

Conference Report: Beyond Survival: Can Asia Measure What Prevention Truly Protects?

Workshop Session at the Asia Pacific Organization for Cancer Prevention (APOCP) Conference 2026

Time and date: 15:30-18:15, September 28, 2026

Venue: The Waterfront Hotel, Kuching, Malaysia

*Organizers: Asia Cancer Forum (ACF) and National Cancer Society Malaysia
(NCSM)*

1. Opening

The Life Prevention Makes Possible

Opening: From a University of Tokyo Question to Three Demonstrations for Asia



Norie Kawahara

Project Associate Professor, Graduate School of Arts and Sciences, The University of Tokyo
Representative Director, Asia Cancer Forum

Profile

Norie Kawahara is Project Associate Professor at the Graduate School of Arts and Sciences, The University of Tokyo. She concurrently serves as Representative Director of the Asia Cancer Forum, leading public-private collaborations that advance policy recommendations to position cancer more prominently on the global health agenda, and as Representative Director of the Asia Future Research Organization, a platform for interdisciplinary future studies in Asia with a strong focus on health. Her research interests span interdisciplinary cancer research and global health, with emphasis on Universal Health Coverage (UHC) in cancer care across Asia, strategies for cancer prevention and early detection, and the socio-cultural dimensions of cancer in Asian communities. Dr. Kawahara's work integrates medicine, public health policy, and social science to improve cancer outcomes and ensure that "no one is left behind" in access to care. She earned her doctoral degree at Juntendo University for her pioneering research on prostate cancer patients' quality of life.

On behalf of the Asia Cancer Forum (ACF), Dr. Norie Kawahara welcomed participants and expressed her sincere thanks to the National Cancer Society Malaysia (NCSM), co-host of the session, and to all the speakers and partners. She also extended appreciation to UICC Asia Regional Office (UICC-ARO) for the support provided in making this workshop session.

She noted that for many years ACF has worked with its partners in Malaysia on cancer education and action, most notably through the BEAUTY (Bringing Education And Understanding To You) and Health Program, a concept developed together with NCSM to empower people to change their habits and improve their lives. This work has been engaged in by the Cross-boundary Cancer Studies lecture series at the University of Tokyo with the generous support of Astellas Pharma Inc.

For 16 years, the lecture series has been guided by the belief of its founder, the late Professor Hideyuki Akaza, that "cancer is a mirror of society." By looking at cancer, it is possible to see how people live, how society supports them, and where that support is missing. The course brings together medicine, society, economics and culture, and asks what kind of society we want to build. It also serves as an incubator, in which

new ideas are tested in the field and developed into practice, with the aim of turning classroom discussions into action in society, and then into policy.

During the summer semester of 2026, the students on the course asked how the social value of cancer prevention can be made visible. Many of the speakers in this Kuching workshop had been guest lecturers in the summer course, bringing their experience into the classroom and helping students to connect their own fields of study with real challenges in Asia. Dr. Kawahara thanked them for supporting the students, who had subsequently gone on to develop policy proposals as their final assignment. The present workshop was developed based on the questions raised by the students in their policy proposals.

Prevention protects life, work, learning, family, and the freedom to choose one's future. Yet when prevention works, often all that can be seen is ordinary life carrying on, which makes its value difficult to see and to measure. Can people attend screening if they cannot leave work? Who helps them to reach medical care? Will their workplace support them after a cancer diagnosis? These questions ask how society can turn knowledge into action.

The theme of the session, "Beyond Survival: Can Asia measure what prevention truly protects?" was to be explored through three initiatives (Figure 1): the Asia Well-being Survey, looking at how daily life supports health; HAL (Hybrid Assistive Limb) and return to work, looking at how recovery supports work and participation in society; and BEAUTY, looking at how trusted support in communities and workplaces connects people to screening and care, and creates social value.

Fig. 1 Three initiatives to protect everyday life



The students' questions provide the starting point: What should we measure? Who should we work with? What should we test in the field?

Dr. Kawahara called on participants to bring classroom questions into practice, and lessons from practice back into education, working "Better Together" to make visible the lives and futures that prevention protects.

2. The Questions That Change the Measure Student Voices on What Conventional Numbers Miss

Presenting on behalf of Dr. Kawahara, Tony Hill (ACF) provided more detail about the University of Tokyo lecture series. The Cross-Boundary Cancer Studies course has been running for 16 years in cooperation with the UICC Asia Regional Office (UICC-ARO) and ACF, with two semesters of lectures each year, attended by students from a wide range of specialties. The most recent series was attended by 16 graduate students from fields as diverse as life-cycle assessment, scientific computing, environmental sociology, network science and AI computational biology. Notably, none of the students were from medicine, so cancer was examined entirely through the lens of other disciplines.

At the end of the lecture series, the students were given one simple question: Looking from your own field, what is it that cancer prevention protects that is not reflected in current statistics? They were asked to write a policy brief of 600 to 700 words, imagining that it would be presented to government to guide future prevention policy. Although they worked separately, most of the students arrived at three common threads (Figure 2).

Fig. 2 Three common threads in the students' policy briefs



First, they redefined what prevention protects. When prevention works, it means continuity, or "life uninterrupted": the job kept, the income still coming in, the family not turned upside down by caregiving. The converse, however, is that when life continues uninterrupted, there is little concrete evidence that prevention has succeeded, which can make it difficult to argue persuasively for its continuation.

Second, they focused on the system rather than the individual. Instead of asking "Why did this person not come for screening?" many asked what barriers or disincentives the system had put in place, or "What did the system ask this person to give up to get there?" This takes the burden off the individual, so that missing a screening no longer looks like a personal failing.

Third, although the students were given complete freedom to propose something entirely new, almost none chose to invent anything. Instead, they borrowed tried-and-

tested methodologies from their own specialties, such as life-cycle accounting, repeat photo surveys of coral reefs, tracking chemicals through industry and mapping social networks, and pointed them at prevention. One example came from a scientific computing specialist, who noted that the value of prevention exists only as a computer estimate. Unless someone maintains the data and keeps it up to date, the rationale for prevention is gradually forgotten.

The students' briefs were then synthesized into three questions for the three streams of the session (Figure 3). For the Well-being stream: If you needed cancer screening next month, how easy would it be to arrange the time, the transport and the family care? People may know about the importance of screening, but can they actually get there? For the Hybrid Assistive Limb (HAL) and return-to-work stream: When someone's physical strength comes back, are they actually able to return to their original work or find a new source of income, and get back to everyday life? And who carries the cost of rehabilitation in the meantime? For BEAUTY, a program that has been implemented in Malaysia with NCSM for almost five years, starting in salons and barbershops and since expanding into the corporate setting: Where does the message stop being turned into action, and how can such bottlenecks be addressed?

Fig. 3 Questions from the students for the three presentations



In the end, the 16 students produced 16 unique proposals, each identifying something protected by prevention that they felt had not been identified before. Over the past 16 years the course has become something of a “brains trust” at the University of Tokyo, benefiting for many years from the knowledge of Dr. Murallitharan Munisamy and others from NCSM, as well as from many of the lecturers present at the session. He thanked them for their continued support of the lecture series, and emphasized that the students' questions are questions, not answers, which will continue to be explored in the session and in the new term at the University of Tokyo beginning in October.

3. Letters from Japan: What Prevention Protects Two Video Messages, One Shared Commitment



Tetsuo Noda

Director Emeritus and Advisor, Japan Foundation for Cancer Research

On behalf of UICC's Asia Regional Office (UICC-ARO) I send my warmest greetings to everyone at APOCP 2026.

Founded in 2000 through the vision of Professor Kazuo Tajima and fellow Japanese researchers, APOCP has advanced cancer epidemiology, prevention, and collaborative research across Asia. UICC-ARO has long supported this mission, including the publication of its official journal, the Asian Pacific Journal of Cancer Prevention.

This year, researchers, clinicians, public health professionals, and policymakers have gathered from across the Asia Pacific and beyond to examine what works and what must change in cancer prevention and control. I encourage meaningful dialogue across disciplines, institutions, and health systems.

Since 2011, UICC-ARO has supported the University of Tokyo's Cross-Boundary Cancer Studies lecture series. I am delighted that these lectures have inspired today's discussion on measuring the social value of prevention.

As Japan advances a more proactive approach to prevention, we face a shared challenge: responding to a growing cancer burden with limited resources. We must make prevention's value visible in lives protected, livelihoods sustained, and futures preserved. Collaboration between Malaysia and Japan, with Japanese companies actively engaged in public-private partnership, can help translate that value into evidence for policy and investment.

UICC-ARO will continue to support this lecture series. I look forward to your insights enriching these lectures, inspiring new research, and strengthening action across Asia. Together, let us turn shared knowledge into a healthier future for Asia.



H.E. Noriyuki Shikata

Ambassador of Japan to Malaysia

I would like to express my heartfelt gratitude for the opportunity to say a few words in this video message for the Asia Pacific Organization for Cancer Prevention (APOCP) 2026 Conference.

Under Prime Minister Sanae Takaichi's leadership, Japan has reinforced its strong commitment to deeper ties with ASEAN and Malaysia. In October 2025, just five days after taking office, Prime Minister Takaichi made Kuala Lumpur her first overseas destination as Prime Minister, to attend the ASEAN-related summit meetings. At the ASEAN-Japan Summit last October, the leaders reaffirmed deepening synergies between the Free and Open Indo-Pacific (FOIP) and the ASEAN Outlook on the Indo-Pacific (AOIP).

