

Anjee Davis:

Hello, everyone. This is Anjee Davis. I'm the president of Fight Colorectal Cancer, and I'd like to welcome you to Fight CRC's accelerating progress in global early age onset colorectal cancer research key strategies for immediate impact. It's been really inspiring to be able to see familiar faces and new participants all united by a shared urgency to tackle early age onset colorectal cancer.

We're building on the momentum from discussion started in December last year, and we want to continue this conversation today really reflecting a commitment to this issue. We have some leading minds in the field joining us from all over the world. We're really excited to see this, experts who are truly at the forefront of research and we're honored to have you here with us. Over the next two hours, I really encourage everyone to actively participate, challenge concepts, and stay connected. Again, I want to thank everyone for the time they're committed to this issue. Fight Colorectal Cancer is committed to early age onset and the idea of convening and collaborating and pushing this issue forward towards action. So I turn it over to Andi Dwyer, who's been leading the charge to take us into today's discussions.

Andi Dwyer:

Hi, Anjee. Thank you so much. And I know we had nearly 70 folks registered and about 40 people on right now and just getting people in from all over the continents currently. So as Anjee noted, this is a continuing conversation of the work and really talking about building upon the momentum. I'm delighted today that we have Dr. Jennifer Kolb, Josh Demb, to share the strategy and a framework we're going to talk about. That was one of the publications that was recently released and the New York Times picked up really about the management of signs and symptoms and really where are we going, and really thinking through what are some of the ways that we're thinking critically about interventions for accelerating management with Dr. Kevin Monahan out of the UK as well as Sonia Kupfer out of here in the US.

So what I'm excited about today is we're going to hear some discussions, some framework from experts who have really fantastic clinical experience, research experience, but I think as Anjee noted, really thinking outside of the box about what are we going to do to really look at decreased incidents down staging disease and really moving forward.

But if we're going to do this, we're really going to also spend some time about half of today really talking about interactive breakout discussions where we're going to really think through some of the strategies as well as really think about some perspective that all of you are sharing related to where we might go to think about interventions to really address those key signs and symptoms that Jen and Josh really move forward in terms of really thinking I'm unpacking a framework. There's no right or wrong answers, everybody. This is really about a critical discussion. We will keep the drumbeat going. And at the close of today, speaking to the drumbeat, Dr. Jose Perea, who's also been a leader in our work internationally is going to talk about where we are going and some of the next steps over the next year, and really kind of our road to Barcelona as we're chatting about as well.

So I'm going to turn it over though before we jump in to also share a little bit of perspective about the Fight CRC work to date to have Phuong Gallagher, who is one of our key research experts and subject matter experts really share some perspective about a recent publication that she, Annie Delores, as well as Dr. Perea released in terms of the lit related to patient perspective and advocacy, but really thinking about the early age onset movement. So Phuong, I'm going to turn it over to you to talk a little bit about some of the work you and other advocates have been engaged in.

Phuong Gallaghe...: Thank you, Andi. This was really a unique collaboration because typically I feel like research advocates get pulled in later down the line once concepts have been pushed down the line and things are opening up and then it's kind of like an afterthought. I'm starting to see a trend and very happy to see this trend where we are beginning to be seen as collaborators at the onset. So as an idea is proposed, it's really important to bring in research advocates. And personally I feel that research advocates are a little bit different from just general advocates because our research advocates in the RATS program at Fight CRC are trained to be able to speak it with the scientific community and still be able to represent the thoughts and values and needs of the patient and caregiver communities. This has really been a great collaboration because we were able to discuss what are the important points that we wanted to bring together.

In this case, what we really found was that there needs to be a understanding, an agreement on simple things like the definition of early onset. What is the age, and that vastly varies from the United States to Spain, to Australia, anywhere. Excuse me. And it's really helpful for us to have these agreements so that we are working with the same or similar dataset, and then we can really bring together the extra understandings and collaborative efforts to move forward into talking about the needs at every stage of the patient journey. So we're not only talking about treatment, we're really talking about their survivorship and the long-term survivorship, which we're now beginning to be able to support research with because we have more long-term survivors.

So I think that there are many critical areas that we are ready to explore, and I think that is best done really together, including not just the research community and not just the patient and research advocates, but also all the other stakeholders who are on this meeting as well. So I really welcome you to think outside of the box as we move through these areas and I'm really looking forward to hearing the ideas that come up today.

Andi Dwyer: Awesome. And I just want to do a shout out to Jose and Phuong and Annie. There's an awesome video that really impacts I think some of the further discussion. It's really rich in terms of that work. So the YouTube link is provided, and Phuong and Annie and Jose, congratulations on really moving part of this work. I think as noted in the abstract, there's a lot of work around all things science and what are the direction, but in terms of really how are we fusing the advocacy and the clinical perspective, this is one of the few pieces. So, well done. And I just want to say in the spirit of that work, we really are doing this

work on behalf of those many folks who are impacted, their families. Brendan, April, Jen, two of the three folks here have lost their lives to colorectal cancer early, early, early in life. And then Jen of course is a survivor of Chris Ganser.

This slide always reminds me of the work that we're doing and these are some sensational people that we're research advocates and are continuing the great cause with their family, friends and the work, and this is why we're here. So I just want to remind everyone that the faces, the names, the families, the colleagues of friends that are impacted, what we're doing today is substantial and it's why we're in the fight. But the work with Fight CRC, I want to just also frame a little bit of the path to a cure. And part of the work that we've been doing in terms of really thinking of a report that provides some bench, some baseline, as well as some real directive about where are we going as it relates to research, and particularly there's some great opportunities for early onset research.

And one of the things that I want to say is that when we're chatting a little bit about the directive, really putting a plan in a blueprint in place to guide the work as well as to really engage our community advocates, survivors, researchers, clinicians, policymakers. We really started really thinking about what are the directive that we need to really look towards. And it's really thinking about the biology, the etiology, which much of our work around early age onset has been discussed. Prevention and early detection strategies, which we will even be diving in a bit today, some of the treatment as well as really thinking about survivorship and recurrence.

So the report that we put together and part of again, that blueprint for guiding the work for us and our community is really thinking about posting dialogues, having conversations like today's setting priorities, putting pressure on implementation, really opening up the discussion. We need everyone, as Phuong said, to really be involved. And I really want to just commend, I think part of the work in terms of our colleagues, funders, where we really have already started to see some movement around what we set forth in our sections and these objectives at this path. We're seeing NCI putting the NOSI forward in terms of etiology detection, screening, prevention, also really thinking about the strategies for funding this work as it relates to early onset. And NCI have been incredible partners as well as DOD and many of our global partners in terms of really thinking about the research, those strategies. And I think really authentically looking to the voice of the community and Fight CRC.

