



General Update

2021 was the 50th anniversary of the National Cancer Act that began “The War on Cancer” with substantial progress in understanding the complex biology of cancer, the immune response and how to reduce normal tissue damage which has resulted in ever-improving treatments. For 2022 the confluence of challenges and opportunities oncology confronts involves addressing inequality of access to health- and cancer- care, building an empowered workforce for the rapidly advancing biologically-based and technology-wise cancer care and furthering and supporting the essential role for radiation and clinical oncologists in the full spectrum of global cancer care.

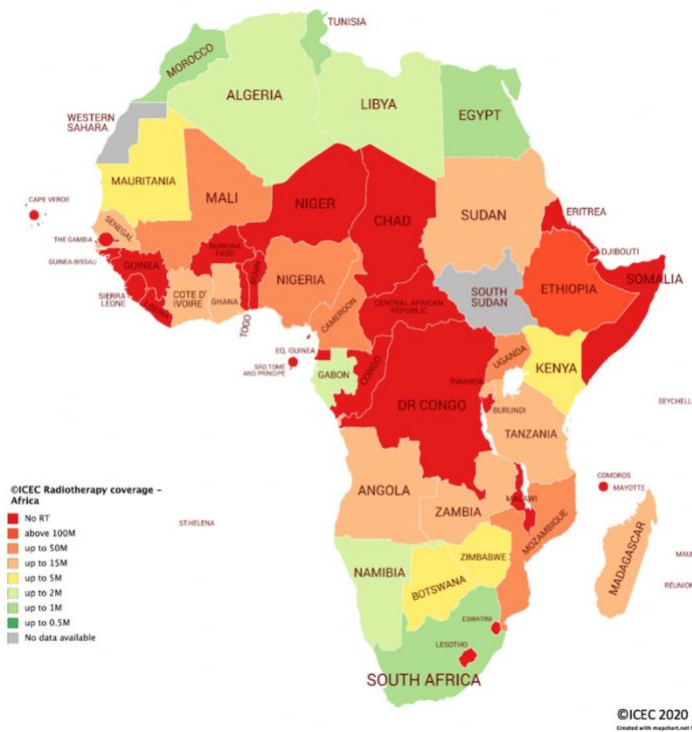
ICEC’s “Essential News Letter” highlights ongoing progress in opening opportunities to transform the lives of many millions of people both those in need of and those who can provide cancer care.

Studying Barriers to Radiation Access in LMICs

Surveying the Challenges to Improve Linear Accelerator-based Radiation Therapy in Africa

Access to radiation therapy (RT) is critical to address the growing global cancer crisis. ICEC has been interested in identifying barriers to RT and understanding how barriers could be reduced or eliminated. As part of a global initiative launched in 2016 by ICEC and CERN, the Science Technology and Facilities Council (STFC UK) Global Challenges Grant

funded the ITAR project, “Innovative Technologies towards building Affordable and equitable global Radiotherapy capacity”. As part of this project, ICEC researchers, including Taofeeq Ige, PhD, Medical Physicist at National Hospital Abuja, headed a study that surveyed all 28 African countries with linear accelerators. Working with key clinical, political and technical stakeholders, the study produced a list of priority problems to solve. The survey included questions regarding the performance of LINAC components, variables that influence machine performance and their association with equipment downtime. Sub-Saharan Africa is a highly informative case study. It comprises countries with differing needs and problems, including a variation in cancer burden, epidemiological and demographic transitions, and variation in wealth,



health systems organization (public, private, mixed), and political commitment towards addressing NCDs. The full report can be found at this link: [Surveying the Challenges to Improve Linear Accelerator-based Radiation Therapy in Africa: a Unique Collaborative Platform of All 28 African Countries Offering Such Treatment.](#)

South East European (SEE) Countries

Building on efforts to understand access to cancer care globally, ICEC Board Member Manjit Dosanjh, CERN, Oxford University, participated in a study with the South East European International Institute for Sustainable Technologies (SEEIST), CERN and other renowned researchers to better appreciate the cancer landscape in the South East European countries and to identify the needs of the region. There is a limited amount of available information regarding cancer registries, organized screening programs, cancer-prevention campaigns, and access to advanced treatment modalities in this region. These limiting capabilities contribute to a lower likelihood of early cancer diagnosis resulting in poorer outcomes. The study sought to identify the availability of cancer patient data and access to diagnostics and radiation therapy, and to understand radiation protection and safety issues for licensing and operating RT equipment. The survey results indicated that cancer incidence is higher where the availability of diagnostic equipment is greater. The lack of RT equipment corresponds to poorer outcomes with fatal consequences in more than half of patients. The SEE region will benefit from economic development, access to diagnostic and screening programs, enhancing cancer registries and increasing access to RT equipment results in higher cure rates. Read the full article, [“Cancer patients in the countries of SEE \(the Balkans\) region and prospective of the Particle Therapy Center – SEEIST”](#) Advances in Radiation Oncology (2021) Mimoza Ristova, Vesna Gershan, Herwig Schopper, Ugo Amaldi and Manjit Dosanjh.



