



Closing the Gap: A New Era for Equitable Cancer Care in Asia Pacific

Announcer 00:01

Please welcome the panel on “Closing the Gap: A New Era for Equitable Cancer Care in Asia Pacific,” moderated by Saumya Jamuar, fellow, Renaissance Philanthropy.

Saumya Jamuar 00:31

Very good morning. Thank you all for coming for this very exciting session that I’m personally very interested in: “Closing the Gap: A New Era for Equitable Cancer Care in Asia Pacific.” And the question that we start off with is there are over 10 million new cancer cases diagnosed in Asia, roughly about 50 percent of the global burden, but nearly three in five cancer deaths happen in Asia. So, the question for today is not whether this region carries the burden, but whether the systems feeding it look anything like each other. I have an esteemed panel of four very distinguished guests. I’ll let them introduce themselves using a single sentence, but maybe I’ll start with Sok Ching first. Sok Ching, you’ve said that it’s not a question of innovation anymore, it’s a question of implementation. And you’ve done some work around this in Malaysia. Do you want to just elaborate more on that?

Sok Ching Cheong 01:26

Hi. Hello, everyone. My name is Sok Ching Cheong. I’m the chief scientific officer of Cancer Research Malaysia, which is a not-for-profit research organization focusing on therapies and closing the equity health-care gap. I think that’s a really important area because I think—we know that there are effective treatments or even diagnostics, but sometimes we assume that having effective interventions automatically means that the patients have access to it. And in Malaysia, our experience is that is actually two very different things. Having interventions and having access to it are very different things for our patients. And let me use breast cancer as a case study. So even though we have good systems in terms of diagnostics and treatment services, women still get lost in basically coming to the clinic, getting the diagnosis, and actually completing treatment. And that was the reason why we created a program called NORA, which stands for Navigation, Outreach, and Resource Access. It is not a new treatment, but it’s basically a very simple system change where we put navigators within the system in order to navigate these women so that they have a chance of survival. And in terms of reach for diagnosis, we have a program called MeMoSA, which stands for Mobile Mouth Screening Anywhere. And this tackles the issue from a very different angle and in a different cancer. Oral cancer is easy to diagnose by actually examining the mouth by clinical oral examination. But the specialists are not always there where the communities need them. So, we developed MeMoSA, which is a mobile phone app that would enable health-care volunteers within the villages in order to be

able to help do the first-line diagnosis, where the teleconsultation images would then be reviewed remotely by the Ministry of Health clinicians. What I'm saying is these two programs taught us something. Innovation is actually just one part of the solution. When we build innovations, we have to build it within the pathway of the health systems.

Saumya Jamuar 04:02

Thank you. Very exciting. And I'll come back to some of those points you raised, but moving on to Ravi. I think, Ravi, you said, what does equitable actually mean, especially in an aging society like Singapore? Is it just making treatment available, or is it tailoring it? I'd love to hear your thoughts on that.

Ravindran Kanesvaran 04:23

That's a great question. I think when it comes to older adults with cancers, sometimes there's a bit of neglect. And partly that's because of this concept of ageism. It's not just a societal issue, but even amongst my colleagues, oncologists, we tend to judge a patient by their age. As they walk into our clinic, we have their demographics and we look at their age, and immediately we come to preconceived notions as to how fit they are to receive treatment. Now, there are two risks to that. Number one: If we assume that they are like any average 80–85-year-old and they are borderline frail or frail, then we may be under-treating them. And this means we're not giving them the best treatment that's tailored for that particular person because we're not doing what we should be, which is a geriatric assessment. And that's what my program does, which is a geriatric oncology program at the National Cancer Centre for the last 19 years. Now, the second risk is that we might be over-treating some as well because they may be younger, in their 70s, but they may have multiple comorbidities, physical, functionally not so strong, they may be frail. And instead of offering them supportive care, talking to them about their goals of care, we might be just delivering treatment, thinking that they are fit for it without formal assessment. Hence, the issue about equitable care is really about the concept or the bias that older adults face, which is ageism.