And part of this work is really building upon this year alone is even at the end of 2023 a think tank hosted in collaboration with NCI and Vanderbilt where we really talked about the etiology signs, symptom interventions, and what are those opportunities for bridging this work as well as some continued conversation leading us even today in terms of talking about the red flags and symptoms and what are we talking about, really being able for interventions to hopefully look at that incidence reduction, mortality reduction, but down staging disease and really thinking about how we're moving forward.

And one of the things I think is that of course, really the messaging, getting the word out and really bringing attention is something that's critical. So I want to commend Dr. Kolb and Demb, who really were as part of a Fight CRC working group and to move it forward. I know the article was written, submitted, there was a number of folks that were engaged, but really thinking about where do we want to place this article and where to go I think was very deliberate, but amazing that the New York Times as well as large media outlets are starting to talk about this in a much more dedicated way. I think the incidents from the work with ACS and many of you on this Zoom meeting today, but also what are we doing about it and the impact, I think those conversations are even starting to happen more so.

In terms of the prevention and early detection work, the objective that we've talked about is examination and uptake of those in terms of early age onset research and what we're moving forward. And I think as Fight CRC as a leading policy advocate, really thinking about the genetic counseling act as well as really looking at the American College of Physicians calling for that screening and pushing back when there was that movement to maybe not have screening start at 45, being an active voice, talking about really that we did make movement that the science is there and that we really need to advocate for screening guidelines that really help with the population who are most in need.

So I just want to remind or all of you, I think Anjee Davis, Molly and team have talked about being a squeaky wheel, and that's really a big part of the work moving forward, subject matter experts and others to really think about the advancement with our industry partners and the like around treatment and around therapy. And how do we start looking at stronger connection of data outcomes, clinical information to better inform our treatment and strategy moving forward.

So I outlined part of the work through path to a cure to show the experience, to show the collective, to show really all the areas firing to really make the movement move forward. And we're going to continue to use this path as a strategy and really Fight CRC being engaged as well.

One of the things I want to also just mention is that Fight CRC in October really took some time to think of about a convenience sample and a snowball effect of approach in terms of serving respondents and people who are part of the patient and advocacy community. And through social media channels over a couple of weeks span, we're able to get 900 respondents sharing some of their perspective related to early onset colorectal cancer. And I bring in today because I think this is really critical to the conversation, is really what are some of their perceptions where people feel that they, in terms of survivors, ultimately miss or even certain perspective related to early age onset colorectal cancer. And ultimately about 90% of those sampled who responded that they felt that people thought CRC was an older person's disease and couldn't happen to young folks.

And I think this is a conversation that we're trying to change and bring awareness. And the polling, we also heard about that whole idea that maybe your signs and symptoms weren't something, that idea that it's not that big of a deal, this whole idea of medical gaslighting of sort, and not feeling heard happened to about 72% of the population who were polled. And so a reminder today as we started with the work that Phuong was speaking of and the people impacted is this is very much the experience of folks and this is the response that we're getting. So this is what we really need to consider as we're doing this work moving forward.

So when we're thinking about the convenings, we're thinking about the think tanks, we're thinking about the subject matter experts. I just want to say thank you to the many collaborators, sponsors, funders, foundations who really make this work possible. I know Michelle, Anjee, so many of the folks through Fight CRC are really dedicated to making sure that we have the fuel and fire, and we couldn't do it without the support as well as much of the research funding globally that's happening to support the work. In terms of really working towards this, what you've seen so far is really thinking about the growth in terms as it relates to the convening of the experts, funding the research, engaging the research advocacy community, clinical trial education engagement, and really making sure we're publishing this research.

You've already heard about two perspectives of different types of opportunities of work that's been funded and put in peer review. And I want to say again, from the work from Nashville, we have a publication coming out in Frontiers based on the findings of that meeting, the work from the work groups, from doctors Demb and Kolb and even the work the Phuong and others have talked about as it relates to the research advocacy.

So with that, this is where we get real and we're going to get some stuff done today as it relates to really moving forward and talking about the impact. So I would invite right now, Dr. Jennifer Kolb as well as Dr. Josh Demb to lead us off as we get ready to really talk about some of the biggest strategies and opportunities as they see it, and opportunities of food for thought for red flags, signs and symptoms and management. And again, after this, we'll hear some perspective from Kevin and Sonia based on implementation strategies. And we'll spend some time then again as small groups chatting about some of the discussion and opportunities for next steps. So Josh and Jen, I'll turn it over to you.

Dr. Jennifer Ko...:

Great. Thank you so much. It's a pleasure to be here. I'll get us started. This is really a team effort, so very grateful to everybody who was involved, co-authors, Fight CRC, who really helped us push this initiative and really provided a lot of the coordination and effort, and we're just super excited to share this research. I'll start with, next slide. Thanks, Josh. So we'll start with a little bit of epidemiology that we all know and is really why we're here today because colon cancer remains common. But despite all of our efforts with screening and decreasing really the incidences and mortality of adult onset colon cancer, we're

really concerned with this early onset phenomenon, age less than 50. And we have some ideas of why this may be happening, possible birth cohort effects, but in the meantime, as the epidemiologic trends remain worrisome until our research catches up, we've had changes systematically with our guidelines.

So on the next slide we'll see that in response to really these worrisome trends, all of the US societies have lowered the screening age, so the multi society task force, the three major GI societies in the United States, as well as the USPSTF. And so the benefit of this is that we now obviously recommend screening at age 45. And so this should take care of some of these trends. However, the main thing that we know is that although screening is potentially being addressed by this, this is really not the whole issue, right? Because there are still a lot of patients who present not as sort of screening cases. So screening is really intended for asymptomatic patients, but what about patients who may have rectal bleeding or what about patients who are less than 45, 43, 44 and have symptoms? And so this is really where we start to talk about early detection, so early cancer detection.

And I think many of us would argue that early detection of early onset colorectal cancer is suboptimal. And I'll go through some of the reasons why this could be. The first is that physicians and patients probably downplay the severity of symptoms, and this is where there may be some stigma. This is where patients may be a little bit reluctant to talk about some of their symptoms that maybe they're not used to sharing things like having rectal bleeding or incontinence or whatever those might be. And physicians may also downplay that and choose a strategy of watchful waiting. Oh, there may be other reasons why you're having this abdominal pain, nausea, vomiting, a little bit of bleeding, it could be hemorrhoidal. And so it's sort of a combination of probably culture and the way things have been handled for many years that that shift hasn't happened yet. And then there's also certainly probably a lack of clinician, and I just sort of say healthcare professionals may not have all the knowledge on what are the common symptoms? What really should help us be tuned into could this be a case of early onset colon cancer?

