THE 11TH ANNUAL SYMPOSIUM ON GLOBAL CANCER RESEARCH (ASGCR)

MEETING SUMMARY REPORT

April 4–6, 2023
Virtual Meeting

NIH NATIONAL CANCER INSTITUTE

AACR American Association for Cancer Research

ASCO AMERICAN SOCIETY OF CLINICAL ONCOLOGY

ASPO American Society of Preventive Oncology

AFRICAN ORGANISATION FOR RESEARCH & TRAINING IN CANCER
AORTIC OAREC
ORGANISATION AFRICAINE POUR LA RECHERCHE ET L'ENSEIGNEMENT SUR LE CANCER

Consortium of Universities for Global Health

RINC - SLACOM
Building leadership in cancer control in Latin America

The 11th Annual Symposium on Global Cancer Research (ASGCR) meeting summary was developed by Synergy Enterprises, Inc., under contract #HHSN261201800036I, “Logistics, Data Analysis, and Technical Support IDIQ Contract,” awarded by the National Cancer Institute (NCI) Center for Global Health (CGH). Lori Whitten, Ph.D., served as the science writer; Jesse Goodman performed the copyedit; and Kali Brinkman designed the layout for the document, respectively.

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EXECUTIVE SUMMARY

The Annual Symposium on Global Cancer Research (ASGCR, or the Symposium) is the flagship meeting of the National Cancer Institute's (NCI) Center for Global Health (CGH). The Symposium convenes people who work in global oncology—researchers, clinicians, policymakers, program implementers, and advocates—to discuss trends in global cancer research and control and outline collaborative efforts to advance the field. ASGCR is held every year as a preconference satellite meeting of the Consortium of Universities for Global Health's (CUGH) annual conference. The Symposium's goal is to increase recognition of global oncology as an important focus area within international public health and convene professionals who are focused on reducing the burden of cancer worldwide. Since 2020, ASGCR has been convened virtually, and recordings from previous years are available (2022, 2021, and 2020).

The 2023 Symposium occurred on April 4–6, 2023, as a satellite meeting to the 14th Annual CUGH Global Health Conference, and was collaboratively developed by multiple international partners involved in cancer control globally together with NCI-CGH. Members of the ASGCR Scientific Steering Committee reviewed submissions for the Symposium's scientific session, identified scientific abstract reviewers, and considered nominations for the Rachel Pearline Award—which NCI presents annually to an outstanding professional who demonstrates excellence in global cancer research and practice in low- and middle-income countries (LMICs)—and determined the awardee.

The Symposium provided an opportunity for real-time dissemination of evidence on collaborative cancer research and control—with a focus on highlighting work happening in and led by LMICs. During ASGCR, participants discussed how to apply evidence in cancer control measures. NCI scientific staff members listened to the needs of the on-the-ground research community to help the Institute develop research programs and set priorities. To advance careers and mentorship, the Symposium highlighted the work of early-career investigators in LMICs, with the aim of offering opportunities for recognition and leadership development. Poster and breakout sessions provided opportunities for building professional networks that diversify the field of global oncology, including non-oncology global health experts. There were 658 unique participants representing 78 countries at the 2023 ASGCR.

The 2023 ASGCR theme was "Closing the Research-to-Implementation Gap." The Symposium's objectives were to: (1) provide a venue for the global oncology research community to exchange information and identify potential areas for collaboration; (2) develop strategic priorities for advancing the field of global oncology; (3) share initiatives that are reducing the burden of cancer in low-resource settings; and (4) create opportunities for researchers and program implementers from low-resource settings to present their work.

INTRODUCTION

The 2023 Annual Symposium on Global Cancer Research (ASGCR, or the Symposium) convened professionals working in global cancer research and control, and who are focused on reducing the burden of cancer worldwide. As the flagship meeting of the National Cancer Institute's (NCI) Center for Global Health (CGH), the Symposium aims to increase recognition of global oncology as an important focus area within international public health and is convened as a satellite meeting of the Annual Consortium of Universities for Global Health's (CUGH) conference. The 2023 Symposium was collaboratively developed by multiple international partners involved in cancer control globally together with NCI-CGH. The Symposium provided an opportunity for real-time dissemination of evidence on collaborative cancer research and control—particularly highlighting work happening in and led by low- and middle-income countries (LMICs) focused on "Closing the Research-to-Implementation Gap" (the theme of this year's ASGCR). Participants at the 2023 ASGCR represented 78 countries (Appendix A).

2023 ASGCR Program

For each day of the Symposium, simultaneous translation was available in English, French, and Spanish. Additionally, speaker bios, the full agenda, scientific posters, and information on the Pearline Award were available on the Symposium website. The links to view the full ASGCR recording for each day of the Symposium are available here: Day 1, Day 2, and Day 3.

Members of the ASGCR Scientific Steering Committee (see Appendix B) reviewed submissions for the Symposium's scientific session, for which an open call was conducted for the first time this year. They identified scientific abstract reviewers to evaluate submissions from the annual call for abstracts. The Steering Committee also reviewed nominations for the Rachel Pearline Award—which NCI presents annually to an outstanding professional who demonstrates excellence in global cancer research and practice in LMICs—and determined the awardee. As outlined in the agenda (see Appendix C), the 3-day program featured the following:

- Day 1: Early-Career Investigator Day focused on mentorship, with panel discussions for mentees and mentors. Breakout sessions involved facilitated discussions on (1) education and training models in global settings, (2) the role of mentors in establishing research careers, and (3) training for mentors and mentees.
- Day 2: The scientific session focused on translating advances in HIV care implementation science to cancer control in LMIC contexts. Peer reviewers (see Appendix D) evaluated and selected scientific abstracts for inclusion in the Interactive Poster Session (Appendix E),

which offered participants an opportunity to discuss these projects with researchers. The top-scoring scientific abstracts were presented in the oral abstract "Flash Talk" sessions. "Flash Talks" covered (1) prevention and early detection, diagnosis, and prognosis; and (2) treatment and cancer control, survivorship, and outcomes research.

- Day 3: The scientific session focused on how collective action on global cancer control might be taken, and included presentations on implementation projects from the Global Alliance for Chronic Diseases. The Interactive Poster Session continued, and the Symposium culminated in the Rachel Pearline Award presentation and keynote address.

The June issue of *AACR Cancer Epidemiology, Biomarkers & Prevention* will publish the 2023 ASGCR's accepted scientific abstracts together with a global oncology commentary.

Meeting Analytics

Participants: 658 (total unique participants over the 3 days); Speakers: 24; Panelists: 11; Facilitators: 9; Notetakers: 6

Institutions Represented: 28

Countries Represented among Speakers, Panelists, and Facilitators: 20

Countries Represented among Participants: 78

Professional Focus Areas of Participants (53 did not list an area):

- Advocacy (188)
- Clinical (258)
- Policy (195)
- Research (538)

Scientific Abstracts for Interactive Poster Session Analytics

Participants: 157 (April 5) and 96 (April 6)

Abstracts Submitted: 113

Abstracts Accepted: 99

Abstracts by Region of Research Site(s)

- East Asia and Pacific (14)
- Europe and Central Asia (4)
- Latin America and Caribbean (19)
- Middle East and North Africa (2)
- North America (13)
- South Asia (6)
- Sub-Saharan Africa (43)

Abstracts by Scientific Area of Focus

- Biology (5)
- Etiology (3)
- Prevention (12)
- Early detection, diagnosis, and prognosis (25)
- Treatment (13)
- Cancer control, survivorship, and outcomes research (41)

ASGCR Orientation:

Dr. Sudha Sivaram, Program Director, CGH, NCI, United States

Ms. Mishka Kohli Cira, Public Health Advisor, CGH, NCI, United States

Opening Remarks:

Day 1: **Dr. Douglas Lowy**, Principal Deputy Director, NCI, United States

Day 2: **Dr. Ophira Ginsburg**, Senior Advisor for Clinical Research, CGH, NCI, United States

Day 3: **Dr. Eduardo Cazap**, Founder and First President, Sociedad Latino Americana y del Caribe De Oncología Médica (SLACOM) and Co-chair, RINC-SLACOM, Argentina

Closing Remarks:

Day 1: **Ms. Isobel Bandurek**, Research Capacity Manager, Global Alliance for Chronic Diseases, United Kingdom

Day 2: **Dr. María Teresa Bourlon**, Assistant Professor, Hematology and Oncology Department, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico; Representative, Academic Global Oncology Task Force, American Society of Clinical Oncology, Mexico

Day 3: **Dr. Patti Gravitt**, Deputy Director, CGH, NCI, United States

Opening Remarks

Day 1: Dr. Lowy welcomed participants, adding that NCI seeks collaborations beyond U.S. borders and works with international partners to build on global cancer efforts. Cancer is a global public health priority, and NCI (as the largest funder of cancer research in the world) has incorporated related initiatives into its Cancer Moonshot℠. Training and mentoring—as well as advancing research in LMICs—are crucial to NCI's general mission. Capacity building in oncology, public health, and related fields in LMICs is essential, as these nations are projected to have large increases in cancer incidence and mortality. Therefore, training the next generation of researchers and leaders in cancer science in LMICs and elsewhere is an important focus for NCI. The Institute welcomes feedback from ASGCR participants, particularly on how NCI might help advance research on cancer in LMICs. Key areas include determining why cancer incidence and mortality are increasing in LMICs, as well as the best prevention, early diagnosis, and treatment interventions. Because of the urgent need to enhance the global oncology workforce, the 2023 Symposium's Early-Career Investigator Day (ECID) focused on the value of mentorship in cancer research.

Day 2: In her brief description of NCI's history, Dr. Ginsburg noted that the Institute has always had a global component. She highlighted its key leaders—NCI Director, Dr. Monica Bertagnolli, and the Director of CGH, Dr. Satish Gopal—and presented a high-level description of NCI's mission. As the leader of the U.S. cancer research enterprise (collectively known as the National Cancer Program), NCI manages a broad range of research, training, and information dissemination activities. The Institute's two broad roles are advancing cancer research and providing training and support for cancer researchers. Established in 2011, CGH aims to improve cancer control worldwide by focusing on those two broad roles in the international context and coordinating multinational research efforts for global benefit. As outlined by the CGH Strategic Plan, its four priority areas are training, research, dissemination, and partnerships. Training is crucial to building research environments that support the conduct of locally relevant cancer studies in LMICs. CGH supports this aim in several ways, such as coordinating ECID as part of ASGCR, and NCI's Global Training for

Research and Equity in Cancer program. CGH's research themes include accelerating global cancer implementation science—the focus of the 2023 ASGCR.

Day 3: Dr. Cazap provided definitions of important words used in the cancer control field. He emphasized that *research* goes beyond basic and clinical studies. Many regions of the world urgently need other types of research (e.g., epidemiology, health systems, and implementation). Implementation research, when combined with social science data on specific cultural and economic factors, is critical for applying the evidence base to a particular population. Although people often complain that resources are not available for cancer control, Dr. Cazap suggested that the situation is frequently an issue of resource diversion to other priorities and inefficiencies in health services. These are critical considerations for developing strategic, efficient, affordable national cancer control plans. *Implementation* of the many existing recommendations, guidelines, programs, and plans for cancer control is essential. These documents are often not acted upon at the country level, and implementation efforts can be hindered by changing governments and political priorities. People mention *global* cancer science, but currently, the research is not universal. Rather, studies are often developed in high-income countries and conducted in LMICs without consideration of the needs of local people. It would be better for LMICs to develop their own protocols with locally tailored research questions and designs. Similarly, *global cooperation* cannot only be high-income countries acting alone. Practical, feasible solutions require true cooperation. The field of cancer control and research must consider and discuss difficult topics, such as equity, economics, and migrants.

EARLY-CAREER INVESTIGATOR DAY (ECID): MENTORSHIP IN GLOBAL CANCER RESEARCH (DAY 1)

Opening Remarks:

Dr. Graciela Meza, Associate Professor, Dirección Regional de Salud de Loreto, Facultad de Medicina Humana, Universidad Nacional de Amazonía Peruana (UNAP), Peru

Dr. Amr Soliman, Professor, Department of Community Health and Medicine, City University of New York, United States

ECID 2023 focused on mentorship—a key experience that facilitates career advancement and success. Mentorship is defined as a process where a person (the mentor) provides guidance to another (the mentee) in achieving their education and career goals. Typically, a mentor is advanced in their career, occupying a position based on expertise and achievements. Mentors can also be peers who learn from each other and share lessons and resources for mutual benefit. Despite the value of mentorship in the conduct of research, few programs are available to support mentors, link mentees with mentors, and facilitate productive engagements between mentors and mentees. To facilitate discussion during ECID, Symposium organizers provided panelists with a set of questions in advance. A summary of their answers is presented in this section.

Dr. Meza emphasized that mentors should go beyond teaching subject matter and facilitating a mentee's research project. Mentors support the attainment of mentees' professional and academic goals more quickly and confidently. In her view, mentorship occurs naturally and need not be imposed. Mentorship is potentially a lifelong experience that adapts to the context of the mentee's career stage. The many roles of mentors include identifying specific talents and potential; guiding and promoting mentees; identifying professional networks, opportunities, and resources; and providing mid- and long-term follow-up to check on the mentee's development. In addition to technical and scientific expertise, good mentors have clear values and are empathetic. They are good listeners who learn a mentee's needs and commitments. Good mentors also organize their time well and continue to collaborate with mentees, with the aim of developing local research capacity.

Speaking from Dr. Meza's experience in Peru, the shortage of mentors is due to a lack of familiarity with and discussion of the concept. Rather than the development of research interests and skills, mentoring is perceived as academic tutoring. In Peru, mentoring is not formalized or associated with compensation for the additional work. Clinical professors purposefully distance themselves so they can be objective when evaluating students. Factors such as competition for funding, territoriality in subject matter, and a lack of time and senior researchers also impede mentorship in Peru. Despite the overall negative climate for mentorship, a private university has mandated it. Additionally, those trying to promote research mentorship in Peru have published several articles on the subject. In her own experience as a mentee, Dr. Meza noted that mentors introduced her to several important fields (e.g., health services research and qualitative research) that changed the course of her career. Most significant for her, Dr. Meza noted, was having a mentor who modeled balancing a research career with a family.

Dr. Soliman noted his own experience as a mentee at the M.D. Anderson Cancer Center and University of Michigan. Dr. Soliman focused his remarks on lessons learned from the NCI-funded Cancer Epidemiology Education in Special Populations (CEESP) program. CEESP began in 2006 and continues to provide mentorship and training for global cancer researchers at the City

University of New York Medical School. The program provides networks of on- and off-campus mentors and research training and mentoring infrastructure. In addition to career planning and development assistance, mentees receive mentorship for field experiences and publications. CEESP created a curriculum to help prepare mentees for field work. A challenge is that there are not many jobs in global health. In the area of research, mentees learn about data representation, dealing with incomplete data, and the research climates of LMICs. CEESP successes include a publication rate of 78 percent (700 publications among mentees who finished the program) and more than 65 percent pursuing careers in cancer-related fields. Successful mentees need grit, motivation, resourcefulness, and good time management. The characteristics of good mentors include interest in mentoring, a network of collaborators, and well-developed multitasking and time management skills.

Panel Discussion on Mentee Experiences

The panel members—who were early-career investigators based in LMICs—discussed the process, challenges, and opportunities involved in seeking mentorship. They shared their experiences about seeking mentorship within their institutions, responding to questions given to them in advance.