The FOIP, first introduced by then Prime Minister Shinzo Abe in 2016, has continued to gain momentum during the last decade. In May this year, Prime Minister Takaichi outlined an updated FOIP in Hanoi, emphasizing cooperation with ASEAN member states, including Malaysia, to build more resilient and diversified regional supply chains and to preserve freedom of navigation based on the maritime rule of law, thereby making the region stronger and more prosperous. She also emphasized building economic infrastructure for the age of AI and data, connecting economic opportunities, and enhancing cooperation in the field of security.

Subsequently, during Prime Minister Dato' Seri Anwar Ibrahim's visit to Japan in June, the two leaders agreed to further deepen Japan-Malaysia cooperation in such areas as economic, trade and investment relations, maritime security and safety, AI, and people-to-people exchanges.

In this context, Prime Minister Takaichi's growth strategy identifies 17 strategic fields, including energy security, green transformation (GX), AI, semiconductors, and digital transformation (DX). These fields are being advanced through public-private cooperation, focusing on investment in crisis management and sustainable growth. Many of these areas align closely with Malaysia's policy priorities.

Advanced medicine and drug discovery are also promising sectors under this umbrella, and several concrete collaborative initiatives are already underway. For example, the PERKESO Rehabilitation Centre, which opened with advanced medical equipment in Ipoh this June, is collaborating with the Japanese company CYBERDYNE to provide advanced rehabilitation utilizing cutting-edge neuro-robotics technology. This rehabilitation centre also serves as a hub for promoting neuro-robotic rehabilitation in other ASEAN countries.

In closing, I hope this conference will provide us with a platform to further strengthen collaboration between Japan and other Asia-Pacific countries, and to share innovative ideas in the field of healthcare. Finally, I wish you all a successful conference.

4. Part I: Where Prevention Begins

Asia Well-being: The Conditions for a Life Uninterrupted



Kosuke Matsui

Manager, Liaison Office
Yakult European R&D Center B.V.

Profile

Kosuke MATSUI is Manager at the Liaison Office of Yakult European R&D Center B.V., in the Netherlands. He graduated from Tokyo University of Marine Science and Technology in 2008 with a degree from the Department of Ocean Sciences. After joining Yakult Honsha Co., Ltd. in 2008 he worked

in various capacities and served in diverse roles, including Home Delivery business in Japan and the International Business Department. In 2012, he moved to Yakult Europe B.V. in the Netherlands (European HQ) as a Manager of the Corporate Planning Office until 2022. In that period, he also worked at Yakult Deutschland GmbH as a Sales & Marketing manager between 2014-2020. He returned to Japan in 2022 and worked as Assistant Manager of the Science & Communications Support Section at the International Operations Department until March 2025, before being appointed Associate Manager of Global R&D Framework Preparation Team at Yakult Honsha Co., Ltd. He has been in his current position since 2026.

Kosuke Matsui began by outlining the social and structural issues related to NCDs in Malaysia. Five interlinked forces are shaping health challenges: population aging; urbanization; the nutrition transition toward calorie-dense, processed and unhealthy diets, including increased intake of fast food; sedentary lifestyles, as more people work in offices and have fewer opportunities to move; and psychosocial stress. These drivers are associated with a rising burden of cancer, diabetes, cardiovascular disease, obesity and mental health conditions, which in turn have economic consequences, including rising healthcare expenditure, absenteeism and presenteeism, workforce loss, pressure on UHC, and reduced economic sustainability. In Malaysia, the NCD burden is estimated to be equivalent to approximately 4.2% of GDP.

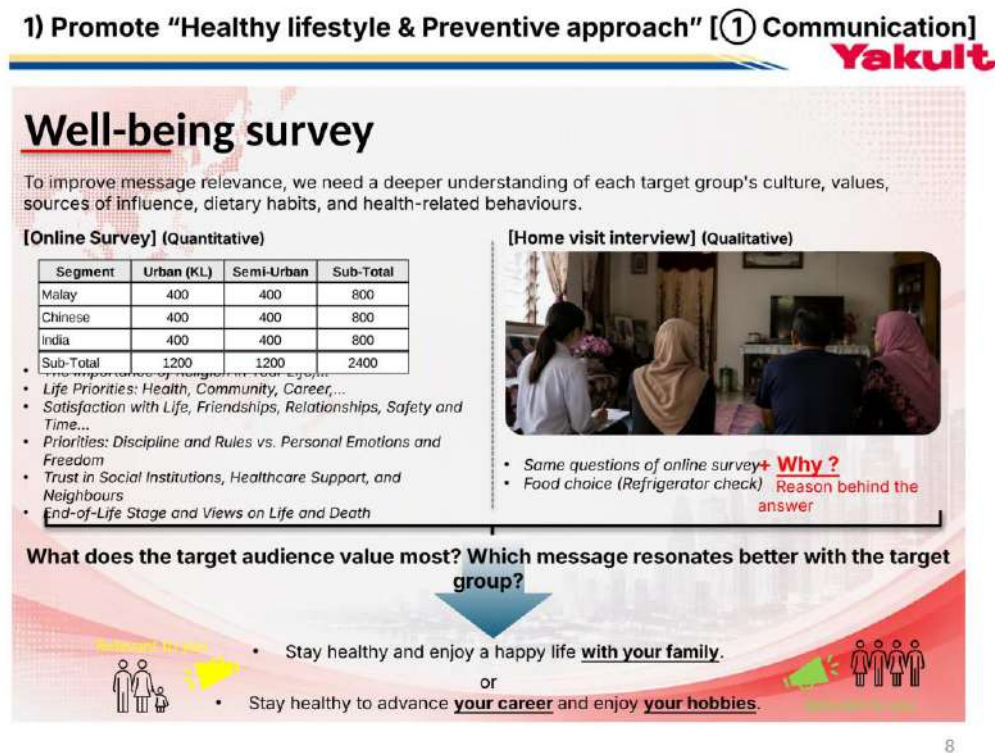
Yakult has been a pioneer of probiotic drinks since 1935, founded on the research of Dr. Minoru Shirota (1899–1982), a Japanese microbiologist and medical doctor who dedicated himself to research into the gut microbiome. In both Japan and Malaysia, the company has grown through its unique sales system, known as the Yakult Ladies.

Of the five key drivers, population aging cannot be modified, but the others can be addressed through healthier lifestyles and prevention. The question, therefore, is how to increase awareness and drive action. Yakult started business in Malaysia in 2004, and today has a factory in Seremban and approximately 500 employees. Over the years, the company has communicated the importance of gut health and prevention through television, newspaper and radio advertising, but has observed different interpretations and reactions across different segments of the population: by ethnicity and religion, by generation, and between urban and rural areas. The diversity of Malaysian society appears to make a significant difference to how messages are received.

Mr. Matsui related how, when he had discussed this issue with Dr. Kawahara, he found that she had encountered exactly the same challenge in promoting cancer screening, and they agreed on the need for a deeper understanding of the Malaysian people.

This led to the Well-being Survey, which aims to improve message relevance by gaining a deeper understanding of each target group's culture, values, sources of influence, dietary habits and health-related behaviors (Figure 4). The survey consists of two components. The first is an online (quantitative) survey of 2,400 respondents, divided into six groups by ethnicity (Malay, Chinese and Indian) and place of residence (urban Kuala Lumpur and semi-urban areas). Respondents are asked about such topics as the importance of religion in their lives; their life priorities, such as health, community and career; satisfaction with life, friendships, relationships, safety and time; trust in social institutions, healthcare support and neighbors; and their views on the end-of-life stage and on life and death. The second component is a qualitative home-visit interview, which asks the same questions but probes the reasons behind respondents' answers and current behaviors. The interviewers also check the contents of respondents' refrigerators, asking why they chose particular ingredients, foods or supplements.

Fig. 4 Overview of the Well-being Survey



By combining the results of the two components, it will be possible to identify which messages resonate best with each target group. For example, one message might say, "Stay healthy and enjoy a happy life with your family," while another says, "Stay healthy to advance your career and enjoy your hobbies." Understanding what each segment values most will indicate the most effective way to communicate.

Another project is the meal photo survey, an educational "Shoku-iku" (food education) project conducted in collaboration with schools in Kuala Lumpur. Students are asked to take photos of everything they eat over a period of two to three weeks, and then, together with Yakult, analyze the data in terms of nutritional value and frequency of intake. In Japan, people generally eat three meals a day, perhaps with a snack between lunch and dinner, whereas in Malaysia food intake is likely to be more frequent, which may have an impact on such conditions as weight and diabetes. The students then create an action plan, such as skipping snacks before sleep or eating at least three vegetables per meal, and after six months or a year the survey is repeated to see whether any behavioral change has taken place.

The company's aim is to integrate these insights into its business. Issues detected through the meal photo survey will inform the development of new products that contribute to the nutrition of Malaysian people, while knowledge gained from the well-being research will help to communicate the right message to the right target group. This communication model could be applied not only in the private sector, but also in public health promotion initiatives, such as cancer screening campaigns and government health campaigns.

The final project is a return-to-work pathway for cancer patients, conducted together with PERKESO, the Malaysian Social Security Organisation (Figure 5). Because Yakult Ladies deliver products from home to home, mainly on foot, the project will

recruit cancer patients who have completed treatment to work as Yakult Ladies. The project provides three benefits for participants: first, physical activity, which a growing number of studies indicate can contribute to better outcomes after cancer treatment, including prevention of recurrence; second, income from the business, enabling financial independence from social insurance; and third, social interaction through conversations with customers and colleagues, which also contributes to health maintenance.

