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ICEC Essential Newsletter

December 18, 2023

can provide cancer care.

The International Cancer Expert Corps accelerated its efforts to improve access to cancer care globally in 2023. ICEC strengthened its mentoring and education partnerships, furthered the essential role of radiation and clinical oncologists in the full spectrum of global cancer care, worked to close the gap in radiation therapy (RT) technology in low- and middle-income countries (LMICs), and advanced global initiatives to link health and security organizations to meet mutual goals. In addition to spearheading independent initiatives, ICEC also expanded its capacity through collaborations with organizations including the European Organization for Nuclear Research (CERN), the World Institute for Nuclear Security (WINS), the Pacific Northwest National Laboratory (PNNL), and Chartrounds, a web-based teaching platform. The Essential Newsletter highlights ongoing progress in opening opportunities to transform millions of lives, both those in need of and those who

The 2023 Roundup

Global Presence: Presentations, Articles, and Events

- "LINACs to Narrow the Radiotherapy Gap": given by Prof. Manjit Dosanjh at the UK Accelerator Institutes Seminar. February 16, 2023 (Link to Presentation PDF and MP4 video)
- CSW67 Virtual Consultation Day: Geneva The Heart of Human Rights, February 28, 2023. Prof. Manjit Dosanjh as Expert Speaker for Technology and Related Education theme (Link to video, 0:34:00) Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, NRSWG
- Matchmaking Session, Eugenia (Nina) Wendling, ICEC Executive Director, Presentation to the Global Partnership Working Group: "Reducing reliance on Cobalt-60 for cancer treatment while addressing the growing global cancer crisis", Tokyo, Japan, March 10, 2023
- <u>UK Civil Society Women's Alliance</u>, Prof. Manjit Dosanjh. CSW67 preparation training panels: technology and education
- CERN international teacher programs:
 - Prof. Manjit Dosanjh, July 2-15, 2023
 - Prof. Manjit Dosanjh, August 6-19, 2023
- CSW Geneva 50th Anniversary: Lecture: Prof. Manjit Dosanjh as speaker on Women, Technology, Access to Health and Role of ICEC. September 21, 2023
- World Institute for Nuclear Security (WINS) Inaugural Roundtable: Fostering Collaboration Between Security and Cancer care-Focused Organizations October 23, 2023

Keynote Speaker: Monique K. Mansoura, PhD, MBA, International Cancer Expert Corps (ICEC),

Board Member, The MITRE Corporation, Executive Director, Global Health Security &

- Biotechnology; "The Case for Collaboration between Health and Security: Lessons from COVID-19 and the International Cancer Expert Corps" Eugenia (Nina) Wendling, ICEC Executive Director; "The International Cancer Expert Corps"
- experience of working with security-organizations" Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, NRSWG
- Matchmaking Session, Eugenia Wendling, ICEC Executive Director, Presentation to the Global Partnership Working Group: "STELLA Linac technology to reduce reliance on and security risks associated with Cobalt-60 EBRT while increasing access to Radiation Therapy," Nagasaki, Japan, November 10, 2023
- November 20, 2023 (Link to lecture) • 14th Seminar of HITRIplus: "Accelerating the future: designing a robust and affordable radiation therapy

• Lecture in Cagliari, Sardinia (Liceo Pacinotti Cagliari): Prof. Manjit Dosanjh, guest speaker on the

importance of multidisciplinary and international collaboration in confronting modern challenges,

treatment system for challenging environments". Prof. Manjit Dosanjh, November 28, 2023. (Link to video)

Project STELLA: (Smart Technology to Extend Lives with Linear Accelerators): On the Frontier of Cancer Care More than half of all cancer patients can benefit from RT, and by 2040, the annual global incidence of cancer is

expected to rise from 19.3 million to 27.5 million cases (approximately 16.3 million deaths) with 70% of them in LMICs. Unfortunately, many regions around the world do not have the necessary infrastructure to support the operation of current linear accelerator machines used in high-income areas.