And so with these sort of factors at play, we know that there's late presentation that patients may present late and that there's delayed diagnosis on the part of the healthcare system. And there's lots of factors that could go into that, which could be on the part of the healthcare team, the insurance, the system, right? There's so many different factors, but at the end of the day, this suboptimal approach to early detection really contributes to poor outcomes. And that's what we're here to talk about today is how can we improve those outcomes? So what we felt was an important starting point to get to that question was to understand, well, what are the most common signs and symptoms? What is most commonly present? Because that's what we need to be able to advertise and then advocate for. And then what is the association? So when that symptom or sign shows up, how strong is the association with cancer risk, right? How worried should we be as healthcare professionals and as family members of patients who may have these signs or symptoms?

And then finally, when we think about those signs and symptoms, really how much time typically is there between the initial presentation and the final diagnosis? And hopefully understanding the answers to these questions and using this as a framework is really how it's going to inform our planning for how to improve this issue. So what did we do to answer this question? So we started with a systematic review. So we looked at all the different data sources from inception through last May, and we did update this to be as recent as possible prior to publication. We had a really rigorous approach to this study. We had two independent reviewers. Thanks again to everybody who contributed to screening thousands of titles and abstracts. I mean, this was really a great team effort and we really felt like we had to review all the literature. This was the global literature, we just wanted to see any data that's been published on this.

And then the next slide. So what was the criteria? So again, we're really looking at early age onset patients. So these are not hereditary cancer. These are adults less than 50 years. And we were looking for full length peer reviewed manuscripts, so high quality evidence, not abstracts and things that were not peer reviewed. And we excluded some of the smaller studies. We excluded studies that were really in sort of children adolescents. And we really looked at studies over the last 25, 30 years. And that was mostly just because there has been such a shift in the epidemiology of early onset colon cancer as well as sort of some changes in colonoscopy quality and our approach overall to colon cancer screening. So again, looking at the last 30 years, what does the literature tell us about young adults who present with non-hereditary cancer? And I'm going to turn it over to Josh to take it from here.

Dr. Josh Demb:

For each one of the questions that we looked at, there was different ways that we intended to analyze the data. When we wanted to look at the most common signs or symptoms presenting, what we were really looking for in the studies was measurement of the proportion of symptoms among early onset colorectal cancer patients. We wanted to look at the symptoms individually, but across the studies so we could pool and see what the sort of average proportion was when we took a bunch of studies together. And so we use random effects meta-analysis to weight each one of these studies fairly evenly. But then we also wanted to additionally acknowledge that a lot of our studies were coming from a lot of places and didn't necessarily look at the exact same study population.

So we also conducted stratified analysis that took account for geographic study location, the age groups that were considered, the potential sources of bias that could come from the study, as well as the different data source types that were used. And by this I mean whether they used medical records or electronic health records based data, whether it was patient self-reported, or whether this wasn't well specified in the study.

Going to that next step, we wanted to look at the association between signs and symptoms and the risk of early onset colorectal cancer. And so in order to do this, we wanted to measure at least three studies that were looking at early onset colorectal cancer risk for each symptom. And this would allow us the

opportunity to potentially pool the data. Unfortunately, as we'll note a bit later, there was only a few studies that did this associational check, and the way that they did it was very, very different. Basically how they compare the different groups was somewhat different. And so what we ultimately ended up doing was just showing these studies descriptively using forest plots. For the last question, we wanted to look at time from science symptom presentation to diagnosis of early onset colorectal cancer, keeping in mind that different studies measured this time to diagnosis differently. And so we aggregated based on whether the estimate provided was a mean or a median. And again, we stratified by data source type.

So, as Dr. Kolb alluded to, this was a fairly large lift in terms of review. We started with about 19,000 studies, after removing duplicates, it ended up at about 13,000 studies that needed to be screened through title review and abstract review and full text review. But after these steps, we were ultimately left with about 81 articles to be included in our review. And just to give some very brief characteristics on these studies, these were all observational studies, 76 of which were cross-sectional studies. And I just want to point your attention to the geographic locations in which the studies were conducted, notably that 26 of the studies were conducted in Asia or the Middle East, 19 were conducted in Europe, and 23 were conducted in North America.

To jump right into our question one results, there were 78 of the 81 studies that reported a proportion of symptoms present in their early onset patients. And this was across 17 different signs or symptoms that were measured. And that's what's shown in this figure at right where our first row is showing the specific sign or symptom measured. We then in the next row show the number of studies that measured that, and then the absolute number of patients who presented with that symptom over the total number of patients with early onset for those studies that measured that symptom. And then the weighted proportion, which we found via that random effects meta-analysis.

And the biggest takeaway for us is in our main models, but then also in any of the stratified models we looked at, hematochezia, abdominal pain and altered bowel habits, which was comprised of factors including constipation and diarrhea, were notably the three most common symptoms that were present. And this persisted across geographic location, whether we looked at US-based studies or other studies across different age groups measured across different sources of bias. This was pretty consistent.

And going to our second question, it was notable that when we looked at the studies that measured association of which there were five, these three common symptoms came up again, where we saw that hematochezia was associated with a 5 to 54 times increased risk of early onset colorectal cancer, abdominal pain associated with a 1.3 to 6 times increased risk, and then altered bowel habits disaggregated here into constipation and diarrhea was shown to have about a 1.3 to 8 times increased early onset colorectal cancer risk.



Shifting on then to our third question, looking at the time from symptom presentation to diagnosis, there were 34 studies that measured this, 23 of which measured a mean and 16 of which presented a median. Some of these presented both. But when we looked at those that presented mean data, we found that the meantime from symptom presentation to diagnosis was about six months with a fairly wide range of potential means. And then in our studies that presented a median across all of these, the median was about four months.

And so really this brings us to our main takeaways that we've just talked about, that those three common symptoms, hematochezia, abdominal pain and alter bowel habits persisted across a large swath of our studies. And they were also associated with a higher early onset colorectal cancer risk, including some other symptoms such as anemia. And then as we just noted on the prior slide, the time from signer symptom presentation to diagnosis range from between four to six months, though there was a fairly wide distribution in that time from symptom presentation and diagnosis. And so this kind of sets the foundation for where the evidence has been at this point, but it really leaves us with this question of where do we go from here? And for that, I'm going to turn it back to Dr. Kolb.

Dr. Jennifer Ko...:

So this is sort of a framework to think about how to make a timely diagnosis of early onset. So the first thing we have to do is identify red flags. Hopefully this systematic review gives a sense and sort of quantifies how frequently those occur and what the risk is, but recognizing what these red flags are, and then those should prompt really a triage. This needs some sort of a workup or a treatment or some intervention. And then the clinical loop really needs to be closed. There needs to be some resolution of those red flags. So we'll suggest a few different points along this way where we could potentially make an impact on the next slide. I think this is just some of our ideas, but really I think the whole point of the next few sections and breakout is really to hear from everybody how we can do this.

