



Global Summit on International Breast Health and Cancer Control:

Improving Breast Health Care through Resource-Stratified Phased Implementation

Integration of Breast Cancer in a Cervical Cancer Platform

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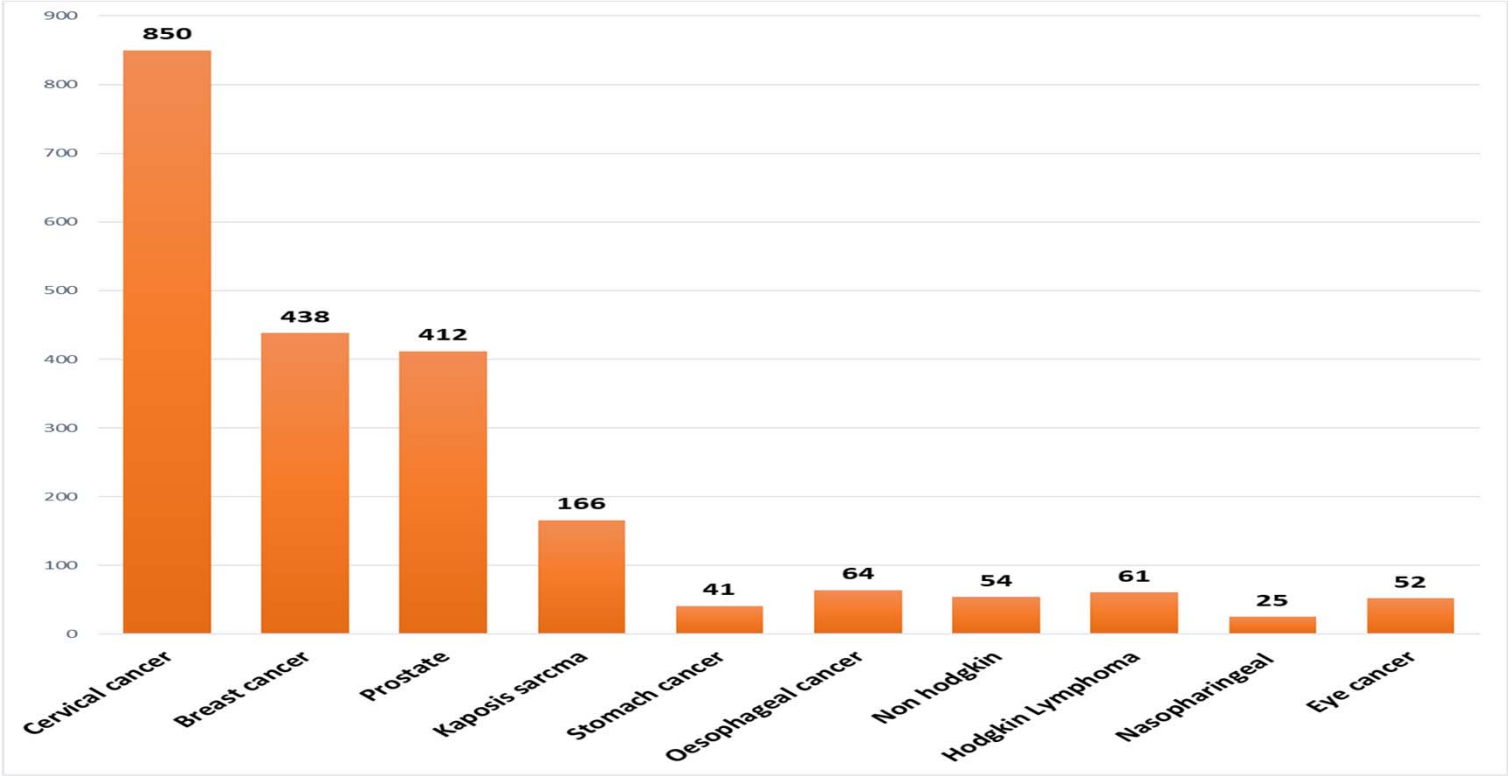


Demographics

- Population: 16m (50% women)
- Economy: Mining and Agriculture
- 2/3 of Zambians live on < \$2 per day
- Most do not have running water or electricity



Cancer burden in Zambia



Source: CDH Register; 2017.

