



# **Resource-adapted guidelines for Breast Cancer Management**

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# Breast cancer worldwide statistics

- Breast Cancer is **most common in women**, except for skin cancers, **worldwide**
- Breast cancer is the **leading cause of death** in women worldwide (GLOBOCAN 2012):
- **Death rates declining** since 1990s as a result of:
  - *Increased Awareness: But, not everywhere*
  - *Early detection & screening: But, not everywhere*
  - *Improved Treatment: But not equally everywhere*

Ferlay et al. GLOBOCAN, IARC, Int. J Cancer 2015 ...

*... Note: reliable statistics, especially on mortality are not available from many many Low & Middle Income Countries (LMIC) – GLOBOCAN has formulas and extrapolations*

# Breast Cancer in LMCs: Significant Health Issue

- Global number of new breast cancer cases in 2008:  
~ 1.38 Million
- LMCs account for 45% of new breast cancer cases worldwide; expected to make 70% of cases by 2020
- 54% of annual breast cancer deaths occur in LMC
- Nearly 50% increase in breast cancer global incidence and mortality is expected 2002-2020

Ferlay et al. GLOBOCAN , IARC ... ..

Lingwood RJ, Boyle P, Milburn A, et al. *Nat Rev Cancer* 2008; **8**: 398–403.

Anderson BO, Cazap E, El Saghir NS, et al. *Lancet Oncol.* 2011 Apr;12(4):387-98

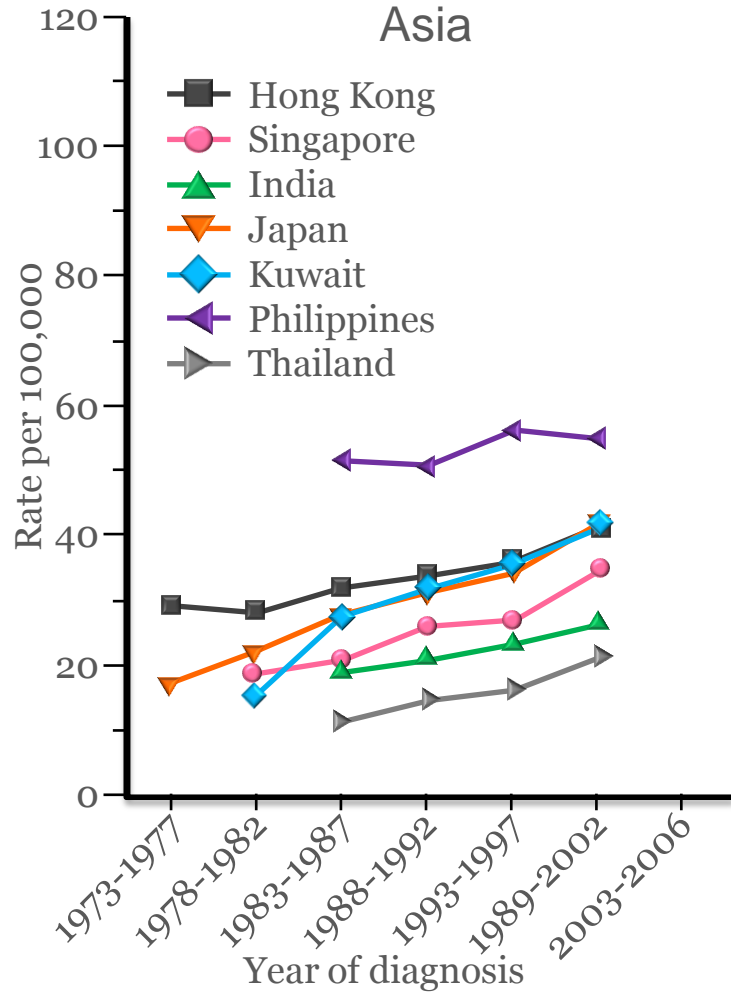
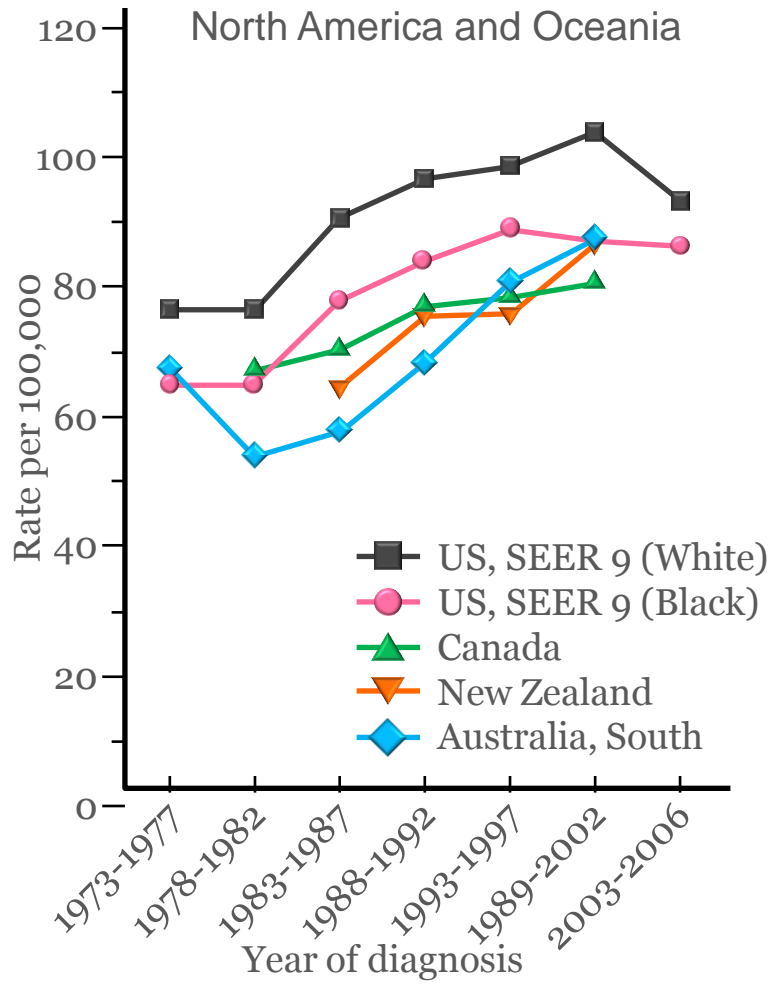
# Globocan 2012 New data

