

Early Age Onset Colorectal Cancer - Trends and Challenges

Colorectal cancer is a term that includes colon and rectal cancers, both of which originate in the lower portion of the large intestine and into the rectum. Colorectal cancer (CRC) incidence in the United States is declining rapidly overall but, curiously, is increasing among young adults. In fact, 11% and 18% of colon and rectal cancer diagnoses, respectively, occur in those under 50.

While research is looking to learn why this increase is occurring, there is still a clear need to raise more awareness around the topic. In particular, educating young adults on the rise in early-age onset colorectal cancer occurrence, is a way to start the conversation.

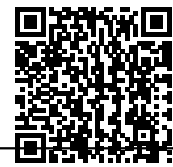
CureTalks discusses the rising incidence of colorectal cancer occurring in adults younger than age 50, risk factors, symptoms, treatments with Dr. Michael Potter and Dr. Ma Somsouk from UCSF Helen Diller Family Comprehensive Cancer Center.

Full Transcript:

Priya Menon: Hello and welcome to Cure Talks. This is Priya Menon your host. Today on Cure Talks we are discussing Trends and challenges of the Early Age Onset of Colorectal Cancer. We have with us two eminent doctors from UCSF Helen Diller Family Comprehensive Cancer Center. Dr. Michael Potter Professor in the School of Medicine. He is Co-Chair of the Professional Education and Practise Implementation Task group for the National Colorectal Cancer Roundtable and co-leads a Colorectal Cancer Task Group for the San Francisco Cancer Initiative. And Dr. Ma Somsouk Associate Professor in the Division of Gastroenterology and Dean Craig Endowed Chair in Gastrointestinal Medicine. On the patient experts panel, we have with these Colorectal Cancer survivors and advocates, Danielle Ripley-Burgess and Curt Pesmen. Welcome to Cure Talks, everyone. Dr. Porter, the first question I want to ask is to you and it's going to be a very basic one so that we set a background for our audience. Can you talk a little bit and tell us about what is Colorectal Cancer? And we have received a question to differentiate Anal Cancer from Colorectal Cancer.

Dr. Michael Potter: Sure. Yeah, Colorectal Cancer is the third most commonly diagnosed cancer in men and women and there are approximately 150 thousand new cases per year. It's also the second most common cause of cancer death in the United States with about 50,000 deaths per year. And colorectal, cancer includes cancers in the large intestine and in the rectum, which is the last several inches of the intestine before it reaches, the anus. The causes of colon and rectal cancer are thought to be similar. So, they're grouped together and that's why we call it Colorectal Cancer. They tend to start a small growth called polyps that begin to appear usually in middle age and a few of which can grow and become cancers over time. The treatment and prognosis of colon cancer and rectal cancer can be a little bit different with rectal cancer sometimes being a little bit more aggressive and treated with different types of treatments because of the different anatomy of those parts of the large intestine. And then to your question about anal cancer, the anus is the very end of the large intestine after the rectum and cancers that occur there are generally caused by something very different by the human papillomavirus, which is a sexually transmitted virus typically and it's the same type of virus that is a cause of Cervical Cancer. So, usually, we think about anal cancers as being different from Colorectal Cancer.

Priya Menon: That's very interesting. Dr. Somsouk just continuing with the basics, what causes Colorectal



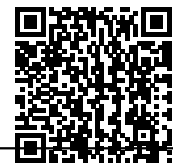
Cancer? And could you talk also a little bit about the risks of developing Colorectal Cancer?

Dr. Ma Somsouk: Yeah, so with regards to the causes of Colorectal Cancer, in most cases, just as people get older, they become more susceptible to cancer. So, you look at just the incidence of Colorectal Cancer in the country as people age above 45 or 50 than the incidence of cancer increases, and then it gets higher and higher as they get into their later ages. So, age in general, just the combined lifelong experience and exposure to various things increases your risk for Colorectal Cancer. Now, there are also specific perhaps modifiable factors that can either increase your risk or potentially decrease your risk of cancer. We know that there are certain dietary factors that tend to be associated with cancer includes foods that are high in red beets has been associated with it. Foods that are high in fiber may be decrease in risk of Colorectal Cancer. I think, part of all, this is also affected by, for example, obesity as people who are more obese, they increase their risk of Colorectal Cancer. And certainly, there are other modifiable things such as smoking, diabetes, physical activity, which would reduce your risk of cancer. And of course, I think, importantly, one thing that I have not yet talked about is hereditary as well as genetic factors that can affect your risk. Those things individually, you cannot modify them.