Saumya Jamuar 05:58

Very nice. And I can attest to that because when my 96-year-old grandfather had a colon mass, the surgeon said, "He's 96. Let it be and let him go." We decided not to. We decided to go for the surgery, and he had another five good years of life. So, I think that ageism is something that resonates with me personally, so thank you.

Ravindran Kanesvaran 06:20

Older adults are fitter now. And basically in the program, we assess their physical functional state, mental state, social support, and most importantly, we ask them what matters most to them. And that's the most important question. Very often, even with 80-year-olds, if they're fit, they're climbing mountains, running marathons, they will tell you, "I want to live longer." And if they're fit to receive that treatment and you do the appropriate assessment, we should be able to get them through with standard of care that we have right now.

Saumya Jamuar 06:50

Okay, perfect. Moving on to Katharina. You've done a lot of work in HPV in Hong Kong, and you've seen the system. From an outsider's perspective, Hong Kong looks like a well-resourced public strategy, but from the inside you feel that there's a divide that sits next to it, where there's fragmented access for lower-income communities. Where does it actually break down?

Katharina Reimer 07:14

Absolutely. I think having been in the field now for 15 years, formerly running a gynecological cancer charity for over 10 years, a strategy doesn't mean people have access to it. What you write on a piece of paper, it doesn't actually reflect what the reality is. So, let's talk about HPV causes cervical cancer. It's 99 percent connected. I find it a very interesting field because if you have the right prevention methods available to women, you could really prevent these type of cancers. We had 40,000 cases of cancer occurrence last year in Hong Kong. 15,000 individuals died. That's the fourth largest contributor to mortality in Hong Kong. Shocking, if you look at a society which is so well-resourced. So, I think from my perspective, the healthy longevity piece is coming up more and more and more. But what does it mean to be healthy and live longer? You need to start early on and we need to teach—literally at school level—what prevention means and that prevention initiatives should become like brushing your teeth. We had that yesterday also in our private session. And I think, especially in Asia, where stigmatization around female-oriented cancers remains huge. Breast cancer has become a little bit more socialized now. People talk about it. But anything else in the reproductive health system remains largely untouched—well, we don't talk about it. I think diagnostics, which are affordable, are noninvasive, can bring that access. And maybe a last point, if you look at—the Hong Kong government has done great things around primary health care—we have now a commission. But we have three centers for 3.5 million women in Hong Kong, to access those preventative measures such as having a Pap smear or having a mammogram, and they're constantly booked out. So, yeah, a lot more to be done there to create access.

Saumya Jamuar 09:46

Perfect. That's a very nice segue to the question for Simran, because what we have talked about—what Ravi talked about—was treatment. You've gone the other way, which is identifying early so you can prevent, and this is where Simran leads the work. And Simran, you said liquid biopsy and genomic profiling are already mainstream. Is denying that cancer patient access to testing an access problem or an ethical one?

Simranjit Singh 10:14

Thank you, for the question, and definitely a pertinent one as well. In terms of liquid biopsies or, more importantly, genomic profiling or comprehensive genomic profiling, the question now is not whether it's a promising technology or whether it's something still in development. I think in many cases and incidences that we have already seen, it's already mainstream. It's being used by doctors to be able to make treatment selection decisions in advanced cancer patients. But still, a large portion in Asia Pacific, that access to comprehensive genomic profiling is still not available. In many instances, you have oncologists making treatment decisions based on traditional paradigms and not utilizing genomic profiling to be able to guide them. And this is a big problem. So, if we talk about access, I think that becomes an ethical question in my mind because look at the number of treatments that are available, and they are all biomarker-driven. NCCN itself has more than 30-plus treatments that are already recommended, and growing each year, right? And if you're not looking at genomic profiling to be able to make that decision, you're actually navigating blind. It's like not using a GPS and driving and trying to reach a destination. So now then comes, are there best practices around this? Are there countries that are already ahead of the curve and adopting this into national paradigms? I'll give an example. In Japan, there's a large initiative called SCRUM-Japan, and they looked at the fact that three of their top cancers with the highest mortality: lung cancer, gastric cancer, colorectal cancer. And they felt that it was, in their mind, unethical not to be providing genomic profiling for these patients to be able to be guided for therapy selection. So what did they do? They brought in over 300 CGP hospitals, comprehensive genomic hospitals across the country. They made sure that all their patients, all, I think there are about 24,000-odd that were done last year itself. And they went through comprehensive genomic profiling. They