Fig. 5 Return-to-work pathway for cancer patients as Yakult Ladies

How can Yakult contribute? - 2) Supporting "Return-to-Work" after the treatment



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In summary, Mr. Matsui stressed that cross-functional collaboration is critical to addressing the NCD challenge and to breaking the cycle linking key drivers, health burden and economic consequences. As a food company, Yakult will seek to develop new products that benefit Malaysian people from a nutritional point of view, and will utilize the Yakult Lady system as a return-to-work pathway.

He expressed his appreciation for Dr. Kawahara's approach of bringing together a range of Japanese companies to work toward breaking this cycle.

5. Part II: What Prevention Keeps in Motion

Hybrid Assistive Limb (HAL) and Return to Work: From Physical Function to Purpose, Work and Belonging



Nobuhisa Matsuhashi

Professor, Department of Gastroenterological Surgery and Pediatric Surgery
Gifu University

Profile

Nobuhisa MATSUHASHI received his MD from Osaka Medical College, School of Medicine, subsequently earning his PhD from Gifu University. Starting his career in 1996 as a resident in surgery at Gifu University, he has worked at several major hospitals in Gifu Prefecture, specializing in surgery. From 2001 to 2004 he was a research fellow at the Department of Surgical Oncology, Gifu University, and from 2004 to 2006 he served as Assistant Professor at the Gifu University Hospital Advanced Critical Care Center. He subsequently worked at other institutions, including Gifu Prefectural General Medical Center. From 2013 to 2019 he was a Specially Appointed Associate Professor, Frontier Science for Surgical Oncology at Gifu University Hospital. Before taking up his current position, from 2019 to 2022 he was an *Associate* Professor, Department of Surgical Oncology, Gifu University. He is a member of various councils and academic societies, including Japanese Society of Gastrointestinal Surgery, Japanese Society of Endoscopic Surgery, Japan Society of Clinical Oncology, and Japan College of Surgeons.

Professor Matsuhashi began with an overview of the evolution of precision oncology, from the Precision Medicine Initiative launched under President Obama in 2015, through genomic profiling, biomarker-driven therapies and the rapid development of targeted therapies, immune checkpoint inhibitors, antibody-drug conjugates, bispecific antibodies and CAR-T cell therapy, to the era of liquid biopsy and molecular residual disease (MRD) detection in the 2020s.

Surgery is the main curative treatment for colorectal cancer, but microscopic cancer cells may remain after surgery and cause recurrence. Adjuvant chemotherapy, using such regimens as FOLFOX and CAPOX, reduces this risk and is the standard treatment for Stage III colon cancer. Oxaliplatin, a key drug, improves treatment outcomes but can cause peripheral neuropathy, which may persist even after chemotherapy ends. Both survival and quality of life (QOL) therefore need to be considered.

Circulating tumor DNA (ctDNA) is tumor-derived DNA released into the bloodstream. By analyzing ctDNA from a blood sample, it is possible to detect MRD even when there is no visible tumor on imaging, helping to identify patients at high risk of recurrence. The CIRCULATE-Japan project, in which Professor Matsuhashi's team participates together with the National Cancer Center Hospital East, is a large platform enrolling patients with resectable colorectal cancer (clinical Stages II to IV) to evaluate the clinical utility of ctDNA analysis. It comprises one observational study (GALAXY) and two randomized phase III trials (VEGA and ALTAIR).

In an updated analysis of 2,998 patients with Stage I–IV disease, the 24-month disease-free survival (DFS) rate was 85.9% among patients who were ctDNA-negative in the MRD window after surgery, but only 28.9% among those who were ctDNA-positive (hazard ratio [HR] 10.53). For patients with pathological Stage II/III disease, the figures were 89.3% and 33.5% respectively. MRD-positive status therefore indicates a high risk of recurrence, and ctDNA may help to tailor adjuvant treatment to individual patients, providing more treatment for those who need it, and less unnecessary treatment and toxicity for those who may not.

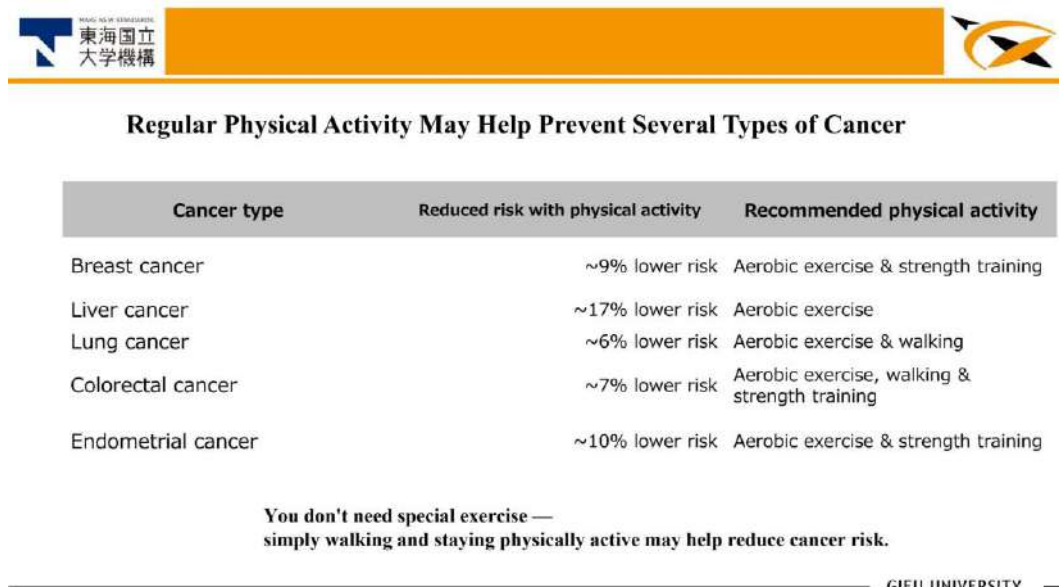
At the same time, cancer care costs are rising worldwide. In the United States, spending on anticancer therapies is projected to rise from US\$99 billion in 2023 to US\$180 billion in 2028; in Europe, direct cancer costs more than doubled from €54

billion in 1995 to €120 billion in 2023; and in Japan, cancer drug costs have risen from ¥740 billion in 2014 to more than ¥1 trillion today.

Alongside surgery, chemotherapy and radiotherapy, physical activity is gaining attention worldwide for its potential role in cancer prevention and treatment. The WHO recommends that adults engage in 150–300 minutes of moderate-intensity physical activity per week. Regular exercise supports immune function, helps to maintain a healthy body weight, and regulates hormonal balance. High hormone levels may increase the risk of breast and endometrial cancer, while obesity, which is increasing worldwide, raises the risk of diabetes, hypertension and several types of cancer.

The strongest evidence for the protective effect of physical activity relates to breast, bladder and colorectal cancer. A UK Biobank study of 47,456 premenopausal and 126,704 postmenopausal women found that physical activity was associated with a 23% reduction in breast cancer risk in premenopausal women and a 17% reduction in postmenopausal women, with a dose-dependent relationship and consistent effects across major risk factors such as BMI, hormone replacement therapy, number of births and alcohol intake. In the Japan Collaborative Cohort Study, occupational activity combining standing and walking was associated with an approximately 40% lower risk of bladder cancer in men and 60% lower risk in women. Sitting all day was the worst, and mostly standing did not reduce risk; it was standing plus walking that really mattered. Among men, regular sports of five or more hours per week were associated with an approximately 70% lower risk. Overall, regular physical activity may help to prevent several types of cancer, including breast, liver, lung, colorectal and endometrial cancer (Figure 6). Special exercise is not required: simply walking and staying physically active may help reduce cancer risk.

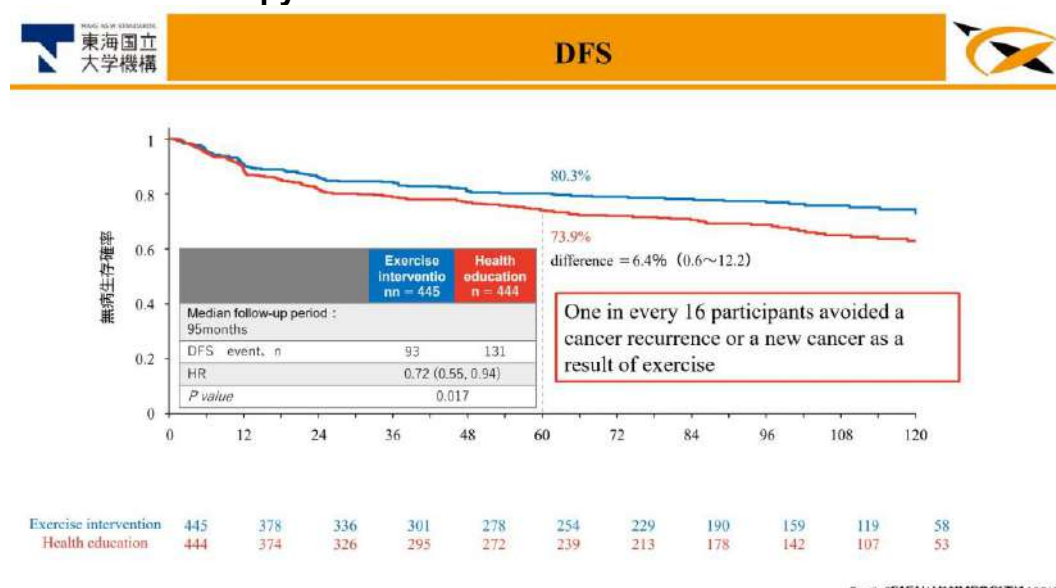
Fig. 6 Regular physical activity may help prevent several types of cancer



A key piece of recent evidence is the CHALLENGE trial, published in the New England Journal of Medicine in 2025, which randomized patients with high-risk Stage II or Stage III colon cancer who had completed adjuvant chemotherapy either to a three-year structured exercise program plus health education materials, or to health education materials alone. With a median follow-up of 95 months, DFS was 80.3% in the exercise group versus 73.9% in the health education group, a difference of 6.4% (HR 0.72) (Figure 7), while overall survival was 90.3% versus 83.2%, a difference of

7.1% (HR 0.63). In other words, one in every 16 participants avoided a cancer recurrence or new cancer, and exercise prevented one death for every 14 participants. New primary cancers were also reduced, including breast cancer (2 vs. 12 patients) and colorectal cancer (0 vs. 5 patients). An absolute overall survival gain of 7% at eight years compares favorably with that of many expensive adjuvant drug therapies.

