REPORT OF THE 3RD INTERNATIONAL KENYA SOCIETY OF HAEMATOLOGY AND ONCOLOGY (KESHO) CONFERENCE

THEME: LET US TALK ABOUT CANCER

27-29 NOVEMBER 2014,

SAROVA PANAFRIC HOTEL,

NAIROBI, KENYA.

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EXECUTIVE SUMMARY

The Kenya Society of Hematologists and Oncologists (KESHO) organized its third annual conference from 27 to 30 November 2014 in Nairobi with the theme: **Let us talk about cancer**. The conference brought together specialists who contribute to the treatment and management of cancer cases. These included haematologists, nurses, oncologists, pathologists, psychological counsellors, radiotherapists and surgeons. The importance of a multidisciplinary approach to cancer management and treatment was emphasized.

In addition, the need to reduce the cost of treatment and address the mass exodus of patients seeking treatment abroad was also raised. Capacity building was also highlighted; this would be done in tandem with acquisition of more diagnostic and treatment facilities in public hospitals in the country. Government was urged to provide incentives for private sector players to invest in the devolved government framework especially in this field. The role of cancer registries was highlighted in helping map the incidences of various cancers in the country. Sickle cell disease and the establishment of a registry was also discussed.

Cancer is among the non-communicable diseases (NCDs) that are increasingly becoming prevalent in Kenya. This could be attributed to changing lifestyles and other factors. The cost of treating the disease is beyond reach for many patients and their families. Cost influences clinical decisions on investigations and treatment issues, posing a challenge to clinicians even when the expertise and equipment to provide the best quality care is available in the country, mainly in private institutions. It was clear that both government and private sector have a role to play in addressing the challenges in cancer management; this can be done through public-private partnerships. The experience of setting up a cancer centre as shared by Texas Cancer Center would guide other players in the establishment of similar facilities.

It was clear that cancer management cannot only be handled by clinicians, the patients, relatives and concerned members of the public have a role to play in creating awareness especially on screening and early detection. Advocacy at both local and international levels is also necessary to ensure that resources are made available for addressing the disease.

Challenges faced by clinicians in handling cancers of the breast, colon and prostate together with sickle cell disease were discussed in detail. The interactive discussion sessions provided participants an opportunity to address issues raised in presentations.

DAY 1: PROCEEDINGS OF THURSDAY, 27 NOVEMBER, 2014

MORNING PLENARY SESSION 1: CHAIR: FRED CHITE

Introduction: History and Journey of KESHO – Dr Catherine Nyongesa

> "Cancer is the third leading cause of deaths in Kenya. The World Health Organization estimates that by the year 2020, cancer will kill over 10 million annually."
> Dr Catherine Nyongesa, KESHO Chair

Dr Catherine Nyongesa, the Chair of the Kenya Society of Haematologists and Oncologists (KESHO) gave a brief introduction on the society. KESHO was formed in 2002 with the objective of providing research in cancer and blood diseases, improving patient care and providing physicians with forum to discuss ideas for purposes of improving practice and outcomes.

Dr Nyongesa acknowledged the support of the founder members of KESHO and the current office bearers who contributed to the successful planning of the conference. Dr Nyongesa indicated that the previous KESHO conferences had been held in 2004 and 2009.

Highlighting the conference theme: **Let us talk about cancer,** Dr Nyongesa indicated that the conference was intended to discuss all aspects of cancer with a view to prevent the disease, facilitate early detection and cure including palliative care for those who cannot be cured. She also highlighted the importance of getting resources for cancer control.

The KESHO chair indicated that the importance of shifting the national health focus from infectious diseases to focus on cancer which is the cause of many deaths in Kenya today. To address the issues around the disease, Dr Nyongesa called for the involvement of all stakeholders including government and policy makers.

Access to treatment is one of the hurdles cancer patients face. This is compounded by the fact that many patients present late resulting in them only accessing palliative care and not curative treatment. This presentation set the backdrop for the discussion of some of the specific challenges posed by the cancer burden in Kenya.

Cancer Trends in Kenya: Anne Korir

> "We need to work together to improve the quality of data."
> Anne Korir, KEMRI

Anne Korir, head of the Nairobi Cancer Registry at the Kenya Medical Research Institute (KEMRI) outlined background on the set up of registries in Kenya; the population based registries in Nairobi and Eldoret and the hospital based registries at the Aga Khan University Hospital, Kenyatta Hospital and Moi Teaching and Referral Hospitals. Anne highlighted that there are three more cancer registries coming up in Embu, Kisumu and Nakuru. This data helps the researchers to determine cancer trends in the country, thus it is important to have quality data.

The cancer registries help track the incidences of cancer in the population to help understand the burden of the disease and inform efforts to control and support cancer. Some of the challenges the KEMRI team has faced included:

- Data handling manually, it would be better if this was done electronically as all patient information could be accessed in one place. Even then, it is difficult to get all the information in one manual file.
- Population boundaries, would the patient's place of residence be considered as place of birth or place where one is living.
- Inadequate institutional support – limited personnel supply.
- Capacity building for staff involved in data capturing for the registries.

Korir indicated that efforts to overcome the challenges were being made through the establishment of an East African registry, networking, continued capacity building. She also acknowledged hospitals that report data. "Without you we cannot be able to produce the data. We need to work together to improve the quality of data."

Challenges in Cancer Management in Kenya - Dr Najma Adamali

Dr Adamali, a retired radiologist shared his experience of cancer drawn from both personal and professional experience. Together with seven partners who are also radiologist, Adamali was involved in starting eight diagnostic centres in Kenya, in Kisumu, Nairobi, Nakuru, Mombasa and Thika. The team was instrumental in bringing the first cancer MRI scanner, nuclear medicine and digital modalities into the East African region. They also established the first radiotherapy unit at the Nairobi Hospital.

On a personal level, Adamali experienced cancer when his wife developed breast cancer 10 years ago. Since then, two members of his extended family have been diagnosed with cancer and survived the illness. Adamali and his wife travelled to London for her treatment and experienced a different way of managing the disease compared to what he had seen there. She was treated by a team of doctors who explained all the treatment options and they were asked to take time to consider them. They also found the Macmillan Cancer Support Trust helpful in guiding them through the process.

On return to Kenya, Adamali and his wife decided to devote more time to cancer. Reflecting on the wisdom of hindsight, the radiologist indicated that they invested in fancy equipment but not in the manpower to run the equipment. Adamali noted that as a radiologist, his interactions with cancer patients and their relatives are limited, yet he has still been able to observe that there is need to do more on the social aspects of the disease. He commented on the sadness when treatment is delayed, giving the example of radiotherapy at Kenyatta National Hospital where patients are currently getting appointments for treatment in 2016, this means that by the time they get to their appointment the disease will have progressed further. Many of the patients who present with the illness also go to health centres at the last stages of the disease and have the extra burden of having limited funds to invest in treatment.

Action points suggested:

- Private sector should invest in the field of medicine - Dr Adamali noted that it is the private sector that is driving medical tourism in India where wealthy individuals and corporates have invested in the field. He gave the example a treatment centre founded in 1989 by six oncologists in Bangalore. In 20 years, the establishment has become the number one cancer provider in the country.
- Kenyan clinicians should adopt a multidisciplinary approach to cancer treatment. This would also help in data capturing for the studies on the disease.
- Explore ways of making use of the private sector radiology equipment to reduce the waiting period for patients awaiting the same service at KNH.
- Address medical tourism occasioned by patients seeking treatment abroad.
- Train more medical professionals in cancer care.