looked at what were the biomarkers, what were the genomic profiles that were driving—or genomic alterations that were driving the cancer. If there was available standard therapy, they went to standard therapy. If there was no available standard therapy, they actually were then enrolled into clinical trials, which is another part of access. For a lot of cancer patients, they need to be able to have access to new developing therapies. And so, they brought them into clinical trials. This is a co-funded initiative—government and industry. It's a public-private partnership. You have government funding, you have the hospital utilization, and you have more than 25 biopharma companies working together. So, what is the output of this? Over 14 treatments have been fast-tracked to approval within 18 months in Japan. That wouldn't have been able to be done without this entire initiative. The datasets that they have been able to gather have now landscaped the entire epidemiology in Japan with regards to their patients in these particular cancers. It's now driving new research because you're not only looking at genomics, you're also now looking at epigenomics, and you're deriving new biomarkers. So, these are things where they took an ethical view. That's how they actually developed that program. It's not impossible to do. And I think in many developed markets, you're already seeing that. And it's now—how do we bring similar mindsets and mindset shifts that these new technologies are great enablers for better treatment decisions.

Saumya Jamuar 14:27

Absolutely. And I think behind the ethics stands the focus of who are we helping, right? And it's the individual, the patient. And how can we best get them the care they deserve, and how do we bring that up? So maybe I can bring that back to Katharina and say, how does that land in Hong Kong? Is that an ethical question, a reimbursement question, a regulatory question?

Katharina Reimer 14:51

Yeah, I think the latter. Regulatory-wise in Hong Kong, we don't have a body, for example, yet like an FDA. I believe we are aiming for that in the next two to three years. And that would obviously then cover bringing diagnostic tools to the market, and making sure that the consumer has confidence in those initiatives. We have a urine test on the market. We have a menstrual pad. But these kind of diagnostic tools have come under quite a bit of scrutiny because we do not have a regulatory body which supports that they are as effective as going and getting a clinician-collected sample, right? Now, I guess, also when you look at the system, as soon as it's implemented by the public sector, the hospital authority, or let's say the HPV vaccination was listed in the childhood immunization scheme in 2018. We are currently running a catch-up program, and it being supported by the government is a huge plus because, the average Joe Bloggs does obviously want to have that security and that safety when it comes to vaccinations, diagnostic tools, and so forth. So, in coming back to the partnership piece, I think there needs to be a lot more partnerships created. The ecosystem needs to understand that, let's say from an investor perspective—we talked about this during the female breakfast—it isn't just about writing a check. A scientist who's smart, who comes up with a new diagnostic tool, doesn't automatically know how to run a business, right? So, the financiers need to be investing more than just that check. On the other hand, we have quite a fragmented public versus private system in Hong Kong. If you are wealthy, if you have good health insurance, the plethora of getting the best treatment is absolutely there. But what about the underprivileged ethnic minorities, such as the huge helper community in Hong Kong? We are all women which have jobs, which have professions, but why don't we send the ladies which look after our children to get tested? Simply because none of the state-run centers are open on Sundays, right? It's just little things like that, where we need to think smarter around how do we tackle these inefficiencies in the system.