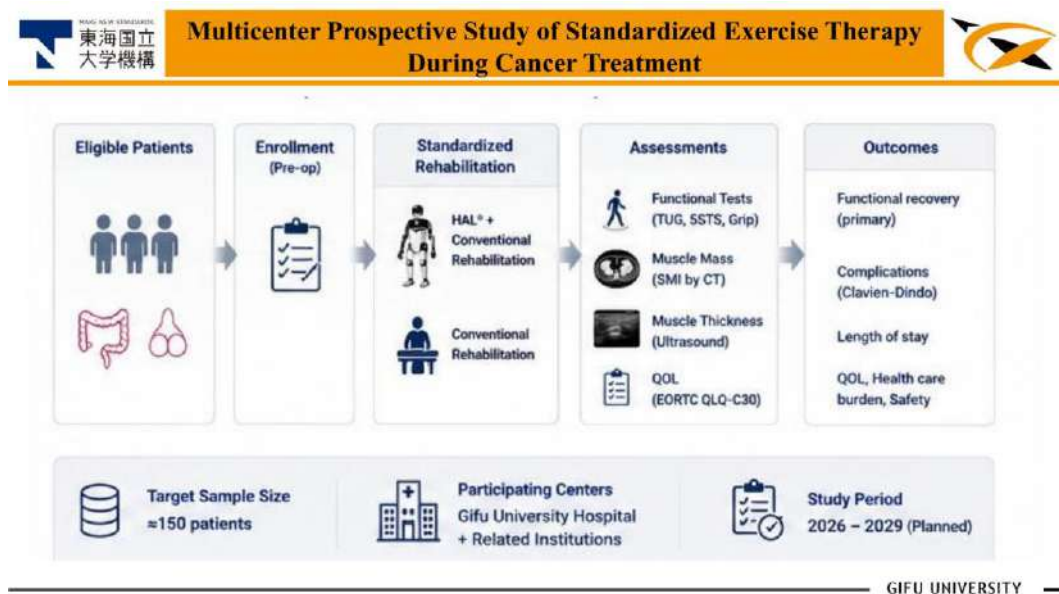
Fig. 7 Disease-free survival in the CHALLENGE trial of structured exercise after adjuvant chemotherapy for colon cancer



Exercise alone is not always enough, however. A randomized controlled trial of 110 patients undergoing gastrectomy showed that prehabilitation combining exercise and nutritional support significantly reduced the loss of lean body mass before surgery, with the greatest preservation in patients who adhered to both resistance exercise and HMB nutritional supplementation. Both the NCCN and ESMO guidelines also recommend moderate-intensity aerobic and resistance exercise, such as walking and home-based exercise, to improve cancer-related fatigue and QOL.

Patients receiving chemotherapy frequently experience fatigue, peripheral neuropathy and progressive loss of skeletal muscle, which can reduce treatment completion rates and relative dose intensity. As high-intensity exercise is often difficult during chemotherapy, Professor Matsushashi's team is conducting a multicenter prospective study of standardized low-intensity resistance exercise ("slow training") during chemotherapy for patients with gastrointestinal and breast cancers, with the primary objective of improving chemotherapy completion rates. A second multicenter prospective study, starting next month, will establish evidence for standardized exercise rehabilitation, including HAL, before and after cancer surgery. Some 150 patients will be enrolled at Gifu University Hospital and related institutions over the period 2026–2029, comparing HAL-combined rehabilitation with conventional rehabilitation, and assessing functional recovery, muscle mass, complications and QOL (Figure 8). HAL training is already being used in prehabilitation for patients with esophageal cancer, who in Japan undergo highly invasive surgery spanning the neck, chest and abdomen.

Fig. 8 Multicenter prospective study of standardized exercise therapy during cancer treatment



In conclusion, Professor Matsushashi emphasized that exercise is becoming an essential component of cancer treatment, not merely supportive care. Throughout the cancer journey, from diagnosis and treatment to recurrence, appropriate exercise can help lower recurrence and mortality, preserve muscle and physical function, improve mental well-being and enhance treatment tolerance. From surgery to survivorship, exercise should be part of every patient's journey.



Yoshihiro Yasunaga

Executive Officer, CYBERDYNE Inc.
CEO, ROBOCARE Center Group

Profile

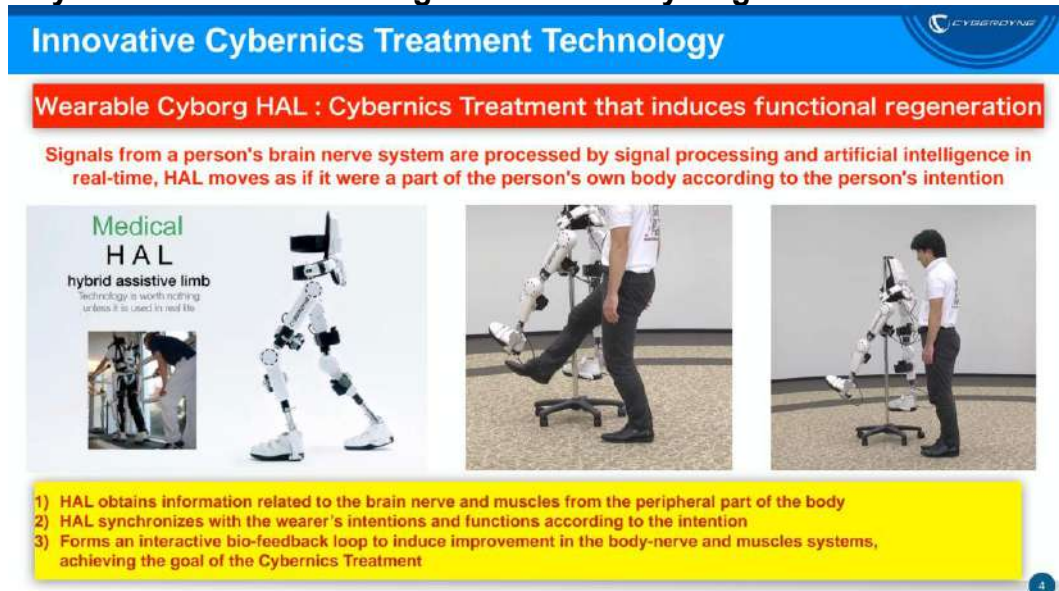
Yoshihiro YASUNAGA graduated from Dokkyo University's Faculty of Economics, Department of Business Administration. After working at Tyco Healthcare Japan and ON Semiconductor Technology, he joined CYBERDYNE in 2008. Initially responsible for IPO preparations, he later moved to the sales department. In 2015, he completed a master's program at The Open University of Japan. In 2019, he entered the University of Tsukuba's Graduate School of Comprehensive Human Sciences, Doctoral Program in Clinical Sciences. He assumed his current position in January

2024. He holds US qualifications as a Certified Public Accountant, Certified Management Accountant, and Certified Internal Auditor.

Dr. Yasunaga introduced CYBERDYNE, a Japanese company that develops and produces robotics technology, including three types of Hybrid Assistive Limb (HAL): the lower limb type, the single joint type and the lumbar type. When a person intends to move a limb, the brain sends signals through the spinal cord and nerves to the muscles, and sensory information returns to the brain during the motion. Such network loops help to keep the brain healthy, but disease or injury can damage them, resulting in difficulty moving. Even in a person with a disability, however, faint bioelectrical signals sent from the brain to the muscles leak onto the skin surface. HAL's sensors

read and analyze these signals, so that the device moves in accordance with the wearer's intention. Repeated exchange of signals between the brain and the body reinforces synaptic connections and drives relearning. This "Cybernetics treatment" improves and regenerates physical function in patients with conditions such as neuromuscular disease (Figure 9). Because the sensors respond to the intention to move, even paralyzed patients can control the HAL system.

