



Organization of Cancer Services in Western Kenya

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Moi Teaching and Referral Hospital is the second largest Public and Referral University Hospital in Kenya serving western Kenya where about 50% of Kenya's population live.

AMPATH

Academic Model Providing Access To Healthcare

(formerly Academic Model for the Prevention and Treatment of HIV/AIDS)

An organizational construct consisting of Moi University, Moi Teaching and Referral Hospital, and a consortium of American medical schools led by Indiana University that aims to deliver essential primary care services, control HIV, and mitigate the social and economic consequences of HIV/AIDS

Health Indicators and Outcomes

- 40,000 pregnant women screened for HIV
- 3,361 HIV infected pregnant women enrolled into pMTCT
- >110,000 other persons screened for HIV
- 30,000 food insecure persons fed weekly
- 10 tons food grown weekly on AMPATH farms
- 4615 orphans and vulnerable children served
- Home counseling and testing successfully demonstrated in Turbo and Kosirai (pop 160,000)
- Riley Mother and Baby Hospital completed
- IU docs provided services in Medicine, Pediatrics, Medical Oncology, Anesthesia, Surgery, Orthopedics, ENT, Ob/Gyn, Pathology

The beginnings of a sustained
partnership...

Development of a Cancer Care Program

Cancer care infrastructure

Kenya



- **No National Cancer Registry**
- **No National Screening for Breast, Cervical, or other Cancers**
- **2 Cobalt 60 Radiation Units in Public Sector**
 - Older, in need of frequent repair
- **Oncologists**
 - 3 (or 4) Oncologists
 - 4 (or 5) Radiation Oncologists



“The infusion clinic”



AMPATH-Oncology

Capacity Building for patient care – nursing & Pharmacy



AMPATH-Oncology

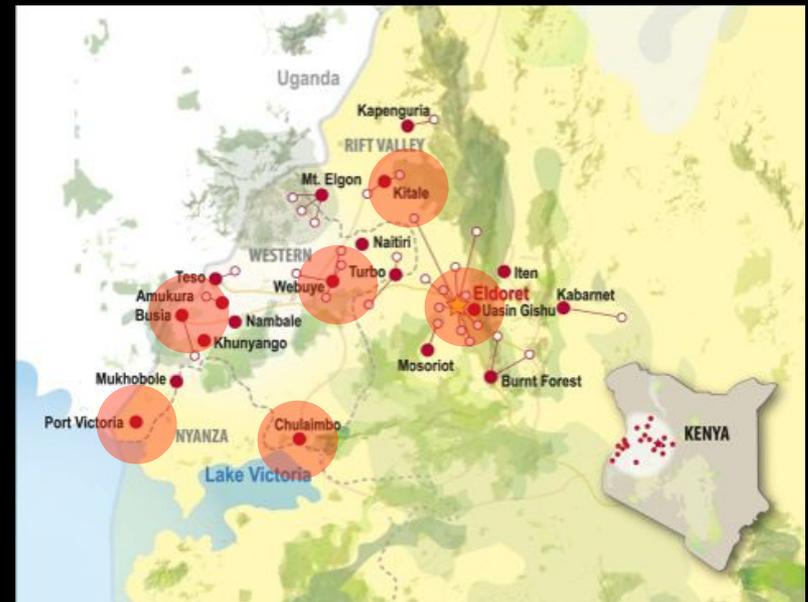
Capacity Building for patient care – nursing & Pharmacy