Priya Menon: Dr. Potter, I wonder if you could now catch up on some signs and symptoms of Colorectal Cancer. So, my question is, how would an individual know that they should be concerned and what are some of the screening techniques that are available now?

Dr. Michael Potter: Right. So, there are sort of two ways to think about the risk for Colorectal Cancer. One is, are you in a population that's at risk. You can have Colorectal Cancer and not know it by far. Many or even most colorectal cancers are detected through screening these days. So, being an age group as Dr. Somsouk said the risk of getting Colorectal Cancers increases with age and for many years, 50 was chosen as the time when you need to start thinking about Colorectal Cancer and getting screened. And that's why screening programs have started at that age. And as a result of these, screening programs, many of these polyps are detected before they have a chance to turn into cancer or if there is cancer, they can be treated when they're still curable. So, because of this cancer, deaths have really decreased a lot over the last decades for those who are 50 and older. In fact, declining by maybe close to 30 to 50% over the last two or three decades, in terms of Colorectal Cancer deaths for people in that age group. At the same time, we're seeing now more cases at a younger age and that's why National guidelines have recently been changed to lower the screening rate to age 45. So, everyone should be thinking about Colorectal Cancer screening by the time they get to 45. But beyond that, we also need to have people be aware of certain symptoms that could be causing Colorectal Cancer, or it could be a sign of Colorectal Cancer and the most common would be persistent rectal bleeding, blood in the stools or persistent abdominal pain that can't be explained through other causes, or weight loss or even anemia on a routine screening test if your red blood cell count is low. Sometimes people can have bleeding without even being aware of it and sometimes it pops up on a screening test that you have a low blood count and that may be a reason to start thinking about getting evaluated. So, those are some of the signs and with particularly, as particularly as it relates to this younger group, that still is not recommended for routine screening. It's important that people, not people recognize those signs, people be aware that those could be warning signs. Individuals can talk to their doctors about it and actually bring up those concerns I'm worried that maybe these signs could be related to cancer because sometimes doctors may tend to discount some of these symptoms that are as being caused by other things that are more common and that often relates to a delay in diagnosis. And then finally the other thing as Dr. Somsouk mentioned is knowing your family history because up to 20 percent or so of Colorectal Cancers arise in people with a family history or a genetic syndrome. And this is especially important again, for younger people to be aware of because when you have one of these syndromes and tends to show up earlier in life and people need to talk to their parents about what their histories are of their siblings or their grandparents. It's surprising how often people don't know their family histories. And even just depressing how often people don't share those family histories with their doctors, or that their doctors failed to ask about them. So, that's a very important thing for people to be aware of and bring to their doctors.

Priya Menon: So, the trend of younger individuals being diagnosed. I'm wondering are there any preventive measures that people can undertake to lower their risks?



Dr. Michael Potter: If you're asking, I don't know who wants to answer that one, but I think, some of the things that we think might be leading to, we don't really know why we're seeing an increase in cancer and Colorectal Cancer incidents in younger people. There's a lot of thought about perhaps these are things that have to do with our lifestyle from the early ages like eating highly processed foods with a lot of corn syrup in them and no fiber as Dr. Somsouk has said, having really sedentary lifestyle, and not getting out and exercising and these things over, many years, can influence the bacteria in our gut, what we call the microbiome or it can influence the molecular biology of the lining of the gut and lead to increase in cancer. And so it's hard to say what you can do right now. But, if you've had many years of living in a certain way, by eating high fiber foods, getting regular exercise, avoiding some of the highly processed foods, the red meat, these are all things that can be, should be helpful, avoiding smoking, getting your diabetes under control, if it's not under control these things may help.

Priya Menon: Thank you.

Dr. Michael Potter: Yeah, Dr. Somsouk may have something to add to that.

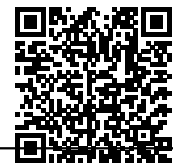
Priya Menon: Dr. Somsouk, please add.

