

Augustine Muisyo Musyoka

PhD candidate fellow in the Network for Oncology Research in Sub-Saharan Africa

Moshi, KCRI, Tanzania



Molecular characterization of Chronic Myelogenous Leukemia and factors that influence molecular and haematological responses among patients during treatment with the Tyrosine Kinase Inhibitor, Imatinib, in Northern Tanzania

I aim at studying the molecular mutations resulting to Chronic Myelogenous Leukemia and determine the factors that influence the treatment responses at both molecular and cytological levels among the patients who are on Imatinib treatment in Northern Tanzania).

I will use Prospective and Retrospective study designs as well as qualitative and quantitative study methodology to meet the objectives of the study. Molecular studies will be used to characterize the mutations associated with CML. Real-Time PCR will be utilized to determine the Molecular responses and Next-Gen Sequencing platform will be used to determine mutations on the Tyrosine Kinase gene, at pre-exposure and during exposure to Imatinib among patients with poor molecular responses. Haematological response will be determined using the Full-Blood Counts. Factors affecting the outcomes will be determined by interviewing patients and healthcare workers.

I expect to understand the mutations associated with CML in Northern Tanzania and study factors that influence the outcomes of treatment of patients with CML being treated with Imatinib, in order to explore ways to mitigate the problems associated with poor outcomes.

Finally I plan to design and implement an intervention that will help improve early diagnosis and initiation of treatment among patients with cancer through sensitization and training improvement.

Research Task 1

Supervisors

Prof. Blandina Mmbaga, Dr. Oliver Henke, Dr. Alex Mremi, Dr. Marcus Bauer, Dr. Elifuraha Mkwizu