In conclusion, the radiologist called for a change from talking about cancer, with reference to the conference them, to doing something to improve access to cancer treatment.

Opening Ceremony – Dr Izaq Odongo, Ministry of Health

Dr Izaq Odongo from the curative services docket in the Kenyan Ministry of Health indicated that global response to infectious diseases such as HIV and Ebola tends to be very fast but this is not the case with non-communicable diseases such as cancer.

He called for the conference participants to leave cancer management as a legacy. He indicated that the government is looking into investing in capacity building in the field by exploring how oncology training can be established locally. The government is also planning to expand the cancer registries to level 5 hospitals and fundraising for this work is underway.

Dr Odongo indicated that the government plans to invest KSh34 billion in cancer over the next 10 years. Noting that most of the treatment centres are in Nairobi, the ministry official indicated that the government is planning to upgrade the existing public-funded centres at KNH and MTRH and also set up three other centres with a view to improve geographical access, this will be done at the same time as human resource development.

Dr Odongo noted that the budgetary allocation for NCDs including cancer compared to infectious diseases has been low. He observed that few Kenyans are insured under the NHIF and even then, the scheme does not fully cover the treatment of cancer. Treatment of cancer is expensive and it can bankrupt – very few Kenyans are insured and NHIF does not cover cancer. Govt hopes to have universal care under which cancer would be covered. For majority of Kenyans, treatment of cancer is an out of pocket expenditure. However, through NASCOP, the government has been able to procure treatment for Carposis sarcoma but treatment for other cancer is yet to be secured.

He also emphasized the importance of prevention and early detention indicating that there are plans to institutionalize screening for breast and cervical cancers at level 4 and 5 hospitals countrywide. As 80%

of cancer patients present late, the government has also established palliative care centres in level 5 hospitals.

Challenges in Management of Colon Cancer in Kenya - Fred Chite

Speaking on challenges in treating and managing colorectal cancers, Dr Chite indicated that there was need for more training in specific skills in cancer surgery. He also called for the need to sub-specialize for medical teams dealing with cancer cases. He gave the example of a pathologist who is dedicated to cancer screening would be able to give more detailed information when reporting.

Colostomy bags are a challenge as some patients are not able to access them. This limits their movement in public places when they substitute colostomy bags with plastic paper bags which are ill-suited for the purpose. This may result in leakages which cause embarrassment and sometimes public ridicule to the patients. Dr Chite urged for collaboration in identifying simpler ways to make quality colostomy bags. He also indicated that patient support groups help them address some of the challenges of treating and managing colorectal cancers.

Chite also called for collaborative clinical research in sub-Saharan Africa. He also underlined the importance of the role played by different medical professionals who contribute to the treatment of cancer patients.

Interactive question and answer session

During the interactive question and answer session, a participant from Mauritius emphasized the importance of capacity building for doctors to treat cancer. Bonding of doctors after their training was discussed as one way of retaining trained personnel especially in public hospitals. Dr Odongo from the Ministry of Health indicated that the policy of bonding doctors in public service for the duration of their training exists. Dr Chite indicated that a lot needed to be done to address challenges in cancer treatment, many of which cannot be done without government support. He lauded the government for the establishment of the Kenya cancer national guidelines, which would help address some of the issues discussed in the conference opening session.

Participants also urged the government, through the Ministry of Health to set aside more funding for capacity building of medical professionals to address the rising cases of cancer in Kenya. Dr Kamal from Sudan said they started training personnel in medical oncology in 1999. Today, they now have locally trained oncologists and radiotherapists.

Early detection was underlined as key in treating cancer cases especially in light of the fact that most cancer cases present at stage three and four, making treatment a challenge. This could be addressed with more awareness campaigns to ensure that early screening and detection helps in identifying patients with early stages of the disease.

Dr Njue, a pathologist indicated that the role of pathologists in cancer diagnosis needs to be foregrounded. Dr Chite acknowledged that these are a group of medical professionals that make a significant contribution to the cancer treatment team. “Tumour is a rumour, tissue is the issue,” said Dr

Chite making reference to the popular saying in oncology circles to underline that even when a clinician suspects that a patient may have a cancer, the pathology results are necessary to confirm the diagnosis.

A participant observed that only 35% of Kenyans are enrolled under the National Health Insurance Fund (NHIF) but cancer treatment is hardly covered. Dr Odongo indicated that renal services are subsidized by the NHIF and that in future the government would move to get all ailments covered under the fund.

A participant commented on the registry asking what how the registry ensures patients are not registered multiple times when they move from one place to another as they are referred from district hospitals to the referral hospitals. In response, Korir indicated the importance of having all demographic information captured in the registry to ensure if a patient visits a health facility in a different district or region, he or she is only captured once.

Dr Zipporah Ali from HEPCA called for reduced bureaucracy to help speed up patients' access to medical care. During the conference, it was noted that most cancer treatment facilities within a small radius of each other in Nairobi. Dr Makumi from Aga Khan asked if there was a mechanism to provide incentives for investors in such services to devolve to the counties. There was a call to explore the public-private partnership (PPP), however, it was noted that the framework governing the establishment of these services needs to be re-examined. Dr Odongo indicated that in the past two years, only three PPPs have been successful, a re-examination of the framework would probably fast-track the more partnership ventures.

With regard to capacity building, Dr Chite indicated that at MTRH they are offering a higher diploma in oncology for clinical officers in addition to short courses.

MID-MORNING SESSION

PLENARY II: Chair- Andrew Odhiambo

Challenges in managing HER2-positive breast cancer patients: An interactive Clinical Discussion – Gladwell Kiarie

Optimising survival in Her2-positive breast cancer: What are the options? – S D Moodley

Is breast cancer from sub-Saharan Africa truly receptor poor – Data from Kenya – Shahin Sayed

This was a breast cancer industry symposium which provided an opportunity for experts to share their views on ways to address challenges in improving survival for HER-2 positive breast cancer. Dr Kiarie presented case studies of patients and engaged participants in a discussion on treatment options. The oncologist and senior lecturer presented real case studies: case one was a 68 year-old retired nurse known hypertension and had had a thyroidectomy in 1990. Case two was a 36 year old sickler who had lost a three-year old child and had a precious pregnancy. Dr Kiarie shared the treatment regimes given to both patients concluding that in the case of the nurse paclitaxel plus Trastuzumab can be considered a reasonable approach for majority of patients with small, lymph node negative, HER2+ breast cancer. She also discussed the impact of trastuzumab in pregnancy and central nervous system disease. The

oncologist also discussed brain metastasis in HER-2 positive disease and cardiotoxicity with Herceptin. She concluded that in management of patients with breast cancer, selecting the most efficacious therapy remains a challenging but achievable goal.

Dr Shahin Sayed, an assistant professor in the pathology department at Aga Khan University Hospital presented data from studies in Ghana, Nigeria and Tanzania in addition to the data collected in Kenya. She noted that studies from sub-Saharan Africa on ER/PR/HER-2 in breast cancer are fraught with inconsistencies in the prevalence of hormone receptor status, most prominently because; histopathology services are scarce and handling of specimens suboptimal. Variability in laboratory methodology and interpretation makes also comparison between data obtained at different stations difficult.

Prof Shahin noted that in Kenya, testing for ER/PR/HER-2 for breast cancers is not part of the routine assessment. Furthermore, testing is available in only two to three centers across the country. She highlighted the methods used to obtain and analyze the data and the results obtained.