Dr. Ma Somsouk: Yeah, and like what Dr. Potter was saying, we do observe that in the people who we have been supporting or advocating screening from ages 50 to 75, the risk of cancer in that population has come down dramatically over the last two to three decades. And that is a by-product of screening. And so, there are effective ways of screening which are now extending towards younger populations. One of the screening strategies is a stool-based screening test. And Dr. Potter mentions microscopic blood loss that maybe people aren't even aware of, but we have sensitive ways of detecting these microscopic signs of blood in the stool. And when that turns positive or an abnormal result, then there is an increased risk that you have a polyp or a tumor or cancer inside the colon that should prompt that individual to get a colonoscopy. So, there's that stool-based screening strategy. There's also the colonoscopy strategy, which is where you have to get a laxative preparation, clean out the colon show up for your procedure, typically get sedation, and in a procedure that is semi-invasive, but very safe. And then there are other tests available, but most commonly used, for example, CT scanning. It's called a CT Colonography that can image the colon and look for polyps or growths inside. People are also developing blood-based tests. So, trying to test for markers of early cancers or polyps is an area of innovation, but it's also not really there for prime time yet.

Dr. Michael Potter: Just to add to that the test that you choose may also be based a little bit on your symptoms. For example, if you have symptoms of bleeding or abdominal pain, or you have a very high genetic risk, it may be important to do a direct visualization of the colon as the first procedure and go straight to colonoscopy. And in fact, the way we often offer colon cancer screening, as we offer people, a menu of options usually it's going to be either a stool test every year or a colonoscopy, every ten years for average-risk people. A lot of people prefer to get a stool test rather than go for an invasive procedure, but for people at elevated risk, we really recommend getting a colonoscopy as the first line of investigation. 14:04

Priya Menon: Thank you. Both of you mentioned how the numbers have come down over the years. So definitely treatments have changed in the last decade or so because of research. Can you talk about what are researchers looking at now? Dr. Potter, you can start and Dr. Somsouk, you can chime in.

Dr. Michael Potter: In terms of screening we're looking at easier ways to detect as Dr. Somsouk mentioned some of these newer methods. And we're also trying to investigate whether there are some studies now of trying to investigate as you asked about the causes of how does gut bacteria, for example, influence the development of cancer and there may end up if we learn more about that. We may learn more about preventive, strategies, and so forth. Usually, if it's early cancer it's fairly straightforward the treatment or a polyp. We just remove the polyp, Dr. Somsouk can do it through the endoscopy or if it's cancer it can be removed with simple surgery, and often no further treatment is needed. And after that, if it has spread, then we're talking about adding different types of forms of chemotherapy and now the cutting edge of cancer therapy is immunotherapy with more targeted approaches, based on genomic, sort of marker, or category of



cancer. And I'm not an oncologist and Dr. Somsouk may know a little bit more about this as a gastroenterologist, but he's not an oncologist either. But a lot of folks in the cancer center working on these strategies.

Dr. Ma Somsouk: Yeah, I agree with Dr. Potter. There's a lot of data here that is clear in Colorectal Cancer screening the evidence is strong, get patients screened even before any symptoms occur, there's a benefit, right? And then when their symptoms do not dismiss it and then there are areas in which there's innovation and in the blood-based testing, microbiome new and novel immunotherapies like the checkpoint Inhibitors. Some people are looking at other types of medications such as aspirin and other types of medications, that might reduce your risk of polyps. But much of, this is also known and needs to be advocated so that people follow through. And of course, then there's hereditary and family syndromes, which sometimes people just aren't as aware and, and that also falls out of bounds of the conventional screening. So, sometimes it requires more education for people who are at risk and aren't aware of that.

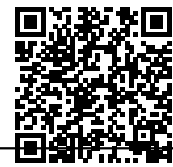
Priya Menon: I have a couple of more questions, but before that, I will probably open it up to the panel. We have with us Danielle Ripley-Burgess and she's a two-time colon cancer survivor from Kansas City. Danielle, please ask the questions.

Danielle Ripley-Burgess: Thank you. My first question is there's a JAMA report that's predicted that Colorectal Cancer will be the number one cause of death amongst those ages, 20-40 by 2030. In your opinion, can anything be done to stop this?