So I think in the realm of identifying red flags, potentially we could work on these educational initiatives and really raising awareness. Certainly research the literature review like this does that, but I think this is really a team effort that needs to be multidisciplinary. So we are so grateful to our primary care colleagues who really do the bulk of the work in evaluating all of our patients day to day with a whole myriad of different symptoms. And they could be unrelated to the GI tract, but then there may be some anemia that's caught on a workup in something from a cardiologist. And so it's a matter of potentially finding ways to educate our colleagues in other departments and to help understand what are the barriers on their end to really working up these signs and symptoms.

And that might involve sort of refining the triage. So how do we change our diagnostic algorithms? Does this come from clinical pathways, clinical guidelines? I think most of us know that if a patient shows up to a GI doctor with one of these symptoms, most GI doctors would potentially move forward with a

colonoscopy. But there's so many different barriers that could happen before that. They may not even make it to that gastroenterologist and there also may not be the resources in that city or in that office or whatever it may be. So how can we really create guidelines and pathways that work all over the country that really can help all patients get plugged in? And then once we have those guidelines and those, once we have that, we also have to implement those, not just having guidelines, but really like how do we get the work done? How do we make them sort of actionable?

And then finally, we need this accountability, closing the loop, making sure that there is some resolution to that initial problem, that that abdominal pain, we may or may not find an answer, but at least you've checked off all the things that need to be done. And this is just strong clinical care. So I think these are a few of the different areas where we may be able to start to create plans and solutions, but this is really, I think where we now need to brainstorm and use the systematic review results really as our baseline data for where to go from here.

And so I think with that, we'll just say one final thank you to all members of the team, all co-authors, everybody who's involved from phenomenal librarians who helped at UC, San Diego from all the different people who screened and reviewed, Dr. Samir Gupta, who also led this study. And it was just really a really great group effort.

Andi Dwyer:

Awesome. Well, thank you so much. And again, I think Samir had said to the two of you, persistence was key and it paid off. So you're queuing up your slides here, Kevin. I also just want to do a huge thanks to everyone who's been helping bring today together. Emma, Zach, the Fight CRC team, creative team, as well as Carly and Phuong, and many folks who are on the phone today who really helped, and the facilitators who are going to be joining us as well. So thank you. And Kevin, I'm going to turn to you because I think now per Jen's guidance, we're really going to have you talk about, as Jen and Josh said, really some of the management strategies. So Kevin, I know you're kind of a rockstar of sort in this area and widely sought out as it comes to really talking about some of their approaches in the UK. So sir, I'll turn it over to you.

Dr. Kevin Monah...:

Well, that's very kind. I don't know about that, but I'll tell you about what we're doing in the UK anyway, and you can decide afterwards what you think. So no, thank you very much. So I work at St. Mark's, which is a National Bowel Hospital in the UK, and I'm also a medical advisor to Bowel Cancer UK. I have no conflicts. So I just want to kind of give this the perspective of what it's like working in different health systems and how we have used what's relevant in our health system, but thinking about what might be more globally relevant as well. But in the UK, one of the things that's important is about, well, I suppose in any health system is about what threshold we have for intervention. So at what point does somebody with a symptom have a colonoscopy, for example? It may seem very obvious, but actually there are very different approaches to this in different countries and different health systems.

And we like to consider positive predictive value of any test before we offer that test. So for example, if you have 100 people with abdominal pain, the positive predictive value for that symptom representing an underlying diagnosis of colorectal cancer might be less than 1%. So what can we do to improve that positive predictive value? And also, when we think about lower prevalence colorectal cancer populations, we try to ensure that we have equal access across all ages. In a way that means that there's something called opportunity cost, which means that if you are going to offer something to a 60-year-old with symptoms where the positive predictive value is relatively low, then you should be offering intervention at the same threshold at different ages. And on the similar vein, you can consider the relative risk of developing cancer or the absolute risk. So if you compare people in their twenties to people in their thirties, the relative risk would be significantly higher in people in their thirties, but their absolute risk will remain low.

And we have to consider this to avoid creating inequalities. And we also need to consider what's the evidence for mitigation. So if you perform a colonoscopy in people in their twenties or thirties, then what's the impact of that on that population? The other thing to consider is that actually early onset colorectal cancer is very rare for GPs. And GPs or primary care doctors in the UK have about three to 6,000 patients that they're responsible for. And they only have one patient or one person with colorectal cancer annually that's within that three to 6,000 population. And probably over the course of their whole career, maybe only one or two people under 50 diagnosed with colorectal cancer. So I think I have a lot of sympathy with GPs or primary care doctors.

I do believe that we should be educating and shouldn't, the message should not go out that younger people who have symptoms definitely won't have colorectal cancer. But I think what we need to do is try to make it easier for younger people or anyone to navigate the system so that that isn't a barrier. Even if a GP doesn't know that maybe they should be thinking about colorectal cancer in the 35-year-old, that actually in some ways we can kind of bypass that step and ensure that individual is able to access appropriate investigation. So I think for me, patient navigation and tools that allow patients to access the care that they need kind of helps to overcome some of those barriers. So how can we make the pathway more effective? As Jen was talking about, what interventions can we offer so somebody doesn't go to the GP with a symptom and get told, "Oh, you're just stressed," or whatever other reason that people might think of.

So this is just the front of the Never Too Young report which we produce with Bowel Cancer UK. And this is where we in England or in the UK, sorry, we have just over two and a half thousand people under 50 who are diagnosed with colorectal cancer annually. And this was a survey of younger people rather with colorectal cancer. And many of the themes that have come up and you will be familiar with, so younger people themselves maybe not aware that they could be diagnosed with colorectal cancer. And many go to the GP several times before they're referred on for the test that they need, and there are other

aspects to their care that could be improved upon access to genetic testing and so on. But I'm going to focus on symptoms. Just to compare US and the UK, so you've just not long ago reduced your screening commencement age to 45. We have just reduced our screening age from 60 commencement screening age from 60, and we're just about to open up to 50-year-olds.

So we're in a different place. Obviously it's great that we're now offering screening to people throughout their fifties, but it's a FIT based screening every two years. And if, let's just say we were screening people from 45, well, whatever age that you choose, there will be people younger than that age and they won't have access to a national screening program. What interventions do they have access to and how can they meaningfully avail of those interventions? And interventions that range from noninvasive testing to colonoscopy are variably accessed by the at-risk population. And we need to think about what other factors are important. If you think about genetic diagnosis, it only really can account for risk for up to about one in five patients at the most. So what causes early onset colorectal cancer in the other 80% of individuals? Well, we really don't have any clear idea.

And often there are facile reasons shared. And often when this is in the media, people talk about obesity and whatnot. But I think really we have to admit that we don't know why, and therefore it's difficult to identify a risk factor that we can use effectively to think about the whole population of people who are at risk of early onset colorectal cancer.