Breast Cancer in Zambia

- Second most common malignancy
- Excessively high mortality
- Late-stage presentation very common
- Earlier age at diagnosis: 49 years vs. 62 years for U.S*.
- Barriers to early detection:
 - Low-levels of awareness
 - Lack of opportunities for diagnosis and treatment
 - Weak laboratory infrastructure
 - Paucity of mid- and high-level health providers
 - Multi-step process for detection and treatment results in high loss-to-follow-up

*Noone AM, Howlader N, Krapcho M, et al. SEER Cancer Statistics Review, 1975-2015

Common presentation of breast cancer in Zambia



Cervical Cancer Prevention in Zambia

- *Cervical Cancer Prevention Program in Zambia (CCPPZ)*
 - implemented in 2005
 - single-visit VIA plus cryotherapy, thermocoagulation or LEEP/LLETZ
 - screened over 500,000 women; treated over 20,000 for precancer
 - currently has 87 facilities across the country offering cervical cancer screening and treatment
- Supported by US President's Emergency Plan for AIDS Relief, US Centers for Disease Control Prevention, World Bank, Global Fund
- Institutionalized by Zambian Ministry of Health in 2015

Objective

- To leverage the successes and experiences of a large public sector cervical cancer prevention service platform to build capacity for the early detection and surgical treatment of breast cancer

Methods

Our initiative sought to improve breast cancer care capacity in Zambia through

- Assessment of existing breast cancer control capacity within the country
- Formation of a breast cancer advocacy alliance to raise awareness
- Creation of a resource-appropriate breast cancer care training curriculum for mid- and high-level providers
- Implementation of training curriculum using didactics and onsite clinical and surgical mentoring by U.S. experts (University of Arkansas School of Medicine)

Components of breast care training curriculum

- Didactics
- Clinical breast examination
- Breast ultrasound
- Ultrasound-guided core needle biopsy
- Modern surgical management

Assessment of breast care capacity

- Well-established cervical cancer prevention infrastructure available for use as a platform for clinic breast examination
- Highly motivated mid- and high-level healthcare professionals
- Availability of ultrasound equipment
- Government support
- No formally trained breast cancer surgeons
- No dedicated breast clinic in the country
- Multidisciplinary approach to cancer management in its infancy
- Small percentage of early-stage breast cancer cases on which to perform conservative therapy
- Two functional analog mammography machines in the public sector

Implementation Outcomes (First 6 months)

- An alliance was formed between various women's cancer advocacy groups
- Two new breast diagnostic centers established in Lusaka and Kabwe
- 2 general surgeons trained: SLN, conservation surgery, ALND
- 1,955 women attending cervical cancer prevention clinics underwent CBE by cervical cancer screening nurses; 167 referred for ultrasound evaluation
- 55 ultrasound-guided biopsies performed; 17 positive for cancer
- SLN mappings (6), ALN dissections (8)
- 8 breast conservation surgeries independently performed by Zambian general surgeons

*Findings and details published by Pinder, et. al, J Glob Oncol. 2018 Sep;(4):1-8.

Challenges

- The surgeon in charge of one of the diagnostic centers left
- Created demand but still had no breast clinics

Implementation Outcomes (Late)