Ampath-oncology

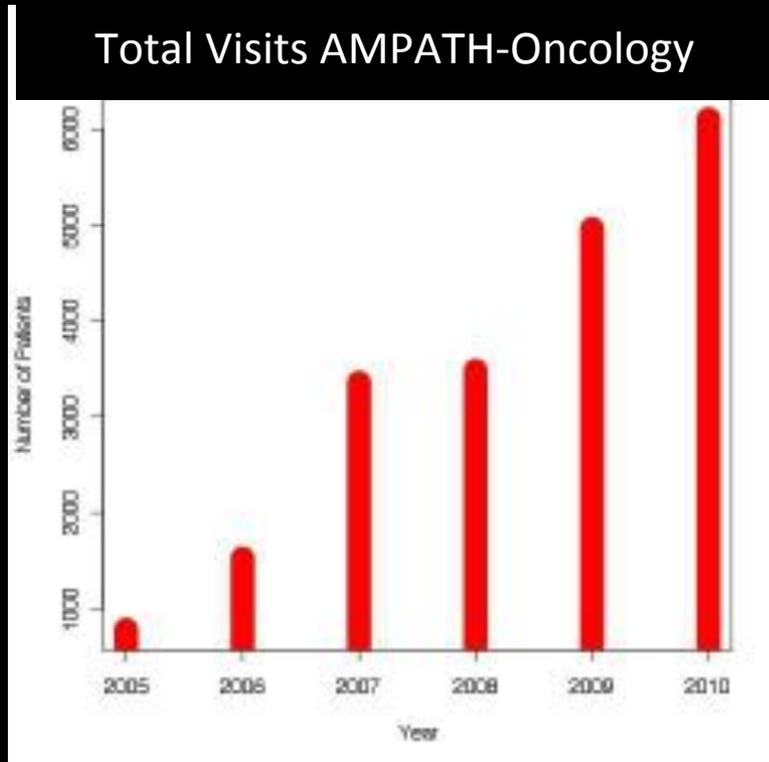
Using an HIV/AiDS backbone

- Access to patients
- A system for follow-up
- Existing basic laboratory infrastructure



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Increasing Patient Volume



- Rapid rise in non-HIV malignancy referrals
- Over 9000 visits in 2012
- Early attempt to offer treatment to all-comers
- Frequent lack of biopsy-proven diagnosis
- Lack of standardized protocols
- Potential for unsustainable costs

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Capacity Building for patient care – Pathology infrastructure

Pre-2008

- Visual diagnosis of most cancers
- Turn-around time for biopsies of 6-8 weeks
- Morphologic diagnosis only
- Lack of a functional cancer registry

2009- present

- Pathologic diagnosis as accepted standard
- Turn-around time for biopsies 2-4 weeks
- Basic, but developing, immuno-staining capabilities
- Up-to-date population-based cancer registry

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Screening Services



Background of AMPATH Oncology Palliative Care

- Started in late Sept, 2010
 - Growing needs for palliative care (over 60-80% of cancer patients)
 - IU Palliative Care Physicians, Drs Greg Gramelspacher and Colleen Brown visited MTRH and AMPATH
- Recommendations: Kenyan champions, accurate prognostication & good communication
- Patient volumes: 783 (2005) → 5953 (2011)

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Capacity Building for patient care – treatment protocols

- WHO List of Essential Drugs

Table 3. Cancer drug priority list.

	Top 10 cancers	Category 1-2	Generic
Priority 1			
Bleomycin	+	+	+
Chlorambucil	+	+	+
Cisplatin	+	+	+
Cyclophosphamide	+	+	+
Daunorubicin	+	+	+
Etoposide	+	+	+
5-Fluorouracil	+	+	+
Methotrexate	+	+	+
Paclitaxel	+	+	+
Procarbazine		+	+
Tamoxifen	+	+	+
Vincristine	+	+	+
Vinorelbine	+	+	+
Cytarabine		+	+
Dactinomycin		+	+
Doxorubicin		+	+
6-Mercaptopurine		+	+
Together with two antiemetics – a dopamine receptor and a 5-HT ₃ receptor antagonist as well as dexamethasone			

- Research protocols that use these drugs
- Minimize toxicity
- Importance of creating a standard, recording data, and re-assessing at regular intervals

AMPATH-Oncology:

Key Questions for Patient Care

- Is it cancer?
 - Is there a biopsy, can we biopsy, do we need a biopsy (does it really change treatment?)
- Is it staged?
 - Can we stage, can we afford to stage, will staging really make a difference in treatment?
- Can we treat?
 - Is there a surgeon able to do the operation, do we have the drugs, can the patient get to radiation?
- Can the patient and/or the system afford any of this?

Cancer Research

- Cervical Cancer Screening
 - “see and treat”
 - HPV serotyping
- Pediatric cancers
 - Childhood Leukemia
 - Treatment Compliance in Childhood Cancers
 - Epidemiology
 - Molecular profiling of Wilm’s Tumor
- Kaposi’s Sarcoma
 - Treatment outcomes in HIV + patients
 - Gem vs BV
- Pharmacogenomics
 - Etoposide in KS patients
 - Vincristine and neuropathy
- Breast Cancer
 - Komen Proposal
 - Behavioral

AMPATH- Oncology: Progress

- Patient volume increased over 10 fold
- Strategic academic partnerships
- Dedicated North American and Kenyan faculty and staff
- Guidelines and EMR initiated
- Creation of a Department of Oncology
- Chosen by AMC to be one of first four sub-Saharan Sites
- Increasing workforce (nurses, medical officers, oncologists)
- Gyne-Oncology Curriculum
- 2012 ASCO MCMC course in Eldoret
- Cancer and Chronic Care facility including radiation