Saumya Jamuar 17:54

Absolutely. And the thing that keeps coming up is health literacy. Not just of the individual, the society, but also the clinicians. They need to understand. The other is access, and how do you make that more accessible? But I'll move to one point that you raised, Hong Kong doesn't have a regulatory body, and they're trying to build something. And so, the question then to Sok Ching and Ravi is: The National Cancer Centre has done a great job in building an ecosystem in Singapore in collaboration with the regulatory body. And Sok Ching, you've said we need to innovate and build our own evidence to bring that. How do we accelerate that process in Asia Pacific rather than going country by country? Can we go at a regional level, and how is that? Maybe Ravi first, and then Sok Ching.

Ravindran Kanesvaran 18:42

That's a great question, Saumya. And yes, while there are some good examples from Singapore that countries around the region could probably partake from, but there will be challenges as well, because some of these examples would require resources. Perhaps I can highlight some points where even less resourced countries could take a leaf from and see whether they can apply in those countries. I think first and foremost is this focus on primary care, and that kicked in in a big way when the government announced the Healthier SG program. And that's when every individual in Singapore who signs up for the program—and now more than 50 percent, nearly 60 percent of the eligible population have signed up for the program—have a GP that they're linked to. Now, having a GP that you're linked to means this person, this physician, will take care of a health plan. They come up with a plan that screens for chronic diseases, that screens for cancer as well, and they are funded to do the screening. That removes another barrier, which is cost. But just having a physician there helps in so many ways. So, even if countries can't afford to pay for the cost of those screening tests, just having that link and creating a network that takes care of individuals across the country makes a huge difference. Putting a lot of things down to primary care, and even cancer screening is really primary care-driven now. Oncologists are really tertiary. So, there's primary care. Then there's also the barriers like subsidies for these tests, and some of them can be pretty expensive. So, trying to look for cheap sources and learning from developed countries that develop Pap smears that can be self-sampled, that can be done at home. FIT kit actually doesn't cost a lot, which is your fecal occult blood testing. Some of these can be done, but you need to think of it as a pathway, not just one test that gives you a result. You must also have follow-through on that. We see a lot of drop-off after a positive test, and there are a lot of psychological, sociocultural reasons behind that. Some of this can be addressed as well with education, and you rightly mentioned health literacy, but you need to have that pathway. Just having solved one part doesn't really help solve the problem because you're just screening. I guess these are some measures that countries can probably take a leaf from, and we are also always learning from many countries—like Pap smears, cervical cancer, cell sampling was first done in India, and that was a major breakthrough for many countries that don't have resources and have sociocultural challenges in getting women to get these tests done.

Saumya Jamuar 21:36

Okay, nice. Sok Ching, so before that, something that he just mentioned, the care pathway. Maybe this is where you just elaborate a bit more on how NORA comes in, and that patient navigator. But the first question, and then follow up with that.

Sok Ching Cheong 21:45

I don't think that we should be having necessarily new innovations just for Asia. I think science is global. Certainly, we do need to figure out what works, and translate that. But what I'm really trying to emphasize is that the evidence must travel with the technology. It doesn't mean that, let's say, a genetic testing panel that worked in

Europe would work necessarily similarly in the Asian setting, because we do have subtle different genetics. For example, in lung cancer, we have a lot more mutations among Asian women compared to the Caucasian population. I wanted also to comment on what Simran has said. It's great that we have this SCRUM initiative in Japan, but we also mustn't forget that Japan is a high-income country, and a lot of countries in Asia are not in that level. So, learning from that, how do we translate accessibility of those drugs to the other countries are also really important. Is it group procurement or any innovative strategies? So, in terms of the care pathway, I think I just want to mention that very recently, the Malaysian Minister of Health, together with our medical device authority, has come up with this guideline, or at least started the discussion, about medical device approvals. That if it was approved in one ASEAN country, then it should actually be applicable to the rest of the ASEAN countries as well. These sort of discussions, I think, are going to be really, really important, so that we do not repeat—or having to demonstrate implementation studies in every country, especially when we have low resources. Although we do need to examine what needs to be adapted in each of these countries. So, for example, for MeMoSA, our mobile mouth screening app, we're now discussing with Cambodia and Indonesia, because Indonesia has more than 1,000 islands, and they have very limited oral medicine specialists. How could MeMoSA be used in their screening programs as well? But in order to do that, we do not assume that we could just translate what we have done with the Ministry of Health in Malaysia to Indonesia, because then we need to really do the mapping of the pathways, bring the stakeholders in, check what the regulatory pathways are as well, before we embark on such an implementation.