Fig. 9 Cybernetics treatment using the wearable cyborg HAL

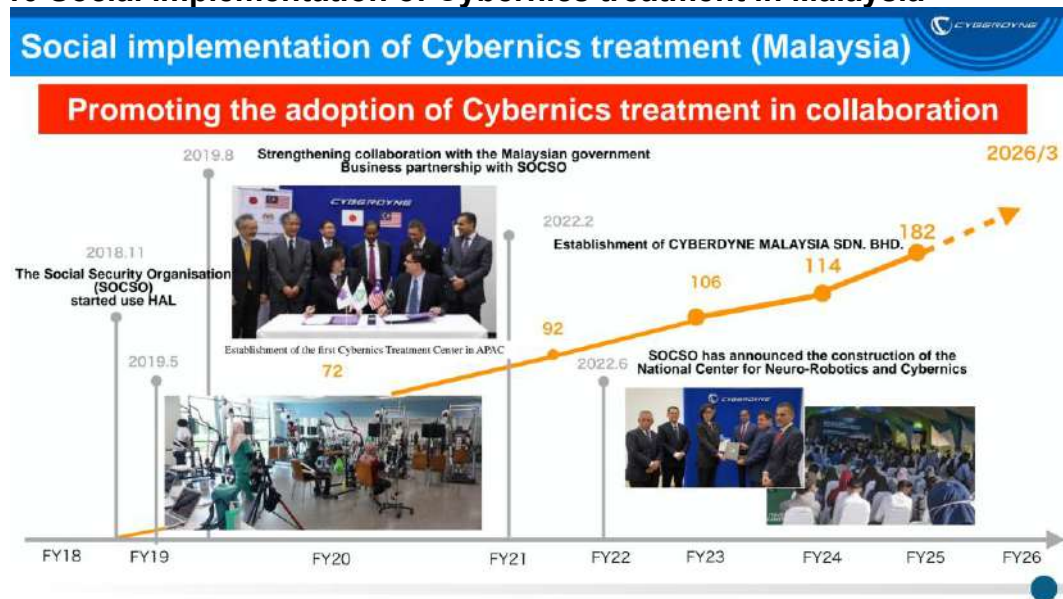


In Japan, HAL treatment for neuromuscular diseases is covered by public health insurance, and the device is also used by patients with spinal cord injury and stroke, among others, whose walking ability improves even after the device is removed. A recent systematic review of 27 clinical studies found that, of ten exoskeleton models studied, HAL was the only one to show improvements in both mobility and secondary outcomes such as continence, pain and QOL, suggesting that HAL treatment induces neuroplasticity and promotes cortical reorganization. CYBERDYNE devices have been supplied to over 400 hospitals and rehabilitation centers in Japan, and the ROBOCARE Center Group, of which Dr. Yasunaga is CEO, operates 19 HAL centers in Japan, focusing on the chronic stage of rehabilitation.

One of HAL's strengths is its immediate effect. In one case, a patient with incomplete spinal cord injury who had been unable to extend his fingers was able to do so voluntarily after just six minutes of HAL therapy, as the signals on the flexion side were drastically suppressed. Before HAL therapy, the brain is over-activated, but afterwards only the appropriate area is active. Dr. Yasunaga himself sustained an incomplete spinal cord injury in a traffic accident four years ago and has used the HAL system, so he can attest to its benefits from personal experience.

HAL is now available in over 24 countries and regions. In Malaysia, PERKESO (the Social Security Organisation, also known as SOCSO) has established HAL centers, and HAL therapy is covered by PERKESO insurance (Figure 10). The new PERKESO rehabilitation centre in Ipoh uses some 65 HAL units, and in September Japan's Minister of Health, Labour and Welfare visited the centre and tried out the lumbar type for himself. Simple exercises using the lumbar type, such as sit-to-stand training from a seated position, can drastically improve walking, and are highly economical.

Fig. 10 Social implementation of Cybernics treatment in Malaysia



CYBERDYNE's new challenge is to extend HAL beyond patients to prevention. Many people with chronic diseases hesitate to exercise because it is too demanding, produces no immediate results, or causes pain and anxiety. The real challenge is therefore not the quality of exercise, but adherence. HAL exercise places less burden on the user, and its effects are felt immediately. In a study of frail older adults, ten short sessions of HAL lumbar-type exercise improved 10m walking speed by 36% and the Locomo 5 score by 93% compared with a control group. HAL also builds confidence to exercise, with the greatest gains in self-efficacy seen among people with no prior intention to exercise. In Dr. Yasunaga's own study of frail older adults, four sessions of just ten minutes each over one month improved Timed Up and Go (TUG) performance by 21.8%, with the improvement sustained after one month because participants had developed an exercise habit. Muscle mass also increased by 3.6% and basal metabolic rate by 3.4%.

The underlying concept is that a short HAL session provides a success experience, which raises self-efficacy and activates the brain's reward system, ultimately leading to a lasting exercise habit (Figure 11). The Thai government has begun funding a randomized controlled trial of the lumbar-type HAL from this month, and in Japan, group exercise programs for older people using HAL have started at the local government level.

Fig. 11 How short-term results create long-term exercise habits



HAL is now also being tested with cancer patients. In an initial trial in the palliative care ward of Aomori Jikeikai Hospital, all five patients showed an immediate improvement in sit-to-stand performance after 20 minutes of HAL therapy, and further research is to be conducted by Professor Matsushashi's group at Gifu University. In this way, HAL transforms exercise from "effort" into "experience." Dr. Yasunaga concluded on a light-hearted note, saying that he had just started HAL exercise himself and expected to be considerably slimmer in two months' time, before giving a demonstration of the HAL device.

6. Panel Discussion I: From Well-being to Belonging Protecting Function, Work and Social Connection

Panelists:

Nobuhisa Matsushashi
Yoshihiro Yasunaga
Kosuke Matsui
Julie Gralow
Ahmad Syarif Ramlan

Gifu University
CYBERDYNE Inc.
Yakult European R&D Center B.V.
American Society of Clinical Oncology (ASCO)
PERKESO, Malaysia

Moderator:

Tony Hill
Asia Cancer Forum

Tony Hill: We are delighted to welcome back Professor Matsushashi, Dr. Yasunaga and Mr. Matsui, and also to welcome Dr. Julie Gralow, Executive Vice President and Chief Medical Officer of the American Society of Clinical Oncology (ASCO), and Dr. Ahmad Syarif Ramlan of PERKESO, who has kindly come from Kuala Lumpur to join us. As we have not yet heard from Dr. Gralow or Dr. Syarif, can I start by asking you both to share your impressions of today's presentations so far?

Julie Gralow: By way of background, I have been Chief Medical Officer at ASCO for five years, but before that I spent 30 years as a breast medical oncologist and professor of global health at the University of Washington in Seattle. Early in my career,

when my patients finished their surgery, chemotherapy and radiation, they would say to me, "You're not going to see me again for three or six months, and I still have all this recovery ahead of me. I need help." So very early on, my patients were asking for help in the recovery period: how to get on with their lives, how to make changes so they would be healthier and the cancer wouldn't come back, and how to go back to work and raise their children.

I learned early on the importance of physical activity for both physical and emotional health. We have heard today about the physical side, the strength and muscle mass, and so on, but we haven't yet talked much about the emotional side. Study after study has shown that physical activity during and after chemotherapy can help with depression, anxiety, insomnia and menopausal symptoms. I put a lot of women through early menopause with the chemotherapy I gave.

In 1995, a group came together to take part in a short sprint triathlon. It was funded by a company that makes exercise clothing, which wanted to support a breast cancer team because their spokesperson's mother had died of breast cancer. They provided a couple of months of training and free registration, and asked me to volunteer some of my patients. You could do any part of the triathlon, or do it as a team. One of my patients pushed her wheelchair around the walking section. At the end, the patients said, "We have enjoyed these two months. We have bonded, we have supported each other, we have talked about things like how to manage a prosthesis while exercising. We can't just let this end here."

So we continued it. I knew nothing about starting a nonprofit, but with some help we founded Team Survivor Northwest, Seattle being in the northwest of the United States. We asked the patients what they wanted. They wanted ongoing training, not just one event a year. They recognized that not everyone would want to do a triathlon, so we added yoga, biking and hiking in the beautiful mountains around Seattle. And they wanted it opened up to all women affected by cancer, not just breast cancer. We are still going strong, and last year we celebrated our 30th anniversary. These days I am the team physician, so I tell everyone I need to stay at the back to help the last person, but really it's because I'm not as fast as I used to be.

All of this has convinced me of the importance of healthy lifestyles, of which nutrition is certainly a part, in getting the best outcomes for our patients, emotionally and physically, along with the support that patients provide each other. And it was fun. One of the most important things I learned came the day before that first triathlon, at a special lunch for the breast cancer patients and survivors who were taking part. A news crew asked the patients why they were doing it, and most of them said, "Because Dr. Gralow thought I could." That is a very important message for all of us: our patients listen to us. A prescription for exercise is something we should all be giving our patients.

Then they asked me why I was doing it, and I had no intention of doing the triathlon. But the patient sitting next to me, who was bald and, as I knew from having just checked her blood counts, very anemic, and who had been an athlete before her chemotherapy, looked at me and said, "Why aren't you doing it with us tomorrow?" I said, "You're right," went out and bought swim goggles, and did it with them the next day. Over the years, some of my bosses said I was getting too close to my patients: "What are you doing hiking mountains with your patients?" But I told them it was the most rewarding thing I was doing in my life. Being out there shows that I am not just talking the talk, but walking the walk with them.

Most of you will, in some way, shape or form, have that kind of influence on patients. I still climb mountains with my patients. Our group has bonded with a group in Kenya that we helped to start, and we plan to climb Mount Kenya next year, when the UICC

World Cancer Congress will be held in Kenya. So go out, have fun, and encourage healthy lifestyles. It really makes a difference.

Tony Hill: We heard in both presentations that PERKESO is collaborating with Yakult to support cancer survivors to become Yakult Ladies through its self-employment social security scheme, and that it is also collaborating with CYBERDYNE on HAL rehabilitation. Could you tell us more about PERKESO's involvement?