Shahin concluded with a quote from emphasizing the need for pilot research on the subject to generate evidence-based data that can be used in similar resource-constrained settings.

> **Pilot research and demonstration projects are needed in LMIC to generate evidence based data that will promote guideline implementation in other regions with similar resource constraints. Benjamin O Anderson (Cancer Control 2013)**

In his presentation, Dr S D Moodley from the University of the Witwatersrand in Johannesburg shared data on Herceptin® (trastuzumab) for adjuvant therapy for HER-2 positive early breast cancers. He also shared treatment guidelines. Dr Moodley indicated that many patients visit his clinic on Friday for their therapy to allow them to recover from the effects of the drugs over the weekend ensuring that they do not lose out on work days.

From the study results, Dr Moodly concluded that patients with hormone receptor positive disease had reduced risk of recurrence after the first event, highlighted as 9.6% after 10 years. Those with hormone receptor negative disease had the absolute risk of distant recurrence as a first event reduced by 9.6% in seven years, thus recurrence of breast cancer was unlikely.

During the interactive session, participants asked follow-up questions on the treatment options discussed.

Pros and cons of prostrate cancer screening – Prof Mungai Ngugi

Prof Mungai Ngugi explained to the participants the pros and cons of prostate cancer screening. He highlighted the need and importance of screening, which can reduce deaths and give patients better quality of life.

The potential harms of screening that include getting false positive tests were discussed. He noted that 80% of positive Prostate Specific Antigens (PSAs) were false positives. Cancer diagnosis is often

associated with psychological stress. He indicated that this can be heightened by false positive PSA test results. Those who get false positive results go for additional screening tests and a third of the men experience pain.

Research indicates that five in 1000 men will die within one month of prostate cancer surgery while between 10 to 70 men will have serious complications. Ngugi also noted that radiotherapy and surgery result in long-term adverse effects some of which impact on the patients' view of their masculinity.

In conclusion, he shared recommendations from the American Urological Association (AUA) indicating that no screening should be done for men under the age of 40. The AUA indicates that routine screening is not recommended for men aged between 40 and 54 years. He also also strongly advocated for shared decision making for men aged between 55 and 69 years who are considering PSA screening with a recommendation to proceed only if necessitated by medical history and other clinical considerations. His parting remarks were that screening should only be done once in two years. For men over 70 years of age, he recommended that they should not undergo screening as the results could adversely affect the quality of their sunset years.

AFTERNOON SESSION: BREAKOUT WORKSHOP - TRACK 1

This session was chaired by Dr Andrew Odhiambo.

Sentinel Lymph Node Biopsy – Ronald Wasike

Dr Wasike, a surgeon at the Aga Khan Hospital shared case studies with participants of patients who were candidates for sentinel lymph node biopsy highlighting that those who undergo the procedure are often good candidates for organ conservation. He however noted that if breast conservation is done, it is imperative that the patient undergoes radiotherapy. He described the procedure in detail displaying pictures of successful surgeries.

Health policy for oncology and hematology: Global to local – Waruguru Wanjau

Dr Waruguru is a medical doctor and researcher on health policy who has experience working with the World Health Organization on policy issues. She indicated that policies on NCDs can be used for advocacy particularly as Kenya is a member of the UN/WHO, thus we can hold the government accountable for commitments it has made under international instruments. She also indicated that the Abuja declaration had successfully been used to increase funding for health. Highlighting the economic consequences of NCDs such as cancer would also be good for advocacy. She also indicated that advocacy efforts could be directed towards zero-rating consumables used in cancer treatment through instruments developed by the World Trade Organization.

Question and answer session

Dr Zipporah Ali noted that there is a new resolution on palliative care, passed in May 2014. She asked how it can be integrated in all levels of care and how government can be encouraged to implement such policies. This could be achieved through advocacy efforts by different stakeholders.

Anne Korir called for advocacy efforts to channel tax from some industries such as the tobacco towards treatment of cancer.

Taking lessons from the HIV/AIDS movement and implementing them in cancer advocacy was also suggested. This included advocating for the disease to be prioritized on the national agenda especially as the economic burden was recognized. Calls for research on the economies of cancer to highlight the impact on household poverty especially in rural and lower income communities were also made.

Participants also called for a shift from the funding community in cancer funding.

AFTERNOON SESSION: BREAKOUT WORKSHOPS - TRACK 2:

Setting up a Cancer Centre - Catherine Nyongesa, Joshua Ndoli and Chege Njoroge

This session was chaired by Dr. Andrew Odhiambo a consultant physician at Kenyatta National Hospital (KNH) and lecturer in Hematology and Oncology at the University of Nairobi. It comprised of three presentations on the basics needed in setting up a cancer centre.

The first presentation was done by Dr. Catherine Nyongesa from the Kenyatta National Hospital (KNH). She took the panel through the three key factors that come into play which include the facility that will technical hardware which includes the machines (Cobalt 60 and Linear accelerator) and theatres, location taking into account the population at hand and costs involved. She highlighted the effectiveness of having an existing hospital set up a cancer centre than building from scratch.

Joshua Ndoli an architect and contractor consultant touched on the technical part in terms of service delivery. The scope of service is dependent on the treatment modalities of each occasion. He outlined the need to separate diagnostic imaging and treatment modalities, in-patient treatment services and auxiliary services. Ndoli also touched on site selection, planning and design considerations, construction, implementation, commissioning and operations as the key steps to be followed while constructing a cancer care centre.

The third presentation on "**Financing a cancer care centre**" was given by Chege Njoroge, a finance consultant and project manager at Build Afrique consult group. Given the statistics, he highlighted the urgent need for finance and development of cancer care centres to cope with the rising number of cancer patients. The main modes highlighted were savings, loans, insurance and bonds.

He took the participants through the detailed modes of financing which include debt, equity, trust, enterprise alliance, joint ventures, public/private partnerships and contract/debt financing, detailing the pros and cons of each.

Dr. Opiyo Anselmy posed a question to the audience: How are you planning to deal with the manpower challenge? He noted that guidelines are needed especially with the establishment of cancer care centres. Manpower needs training. He further said that there are organizations such as IFC that are willing to finance the programme.

He also said that there is a deficit in relation to the number of linear accelerators in the country and the number of patients. In essence, 40 linear accelerators are needed in the counties.

Safe Preparation and administration of chemotherapy - Irene Weru

The second breakout session was on "safe preparation and administration of chemotherapy." Dr. Irene Weru talked about how anticancer medicines are classified as High Alert Medicines (HAMs), hazardous and have a narrow therapeutic index. The difference in the dosage required to treat the disease and the dose that can cause harm is very small. Drug sequencing was highlighted as a key determinant of the severity of the side effects.

She also touched on the safety considerations for the personnel, care givers, the modes of contact for drug exposure, levels of protection, safe handling during reconstitution (use of dust free drugs), storage of the drugs in designated sections, clearly labelled and marked.

On handling spillages, she noted that it was common for doctors to assume that the mess caused by spillage is to be taken care of by the cleaners. She emphasized that personnel handling anti-cancer medicine should always clean up their own mess. The cleaner might be unaware of the exact nature of the spillage. In cases of powder spillages, they should be soaked up in absorbent material. Spill kits should also be availed and replaced immediately after use. On waste disposal and management, it ought to be handled separately and the staff need to be trained on the components they are handling. The containers need to be colour-coded and puncture resistant.

She posed the question: why is patient safety important when handling phytotoxic? The overarching principle is that patients should receive medicine that is appropriate for their clinical needs. The medicine should be given in doses that meet the patient's individual requirements, for adequate periods of time and at the lowest possible cost to the patient and community.