Saumya Jamuar 24:32

Very nice. Thank you. And that actually highlights a very important piece of the health literacy puzzle. It's the policymakers, the governments—they need to be educated as well about this. And having a framework that works across ASEAN allows the low-resource countries to leverage on the higher-resource countries in the region to actually implement some of that. So that's definitely something we should add to the health literacy piece. Moving on, in terms of one of the things we haven't touched on, I know there was a session before this on AI. How do you see that evolving with MeMoSA, you doing that? And Simran, you're on the other end, where you're saying, "No, I can do it through blood." And they're complementary. It's not that you're saying it's only blood, but it's complementary. How do you see that evolving over time?

Simranjit Singh 25:20

Sure. So just to correct you on that front, our entire engine of being able to have our back end—because you're going to be able to look at 3.2 billion different permutations of genomic profiles—all of that is done by AI. All of that is done by machine learning. And so that is the reason why you are able to improve and the entire programming of our BIP software, bioinformatics software. That also being said, it also then allows us to bring in clinical data, claims data, genomic data, all together, and biopharma clinical trial data, because we work with quite a number of biopharma trials. So, we have actually now established an entire platform called InfinityAI within that in itself, that actually brings all of that information together, aggregates it, and now you're able to see the full patient journey. Why? Because we have testing in early detection, we have testing in recurrence monitoring of disease, and we have testing in late-stage disease or advanced cancer. And so, you're able to actually map the entire patient journey and the changes in epidemiology, the changes and frictions that you have in terms of claims, the frictions that you might have in terms of clinical data, and clinical phenotypic data that you might want to be able to bring that in. So, I think it's going to be a major part of what we do. The other part that is very complementary is actually AI use in imaging. Because a lot of those imaging markers then also help in terms of guiding molecular testing. We've been partnering with quite a number of imaging companies as well that come together with us to be able to create an entire full suite of solutions. In Korea, we work with a company called Lunit. They are a widespread

company in radiological AI, and we actually complement each other. They find a nodule, there needs to be molecular testing, and we bring that together as a full suite. So, I think it's very complementary in terms of providing a full toolkit to doctors to be able to leverage and provide better care for patients.

Saumya Jamuar 27:47

Perfect. Thank you. Thanks, Simran. That's very helpful. And thanks for correcting me. It was more to provoke you rather than—And I'm glad I got that answer. Perfect. So, we've had a very interesting session, but I know you all are sitting there eager to ask questions. So, maybe I'll turn to the audience and see if anyone does have a burning question that they want to ask. We still have about 15 minutes. But if you have a burning question, please raise your hand and happy to—If not, then I can continue. Ah, perfect.

Audience Member 28:21

I am from Hong Kong, the Hong Kong Anti-Cancer Society. I just want to add that, in the area of inequity, I think the civil society has been doing a lot. So, there are a number of very good NGOs which are doing this in order to help. For example, the Breast Cancer Foundation, the Hong Kong Anti-Cancer Society, and the Children's Cancer Society. For example, in the Hong Kong Anti-Cancer Society, those people who have gone through screening and are diagnosed with cancer, then through our medical assistance scheme, they will be able to get medical treatment, which is very expensive. Currently, the targeted therapy and immunotherapy are very expensive. So, those who cannot afford to pay, they are facing the difficulty of deciding whether, for example, to sell their house or to send their children back from overseas studies and things like that. So, through a financial vetting process, those people who cannot afford this funding for medical treatment, then they will be given assistance. In this way, I think we hope that it will be helpful to the family. Another thing, I would like to echo what Malaysia is doing. In fact, in the Hong Kong Anti-Cancer Society, we don't use the word "navigator," but we use the word "case manager" to really help one-to-one, either by a social worker or a nurse to help the family. In fact, we believe that not only the patient is suffering—in fact, the carer and the whole family are suffering. We believe that psychosocial support is really very important throughout the process. So, we are doing that as well, and then we are getting very full support from charitable foundations. And we are demonstrating to the government that this is something that should be provided. And, for example, the one that I mentioned about medical assistance. With our experience of over five years—we started in 2006—and after five years, we sent a report to the government, and then they began to take up some of the new cases, which are on a very high-cost targeted therapy. So, we continue to help those who are not, because in the drug formulary, some of the drugs are not covered by government. With this medical assistance scheme, we will be able to help many. So, I just want to add this information for you to know that we are actually trying our very best, and we have actually sent a report to the government to talk about the ecosystem. There is a need for a lot of collaboration from different sectors, including the insurance, the pharmaceutical companies, as well as those NGOs which are helping their cancer patients. Thank you.