So this is a quote from the report, and this woman obviously was going back and forth through a GP as I was describing earlier on. So let's just think a bit more about what we can do about somebody like this in the same situation. And this is another, the GP didn't think much of the symptoms because possibly that GP has never encountered a person who's had colorectal cancer on the age of 50 thus far in their career. Maybe they have, maybe they haven't. But as I said, also, there are younger people who are not aware that they could be at risk of this disease.

So this is obviously just being presented and it's very helpful because you can't presume that the same symptoms that indicate a likely colorectal cancer diagnosis in the whole population, mostly that is people over the age 50, are the symptoms that are specifically relevant in the early onset colorectal cancer population. We, as I say, uses PPV to determine the threshold for referral. And if you take individual symptoms, so NICE is the kind of NHS body that determines guidelines. And it will select people on the basis for an urgent investigation if they have a 3% risk of colorectal cancer or a routine investigation if the risk is lower than that typically. But one of the things they did, whether that's right and wrong or wrong is another matter. But one of the things that they did was performed a meta-analysis of symptoms that predict the likelihood of having colorectal cancer.

And what this demonstrates is that individually symptoms are very poor predictors of who's likely to have an underlying diagnosis of colorectal cancer. There's a great deal of subjectivity and how they're reported and how they're interpreted. Diarrhea for one person can mean something very different for another individual. And if you take some of the PPVs here, the highest in the whole population are, again, PR bleeding, but also anemia, which is less predictive in a younger population. And again, weight loss is less predictive in a younger population. Now I've just written on back of the envelope PPV for the early onset colorectal cancer population. So if you take all younger people who have diarrhea and you try to work out how many of them are likely to have an underlying colorectal cancer diagnosis, we'll know it'll be less because there are lower prevalence population. I mean these are not in any way meant to be accurate figures, but I just want to illustrate that actually symptoms can be maybe on their own. We need something a bit more than symptoms to try and identify people who are most likely to benefit from investigation.

Now I'm going to bang on about FIT testing a lot. I don't believe that FIT is a panacea. It's not going to cure all Ls and solve all of our problems, but it is a very helpful test because it's cheap. It's something that people feel quite comfortable performing at home. And it's also quantitative assay, so it measures hemoglobin in stool, it doesn't measure blood, and you can detect very low concentrations of hemoglobin. And that at the moment is used as a kind of basis of screening programs across most of Europe. We have a very high threshold for concentration for triggering a colonoscopy in screening population in England. It's harder than most European countries. Actually, it needs to be significantly lower. Actually, we started using this in symptomatic triage, especially as a consequence of COVID when endoscopy was highly restricted. But we use much lower threshold and symptomatic population.

What we know is that at low concentrations, the sensitivity for colorectal cancer is actually very high. All the specificity is lower. And if you increase the concentration, the threshold, then the sensitivity will decrease and the specificity increase. So you can adjust the concentration depending on how you want to predict whether someone is likely to benefit from a colonoscopy.

And this is a project that we performed. It's called a NICE FIT Study, and we recruited over 10,000 people across England who were being referred on the basis of symptoms for an urgent colonoscopy. And we looked at different thresholds of fecal hemoglobin, and our threshold of two micrograms, which is the lowest measurable level, the sensitivity for colorectal cancer is 97%. So we're finding 97% of cancers, and the positive predictive value is 8.7%, which is well above the threshold that we would refer somebody urgently. But it's not such a great test for advanced adenomas. So it is less good at preventing cancer than it is diagnosing cancer early perhaps.

And as I say, you can adjust the threshold and you can alter the sensitivity and specificity, but you also adjust the positivity, which means that very low thresholds, nearly 40% of people with symptoms will end up having a

colonoscopy in theory. So the threshold that NICE recommended as a standard of practice in the UK was that if the colorectal cancer probability is 3% or more, then a patient should be referred urgently, as I said. But using FIT at a concentration of 10, the probability of an underlying diagnosis of colorectal cancer is much higher, 16.1%. So what are the appropriate thresholds? And with the addition of FIT to symptoms, what we're trying to do is apply more objectivity, which was just something that can be rather subjective and variably reported, as I said earlier on.

So if we take a step back and think about the kind of patient who presents to primary care, this is in England, but there's a universal element to this. A 60-year-old with abdominal pain and a change in bowel habit has a probability of one to 2.6% of having colorectal cancer. After a positive FIT test with those symptoms, that probability is over 10%. As I said, there's a threshold of 3% for urgent referral. If they have a FIT which is below 10, then their probability of having colorectal cancer is not higher than someone who doesn't have any symptoms at all. So it's as useful to offer a colonoscopy to the person who comes to the appointment with them who doesn't have symptoms as it is to them if they're FIT below a threshold of 10. So we can define a very low risk population for whom maybe we can reassure and we can handle differently.

Now, obviously there are resource issues that we contend with perhaps more than in the US, but you could, for example, say to someone, "Look, your probability of having colorectal cancer is low. Maybe you should have a colonoscopy, but it may not need to be this week. It could be done in a few weeks. Or we can look at other causes for your symptoms, which is also very important." So we have developed this guideline in the UK whereby if someone presents with a symptom, and this is any symptom or with iron deficiency anemia. When I say any symptom, previously people were referred with what are called high risk symptoms. And what we've realized in our review is that there is no such thing as a high risk symptom. And when you add FIT to any symptom actually, this is more relevant to that individual than any individual symptoms.

So if we divide people with high versus what were considered low risk symptoms and add a FIT test, the probability of them having cancer if they have a FIT above a 10 or more is equal. And similarly, the probability of having cancer if their FIT level is less than 10 is again equal. So all symptoms all go in, people have a FIT test, and if the FIT level is above 10, they have an urgent colonoscopy. If the FIT is less than 10, then they go into a process where there's holistic review of their symptoms and the safety netting issue comes up. If the symptoms are longstanding and they've been previously investigated, they may not need to have a colonoscopy. Now this is for people of any age.

Until recently, until we produced these guidelines, people were only really able to access the urgent pathway in the NHS. And I'm not saying I agree with this, but this is what it was if they were over 50 with symptoms. And if they were under 50, that really relied on the discretion of a primary care doctor. But now

this guideline applies to anyone who's an adult from the age of 18 onwards. So in theory, people who are younger have better access to colonoscopy now than they did or whatever form of colorectal investigation.

We did a subgroup analysis, and this paper was called Finding the Needle in the Haystack. This is about picking out from all the younger people with symptoms who's likely to have colorectal cancer. This is a population of people who were referred urgently anyway in whom we perform FIT testing. And it's just under 1500 patients with one and a half percent of those patients having a diagnosis of colorectal cancer. We subsequently learned when they had the colonoscopy, and similarly FIT seem to perform well in this population.