This year, ICEC received funding from the United States Department of Energy to advance the work of Project STELLA, an initiative to develop a new, robust and more affordable medical linear accelerator and supporting systems to address the minimal presence of RT in LMICs. In collaboration with ICEC, CERN, STFC (UK), Lancaster and Oxford Universities, STELLA is critical to improving access to cancer treatment worldwide.

More information is available using this link.

















A workshop comprised of African country representatives to review and discuss clinical design needs for

Discussion on Project STELLA

the STELLA LINAC On February 10, ICEC organized an online workshop co-chaired by Manjit Dosanjh, PhD (ICEC, CERN, Oxford)

and renowned Nigerian medical physicist Taofeeq Ige, PhD. Hosted by the European Organization for Nuclear Research (CERN), it included nearly 50 representatives from LMICs, CERN, ICEC and others regarding efforts to increase access to RT through the development of a novel LINAC designed especially for those delivering care in resource-limited settings and LMICs. Participants included individuals with unique expertise and who have made important contributions in collecting data to inform Project STELLA. The participants reviewed the preliminary STELLA LINAC conceptual design report and specifications, emphasizing end-users' needs in efforts to produce an updated and detailed list that reflected the needs of

clinicians and medical physicists in resource-limited regions delivering RT to cancer patients. Presenters also provided an overview of ICEC, the history and motivation for Project STELLA, and a summary of the recent survey of 28 African countries which have linear accelerator-based radiation therapy.



Prof. Manjit Dosanjh and Dr. Taofeeq Ige, co-chairs of the discussion held on February 10, 2023.

Chartrounds Partnership

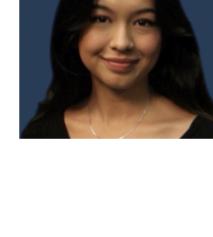
ICEC has established an official partnership with Chartrounds, a virtual platform designed to increase accessibility to cancer expertise and encourage global collaboration across medical specialties. Membership is free and provides access to live lectures and case studies on disease-site specific topics, from head and neck cancer to brachytherapy. Some new features of the partnership include seminars held by ICEC-referred experts and a keyworded library of session archives for members unable to attend live events. More information on Chartrounds is available on our website using this link. To register for a free membership

and access to live lectures and case studies, sign up here. ICEC and Chartrounds are also collaborating to develop Chartrounds Africa, launching in early 2024. This new venture is built around the needs of African oncology physicians and medical physicists to discuss patient

management and treatment plans with trusted colleagues in real-time.

Welcoming ICEC's Special Project and Communications Coordinator Following the organization's growth this past year, Sierra

Kelleher has joined ICEC as a Special Project and Communications Coordinator. She assists in facilitating partnerships and mentorship programs between ICEC and other regional groups and manages the organization's social networking and communications platforms. Following a year of working for ICEC as an intern and part-time colleague, Sierra enters the position familiar with the nonprofit's mission and vision and is committed to furthering this work in her new role.



Established between ICEC, Bugando Medical Centre (BMC) and the American Brachytherapy Society (ABS)

Bugando Medical Centre Twinning Program

ICEC has supported the Bugando Medical Centre's Department of Radiation Oncology, located in Mwanza, Tanzania, since 2020 through ongoing education, training and mentoring programs to help advance the department's treatment of patients with cancer. In 2021, ICEC, supported by radiation oncology brachytherapy

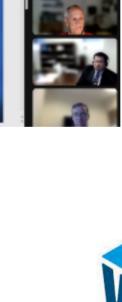
specialists who are members of the American Brachytherapy Society International Committee, initiated monthly Zoom sessions to provide expert guidance to the BMC brachytherapy team in their treatment of patients with cervical and breast cancers. In mid-2023, the BMC team requested additional support from ICEC to initiate an HDR brachytherapy program for the treatment of prostate cancer, which in 2020 was reported as the most common cancer among men in Tanzania. ICEC enlisted help from radiation oncologists at the University of Kansas Medical Center (KUMC),

who determined that the BMC program staff possesses sufficient expertise, training and knowledge to initiate a

prostate HDR brachytherapy program. ICEC, KUMC and BMC are working to obtain an ultrasound machine, a necessary piece of medical equipment to start implementing the program. If you are interested in contributing to this program, contact info@iceccancer.org.