A case study of KNH was given on the medication documentation safety and administration. Data collected between March and December 2010 showed that the biggest errors were in prescriptions. Sometimes the doctors failed to put the dosage, the BSA was worked out incorrectly or was not done at all, or the wrong route of administration was put in the prescription. The greatest errors were in frequency and duration.

In conclusion, patient information needs to be available at all times for everyone involved in the treatment; the doctor, nurse and pharmacist. Medicine information should be readily available and

standardized. Automation of cancer medication orders is equally important as this minimizes verbal and hand writing communication errors and communication of drug orders and look-alike medicines.

Question and answer session

After her presentation, a question was posed from a practicing oncology pharmacist from Sudan: In cases where the hospital does not have a clean room to prepare the drugs, how do they go about it? Dr Weru indicated that due to the resource constrained setting, the most important thing is to remember about the hierarchy of protection, protect yourself with the personal protective gear first. All major private and public referral hospitals have biological safety cabinets.

Another participant indicated that there are hospitals where the chemotherapy agents are administered without proper safety precautions. He asked for guidance on how to chemotherapy administration by expectant medical staff. Dr Weru responded that the most important thing is to have safety precautions. Preferably the nursing staff should be given alternative responsibilities. All staff involved in treatment should understand what risk exposed to thus enabling them to make informed decisions.

Another question was posed by an oncologist from the Moi Teaching and Referral Hospital (MTRH). "Do you have guidelines on precautions and measures on safe intrathecal preparation of the drugs?" Intrathecal preparations should be made separately from the other preparations in a designated area by specifically trained staff. In many international centres, staff members are specifically trained to administer intrathecal therapy and are certified to administer.

Dr. Catherine Nyongesa noted that it is safe for the female workers in a cancer centre to prepare chemotherapy and administer whether breast feeding or expectant as long as they are in the proper protective gear.

Anne from MTRH asked: "What do you use for spill kits? Do you prepare them locally or outsourced? Weru indicated that for spill kits, they improvise by using the same gowns, gloves and make it available at the pharmacy and when mixing chemotherapy.

Another participant asked the group if anyone had had experience in the use of closed systems. The view was that closed systems will only add to the patient's costs of treatment. It is a recurrent cost as one would need to use the closed system for every preparation. It has been thought about but the additional costs and constraints make it impossible. Dr Weru emphasized the importance of calling the person who has made the prescription to confirm dosage to eliminate errors.

In conclusion, participants agreed that it was better to give quality rather than quantity care and lose all the patients.

EARLY EVENING SESSION: Chair: Zipporah Ali

Psycho-social aspects of cancer care - patient communication, survivorship challenges – Philip Odiyo

> "A patient is not a group of symptoms and damaged organs and altered emotions.
> The patient is a human being, worried, hopeful and is searching for relief, health and trust."
> Philip Odiyo

> When a patient is diagnosed with cancer, they go through the six feared Ds; Discomfort, dependency, disfigurement, disability, disruption, disengagement and death.
> Philip Odiyo

Odiyo explained that when a patient is diagnosed with cancer, they go through the six feared Ds which are discomfort, dependency, disfigurement, disability, disruption, disengagement and death. He noted that the patients have become more autonomous in researching in a bid to get information to help them understand their illness. He noted that cancer treatment is a long-term relationship between the oncologist and the patient.

To avoid doctor-hoping, the doctors need to respond to the different issues that patients raise in the course of treatment. The communication ought to address the emotions of the patients apart from giving them information. The patient needs to be given time to make an informed choice to foster a healthy relationship with the doctor.

Odiyo indicated that a research study indicated that 45% of patient concerns are hardly addressed by the oncologist. Of these, 50% of psycho-social problems are missed and during 50% of the visits, between the patient and doctor do not agree on the nature of the problem presented.

He noted that most of the time there is a breakdown of communication between the oncologist and patient. "As a doctor can you get into the patient's mindset and be able to help them?" He also emphasized that the patient should be actively involved in all decision making. "Uphold their self-esteem and empower them."

In conclusion, Dr Odiyo emphasised that it is the doctor-patient relationship is a healing one and urged clinicians to listen more to patients to reduce emotional suffering even if it is not possible to cure the illness. "Fostering hope is a balancing act between telling the truth and giving hope. Effective patient care is not a one man job, team work and effective collaboration is important in giving care to cancer patients.

Acute leaukaemias among post-pediatric patients at Kenyatta National Hospital in 2013 – 2014 – Prof Othieno Abinya

Prof. Othieno Abinya presented a study on acute leukaemias amongst post-pediatric patients at KNH in 2013-2014, focusing on the danger and sensitivity of treatment. He noted that there needs to be a dedicated unit, excellent hygiene, availability of the needed antimicrobials, dedicated staff and a

dedicated blood donor service. At the time of the study, there were 55 patients. The causes of death were anaemia, neutropenic sepsis and thrombocytopenic haemorrhage.

Anaemia would have been prevented more easily with a responsive blood donor service. He recommended that all major/teaching hospitals should have dedicated leukemia services, adding h that without the necessary resources, magnificent buildings cannot provide treatment.

Oncology at the periphery, is it possible? - Matilda Ong'ondi

Dr Ong'ondi gave an overview of Tenwek Hospital and its operations in relation to chemotherapy treatment. The time of diagnosis and initiation of chemotherapy determines how the patient will respond to the treatment. Decentralizing oncology care is needed. Some of the core requirements she highlighted include having an open mind. She indicated that some of the patients disappear due to the prohibitive costs. A good follow-up mechanism is also needed to retain the patient on treatment. A lot of emphasis on follow up is important and periodical counselling.

Clinicians need to be trained and educated as the first responders to the patients. She noted that support from haemato-oncologists has greatly helped especially the phone consultations. "The reality is we cannot have oncologists everywhere," emphasizing the important role virtual consultations serve when working from the periphery. She advised that it is important to keep simple chemotherapy regimens in the periphery, have a committed clinician to be part of the team and good facility support.

Sickle cell disease registry and prevalence of sickle cell disease in Kenya – Is it feasible? - Dr. Constance Tenge

Dr Tenge is a senior lecturer and pediatrician at Moi University. Tenge gave a proposal on how healthcare providers can be sensitized on sickle cell disease, giving an emphasis on the need for a national control programme to provide a comprehensive approach to the prevention and management of the disease. She said that the programme should use simple, affordable and accessible technology that is feasible.

It was clear that the management of sickle cell disease in most African countries remains inadequate due to lack of firm data on burden and survival of patients. She noted that there is a high morbidity and mortality, indicating that it was at 5% for children under five.

She recommended having academic missions for education, care and research; making use of workshops, community barazas, health camps, gradual targeting of different regions and identifying and profiling the patients. Most importantly, public education and awareness of genetic risks and carrier detection before marriage or pregnancy is very important. Carrier detection screening programmes should go on. She indicated that the test if available at only KSh550 by one of the private service providers.

Economics of Cancer Care - Prof Khama Rogo

Prof Khama Rogo from the International Finance Corporation spoke on the "Economics of Cancer Care" citing that cancer continues to kill more people than malaria, TB and HIV/AIDs. Due to the meagre resources, poor patients continue to dig deeper into their pockets for treatment which the rich who can afford treatment as they have private medical cover.

