

Access to Radiotherapy Technology Study (ART)

The International Cancer Expert Corps (ICEC) a non-profit organization, is undertaking a regional study to understand the level of access to linear accelerator-based Radiation Therapy (RT) for cancer patients. Regional countries participating in this project include **Armenia, Azerbaijan, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.**

The study's main objective is to determine barriers to and plans for the adoption of medical linear accelerators (LINAC) for cancer treatment. The study includes participation by regulators of RT equipment as well as physicians, physicists and research scientists in the institutions in your country that utilize those medical devices, and academic, institutional and medical researchers.

By leveraging what has been learned from our previous studies and analysis in the use of LINAC and Cobalt-60 (Co-60) based technology for RT for cancer treatment in Africa[1] and South-East European Countries[2] (the Balkan Peninsula) in the current ART project, we plan to study and understand the status of RT and assess the need for training and capacity building for effective and efficient treatment in the selected countries.

Questionnaires have been developed targeting the following profiles:

1. Clinicians (radio-oncologists) from the region in order to obtain data from hospitals about cancer, number of treated people, number of operational machines etc. The objectives for adapted surveys are to better understand facility- and national-level plans for transitioning from Co-60 to LINAC, training and education opportunities, infrastructure challenges in LINAC operation, and any reservations/concerns about transitioning from co-60 to LINAC.
2. A scientific community that could be involved in the future for RT and radiobiology research facilities, in order to provide information about the research and education in accelerated particles and related topics (fundamental research and radiation/particle therapy).
3. Regulatory bodies for radiation protection including the nuclear regulators and Ministries of Health for the countries being studied to gather data for the radiotherapy equipment.

The information obtained will provide a better understanding of national-level plans for transitioning from Co-60 to LINACs, needs and opportunities for training and education as well as regulatory requirements for LINAC-based RT.

Project Stakeholders:

ICEC: Eugenia Wendling, David Pistenmaa, Manjit Dosanjh with collaborators Mimoza Ristova and Vesna Gershan (N. Macedonia), Petya Georgieva (SEEIIST)

ISTC: David Cleave, Irina Khomeriki, Sonya Vekstein

STCU: Curtis Bjelajac, Elena Taberko, Alfreda Rosca, Gulam Babeyev

For more information, please visit the Access to Radiotherapy Technologies Study (ART) website.

[1] Ige TA et al., Surveying the Challenges to Improve Linear Accelerator-based Radiation Therapy in Africa: a Unique Collaborative Platform of All 28 African Countries Offering Such Treatment, *Clinical Oncology*, <https://doi.org/10.1016/j.clon.2021.05.008>

[2] Dosanjh M, Ristova M et al., Availability of technology for managing cancer patients in the SEE region. *Clinical and Translational Radiation Oncology* 2022, Vol 34, 57-66. <https://doi.org/10.1016/j.ctro.2022.03.004>