Cancer Clinical Genetics Course
An Initiative of the African Oncogenetics Network

Training Principles and Philosophy

The GCLL Cancer Clinical Genetics Course aims to provide oncology genetics educational training and resources to help inform patient identification, testing, counseling, prevention, and treatment oncology practices for primary care providers and general oncologists. For example, carriers of germline BRCA1/2 or Lynch Syndrome mutations are at increased risk of breast, ovarian, prostate, endometrial, colorectal, and other cancers. Genetic testing is of clinical value because many mutations are actionable in reducing risk, predicting prognosis, determining appropriate treatment regimens, and evaluating treatment response. To increase the capacity for cancer genetic testing and counseling in resource limited settings, this course aims to provide a foundation for clinicians without specific training in clinical cancer genetics who wish to understand this field and incorporate this into their practice.

Training Overview

The Cancer Clinical Genetics Course is a distance (web-based) asynchronous virtual core training that teaches the basic concepts and principles used in cancer clinical genetics, with a focus on best practices for cancer clinical genetics in Africa. Topics will include an overview of basic inheritance patterns, hereditary cancers and syndromes, the ethics and practice of cancer genetics in Africa, patient eligibility and ascertainment, genetic testing and interpretation, and principles of genetic counseling. The module will provide a foundation for clinicians without specific training in clinical cancer genetics who wish to understand this field and incorporate this into their practice. Trainees will have access to a suite of pre-recorded videos recorded by international leaders in Oncogenetics. Some lectures and discussion sections will involve case presentations.

The proposed training will:

- Provide training on the Genomics and molecular basis of Cancer development (gene categories on their penetrance, different cellular and molecular pathways, etc)
- Provide training in competencies necessary to assess and diagnose cancer risk and determine treatment modalities.
- Strengthen and develop strategies to improve health outcomes for patients at increased risk.

Audience

This course is designed for African clinicians and healthcare professionals (including primary care providers, physician assistants and nurses) who would like to increase their overall understanding of oncogenetics, cancer risk assessment, hereditary cancer syndromes, and genetic counseling.

Format

Each lecture will be available asynchronously as a self-directed learning, self-paced, with online access to learning materials. There will be a knowledge check (quiz) after each lecture for tracking performance and completion. A certificate of completion will be available post training. CME or similar credits could be offered if it were of value to the participants. The lectures will initially be available in English with future expansion to other languages. There is no cost to participate in this training.

Course Directors

Yosr Hamdi, Institut Pasteur de Tunis, Tunisia
Achille Manirakiza, King Faisal Hospital, Rwanda
Timothy Rebbeck, Dana-Farber Cancer Institute

Course Syllabus

Module	Lecturer	Institution
Basic Genetics	Wijden Mafoudh	University of Tunis El Manar, Tunis,Tunisia
	Rokhaya Ndiaye	Cheik Anta Diop University, Dakar, Senegal
Ethics, confidentiality, regulatory elements	Prisca Adejumo	University College Hospital, Ibadan, Nigeria
Oncology and Genetics	Yosr Hamdi	Institut Pasteur de Tunis, Tunis, Tunisia
	Wijden Mahfoudh	University of Tunis, El Manar, Tunisia
	Huma Rana	Dana-Farber Cancer Institute, Boston, MA USA
Genetic counseling basics	Farid Barquet Ramos	Dana-Farber Cancer Institute, Boston, MA USA
Genetic Counseling	Mohamed Zahir	Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania
Recognizing at-risk groups	Diane Koeller	Dana-Farber Cancer Institute, Boston, MA USA
	Junne Kamihara	Dana-Farber Cancer Institute, Boston, MA USA
	Prisca Adejumo	University College Hospital, Ibadan, Nigeria
	Chinedu Ukaegbu	Dana-Farber Cancer Institute, Boston, MA USA
	Asaf Maoz	Dana-Farber Cancer Institute, Boston, MA USA
	Tim Rebbeck	Dana-Farber Cancer Institute, Boston, MA USA
Genetic Testing	Brandie Heald Leach	Exact Sciences, Cambridge, MA USA
	Raj Ramesar	University of Cape Town, Cape Town, South Africa
Sequencing Technology and Genotypic Techniques	Joyce Ngoi	Yemaachi Biotech, Accra, Ghana
Care pathways, referrals, molecular tumor boards	Achille Manirakiza	King Faisal Hospital, Kigali, Rwanda

This training is organized through Dana-Farber Cancer Institute's Center for Global Health and the Zhu Family Center for Global Cancer Prevention at the Harvard T. H. Chan School of Public Health.

Evaluation Plan and Benchmarks for Success

Evaluation will include assessment by pre- and post-lecture quizzes. Certificates will be issued for successful completion of the training program.