Role of American Society of Clinical Oncology in Low- and Middle-Income Countries

Jean-François Paes, Matthew D. Gallo, Anas B. Chagpar, Doug Pyle, and Forest J. Lubner Jr

ABSTRACT

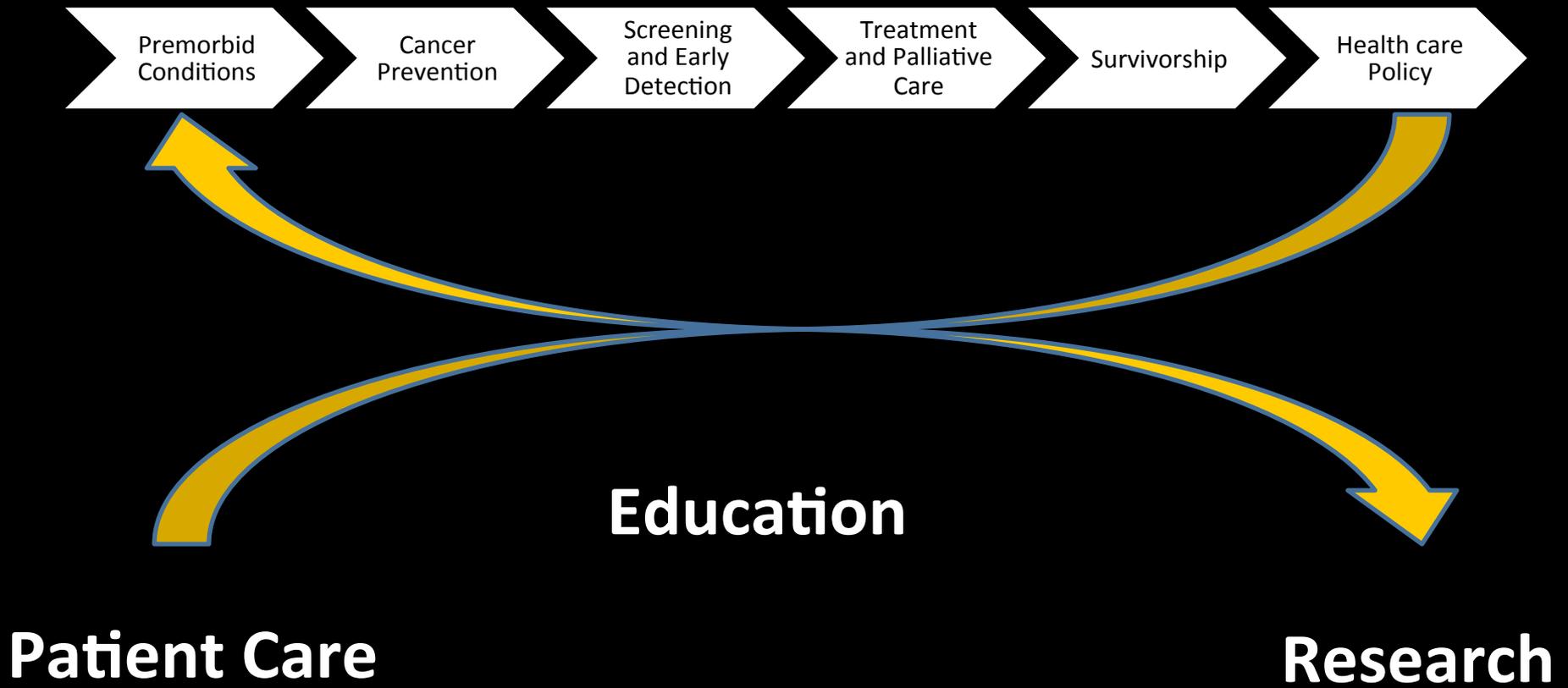
The American Society of Clinical Oncology (ASCO) is a global community of health care professionals whose stated purpose is to "make a world of difference" by improving cancer care around the world. Unfortunately, cancer survival rates vary significantly among countries with differing financial and infrastructure resources. Because ASCO is a professional oncology society

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Barriers to Cancer Control in LMCs

- Lack of infrastructure
- Poorly trained and Limited workforce
 - Patient care costs
- Insufficient palliative care
 - Education Deficits

Kenya: A Sustainable Approach for Cancer Control



Final reflections on global health

- Care must lead the way
- Strategic partnerships
- Need to listen, before you listen
- LMCs can teach high income countries how to deliver more cost effective cancer care
- The Academic tripartite mission (service, education and research) works
- AMPATH-Oncology is one such model

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