Session Chair:

Dr. Joanne D'Silva, Branch Director, Intramural Diversity Workforce Branch, Center for Cancer Training, NCI, United States

Introduction of Panelists:

Mr. Douglas Perin, Project Manager, Clinical Monitoring Research Program Directorate, Frederick National Laboratory for Cancer Research, Leidos Biomedical Research, Inc., United States

Panelists:

Dr. Ana Estrada-Florez, Postdoctoral Researcher, University of California Davis, United States and Universidad del Tolima, Colombia

Dr. Diana Kassaman, Senior Instructor, Aga Khan University Hospital, Kenya

Mr. Hassan M. Abushukair, M.D. Student, Jordan University of Science and Technology, Jordan

Dr. Kavita Singh, Senior Research Scientist, Public Health Foundation of India, India

What are the educational requirements for cancer research in their institution?

Dr. Kassaman noted that undergraduates are taught the research process and conduct projects under supervision in her institution. There is a culture of research, and her institution provides training for clinical investigators who have no experience. Trainees have opportunities for collaboration with senior researchers and for disseminating findings at the institution's annual symposium. At Dr. Singh's institution, mentees outline a project plan, with mentors providing a valuable reality check and help when students have the typical setbacks. Mentors also help mentees develop contingency plans. Dr. Singh noted that NIH K-awards—which provide support for senior postdoctoral fellows or faculty-level candidates to enable them to conduct their research independently and are competitive for major grants—require awardees to have a strong mentor group and clear research goals. For her, it was important to develop skills and expertise that were not available in her country.

What strategies did they use to find mentors?

Dr. Estrada-Florez learned about research from an engaging undergraduate professor and developed a research project on genetics for her bachelor's degree. She worked in molecular biology (thyroid cancer) for her master's degree,

and her mentor helped find a supervisor with expertise in genetics for Ph.D. studies. Doctoral students are required to complete a minimum 6-month internship to focus on specific areas. In Dr. Kassaman's case, she met her Ph.D. mentor—a senior U.S. researcher who collaborated in and was well known in Kenya—at an in-person conference. Dr. Kassaman continued their communication, and her mentor provided information about a grant opportunity to support their international collaboration. Mr. Abushukair explained that his institution formally assigns medical students to a mentor within the university. For outside mentorships, medical students can explore professional associations (e.g., ASCO's virtual mentorship program) and seek out networking opportunities (with peers and senior investigators) at professional meetings. Social media can help mentees identify researchers with similar interests, information on their work, and opportunities to interact and reach out. He suggested that mentees "seal the deal" with a mentor by showing interest in their research area and outlining skills. Dr. Singh stressed that mentors who work in multidisciplinary groups are particularly helpful for exposing mentees to the diverse areas needed in global health research—such as implementation science and qualitative and economic research.

If they were to design an ideal system of cancer research mentorship, what would it look like?

Dr. Kassaman suggested that a good system would put out a call for mentors with particular areas of expertise with whom mentees could be linked. She stressed the importance of providing mentor-mentee sessions about their respective role in developing the mentee's skills to be a principal investigator. Mr. Abushukair commented that it is essential to clarify the mentee's short- and long-term goals and expectations for work. He emphasized that routine, clear, and consistent communication is paramount. Noting the importance of outlining the commitment of both parties, he suggested routine updates on the mentee's progress. In his view, mentees need to be proactive about establishing expectations and roles. Dr. Singh added that regular weekly calls help with mentee motivation, identification of potential problems, and proactive development of solutions. Early and clear communication with all mentors about what you need from them is crucial. Assistance from mentors with planning and training grants is very important. With experience, mentees become mentors. Dr. Singh commented that mentees must have perseverance when applying for planning grants. It is important for mentees to communicate clearly about what they need from all mentors from the outset.

Mentee Experiences Panel Discussion Themes

- Set clear career goals in areas of genuine interest (passion) and write them down.
- Select a mentor with international collaborations, if possible.
- Good mentors open doors to opportunities; mentees should not be afraid to pursue them.
- Mentors who are women model work-life balance and the possibility of women conducting research in LMICs.
- Mentors support mentees learning how to write grants and other funding applications.
- Mentors should know that not all mentees understand what is involved in mentorship or what it means for a mentee to manage a research project. It is important to check in with mentees, be clear about what is required, support mentees, and suggest solutions.
- Mentees learn how to mentor others through experience, but there may be opportunities for formal learning in mentorship.
- Perseverance, hard work, and passion for science are key characteristics for mentees.
- Mentees benefit from multiple mentors from diverse disciplines (e.g., help them to clarify a career development pathway, build a professional network, identify necessary skills/learning, and introduce themselves to other mentors).

Q&A

What can be done to improve the number of research grants awarded to investigators in LMICs? How can mentorship help?

Mr. Abushukair: Difficulty getting research grants is a common theme among LMICs across regions. International funding agencies focused on LMICs offer grants and development awards. This is only a short-term solution, however. Mentors (such as those who work through ASCO) can assist mentees by helping them to submit the best grant applications possible.

Dr. Kassaman: Mentors should encourage mentees to engage with other researchers and professional networks at conferences, obtain contact information, and follow up. LinkedIn offers useful information about developing a professional network, which can lead to opportunities for research training and small grants. Such opportunities and collaborations can provide additional mentors. When attending a conference, aim to develop networks and meet collaborators who can direct you to funding opportunities.

Dr. Nagi El-Saghir: ASCO offers programs and awards for investigators. At the institutional level, it is important to create a good atmosphere for research. Intramural funding from the home institution can assist junior faculty and research assistants. Some donors are particularly interested in helping LMICs, but cultivating relationships with them takes a great deal of effort. Early-career investigators working in Arab countries may apply for the King Hussein Award for Cancer Research.

Do your institutions use mentee-mentor contracts?

Mr. Abushukair: My medical school does not use a contract, but we develop an agenda that covers the mentee's expected outcomes and commitment for the next 4–6 months.

Dr. Singh: We do not have contracts, but applying for training opportunities (e.g., NIH K-awards) requires a letter of support from the mentor that outlines how they are helping the mentee. This letter details the skills being developed and how the mentee will be supported.

Apart from social media, what are other ways to network?

Dr. Estrada-Florez: Research Gate is a forum to discuss scientific articles and laboratory techniques.

What are some ways to present your skills and potential without published research?

Mr. Abushukair: Without prior experience, one can prepare a mini-proposal or proof of concept to show interest in a topic and how it could be studied. This shows effort and a willingness to invest time in a potential mentor's area of research.

Dr. Singh: Similarly, one can submit a concept proposal, conference presentations, and abstracts to potential mentors. It is important to do research and know about potential mentors and common interests.

What can be done when a mentor asks for change in the course of your career path?

Dr. Estrada-Florez: I have not had that experience, but the response would depend on the situation. If the suggestion has come after some time into a project, then it is up to the mentee to take the time to consider if the change would be for the best and follow advice. However, if a mentee is just starting out and has a specific plan, then any change should be discussed in depth. It would be best to weigh the pros and cons and consult with other mentors. This is one reason why it is important to have more than one mentor.

What is the most beneficial consideration for pursuing mentorship opportunities?

Mr. Abushukair: Start by putting yourself out there and try to be in the right place at the right time, even if you feel you are not ready. Do your due diligence and homework, but do not be too

tough on yourself. It is important to get out of your comfort zone.

Dr. Kassaman: Collaboration is important. Although you must define your own goals, be flexible and compromise when necessary. Communicate clearly to mentors about the challenges of being from an LMIC (e.g., not having Wi-Fi) or your specific issues upfront (e.g., anticipated difficulties meeting a timeline). Build trust with your mentors.

Dr. Singh: Take a goal-oriented approach for your short- and long-term objectives. Persevere despite failures and accept serendipity. Get out there and ask for help when you need it.

Panel Discussion on Mentorship

The panel discussed the challenges and opportunities for providing mentorship for cancer research in LMICs. Symposium organizers invited four senior researchers to describe their experiences serving as mentors and mentorship at their institutions, responding to questions given to them in advance. A summary of their answers is presented in this section.

Session Chair:

Dr. Richard P. Moser, Training Director and Research Methods Coordinator, Behavioral Research Program, Division of Cancer Control and Population Sciences, NCI, United States

Introduction of Panelists:

Ms. Yelena Shnayder, Public Health Analyst, CGH, NCI, United States

Panelists:

Dr. Mabel Bohorquez, Professor, Departamento de Ciencias Clínicas, Universidad del Tolima, Colombia

Dr. Mazvita Muchengeti, Acting Head of Department, National Cancer Registry, South Africa

Dr. Nagi El-Saghir, Professor and Head, Division of Hematology Oncology, Department of Internal Medicine; Director of Breast Center of Excellence, NK Basile Cancer Institute, American University of Beirut Medical Center, Beirut, Lebanon

Dr. Priya Ranganathan, Professor of Anesthesiology, Tata Memorial Center; Director, CReDO Training Program, Mumbai, India

What are features for successful models of mentorship in global research?

Dr. Bohorquez explained that research centers that focus on particular areas (e.g., genetics) and link research with interdisciplinary clinical practice offer successful training models. Dr. Muchengeti noted that multiple models have been used successfully in South Africa. In the Sandwich Model, a mentee is co-supervised by an international mentor as well as one in their home country. Group mentorship can be provided in person and online for five to 15 students. This is an efficient and effective way to mentor students when combined with peer mentorship and student learning networks. In the "Each One Teach One" model, researchers who have completed their master's work become mentors to more junior students. Required skills and training needs of mentees include advanced statistical methods and grant and other scientific writing. Challenges include finding career paths for mentees, retaining cancer epidemiologists, and facilitating cancer advocacy and awareness.

Dr. El-Saghir described the NIH-funded Scholars in Health Research Program (SHARP) at the American University of Beirut. This 12-hour credit

diploma provides a foundation to pursue a career in clinical and translational research, following a successful model available in several top-tier academic institutions in the United States. The program helps create and sustain a cadre of highly trained researchers who will conduct patient-oriented and population-oriented studies on non-communicable diseases—equipping them to become change agents. SHARP trainees learn advanced quantitative methods (e.g., data science and survival analyses).

Dr. Ranganathan explained that the International Collaboration for Research methods Development in Oncology (CReDO) workshop is a unique model for cancer research capacity building. CReDO is a highly subsidized, intensive residential 6-day workshop designed to help researchers develop an idea into a structured proposal. A publication is available on this model, which includes pre-workshop webinars, didactic lectures, focus group discussions, office hours, and meet-the-faculty sessions. Intense protocol-development sessions feature a small student-to-faculty ratio and provide an opportunity for critiques. CReDO supports participants with post-workshop webinars once they return to their institutions.

What are some specific training needs for mentors—in the United States and in LMICs?

Dr. Bohorquez remarked that in her experience, scientists receive no training in mentorship. Collaborative work with international universities can help. LMICs are challenged because there are few full-time professors working in research, and resources are often distributed inequitably. A significant challenge is the lack of coordination between research and clinical practice—as professors usually focus on one or the other—and the lack of time for students to conduct research.

Dr. Muchengeti focused on the need for learning about advanced statistical methods (with training in current software). Other training needs included grant and scientific writing, cancer advocacy and awareness, and increasing the visibility and appeal of research to students. Dr. Ranganathan emphasized the need for training on how to develop a research idea into a structured protocol for projects that can be conducted in low-resource settings. Mentees need assistance prior to learning about protocol development, as well as ongoing support after they have formulated project proposals.

How to do mentors manage time and resources to offer guidance?

Panelists agreed that implementing the successful models of mentoring discussed above helps with time and resource management. Dr. El-Saghir noted that his institution's motto is, "Do the best we can with the resources that we have, while working on increasing our resources." Dr. Ranganathan stressed the importance of investing resources into capacity building for cancer research, which can be done in an intensive group format. For example, the CReDO workshop is highly subsidized and can fund some of the proposals developed.

What skills and competencies are needed for successful mentorship?

Dr. El-Saghir remarked on the skill of helping mentees set goals and become involved in ongoing research. Mentees should be exposed to a breadth of projects. Over time, mentees must develop their own projects. He emphasized the importance of discussing research papers in journal clubs, so that mentees can learn how research is conducted. To nurture students' ability to be independent investigators, mentors should teach them how to identify unmet research needs, search for solutions, and develop original scientific proposals. Students should be involved in writing projects (e.g., manuscripts, grant proposals, and informed consent forms). Mentors should support mentees as they look for sponsorships and attend scientific meetings—introducing them to other researchers so they develop a professional network. Mentors also need to listen and advise—always providing constructive criticism, positive feedback, and encouragement.

Mentorship Panel Discussion Themes

- General challenges include inequitable resource distribution within countries and among academic institutions, the need to strengthen second languages, and the relatively few universities in some LMICs.
- Specific challenges include:
  - A root cause of the time shortage is the disconnection between research and clinical practice. Students and mentors are not given protected time for research and must use their own time.
  - The essential problem is that there are few mentors for many students in LMICs.
- It is important to offer mentees the perspectives of diverse researchers from multiple disciplines.

Q&A

What are the characteristics of a good mentee?

Dr. El-Saghir: They must have a genuine interest in the topic, as well as a desire to continue research in the future. Mentors should provide encouragement to get the best out of mentees, but they need help with writing skills and developing research ideas. Most important, a good mentee asks questions.

Dr. Bohorquez: I agree that keen interest and always asking questions are characteristics of good mentees. They also need to have clear goals and be a good person. I try to encourage mentees to be better than their mentor.

Dr. Ranganathan: A good mentee is open to suggestions but at same time, is not completely swayed by the opinion of their mentor. So, they accept constructive criticism but do not totally change the original research idea. They think for themselves.

Dr. Muchengeti: Good mentees would like to continue in cancer science. To me, it is best if mentees are passionate about the field, as mentors invest a great deal of effort in their students. It is important for mentees to be teachable and understand the role of criticism in improvement. Good mentees like to teach others. I prefer when mentees give me deadlines and communicate openly with me about what they need.

Dr. El-Saghir: Mentees are not always ideal in terms of their characteristics, but we should work with them, as they may excel in different areas. It is important that training programs convey a culture of research and teaching.

In group mentoring programs, how do mentors manage the different interests and backgrounds of mentees?

Dr. Muchengeti: We have research meetings in which each person updates the status of their projects and any challenges. Other students and the mentor provide feedback and suggestions. Everyone in the group is an epidemiologist. We have a scientific writing group in which students write about their own research, but all receive the same structure and general information (e.g., selecting the target journal and components of a manuscript). When students see others presenting research, it motivates them. Students help and teach each other, which fosters a research community.

Dr. Bohorquez: I believe it is important for mentees to learn from everyone, not just their mentor.

Dr. El-Saghir: I do not have experience with group mentoring, but we do have meetings where all the students learn about each other's research.

Dr. Ranganathan: The situation in a group of mentees—diversity in knowledge, skills, and abilities—also occurs in research teams. To me, the role of the mentor is to identify these differences and find ways to help those who need assistance in specific areas. Perhaps they need another mentor in that area or to attend additional meetings to catch up. Regardless, it is important for group members to see diversity and

learn that it enhances value and is not necessarily a barrier.

How should a mentor decide when the mentee is ready to work independently? Should it be a joint decision?

Dr. El-Saghir: In my view, we are always learning, growing, and developing—even full professors.

