that we're not going to be prepared to deal with the volume of people we have with those kind of cognitive issues till about 2030, if all these other things are addressed over time. And I'm sure that there's a huge gap that we could identify and start tackling with cancer, if we looked at it that way.

Now, there's a lot of different models of survivorship care. There's been no research to say one is better than another, or what really constitute these models, and whether that's delivering good care or not. And there's people working on how to measure it, like what should be measured to say we're giving good care or not, and what's the best way for which kinds of patients or providers?

But there's a multi-disciplinary kind of approach. The kinds of things at M.D. Anderson and Sloan Kettering have are not the kinds of things most of us are going to do. Because we don't have the volume of patients where you have separate huge services to deliver all these things. At our institution, where we receive about 6,000 new patients a year, I've been encouraging sort of an embedded model. Where you're seen within the tumor group that you're treated with, but with APPs who are focusing more on the survivorship issues rather than sending them off to a, quote unquote, survivorship clinic.

There's disease-specific ones, like I just mentioned. There's a consult stage of service, where you may be seen once or get referred based on your needs. There's integrated care, risk stratified, and shared care. But for all the naming of them, we haven't done a lot of exploring what they look like and how well they work.

Now, this is coming back to the acute study, in 2007, which was very well intentioned. And they came up with a lot of suggestions that would help close the gap, such as implementing electronic health records was going to improve efficiency by 15%. Has anybody seen that? Has anybody declined 15% in efficiency? Probably. It's not then what we had hoped or what we know it could be. It's not that yet.

So if everything was all added up together, these lines still show that, based on those numbers, there would still be a gap. And that includes asking people not to retire for 5 or 10 years, like not going to happen. And this report was run, if you remember, in 2007, when this was just starting to cross over. And this was the numbers that were used then, and it's not even clear from the methodology point of view that they calculated their visits correctly. So this is probably a under projection by far, and we're too busy in our day-to-day work delivering care to step back and think about this.

So instead of doing it as the physician-centered piece of how many patients can I see and doing the math that way is thinking about what the patient needs, and who's in that pyramid. And it doesn't mean just the oncologists or primary care providers, it also means, with all these new all agents, how many pharmacists do we need? I don't know that anybody's done any kind of projections around that that we could benefit from having in our cancer care system, never mind the rehab services or the others.

And the physical facilities, now this is a lovely new building, but I wonder if you've already maxed out on your space here. That probably happened within the first year or two you moved in. Right? OK. That's because you're counting number of new patients which is that relatively small flat line growing over a little bit. Right? You're not counting number of visits of how many patients, and so I would pause it. And I'm going to be working on a paper with a few people to write this up as we're measuring the wrong things, and we're measuring everything we need for those patients the wrong way, I think. And this is just, again, showing how many patients are where the costs of care are aren't necessarily in the front or at the end but during that period of survivorship care.

Now, so what we did is we did some projections. So for example, if you counted what NCCN guidelines recommend for most solid tumors. And you thought-- just follow me through these assumptions-- first year is somebody diagnosed and treated, and then the second year, they're usually seen four times to see how they're doing when treatment's over, if that's what's happening. And then, they're seen three times and then two times and by five years they're out to once a year and get to annual visits.

Now, how many of you are in practices where you actually discharge patients back to the PCP at five years? At 10 years? Ever? Ever, OK, so that's problem number one. And then the other part about that is, if you assume 70% are long-term survivors, we did this conservatively assuming 50% of those patients. Meaning some make a home that they don't live in Pittsburgh or at Chapel Hill or what have you, and they go someplace else.

If you had 5,000 new patients, that 5,000 in year one is going to turn into 60,000 outpatient visits by year 10, 60,000. Not 5,000 visits, 60,000, and I'll show you some other things. So this was done on distress screening, that we have enough data to say that probably about 70% of patients will have some adaptation to their cancer but will manage. And then, you have about 20% that need that extra hand-holding, and then there's about 10% that have co-existing psychological conditions. So they may have a preexisting history of bipolar disorder or something like that.

So if you think about this as the same 5,000 people that you would need to develop a program for that 70% of people, this is assuming one visit. That you would have to be servicing 3,500 people in that new year as if you opened your doors, and you had no patients on day one. And that you would have to be developing some kind of face-to-face, one-to-one services for 1,500 people, seeing them once. That doesn't assume any kind of follow up.

Our program can barely do this, and we have a full team of people, and it's based on the number of new patients not the number of visits that are needed or the kinds of projections this is implying. And so this is an example of if you had 5,000 new patients, at the end of 10 years you'd have 77. You know, over 10 years increasing about 2,500 patients, you probably could figure that out. You might add a little building or build another floor too to your institution or what have you, but this is what it looks like at the 10 years, as you've added 35,000 visits.

And if you don't discharge them, it's going to be up to 50,000 visits of this group over 10 years, and that's just underestimating. The other 50% of patients are those with metastatic disease or who have high-risk issues that are going to be followed more often, like bone marrow transplant patients or whatever. So that's only half the added visits. That's not counting the other half.