Dr. Michael Potter: I can start. So, I think as what was illustrated in that study, there is an increased incidence, well-observed risk of Colorectal Cancer in younger and younger populations. And as we also are trying to understand, we don't quite know exactly where those specific risk factors are. I think that one of the things that we are aware of is that there is a contribution of the environment, diet, and individual risk that tends to be associated with the early onset of Colorectal Cancer. And I think to the extent that we are aware of those things we should advocate for a better lifestyle as well as diet in the population to reduce that risk in the younger population. And so that does include most obviously like physical exercise, activity on a regular basis as well as a diet that are healthy and increased fiber, reduce in, earned or process that preserved type foods as well as decreases in red meats. I think from that standpoint these are some of the things that we should advocate for in terms of policies as well as practices for populations. Then there is as what we had discussed earlier individualized risk, where there are certain individuals who belong to families that have increased risk for Colorectal Cancer, and we should be asking those questions to individuals that we see as they are our patients and encourage them to get cancer screening if they have that increased risk factor.

Dr. Ma Somsouk: So yeah, I would add, I mean Danielle, that's a really important question. The reason that the age 44 average risk, screening was reduced to 45 was in part was in response to the increasing numbers of cases. I would guess that if the rates of Colorectal Cancer continue to increase at some point will be lowering that age again, but that remains to be seen but hopefully will be doing a better job of detecting Colorectal Cancer in people aged 45 and above. I think, in terms of what else can we do, given that so many of the younger people with colon and rectal cancer have family risks that they may not be aware of or have that it's time for us to do a lot more education about how to detect family risk. I think that there may also be some breakthroughs in the coming years that can help us do a better job with what we call Precision medicine, terms of there may be ways that we can for people who aren't sure about their family risk or about their genetic risk, on there may be some targeted ways for us to identify those people many years in advance and find a subset of people who also need to get screening maybe even as young as 20 or 30 perhaps. But we don't have those tools yet for most people and of course, Colorectal Cancer is still very uncommon in younger people and it's at present, not considered to be the best use of resource to recommend it that every single person would start to get screening as young as 20 or 30, but we do need to do a better job of trying to find the individuals who are at higher risk and start to offer some of these strategies to them. And I think there's going to be a lot of focus on that in the coming decade.

Danielle Ripley-Burgess: So, my personal story is I was diagnosed with stage 3, colon cancer at age 17



and I had an MSI High tumor. Eight years later diagnosed with Stage 1 colon cancer. I was 25 MSI high again, at the time of my diagnosis genetic testing was performed in both results showed I had a variant of unknown significance, but nothing was definitive. About four years after my second diagnosis, I was notified that the lab had reclassified my variant. I got a call from my doctors telling me that I had Lynch syndrome. For 12 years. I didn't think my cancer was tied to a hereditary syndrome but all of a sudden it was and it had implications for my family no, I didn't inherit the gene. I am the mutant but that's another story. So, here's my question how reliable is our genetic tests for hereditary Colorectal Cancer? Do you feel we've discovered all of the conditions tied to CRC or is it likely that more will be uncovered as research goes on? Is more research going on? Do doctors anticipate seeing a wave of people like me, maybe people who had a reclassification due to more data coming in from other patients, over the years?

Dr. Michael Potter: That's a lot of questions. Well, first of all, it's incredibly illuminating for sharing your story and interest shows how much there is left to be learned. I'm not, I don't have training in it. I'm a primary care physician and I don't have training in genetic counselling, although I for personal medical reasons I have a family history of one of the BRCA genes. My experience of going to a genetic counselor and hearing what they have to say. And I have to say that there's still a lot to be learned. And there are hundreds of genes of potential interest. But until large numbers of people get tested with them and the studies are done sometimes it takes many years to determine whether these genes are related to cancer syndromes like you, they may be reclassified after more information and it's going to take many years to know what all the genes are that is important. There are some genes that we know are really important and then there are some genes that we think might be important and then there are probably genes that we haven't even noticed or figured out yet and it's going to take a long time and that's very frustrating but some of your questions might be best answered by a genetic specialist in cancer genetics, which I am not. I don't know if Dr. Somsouk maybe you have some experience talking with patients about these.