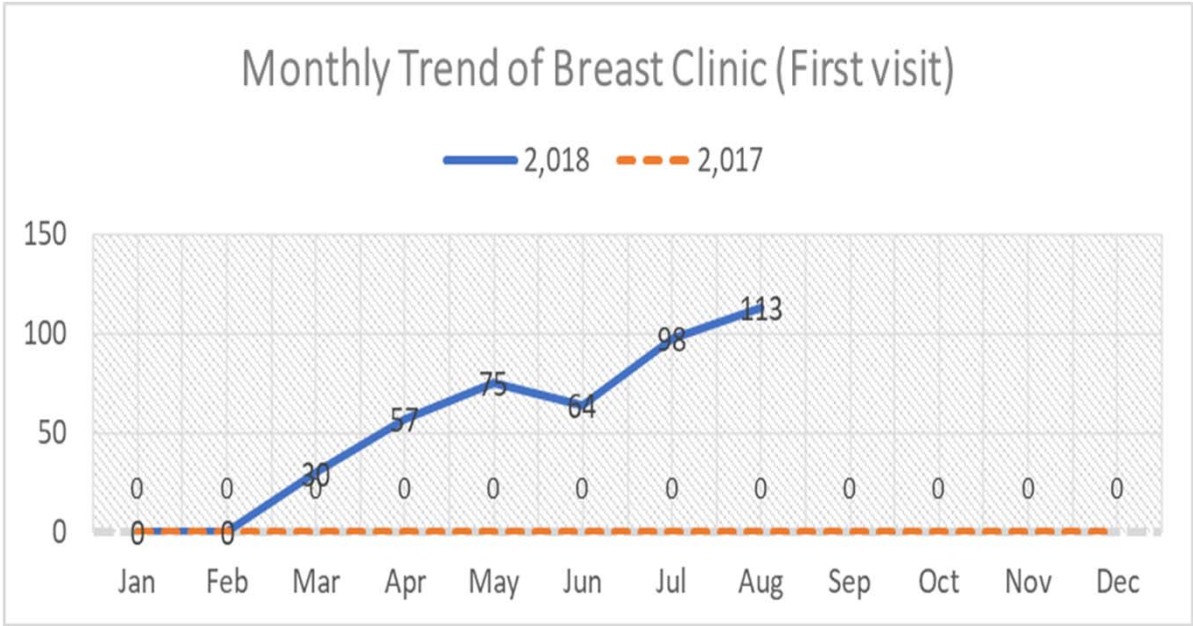
- Cervical cancer prevention providers being trained to perform clinical breast examination.
- All the women accessing cervical cancer screening are offered clinical breast examination
- **New breast cancer clinic established at District Hospital level (Matero Hospital), March 2018**



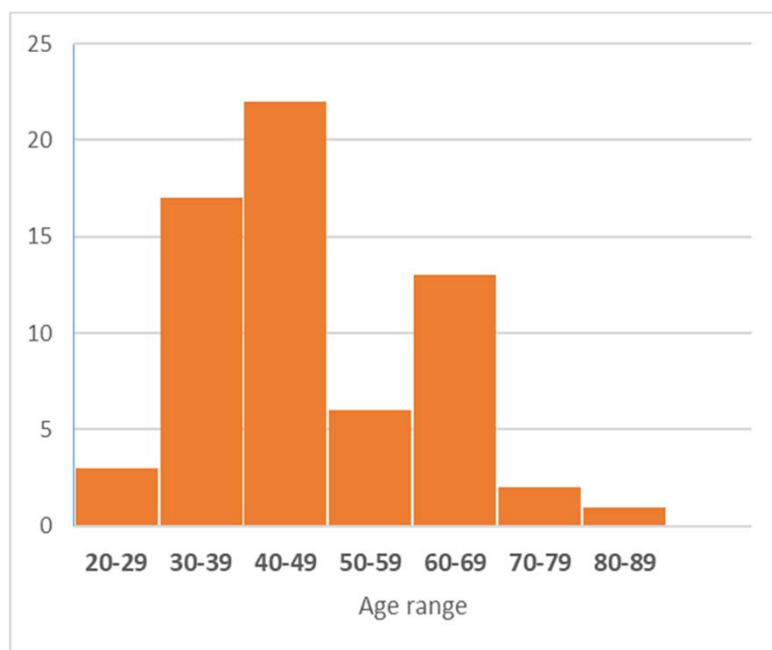
Matero Hospital Breast Clinic



Matero Hospital Breast Clinic Feb-Aug 2018 (n=437)