Increasing Access to Radiotherapy Technologies

Linacs to narrow radiotherapy gap

By 2040, the annual global incidence of cancer is expected to rise by more than 42% from 19.3 million to 27.5 million cases, corresponding to approximately 16.3 million deaths. Remarkably, 70% of these new cases will be in low- and middle-income countries (LMICs), which lack the healthcare programs required to effectively manage their cancer burden. While it is estimated that about half of all cancer patients would benefit from radiotherapy (RT), there is a significant shortage of RT machines outside high-income countries. The recent article "Linacs to narrow radiotherapy gap" published in *CERN Courier*, highlights a technology initiative launched at CERN, known as Project STELLA. The collaborative project is preparing to build its first linear-accelerator prototype designed to address the lack of radiotherapy in low- and middle-income countries. [Read the full article.](#)



Science and
Technology
Facilities Council



Access to Radiotherapy Technologies Study

ICEC encourages the transition from cobalt-60 RT machines to linear accelerators through education, training and mentoring programs. While cobalt-60 external beam radiotherapy machines provide access to an essential component of cancer care, medical linear accelerators (LINACS) are more secure and generally accepted to be more effective than cobalt-60 units for cancer radiation treatment, delivering more advanced treatment options resulting in better treatment outcomes. ICEC has initiated the “Access to Radiotherapy Technologies Study” funded by the Pacific Northwest National Laboratory and the US Department of Energy National Nuclear Security Agency Office of Radiological Security to expand its understanding of different global regions’ reliance on Co-60 machines, including identifying barriers to that may impede the transition to alternative technologies in a number of countries in Eastern Europe, Central Asia, and the Caucasus. According to an earlier study by the IAEA, countries within the Caucasus region ranked second highest in the world (only behind sub-Saharan Africa) in the number of treatment machines that relied upon co-60.

Exciting Upcoming Announcement Regarding the Establishment of an Endowment Fund for Mentorship

ICEC was recently bequeathed a generous gift to establish an Endowment Fund for Mentorship. A formal announcement will be made in January 2022 that will provide details about the important and consequential donation including the donor's relationship to the organization, the Endowment's mission, and parameters for future granting opportunities.

ICEC Twinning Program Update

Twinning Program established between ICEC, Bugando Medical Centre and the American Brachytherapy Society

Building upon an established and highly successful Twinning Program between ICEC, Duke Global Institute's Dr. Kristin Schroeder and Dr. Nelson Chao and the Bugando Medical Centre's Pediatric Oncology Department, ICEC, engaged with Dr. Daniel Petereit and the American Brachytherapy Society (ABS) to offer Brachytherapy training, mentoring and support to the Bugando Medical Centre's Radiation Oncology Department. Members of the ABS International Committee, headed by Dr. Junzo Chino, have joined the initiative providing ongoing brachytherapy training and mentoring through case review, educational presentations and providing training and educational resources. Dr. Nestory Masalu, Head of the Oncology Department and Dr. Beda Likonda, Head of the Radiation Oncology Department at BMC, have been integral to establishing this program. The Brachytherapy program, initiated at the beginning of 2021, is supported by ten radiation oncologists and continues to expand in scope. If you are interested in working with ICEC on this program or others, contact ICEC at info@iceccancer.org.

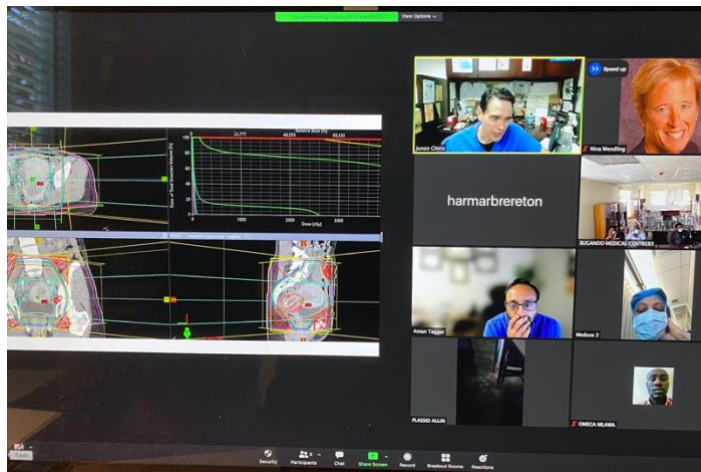


Photo: ICEC /BMC / ABS Zoom Brachytherapy Meeting

ICEC increasing global contributions

ICEC leveraged the "new Covid environment" of 2021 by expanding its online global contributions through increased participation in web conference presentations, implementing training and mentoring programs, research and engagement with other programs.

World Institute for Nuclear Security



In April 2021, ICEC Manjit Dosanjh, PhD, ICEC, CERN and Oxford University; and Taofeeq Ige, PhD, National Hospital Abuja, delivered the presentation, "Defining the challenges from the grass-roots perspective and delivering innovative Linac-based RT solution at the World Institute for Nuclear Security 2nd Virtual Roundtable on [Strengthening the Coordination of International Programmes involved in the Adoption of Alternative Technologies](#).