And this was us at UNC, and of course, everybody probably had their own trauma of when they went through their electronic health records, and we had a little dip. So this is that almost 10 years, where we've gone from 4,200 new patients up to 6,200 which is not a bad growth, but look at this. This is last year we had 80,000 clinic visits, not counting inpatient beds or anything. 80,000 visits, and almost 67,000 of them were follow-up visits, not the new patients undergoing treatment.

So I just want to share with you, the UK has developed this risk-stratified model that we have a lot to learn from. They're implementing it, and they're starting to begin to think about what the outcomes are, having done this. The COSA is the Australian Society of Survivorship, and they actually have developed a patient-centered model. And they have a nice white paper on their website, and this is the PDF URL for that.

But when they looked at the survivor-- and the same thing with the UK approaches-- they assume that the majority of people are going to manage their own issues, but it's called supported self-management. It's not self-management, like good luck, which is what we do a lot of times. Your treatment's done. Good luck. The survivorship care plan was meant to be a Band-Aid for that, but it's not quite what really has happened.

And so what their assumptions were, which I think were very interesting, is that the level of risk for disease co-morbidity and recurrence is dependent upon the tumor type, as well as the patient. They have short, medium, and long-term treatment issues and side effects. Patients have existing co-morbidities, but this was the important thing. The survivor ability and motivation to engage and self-manage.

Now, they recommend doing survivorship care plans, a treatment summary in survivorship care plan. But the other part of theirs is they include a patient needs assessment including health literacy at the time treatment ends, and we do not do that. We just throw it to the wall, one-size-fits-all. Whereas, then they are able to determine the patient's ability to do some of these things and figure out whether this person needs to come back or can be discharged or what have you. And figuring in how much professional involvement there needs to be.

Now, this is busy, but it's just meant to represent we've been writing white papers about doing triage care since at least 2006. And Larissa Nekhlyudov did a paper in this *Lancet Oncology* issue, in 2017, which is basically saying, when do you integrate the primary care provider back into caring for the survivor? And she came up with the low, intermediate, and high risk, et cetera, et cetera. These are all great quite white papers, but nobody's testing them. Nobody's deciding who's at what level of risk and measuring whether this can really work or not.

So we haven't implemented any of these things, even though for a decade we've been talking about the need to think about this kind of care. And again, this was Larry Shulman and Linda Jacobs paper that again goes into detail about, how do you stratify them, and what would you look at them? But again, nobody has modeled this, and we're sitting on a ton of big data that we could put these in and then test as formulas to see what predicts risk. And in the UK, it wasn't the disease, it was their functional ability that predicted their risk level more than anything else.

And so what they did is that, in the UK, they figured out 70% to 80% of patients could do this supported self-management-- colorectal patients about 50%, prostate 40% to 50%. Just think if you could-- and I don't mean this the way it sounds-- unload that volume of patients. Those are your highest volume of patients from your follow-up visits. What would your clinics look like? How would you be able to see other new patients or figure it out? But it also requires extra resources of how do you create and deliver supported self-management to people?

And then the UK model, this is very busy, but again, what they do is they do this risk assessment. And they have the needs assessment, which is the risk stratification based on health literacy, as well as other issues. Their treatment summary and then their care plan, and then they're stratified, and then the resources are made based on what those needs are. That's one of the reasons our survivorship care plans haven't really taken off is because it doesn't do this. It's just a piece of paper we hand to people, but there's not an antecedent to figure out who needs what in helping to deliver what goes on.

So we have to get around, when we think about survivorship programs, about different ways of doing this. Because the luxury of doing care one-to-one, face-to-face is going to be for the really highest risk populations, and we're not going to be able to afford to do that for all survivors as time goes on. We need to figure out how do we turn eHealth into iHealth, which is intelligent health, which is based on sensors and patient-reported outcomes that people are going to put in. If they're saying they have certain symptoms, what they get back is going to be more triaged and tailored to what they're saying their issues are.

And I just did a quick and dirty review of a leading internet research journal, *JMIR*, and put in the word cancer and mental health and came up with 48 studies, and you can see the populations. Luckily, there was two on caregivers, one on adolescent and young adult. And they were exploring how to use interactive portals, not just one-way delivery mechanisms, where we just push stuff out to patients. Social support, prevention, survivorship care plan, symptom management, PROs, psychosocial interventions, and information seeking, that's nice, but it's like peeing in the ocean.

We need so much more and so much more that needs to be scalable and available to us clinically. So that patients don't feel like we're abandoning them, and we're doing a good handoff and transition for them for their own self-care, as well as working with their primary care provider. And so Michael Jefford in Australia also wrote a paper about where those shifts were occurring. And the big one that I just want to point out is a shift from clinically-led approach to an emphasis on supported self-management based on individual needs and preferences with appropriate support.

And we haven't done the research that we need to do to identify who's going to do well with that, what kind of services. And how do they get delivered and how are they going to benefit from those things. And we should have been doing this the last 10 years, so that we're prepared to do that within our environment today. And so there's going to be a lot of testing of different models and different ways to do this, I think, over time.