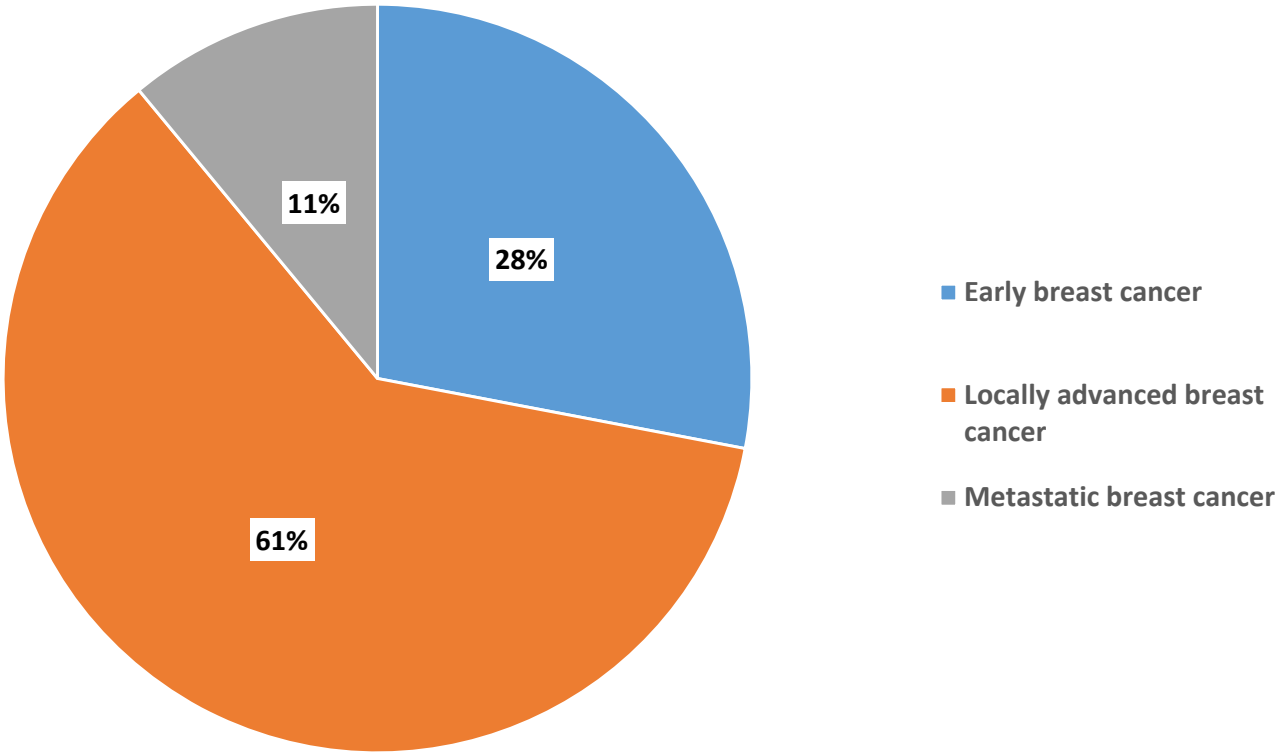


Matero Hospital Breast Clinic Feb-Aug, 2018



- Diagnosed with breast cancer - 63
- Age distribution of breast cancer patients
 - 45/63 (71%) <age 50 years
- Histology – 97% invasive ductal

Distribution of breast cancer patients by stage



Breast Cancer Surgeries

Cancer surgery

- Mastectomy - 25
- Wide Local Excision - 1
- Axillary Lymph Node Dissection - 24
- Sentinel lymph node biopsy – 2

Benign surgery

- Excisions of masses - 79



Do we have the capacity to screen asymptomatic women for breast cancer in Zambia?

Screening Infrastructure

- **Two** functional mammography machines
 - Neither has stereotactic biopsy components nor digital
 - No dedicated radiologist to read films
- **Three** facilities perform ultrasound guided core needle biopsies
- **One** dedicated breast clinic (District Hospital level)

Do we have the capacity to screen asymptomatic women for breast cancer in Zambia?

Human resources

- 34 general surgeons in the country
 - 5/34 trained to perform core biopsies
 - 2/34 trained to perform breast cancer surgery
- 6 pathologists in the country
 - Delays in histopathology results
 - IHC rarely available
- National cancer center for chemotherapy and radiotherapy
 - 7 medical oncologists
- Multidisciplinary tumor board

Do we have the capacity to screen asymptomatic women for breast cancer in Zambia?

- A population based screening program for breast cancer is not feasible at this time

What are we able to do?

Manage palpable /ultrasound detectable breast disease

Future Plans

- IHCs
- Mobile U/S machines
- Create breast clinics in all level two hospital
- Baseline data- Research
- Digital mammography with stereotactic components

Acknowledgement

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