Dr. Ranganathan: I agree, as the learning process never ends for researchers and mentors. Mentors have mentors themselves and progress in their careers. There are no objective criteria for deciding when a mentee is ready to work independently. Rather, the readiness for independent work is a gradual realization.

Dr. Muchengeti: Some mentees have imposter syndrome and may not feel ready to move on. They need to be pushed to apply for grants and run projects.

Research Mentorship Facilitated Breakout Discussions

Session Chair:

Ms. Isobel Bandurek, Research Capacity Manager, GACD, United Kingdom

Participants focused on one of three topics (assigned among six rooms) in facilitated breakout sessions. Volunteers served as moderators, notetakers/Jamboard administrators, and panelists in each of the six rooms (see Appendix F). Original Jamboard notes can be viewed in Appendix G. The summary of the discussion on each of the three topics is based on the Jamboard notes and a brief report from each room.

Establishing a Mentoring Relationship

What local or national mentoring programs do you know of?

Participants were familiar with the following mentoring programs: ACSO, National Research Mentoring Network, BCNET Biobank and Cohort Building Network, and Research Mentorship Alliance (China).

How would you find a mentor if there are no programs available?

Participants mentioned the following ways to find mentors: LinkedIn (with possible cold contact via email), literature searches of topics of interest, Global Oncology Survey, International Cancer Research Partnership, Research Mentorship Alliance in Ghana, WhatsApp (if potential mentor is known to a current associate), ResearchGate, international conferences, and university or company websites.

What would you say when first approaching a prospective mentor? How might this differ depending on the channel of communication or how well you know the person?

It is important not only to know about the potential mentor through pre-work, but also to identify what skills and common interests you bring to their research.

Making the Most of a Mentoring Relationship

What are the key characteristics of a model mentee?

Participants noted that passion for science, clear career and research goals, and eagerness to learn are all characteristics of good mentees. It is also important to be a critical thinker who can troubleshoot. Intellectual curiosity and an openness to constructive criticism are also positive characteristics.

What themes or topics can or should be explore through mentoring?

Mentors can help mentees attain clarity on how to reach their short-term goals and long-term vision. They also help mentees identify opportunities for grants, networking opportunities, and career options. Mentors can provide valuable lessons about identifying research gaps and appropriate methodologies. They offer mentees career development support and advice on responding to criticism and avoiding burnout. Mentors also facilitate professional contacts and references for mentees.

What can you ask from a mentor? Is there anything you should not ask for?

It is important for mentors and mentees to discuss boundaries. Mentees can ask their mentor about requests that are off limits. However, mentees should also set boundaries because of the power imbalance. It is critical to clarify what each party wants from the relationship and to discuss potential conflicts of interests and how to address them. The mentor is there for professional not personal support, so mentees should find out about other sources of mental health assistance. Mentees should discuss their career goals with the mentor to guide course work. An important area to discuss is the preferred way to handle timelines and routine communication. Mentees may want to develop skills beyond their mentor's experience and may need to find another senior researcher to guide them in that area. Mentees may ask for advice on their next career steps.

Career Development Beyond Mentoring

What benefits of mentoring can you seek out from other people or places? Do you have any examples?

Participants stressed that it is important for students to have many diverse mentors with different perspectives. They can also read blogs or articles on other people's experiences and learn from them.

What skills do early-career investigators have that will make them good mentors now?

Early-career investigators are similar to peers and better understand the current challenges in the field and job market. Because their experiences are closer to that of the mentee, they have more empathy.

What can peer mentoring provide that traditional mentoring cannot? And vice versa?

Peer mentoring offers greater scope or comfort to ask detailed questions of a more experienced person. Traditional mentoring tends to be hierarchical, whereas peer mentoring is based on equality.

Learning From Our Peers: Translating Advances in Implementation Science in HIV Care to Cancer Control in LMIC Contexts (Day 2)

Seminal advances in HIV/AIDS treatment have resulted in increased lifespans among people living with this condition worldwide. The substantial progress made in the HIV field—from basic research to translation and implementation science—has led to many advances. Researchers have developed novel, safe, and effective modalities for HIV prevention, treatment, and care, especially in resource-constrained settings in LMICs. This scientific session highlighted the strides made in the HIV implementation science research that have informed successful HIV care delivery models and strategies in LMICs. Examples include community-based testing, linkage from testing to care, task shifting, decentralized care delivery, peer support groups, and leveraging community health workers to improve reach, adoption, acceptability, affordability, and sustainability of HIV care interventions. The scientific session focused on how effective strategies in HIV care implementation can be adapted for global cancer control.

Session Chairs:

Dr. Elvin Geng, Professor of Medicine, Washington University in St. Louis, United States

Dr. Thomas A. Odeny, Assistant Professor, Department of Medicine, Washington University School of Medicine in St. Louis, United States

Presenters:

Dr. Dan Wu, Assistant Professor, Clinical Research Department, London School of Hygiene and Tropical Medicine, United Kingdom

Dr. Izukanji Sikazwe, Chief Executive Officer and Director, Center for Infectious Disease Research in Zambia, Zambia

Dr. Thomas A. Odeny, Assistant Professor, Department of Medicine, Washington University School of Medicine in St. Louis, United States

Dr. Elvin Geng provided context for the presentations on applying lessons learned from HIV care to cancer control in LMICs. In 2004, there were about 2 million deaths from HIV, with life expectancy falling into the forties in southern Africa. However, a global response to HIV was emerging (e.g., the U.S. President's Emergency Plan for AIDS Relief, the Global Fund to fight AIDS, and national investments) along with skeptics and negativity. Twenty years later, 80 million life years have been saved, and HIV treatment is available in the poorest places in the world, with a robust workforce.

There are many lessons that can be learned from HIV care advancement and how it was achieved—which could be applied to stemming the rising morbidity and mortality of cancer globally. This will require financing, political will, and implementation science. Advancing HIV care involved organizing, policy entrepreneurship, and global advocacy and solidarity. Dr. Geng noted important elements for cancer control implementation, as shown by the following lessons from HIV care: (1) leveraging community strengths (e.g., community-based healthcare workers); (2) moving from the World Health Organization's 4-S Framework to Differentiated Service Delivery; and (3) shifting the focus of implementation to changing the behaviors of

organizations and systems (as opposed to those of patients). In conclusion, Dr. Geng encouraged participants to consider HIV research, and determine which aspects should be adopted outright to cancer control, as well as those that could be adapted.

Pay-It-Forward (PIF) Strategy to Improve HPV Vaccine Uptake Among 15- to 18-Year-Old Girls in China

Dr. Wu explained that 15 percent of global cervical cancer deaths occurred in China. Despite this high mortality burden, there is low uptake of the HPV vaccine and a lack of appropriate community-engaged messages and campaigns in China. PIF offers participants a subsidized vaccination as a gift and an opportunity to voluntarily donate to help others receive the vaccine and send postcards with public health messages. This is known as the "contagious kindness" approach. Dr. Wu and colleagues conducted a feasibility pilot test (January through April 2022), which showed promising results. The researchers followed up with a two-arm randomized controlled trial (RCT) and found increased HPV vaccination rates and lower costs per person vaccinated. Additionally, donation rates and amounts given were greater in sites with higher income levels, and uptake was better among girls with female guardians. Implementation challenges for PIF included outbreaks of influenza, stressed health staff, establishing payment mechanisms for clinics, and timing (e.g., clinic workflow).

Program Science Cycle: Lessons From the Centre for Infectious Disease Research in Zambia (CIDRZ)

Dr. Sikazwe noted that CIDRZ is the largest independent nonprofit organization focused on health research in Zambia. Since its inception in 2001, CIDRZ has had a great impact, such as testing more than 1 million people for HIV and providing HIV prevention, testing, and treatment services to about 3,000 key populations. The CIDRZ Cervical Cancer Program was built from its HIV knowledge and services. As HIV is linked with HPV-associated cervical cancer, CIDRZ piloted HPV screening and vaccination in the Lusaka Province between 2013 and 2017. This project included dispelling myths about the vaccine that reduced uptake. In June 2019, the HPV vaccination was officially adopted as part of Zambia's routine immunization program. At that time, Zambia began offering the vaccine to 14-year-old girls, both individuals enrolled and not enrolled in school. Implementation was facilitated by (1) integration into the routine national immunization program; (2) government leadership and support; (3) adequate commodities and supply chain management; and (4) community champions. CIDRZ plans an HPV Multi-age Cohort Vaccine Strategy for September 2023.

Translating Advances in Implementation Science in HIV Care to Cancer Control: Experience With Text Messaging to Improve Retention in Care

Dr. Odeny discussed how the cancer control field might adapt or translate advances in implementation science in HIV care—specifically, using text messages to improve retention in the care cascade. In HIV care, Kenyan public health workers use text messages to improve retention in HIV care with the aim of preventing mother-to-child transmission. The first step was to examine the cascade of care and reduced uptake as patients progress through it. Importantly, evidence indicated that mHealth interventions (such as text messaging) can improve retention. It was critical to the success of this effort that all Kenyan health workers own a mobile phone and that most use text messages. Also critical was the good level of penetration of mobile phones among the Kenyan population (88.1 percent own one). With this foundation, Kenya has used two-way text messaging to promote postpartum retention in HIV care and increase uptake of infant HIV virologic testing.

Regarding the application of these interventions to cancer control in LMICs, Dr. Odeny worked through the example of cervical cancer screening. After considering the cascade of care, researchers would need to quantify the gap

between evidence and practice and analyze reasons for the gap. Using this analysis as a foundation, they could conceptualize implementation strategies. Multiple frameworks, models, and theories from implementation science are available to guide the process. One is Everett Rogers's Diffusion of Innovations theory, which can be used to identify innovators and opinion leaders in a social network of community health workers by examining activity on a text messaging platform. This process identifies those in the community who will be able to implement a program.

Q&A

How can the PIF approach be adopted in very low-income regions in which people might not be able to donate money?

Dr. Wu: I understand the constraints of implementing the PIF approach in low-income settings. My team's study included both low- and high-income research sites. We adapted the subsidy amount and used non-imported vaccines to keep costs as low as possible while engaging participants in the project. Participants also had the very low-cost option to send educational postcards. A mix of factors boosts vaccine uptake. The generalizability of PIF to low-income settings is based on strong giving cultures, so I think piloting this approach in other places is warranted.

How are samples managed in programs that rely on self-collection for cervical cancer screening?

Dr. Sikazwe: The local health facility or other community setting distributed testing kits and taught women how to use them. The kit instructions are pictorial, so language skills were not an issue. Women return the samples to the health facility. Not all of the kits are returned. If the screen is negative, the woman is told to come back in 6 months. Women with positive screens are scheduled for a physical examination of the cervix by a nurse within 2 weeks. The process for women who are HIV positive is slightly different and adheres to guidelines. Self-collection is easy, and we have seen good uptake for screening.

Text messaging to increase engagement in HIV services has been widely adopted, proven to be sustainable over time, and used routinely in some settings. What factors helped bring this approach to scale?

Dr. Odeny: Part of it was serendipity, as text messaging became a popular way for Kenyans to conduct their business (e.g., banking) during this time. It was only a matter of time for it to be used in healthcare delivery. The question was how to incorporate this mode of communication in a systematic way to maximize the benefits and minimize the potential adverse effects of intervention. I suggest that when thinking about implementation, researchers consider how self-propelling popular technology platforms can be leveraged in everyday healthcare.

How can we bolster the organization of international efforts to fight cancer in LMICs as was the case for HIV?

Dr. Odeny: This is a question for NCI. If there were a global fund for cancer control, similar to PEPFAR for HIV, then mechanisms could be established in each country. Siloed systems for cancer control would not be desirable.

Dr. Sikazwe: It will take leadership and advocacy to move away from the siloed approach. Many lessons learned from HIV care translate to cancer diagnostics, strategies, and financing.

Dr. Wu: Advances in the evidence mean that some cancers (e.g., cervical and liver) are often preventable. The field can do more to improve prevention early in the care continuum. Seemingly small steps can have an impact.

What would be your advice (in one sentence) for global leaders in cancer control?

Dr. Odeny: Increase funding for cancer control.

Dr. Sikazwe: Bolster and leverage community advocacy for cancer control.

Dr. Wu: Building research and workforce capacity (train the trainers) is essential.

Connecting for Cancer Control: Collective Action Through the Global Alliance for Chronic Diseases (GACD) Network of Implementation Projects (Day 3)

This session focused on cancer research implementation—specifically, nurturing local and global interrelationships as a strategy to support research to action. All presenters work within the Global Alliance for Chronic Diseases (GACD) Research Network's Cancer Research Programme and discussed the benefits, practical limitations, and considerations of independent and collective action. This scientific session was organized by GACD. It was accepted from the first open call for sessions for ASGCR 2023.

Session Chair:

Dr. Arunah Chandran, Public Health Officer; Early Detection, Prevention, and Infections Branch; International Agency for Research on Cancer, France

Presenters:

Dr. Lana Ray, Indigenous Research Chair in Decolonial Futures; Director, Anishinaabe Kendaasiwin Institute; Associate Professor, Department of Indigenous Learning, Lakehead University, Canada (Anishinaabe)

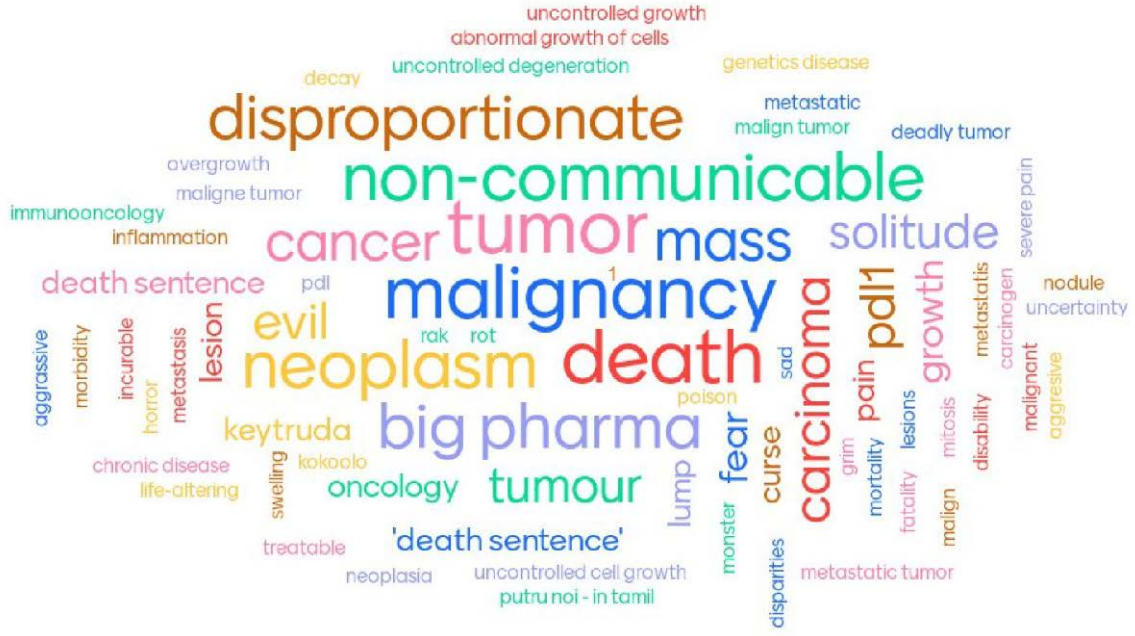
Ms. Isobel Bandurek, Research Capacity Manager, GACD, United Kingdom

Dr. Ishu Kataria, Senior Public Health Researcher, Center for Global Noncommunicable Diseases, RTI International, India

Dr. Johnblack Kabukye, Medical Officer and Informatician, Uganda Cancer Institute, Uganda

Setting the Stage for the GACD Project Presentations

To begin the session, Dr. Ray requested that participants provide terms synonymous with cancer (see word cloud). Some of the terms were biomedical, while others spoke to the experience of cancer.



