

CaREER Program Seminars

Background: The overall goal of the CaREER program is to train and empower the next generation of scientists, technologists and physicians skilled in cancer research including in emerging transformative areas of radiotherapy and addressing disparities. The specific aims of the program include year-round complementary didactic CaREER program activities with research seminars and workshops. Seminars will cover responsible conduct of research, research design, leadership, global health, cross-cultural communication and introduction to transformative research areas in radiotherapy including AI, FLASH, Global Health, Radioimmunotherapy etc. Meanwhile, yearly CaREER workshops during Global Health Catalyst summits will focus on knowledge/experience sharing and/or research posters/oral presentations by trainees, and networking involving participants from different cultural backgrounds and disciplines.

Seminar Schedule (Subject to Change)

Dates 2024-2025	Lecture / Topic	Topic Description	Planned Instructors
June 3	CaREER Program Orientation	Orientation on the CaREER program and introductions for all CaREER Fellows/Trainees for 2024	W Ngwa
June 7-9	Global Health Catalyst summit at Johns Hopkins University (Bloomberg Center at 555 Pennsylvania Ave, Washington DC)	Topics will include Addressing disparities in the USA and for Global Health in Oncology Cross-disciplinary and cross-cultural collaborations Artificial intelligence in Radiation Oncology and Global Health Hypofractionated Radiotherapy	Global Health Catalyst summit speakers
June 17	Responsible Conduct of Research	Topics include: a. Publication practices and responsible authorship , b. Conflicts of interest, research misconduct , c. Peer review , d. Data management , e. Collaborative research	CITI/Recorded Videos and assessment Please watch the videos by clicking on the topics on the left. The Video lectures are also available on the course learning management system
July 14	Radio-immunotherapy	Introduction to Radio-immunotherapy: opportunities, challenges, and potential impact	W Ngwa R Hobbs or invited speaker
August 18	MRI-guided radiotherapy	Introduction to Image guided radiotherapy for different radiotherapy modalities: MRI-focused	A Viswanathan or Invited speaker
September 15	FLASH Radiotherapy	Introduction to FLASH and ongoing research	M Rezaee/X Jia or Invited Speaker
October 13	Artificial intelligence (AI) in Radiotherapy	Introduction and broad coverage of AI in radiotherapy	J Lee H Quon or Invited Speaker
November 17	Radiomics	Application of AI in Radiomics	K Ding or Invited speaker
December 15	Nanoparticle-aided Radiotherapy	Comprehensive coverage of nanoparticle-aided radiotherapy with hyperthermia, radiosensitization, photoelectric effect etc.	R Ivkov or Invited Speaker
January 19	Smart Radiotherapy Biomaterials and drones	Coverage of both inert and smart radiotherapy biomaterials and multi-functionality, merits and demerits, clinical translation; and potential as low-cost technology for addressing disparities	W Ngwa or Invited Speaker

February 16	Radiobiology	Introduction covering Classification of radiations in radiobiology; Cell cycle and cell death; Irradiation of cells; Type of radiation damage.	P Oberdoerffer or M Goldstein or Invited Speaker
March 16	Oncogenetics/Epigenetics	Mechanism of Cancer (tumor suppressor genes and oncogenes) and relevance in radiation oncology.	M Laiho or F Bunz or Invited Speaker
April 13	Leadership training seminar	This will cover leadership skills and their application in research	Invited Speaker
April 20	End of Course and Award of Certificates for those participating in at least 80% of the Webinars and completing any assessments after the lectures		