You can play a part, a significant part, by one is making observations about what is and isn't working. And working in partnering with your clinical researchers about this is what I've been seeing, have you thought about this, or being parts of research teams. As well as being innovators in your own practices and then tracking how that's going and what's making it work.

There's nothing worse than having interventions that have been tested to show that they make a difference, and then nobody uses them. And the implementation piece of a lot of this is the trickiest part of that. And that's, I think, where the survivorship care plan debacle happened is we really didn't build in implementation science on day one. And so everybody has struggled for years about what to do and how to do it. So I think we all have a role in handling all of that stuff, and I think we need to think about how do we develop and test risk-stratified modeling and differentiate patients who might be low, moderate, or high-risk.

And at the same time, develop interventions for each of those groups. And then make sure we're working with implementation science when we bring those two together to test how well that's going to help us address the needs of those groups. So again, we're going to have to define who's at risk, and how do you define that? And we need to look at some of the large data sets that we have.

It's not just about risk of recurrence or risk of dying. It's risk of functional decline. It's risk of toxicity. Can we predict who's going to get heart failure, or who's going to have other kinds of problems?

Like, I just saw a patient yesterday in clinic who was a dental hygienist and has developed mild peripheral neuropathies from the chemo that she had. But as a dental hygienist, what do you need to do? You need to feel your fingertips to use all those little tools in your mouth. Right? She can't do that anymore. So the mild toxicity that she experienced meant she had a career change, because she couldn't do her work anymore.

Like, do we do that as a baseline assessment? And say, not just the piano player, but maybe somebody who requires that fine motor pieces maybe shouldn't get something that's going to cause a peripheral neuropathy. Or what about cardiotoxicity and other kinds of things, when we do that kind of modeling. So I think we have a long way to go.

I think we all have a piece to play in this, but the bottom line is that what we're doing now is not going to be sustainable the next 5 or 10 years from now. Because you'll always be looking to build new buildings, because you underestimated the volume of patients you're trying to see, and you're never discharging them. And I've worked with oncologists, and it depends on the generation of their training as to they feel like they should follow them for the rest of their life. Well, I grew up in that generation too. That was in the '70s, when people died at nine months, and so there was always somebody replacing them.

But yeah, we took care of them the rest of their life. We didn't have hospice. We didn't have palliative care. We were it. But that's not what's going on today, and so we've got to change our mode of thinking to say that we're not doing anybody a service by continuing that kind of model.

I think we need to think about how do we shift care. It's going to really require a lot of cultural changes, and cultural changes are not easy. We don't like to change as human beings. It's just natural. You get comfortable. You want to do it this way. That's the way it is, but we are going to have to figure out how do we change these.

So for example, one of the issues with follow-up visits, and why they're hard to reduce is if your senior survivor's mixed up in your regular clinic, what happens is they come in between a new patient and a metastatic patient. It's your chance to catch up on your being kind. Right? So you can see them for 10 minutes instead of 30 minutes. It's a billable visit. And it makes you feel good, because you're seeing somebody doing well in between the person who's emotionally distraught after being newly diagnosed or dealing with the issues of somebody with advanced disease.

And the patients, we make them think from day one that we're saving their life. So of course, they have to see us, because who else could save them? Because we've already done that. So we start from day one setting up a field, where it makes it very difficult to discharge patients. They don't want to go. We don't want them to go.

There's a lot of incentives not to have them go, and yet, that's not fair to the person as they go on for their life, for years out. But it's also not fair to us or the system, and it won't be able-- could double book your clinics for 24 hours a day, seven days a week, and you still will not have capacity to see who needs to be seen. So are we going to start saying what's a tolerable wait list? 30 days from diagnosis? From suspicion of diagnosis? 100 days? Three months?

So we're going to have to start seeing trade-offs if we don't start facing this and start thinking about how we can do this differently. And so if you're working in a clinic where you're seeing-- one thing you can do is have your institution run statistics to see how many patients are being seen in follow up 10 years or more beyond diagnosis. Because they're probably not the ones with metastatic disease. And then the next time they come in, talk to yourself or your other providers to say, shouldn't we be thinking of discharging them? Can't their PCP see them, and the patient knows that they can always come back if they develop a new problem?

That's low hanging fruit, people who are 10 years out. It's very hard at my institution to try and get them to run reports, so I know how many numbers that is. So we have to make the data work for us. As somebody said about our electronic health records, they were supposed to help us work harder, but we're working harder for them than they are for us. And we need to turn some of that data stuff around so that it's useful for us.

So right off the bat, just look for people who have been coming back for more than 10 years and thinking about moving them along. And then start talking about those between 5 and 10 years or whatever, because there's nothing magical about the five-year mark. Some people actually don't need to be seen after two or three, because the risk of recurrence goes down to the general population. And some people maybe they have to be followed for eight years instead of five. So we need to start getting smarter about how we deliver this. It's not one-size-fits-all, and we need to test these as we go along.