Sok Ching Cheong 31:31

Can I answer that?

Saumya Jamuar 31:32

Yes, absolutely. That was one of the points that I wanted to raise as well, that in a study that looked at eight ASEAN countries, about 50 percent of individuals who are diagnosed with cancer end up having financial catastrophe within 12 months of diagnosis. And so, I just want to turn to Sok Ching and Ravi to say—what are we

doing about that, and do we have lessons that we can share with others where we have done well and lessons where we haven't done well, and we should avoid them in other countries?

Sok Ching Cheong 32:03

Yes. Maybe I can start. With NORA, the navigation program, actually, when the patient comes to us, the first thing we do is an assessment. We assess their mental state, we also assess their financial state. And we have a community navigator and also a nurse navigator. The community navigator actually solves the social barriers. So what we're really proud of is the fact that actually there's quite a lot of government aid offered in Malaysia. But unfortunately, though, due to low literacy, et cetera, the patients actually cannot unlock that. So, with the community navigator, we have unlocked millions, actually, to help the patients proceed through their journey. The second area I want to also touch on is the importance about doing research and having representation, as mentioned, because people do have to decide between selling their house, bringing their children back from education, versus surviving the disease. And this is the actual fact that we're dealing with every day. We need to do the kind of research in our country that will enable us to make sure accessibility. For example, immunotherapy. We are now doing a low-dose immunotherapy trial. We monitor the patients to make sure that they're getting the optimal dose, but we can actually reduce the dose, and this has been demonstrated in many parts of the world. But we need to do the research here in our own countries, in order for our equivalent of FDA to be brave enough to give low doses. These are the research that we should do and we should invest in. But unfortunately, I think, in terms of the funders, these are not sexy research. They're not new entities, right? So that is the struggle that we are having, and I think philanthropic funding is so important in order to fund this kind of research for accessibility.

Saumya Jamuar 34:01

Thank you so much. Ravi?

Ravindran Kanesvaran 34:03

So you quoted a very important study. It was nine countries and 9,000 patients, and 48 percent actually had financial catastrophe, and usually most of that cost is because they can't afford the drugs. And the reason why they need those drugs is because they're diagnosed late, because they have late-stage cancer. I guess my thoughts on this would be summarized into three points. I think the first point I have is countries should try to first form a health technology assessment unit and then use that unit to negotiate prices with drug companies. Very often, sometimes governments worry about negotiation with pharma or industry because the cost is so high, they'd rather not know or not get engaged or support in that sense. But when Singapore did this, and we came up with a cancer drug list in 2022—the Health Technology Assessment Unit actually was formed in 2015, akin to those in the unit in Australia and Canada, where it's pretty much the norm to assess these drugs from a cost-effective point of view, and then propose recommendations to government to what drugs should be supported financially and what gets partial support, and so on. But again, a lot of these high drug costs are because of drug development, which is expensive. And without that drug development, you won't get improvement in survival and drug discovery and new drugs that come into the market. Now, the second thing is—why don't we avoid late-stage cancer? Which is put in more effort and funding into cancer screening, early detection. For example, even a country like Singapore, where these tests are subsidized, patients don't have to pay out of pocket, only 40 percent of eligible Singaporeans actually get screened, whether it's colorectal, cervical cancer, or breast cancer, only 40 percent. Now, this is a far cry from Australia, which is at 70 percent, US colorectal 75 percent, or even over 80 percent in Scandinavian countries. So, there are other issues there, but putting a lot of effort in screening and early detection probably makes a lot of sense. Now, going back to what Madam Pat said earlier about civil society, I think they play a critical