Cancer is a double disease burden, the transition in the disease patterns and lifestyle. He noted that the scarcity of skilled staff and laboratory services is lacking with only five medical oncologists in the country. Very few cancer drugs are on the list of the WHO essential drugs. The high cost of drugs and long delays for radiotherapy inhibit effective treatment for patients.

Prof also noted that cancer is not part of the MDGs or any other global initiative with no local or international funding. On management investing in expensive machines that cannot be maintained due to resources is not practical.

After his presentation, the panel proceeded for the evening cocktail.

PROCEEDINGS OF FRIDAY, 28 NOVEMBER, 2014

MORNING SESSION PLENARY III: Chaired by Othieno Abinya

This session comprised seven 20-minute sessions, followed by an interactive session where participants asked questions and made observations on all the presentations.

Fred Chite's presentation touched on **"Breast Cancer: Endocrine therapy and beyond."** He underscored the need for a mulitidisciplinary team for cancer care and management as well as other interventions like laparoscopic colectomy, metastatecctomy and other modalities.

Dr. Peter Bird of Kijabe Mission hospital focused on "**Organ preservation in breast cancer surgery."** The thrust of his presentation was breast conservation. He alluded to the unacceptable disparity of healthcare between African countries and developed countries. He noted that most patients in his clinic present when breast cancer is at its advanced stages. However, when patients present with the disease in its early stages, it has been possible to preserve the organ successfully through surgery and radiation therapy.

Dr John Weru talked a study focusing on "**Integration of palliative care services into an existing Oncology programme."** This study recommends the need for training and research on clinical implications of palliative care in oncology.

A presentation titled **"Opportunities for interventional oncology"** was made by Dr Henry Wanga. He noted that the most common malignancy of the liver arises from the colon, stomach, pancreas, breast and lung neoplasm. In children, metastases are from neuro blastoma and Wilm's tumour. He made mention of Image Guided Systems (IGS) which provided excellent image quality with exceptional dose efficiency.

Dr Farouk Karsan made a presentation on "**Curative radiation for localized prostate cancer."**

Martin Magwaza from Astra Zeneca talked about "Partnership for Capacity Building and Scientific Leadership." He talked about a Kenyan programme, dubbed, *Pambazuka,* which will support health care providers and volunteers to manage breast care patients, whilst availing affordable breast cancer medicine.

Benda Kithaka, a co-founder and volunteer with Women for Cancer, spoke about the need to **create awareness and do more advocacy work on cancer prevention.** Women for Cancer, advocates for early testing and early detection. She challenged media to make cancer a year long conversation; not just during the month of October.

Question and answer session

There was a question to AstraZeneca regarding availability of funding for grants. In principal, AstraZeneca discourages drug-related studies. However, funding is available for research. Oncologists

were encouraged to submit research protocols and it was noted that oncology has become an entire business unit.

There was a query about whether breast reconstruction is growing or stagnating. It was noted that high costs make it prohibitive to patients; hence, fewer cases of reconstruction.

A discussion about the cost of cancer care arose. How can the cost come down? In response, it was noted that there is a tug of war between providers on one hand, and patients, on the other hand. There is a need for innovation in terms of cancer prevention and management to push down costs. Participants were encouraged to advocate for lower treatment costs. There needs to be an emphasis and focus on preventative measures, for example, cost of pap smears have reduced from KSh1,500 to KSh600. Communities should set up endowment funds for cancer management and control. The media also have a role to inform the public on the cost of screening and treatment.

There was a question about the rise of medical tourism and whether prostate cancer patients should be seeking treatment overseas. The vast majority of cases can be managed locally except in specialized cases.

Concerns about inking margins came up and it was notes that breast conservation centres should be centres where people are very well-trained especially with regard to inking of margins.

With regard to access and affordability, there is a need to leverage on Public-Private-Partnerships as a possible solution to reducing the cost of cancer care treatment.

A query about the reliability of simple tools to inform modalities of treatment in settings where there aren't adequate investigations arose. The response was to do the best in our settings. Participants were encouraged to use *Adjuvant Online.*

With regard to breast cancer, there was a call to mount screening activities as part of detection of early stage cancers.

"Should we have paid blood donors?" a question was asked. It was felt that there needs to be more advocacy for regular voluntary blood transfusion instead.

It was noted that in the developing world, women are not taking their medication as prescribed. There needs to be more interaction and doctors should be keen and attentive to patients; not dismissive of seemingly minor symptoms like hot flushes.

After the tea break, participants resumed for another interactive session.

MID MORNING SESSION: FREE COMMUNICATION 11: Chaired by MD Maina

There were seven twenty- minute discussions which were followed by a Question and Answer session.

Rose Wekesa started this session by talking about **"Electronic Portal Imaging: Achieving accuracy and precision for external beam radiotherapy."** She focused on treatment verification by portal imaging, noting that portal imaging is a necessity in radiation treatment. She alluded to the fact that radiation therapy is one of the safest and most effective ways to treat cancer whilst noting that errors are extremely rare.

Gears shifted to the preliminary results of **a pilot project of a HIV-linked cancer registry in Embu and Nakuru counties.** The study by Jamilla Rajab and Muchiri Micheka aims to create a Cancer/HIV and AIDS linked database on a unique mobile telephony platform. It was emphasized that there is nothing conclusive at this stage.

Izaq Odongo from the Ministry of Health talked about "**Joining forces to overcome cancer: The Kenya Cancer Research and Control Stakeholder Meeting experience."** He reiterated the Government of Kenya's commitments to reduce cancer mortalities and morbidities. Recommendations included political will to drive the cancer agenda forward, joint coordination among cancer stakeholders, forging new partnerships and strengthening old ones.

Dr. Teresa Lotodo, made a presentation on "**Use of flow cytommetric immunophenotyping analysis for expression in leukemia cases at Moi Teaching and Referral Hospital."** She described what this entails and concluded that this is an important diagnostic tool that needs to be availed in public hospitals.

"Palliative Care in Sub-Saharan Africa," by Mary Kinoti noted that palliative care is relatively new in Africa. Palliative care seeks to maximize one's quality of life and relieve the suffering of patients with life-limiting incurable diseases. She emphasized that palliative care needs to be integrated throughout the disease course; not just towards the end.

Samuel Mukono made a presentation on "**Mismatch repair (MMR) gene defect in colon cancer: Case series and review of literature."**

The final presentation in this session was a fairly new type of therapy; Photodynamine therapy. Titled "**Synthesis of Thienyl-appended Porphyrins for use in cancer treatment,"** Dr. Edith Amuhaya noted that this therapy's components are: lights of appropriate wavelength, oxygen and a light sensitive drug.

Question and answer session

A participant wondered if patients were charged for immunophenotyping at Moi Teaching and Referral Hospital. The service is offered free of charge.

"Does cytommetry need to be done in every case of acute leukaemia?" asked another participant. It was noted that this need not always be the case but that this procedure is important and needs to be embraced.

There was a comment on why PDT is not common in Kenya what the plans to popularize it are. The response that more needs to be done make it popular. Still on PDT, there was a question about the conditions in which this treatment can be administered, apart from the oesophagus and lungs. Literature shows that it can be used to treat other cancers. Another question on PDTs was on where else it is used other than the oesophogus and lungs. Response was that literature shows that can be used to treat other cancers.

There was a question about radiotherapy and positioning with regard to the oesophagus. In response, the upper oesophagus positioning is similar to that of head and neck.

There was a question about the ongoing study in Nakuru and Embu counties and the respondent emphasized that all the findings shared were very preliminary, and not conclusive.