But I think the thing about a low prevalence population is that it doesn't behave the same way in terms of the outcome of any intervention compared to a high risk population. And the value of any intervention needs to be considered in terms of that population prevalence. So if you take people that didn't quite work as I expected, but with a population prevalence as that study was of one and a half percent, you have to perform a lot more colonoscopy even if somebody has a positive FIT test in a higher prevalence population. This is another study which is over 3000 patients from South London, and these are also adults between the ages of 18 and 50 who presented to primary care with either low or high risk symptoms. So this is any symptom. And in this population, the population prevalence of colorectal cancer is 0.38%. So this represents more typical whole population of younger people with symptoms who present to primary care. And in this population, the positive predictive value is 2.7%. So it's very close to the 3% NICE threshold.

So once again, if you offer a FIT test and it's above the threshold of 10, then actually you will identify a population who are likely to benefit from colonoscopy. And there's similar results from another study from Spain published in 2021.

So just to finish up, how do we use interventions to a pardon for the expression, but find the needle in the haystack, find the individual who's most likely to benefit and actually otherwise can be extremely difficult to find? And how do we develop navigation and pathways for those individuals who are likely to have colorectal cancer? What risk stratification can we use? So symptoms on their own are obviously helpful, but we can apply more objectivity. And what about the value of combining FIT with risk scores that combine patient factors and maybe hemoglobin level or high platelets have been found to be associated with the likelihood of or probability of colorectal cancer in a symptomatic population.

Thus far, the studies have been published mostly demonstrate that actually FIT is more important. And there's a big study in the UK at the moment called COLOFIT, and it's very well funded study. But thus far the preliminary findings indicate that if you combine patient factors like age and gender and whatnot, actually FIT comes out on top of all of those things, which is disappointing to the

group who are running the study, but it's reassuring in terms of what we're doing at the moment. We can use any triage tool provided it's effective to expedite referral for those who are most likely to benefit from colonoscopy. Now, like I say, I focused on FIT. I don't believe FIT is the answer to all of our problems, but I think that a lot of the things that we're learning about FIT and how we're implementing it in practice, we can apply to other interventions and a lot of the principles remain very similar.

So there have been some very interesting studies evaluating the fecal DNA. If you add 16 SRNA sequencing from the FIT kit to the FIT result, you improve the diagnostic accuracy of FIT testing. And it's actually not that expensive. And I think there's a lot of promise there. There have been many interesting studies, obviously with circulating DNA and a very nice paper. I know Samir was an author on this paper evaluating micro RNA. Samir, I think maybe you wrote an editorial micro RNA.

And I think that also, as a gastroenterologist, if somebody presents to me with symptoms, then actually colorectal cancer is one of the things that we're thinking of and we need to perform a holistic evaluation of them as an individual. In primary care, they'll probably have a calprotectin as well, which might indicate that they might have inflammatory bowel disease, full blood count, celiac urology. So all of these things need to be factored in because even if you've ruled out colorectal cancer, then the 35-year-old with diarrhea, they went to the GP because they had diarrhea probably more than they were concerned about colorectal cancer. So how do we resolve that concern and ensure that if they have another diagnosis that that symptom has been addressed or how do we effectively reassure them? And that's it. Thank you very much.

Andi Dwyer: Awesome. Once again, Kevin, congratulations. Rockstar status achieved. Kevin, we're going to have you stop sharing screen and I'll have Sonia bring hers. But while we're doing that, one question from Samir with common questions that come up when considered FIT for triage include utility and setting of person with overt rectal bleeding or known hemorrhoids. How do you address these types of questions?

Dr. Kevin Monah...: It's a question that often comes up. Because we're measuring hemoglobin and not blood, actually, we can differentiate between [inaudible 00:52:34] causes of bleeding from hemorrhoids and tumors or the neoplasia that are shedding hemoglobin. So if you perform a FIT test and people overt PR bleeding, actually in the same way it has a reasonably good negative predictive value, what we would say is that actually, if people have persistent PR bleeding, they should still have an investigation, but we might just perform a flexible sigmoidoscopy, which is less invasive and easier to perform depending on what their issues are with that individual. So FIT still has some benefit in that population. And actually the other thing to factor is that if somebody goes to the GP and they have symptoms, the worst thing that will happen if they have a FIT test and it's caused by hemorrhoids is that it would be positive and they'll end up having a



colonoscopy. And maybe more of them didn't necessarily need that colonoscopy, but it's not going to miss somebody any more than it would do for any other symptom.

Andi Dwyer:

Very good. And I just want to point to some of the chat that's happening. So Dr. Jones has some perspective about the FIT in Polymedco, and then that's also in the chat, I think for most folks to see. And then Dr. Gallagher had mentioned another way to triage based on hazard ratios or PPV is high risk goes to colonoscopy, others go to see CT colonography, which is non-invasive. So let's keep the conversation going. In the interest of time, I'm going to have Dr. Kupfer, who is also a rock star here in the US. So coast to coast, we have some fantastic folks. And Sonia, I'm going to turn it over to you and your work and really thinking about some other perspectives, I think complimenting, but also some parallel strategies with Dr., what's been produced today and our discussion. So Sonia, take it away.

Dr. Sonia Kupfe...:

Great. Thanks so much for the invitation. It's really an honor, and I know there's a lot of rock stars. We have a whole rock band on this call, so I'm looking forward to hearing everyone's perspective here. So I'm going to, as you said, talk mostly from a US perspective. I work at the University of Chicago on the south side of Chicago. I lead a GI cancer risk and prevention clinic and really serve a diverse population. No disclosures. So similar to what Kevin had shown, I chose this framework. I kind of liked how it put things into context. So when you're thinking about which cancers would benefit most from early diagnosis, I think here obviously we're talking about colorectal cancer, but similar to some of the themes Kevin brought up, is how do we prioritize symptoms for targeting? And that's where this great meta-analysis will really help guide us.

What I want to focus on is sort of the bottom two squares. What are the factors that influence someone to seek healthcare in the first place? So what are the barriers to timely presentation? And then also touch on some of the factors that influence a prompt investigation and diagnosis. So what keeps people from getting timely healthcare? And I'll talk about some of these factors, I don't have enough time to talk about all of it, but hopefully these will come up in the discussions. And they really also break down in terms of individual factors, system factors, and then the context in which this is all happening, which includes sociocultural, economic, and political.

As many of us know, healthcare in the United States is incredibly fragmented. It is worldwide for sure, but certainly in a country as large and without a universal health system in the United States. Problems of insurance being tied to employment. We do have safety net hospitals, federally qualified health centers, as well as having had Medicaid expand in some states, but of course not in others. And then really fragmentation amongst our preventative services and our primary care. And this all leads to lack of any sort of ability to have a coordinated effort, certainly brings up inequalities and disparities in healthcare across the board, leads to higher costs and really makes for unwell patients and unwell healthcare providers. And I think this all came really under the spotlight

during COVID. But these problems have existed for a long time and will continue to do so. So let's just touch on a few aspects of a timely presentation.