role as well. Similar to the Hong Kong Anti-Cancer Society, Singapore Cancer Society also tries to galvanize support in the community. They have a cancer treatment fund for those who are very, very poor, who can't afford these drugs. And how we provide that subsidy as part of Cancer Society is that we do means testing, and we provide subsidies for drugs that may not get support from government funding. But more importantly, civil society actually plays—or these nonprofits play—a huge role with the data that they have to convince governments that these work. So many years ago, in 2016, the vaccine for cervical cancer was not funded by the government or paid for. And then Singapore Cancer Society started a program that subsidized the treatment for girls in school for the vaccine. And when the government saw there was actually benefit for it, then now it's fully paid for and subsidized, paid for by the government. And immediately, the compliance rates improved because cost doesn't become a barrier. So, I think these are the three points I want to make with regards to what countries can do, regardless of whether you're a high-resource or a low-resource country, you can actually make a difference.

Saumya Jamuar 37:34

Perfect. Simran, do you have anything? I see you're very eager to.

Simranjit Singh 37:38

Yeah, I do. I think Ravi alluded to something really important. I think if you look at late-stage treatment, just in colorectal cancer in Singapore, that's anywhere between \$200,000–\$300,000. If you are detecting it early, it's in stage 1, you are talking about \$30,000–\$40,000. So that's a huge differential in terms of cost of treatment. But I think in order to improve, he also mentioned about a study which just got released the *Singapore State of Health* study. And in that study, it was interesting to see that Singaporeans have one of the highest amount of health screening. General health screening, chronic health screening, diabetes, hypertension, all of that, almost 80 percent. But when it comes to cancer, as he mentioned, it went down to 40 percent. And these traditional modalities of screening have been there for many years. We are talking about almost 10–15 years. And they are not changing that trajectory. Yes, we need to do more in health literacy, I agree. I think there's lots more that needs to be done in terms of education. There's lots more that needs to be done in terms of mindset shift, in terms of taking proactive action in terms of your health, and demystifying that fear of cancer. I think those are all important pieces. But there must be new enablers, and some of these new enablers are new technologies. Like multi-cancer detection tests, blood tests. And here, when we see it, a lot of what they are addressing is actually these social and cultural issues. The reason why people do not screen is either it's inconvenient—you talk about FIT test, it requires you to be able to either poop on demand in the clinic or be able to then do it at home and bring the entire sample back to the clinic. Not everybody wants to do that. Colonoscopy requires you to take barium beforehand and be able to do a prep the day before—an invasive procedure—and then a day after for recovery. Not everybody has the ability and time to do that and wants to go through that experience. Many people who have gone through that experience don't want to go through that experience again. So, what do you need to do? You need to change that paradigm. One way is technologies like multi-cancer detection using blood. You're now looking at genomics, you're looking at epigenomics. You're able to now have very comparable sensitivity and specificity. In a session that we had yesterday, I just wanted to just talk a little bit about some of that sort of misunderstanding. Some of these traditional tests that we have—for example, low-dose CT that we have for lung cancer. Low-dose CT for high-risk lung cancer patients or lung cancer individuals—so smokers—a lot of that is recommended. But the specificity of low-dose CT is very low. We are talking about 75 percent. And some of these blood tests that we have are 99 percent specificity. You have a 1 percent false positive. So here we have a technology that is improving—much more accessible, because you're being able to do it with your regular screening. But there's still some misperception. You're still thinking there's some of these older tools—I'm not saying throw the baby with the bathwater. I think it needs to be a complementary testing regime.