Ahmad Syarif Ramlan: I am a medical doctor by training, qualified in occupational medicine, and I am very passionate about occupational health. PERKESO, the Social Security Organisation of Malaysia, plays a significant role in empowering our human resources, specifically the workers of our country. Many Malaysians see PERKESO purely as a compensation body. However, under our parent act, our role is not limited to compensation. Compensation is a worker's right, but our other two pillars are prevention and rehabilitation. PERKESO has invested a great deal in rehabilitation because, as Dr. Gralow mentioned, the question is quality of life. Money will run out. So how do we help people to have a better quality of life, and how do we empower them to continue earning their living, not just psychosocially but financially, so that they can continue to contribute to their families as well as to themselves?

Yakult empowers women through its Yakult Lady program, and we are looking at how to expand that role for affected workers who have lost their jobs, so that they can move into self-employment. PERKESO has expanded social security coverage to the self-employed through *Lindung Kendiri*, the Self-Employment Social Security Scheme, and under this scheme we also help people get back to work. If they are unable to gain conventional employment with an employer, they may be interested in self-employment, and becoming a Yakult Lady is one example.

As for HAL, I would like to reiterate that the device you saw demonstrated is not a typical exercise machine. After an injury, a physiotherapist will move your limbs manually to improve the range of motion, and after operations such as a total knee replacement, devices are used that passively move the limb to prevent contractures. HAL is different. Sensors are applied, and the device moves only when the patient thinks of moving. If you do not think about moving, the device will not move. It closes the loop from cognition to peripheral stimulation, and that is what makes the technology so significant. PERKESO, through our subsidiary company, has acquired this technology because we want to support workers affected by injury or disability and shorten their period of disability. We believe in early intervention and early rehabilitation, so that workers are not lost from employment. The hierarchy of return to work begins with the same job with the same employer; then a similar job with the same employer; then a different job with the same employer. If that is not possible, we look at other options, and that is why we are looking to collaborate with Yakult for people who have suffered from cancer. Dr. Yasunaga and CYBERDYNE have been significant partners for PERKESO in our rehabilitation centres in both Melaka and Ipoh.

Tony Hill: Dr. Gralow spoke about the tremendous positive effects of exercising together on mental health and well-being. Dr. Yasunaga, do people undergo HAL rehabilitation alone, or in groups? This could be a transformative experience not only for people recovering from strokes, but also for post-operative cancer patients, and doing it as a group might double the effect.

Yoshihiro Yasunaga: In the medical setting in Japan, rehabilitation is normally conducted one-to-one, with one therapist for each patient. In Malaysia, one therapist coordinates many patients simultaneously. In Japan too, outside the medical setting, in the case of exercise for frail older people, one trainer coordinates many people at the same time, and people enjoy the group sessions much more.

Tony Hill: Mr. Matsui, Yakult's work is very much about prevention, from data collection in schools, where students photograph their food and think about what they are putting on their plates, to the home visits. There are many online surveys these days, but going into people's homes is quite different. Are people open to that, and how have they reacted to the home visits?

Kosuke Matsui: From my experience in Japan, people are not always so open to home visits, especially in urban areas like Tokyo, where people are more individualistic. However, that points to what may become a big issue in the future: loneliness. More people are living in cities and are separated from society, and, as Dr. Gralow noted, once people are separated from society, they do not enjoy their lives. In my experience with the Yakult Ladies, when we first knock on the door to promote Yakult, the reaction is often, "No, I don't need Yakult." But once a relationship has been established, it can last for a very long time. We visit every week at the same time, and we chat together. Chatting is important, so we train Yakult Ladies in how to make conversations enjoyable for customers. Once customers are accustomed to the weekly visits, they really appreciate them, and we receive many thank-you letters, especially from retired customers in their seventies and eighties. Some local municipalities even ask us to visit older people in their homes, with the municipality covering the cost of the Yakult so that we can visit on a monthly basis. Such human networks will become more and more important in the future, both for prevention and for improving QOL.

Tony Hill: Loneliness is an issue, particularly in Japan as society ages, and aging is coming to many Asian countries, if it has not already. Perhaps Yakult Lady visits could be coupled with exercise, or cancer survivors could be brought together in group exercise, as in the example of Team Survivor Northwest that Dr. Gralow described so vividly. Professor Matsuhashi, HAL has started to be used with cancer patients, for example at Aomori Jikeikai Hospital. Are patients reluctant at first, or are they willing to try it?

Nobuhisa Matsuhashi: Next month we will begin a trial at Gifu University and nearby hospitals, enrolling 150 patients, in which HAL will be used for prehabilitation and rehabilitation in connection with chemotherapy, surgery and radiotherapy.

Tony Hill: How long will the therapy last in such cases?

Nobuhisa Matsuhashi: The study will run for three years.

Tony Hill: Dr. Syarif, is PERKESO conducting rehabilitation initiatives with cancer patients, or is it mainly working with other types of patients at present?

Ahmad Syarif Ramlan: PERKESO's coverage is governed by our parent act, the Employees' Social Security Act 1969, which has been in place for more than 50 years

and provides for contributions from employers and employees. Under this act there are two schemes: the Employment Injury Scheme and the Invalidity Scheme. The Employment Injury Scheme covers injuries related to employment, such as accidents in the course of work, and rehabilitation is provided as part of the benefits. The Invalidity Scheme provides 24-hour coverage for invalidity arising from any cause, and rehabilitation services, including HAL rehabilitation, are also part of its rehabilitation benefits. So cancer is included, subject to terms and conditions, in particular whether the person will benefit from the device and technology, especially in getting back to work.

There is also an age factor. The Invalidity Scheme is capped at the age of 60, as the Act focuses on the workforce, and after 60, old-age benefits come under the Employees Provident Fund (EPF). So as long as the need arises before the age of 60, whether for post-operative or cancer rehabilitation, insured persons are entitled. As a statutory body, PERKESO must serve the insured persons who contribute to the fund, so the service is also provided through our subsidiary companies, where it can be paid for privately. That is how we are remodeling the financing of this kind of service.

Tony Hill: Dr. Gralow, we will shortly be hearing about the BEAUTY program, which has been implemented in Malaysia for almost five years by NCSM and ACF with the support of Astellas Pharma. It started out as an initiative in barbershops and beauty salons to raise awareness about the importance of screening. Dr. Kawahara's earlier research in Harbin, China, also showed the transformative power of beauty in restoring the confidence of people affected by cancer and their faith in life. I believe you have had a similar experience in the US?

Julie Gralow: Yes, this is the perfect segue. In the mid-1990s, one of my patients, a beautiful young single mother with breast cancer whose husband had left her, came up with the idea of a program we called Beauty and Cancer. She was talking to her hairdresser while having wigs made in anticipation of losing her hair, and the hairdresser became interested in setting up a program. Ultimately, women donated their wigs when their hair grew back, and a group of hairdressers would clean and style them for the next patient. She also noticed that some of the skin creams she was using were causing irritation during chemotherapy, so she got cosmetologists involved in finding non-allergenic products. She started a whole Beauty and Cancer program in the Seattle area, components of which, such as the wig closet, are still running today.

Education was also a part of it. She said we needed to educate other women, and she started a program at our hospital teaching patients about cancer and recovery, which was also very successful. And she always wore lipstick to every appointment. That beauty was part of her makeup. She needed something bright to show that she was going to survive, and that she was still beautiful, inside and out.

7. BEAUTY WALK – A Moment to Move Together ***An Audience Movement that Makes Prevention a Lived Experience***

Yoshie Tanaka
Asia Cancer Forum

In lieu of a coffee break, Yoshie Tanaka (ACF) led participants in a short audience participation session. She first introduced a shoulder stretch, which can be performed

standing or seated, to improve shoulder joint flexibility and relieve stiffness around the shoulders and shoulder blades, a common cause of neck and back pain. She then introduced the four key points of the “Beauty Walk,” beginning with good posture, standing as if against a wall with the spine aligned.

8. Part III: Making Prevention Visible

BEAUTY: From the Prevention Pathway to Shared Social Value



Murallitharan Munisamy

Managing Director, National Cancer Society Malaysia

Profile

MURALLITHARAN Munisamy is a Public Health Physician from Malaysia. He trained as a Medical Officer in the Russian Federation under a Malaysian government scholarship and completed a Master's in Community Health Sciences at the National University of Malaysia. He earned a PhD in Public Health from Chulalongkorn University, Thailand, under the ASEAN Economic Community program. In 2015, he received the Chevening Scholarship from the UK Foreign and Commonwealth Office, completing a term as a Fellow in Health Policy, Planning, and Financing at the London School of Hygiene and Tropical Medicine and the London School of Economics and Political Science.

Before his medical career, Dr Murallitharan was an award-winning journalist for the New Straits Times, a leading English newspaper in Malaysia. In medicine, he has served in various roles, including medical officer and clinician at Hospital Kuala Lumpur and the National Blood Bank, clinical epidemiologist for the Clinical Research Centre, Ministry of Health, Malaysia, and Medical Director of MMPKV Healthcare Sdn Bhd. He is deeply involved with healthcare services for marginalized and underprivileged groups.

Dr Murallitharan's interests lie in public health, health systems, and health economics. He collaborates with Chulalongkorn University, the University of Tokyo, the London School of Hygiene and Tropical Medicine, and the London School of Economics. He is currently the Medical Director of the National Cancer Society of Malaysia.

Dr. Murallitharan Munisamy began by providing some context on how the Bringing Education and Understanding To You (BEAUTY) and Health Program has progressed. In its first few years, BEAUTY was run within the community, using a focal point for the community as a driver for persistent health prevention and health promotion, an approach that still works today. Beauty salons and barbershops were chosen because, as Dr. Muralli joked, a man has a knife at his throat for some 40 minutes while his hair is cut and he is shaved, making it the best point at which to provide a “pointed” intervention to get him to rethink health promotion messaging.