AFTERNOON BREAKOUT SESSIONS

TRACK 3 - CHAIR: Zipporah Ali

Palliative Care in Kenya: Optimizing pain management in cancer care – Dr Esther Munyoro, Gladys Nduku, Dr Essie Muinga and John Weru.

Dr Essie Munyoro opened her presentation with a quote:

> "In most parts of the world, the majority of cancer patients present with advanced disease … the only realistic treatment option is pain relief and palliative care."
>
> World Health Organization

She focused on four basic approaches to cancer pain control i.e. surgery and physical methods, analgesics, psychological and behavioural methods and finally anti-cancer. She talked about total pain; that is, physical, psychosocial, spiritual and emotional pain and triggers associated with such pains.

The gist of her presentation was that pain should be made visible in practices in order to optimize pain management in cancer care. Given our African cultures which deny death, pain must be spoken about.

The second presentation **"Improving survivorship among pediatric malignancies**" was made by Dr Fatma Abdalla.

Gladys Nduku, Palliative Care Nurse

Nduku focused was on the need of getting a history of the pain and to ask the patient to point out where the pain so as to determine the nature of the pain. Use of a pain score and the WHO analgesic ladder were referred to. She however noted that there is a need for patient education on pain and the different medication given. E.g. morphine is taken in combination with a laxative.

Dr Essie Muinga noted that palliative care is an approach that improves quality of life of patients and their families facing problems associated with life-threatening illnesses. She talked about the essential components of palliative care.

Dr John Weru's study set out to assess the understanding of clinicians regarding integration of palliative care services into an existing oncology programme. The study notes that there is a need for training and research on clinical implications of palliative care in oncology.

"Does National Health Insurance Fund (NHIF) improve survival of Wilm's tumour?" This was a presentation made by Dr Fatma Abdallah who posited that enrollment in NHIF is associated with greater completion of therapy and greater survival. Her study found that 94% of those completing therapy are alive without recurrence at two years as well as a 52.7% two-year event free survival.

Question and answer session

There was a comment about pain management requiring a multi-disciplinary approach and and a query on why pharmacists are not included. In response, it was noted that pharmacists are also being trained in palliative care.

There was a question about barriers to access morphine; sometimes requiring more than three people to sign off. How can this bureaucracy be overcome? It was noted that indeed, measures need to be put in place to make morphine easily accessible to patients. Still on morphine, there was a question about whether nurses can be allowed to prescribe the said drug. It was noted that these are ongoing conversations with the Ministry of Health and the Nursing Council of Kenya.

There was a question about when to introduce end of life care to patients owing to the sensitivities around this conversation. Participants were urged to practice active listening so as to pick up cues and hints from patients.

A query about when the discussion of survival rates should commence. This should be done right at the beginning and properly documented. Patients have a right to this information.

There was a comment from a Zimbabwean doctor who noted that people think of cancer last. There is a need to create awareness among primary health care providers up to specialists. Cancer is usually the last diagnosis after all else has been done.

There is also a need to create awareness on uptake of NHIF. Only 35% of Kenyans have enrolled in NHIF yet the study has shown that NHIF enrollment has led to better survival rates. Still on NHIF, it was noted that children benefit from NHIF cover for cancer treatment only as inpatients. There are ongoing discussions with NHIF to explore how children can also access outpatient care for cancer under the medical scheme.

There was a general comment about the need for increased networking that will result in investment in treating cancer patients. It was also noted that innovations like use of mobile telephones to create messages to sensitize communities should be explored for enhanced awareness creation.

BREAKOUT SESSION: TRACK 4:

Curbing Mass Exodus by Kenyan Patients Seeking Treatment Overseas – Vincent Mutiso and Alfred Odhiambo

This session was moderated by Dr Constance Tenge. Introducing the session, Dr Tenge noted that there is a mass exodus of cancer patients who go overseas seeking treatment for cancer; these include our political leaders whose medical tourism trips have been reported in the media.

"Kenya spends 10 billion annually on cancer patients who go abroad to seek medical services," said Dr Tenge. This is an issue of concern that was discussed with doctors who made presentations during the breakout sessions. The presenters addressed different aspects of treatment and management of cancer; Dr Vincent Mutiso spoke on surgery while Dr Alfred Odhiambo covered radiology.

Dr Mutiso noted that presently, Kenyan doctors have the requisite skills to diagnose, treat and manage cancer patients. He questioned the motives of doctors who come to Kenya seemingly for financial gain, where they set-up shop in hotel rooms where they examine patients then schedule operations and other follow-up procedures abroad. He called for governments to scrutinize their credentials and also those of establishments where Kenyans go to seek treatment abroad. He however highlighted that there are institutions in India and Pakistan which have well-trained surgeons but noted there are those whose credentials should be scrutinized.

The cost of surgery in the country is high, making it easier for patients to opt for treatment abroad at cheaper rates. However, cost is not the only consideration especially for the surgeons. The surgeon highlighted the harm that could be caused by post-operative infections contracted in hospital. He indicated that the best treatment centres would have an infection rate of 0.4%, mid-level establishments would have a 1.2% infection rate while the ones at the end of the scale would have a 5% rate of infection. The high possibility of getting infections at a public hospital would be high further pushing the cost of treatment as it would include the cost of treating the infection. This could be improved with more funding. "If all the people who can afford to go overseas [for treatment] go, then the skilled personnel would not have a place to practice," said Dr Mutiso indicating that the over 300 doctors graduating from the University of Nairobi School of Medicine need to be placed in institutions where they can use the skills gained in college to benefit the populace.

In conclusion, Dr Mutiso highlighted the following action points:

- Need to improve standards at our hospitals
- Ensure the highest quality of medical service is provided at these institutions
- Colleagues who refer patients abroad need to recognize that the treatment can be obtained locally
- Need to improve on people skills
- Need better regulation to address the challenge of medical tourism

Dr Alfred Odhiambo highlighted that radiology in the country is quite advanced, sharing examples of top-notch machinery that is currently available in the country. He highlighted that all radiotherapy services save for positron emission tomography (PET) are available in Kenya, thus patients do not need to seek these services abroad. He however highlighted patients requiring PET would be less than 1%.

Dr Odhiambo noted that some of the notable cancer treatment facilities in India are registered as research centres something that the Kenyan facilities could emulate.

Utilization of Immunophenotying and Tumor Markers in Cancer Diagnosis and Strategies for cost effective and comprehensive lab test selection in a resource-constrained setting - Dr Ahmed Kalebi

Dr Kalebi highlighted the fact that all pathology investigations begin with a clinical question. This cycle gets repeated if the correct clinical question(s) were not raised in the first instance, this translates to higher costs for the patients.

Kalebi also underscored the need for integrated electronic management systems to ensure that laboratories do not deal with queries in an isolated manner. In highlighting the importance of making cancer treatment more cost effective, Kalebi asked if doing a fine needle aspiration (FNA) test is necessary when they are inconclusive and would therefore require a biopsy. He called for the medical fraternity to come up with cost packages for consultation and investigations which would contribute to lowering the cost of cancer treatment.

Question and answer session

During the question and answer session, the need to lower the cost of treatment to compete with India was emphasized. In addition, the issue of regulatory measures to address the alleged unethical practices such as doctors getting monetary incentives for referring patients abroad was highlighted.

The participants also highlighted the importance of educating patients on the services available in the country. They also called for high standards of professional etiquette amongst medical practitioners.

The issue of Continuing Medical Education (CME) was raised where such sessions could be used to share new information on cancer or train staff members who are not familiar with certain aspects of the disease. Dr Makumi indicated that it was possible to take advantage of technology to have local specialists give talks on their fields of expertise without having to travel within the country and region.