Saumya Jamuar 41:31

Absolutely. I think Simran, you bring up a very interesting point, and this is where—we're running short of time, and it's been a very engaging session, so thank you all. But this is a rapid fire. And maybe, Katharina, I'll start with you because Ravi touched on HPV a bit, and you may want to bring that. But if there was one thing looking ahead in 2030, one barrier that you would want to dismantle, what would it be? And have you seen any personal progress in that, or have you?

Katharina Reimer 41:58

Well, if we look at specifically cervical cancer, WHO has a mandate of 90-70-90, and that's not the clothing size of women, it's about 90 percent vaccination rates, 70 percent screening rates, and 90 percent access or equitable access to care in case. So, if you look at Asia Pacific, and that's some of the work we're doing with the HPV coalition, where we have 10 different countries and different movers and shakers within this field. Australia is there. Australia is there. That's a great example. It is possible. They will eradicate cervical cancer by 2027, hopefully. So, yes, we can take a leaf from that and coming back a little bit to ASEAN and the LMICs—the low- and middle-income countries—I think there's a huge opportunity for those countries to learn from the mistakes the more developed world, Japan, Hong Kong, Singapore have made. I actually do think there is a lot of opportunity and a lot of hope that we are able to grapple some of that disease burden, which is now significantly showing up in the public health system with individuals becoming older and living longer and so forth. But you want to have a healthy longevity.

Saumya Jamuar 43:31

Very nice. Sok Ching? Go on.

Sok Ching Cheong 43:34

If there's some barrier that I want to see removed, it's actually people should not be needing extraordinary help to get ordinary care. I think that's the main thing I want to see happen by 2030. And it's really encouraging because I think with some of the initiatives that we are doing, we see that communities actually want to help. MeMoSA is actually delivered by villagers. They are delivered by health-care volunteers appointed by the village head. And I've seen really encouraging enthusiasm in this. And things like NORA, which is a simple navigation—doesn't cost a lot of money—are already showing signs of improving five-year survival rates. So, I think that there's a lot of encouraging interventions that can come out of these programs.

Saumya Jamuar 44:29

Very nice. Ravi?

Ravindran Kanesvaran 44:30

I think for me, what I'd like to remove is really this mental barrier or mindset change with regards to ageism, or specifically in my area of interest, the way we perceive older adults with cancer. And the reason I say that is because, as of now, a lot of times chronology plays a big role when patients come in, we look at the age, and we make all these preconceived notions. And the reality is cancer is a disease of aging. As we grow older, our risk of cancer increases. The majority of cancer patients are older than the age of 60 years. Most of cancer patients are above that age. So, removing this concept is more in relation to my colleagues than society. In society in general,

yes, I think there's a lot of movement now, and there's this whole healthy longevity space as well, where people want to do things to make them live healthy, with a good healthspan. But amongst my colleagues, I think a lot of people don't realize that—and this is what I tell them as well—every oncologist is a geriatric oncologist because we all treat older patients with cancer. So, I think we need to personalize their care, we need to do the right assessment, and to listen to them and ask them what matters most to them.

Saumya Jamuar 45:40

Perfect. And Simran, one word, if you can. We are out of time.

Simranjit Singh 45:46

Sure. I think one thing that I think can be dismantled is the fact that we need to do things separately. I think public sector looking at it, private sector looking separately—I think there's a lot of ability to converge. The coming-together in terms of public-private partnerships is really the key towards getting better outcomes for patients.

Saumya Jamuar 46:10

Perfect. Thank you. It's been a very engaging session. Please join me in thanking the panelists for that. Thank you. I love Sok Ching's two quotes: "Science is global, but evidence needs to travel with technology" and "Let's not make patients take extraordinary help for ordinary care." I think those are the takeaways for me here. But thank you again for being part of this conversation and thank you for being here as well. I couldn't take your questions, but I hope you learned something.

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