Dr. Ma Somsouk: Yeah, I think we end up as gastroenterologists. We are often the first providers that end up diagnosing cancer and breaking that type of news with the patient and it's become more and more standard practice that we do genetic testing on all tumors, regardless of age. I think there was a time when we were limiting the genetic testing towards younger patients, but now it's becoming just more prevalent that we're doing so as well as the cost of genetic tests coming down. But so, one I think standardized testing, standardized genetic testing is important. We also look for risk factors such as three first-degree relatives that there's like this algorithm of 3-2-1. Three, first-degree relatives, two generations, with one being under age 50. Those are ways in which we're screening for people who are at higher risk for having a familial syndrome. But Danielle as you stated sometimes, you're the first case that gets diagnosed and I think that we always have to be humbled in terms of what we say and the pattern that we see we can always be wrong. And as your shared knowledge keeps accumulating, usually the first genetic variants are possibly the more obvious ones that for example, like the low-hanging fruits, and they might represent more, a higher percentage of the common genetic risk factors for Colorectal Cancers. And as time goes on, it's important for academics as well as even industry to aggregate these cancer cases to identify the samples and to do research and then to identify percentages that are increased in the cancer cases versus people who don't get cancer, right? So that we could identify new variants and so that will get accumulated over time. And that type of research just needs to be supported, and it's going to become increasingly challenging to identify these variants, but it will still be valuable to do so. And that needs to be supported.

Dr. Michael Potter: I guess the question of carrying those genes is, what is, how is that going to help you to know and with Colorectal Cancer knowing could be lifesaving because colorectal cancer is essentially 100% treatable and curable if detected early enough. So, knowing can be really, really helpful.

Danielle Ripley-Burgess: Thank you for your answers.

Priya Menon: Thank you, Danielle. Thank you for those questions and sharing your story with us. Next, we have with us colon cancer survivor, award-winning writer and producer, Curt Pesmen. Curt, all yours.

Curt Pesmen: Hi. Thanks for having me, including me in the talk. In my instance. I was working before I get

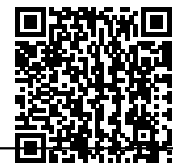


to my question that concerns my own diagnosis, but in my 30s, I was working in the healthcare setting in the media world, doing Breast Care, Breast Cancer Care, and advocacy for a women's magazine, called Self Magazine. And I had learned in my 30s, as we were trying to get younger women to think about breast cancer screening, at that time, in their 30s and 40s depending on family history. I learned about something called the Young Survival Coalition for breast cancer survivors, at that time under the age of 40. It was very new and again, it's about I think 24 years. So, Danielle, it's about the time that you were diagnosed, but they were up and running with breast cancer, young adult survivors group. And my first question for the doctors would be today, do you think a similar young CRC survival Coalition could advance all of our shared near-term and then long-term goals. I mean for Danielle and I both of us work for fight CRC a National Organization. So, in other words, do you think a fight CRC-Y, for young people as a split-off could actually help maybe get the word out and increase some of the screening, and we've been talking about?

Dr. Michael Potter: Well, you might be having a better answer to that than we do as a long-term advocate, but I think it definitely would. As a leader in some of the advocacy groups and both Dr. Somsouk and I have participated in a lot of the professional organizations like the National Colorectal Cancer Roundtable on which UCSF is a member and we have meetings and whenever you go to a professional meeting of doctors and researchers who are working on issues related to Colorectal Cancer, the highlight of the meeting is always when a cancer survivor comes and tells their story for example, because it reminds everyone of why we're doing this. It also tends to bring up issues that the research community maybe have been ignoring. And I certainly remember, I've been involved in doing this work for 20 20 years or more now myself when we would have younger people come and speak at these organizations about their experience, sort of like what you were describing Danielle. It had a real impact and I think that's maybe one of the reasons why there's so much more focused. People started looking at the data and thinking about not just the numbers, but the human stories and behind the numbers and I think that's very motivating in terms of the types of research that gets performed, the types of services that get offered and type of funding that becomes made available to advance the cause on all sorts of levels and fight CRC is certainly been very active on many levels advocating for coverage for screening, advocating for awareness, advocating for there to be a National Colorectal Cancer month in March, which is coming up everyone. So, you can put on your blue stars and clothing to remind everyone. But absolutely I think it would and sorry that was too long of an answer for you Curt.