So again, we can think about individual factors and then certain system factors. So certainly health literacy, understanding what's happening and how to talk about it, knowledge about cancer, and then of course, something that we all face when we're taking care of patients is the fear. The fear of finding out that something bad is going on. System factors that may be barriers to a timely presentation. Of course, access. Younger people often don't have healthcare insurance. They may be not getting it through their employers. They may have partial coverage. And then costs, direct costs of course, but also indirect costs, costs of being able to get to their appointments, taking time off, et cetera. And of course this impacts those in their prime working years especially. So just a few studies that I'm going to highlight that I found in preparing for this. So this is really looking at colorectal cancer knowledge and perceptions in younger individuals.

And these investigators did a survey in 2018, really across the board in the United States of 624 adults. You can see the breakdown. It was half, half female, male, predominantly non-Hispanic white, married, and with a higher education. So again, this may not be generalizable to the whole population, but within those limitations, 36% of the respondents knew the appropriate age to start colorectal cancer screening. Colonoscopy, the message seemed to have gotten out to this group, but really less than 60% knew that there were other available tests. The majority thought that genetics was the primary determinant of cancer risk. And importantly for disparities in this country with African Americans having highest incidences of mortality, they rated their lifetime risk lower than non-Hispanic white. So these are some of the myths that we are facing as we try to combat this issue.

Now turning to timely investigation and diagnosis, again, thinking about what are the individual factors here? This may be more on the health system side, but certainly provide our knowledge. And I saw a question I think or a comment from Samir about how do we get this message out to primary care doctors? And I think that's something that we definitely need to talk about. What is our workforce? What are our testing thresholds? And really are we delivering quality of care across the board? And then system factors, this is really, do we have the adequate equipment? Do we have the capacity to provide colonoscopies to all of these individuals who may be coming? And then what is our health system structure?

Speaker 8: Sorry. We got to go to Zoom.

Dr. Sonia Kupfe...: I think I'm hearing someone. Can you... There we go. So this was a study led by Swati Patel looking at primary care provider knowledge and practice in risk assessment for early age onset colorectal cancer and a call for opportunities for improvement. This was a survey of primary care doctors in three large medical centers. You can see they had almost 200 respondents, which was about a 30%

response rate. And you can see that there was in this group pretty good awareness of early onset colorectal cancer incidents increasing. However, Les knew that the mortality was also increasing. And there was high uptake of colorectal cancer screening at age 50. And perhaps since this was in 2020, we had already dropped the age for colorectal cancer screening. So this may be an issue of knowledge of the current guidelines.

And then this is just showing what was the PCP's recommendation for colonoscopy in patients who are age between 40 and 49. And you can see that average risk here, most said never, rarely or no answer. Those that had family history, there was more uptake of recommendation for colonoscopy as well as for some of the signs and symptoms that have been discussed here. Although I will note that while they said most of the time always it was only about 50% of the respondents, whereas iron deficiency anemia seemed to be a bigger prompt for colonoscopy investigation. Whereas change in bowel habits, which certainly came out in the meta-analysis, really rarely seemed to be something that prompted a colonoscopy.

And then I just wanted to touch on something that we face in the United States, which is, as I said, insurance coverage for those below the federal poverty rate, among other access issues. And I mentioned that some states in the United States have expanded Medicaid so that the only criterion is being below the federal poverty level, whereas other states have not done engaged in this expansion.

So this was a study published last year where they used data from the National Cancer Database and looked at those, the incidents of early onset colorectal cancer in that same age group of 40 to 49 in those states that expanded Medicaid and those that did not expand Medicaid by racial and ethnic groups. And you can see that Medicaid expansion, so those states that did expand showed a significant increase in early onset colorectal cancer incidents post expansion in Hispanics. That was the only group that seemed to have that bump in incidents. Whereas the rate of increase, you can see here the actual percentages. So in the expansion states, pre-expansion it was 4.3% per year. It bumped up to about 10% post expansion, whereas you can see that there was even potentially a drop in the non-expansion states. Importantly, it didn't seem to impact non-Hispanic Blacks and non-Hispanic whites to the same degree as was seen in Hispanics. So it seems like perhaps insurance, while it does make a difference and certainly more studies are needed in this area, it may not be the complete picture.

And then I just wanted to bring this study forward. We're hearing about how can machine learning and AI really sort of solve all of our problems. And this was a study that looked at can machine learning be used to predict early age onset colorectal neoplasia using information that's already available in the electronic health record? And you'll see that these investigators used an electronic health system put in every sort of factor that they had access to. And you can see here these are the ROC curves and the comparison was to a logistic regression

model. They were kind of looking at different kinds of machine learning models. But I'll just note that really none of them really were game changers. It seems like they were definitely somewhere better than others. But it seems like we still have a ways to go in terms of implementation or at least first set need to discover what machine learning can do for us in this space.

I thought this was interesting. This looked at the most important variables that came out in these different machine learning models for a colorectal cancer or high risk polyp prediction. And you can see that factors like percent income brackets per zip code, whether it was a diagnostic indication body mass index, and then some of the things like GI bleeding also came out. So it'll be interesting to see whether these can be leveraged to help us to sort of identify at-risk individuals. I will note that this won't solve the problem of people who don't access healthcare frequently because obviously this depends on having records in the electronic health system.

So I just wanted to end my brief comments here really just focusing on advocacy. I think Phuong really set the stage for this and the importance of this. Many of you know Candace Henley, who I also know as a fellow Chicagoan who is the founder and chief advocate of the Blue Hat Foundation. And she recently shared this short video about some of the efforts that she is engaged in in our local community on the south side of Chicago to really target those very difficult to reach populations, especially young men. And she has this fantastic screening program that is based on basketball. So I'm just going to go ahead and play this and then I'll be finished with my portion.

MUSIC: [inaudible 01:06:50].

Speaker 9: Dope Event, man. Beautiful Saturday afternoon, good competition. Learn some very positive information about how we can protect ourselves and be preventative with our healthcare, especially as it pertains to colon cancer awareness. Shout out to Hoops 4 Health and everybody that showed up today.

Speaker 10: This is a wonderful event. We had an awesome turnout. We had loved juice. Somebody came out with healthy food choices. We got over 40 screenings, and I enjoy myself and I love seeing the faces of all the wonderful people in the community we are serving.

Speaker 11: It's a beautiful turnout, health screenings, HIV screenings. It's a good event to have to bring our communities together in terms of health initiatives, just getting people screening, getting people aware of the proper health education.