Dr. Ray stressed that culture affects the underlying assumptions about cancer, and these must be considered in research implementation and collaboration. Cancer control researchers must create a context for collaboration by understanding the interrelated and interconnected local and global ("glocal") states, which can serve as a strategy to support implementation and maintain accountability at the local level. Because dominant norms (due to privilege, colonialism, etc.) affect global collaboration, local implementation is sometimes not optimally effective. An alternative is to develop local hubs that are respectful of each other's views and have agency. Research in the GACD demonstrates that such hubs can work together to advance cancer control. It is important for researchers to acknowledge that colonialism is a risk factor for chronic diseases, along with related problems of discrimination, lack of access, and limited benefits from research participation. Key medical bodies (e.g., American Society of Clinical Oncology) have put forward positions and messaging on equity, decolonization, diversity, and inclusion. To purposefully apply an equity lens:

- Cancer projects (research questions) and prevention goals should include those that originate in the community;
- Communities should co-design the collaborative research process used;
- Tools should relate to people; and
- Researchers should have lived experience or years of experience working in a community and develop overall considerations for representation (e.g., gender).

Ms. Bandurek briefly described the GACD Research Network (the Network). GACD intentionally aims to increase awareness and collaboration among projects that it supports through funding teams—with a focus on reducing the burden of chronic noncommunicable diseases in LMICs and vulnerable populations within high-income countries. GACD funds six research programs (133 projects) operating in 80 countries. Research teams form a community under the banner of the GACD Research Network, which has more than 800 participants across 70 countries. Anyone who works on a project can join the Network. The GACD Cancer Programme funds 23 projects (either administration or implementation) in 39 countries. GACD identifies common factors (e.g., target population, cancer site, and implementation framework) among projects and leverages that information for transferrable learning. Cross-project collaboration in the GACD Cancer Programme is facilitated by three elected co-Chairs. The annual scientific meeting offers scope for in-depth considerations of implementation science challenges and is collegial (e.g., interpersonal leveling, with only name, affiliation, and country on badges and other materials).

The framework and operating procedures of the GACD Research Network encourage bottom-up collaboration that is amplified through top-down support.

Brief GACD Project Descriptions

Dr. Ray described the Waasegiizhig Nanaandawe'iyewigamig Mino-Bimaadiziwin Project: Cancer Prevention through Traditional Healing. In this project, traditional healers work within the community's health access center in northwestern Ontario, Canada, to promote health and healing in an indigenous context. The study addresses the effects of colonialism on health and privilege on indigenous ways of knowing and doing to produce tangible outcomes for people in the communities. The intervention involves the implementation of medicine camps and traditional health practitioner visits. The project documents the experiences and outcomes of people who visit with traditional healers at the clinic for cancer prevention using a culturally based framework. The project also works to enhance capacity and supports the training of potential traditional healers or assistants.

Dr. Kataria described the Access Cancer Care India (ACCI): Affordable, Integrated Multi-Cancer Early Detection to Improve Equitable Cancer Outcomes project. The project's primary aim is to improve access to the early detection and care continuum for oral, breast, and cervical cancers

among a rural population in India. The researchers use a multi-level strategy that is integrated into the local health system. The overall goal is to reduce late diagnosis of cancer by putting in place cost-effective interventions—screening and better access to diagnosis—and to understand their implementation in the context of rural India. The researchers are determining the current health services for detecting these cancers and barriers to access for early detection and treatment services. They also will develop capacity for early detection and treatment of these cancers and assess readiness and capability to scale up and sustain interventions.

Dr. Kabukye discussed the PRESCRIP-TEC: Prevention and screening Innovation Project—Towards Elimination of Cervical Cancer (PRESCRIP-TEC). This project investigates the feasibility of implementing the WHO guidelines for prevention and screening for cervical cancer in India, Bangladesh, Uganda, and Slovakia. PRESCRIP-TEC offers HPV home self-tests, so women do not have to travel to a clinic for gynecological examination. Women with a positive screen will then go to a clinic for an exam, and those with precancerous lesions will be provided with direct treatment. Information on testing is provided via traditional media, mobile devices, and social media to increase uptake of cervical cancer screening. The researchers are conducting a cost-effectiveness analysis and will produce a business case for this form of routine testing.

Q&A

What are the major cancer control implementation challenges?

Dr. Kataria explained that administrative challenges are often not documented. For example, the time and effort needed to obtain ethics approvals across multiple sites can be considerable. Sites have different processes, so time must be built into the project to navigate these approvals. There can also be requirements for multiple-level approvals for a study (site, local, and national). Each process may be quite different and take more time than the approvals necessary in the country that funded the research. Project timelines must consider these multiple, often complex processes.

Dr. Kabukye focused on the challenge of research silos and the duration of time it takes for information on projects to become publicly available. This situation leads to inefficiencies and duplicative research. Sharing information and collaboration can mitigate this problem. He suggested developing a repository for cancer control research projects with as much detail as possible so funding agencies can consult this resource when making decisions about grant support to avoid duplication. Even publishing a research protocol takes time, but it is not clear that investigators look at ongoing protocols before they decide on a project. However, funding agencies should look at ongoing research protocols.

Dr. Ray noted that one challenge can be the tension between the community's perception of ethical research and accountability versus the institution's view. When meeting with a community, researchers may need a formal agenda to show evidence of accountability from the institution's perspective. However, the community takes an iterative approach. It is crucial to work with community partners to overcome challenges. Another challenge is that the university benefits from the grant's administrative fees even though the community conducts the research. The framework in which indigenous people own, control, and have the right to access their own data sometimes conflicts with the data processes followed by institutions and funders.

How can we maximize transferable learning and develop common tools?

Dr. Kataria spoke about her experience with the ACCI and Women Empowerment-Cancer Awareness Nexus. Both projects aimed to reduce barriers to early detection and treatment. The efforts shared tools (e.g., data collection), adapting them as needed. The key to maximize transferable learning is increasing knowledge and reducing barriers. Dr. Kabukye added that community health workers drive many projects on high-priority areas of global health (e.g.,

maternal-child health and HIV) and are an established mechanism of service delivery. Communities know and trust these professionals—who increase efficiency, adherence, and uptake regardless of the disease or health area. Community health workers are particularly helpful for implementation projects in the context of problematic healthcare systems.

How can we promote equity in project teams? What can be done to ensure that underrepresented groups have a voice in cancer research?

Dr. Ray explained that, in her project, indigenous people are involved at every stage. Members of the community can engage in conferences in which information on the research is disseminated and knowledge is translated. This process supports capacity within the community and ensures that messages are received in context. Developing a community advisory group can be helpful to promote two-way communication. It is important to discuss assumptions about the flow of knowledge and overall process.

ORAL ABSTRACT FLASH TALK SESSION (DAY 2)

This session featured a series of rapid-fire (5 minutes), high-level presentations from the top-scoring scientific abstracts for the Symposium. Each presentation covered a research study or implementation program. Presentations were grouped by topic area (selected by the scientific abstract author upon submission).

Session Chair:

Dr. María Teresa Bourlon, Assistant Professor, Hematology and Oncology Department, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico; Representative, Academic Global Oncology Task Force, American Society of Clinical Oncology

Dr. Hawa Camara, NCI Fellow, Cancer Prevention Fellowship Program, NCI, United States

Presenters:

Topic 1: Prevention & Early Detection, Diagnosis, and Prognosis

Dr. Rita-Josiane Gouesse, Research Coordinator, Scale Up Cervical Cancer Elimination with Secondary prevention Strategy (SUCCESS), Côte d'Ivoire

Dr. Thanh Hoang, University of Gothenburg, Sweden

Dr. Maria Geba, Medical Fellow, Division of Infectious Diseases and International Health, University of Virginia, United States

Dr. Che-Hong Chen, Senior Research Scientist, Stanford University, United States

Mr. Varun Nair, B.Sc. Student, University of British Columbia, Canada

Topic 2: Treatment & Cancer Control, Survivorship, and Outcomes Research

Dr. Donna Shelley, New York University School of Global Public Health, United States

Dr. Ayo Falade, Resident Physician, Mass General Brigham Salem Hospital, United States

Dr. Fatou Jallow, Health Specialist, CGH, NCI, United States

Dr. Marianna Nobile, Associate Program Officer, Program of Action for Cancer Therapy, International Atomic Energy Agency, Austria

Dr. Annet Nakaganda, Research Lead, Cancer Epidemiology, Uganda Cancer Institute, Uganda

Topic 1: Prevention & Early Detection, Diagnosis, and Prognosis

Human Papillomavirus (HPV) Cervical Cancer Screening and Secondary Prevention in Côte d'Ivoire: Time From Testing to Treatment

Dr. Gouesse explained that the SUCCESS project was implemented by a consortium led by Expertise France, with Jhpiego providing service delivery. Cervical cancer is the second deadliest malignancy in Cote d'Ivoire. Project findings included that HPV-based cervical cancer screening was acceptable for women in Cote d'Ivoire, with self-collection as the most preferred method. The long turnaround times for results (more than 2 months) showed weaknesses in the sample testing and result delivery continuum. The increased turnaround time for receiving

results adversely affected visual inspection and assessment of samples, which negatively influenced time to treatment. Based on the SUCCESS project's finding, scalability might be improved by increasing laboratory coverage and capacity prior to scale-up. It is important to monitor laboratory activity as a core aspect of the screening continuum. Improvement in client follow-up and employing community health workers to reach out to patients lost to follow-up would also bolster scalability.

Multilevel Barriers and Facilitators of Smoking Cessation in People Living With HIV in Vietnam: A Qualitative Analysis

Dr. Hoang discussed a qualitative analysis of the multilevel barriers and facilitators of smoking cessation among people living with HIV who were receiving antiretroviral treatment in Vietnam. Using abductive analysis to determine themes, the research team found barriers at the patient (e.g., limited knowledge and misperceptions, lack of familiarity with cessation aids, and mental health problems), provider (e.g., lack of skills, knowledge, and resources), and system (e.g., lack of screening and interventions for tobacco use) levels. The team also found facilitating factors at the patient (e.g., self-determination), provider (e.g., endorsement of role in supporting patients and trusting relationships), and system (e.g., personnel and financial support and training) levels. The study's findings suggested that interventions at the patient, provider, and systems levels could increase the engagement of people living with HIV in smoking cessation treatment. Providers need training to deliver tobacco cessation treatment and patient education about the significant health implications of continuing to smoke. System changes are needed to support providers as they integrate tobacco use treatment into routine care.

Collaboratively Adapting a Tele-Behavioral Mobile Platform to Enhance Patient-Provider Communication Regarding Cervical Cancer Prevention Efforts in Bluefields, Nicaragua

Dr. Geba described a cervical cancer prevention program using the *Azulado* mobile platform in Bluefields, Nicaragua, a rural community with the highest rates of this disease in Central America. Cervical cancer is the leading cause of cancer death among Nicaraguan women. Created in 2020, *Azulado* is a culturally and linguistically tailored mobile platform for women in Bluefields. Its offerings include educational resources about cervical cancer, a community message board, and direct messaging to providers. The study investigated healthcare provider perspectives to inform the design of a provider portal to be incorporated in the *Azulado* mobile application via individual interviews, focus groups, and a Qualtrics survey. Providers were satisfied with the platform, as they rated the application highly and found it easy to use. Participants also valued *Azulado's* inclusivity and ethnic representation, mental health support for positive screening results, and guaranteed patient anonymity.

A Model of Public Health Campaign on the Awareness of Alcohol Flushing and Prevention of Upper Aerodigestive Tract Cancers in East Asia

Dr. Chen discussed a multipronged public health campaign in Taiwan—involving volunteers, education, community outreach, social media, and government collaboration—to increase awareness that drinking alcohol can cause cancer and that alcohol flushing increases cancer risk. Alcohol flushing is associated with *ALDH2* missense mutation (rs671), the most common genetic risk factor for upper aerodigestive tract (UADT) cancers. This genetic risk factor is common in East Asia, where more than 540 million people are affected by alcohol flushing. The campaign was developed based on a pilot study that found that health education on *ALDH2* reduced drinking frequency and alcohol

consumption. As part of the campaign, the Taiwan government declared May 9 a national "No Alcohol Day" in the nation, garnering the participation of more than 150 organizations. This educational effort is expanding to Japan, Korea, Hong Kong, and the Stanford Center for Asian Health Research and Education. A similar effort will be piloted for oral cancer prevention. Multiple tools are available to increase *ALDH2* awareness education (e.g., educational package, alcohol intolerance animation, and social and news media links). This campaign model and its tools can be translated and replicated in other East Asian countries and Asian communities in the United States.

Understanding the Cervical Cancer Self-Collection Preferences of Women Living in Urban and Rural Rwanda

Mr. Nair described a cross-sectional survey to understand the attitudes and preferences of women in urban and rural Rwanda toward self-collection practices for cervical cancer screening. Currently, Rwanda does not have a formal screening program for cervical cancer. The study provided valuable data on key demographic factors on women at two sites (one rural, one urban) in Rwanda (e.g., age, education level, relationship status, and age at first intercourse). Many women were unembarrassed about self-collection (more so in the urban area) and were willing to visit a health center for a pelvic examination if their screening test was positive. The willingness for self-collection and perception that they needed their partner's approval for self-collection were higher in the rural area. Further research in this area may spur the integration of self-collection for cervical cancer into policy and program implementation in Rwanda.

Topic 2: Treatment & Cancer Control, Survivorship, and Outcomes Research

Adaptation of Tobacco Cessation Treatment Intervention and Implementation Strategies to the Context of HIV Care in Vietnam

Dr. Shelley discussed a systematic, theory-driven process for adapting tobacco cessation treatment intervention and implementation strategies in HIV care in Vietnam. Multiple intervention components were tested across three arms of an RCT: (1) the ask, advise, and assist approach, plus quit-line counseling; (2) nurse-delivered six-session counseling intervention; and (3) nicotine replacement therapy (gum). Based on the project, the researchers came to the following conclusions: Transferring evidence generated in one context to another requires rigorous adaptation of both evidence-based interventions and proposed implementation strategies. Using theory to guide a systematic process provided strong justification for adaptations and increases the potential for generalizing to other sites. Balancing pragmatism with rigor using rapid analysis and multiple methods increased the feasibility of the process. Adaptations were facilitated by engaging implementers in the process (not only as subjects). Ongoing engagement identifies the need for additional modifications in the early phase of a study. Deferring to country partners' expertise and local knowledge is critical for effective adaptation and implementation.

Clinical Trials in Gastroesophageal Cancers: An Analysis of the Global Landscape of Interventional Trials From ClinicalTrials.gov

Dr. Falade described a database analysis of global clinical trials on gastroesophageal cancers—a leading cause of cancer morbidity and mortality worldwide that disproportionately occur in LMICs—registered on ClinicalTrials.gov (CTG). The researchers queried the CTG

database to identify all phase III interventional studies investigating gastroesophageal cancers from 1999 to October 26, 2022. Although more than 80 percent of gastroesophageal malignancies occur in LMICs, clinical trial activities are disproportionately conducted in high-income countries. Relatively few of the trials focused on esophageal cancers despite being a highly fatal malignancy, indicating an important area of unmet need. The geographic location and number of clinical trial sites emerged as the most significant predictors of trial termination. Studies involving sites in LMICs and projects with more than 50 research sites were less likely to terminate prematurely. The findings highlight the potential role for multinational trials with LMIC sites to advance clinical research for gastroesophageal cancers.