Curt Pesmen: Yeah. Okay. The next question I guess it's maybe a touch more scientific rather than advocacy-oriented. One of the things and this does hurt back to my case in which, my both my surgeon and Medoc said, your cancer clearly started in your 30s. And so obviously I would have been an early adult-onset case, but I also had ulcerative colitis in my 20s. And so I've always read about the links and the associations between IBD and then later development of CRC and fairly recently, I read about one of these reports and it was based on good science about how Crohn's And also colitis may be linked to "industrialization and a western-style diet, rich in processed foods and meats". So, my question today, that's not news for the cancer community but in terms of the IBD Community, since you both work in the CRC field, would we as advocates and survivors and even the general public, would we benefit by having more interaction among the IBD and the EAO, we're getting a lot of letters here, a lot of acronyms, but is there would there be benefit between the Inflammatory Bowel Disease community and CRC research communities to reduce the young adult-onset burden?

Dr. Ma Somsouk: Yeah, so Curt, thanks for the question and I think you sit on both sides of the best patient advocacy group, both IBD cancer as well as the early onset cancer group. And I think overall it's so important for people to see like people similar people that have issues and to be able to share like these instances of cancer or Ulcerative Colitis or Inflammatory Bowel Disease with people so that people can be able to go to each other, as well as get through it together. In the setting of Inflammatory Bowel Disease and Ulcerative Colitis. There is I would say a good amount of research that is focused on cancer incidents because chronic inflammation, right, in Ulcerative Colitis or in Crohn's Colitis, that process is a driver of cancer and its development. And so, we know that when we take care of patients, with Inflammatory Bowel Disease, we strongly encourage people to get a colonoscopy at an earlier age. But I think that people need to be aware that this is a common thing, colonoscopy is safe and in people who have risk factors that this



should be done, and I think that there's a lot of importance in sharing that experience with people and that to make it not seem so far and distant. I think over the past two decades if you look at when cancer screening was first started it was very foreign to get a colonoscopy. Like Katie Court, who knew if I went on TV, right, to show that this is something that is part of the routine, right, and even today are cancer screening rates are low, right in the 60 percent range, shy of 70 percent. So there's room to go and certainly, there's a stigma around doing it and the cancer screening tests and probably even more so than younger people. So, I think for all those reasons, there's a variety of just trying to harness the groups together to advocate for more of this shared knowledge and experience that will hopefully encourage people to get screened.

Curt Pesmen: As a sort of a follow-up, I do remember I was treated at UCSF which is why I'm very proud to be here 20 years after a stage 3 diagnosis. Thank you, UCSF. The name is probably familiar to a lot of you Dr. Alan Venook was my Medoc. So, I was in very good hands, and looking back and now looking forward, I was counseled to have a colonoscopy early because of my history and I did at age 40. Unfortunately, it was missed and so ironically I felt like I was some of the breast cancer patients that I had worked with and written about and talked with who felt like, well my doctor missed my mammogram there was cancer there and she missed it or whatever and I was like, they were talking about dense breast tissue and I was like, well did I have dense colon tissue, I was trying to relate it to younger women who had been diagnosis delayed and, or missed. So, I took it on authority from my UCSF team that I've had. missed at age, 40. It probably wouldn't have been stage 3. So, it's one of those things just another point to add to our early-onset questions, where you get your colonoscopy may be as important as just getting one and ticking that box.

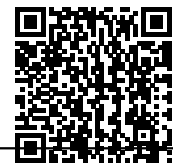
Dr. Ma Somsouk: Right.

Dr. Michael Potter: Yeah, I mean there are lots of factors even in the best centers colonoscopies is not 100%. Because if you can think about it, it's a scope. It's going in, it's looking at all the twists and turns of the colon and possible that there could be something that was behind a fold in the colon that just wasn't seen for a reason or there could be a little bit of piece of stool that is left in the colon that covered it up and maybe the bowel prep wasn't absolutely immaculately clean that can get in the way and in addition we're learning about other types of polyps. Like, we think about Pilots is these big round things that stick up out of the colon, but there are other types of polyps called things we call them flat polyps. They often arise in the right side of the colon that can be perhaps harder to detect or perhaps maybe rise more quickly, we say get a colonoscopy every 10 years, but there may be certain types of polyps, as we're learning about it that grow much more quickly. Maybe they grow more quickly and people who have higher risk factors, like ongoing inflammatory processes. So, there's still a lot of stuff there. I do agree that you want to have your colonoscopy done by someone who has a lot of experience doing it. But also, it isn't a perfect test unfortunately and there are new things that we're learning and new techniques. There are new forms of colonoscopy that can wear special stains and special microscopes, in specialized centers that can be applied as well. I bet Dr. Somsouk has more to say about that than I do though, the one who uses those tools.