It was noted that treatment facilities in India had good marketing. Participants felt that it was important for the Kenyan fraternity to borrow ideas from their counterparts abroad where patients go to seek treatment. The fact that older clinicians have experience in the field and are able to identify what is ailing the system and plug it was also discussed.

Dr Mutiso emphasized the importance of infection control especially after surgical procedures. Prof Abinya highlighted that we need to work towards a cleaner environment.

The need to build capacity amongst medical staff was also discussed while another participant highlighted the importance of referring patients to trusted laboratories. It was noted that sometimes patients took samples to questionable laboratories because of lack of knowledge and this would impact on the care they receive based on the test results.

EARLY EVENING SESSION PLENARY IV: CHAIR: AHMED KALEBI

This was a session in which there were four brief presentations and afterwards, participants were given an opportunity to ask questions or comment on the presentations.

MD Maina made the first presentation entitled, "**Sickle Cell Disease; Iron Metabolism – What do we know today?"**

Abdoul Azis walked participants through "**Bone Health in cancer patients: guidelines for African cancer professionals.**

Othieno Abinya talked about "**Acute Leukemia: "The Hard Facts.**" He alluded to the fact that developing countries need to plan better, with regard to cancer care and management. He gave an example of having blood supply of 30 pints and ensuring it is in stock, noting that Western countries are able to carry out treatment easily simply because of proper planning. He talked about the prohibitive costs of treatment overseas whilst adding that treatment options are available in Kenya.

Fatma Abdalla gave an interesting presentation, "**Race disparities in peptide profiles of North American and Kenyan Wilms Tumor Specimen**." The study reveals that there is an over 90% survival rate in the US, for paediatrics. It also notes that non-whites are the majority of cancer patients. There appears to be a correlation between race and cancer. Of interest also is that Wilms' tumour appears to vary more with ethnicity.

Plenary discussions

A participant asked: "How do you convince your patients to do undergo procedures when they are very sick?" while another asked why children get worse when chemotherapy is induced? The response was that when patients undergo chemotherapy, they will get sick before they start getting better.

A question on the race disparities in Wilms tumours, a participant asked if we the stage of presentation of the Kenyan cases is known vis a vis that those in the US. Dr Abdalla indicated that the molecular makeup will not change – that is what this study (Race disparities in peptide profiles of North American and Kenyan Wilms Tumour Speciment), is limiting itself to. In Kenya, majority of patients present at two to five years. Survival rate has improved from 35% in 2002 to 63% currently.

Well stocked blood banks are important resources in cancer treatment. A question was asked on how to address chronic blood shortages? It was observed that the burden of blood donations is left to school children, once schools close, particularly during the December holidays; there is normally a shortage of blood in the banks. Kenyan adults are encouraged to donate blood at regular intervals especially at the

end of the year when the shortage is significant. Corporates and faith-based organizations should also be targeted for blood drives.

A participant asked who chelation therapy is for. Chelation therapy is for specific patients – it needs to target those who will get the long-term benefits from it such as sicklers.

The issue of limiting patient visitors to manage infections was raised. It was noted that patients, caregivers and visitors have a responsibility to maintain a clean environment for the benefit of patients undergoing treatment.

On whether Kenyan is using local or international protocols it was stated that there is a study centre in Kenya looking into the development of local protocols.

Concern was raised over low remission rates at KNH. It was indicated that upto 60% remission is possible with good supportive care, this is key in improving remission rates.

PROCEEDINGS OF SATURDAY, 29 NOVEMBER, 2014

MORNING SESSION FREE COMMUNICATION III: CHAIR: JAMILLA RAJAB

The opening session on the last day of the conference included presentations by local and international experts. Rachel Mutuku, a senior manager in reproductive health at Population Services spoke on **"Cervical cancer screening and prevention treatment through the private sector.** Mutuku shared the project's experience in scaling up screening for cervical cancer resulting in the diagnosis of patients and referred them to treatment centres. The project has also contributed to awareness creation and community mobilization leading to the public going to the centres. Mitigate barriers to 100% follow up and treatment.

Mutuku also highlighted the importance of male involvement in mitigating the challenges encountered in the provision of the screening services. Communication with the clients to allay fears is also important as is follow-up.

Dr K E Hamed Mohamed from the University of Khartoum shared Sudan's experience in "**Early detection of cancer."** Dr Mohammed indicated that many cancer patients still seek the services of traditional healers, this poses a challenge as they then present in hospital with later stages of cancer. They have found using music to attract the public meetings where they share information on cancer has worked very well. They have also trained female doctors who carry out clinical exams. He also indicated that they have treated men with breast cancer.

Musila Mutala spoke about "**Current and emerging partnerships in imaging and radiotherapy**," he highlighted the partnership between medical radiology and oncology. He emphasized the importance for oncologists to give detailed information on why the patient is being imaged. He indicated that this information will help guide the radiotherapist.

David Miller spoke on the "**Dissemination of oncology expertise via an online collaboration platform.** David described how this platform enables clinicians in different parts of the globe to share cases for discussion. It is an interactive platform that supports different document types such as pictures and word documents allowing the experts discussing a case remotely to be on the same page.

Dr Steve Burgert from Tenwek hospital shared results from the STEP study on **Endoscopic Screening for Esophageal Squamous Dysplasia in Western Kenya.** Burgert noted that esophageal cancer is the eighth most common cancer and the sixth most common cause of cancer-related death in the world.

He highlighted some of the challenges in treating cancer in a developing country like Kenya. These include inadequate reporting systems, late presentation, inconsistent referral patterns, financial constraints and inaccessible chemotherapy and ration therapy, fatalistic attitude and seeking treatment from traditional healers.

The step study involved community leaders in raising awareness on the study, seeking their approval and buy-in and in follow-up. He shared photographs of the equipment used in treating the cancer and those of patients who had successfully undergone treatment.

Wyclef Kaisha presented a case series on **Surgery for Pancreatic Cancer.** He emphasized the importance of close follow-up after this kind of surgery.

Nelson Mandela made a presentation on **2D vs 3D external beam planning in cervical cancer anomalies in treatment volume.** Mandela walked participants through the two methods.

Hamdoun Eldai spoke about the **Introduction to radio pharmacy-role and scope** in Sudan. He highlighted lack of trained manpower as one of the challenges they face. To alleviate this, he called for support for training postgraduates in the field as having a competent and dedicated staff is an important resource.

Prof Othieno Abinya spoke on **Chronic Myeloid Leukemia (CML) predictors in Imatinib failure.** He indicated that treatment failure with imatinib has been demonstrated in approximately 10% to 15% of CML patients. He also highlighted that early identification of patients at risk of failure is important as they can then be put on alternative treatment. Some of the predictors for Imatinib failure identified from the study included missed doses and longer durations between diagnosis and start of therapy with Imatinib.

Peter Loreh made a presentation on **Post-operative electron beam therapy for keloids at Cancer Care Kenya.** Loreh observed that most keloids recur about six months after surgical excision. He displayed pictures showing different causes of keloids including ear piercing and scratching. He however observed that the benign tumours do not occur in people with albinism. He also discussed the risk factors while cautioning that patients should inform their doctors before surgery if they are prone to develop keloids. Loreh also indicated that people prone to keloids should avoid body piercings and tattoos.