Design Workshops: Participatory Co-design and Iterative Adaptation of Cervical Cancer Screening Implementation Plans in Peru

Dr. Jallow described a project featuring a 1-week series of workshops with local health systems convened in Lima, Peru, to identify context-specific priorities and tailor strategies to improve implementation processes for cervical cancer screening. During the workshop, the room layout and seating were purposely intended to maximize engagement. Participants collectively identified (1) the successes, challenges, and opportunities of the HPV-based screening program; (2) the options for achieving the possible changes, and their respective viability, advantages, and disadvantages; and (3) the potential acceptability by actors in the health system. Through real-time participatory reflection and process mapping of the screening program, participants rapidly identified the context-specific challenges and gained a shared understanding of the complexity of the screening system. They also developed an understanding of their role in the decision-making and problem-solving processes and demonstrated a willingness to work with the regional director to implement process improvements in the system. The workshops changed the perspective of what successful screening looks like and helped participants identify short-, medium-, and long-term action items for implementation planning.

Supporting African Countries in Developing Cancer Control Programs (NCCPs): The Added Value of South-South Cooperation

Dr. Nobile discussed ways to support African countries in developing cancer control programs, with a focus on the added value of South-South cooperation. She briefly described several examples of cooperation among Botswana, Zambia, and Zimbabwe in developing NCCPs. According to the WHO, a National Cancer Control Program (NCCP) is designed to reduce cancer incidence and mortality, and improve the quality of life of cancer patients through the systematic and equitable implementation of evidence-based strategies for prevention, early detection, diagnosis, treatment and palliation, making the best use of available resources. WHO, the International Atomic Energy Agency (IAEA), and the International Agency for Research on Cancer provide advisory support to member states. This support helps those countries to develop evidence-based, prioritized, country-specific strategic documents and to strengthen regional coordination to tackle the raising burden of cancer.

After reviewing the NCCP development process, Dr. Nobile described several examples of South-South cooperation in Africa. Botswana supported Zambia to introduce HPV testing in the cervical cancer screening. Zambia provided capacity-building assistance in radiation oncology to Botswana. Zimbabwe is supporting Botswana in developing its first NCCP. These three countries are implementing priority activities through strategic partnerships, strong coordination mechanisms, and resource mobilization. An NCCP can serve as a foundation document to establish and expand radiation medicine services through different initiatives (e.g., IAEA's Rays of Hope initiative). To strengthen collaboration and to increase technical mutual support, the three countries will conduct quarterly virtual meetings to share best practices on NCCP implementation.

Cancer Control Through Surveillance: Harmonized Cancer Registration Guidelines for East Africa

Dr. Nakaganda explained that, currently, cancer registration in East Africa is characterized by disparities in quality and coverage, as well as insufficient harmonization of procedures. Different laws/legislation limit data access, and there is lack of networking and insufficient national government recognition and funding. To change the situation, cancer control experts set out to harmonize cancer registration guidelines for East Africa. Such guidelines provide essential data for the implementation of evidence-based cancer control strategies. Harmonized guidelines were developed between 2018 and 2021 through participation by all East African countries, partnership and leadership formation, a literature review, SWOT analysis, and conferences. These efforts resulted in the *East African Cancer Registration Guidelines.*

Although some challenges still exist, there have been an increasing number of and growing interest in cancer registries over the last decade. Most of the registries in East Africa are affiliated with government institutions, and there is active engagement/commitment at East African community level. The harmonized guidelines provide an opportunity for improving the cancer surveillance system/structure in the region. Forging effective partnerships, wide stakeholder involvement, use of locally generated data, and locally driven solutions are essential for generating policies and creating a sustainable leadership structure for directing the cancer control effort in the region.

PEARLINE AWARD PRESENTATION AND KEYNOTE ADDRESS

Session Chair:

Dr. Franklin Huang, Associate Professor, Department of Medicine, University of California San Francisco, United States

Pearline Awardee:

Dr. Yin Ling Woo, Professor, Department of Obstetrics and Gynaecology, Faculty of Medicine, University Malaya, Malaysia

The award honors Rachel Pearline, M.D., M.P.H., a revered oncology fellow, who was passionate about global cancer control. The award was named in Rachel's memory in 2016, following her death at the age of 38 (in November 2015) from gastric cancer.

Pearline Award Presentation

Dr. Huang expressed gratitude to Rachel Pearline's father Donald and sister Sarah, who attended the session. Dr. Huang explained that he and Rachel grew up together in St. Louis, Missouri, and trained in the same program. He honored her passion for adventure and learning, noting that Rachel had traveled to China and learned Mandarin. Facing cancer, Rachel was positive and spirited. The Rachel Pearline Award is given each year at ASGCR to recognize one outstanding professional who embodies virtue and eminence in cancer research, practice, and/or training in an LMIC setting. There were fourteen nominees for the 2023 Pearline award. Dr. Huang offered a special posthumous mention to one nominee, Dr. Bongani Kaimila, who died in a car crash. Dr. Kaimila was dedicated to advancing research and treatment on esophageal cancer, which is highly prevalent in his country of Malawi. Dr. Kaimila developed and sustained many international collaborations and will be missed. Dr. Huang introduced the 2023 Rachel Pearline Awardee, Dr. Yin Ling Woo, who conceptualized and implemented Program ROSE—an innovative cervical screening program in Malaysia that incorporates HPV self-sampling.

Keynote Address From Dr. Yin Ling Woo

Dr. Woo expressed her gratitude to receive the award. She commented on her hope to capture the spirit of Rachel Pearline—intense caring for patients and passion for global cancer control—in the keynote address. She began by noting the importance of discussing *why* one does research, not only how it is conducted. Although trained internationally, Dr. Woo explained that she always wanted to return to Malaysia. Her mentors understood, were generous, and supported this goal. The driving force for her research is the women—who are often central to the family and accomplish amazing feats—with gynecological cancers. Her mother had cancer and is well now. But her mother's experience brought home the significant impact of cancer on individuals and family members, reinforcing why she works in this field. Her mission is to keep women healthy. Dr. Woo spoke briefly about her home country of Malaysia, which is multiethnic, multicultural, and has multiple religions. People there are warm, and the country—independent since 1957—is full of promise and fragility.

Program ROSE is comprehensive, empowers women, and advances the elimination of cervical cancer by reaching out to them for home testing and linking them to screening through their mobile phones. Women, therefore, do not have to go to a clinic or hospital for cervical cancer screening, nor must they have a pelvic examination. Dr. Woo emphasized that cervical cancer can be eliminated in our lifetimes, but this requires screening at least 70 percent of women and getting 90 percent of those with abnormal

results into care. To provide context, Dr. Woo explained that in 2010, Malaysia had successfully established an HPV vaccination program. After 10 years of implementing this program, infection rates were reduced by more than 90 percent (which in turn, decreases the risk of cervical cancer). Cervical cancer screening is free in Malaysia, but less than 20 percent of women participate regularly.

Program ROSE is designed with an emphasis on providers' and patients' priorities and is woman friendly. Because the HPV test is superior to the conventional Pap smear, it has shifted the screening paradigm so that a pelvic examination is no longer required. However, researchers had to develop a new screening process with HPV testing as well as build the implementation evidence base prior to launching Program ROSE. Dr. Woo stressed the importance of developing a compelling story for cervical cancer elimination. Most people are driven by stories, which can be followed by data and evidence. She learned how to deliver the narrative of cervical cancer elimination effectively and involved her family in generating ideas on ways to reach women.

Program ROSE was tailored by identifying and removing local barriers (e.g., through educational outreach to women at their workplaces). The solutions implemented were developed locally rather than brought in from a different environment. All aspects of Program ROSE are usable and simple. A 2017 pilot study found that Malaysian women were open to self-testing and found it acceptable. The program was further developed in 2019, but it had to be supported by increasing laboratory capacity and applying the highest standards of testing in the most cost-effective manner. Dr. Woo created a foundation in 2019 to execute Program ROSE, which offers end-to-end services—including screening based on self-sampling, validated testing, a secure digital health platform, and linkage to treatment when necessary—and the ROSE laboratory in 2020. A crucial part of the process was building trust and relationships with stakeholders.

Looking to the future, Dr. Woo commented that her team now aims to address the many unmet needs related to the prevention and management of ovarian cancer in Malaysia. This project aims to fulfill the need for genetic counselors in Malaysia to counsel women about *BRCA* and cancer risk. The Mainstreaming Genetic Counselling for Genetic Testing of *BRCA1* and *BRCA2* in Ovarian Cancer (MaGiC) Patients in Malaysia study is one of the largest collaborative multi-institutional projects in this area. The MaGiC study determined the feasibility of mainstreaming genetic counseling and found that there was no significant impact on psychosocial outcomes. The study's findings resulted in the acceleration of clinicians being familiar with genetic testing. In August 2022, the Every Woman Study Low- and Middle-Income Edition began. The study aims to identify the local needs for women in the area of ovarian cancer screening and treatment.

In conclusion, Dr. Woo noted her reflections and the potential lessons for cancer control researchers. She encouraged researchers to be courageous when developing culturally appropriate medical interventions. Investigators should recognize that collective action is often required to bring about change and realize good health to all. She emphasized the importance of engaging with all sectors—including education, financial, and media (social)—and working with like-minded people. Researchers need to develop and implement patient-centered interventions for patients and their families. Noting the need to teach the next generation of healthcare professionals to be empathetic in providing care and conducting research, Dr. Woo stressed that LMICs must be able to train and retain a clinical workforce to keep their nations healthy. She encouraged Malaysian clinicians and researchers working abroad to return to their homeland. In terms of career advice, seemingly small opportunities may lead to more significant ones. To close her keynote address, Dr. Woo highlighted the need to keep women healthy for the future generation, as they are the fabric of societies and nations. Finally, she paid tribute to all the courageous women fighting cancer as best they can.

Program ROSE Achievements to Date

- By 2022, more than 23,000 women had been screened for cervical cancer in Malaysia.
- The program has been implemented in 150 community locations across 12 states.
- Many (29) government hospitals and more than 90 healthcare professionals are engaged for follow-up cervical cancer care for women who need it.
- The program collaborates with more than 80 nongovernmental organizations and private clinics, with more than 500 volunteers engaged.

APPENDIX A: PARTICIPANT COUNTRY LIST

Countries represented by 2023 ASGCR participants in alphabetical order with number from each in parentheses. Some participants (46) did not list their countries.

Argentina (6)
Austria (3)
Bangladesh (1)
Belgium (2)
Botswana (3)
Brazil (4)
Brunei Darussalam (1)
Burkina Faso (6)
Burundi (1)
Cameroon (1)
Canada (11)
China (4)
Colombia (2)
Congo (2)
Cote d'Ivoire (4)
Denmark (1)
Ecuador (2)
Egypt (7)
Eswatini (1)
Ethiopia (2)
France (9)
Ghana (4)
Greece (1)
Grenada (2)
Haiti (1)
Honduras (1)
India (27)
Indonesia (1)
Iran (1)
Iraq (1)
Ireland (1)
Israel (1)
Italy (1)
Japan (1)
Jordan (21)
Kenya (17)
Lebanon (1)
Malawi (6)
Malaysia (39)
Mali (1)
Mexico (7)
Moldova (1)
Mongolia (1)
Morocco (3)
Mozambique (2)
Myanmar (3)
Nepal (1)
Nicaragua (4)
Nigeria (54)
Norway (2)
Pakistan (4)
Papua New Guinea (1)
Peru (6)
Philippines (2)
Qatar (1)
Republic of Korea (2)
Romania (1)
Russia (1)
Rwanda (3)
Saint Lucia (1)
Singapore (2)
Slovakia (1)
Slovenia (1)
South Africa (11)
Sri Lanka (2)
Sudan (1)
Switzerland (2)
Taiwan (2)
Tanzania (12)
The Gambia (1)
Turkey (1)
Uganda (5)
United Kingdom (16)
United States (247)
Uzbekistan (1)
Vietnam (1)
Zambia (4)
Zimbabwe (2)

APPENDIX B: SCIENTIFIC STEERING COMMITTEE

Rose Ihuoma Anorlu, MBChB, FMCOG, FRCOG, FWACS, M.P.H., President, African Organisation for Research and Training in Cancer; Professor, Obstetrics and Gynecology, University of Lagos, Lagos, Nigeria

Isobel Bandurek, M.S., Research Capacity Manager, Global Alliance for Chronic Diseases, London, UK

Frédéric Biemar, Ph.D., Director, International Affairs, American Association for Cancer Research, Philadelphia, PA, USA

María Teresa Bourlon, M.D., M.Sc., Representative, Academic Global Oncology Task Force, American Society of Clinical Oncology; Assistant Professor, Hematology and Oncology Department, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico

Eduardo Cazap, M.D., Ph.D., FASCO, Founder and First President, Sociedad Latino Americana y del Caribe De Oncología Médica; Editor-in-Chief, *e*cancer; Co-Chair, RINC-SLACOM, Argentina

Mishka Kohli Cira, M.P.H., Public Health Advisor, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Dalal Najjar Cobb, Deputy Director, Consortium of Universities for Global Health, Washington, DC, USA

Kalina Duncan, Dr.P.H., M.P.H., Branch Director, Partnerships and Dissemination, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Linsey Eldridge, M.P.H., Public Health Analyst, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Allison Frank, Cancer Research Training Award Fellow, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Nina Ghanem, M.Ed., Communications Director, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Keith Martin, M.D., PC, Executive Director, Consortium of Universities for Global Health, Washington, DC, USA

Rahma Mkuu, Ph.D., M.P.H., CPH, Chair, Global Cancer Research Special Interest Group, American Society of Preventive Oncology; Assistant Professor, University of Alabama, Tuscaloosa, AL, USA

Mark Parascandola, Ph.D., M.P.H., Branch Director, Research and Training, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Douglas Puricelli Perin, J.D., M.P.H., Contractor, Leidos Biomedical Research Institute with support to Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Yelena Shnayder, M.S., Public Health Analyst, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Sudha Sivaram, Dr.P.H., M.P.H., Program Director, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

Jenna Smith, Events and Memberships Manager, Consortium of Universities for Global Health, Washington, DC, USA

Vidya Vedham, Ph.D., Program Director, Center for Global Health, U.S. National Cancer Institute, Rockville, MD, USA

APPENDIX C: 11TH ANNUAL ASGCR AGENDA

Agenda

Closing the Research to Implementation Gap

Dates: April 4-6, 2023

Times: 9AM-12PM

Times are listed in US Eastern Time. Check other time zones here. ASGCR will be recorded and proceedings will be posted online after the Symposium.

Tuesday, April 4th - Early Career Investigator Day (ECID) - Mentorship in Global Cancer Research

Overview: Early Career Investigator Day for 2023 will focus on mentorship. Mentorship is a key element in facilitating career advancement and success. It may be defined as a process where a person (the mentor) provides guidance to another (the mentee) in achieving their education and career goals. Typically, a mentor is advanced in their career, occupies a position with the organization that is based on expertise and achievements. Mentors can also be peers who learn from each other and share their learnings and resources for mutual benefit. Despite the value of mentorship in the conduct of research, there are few programs available to support mentors, link mentees with mentors, and facilitate productive engagements between mentors and mentees.