Dr. Ma Somsouk: Yeah. I mean, I think even in the last 20 years, the scopes that we use, the camera they are essentially camera companies, right? Pentax, Olympus, Fuji. So, the camera quality has gotten better and what they've added on to it are also different almost filters, on to the wavelength that comes into the camera so you can see certain aspects or characteristics more clearly. So, we do things like narrowband imaging to look for these flat polyps or changes in the vascular pattern that are maybe more subtle but that's recommended these days for people, with Inflammatory Bowel Disease and screening for Colorectal Cancer. So, we will use this narrow-band imaging in a VR setting. Sometimes a dye as what Dr. Potter was saying to try to highlight areas where we should pay particular attention and then take samples from.

Curt Pesmen: Dr. Somsouk are those coins of the realm yet or are those only research-based hospitals?

Dr. Ma Somsouk: They tend to be studied in academic centers and then tend to then get disseminated out beyond that. So, it tends to be an option that's available for all gastroenterologists these days, like these types of settings. Sometimes the dye is not available, but the NBI setting is available, but whether or not it gets practiced all the time, consistently in patients who have Inflammatory Bowel Disease, and getting



screened for Colorectal Cancer is a different question, right? So we know that's what we recommend in terms of standard practice these days whether or not it gets done is a separate issue.

Dr. Michael Potter: And so, these are things that someone with one of these conditions can ask their gastroenterologist. What, when techniques they're using there is also the flip side of this these new technologies in that should they be used in people who have maybe average risk, who are don't have an inflammatory process or don't have a genetic syndrome. One can apply these technologies and then you can imagine if you have a lower risk person and you start doing these types of tests, you'll end up with a lot more biopsies that may turn out to be unnecessary. Every biopsy increases the risk of colonoscopy. So, we have to think about how to apply these technologies judiciously, so that in some populations, applying them might do more harm than risk. But in the case of someone who's a high risk, it seems to make quite a bit of sense to use these technologies routinely.

Curt Pesmen: Thanks for that.

Priya Menon: Thank you. I think kind of making sure that we kind of wrap up in time. Dr. Porter, Dr. Somsouk, I just have one last question and then we can complete the show for today. As we all know March is Colorectal Cancer Awareness Month. So, do you have any message for those who are facing a diagnosis of CRC?

Dr. Michael Potter: Right. Well, the first message would be to know whether you're at risk and know whether you have symptoms and go and see your doctor to get screened as you should be getting screened. And if you're not sure do ask your doctor. I think for people who have Colorectal Cancer, I think there is hope many Colorectal Cancers are now curable. And we have people like our panelists who have had advanced Colorectal Cancer diagnoses and are here many years later to talk with us about it. And so, I think, no matter where you are in the process of being diagnosed. I think there still is a lot of hope. And so that would be the message I would provide.

Priya Menon: Dr. Somsouk?

Dr. Ma Somsouk: I'll say for the people who get diagnosed with Colorectal Cancer or who have symptoms that are concerning for Colorectal Cancer. The first thing is get your colonoscopy, get it checked out. You want to find out about it, sooner rather than later. The sooner you find it, the more curable that it is and even if you're diagnosed with cancer, it's probably one of still the most responsive cancers to surgery, chemotherapy, radiation as well as checkpoint inhibitors. So, for those reasons, people should be encouraged to get things checked out and get it taken care of. For the people who aren't symptomatic, we have a great guideline today to screen and prevent Cancer, and people should participate in cancer screening whether it's a stool test or colonoscopy, but it's important just to get it done and do the test that you feel comfortable with.

Priya Menon: Thank you, Doctors. Thank you very much for taking the time to join us on Cure Talks today. Daniel and Curt, I hope this discussion will be useful for the cancer community. So, thanks for joining and asking those great questions. We also thank UCSF Helen Diller Family Comprehensive Cancer Center. This talk will be available on curetalks.com. Thank you, everyone, and have a great evening.

Thank you. Appreciate it.