The 6th annual Meeting of the Ad Hoc Working Group of Stakeholder States Involved with Technological Alternatives to High-Risk Radioactive Sources



Held virtually in June 2021, Nina Wendling, ICEC Executive Director, delivered the presentation, "The challenges of public-private partnership." The Ad Hoc Working Group, organized by the NNSA's Office of Radiological Security and its counterparts in France and Germany, aims to exchange views and ideas on the use and consideration of alternative technologies to high activity sealed radioactive sources. [Learn more about this meeting and the final report here.](#)

CUGH 2021 Virtual Conference, "Addressing Critical Gaps in Global Health and Development"



The presentation, "Innovation for finally addressing the growing pandemic of noncommunicable diseases (NCDs) in LMICs and rural HICs: A novel comprehensive global approach through developing flexible multidisciplinary-competence, disruptive technology solutions, pioneering academic career paths and strong mentoring relationships" was delivered by Taofeeq Ige, PhD, National Hospital Abuja; Kristin Schroeder, MD, Duke Global Institute; Manjit Dosanjh, ICEC, CERN, and Oxford

University; Donna O'Brien, MHA, Strategic Visions in Healthcare; Norm Coleman, MD, Senior Scientific Advisor to ICEC; and Nina Wendling, Executive Director, ICEC. This unique presentation outlined ICEC's global model that develops and supports "flex-competence©" - the organizational capacity and expertise needed to adapt to both the predictable essential needs (maternal/child, general healthcare) and the more complex management of IDs and NCDs, while building in flexibility to rapidly address a surge from a pandemic, natural disaster or terrorist incident. Read more in the recent article, ["Achieving flexible competence: bridging the investment dichotomy between infectious diseases and cancer,"](#) Coleman CN et al.

Wilton Park: Advancing best practices for radiation oncology



The Wilton Park program assessed ways of ensuring sustainable access to radiation therapy and cancer care, engaging policymakers on the potential scope of work related to addressing training and technology access issues through discussions with technical experts. The agenda focused on how to improve sustainable access to technology and equipment, and how to train the necessary workforce for radiation therapy, and how to sustain the workforce over the long term. Manjit Dosanjh, ICEC, CERN, and the University of Oxford presented "Access to technology: collaboration and partnerships" that focused efforts of ICEC and others to expand access to technology through workforce sustainability building and strengthening programs.

Skeptics in the Pub: From Higgs to Healthcare in low-resource regions

[Skeptics in the Pub](#) is an informal social event designed to promote fellowship and social networking among skeptics, critical thinkers, freethinkers, rationalists and other like-minded individuals. It provides an opportunity for skeptics to



talk, share ideas and have fun in a casual atmosphere, and discuss whatever topical issues come to mind while promoting skepticism, science, and rationality. In May 2020, Manjit Dosanjh presented, "[From Higgs to Healthcare in low-resource regions](#)" a global collaboration that includes engineers and physicists from CERN, the International Cancer Expert Corps (ICEC), the UK Science and Technology Facilities Council's (STFC) Daresbury Laboratory, Lancaster and Oxford University and users in Africa and other Low- and Middle-Income Countries (LMICs) that is aiming to change the current status quo improving access to radiation therapy.

Global Engagement

ICEC granted special consultative status to the UN Economic and Social Council (ECOSOC) Committee on Non-Governmental Organizations

On 21 July 2021, the Economic and Social Council (ECOSOC) adopted the recommendation of the Committee on Non-Governmental Organizations (NGOs) to grant special consultative status to the International Cancer Expert Corps. Consultative status for an organization enables it to engage in a number of ways with ECOSOC and its subsidiary bodies, the Human Rights Council, and, under specific conditions, some meetings of the General Assembly and other intergovernmental bodies, as well as with the United Nations Secretariat.



The Conference of Non-Governmental Organizations in Consultative Relationship with the United Nations ([CoNGO](#)) is an independent, international membership association founded in 1948, the year of the Universal Declaration of Human Rights. As an NGO in general consultative status with ECOSOC, CoNGO's work relates to the entire United Nations System: the Secretariat, Agencies, Treaty Bodies, Regional Commissions, Institutes, Summits and World Conferences.



In October 2021, CoNGO hosted the Summit on Substantive Issues. The focus of the summit was to identify the issues and concerns NGOs are addressing and must address today and examine whether CoNGO's responses to these issues and concerns are adequate and relevant—both in the present context and for the future. ICEC Board member, Manjit Dosanjh presented on the [Panel: Social Justice: Migration, Racism, and Health](#) highlighting global disparities in health with a focus on access to cancer treatment and the innovative STELLA radiation technology project. On December 1, 2021, ICEC was elected to serve a three-year term on the CoNGO Board.

Donate Now!

ICEC invites our community to help support ICEC Twinning Programs and mentoring relationships in Tanzania, Nigeria, Armenia, Botswana, and in rural regions of South Dakota, working with the Lakota Sioux providing cancer care to the community. Your contribution makes a significant difference in our work to strengthen healthcare systems that deliver quality cancer care. Please consider making a year-end tax-deductible contribution today. For more information about contributing to support ICEC's programs, go to <https://www.iceccancer.org/donate/>.

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