9:00-9:30AM 30m	**Welcome and ASGCR Orientation** **Sudha Sivaram, DrPH, MPH**, Program Director, Center for Global Health, National Cancer Institute, Rockville, MD, USA **Opening Remarks** **Doug Lowy, MD,** Principal Deputy Director, National Cancer Institute, Bethesda, MD, USA **Graciela Meza, MD, MPH,** Associate Professor, Dirección Regional de Salud de Loreto, Facultad de Medicina Humana, Universidad Nacional de Amazonía Peruana (UNAP), Iquitos, Peru **Amr Soliman, MD, PhD,** Professor, Department of Community Health and Medicine, City University of New York, New York, USA

9:30-10:25AM
55m

Panel Discussion on Mentee Experiences

Session Chair: **Joanne D'Silva, PhD, MPH,** Branch Director, Intramural Diversity Workforce Branch, Center for Cancer Training, National Cancer Institute, Rockville, MD, USA

Session Description: The aim of this panel is to discuss the process, challenges, and opportunities while seeking mentorship from the perspectives of early career cancer investigators based in low- and middle-income countries (LMICs). We invite four early career investigators to share their experiences about seeking mentorship within their institutions. Mentees make a presentation on their career trajectory thus far - how they started in the path of cancer research; what are the educational requirements for cancer research in their institution? How do they see their career path progressing? What strategies did they use to find mentors? If they were to design an ideal system of cancer research mentorship, what would it look like?

Introduction to Panel: Douglas Perin, JD, MPH, Project Manager, Clinical Monitoring Research Program Directorate, Frederick National Laboratory for Cancer Research, Leidos Biomed, Rockville, MD, USA

Panelists:
Ana Estrada-Florez, PhD, Postdoctoral Researcher, University of California Davis, USA and Universidad del Tolima, Colombia
Diana Kassaman, RN, MSN, Senior Instructor, Aga Khan University Hospital, Kenya
Hassan M. Abushukair, MD Student, Jordan University of Science and Technology, Jordan
Kavita Singh, PhD, Senior Research Scientist, Public Health Foundation of India, India

10:25-10:30AM
5m

Break

10:30-11:25AM
55m

Panel Discussion on Mentorship

Session Chair: Richard P. Moser, PhD, Training Director and Research Methods Coordinator, Behavioral Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute, Rockville, MD, USA

Session Description: The aim of this panel is to discuss the challenges and opportunities for providing mentorship for cancer research in LMICs. We invite four mentors to provide their experiences serving as mentors and about mentorship in their institutions. Some questions to consider are: What are features for successful models of mentorship in global research? What are resource-specific training needs for mentors in global cancer research? How to do mentors manage time and resources to offer guidance? What are skills and

competencies needed for successful mentorship? What networking and grant opportunities have been helpful to your mentees?

Introduction to Panel
Yelena Shnayder, MS, Public Health Analyst, Center for Global Health, National Cancer Institute, Rockville, MD, USA

Panelists:
Mabel Bohorquez, MD, Professor, Departamento de Ciencias Clínicas, Universidad del Tolima, Colombia
Mazvita Muchengeti, MBChB, DipHIVMan, MSc, PhD, Acting Head of Department, National Cancer Registry, South Africa
Nagi El-Saghir, MD, FACP, FASCO, Professor and Head, Division of Hematology Oncology, department of Internal Medicine; Director of Breast Center of Excellence, NK Basile Cancer Institute, American University of Beirut Medical Center, Beirut, Lebanon
Priya Ranganathan, MD, Professor of Anesthesiology, Tata Memorial Center; Director, CReDO Training Program, Mumbai, India

11:25AM-12:00PM
35m

Facilitated Discussion in Breakout Rooms

Session Chair: Isobel Bandurek, MSc, RD, Research Capacity Manager, Global Alliance for Chronic Diseases, London, UK

Session Description: We will have six breakout rooms for discussion. Based on 2022 experience where we had over 90 participants, we will assign three topics amongst the six rooms; hence, two rooms will discuss the same topic. The topics proposed are as follows:

Breakout rooms 1 and 2: Establishing a mentoring relationship

- What local or national mentoring programs do you know of?
- How would you find a mentor if there a no programs available?
- What would you say when first approaching a prospective mentor? How might this differ depending on the channel of communication or how well you know the person?

Breakout rooms 3 and 4: Making the most of a mentoring relationship

- What are the key characteristics of a ‘model’ mentee?
- What themes or topics can or should be explored through mentoring?
- What can you ask from a mentor? Is there anything you shouldn’t ask for?

Breakout rooms 5 and 6: Career development beyond mentoring

- What benefits of mentoring can you seek out from other people or places? Do you have any examples?
- What skills do early-career investigators have that will make them good mentors *now*?
- What can peer mentoring provide that traditional mentoring cannot? And vice versa?

Report Out from Breakout Rooms & Closing Remarks
Isobel Bandurek, MSc, RD, Research Capacity Manager, Global Alliance for Chronic Diseases, London, UK

Wednesday, April 5th

9:00-9:15AM
15m

ASGCR Orientation
Mishka Kohli Cira, MPH, Public Health Advisor, Center for Global Health, National Cancer Institute, Rockville, MD, USA

Welcome & Opening Remarks
Ophira Ginsburg, MD, MSc., Senior Advisor for Clinical Research, Center for Global Health, National Cancer Institute, Rockville, MD, USA

9:15-10:15AM
1h

Scientific Session: Learning from our Peers: Translating Advances in Implementation Science in HIV Care to Cancer Control in LMIC Contexts

Session Chairs: **Elvin Geng, MD, MPH**, Professor of Medicine, Washington University in St. Louis, USA
Thomas A. Odeny, MD, MPH, PhD, Assistant Professor, Department of Medicine, Washington University School of Medicine in St. Louis, USA

Session Description: Seminal advances in HIV/AIDS treatment have resulted in increased lifespans among people living with HIV/AIDS worldwide. The substantial progress made in the field of basic to translation and implementation science has led to the development of novel, safe, and effective modalities for HIV prevention, treatment, and care especially in resource-constrained settings in low- and middle-income countries (LMICs). In this session, we will aim to highlight the strides made in the HIV implementation science research that have informed successful HIV care delivery models and strategies in LMICs, such as community-based testing, linkage from testing to care, task shifting, decentralized care delivery, peer support groups, and leveraging community health workers to improve reach, adoption, acceptability, affordability, and sustainability of HIV care interventions and discuss on how these strategies can be adapted for global cancer control.

Speakers
Dan Wu, PhD, Assistant Professor, Clinical Research Department, London School of Hygiene and Tropical Medicine, UK
Izukanji Sikazwe, BSc, MBChB, MPH, Chief Executive Officer and Director, Center for Infectious Disease Research in Zambia, Lusaka, Zambia
Thomas A. Odeny, MD, MPH, PhD, Assistant Professor, Department of Medicine, Washington University School of Medicine in St. Louis, USA

10:15-10:20AM 5m **Break & Transition to GatherTown**

10:20-11:00AM 40m **Meet the Abstract Authors: Interactive Poster Session on Gather Town**

Session Description: Participants will be directed to Gather Town to view posters and engage with abstract presenters in this immersive web-based platform that allows participants to move and interact freely within a virtual space.

11:00AM-11:55AM 55 **Oral Abstract 'Flash Talk' Session**

Session Chairs: María Teresa Bourlon, MD, MSc, Assistant Professor, Hematology and Oncology Department, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico; Representative, Academic Global Oncology Task Force, American Society of Clinical Oncology

Hawa Camara, PhD, MPH, NCI Fellow, Cancer Prevention Fellowship Program, Rockville, MD, USA

Session Description: This session will be a series of rapid-fire presentations from the top-scoring accepted scientific abstracts for the 11th Annual Symposium on Global Cancer Research. Each presentation will be a five-minute oral PowerPoint presentation by the lead author providing a high-level overview of the research study or implementation program. Abstracts will be grouped by topic area selected by the abstract author.

Topic 1: Prevention & Early Detection, Diagnosis, and Prognosis

Human papillomavirus (HPV) cervical cancer screening and secondary prevention in Côte d'Ivoire: time from testing to treatment
Rita-Josiane Gouesse, PhD, Research Coordinator, Scale Up Cervical Cancer Elimination with Secondary prevention Strategy (SUCCESS), Jhpiego, Côte d'Ivoire

Multilevel barriers and facilitators of smoking cessation in people living with HIV in Vietnam: A qualitative analysis
Thanh HL Hoang, MD, MPH, University of Gothenburg, Gothenburg, Sweden

Collaboratively Adapting a Telebehavioral Mobile Platform to Enhance Patient-Provider Communication Regarding Cervical Cancer Prevention Efforts in Bluefields, Nicaragua
Maria Geba, MD, Medical Fellow, Division of Infectious Diseases and International Health, University of Virginia, Charlottesville, VA, USA

Public Health Campaign on the Awareness of Alcohol Flushing and Prevention of Upper Aerodigestive Tract Cancers in East Asia
Che-Hong Chen, PhD, Senior Research Scientist, Stanford University, Stanford, CA, USA

Understanding the cervical cancer self-collection preferences of women living in urban and rural Rwanda
Varun Nair, **BSc Student,** University of British Columbia, Vancouver, BC, Canada

Topic 2: Treatment & Cancer Control, Survivorship, and Outcomes Research

Adapting a tobacco cessation treatment intervention and implementation strategies to enhance implementation effectiveness and clinical outcomes in the context of HIV care in Viet Nam: A case study
Donna Shelley, MD, MPH, New York University School of Global Public Health, New York, NY, USA

Clinical trials in gastroesophageal cancers: An analysis of the global landscape of interventional trials from ClinicalTrials.gov
Ayo Falade, MD, MBA, APGD, Resident Physician, Mass General Brigham Salem Hospital, Salem, MA, USA

Design Workshops: Participatory co-design and iterative adaptation of cervical cancer screening implementation plans in Peru
Fatou Jallow, PhD, Health Specialist, Center for Global Health, National Cancer Institute, Rockville, MD, USA

Supporting African countries in developing Cancer Control Programmes: the added value of south-south cooperation
Marianna Nobile, PhD, Associate Program Officer, Program of Action for Cancer Therapy, International Atomic Energy Agency, Vienna, Austria

Cancer control through surveillance: harmonised cancer registration guidelines for East Africa
Annet Nakaganda, **PhD,** Research Lead, Cancer Epidemiology, Uganda Cancer Institute, Kampala, Uganda

11:55AM-12:00PM
5m

Closing Remarks
María Teresa Bourlon, MD, MSc, Assistant Professor, Hematology and

Oncology Department, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico; Representative, Academic Global Oncology Task Force, American Society of Clinical Oncology

Thursday, April 6th

9:00-9:15AM
15m

ASGCR Orientation
Mishka Kohli Cira, MPH, Public Health Advisor, Center for Global Health, National Cancer Institute, Rockville, MD, USA

Opening Remarks
Eduardo Cazap, MD, PhD, FASCO, Founder and First President, Sociedad Latino Americana y del Caribe De Oncología Médica; Editor-in-Chief, eCancer; Co-chair, RINC-SLACOM

9:15-10:15AM
1h

Scientific Session: Connecting for cancer control: Collective action through the Global Alliance for Chronic Diseases (GACD) network of implementation projects

Session Chair: Arunah Chandran, MD, PhD, Public Health Officer, Early Detection, Prevention, and Infections Branch, International Agency for Research on Cancer, Lyon, France

Session Description: Is the whole greater than the sum of its parts? In this session we will explore how a rethinking of this cliched expression can support cancer research implementation. We will explore the nurturance of local and global interrelationships as a strategy to support research to action and consider the benefits, practical limitations and considerations of independent and collective action. The GACD Research Network – and specifically the Cancer Research Programme – will be presented as one example of international collaborative efforts. A panel discussion will bring together diverse voices from across the Cancer Research Programme to discuss critical issues related to collective action, such as equity between teams and institutions, and building collective action into grant proposals.

Panelists:
Ishu Kataria, PhD, MSc, Senior Public Health Researcher, Center for Global Noncommunicable Diseases, RTI International, India
Johnblack Kabukye, PhD, MBChB, Medical Officer and Informatician, Uganda Cancer Institute, Kampala, Uganda
Lana Ray, PhD, Indigenous Research Chair in Decolonial Futures; Director, Anishinaabe Kendaasiwin Institute (AKI); Associate Professor, Department of Indigenous Learning, Lakehead University, Canada (Anishinaabe)
William Pomat, PhD, MSc, Director, Papua New Guinea Institute of Medical Research, Goroka, Papua New Guinea

10:15-10:20AM
5m

Break & Transition to GatherTown

10:20-11:15AM
55m

Meet the Abstract Authors: Interactive Poster Session on Gather Town

Session Description: Participants will be directed to Gather Town to view posters and engage with abstract presenters in this immersive web-based platform that allows participants to move and interact freely within a virtual space.

11:15-11:55AM
40m

Pearline Award Presentation & Keynote Address
Session Chair: Franklin Huang, MD, PhD, Associate Professor, Department of Medicine, University of California San Francisco, USA

Pearline Awardee: **Yin Ling Woo, MB BCh, PhD,** Professor, Department of Obstetrics and Gynaecology, Faculty of Medicine, University Malaya, Malaysia

Session Description: The Rachel Pearline Award honors Rachel Pearline, MD, MPH. Dr. Pearline was a revered oncology fellow committed to global cancer control, who received the award named in her memory in 2016 following her death at the age of 38, in November 2015, from gastric cancer. In honor of Dr. Rachel Pearline, each year the Annual Symposium on Global Cancer Research Steering Committee, we recognize one outstanding professional who embodies virtue and eminence in cancer research, practice, and/or training in a low- and middle-income country setting.

The 2023 Rachel Pearline Awardee is Yin Ling Woo, MA, MRCOG, PhD, a Professor of Obstetrics and Gynaecology at the University Malaya who conceptualized and implemented Program ROSE (www.programrose.org), an innovative cervical screening program incorporating HPV self-sampling.

