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for STS: 37 (42%) CR, 12 (14%) PR, 38 (43%) NR and for bone sarcoma: 14 (30%) CR, 4 (9%) PR, 28 (61%) NR. 2-year OS for early-stage STS and bone sarcoma was significantly higher at 75% and 90% respectively compared to late-stage disease 21% and 25% ($p < 0.001$).

Conclusion: This is the first report to document treatment and outcome for pediatric sarcomas in Tanzania. We show that early-stage disease is potentially curable while advanced stage disease has significantly worse outcomes. Patents with stage IV disease are likely to receive palliative care only. Future studies are needed to explore reasons for high rates of incomplete treatment with chemotherapy and no radiation therapy in Tanzania.

Author Disclosure: A. Ewongwo: None. S.E. Mithé: None. R. Von Eyben: None. N.J. Dharsee: None. Z.S. Abraham: None. T. Scanlan: None. L. Million: None.

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Challenges and Opportunities for Increasing Adoption of Hypofractionated Radiotherapy in Low- and Middle-Income Countries

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Purpose/Objective(s): In the advent of the COVID-19 pandemic, professional societies including the American Society for Radiation Oncology and the National Comprehensive Cancer Network recommended increased adoption of evidence-based hypofractionated radiotherapy (HFRT), with benefits including significantly reducing the number of clinical visits for each patient to minimize potential exposure to infection, and reducing treatment costs and stress on limited workforce, particularly beneficial in Low-and-Middle-Income Countries (LMICs). Despite these benefits, HFRT adoption remains low, especially in LMICs. The purpose of this study is to investigate the challenges and opportunities for increased adoption of evidence-based HFRT in LMICs.

Materials/Methods: An IRB-approved survey was implemented in 18 sample radiotherapy centers in African LMIC to assess the challenges and utilization of HFRT. The experiences of three cancer centers were documented as part of an ongoing multi-center HFRT clinical trial designed to compare results with those reported for clinical trials involving North American and European Populations. Based on the findings assessed, challenges from the survey, and recorded experiences from the three centers, an online education and training program was developed in collaboration with the Global Health Catalyst, Radiation Knowledge and computer-based training tools for treatment planning, contouring, and online learning, with remote support provided by members from the international councils of ASTRO and AAPM.

Results: Only 8 of 18 surveyed clinics reported adopting HFRT as a common practice. Analysis of survey data demonstrated a significant need for training on contouring for radiation oncologists, and treatment planning and quality assurance. An education and training program was developed for implementation in the LMICs via a collaborative education model involving ASTRO and AAPM members who are faculty in USA institutions in collaboration with LMIC radiation oncology professionals.

Conclusion: The findings demonstrate a need for additional investment in infrastructure and training, as well as better ongoing education of oncology leaders on the benefits of increased adoption of evidence-based HFRT. The project also highlights opportunities and approaches for leveraging information and communication technology for collaborative high-impact global radiation oncology education, with the participation of members across both LMIC and USA institutions and professional societies. The HFRT training program provides a template for continuous education and training to increase the adoption of evidence-based approaches to HFRT that can significantly increase improved access to radiotherapy and reduce

disparities in advancing globally the practice of radiation oncology. The impact of such a program and approach will be presented and discussed.

Author Disclosure: A.O. Joseph: None. W. Swanson: None. O.C. Irabor: None. A. Nobeh: None. S.M. Avery: None. S. Huq: None. W. Ngwa: None.

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Lessons Learned from Remote Global Radiation Oncology Education and Training on IMRT for Low- and Middle-Income Countries

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Purpose/Objective(s): There is a vital need to train radiation oncology professionals in low-and middle-income countries (LMICs) to develop sustainable capacity and infrastructure for clinical oncology care. Radiotherapy departments in LMICs have started to introduce intensity-modulated radiotherapy (IMRT), which is widely utilized in high-income countries and has become the standard of care due to reduced toxicity and improved outcomes in a wide variety of cancers. This work reports on the initiatives and experience with the use of an online training and learning program for global radiation oncology education and training across three LMICs: Uganda, Mongolia and Guatemala

Materials/Methods: Four interactive lectures and four sequential hands-on (step-by-step on IMRT processes) training sessions were given by radiation oncologists and medical physicists at XXX University in XXX, focusing on site-specific target definition, normal tissue contouring, IMRT planning and optimization, and IMRT QA. Additional four weeks of eight online videos and materials developed by XXX were provided to participants to review with quizzes after each week. Pre- and post-surveys, including 10-point confidence scores and free-response questions were performed to evaluate the outcome of the training sessions. Padlet was used as a platform for questions and answers during and after the training sessions.

Results: On average, 37 participants, including 15 radiation oncologists, 11 medical physicists, 5 dosimetrists, and 6 radiation therapists, participated in the virtual training sessions. Eighty percent of the participants responded to the surveys taken immediately following training. 66.7% had not received the IMRT training before. The level of confidence level using IMRT in the clinic increased from 3.25 ± 1.98 to 5.25 ± 2.20 . Lessons learned include: 1. Hands-on training sessions are preferred to lectures; 2. Through virtual training, interactions between trainers and trainees are important to engage participants; 3. Different training sessions designed for specific groups (radiation oncologists, medical physicists, radiation therapists and dosimetrists) are needed to improve the relevance; 4. Online self-guided videos are easy to scale up but are a challenge to meet the specific needs of specific groups. 5. Language barrier is one of the limitations to performing the training for non-English speaking LMIC participants.

Conclusion: Remote training provides an excellent and feasible e-learning platform to train radiotherapy professionals in LMICs. If adequately supported, the use of virtual training model can be an effective way to build capacity, as there are limited numbers of academically