HDR Prostate Brachytherapy Workflow





WINS Inaugural Roundtable In October, ICEC presented at several sessions of the World Institute for Nuclear Security's inaugural roundtable, "Roundtable on Fostering the

Collaboration Between Security and Radiotherapy-Focused Organizations." The roundtable, held in Bethesda, Maryland, just outside Washington, DC, brought together security-focused and radiationtherapy (oncology) organizations to assess the current status of

radiological security and radiotherapy in LMICs and identify areas of collaboration that the two organizations could leverage to further mutual goals to support the secure use of radioactive sources while increasing access to linear accelerator-based RT. The roundtable highlighted the mutual benefits of collaborating to achieve shared objectives and the risks that can occur from a lack of partnerships. Presentations over the two-day roundtable emphasized the need for collaboration between the disciplines. Participants shared examples of successful collaborations and highlighted transferable

lessons regarding strengthening security and radiotherapy-focused



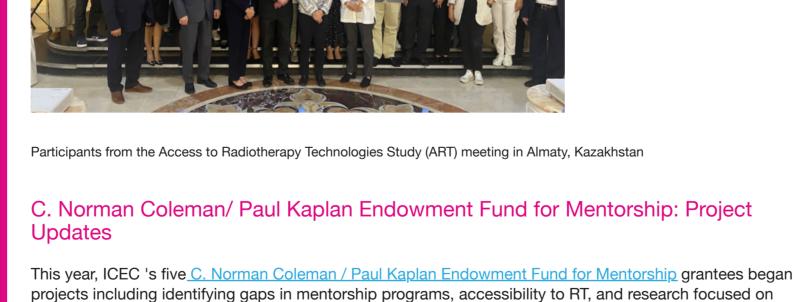
plans to build on these ideas to pursue tangible actions. ART (Access to Radiotherapy Technologies) Study ICEC finalized its Access to Radiotherapy Technologies Study funded by the US Department of Energy NNSA ORS. The study provides a better understanding of the accessibility of linear accelerator-based RT for cancer

missions. The roundtable ultimately identified several practical steps and

opportunities for training and education, infrastructure challenges and regulatory requirements that must be met to facilitate the adoption of LINAC-based RT. The study included participation by regulators of RT equipment as well as physicians, physicists and research scientists.

patients across the Baltic Region, Eastern Europe, Central Asia, and the Caucasus including Armenia, Azerbaijan, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Tajikistan, Ukraine and Uzbekistan. The report provides important insights into the challenges faced in transitioning from Cobalt-60

external beam radiation therapy machines to linear accelerators (LINACs), including the needs and



improving the quality of certain cervical and breast cancer treatments.

All reports are available on our website Highlighted grantee: Goodluck Nchasi's research continues to expand the CUHAS Cancer Research Scholar Program in Mwanza, Tanzania. Per his report:

"Medical and pharmacy students were competitively selected to be paired with research mentors from CUHAS and other research institutions to develop and implement their research projects. The scholars have completed most lectures on topics including research ethics, design, and analysis. Pre- and post-implementation surveys after each lecturer evaluate growth. Knowledge scores are modeled as a function of exposure groups based on the number of workshops attended, adjusting for their baseline knowledge. Small group discussions are facilitated by alumni from the pilot cohort. The ICEC Endowment has greatly supported our scholars' IRB submission, stationary, and statistical support."



ICEC HUB

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CENTER

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