11:55AM-12:00PM
5m

Closing Remarks
Patti Gravitt, PhD, MS, Deputy Director, Center for Global Health, National Cancer Institute, Rockville, MD, USA

APPENDIX D: SCIENTIFIC ABSTRACT REVIEWERS

Ann Amuta-Jimenez, ASPO, United States
Santiago Avila, NCI, United States
HyoSook Bae, NCI, United States
Maria Bourlon, ASCO, United States
Hawa Camara, NCI, United States
Choeeta Chakrabarti, ASPO, United States
Ann Chao, NCI, United States
Margarita Correa-Mendez, NCI, United States
Sandy Eldridge, NCI, United States
Erinma Elibe, NCI, United States
Julia Gage, NCI, United States
Elise Garton, NCI, United States
Satish Gopal, NCI, United States
Jaclyn Hall, ASPO, United States
Fatou Jallow, NCI, United States
Dalana Johnson, NCI, United States
Judith Jomabuti Ajeani, AORTIC, Uganda
Tosca Le, NCI, United States
Francis Makokha, AORTIC, Kenya
Raul Murillo, SLACOM, Argentina
Ntokozu Ndlovu, AORTIC, Zimbabwe
Paul Pearlman, NCI, United States
Doug Puricelli Perin, NCI, United States
Marie Ricciardone, NCI, United States
Hannah Simonds, AORTIC, South Africa
Angela Solano, SLACOM, Argentina
Abdulhafiz Zakieh, NCI, United States

APPENDIX E: LISTING OF SCIENTIFIC ABSTRACTS FOR POSTER SESSION

Poster Listing

Room 1: Early detection, diagnosis, and prognosis

Poster 1
Title: A Learning Collaborative to Empower Rwandan Health Center Clinicians to Improve the Quality of Screening for Women's Cancers
Presenting Author: Jean-Marie Vianney Dusengimana, Partners In Health
Institution Country: Rwanda

Poster 2
Title: A SEER Analysis of Demographic Factors Associated with Ceruminous Adenocarcinoma, 2000-2019
Presenting Author: Beau Hsia, Creighton University School of Medicine
Institution Country: United States

Poster 3
Title: Applying Next-Generation Sequencing to Improve Pediatric Cancer Diagnosis in Mexico
Presenting Author: Roberto Ruiz-Cordero, Department of Pathology, University of Miami Hospital
Institution Country: United States

Poster 4
Title: Assessment of Baseline Nutritional Status of Pediatric Cancer Patients Treated in the Pediatric Oncology Unit of Jimma University Medical Center: A Cross-Sectional Study
Presenting Author: Rediet A. Gebremedhin, Jimma University
Institution Country: Ethiopia

Poster 5
Title: Association Between HMOX1 (GT)n Promoter Microsatellite and Prostate Cancer Prognosis
Presenting Author: Gaston Pascual, University of Buenos Aires
Institution Country: Argentina

Poster 6
Title: Availability and Geographic Access to Hospital Based Breast Cancer Early Detection and Diagnostic Services In Ghana
Presenting Author: Matthew D. Price, The Johns Hopkins Hospital
Institution Country: United States

Poster 7
Title: Women's Perspectives on Barriers to Follow-up for an Abnormal Clinical Breast Exam in Uttar Pradesh, India: A Qualitative Study
Presenting Author: Erica Liebermann, University of Rhode Island
Institution Country: United States

Poster 8
Title: Cervical Cancer Prevention and Control in the Pacific: A Comprehensive Systems Based Approach in Yap State, Federated States of Micronesia
Presenting Author: Neal Palafox, University of Hawai'i
Institution Country: United States

Poster 9
Title: Clinical and Non-Clinical Determinants of Cervical Cancer Mortality: A Retrospective Cohort Study in Lagos, Nigeria
Presenting Author: Idris O. Ola, Institute of Medicine, Sahlgrenska Academy, Gothenburg University
Institution Country: Sweden

Poster 10
Title: Detection of Protein Kinase C Isoenzymes in Patients at Risk of Schistosoma Haematobium Induced Bladder Cancer
Presenting Author: Zanna Abdulsalam Abubakar, National Biotechnology Development Agency
Institution Country: Nigeria

Poster 11
Title: Examining Levels of Awareness, Barriers and Enablers Regarding the Cervical Cancer Prevention and Treatment Pathway for Patients and Health Providers In Tanzania: A Qualitative Study
Presenting Author: Sanchit Kaushal, Queen's University
Institution Country: Canada

Poster 12
Title: Examining Policies and Guidelines to Improve the Cervical Cancer Prevention and Treatment Pathway for Patients and Healthcare Providers in Tanzania: A Qualitative Study
Presenting Author: Melinda Chelva, Queen's University
Institution Country: Canada

Poster 13
Title: External Quality Assessment for Prostate Specific Antigen Test Accuracy: A Needs Assessment of Nigerian Tertiary Hospitals
Presenting Author: Ifeyinwa D. Nnakenyi, Center for Translation and Implementation Research, Universtiy of Nigeria Nsukka
Institution Country: Nigeria

Poster 14
Title: Influence of Neuro Oncology Capacity Development on Diagnosis of Pediatric Primary CNS Tumors in Northern Tanzania
Presenting Author: Kristin Schroeder, Duke University Medical Center
Institution Country: United States

Poster 15
Title: Integrated Breast and Cervical Cancer Prevention: What Is The Cost Of Cost Reduction?
Presenting Author: Ishak Lawal, End Cervical Cancer Nigeria Initiative (ECCNI)
Institution Country: Nigeria

Poster 16
Title: Minding the Gap: Implementation of Sequencing-Based Diagnostics for Pediatric Cancer in Resource-Limited Settings
Presenting Author: Kenneth M. Busby, The University of North Carolina
Country: United States

Poster 17
Title: Oral Health Inequalities Among Tobacco Users in the Tea Plantation Workers, Nilgiri Hills, Tamilnadu, India
Presenting Author: Delfin Lovelina Francis, Saveetha Dental College and Hospital, SIMATS, Chennai
Institution Country: India

Poster 18
Title: Oral Lesions Associated with Tobacco Smoking in Adolescents/Adults Dwellers in Lagos, Nigeria
Presenting Author: Oladunni Ogundana, College of Medicine, University of Lagos, Nigeria
Institution Country: Nigeria

Poster 19
Title: Perceived Factors for Late Diagnosis in Women with Advanced Breast Cancer in Northern Tanzania
Presenting Author: Elizabeth F. Msoka, Kilimanjaro Clinical Research Centre; Kilimanjaro Christian Medical University College
Institution Country: Tanzania

Poster 20
Title: Prognostic Factors in the Overall Survival of Skin Appendage Carcinoma: An NCDB Analysis
Presenting Author: Xinxin Wu, Creighton University School of Medicine
Institution Country: United States

Poster 21
Title: Specific Activity of GSTs and Protein Expression of GSTT1, GSTP1 and CYP1A1 in Head and Neck Cancer
Presenting Author: Nosheen Masood, Fatima Jinnah Women University, Rawalpindi
Institution Country: Pakistan

Poster 22
Title: The "Knowledge-to-Action" Process Model for Cancer Control Stakeholder Engagement for the REBUNG Selangor, Malaysia
Presenting Author: Nur Aishah Taib, Universiti Malaya
Institution Country: Malaysia

Poster 23
Title: The Impact of Covid-19 Pandemic in Colonoscopies and Colorectal, Rectosigmoid and Anal Cancer Screening
Presenting Author: Rafaela de Andrade, Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA)
Institution Country: Brazil

Poster 24
Title: When Canada is an Under-Resourced Country: Patient-Oriented Research on Optimizing Rational Decision-Making for Bladder Cancer
Presenting Author: Erica Frank, University of British Columbia / NextGenU.org
Institution Country: Canada

Poster 25
Title: Who Gets Diagnosed Later? Demographic Differences in Early Vs. Late-Stage Medullary Thyroid Carcinoma: A NCDB Analysis
Presenting Author: Darby Keirns, Creighton University School of Medicine
Institution Country: United States

Room 2: Cancer control, survivorship, and outcomes research

Poster 1
Title: Barriers and Facilitators to Implementation of Hospital-Based Pediatric Cancer Registries in Resource-Limited Settings
Presenting Author: James B. Collins, University of North Carolina, Eshelman School of Pharmacy
Institution Country: United States

Poster 2
Title: Barriers in Delivery of Results and Treatment of Women Tested Positive for HPV in Burkina Faso
Presenting Author: Gountante Kombate, Jhpiego, Johns Hopkins University Affiliate
Institution Country: Burkina Faso

Poster 3
Title: Breast Cancer at a Major Public Oncology Centre in Namibia through the WHO Global Breast Cancer Initiative Framework: African Breast Cancer – Disparities in Outcomes Cohort Study
Presenting Author: Pauline Boucheron, International Agency for Research on Cancer (IARC/WHO)
Institution Country: France

Poster 4
Title: Breast Cancer Patient Experiences in the Botswana Health System: Is it Time for Patient Navigators?
Presenting Author: Kirthana Sharma, Rutgers Global Health Institute
Institution Country: United States

Poster 5
Title: Cancer Control Through Surveillance: Harmonised Cancer Registration Guidelines for East Africa*
Presenting Author: Annet Nakaganda, Uganda Cancer Institute
Institution Country: Uganda

Poster 6
Title: Comparison Between the White Skin Color Distribution on the Brazil and Diagnoses of Nonmelanoma Skin Cancer
Presenting Author: Arthur Minas Alberti, Universidade Federal de Ciências de Saúde de Porto Alegre (UFCSPA)
Institution Country: Brazil

Poster 7
Title: Correlation of Childhood Cancer Mortality Trends and CureAll Metrics for 134 LMICs
Presenting Author: Emily R. Smith, Duke University
Institution Country: United States

Poster 8
Title: Demographic Factors Associated With Extracutaneous Involvement in Kaposi Sarcoma
Presenting Author: Michelle S. Swedek, Creighton University School of Medicine
Institution Country: United States

Poster 9
Title: Design Workshops: Participatory Co-Design and Iterative Adaptation of Cervical Cancer Screening Implementation Plans in Peru*
Presenting Author: Fatou Jallow, National Institutes of Health/National Cancer Institute
Institution Country: United States

Poster 10
Title: Development of a Breast Cancer Survivorship Health System Needs Assessment Questionnaire (BSH-Q) for Malaysian Health Institutions
Presenting Author: Tania Islam, University of Malaya
Institution Country: Malaysia

Poster 11
Title: Does Receipt of Resource-Adapted Guideline-Concordant Breast Cancer Care Improve Outcomes? A Retrospective Study of 517 Breast Cancer Patients in Southwest Nigeria
Presenting Author: Anna Dare, University of Toronto
Institution Country: Canada

Poster 12
Title: Epidemiology, Diagnosis, and Outcomes of Pediatric Burkitt Lymphoma Patients Treated at Bugando Medical Centre in Mwanza, Tanzania
Presenting Author: Hutton Chapman, Duke University Medical Center
Institution Country: United States

Poster 13
Title: Evaluation of Potential Risk for Developing Treatment Associated Late Effects Among Childhood Cancer Survivors at Bugando Medical Centre, Mwanza, Tanzania
Presenting Author: Goodluck I. Nchasi, Catholic University of Health and Allied Science
Institution Country: Tanzania

Poster 14
Title: Exploring the Impact of Metastatic Breast Cancer Support Group in Nigeria
Presenting Author: Runcie C.W. Chidebe, Project PINK
Institution Country: Nigeria

Poster 15
Title: Factors Associated with Receiving Results and Attending Colposcopy in Patients with Positive HPV Screens in Mexico City
Presenting Author: Raúl U. Hernández-Ramírez, Center for Methods in Implementation and Prevention Science, Yale School of Public Health
Institution Country: United States

Poster 16
Title: Global Cancer Surgery in Low-Resource Settings: A Strengths, Weaknesses, Opportunities, and Threats Analysis
Presenting Author: Samantha J. Sadler, Harvard Medical School
Institution Country: United States

Poster 17
Title: Global Oncology Projects at NCI-Designated Cancer Centers: A Focus on Implementation Science
Presenting Author: Allison Frank, Center for Global Health, National Cancer Institute
Institution Country: United States

Poster 18
Title: Hispanic Liver Cancer Patients are Underrepresented in Phase III Clinical Trials Conducted in the Last 10 Years
Presenting Author: J. Alberto Maldonado, National Cancer Institute, National Institutes of Health
Institution Country: United States

Poster 20
Title: Human Papilloma Virus Vaccine Uptake and its Determinants Among Adolescent Girls in Kilimanjaro, Northern Tanzania
Presenting Author: Jojet Josephat, Kilimanjaro Christian Medical Centre, KCMC
Institution Country: Tanzania

Poster 21
Title: Identifying Temporal Patterns in Healthcare Service-Use Trajectories of Long-Term Breast Cancer Survivors
Presenting Author: Alexia Giannoula, Medical Research Institute of the Hospital del Mar
Institution Country: Spain

Poster 22
Title: Impact of Multimorbidity on Adherence to Follow-Up Recommendations for Long-Term Breast Cancer Survivors
Presenting Author: David Abbad, Hospital del Mar Institute for Medical Research
Institution Country: Spain

Poster 23
Title: Implementing a Hospital-Based Peer Support Intervention Model for Cancer Patients: A Pilot in Vietnam
Presenting Author: PhuongThao D. Le, New York University School of Global Public Health
Institution Country: United States

Poster 24
Title: Leaving Cancer Patients Behind for Greener Pastures: The Clinical Oncology Workforce in Nigeria
Presenting Author: Runcie C.W. Chidebe, Project PINK
Institution Country: Nigeria

Poster 25
Title: Low-Income is a Negative Prognostic Factor in Patients with MPNST: An NCDB Analysis
Presenting Author: Jared Kennard, Creighton University School of Medicine
Institution Country: United States

Poster 26
Title: Management of Clinically Localized Prostate Cancer: Guideline Concordance and Clinical Outcomes from Tertiary Institutions in Nigeria
Presenting Author: Musliu Adetola Tolani, Ahmadu Bello University
Institution Country: Nigeria

Poster 27
Title: Prevalence of Antimicrobial Resistance in Gram-Negative Bacteria Isolated from Cancer Patients: A Retrospective Descriptive Study
Presenting Author: Angel A. Velarde López, Liga Nacional Contra el Cáncer e Incan
Institution Country: Guatemala

Poster 28
Title: Socioeconomic Disparities Across the Cancer Care Continuum in Saint Lucia: A Community-Based Study
Presenting Author: Aviane Auguste, Vaughan Arthur Lewis Institute for Research and Innovation (VALIRI)
Institution Country: Saint Lucia

Poster 29
Title: Supporting African Countries in Developing Cancer Control Programmes: The Added Value of South-South Cooperation*
Presenting Author: Marianna Nobile, International Atomic Energy Agency, Programme of Action for Cancer Therapy (PACT)
Institution Country: Austria
Presenting Autor: Kennedy Lishimpi, Misistry of Health of Zambia
Institution Country: Zambia
Presenting Autor: Justice Mudavanhu, Ministry of Health and Child Care of Zimbabwe
Institution Country: Zimbabwe

Poster 30
Title: Swahili Translation and Cultural Adaptation of a Pediatric Cancer Stigma Scale (CASS) for Use in the Non-Patient Population in Tanzania
Presenting Author: Kristin Schroeder, Duke University
Institution Country: United States

Poster 31
Title: The cervical cancer treatment gap in Mexico under Seguro Popular, 2006-2016
Presenting Author: Sean P. McClellan, Department of Family and Community Medicine, University of California San Francisco
Institution Country: United States

Poster 32
Title: The Clinicopathological and Psychosocial Profile of a Cohort of Nigerian Breast Cancer Survivors
Presenting Author: Funmilola O. Wuraola, Obafemi Awolowo University Teaching Hospital / African Research Group for Oncology
Institution Country: Nigeria

Poster 33
Title: The Language of Cancer Communication in Africa
Presenting Author: Hannah Simba, International Agency for Research on Cancer (IARC/WHO)
Institution Country: France

Poster 34
Title: The Perceived Relationship of Nutrition and Breast Cancer Among Breast Cancer Patients in Northern Tanzania
Presenting Author: Garrett Barnes, University of Alabama at Birmingham
Institution Country: United States

Poster 35
Title: The Process of Setting Up an Inter-Country Cancer Care Program in Low-And-Middle-Income Countries: A Case of International Cancer Institute's Uganda Blueprint for Innovative Healthcare Access Program
Presenting Author: Gloria Kitur, International Cancer Institute
Institution Country: Kenya