Question and answer session

On the Imatinib study, a participant asked if there was a difference between those who were treatment and were naïve to Imatinib and those who had used hydroxyurea previously. It was noted that those who had not been put on any other treatment or used hydroxyurea had less chances of failure. The reason for this has to be investigated further to trace the nature of survival curve and survey any other kind of abnormalities that may or may not have accumulated.

Another participant noted that there have been several published studies where Nilotinib is compared with Imatinib, the former seen to have more superior response. “What is the way forward on treating CML?” he asked. Abinya responded that Imatinib cannot be wished away as it is a major innovation that can be used at a lower cost. The scoring system at time of diagnostics helps to determine those who are likely to fail on Imatinib and start them on a different therapy. Dycetinib and Nilotinib give much better response, but those who do not have serious risk scores can be started on the lower cost Imatinib.

Is there a way to use locally derived predictors for Imatinib failure? Monitoring has to be started immediately – high risk scores, start away from Imatinib, at this point Imatinib is free but also cheaper than second generation and third generation therapies.

"At what point should we start thinking of sending patients for stem cell transplants?" is a question posed by one of the clinicians. Patients who want to go for transplants should be allowed to. If the free donor medication ceases to exist, we need to find out the cheaper option to help many resource-constrained patients.

Imatinib and pregnancy – young patients with molecular response and are young and would like to have a baby? Prof Abinya noted that data exists on the risks to the foetus during pregnancy and breastfeeding, data exists.

On cervical cancer screening, a question was asked on incorporating screening for other NCDs at the participating clinics. Mutuku indicated that they were working with AstraZeneca on screening for hypertension. She also noted that those with advanced stages of the disease were referred to a government facility for treatment.

In response to a question on use of mammography in breast cancer screening in Sudan, Dr Mohamed indicated that mammography is mainly used for screening high risk patients. He also noted that 40% of breast cancer incidences were in patients below the 40 years of age. He however highlighted the challenge in establishing the correct age of patients as some gave the same age even years after the first consultation.

On radiotherapy for keloids treatment after surgery, there was a question on why they do not give higher doses. Loreh indicated that the keep the dosage low to help keep treatment costs for the patients low. It also allows them a window to give higher doses later in cervical and rectal cancer patients who present with stage 3 as they may receive further boosting treatment.

CLOSING PLENARY V: CHAIR: FATMA ABDALLA

There were five short presentations in this final session.

Dr. Vijay Kumar talked about "**Cancer and Stigma**." He gave an example of Mrs. Sonia Gandhi shuttling to the US for treatment of an 'unknown disease.' That is stigma," he said. Kumar used the Oxford dictionary definition of stigma: "A mark of disgrace associated with a particular circumstance, quality or person."

He admitted that there few studies associated with stigma in cancer. "We have the tendency to discriminate people knowingly or unknowingly, that is stigma," he quipped.

In his presentation, he alluded to different movements whose aim is to 'destigmatize' cancer e.g. October Breast Cancer Awareness month, and the use of bald cartoons to address stigma in children who have lost their hair to cancer. He also challenged participants to be the change that they wish to see, as he quoted Mahatma Gandhi.

Anup Devani made a presention, "**Chemotherapy: Sensitivity and Resistance through Genetic Profiling**.

He noted that clinical genetics in Kenya needs to be better understood. Kenya has not been doing nearly as well as it ought in this field.There are far too few people in Kenya that can afford the best quality care. He said there is a need to adopt new technologies, so that they can be affordable based on creating demand which will see prices going down. He challenged participants to embrace the future by resisting change and inertia.

Devani called for medical practitioners to embrace change, overcoming resistance to change is key in unlocking new technologies in oncology. Financial and intellectual investments are the key in cancer treatment in the future.

A joint presentation by Amyn Alidina and David Makumi entitled, "**Starting chemotherapy infusion program at Aga Khan Hospital Dar es Salaam: Processes and Challenges**," was made.

The presenters noted that each country has a different level of infrastructure hence, the need to map what exists in the region so as to leverage on each other's' strengths and share expertise and experiences.

Similarity of socio-economic environments in Kenya and Tanzania is a plus and will aid the learning process significantly. Some of the successes of this program include:

- Focus on capacity building of nurses through video conference.
- Shared tumor boards have been used for learning and sharing expertise/experiences. Cases ar e presented and discussed in real time weekly.
- Use of technology in driving the cancer agenda forward. Encouraged other institutions to invest in technology.

Challenges include cost of medication, regulatory issues of new products and medical tourism.

Opportunities include joint research, education, region specific guidelines, product evaluation and cancer registry.

Dr. Cushny Wanjiru made a presentation "**Epidemiology of cancer patients seeking palliative care at Nairobi Hospice."**

She noted that in Kenya, palliative care is the last stage. It should begin as soon as a diagnosis is made, ideally. She gave statistics on cancer in Kenya; what is more prevalent in men and women.

Her recommendations include setting up of hospices countrywide, use of Information, Education and Communications materials to create awareness on cancer, and supporting research in the field of cancer.

An inspiring story on "**The making of Texas Cancer Centre**," was made by Dr. Catherine Nyongesa, Joshua Ndoli and George Ngacha.

The presentation, told mostly through pictures, talked about the making of an exclusive facility that focuses on cancer care and management. It was very practical and focused on building, equipment, and expansion plans for the current facility in Hurlingham, to its new home on Mbagathi way.

Practical steps like taking into account the high levels of energy; hence need for slightly thicker walls because of radiation and the need to trap it during treatment were shared. A civil engineering firm, Jipsy, talked about the challenges of undertaking a project of this nature which is undoubtedly complex; due to the unusually bunker thick walls.

Dr Andrew Odhiambo gave the final presentation, **"Why the sun is good for you."**

This study focuses on the benefits of Vitamin D. The study also reveals a correlation between lower vitamin levels and prostate cancer. It also showed how much vitamin D is found in the serum of patients with prostate cancers. In conclusion, there is a high prevalence of vitamin D deficiency in prostate cancer patients. More studies need to be done to explore this.

Question and answer session

This was the final question and answer session.

It was commendable that there so many presentations by young doctors.

A question about whether existing buildings can be converted into cancer treatment facilities. The response is that it's better to use barren land or demolish and existing structure. Attention needs to be paid to the unique requirements of a cancer treatment facility. As well, a structural integrity test needs to be done in relation to intended usage of a building,

A comment was made on the importance of having a pharmacy cater to the needs of cancer patients separate to one that serves the general public. It was clarified that this will be incorporated in the new Texas Care Centre facility.

There was a concern on whether young people have Vitamin D deficiency, and the response was that the tendency was for older people to be more deficient as they age.

There was a discussion about whether Aga Khan had any plans of transferring its second machine to Mombasa – the response is that there are so such plans.

A member sought to find out how easy it is for a member of the public to be part of a clinical trial based on molecular biology. It was noted that pharmaceutical companies have their interests and will only invest where it makes business sense and cents.

A member sought to find out if Texas Cancer Centre has a cancer registry to which the response was that staff, have been trained in data management.

Participants were also encouraged to prepare for the AORTIC conference next year and review their papers and submit them to the East African Journal of Pathology. Submissions can be sent to eapathjournal@gmail.com

CLOSING REMARKS

This was a very brief session in which Prof Othieno-Abinya gave a vote of thanks. He mentioned members of the organizing committee, the conference secretariat, the conference organizers, IMG Kenya. He also thanked sponsors who included Astra Zeneca, Novartis, Roche and MSD.

He thanked Texas Cancer Centre, exhibitors, local and international speakers and delegates, and the Panafric hotel. After these remarked, the conference ended officially.