In beauty salons, it was realized that the beautician is someone not terribly visible, but highly trusted in a person's journey through life. BEAUTY combined multiple interventions: a library of low-literacy videos and booklets displayed on screens in salons and barbershops; education and training for barbers and beauticians; screening provided for the targeted communities; and subsequent enrollment in online communities, through which participants receive reminders and health messaging.

One of the lessons learned, however, was that the approach does not work well in very urban settings, where people are not geographically connected. People in urban settings are, however, highly connected through their workplaces, which led to the development of “BEAUTY at Work.” The traditional public health model of going into villages where everyone gathers at dusk to receive interventions does not work in cities. The workplace community, by contrast, keeps people physically together for

eight or nine hours a day in Asia, notwithstanding the rise of working from home in recent years, and provides an administrative structure through which interventions can be nudged. There is also increasing evidence from occupational health and occupational medicine, including in the field of cancer, that the workplace itself can be a trigger for NCDs and cancer, which makes the case for intervening directly in the workplace.

Dr. Muralli observed wryly that Malaysians are “good” at whatever they decide to do, including eating well and being hypertensive, and figures for noncommunicable diseases (NCD) across the country are high. In the workplace, there is a big disconnect between employers and the health of their employees. In Southeast Asia in particular, the employer’s approach to occupational health tends to be defensive, essentially “Don’t cost me money,” and if an employee is likely to become an additional cost, the inclination is to remove them from operational expenditure. Within this transactional relationship, employers are not invested in their workers’ long-term health, and people move from one employer-driven insurance plan to another, with no continuity. Dr. Muralli also noted with regret that PERKESO had rolled out an excellent expanded coverage plan that could have been the first stepping stone to proper social health insurance in Malaysia, but that, in the absence of sufficient political will, it was pulled back after about a week and made voluntary.

A central premise of BEAUTY at Work is to move prevention away from where it is conventionally located. Most healthcare professionals look at prevention within healthcare settings, but the moment we depend on people coming actively into the healthcare setting that implies implicitly that we have failed at prevention. People do not generally seek screening unless they are symptomatic. The value proposition of prevention is also weak: telling a stressed smoker that not smoking today will prevent lung cancer 18 years from now is not persuasive. While navigation within the care journey is increasingly well understood, the navigation of well people is not, because they do not enter any formal ecosystem. The approach must therefore be to intervene within people’s existing journeys, namely their workplace ecosystem, integrating prevention into workplace schedules day by day, week by week and month by month, working closely with human resources departments and senior management, and doing so at minimal or no cost to the employer to secure their buy-in.

Knowing that one has a health issue is very different from acting on it. The challenge is compounded by symptoms that are non-specific in the early stages, biochemical changes that barely register, and reverse messaging on social media. Moving people to act therefore requires not only consistent information, but also meaningful, seamless opportunities to act; almost, as he put it, bringing the food right up to their mouths and chewing it for them.

Organizations themselves can be unhealthy, from poor workplace food choices to poor indoor air quality and secondhand exposure to vaping. It is therefore necessary to transform the physical workspace, organizational discipline and organizational culture in order to inculcate preventive practices. Just as people like to be praised and rewarded, so do organizations.

Drawing on the Health and Productivity Management program led by Japan’s Ministry of Economy, Trade and Industry (METI), BEAUTY at Work “gamifies” workplace health through league tables, points and awards. The program has now been adopted by the Ministry of Health under the brand “Healthy Community at Work,” and efforts are underway to bring in the Department of Occupational Safety and Health (DOSH) to add an element of regulation, providing both carrot and stick. The program also addresses psychosocial risks and mental health at work. Since COVID-19,

awareness of mental health in the workplace has increased greatly, but while many surveys are being conducted, few interventions are following. NCSM's interest in mental health reflects the fact that 67% of cancer patients experience serious mental health issues during their cancer journey.

PERKESO's Health Screening Programme (HSP) offers free screening to every eligible employee, at no cost to employee or employer, yet uptake reaches only 20% at most. Employers have cited the disruption to shift timings when staff leave work for screening, so BEAUTY at Work brings screening into the workplace. The largest exercise so far screened some 8,000 people over about 30 days at a large manufacturing complex, working with human resources so that screening took place as workers came off shift, including in the evenings and at night, the kind of flexible work that civil society is well suited to.

In addition, interactive self-help cancer prevention webinars currently reach about 30,000 people every month, with companies' attendance recorded on a leaderboard that leads to awards at the end of the year. Interactive videos are available in four languages, and a newsletter provides multidimensional content focusing on self-care rather than fear. Employees are also enrolled in a community channel on WhatsApp, which has a penetration rate of around 97% in Malaysia, through which they receive messages every one or two days, with a monthly lottery to sustain participation. The aim is to compete with the pseudoscience and fake news that reach people constantly through social media.

Employers are motivated because the program runs at no cost to them and, by replacing medical checkups that cost upwards of US\$100 per employee per year, can save significant sums across 8,000 to 10,000 employees. The program maps the health belief model, identifies gaps, and creates mini-interventions to fill each of them, as no single solution will work; seven or eight solutions are needed to change organizational culture and individual behavior systematically. Tracking shows that messages are shared far beyond the workplace community, so that the program acts as an engine of health promotion. While productivity, or reduced loss of productivity, is the simplest dimension to measure, other behaviors need to be costed better. For example, how much does an annual iFOBT colorectal cancer screening save a company? Unfortunately, Dr. Muralli noted, employers are often not interested in abstract savings, however robust the modeling; what matters to them is whether cash is actually being disbursed.

Within the program, employees receive webinars, newsletters, assessments and referrals, with prompts based on symptom recognition and a wellness navigation pathway leading to screening and further diagnostic tests where needed. Employers are offered new employee engagement opportunities in place of the traditional bowling tournaments, pickleball and hotel buffet dinners. For example, a recent event for about 400 people combined a pickleball tournament with a mindfulness workshop. Workplace assessments, such as of indoor air quality, which would normally require expensive consultants, can now draw on experts from the Ministry of Environment and the Ministry of Health. Meaningful outputs are recognized through awards, in place of the many purchased corporate awards common in Malaysia. All of this is monitored through an interactive customer relationship management (CRM) database at both organizational and individual levels, and monthly Zoom meetings in which organizations compare their rankings tap into competitive instincts to good effect.

BEAUTY at Work was formally launched on April 30 this year as part of the Ministry of Health's occupational health drive, with the first year focusing on "Healthy Lungs, Healthy Worker" under the National Lung Health Initiative. Screening now covers

NCDs, cancer and mental health. In total, some 90,000 workers have been screened in occupational settings, with and without PERKESO, and another 100,000 people in communities. Collaboration with Japanese colleagues is also important, as METI's framework begins to extend to Japanese employers outside Japan, and NCSM is working to adapt it to the Malaysian setting. Now in its second year, BEAUTY at Work aims to reach at least 30% of all employers in Malaysia by 2027–2028, driving sustained behavioral change for better cancer and NCD outcomes.



Shingo Iino

Vice President and Head of Sustainability
Astellas Pharma Inc.

Profile

Dr Shingo Iino (Ph.D.) is Vice President of Sustainability at Astellas Pharma, where he leads the company's global sustainability agenda through comprehensive environment, social, and governance (ESG) strategies. With over six years at Astellas, he has held senior roles spanning corporate sustainability, social responsibility, and development project management. Since 2023, he has also served as Board Chair of the Astellas Global Health Foundation, guiding efforts to improve health access in underserved communities, strengthen resilience, and provide disaster support worldwide. Dr Iino played a central role in embedding sustainability into Astellas' Corporate Strategic Plan 2021, including the development of a new materiality matrix that prioritizes key social issues and drives long-term value for society and the organization. With a strong commitment to advancing sustainable healthcare, Dr Iino continues to champion innovative, impact-driven initiatives that align business growth with societal well-being.

Dr. Iino set out to answer one question: What does prevention protect, and can it be measured? If prevention cannot be measured, he noted, it will always lose out to the things that can be measured. He went on to present how Astellas is trying to make its social value visible.

Astellas is a global life sciences company, turning science into value for patients and working across multiple therapeutic areas, including oncology, ophthalmology, urology, neurology and women's health. Headquartered in Tokyo, it operates in approximately 70 countries and regions, with 18 R&D sites and more than ten manufacturing sites. Its approach to sustainability is to contribute to society through its core business, creating a positive cycle that strengthens the sustainability of both society and Astellas. Astellas' materiality is organized under three pillars, namely trust, innovation and people, and Access to Health is one of its nine material topics.

Astellas' Access to Health work spans three layers: its core business; expanding the availability of its medicines; and supporting third-party initiatives in awareness, education, diagnosis and linkage to quality care. Disease prevention programs fall within the third layer, delivered with partners in the countries where Astellas operates, such as ACF and NCSM. Astellas supports health system strengthening in several countries, including Malaysia, Mexico, Peru and the Dominican Republic, all built on the same logic: better literacy, earlier detection, and stronger linkage to care. However, activity numbers alone, such as the numbers of patients and countries reached, do not explain social value, and this is the gap that the project aims to close.

Earlier cancer detection creates value for patients, families and the health system, with evidence linking earlier diagnosis and treatment to longer survival, better QOL and a lower healthcare burden. The key is not simply to screen more, but to connect awareness, detection and timely treatment through evidence-based pathways. In

Malaysia, roughly three out of four colorectal cancer patients are diagnosed at a late stage (Stage III or IV), which is not primarily a treatment problem, but a detection and literacy problem. The greatest feature of the BEAUTY and Health Program is that it raises cancer literacy along the pathway of people's everyday lives, without requiring them to visit a medical institution. Astellas has contributed ¥150 million (approximately US\$1 million) to the program's operating bodies, with a target of benefiting more than one million Malaysian residents.