Poster 36
Title: Understanding the Social and Economic Impacts of a Cervical Cancer Diagnosis on Women and Children in Uganda
Presenting Author: Hallie P. Dau, University of British Columbia, School of Population and Public Health
Institution Country: Canada

Poster 37
Title: Time from Symptoms to Care Milestones at the Only Public Oncology Clinic in Belize
Presenting Author: James Dickerson, Post-Doctoral Fellow, Department of Medicine (Hematology and Oncology), Stanford University
Institution Country: United States

Poster 38
Title: Transferring Cancer Research to Implementation: Key Enabling Factors in Caribbean Settings
Presenting Author: Lindonne Telesford, St. George's University
Institution Country: Grenada

Poster 39
Title: Translation and Linguistic Validation of the Mastectomy Module of the BREAST-Q Questionnaire for Use in Nigeria
Presenting Author: Olalekan Olasehinde, Obafemi Awolowo University ILE-IFE
Institution Country: Nigeria

Poster 40
Title: Understanding the Cervical Cancer Self-Collection Preferences of Women Living in Urban and Rural Rwanda*
Presenting Author: Varun Nair, University of British Columbia, Integrated Sciences
Institution Country: Canada

Poster 41
Title: Using Innovative Technology and Collaborative Efforts to Reduce Disparities and Inequities in Cancer Care and Improve the Lives of Patients in Low-Middle Income Countries in Sub-Saharan Africa: South African and Lesotho Experience of the ECHO Model
Presenting Author: Daniel Osei-Fofie, Robert Mangaliso Sobukwe Hospital
Institution Country: South Africa

Room 3: Prevention

Poster 1
Title: Public health campaign on the awareness of alcohol flushing and prevention of upper aerodigestive tract (UADT) cancers in East Asia*
Presenting Author: Che-Hong Chen, Stanford University School of Medicine
Institution Country: United States

Poster 2
Title: Assessment of Oesophageal Cancer Risk Factors in Age Sex Matched Case Control Study by Using Conditional Logistic Regression in the State of Assam, North East, India
Presenting Author: Biraj Kumar Kalita, Manipur university
Institution Country: India

Poster 3
Title: Barriers to Effective Safe Handling of Chemotherapeutic Drugs Among Healthcare Workers in Vietnam: Needs Assessment by Electronic Survey
Presenting Author: Cham P. Nguyen, University of California, San Francisco
Institution Country: United States

Poster 4
Title: Building Capacity on Cancer Prevention of Healthcare Professionals in Latin America and the Caribbean as Trusted Agents to Increase Populations' Health Literacy: An Online Competency-Based Microlearning Program
Presenting Author: Ariadna Feliu, International Agency for Research on Cancer
Institution Country: France

Poster 5
Title: Collaboratively Adapting a Telebehavioral Mobile Platform to Enhance Patient-Provider Communication Regarding Cervical Cancer Prevention Efforts in Bluefields, Nicaragua*
Presenting Author: Maria Geba, University of Virginia Department of Infectious Diseases and International Health
Institution Country: United States
Presenting Author: Katherine Hall, University of Virginia School of Nursing
Institution Country: United States

Poster 6
Title: Human Papillomavirus (HPV) Cervical Cancer Screening and Secondary Prevention in Côte d'Ivoire: Time from Testing to Treatment*
Presenting Author: Rita-Josiane Gouesse, Jhpiego - Cote d'Ivoire
Institution Country: Côte d'Ivoire

Poster 7
Title: Knowledge and Recommendation of HPV Vaccination Among Providers Involved in Cervical Cancer Prevention Activities in Africa
Presenting Author: Joel Fokom Domgue, The University of Texas MD Anderson Cancer Center
Institution Country: United States

Poster 8
Title: Multilevel Barriers and Facilitators of Smoking Cessation in People Living with HIV in Vietnam: A Qualitative Analysis*
Presenting Author: Thanh HL. Hoang, University of Gothenburg
Institution Country: Sweden

Poster 9
Title: Preparing for the Next Pandemic: An Asian National Cancer Centers Alliance (ANCCA) Initiative
Presenting Author: Sok King Ong, Ministry of Health
Institution Country: Brunei

Poster 10
Title: Regional College Women in the United States (U.S.) Report Low Health Literacy Regarding Basic Genital Biology and Cervical Cancer Risk Factors
Presenting Author: Joanna Ellington, Glyciome, LLC
Institution Country: United States

Poster 11
Title: The Impact of COVID-19 on HPV Immunization Programs in Countries with High Cervical Cancer Burdens: Global and National Perspectives
Presenting Author: Dominique Guillaume, International Vaccine Access Center, Johns Hopkins University
Institution Country: United States

Poster 12
Title: The Introduction of a High Risk HPV DNA Test for the screening of Cervical Cancer Among Mongolian Women
Presenting Author: Enkhjargal Bayarsaikan, National Cancer Center of Mongolia
Institution Country: Mongolia

Room 4: Treatment

Poster 1
Title: Adapting a Tobacco Cessation Treatment Intervention and Implementation Effectiveness and Clinical Outcomes in the Context of HIV Care in Viet Nam: A Case Study*
Presenting Author: Donna Shelley, New York University School of Global Public Health
Institution Country: United States

Poster 2
Title: Effectiveness-Implementation Hybrid Trial in Lebanon to Test Evidence-Based Tobacco Cessation Interventions in Primary Care in a Low-Resource Setting: A Study Protocol
Presenting Author: Dima Bteddini, University of Florida
Institution Country: United States

Poster 3
Title: Expanding Cervical Cancer Screening In Mozambique: Challenges Associated with Diagnosing and Treating Cervical Cancer
Presenting Author: Samantha Batman, MD Anderson Cancer Center
Institution Country: United States

Poster 4
Title: Clinical Trials in Gastroesophageal Cancer: An Analysis of the Global Landscape of Interventional Trials from ClinicalTrials.gov*
Presenting Author: Ayo S. Falade, MGB Salem Hospital
Institution Country: United States

Poster 5
Title: Comparative Analysis of Time Between Diagnosis and First Treatment of Malignant Prostate Cancer in the Brazilian Public Health System (SUS)
Presenting Author: Luiza Seixas de Sá Beltramo, Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA)
Institution Country: Brazil

Poster 6
Title: Hematopoietic Stem Cell Transplants and Treatment of Severe Blood Disorders: Role of Providers in Medical Tourism
Presenting Author: Deepika Khanna, University of Illinois, Chicago College of Medicine
Institution Country: United States

Poster 7
Title: Impact of the COVID-19 Pandemic on Breast Cancer Treatments in the Brazilian Public System
Presenting Author: Laura Tibola Marques da Silva, Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA)
Institution Country: Brazil

Poster 8
Title: Impact of the COVID-19 Pandemic on Pediatric and Adolescent Cancer Care in Northern Tanzania
Presenting Author: Hannah E. Rice, Duke University
Institution Country: United States

Poster 9
Title: Implementing Equitable Cancer Support Program: Lessons from Cervical Cancer Chemotherapy Access Program (C3AP)
Presenting Author: Qudus Olajide Lawal, End Cervical Cancer Nigeria Initiative (ECCNI)
Institution Country: Nigeria

Poster 10
Title: Insurance Status and Surgical Cancer Patient Characteristics and Outcomes at Muhimbili National Hospital in Dar es Salaam Tanzania
Presenting Author: Nathan R. Brand, University of California, San Francisco
Institution Country: United States

Poster 11
Title: Mobile Health Technology for Tailored Tobacco Cessation Support in Lao People's Democratic Republic: A Pilot Trial
Presenting Author: Shweta Kulkarni, University of Oklahoma Health Sciences Center
Institution Country: United States

Poster 12
Title: The Status of Government-Funded Radiotherapy Centres in Nigeria
Presenting Author: Simeon C. Aruah, National Hospital Abuja/College of Medicine, University of Abuja
Institution Country: Nigeria

Poster 13
Title: Utilization of MGMT Promoter Methylation Status to Guide Treatment in Elderly Patients with Glioblastoma
Presenting Author: Tiffany Chu, Creighton University School of Medicine
Institution Country: United States

Room 5: Biology and Etiology

Poster 1
Title: PKA as a Master Regulator of the Early Metabolic Reprogramming in Bone Metastatic Prostate Cancer Cells
Presenting Author: Pablo Sanchis, IQUIBICEN (University of Buenos Aires - CONICET)
Institution Country: Argentina

Poster 2
Title: Competing Endogenous RNA (ceRNA) Networks Implicated in Prostate Cancer Progression to Castration Resistance Identified through Bioinformatics Analyses
Presenting Author: Sabrina Ledesma-Bazan, IQUIBICEN (CONICET - Universidad de Buenos Aires)
Institution Country: Argentina

Poster 3
Title: Heme Oxygenase 1 Counteracts Pro-Stemness and Pro-Invasive Effect Triggered by Communication with Bone Progenitors in Prostate Cancer Cells
Presenting Author: Inés Achinelli, University of Buenos Aires
Institution Country: Argentina

Poster 4
Title: LNP-CRISPR Gene Editing Enables in Vivo ATAD3A Depletion and Induces the Remission of Head and Neck Cancer
Presenting Author: Yong Teng, Emory University
Institution Country: United States

Poster 5
Title: Unsupervised Machine Learning Predicts Invasive and Undruggable Long Coding Rna Linc00662, Linc01234, and Spanxa1, Rabphilin 3a, Svil Antisense Rna 1 Like from Oral Cancer Transcriptomics
Presenting Author: Pradeep Kumar Yadalam, Saveetha Dental College, Saveetha University
Institution Country: India

Poster 6
Title: Epidemiological Characteristics and Histopathologic Patterns Cranial-Spinal Tumours (CSTs) at Bugando Medical Centre in the Lake Zone Region of Mwanza Tanzania
Presenting Author: James Lubuulwa, Bugando Medical Centre (BMC)
Institution Country: Tanzania

Poster 7
Title: Utility of the Cytosponge for Etiological Research in Esophageal Squamous Cell Carcinoma: Proof-of-Concept Pilot Study Using Tobacco-Specific Methylation Markers
Presenting Author: Fazlur Rahman Talukdar, University of Cambridge
Institution Country: United Kingdom

Poster 8
Title: Vehicle Fleet is Associated With Hospitalizations for Oncological Treatment and Surgery in Brazil: A Cross-Sectional Study
Presenting Author: Lucas Kieling, Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA)
Institution Country: Brazil

**Oral Abstract Presenters (see agenda for more details)*

APPENDIX F: BREAKOUT SESSION TOPICS AND ASSIGNMENTS

The high number of participants necessitated two breakout rooms for each topic.

Breakout Room 1: Establishing a mentoring relationship	Facilitator: Maggie Correa-Mendez Notetaker/Jamboard administrator: Yelena Shnayder Panelist: Joanne D'Silva
Breakout Room 2: Establishing a mentoring relationship	Facilitator: Jack Murphy Notetaker/Jamboard administrator: Allison Frank Panelists: Ana Estrada-Florez and Mabel Bohorquez
Breakout Room 3: Making the most of a mentoring relationship	Facilitator: Lucas Buyon Notetaker/Jamboard administrator: Sudha Sivaram Panelist: Richard Moser
Breakout Room 4: Making the most of a mentoring relationship	Facilitator: Rima Elibe Notetaker/Jamboard administrator: Taylor Ladson Panelists: Diana Kassaman and Mazvita Muchengeti
Breakout Room 5: Career development beyond mentoring	Facilitator: Fatou Jallow Notetaker/Jamboard administrator: Doug Puricelli Perin Panelists: Hassan Abushukair and Nagi El-Saghir
Breakout Room 6: Career development beyond mentoring	Facilitator: Hawa Camara Notetaker/Jamboard administrator: Izzy Bandurek Panelists: Kavita Singh and Priya Ranganathan

APPENDIX G: JAMBOARD SCREENSHOTS FROM BREAKOUT DISCUSSIONS

Breakout Room 1: Establishing a Mentoring Relationship

What local or national mentoring programs do you know of?

ASCO https://old-prod.asco.org/career-development/mentorship

US-based: National Research Mentoring Network https://nrmnet.net/

BCNEt at IARC-mentoring in clinical research and Biobanking - open to LMIC scientists (Hendersm@mail.nih.gov)

Research Mentorship Alliance in Ghana

How would you find a mentor if there are no programs available?

Utilize resources like the International Cancer Research Partnership (https://www.icrpartnership.org/) to learn about research taking place that matches your area of interest.

LinkedIn, Literature, Research Gate

Utilize Global Oncology Survey (https://www.cancer.gov/about-nci/organization/cgh/partnerships-dissemination/cancer-centers-global-oncology-survey) to learn about research.

What would you say when first approaching a prospective mentor? How might this differ depending on the channel of communication or how well you know the person?

Do some pre-work prior to first meeting

Breakout Room 2: Establishing a Mentoring Relationship

What local or national mentoring programs do you know of?

How would you find a mentor if there are no programs available?

- LinkedIn
- Research gate
- WhatsApp (if you already have a connection)
- University or company website
- Email
- Conferences to connect with potential mentors

What would you say when first approaching a prospective mentor? How might this differ depending on the channel of communication or how well you know the person?

- Researching mentor, understanding how you can contribute

Breakout Room 3: Maximizing a Mentoring Relationship

What are the key characteristics of a 'model' mentee?

Passion for the science, clear career goals

Intellectually curious and open to new experiences

What themes or topics can or should be explored through mentoring?

Clarity in steps to reach goals

What can you ask from a mentor? Is there anything you shouldn't ask for?

was saying, those are boundaries that should be discussed at the start of a mentor/mentee relationship

Breakout Room 4: Maximizing of a Mentoring Relationship

What are the key characteristics of a 'model' mentee?

- Critical Thinker
- Eager to learn
- passionate
- Key characteristic for both mentor and mentee: honesty
- Openess

What themes or topics can or should be explored through mentoring?

- Themes and topics: Timelines, expectations, career options, stakeholder networking
- Is it feasible to have a mentor outside your institution?
- How to develop skills beyond a mentor's expertise
- short, mid, and longterm goals
- Guidance for next steps

What can you ask from a mentor? Is there anything you shouldn't ask for?

- Funding opportunities
- Conflicts of interest.
- How to resolve issues between mentors and mentees

Breakout Room 5: Career development beyond mentoring

What benefits of mentoring can you seek out from other people or places? Do you have any examples?

Mentors are instrumental to develop mentee career, nourishing interests

International conferences are a good place to look for mentors and interact with them.

What skills do early-career investigators have that will make them good mentors now?

Good listening skills

What can peer mentoring provide that traditional mentoring cannot? And vice versa?

Talk to peers about your own career path, share experiences, as the path may not be always clear.

Mentors can encourage their mentees to take care of their peers, of other students.

Breakout Room 6: Career development beyond mentoring

What benefits of mentoring can you seek out from other people or places? Do you have any examples?

Diversity of mindsets, cultures, that can provide a new angle to troubleshoot, and innovate by looking at things from different angles.

Reading blogs or LinkedIn articles of other people's experiences

What skills do early-career investigators have that will make them good mentors now?

ECRs know the specific challenges of getting into a research career and can relate to other ECRs

Approachability, empathy for upcoming mentees, being more relatable to young investigators more like being a peer to them without the obstacle of hierarchy.

What can peer mentoring provide that traditional mentoring cannot? And vice versa?

Tradiitonal mentoring tends to be hierarchical whereas peer mentoring is more as equals