Speaker 12: The turnout, the passion and the dedication to the game that the men brought to the floor and women was so amazing and the fact that they did it knowing that we were talking and raising awareness about colon cancer and prostate cancer. Hopes For Health is raising awareness and the high rates of these both diseases for African American men. We believe in education through

participation. You are more inclined to remember information and to do something about it when you participate. So this was that model. And I am so pleased and I'm so excited. I'm thank [inaudible 01:09:21] for our sponsors, Garden Health, who is our platinum sponsor, Cologuard, Aetna, Lilly Cancer Center, and my partner Indis. Run from prostate cancer. This has been amazing and we are looking forward to having more our next one and more after that. So I can't say enough about how excited I am and said grateful to all of those that supported this initiative and made sure that it was successful.

Dr. Sonia Kupfe...: All right. So shout out to Candace's great work, and I look forward to the conversation. So thank you so much.

Andi Dwyer: Awesome. Thank you so much. And yeah, I just want to say I know Candace does a lot with so many of the orgs and for her community. It's so great to see and hear. We're going to go straight to breakouts. Everyone, we are going to be at about 35, 40 minutes. We will bring back the entire crew with about five minutes at the top of the hour just for some final comments from Jose and our Disease Awareness team about some upcoming opportunities. And just in terms of next steps, I know that a lot of times there's some discussion after and summaries. We're going to hold and use the recordings and part of the information that was used during the discussion today as well as the sessions to really think about those next steps and some of the themes.

I do think that Sonia and others, and I think Samir's work and Josh and Caitlyn Murphy, who's been on as well and had some perspective and all of us have been really talking about really the movement and what are we going to do with the frameworks we've talked about, all the strategies that were talked about as well. And I think one of the sweet spots is really talking about the connection with primary care, balancing the need for management of all the things the medical community works towards, but how do we look at building a partnership to really think about addressing part of the issue? So I think one of the things, and I put this in the chat that we're really hoping to do is talk about building in conversations, really thinking about direction from today, utilizing not just the topics of like this is an issue with the New York Times and the Wall Street Journals and the big Time magazine conversations, but ultimately, how are we working as a community to move forward?

And I think that's something that Fight CRC can help lead a charge in terms of really thinking about commentaries. Some of their primary care associations are really interested in how to look at some quality improvement opportunities and how do we really think again about building partnerships and strategy to really address many of the issues. I know Anita was in my group and I really think about the testament of so many folks who've been really around the table to help really advocate for this work and moving it forward. I think as Phuong had mentioned as others about the partnership, and I think that's what we're really going to have to look at moving ahead.

One of the things to close us out is I'm going to turn, and I will bring up a slide really quickly for Dr. Perea, who again is a fearless champion and amongst the rock stars, the global phenomenon of stars who are part of the Fight CRC team as well as advocates who have been really engaged in the work. So let me go ahead, and you guys can't see my screen right now, can you? No. Okay. Just making sure. Let me just try to exit out here really quickly. But Jose, as I'm bringing up the slide, because I have to reboot here, do you want to share some perspective about our next steps and some of the pointing that we have coming forward into 2025?

Dr. Jose Perea:

Yes, for sure. So first of all, thank you, Andi, and of course Fight Colorectal Cancer for organizing these meetings. So thinking about or taking as a starting point, the meetings that have been developed about early onset colorectal cancer since Denver some years ago, and also from an international perspective of our early onset colorectal cancer international symposium. So we wanted for that point to put together all the dimensions of early onset colorectal cancer issues. So because we all think and we all know that this is a worldwide problem, and regarding that, we should think about early onset colorectal cancer from that perspective. And from that point, the problem is that there are too many disparities about early onset colorectal cancer, and also geographical aspects are also another point thinking about that.

So from that perspective, we want to develop a meeting. The idea for next year's meeting is an in-person meeting. And the idea is to put together, as I think we have talk about that around all the meeting, to put together the perspective from patients, from patients organization. We are going to develop a work from different organizations from around the world, Canada, Australia, of course Fight Colorectal Cancer, UK, Europe, and to put together all the ideas, the interesting, the problems of early onset colorectal cancer. And put not only those perspective, but also clinicians and researchers to try to put together with a common positions to move forward with the problem. That's why we are organizing this meeting next year. And of course you are all invited and we keep you informed in that regard. So that's the idea of the meeting. So, Andi.

Andi Dwyer:

Great. And by virtue that you all stayed on, you get an invitation. So you're right, Jose. Congratulations. But I do think one of the things in some of our initial conversations, and this is something the engagement is really thinking about as Jose said, how are we moving together and what are some common strategies? I know we've heard today some different varying perspectives, different interventions, different really kind of issues that come up. But I do think there are some common areas where we can really be growing in the same direction as relates to thinking about particularly interventions and opportunities to decrease incidents, reduce mortality. So Jose, thank you so much for your leadership and more to come on what this meeting. And I think today and some of the strategies and some of the discussions that we've had even since December have helped us really in our thinking. So we're just engaging those advocacy communities all throughout the globe to talk about a combined effort and really excited about that. And so we'll keep everyone updated in addition to

really thinking about some possible commentaries and continued discussion from today and other opportunities.

So I'm going to turn it over to Zach and the Disease Awareness team because I do want to say when we had thought about this meeting and where we were going, we did want to focus on a question and we had a lot to cover. But I think it's paramount as we started with Phuong's conversation and others about what are we doing to really continue to have a conversation with the community. I think in the spirit of Candace work and others around awareness and having some topics, particularly around some of the topics in areas where I think people have the most passion, concern, and interest as it relates to early onset colorectal cancer. And as Zach will close this out, just a reminder everybody, we will be sending the recording summary notes and some of the next steps and would love to have you engaged. And Jose, thank you. And then for all of the panelists, all the facilitators for being a part of today. So Zach, I'll turn it over to you to bring us home. Thank you everybody.

Zach:

Thank you, Andi. I do want to take just a second to thank everyone for joining us for our think tank today. We really appreciate your time and effort here. We could not do it without you. As Andi mentioned, August 28th, 1:00 PM Eastern, which is a Wednesday, I believe, there is going to be a joint webinar hosted by both the Disease Awareness and research advocacy teams or Fight CRC focused on like this early age onset colorectal cancer. We'll be diving into the question of why this is happening, diving into the research about EAO cancer and what we Fight CRC are doing to address the problem. And we will also be hosting a discussion around the unique challenges that young adults face when they are diagnosed with colorectal cancer at a young age.

The registration link has been placed in the meeting chat. We would love to have you join us for that meeting. And then just as a wrap up for the think tank, as Andi mentioned, please keep an eye out, facilitators especially for a link to drop your recording and transcripts from this think tank that'll be coming out shortly. I'll send it immediately after this. And then everyone else, we will be consolidating all this information and look out for that. So thank you all for joining us.