To move from activity to measurable value, a logic model was built, covering inputs, activities, outputs, outcomes and, finally, social impact in monetary terms. For a conservative estimate, only colorectal cancer was valued, as reliable Malaysian public data exist for it, although the program covers various disease areas. Social impact was broken down into five value areas and four beneficiary groups, yielding ten impact items, including access to optimal treatment, hope for healing, work productivity, reduced medical burden and local economic contribution. Only those items for which the evidence is sufficiently strong were monetized, to avoid false precision.

For example, the value of increased access to optimal treatment is calculated by multiplying three factors: the value of one life year, using the US\$50,000 willingness-to-pay threshold referenced by the Ministry of Health Malaysia; survival time at each cancer stage, based on data from the National Cancer Institute (Institut Kanser Negara); and the change in the number of patients at each stage, based on the national registry distribution. The key point is that early detection does not create value by itself, but by moving patients from later to earlier stages. For work productivity, three distinct effects were carefully separated to avoid double counting: avoided income loss from unemployment; avoided productivity loss while still working, such as fewer missed days and better concentration; and avoided loss of income from premature death, using years lost before Malaysia's retirement age of 60.

The results showed that, with one million residents reached, 150 colorectal cancer patients would be treated earlier, and the proportion of late-stage diagnoses would fall from 75% to 55%. The estimated social impact is approximately US\$4.56 million, or about US\$29,500 per patient, with most of the value accruing to patients, mainly through life years gained and the value of hope. Expressed as a social return on investment (SROI), every dollar invested in awareness and literacy returns an estimated US\$4.6 in social value.

Dr. Iino acknowledged that this is a model, not an audit, but that an explicit, contestable estimate is far more useful than silence, and that it can be improved as Malaysian data improve. Quantifying social value is important not only to demonstrate the significance of the initiative for Malaysian society, but also because, as a private company, Astellas must be accountable to its internal and external stakeholders for its investment in donations to partners.

9. Panel Discussion II: From Evidence to Community Action

Panelists:

Murallitharan Munisamy

Angelique Lewis

Takuma Wada

Ahmad Syarif Ramlan

National Cancer Society Malaysia (NCSM)

Astellas Pharma Inc.

PMCare Sdn Bhd

PERKESO, Malaysia

Moderator:

Tony Hill

Asia Cancer Forum

Tony Hill: Angelique, you have been involved with BEAUTY for almost five years. It started in beauty salons and barbershops, with the first two years very much focused on bringing education and understanding to people through the beauty aspect, and as Dr. Muralli explained, it has now moved into the workplace. Could you share your impressions?

Angelique Lewis: I am Head of Access to Health, Sustainability at Astellas, and I work for Dr. Iino. My team is responsible for our philanthropic work across our portfolio in the countries where we operate. I have had the distinct pleasure of working with Dr. Muralli, Dr. Kawahara and others, and of visiting Malaysia to see the work in action. When it first started, the program was more about awareness, ensuring that people knew what could possibly be happening and how to overcome it. It was a very novel concept to us; we had not seen anything like it before. What it has turned into is not only awareness and education, but also breaking down stigma, so that people understand that they do not have to be afraid of a cancer diagnosis, and that if it is found sooner, they are likely to be much better off. The way we have seen the program change over the five years is incredible. I often argue with Dr. Iino that the impact we are calculating is so small compared with the huge impact that Dr. Muralli and his team are having on the ground. If you have not yet had a chance to see the team's work in person, I invite you to visit Dr. Muralli's world.

Tony Hill: Mr. Wada, could you explain a little about your work in Malaysia and your involvement with NCSM and other initiatives?

Takuma Wada: I am very honored to be on the panel today, and I thank Dr. Kawahara for the opportunity. I originally come from Sumitomo Corporation, and PMCare is one of its subsidiaries. Sumitomo Corporation has healthcare subsidiaries in Malaysia, Vietnam, Singapore and, more recently, the US. In Malaysia, we have managed care organizations, including PMCare, where I work, and MediExpress, which together hold almost 40% of the managed care market, as well as one of the largest primary care clinic chains in the country, with 210 outlets. So we are focusing on the primary care space.

As a managed care organization, we act as a middleman between payers, such as insurers and corporate clients, and providers, such as hospitals, clinics and specialists. In the BEAUTY Program, that connecting position enables us to approach the payer side to raise awareness, including among employees. Through our daily claims administration operations, we also hold a vast amount of data, providing a holistic view of patient journeys over more than three years for specific companies and their employees, which enables us to trace improvements after interventions.

Tony Hill: How are those improvements measured?

Takuma Wada: For example, for a holding company with ten subsidiaries, we contact the HR department of each company and provide a six-month wellness program, inviting 100 employees from each company, for a total of 1,000 participants. We conduct health screening at the outset, and then provide wellness services physically in their offices, bringing in doctors, dieticians and nutritionists to share knowledge, and matching participants with consultations or physical activities. After three or six months, we conduct health screening again and compare vital data, such as HbA1c and blood pressure, with the previous results, and if there is improvement, we show this to HR. We also continue to track medical costs, and if we can contain those costs relative to the macro-level medical inflation rate, that demonstrates the value of the program to the client.

Tony Hill: Dr. Syarif, Dr. Muralli mentioned an expansion of social security coverage that was rolled out and then made voluntary shortly afterwards. Could you tell us a little more about that?

Ahmad Syarif Ramlan: This is Lindung 24/7, which provides social security protection for accidents that happen outside working hours. Coverage under the 1969 Act has been limited to employment injury, but accidents can also happen after work, when people go home, pick up their children or attend to other commitments. Following a parliamentary amendment, 24-hour protection became mandatory from June 1 for all eligible workers with employers, funded by contributions from both employers and employees. Workers were able to opt out until August 31, after which opting out is no longer possible, although those who opted out can still opt back in. As of August 31, about 85% of the workforce remained covered, which is good news. Malaysia does not yet have universal social protection, which means not only the low-cost medical treatment provided by the Ministry of Health, but also rehabilitation and return-to-work support, and Lindung 24/7 is one of the steps PERKESO is taking to close the gaps.

Tony Hill: Dr. Muralli, you mentioned that NCSM screened 8,000 people in 30 days. That is an incredible number. Was that done using mobile units?

Murallitharan Munisamy: In BEAUTY at Work, a key principle is to provide screening without any friction. People do not come for screening because they cannot get time off, as many work six days a week, and screening services are often available only during office hours. Employers, for their part, say they cannot give time off; it is bad enough that employees take time off when they are sick, let alone when they are healthy. So we remove the friction, firstly by offering screening on site, so that employees do not need to take time off work, and secondly by offering it at odd hours, between shifts. At some manufacturing centers operating around the clock in three shifts, people coming off the morning shift at around 2 p.m. can be screened right there, and those on the next shift can come in a little earlier. Employers can help sweeten it by providing a meal, because ultimately the savings are theirs. This is how we are changing the mindset around screening.

Tony Hill: What percentage of the eligible workforce did those 8,000 people represent?

Murallitharan Munisamy: We reached close to 80% of that working population within that time.

Tony Hill: You also touched on worker uncertainty, fear of results and worry over costs. Do social media and fake news affect people's willingness to be screened?

Murallitharan Munisamy: For sure, very much so. As a practicing physician, I still detect late-stage breast cancer in very highly educated women. When I ask why they have not had a mammogram, which they can get free through workplace initiatives, they say they have been told that the radiation from a mammogram will give them cancer. And here is a sad statistic: at a recent breast cancer guidelines meeting of about 40 people, 30 of whom were women, and all of whom were consultants or university professors, only 12 had actually gone for mammography screening. Here we were writing guidelines for breast cancer screening, and the people in the room were not going for screening themselves. That is the take-home message.

Tony Hill: Are there any questions or comments from the floor? Dr. Gralow?

Julie Gralow: On that last topic, misinformation, mistrust and fake news are a huge problem that we are dealing with too, and we are trying to come up with a campaign. We also have many unproven therapies being touted as cures. ASCO has a physician-patient communication guideline that says, essentially, try to understand where patients are coming from. They have cancer, they are scared to death, and they have family members telling them to take this or that supplement. Keep the communication open, and do not just dismiss them and tell them they are wrong. We actually have to teach our members how to handle this, so that patients will tell them if they are taking these therapies. If you figure out how to deal with all this misinformation and mistrust, please let us know.

10. Closing Remarks

Dr. Kawahara thanked the speakers for sharing their splendid ideas and experience, and expressed her sincere gratitude for the time, wisdom and commitment shared during the session. The Asia Well-being Survey will continue, support for return to work has just begun, and the Yakult Lady return-to-work program has just started, and should be taken forward and shared around the world. BEAUTY has built a bridge between Japan and Malaysia, and its next stage, "BEAUTY Plus," will bring together more companies, hospitals, universities and communities. Together, it will be possible to connect wellness, screening, care and return to work, enabling people to receive care without fear, continue working and support their families.

Dr. Kawahara called on participants to make these values visible, to measure them, and to connect them to new partners and involvement. This autumn, classes at the University of Tokyo will begin in both Japanese and English, bringing the lessons of the session to students, and bringing their ideas back into practice. Sustainability is more than GDP: it means well-being in daily life, living safely, working with dignity and choosing our future.

Dr. Kawahara closed by urging all present to turn the day's meeting in Kuching into tomorrow's action, "Bringing Education And Understanding To You."