	2008	2012	In LMCs	
Number of cases	12.7 M	14.1 M	57% of new cases	
Number of deaths	7.6 M	8.2 M	65% of deaths	

Ferlay J S, et al . GLOBOCAN 2012 v1.0, IARC CancerBase No. 11. 2014(25 April 2014), (2013).

Ferlay J S, et al. Globocan 2008 V2.0: IARC CancerBase No. 10. (August 29, 2013. ), (2010).

# Female Breast Cancer Incidence Rates: Rising in Most Countries, except in some industrialized nations



## Breast cancer in Low- & Middle- Income Countries: Examples from Arab Countries

- ASR **Incidence Rates: 9.5-50** (rising in most countries: Up to 69/100/000 W /y in Lebanon)
- Young Age at presentation: Median: 48-52 years;  
**50% of cases < age 50**  
*(USA & Europe: 25% are < 50; 50% are >age 63)*
- **High proportion of Locally advanced and metastatic disease at presentation: up to 60-80%** (Most recently: Rates are decreasing in many centers)
- **High rates of Mastectomy:** up to 88-60% (Decreasing)
- **High rates of Lymphoedema** and suboptimal care
- Only **few programs of Supportive & Palliative Care**

# Worse survivals in LMCs: Access to Care & Late Stage at presentation

## Factors associated with increased incidence:

- Changing lifestyles and diets
- Changes in reproductive patterns
- Increased life expectancy
- Improved diagnoses and detection

## Factors associated with worse cancer survival:

- Limited access to basic and modern therapy
- Late stage presentation:
  - In India, 50-70% of cases have LABC and MBC at dx
  - In Arab countries, 60-80% had LABC and MBC; but lately this is decreasing

Chopra R. The Indian scene. *J Clin Oncol* 2001; **19** (suppl 18): 106S–11S

El Saghir, et al. *Int J Surgery* 2007 Aug;5(4):225-33

El Saghir, et al. *J Cancer* 2014

# Advanced disease in LMCs: Reasons for delays in presentation

- **Health systems:**
  - - Lack of national programs
  - - Lack of access to adequate breast care
  - - Other priorities



# Advanced disease in LMCs: Reasons for delays in presentation

- Patient Factors
- Socio-economic
- Cultural
- Education
- Doctor Factors
- Training
- Resources

# Patient management: Guidelines & applicability worldwide

- **Guidelines are issued and graded based on:** evidence, quality of evidence, balance between benefits and toxicities, and include strength of given recommendations
- **Guidelines generally do not consider costs**, except in the context of cost-effectiveness
- Such **“Resource-unlimited” guidelines** are not applicable everywhere: Even in some countries where they are issued!
- **Breast Health Global Initiative attempted to make a difference & issued “Resource-sensitive” guidelines**

# Resources & Treatment Limitations in LMICs

- **Advanced Stages at Presentation** are daily encounters
- Mastectomy: remains most common surgical procedure
- SLNB: remains uncommon: Lack of setup & expertise
- **Radiation therapy use**, where available, is more often used only for palliative care than treatment
- **Systemic chemotherapy** is not always administered by trained medical oncologists whose numbers are few
- Proper choices of therapy may be limited because of lack of **good quality pathology laboratories** and reliable determination of ER, PR and HER2 receptors
- Palliative care remains very fragmented

# Breast Health Global Initiative BHGI

## General Recommendations for LMIC:

- **Public awareness** and **Early Detection programs**: Reduces taboos and excessive fears
- **Clinical breast examination** should be promoted as a necessary method for clinical diagnosis of breast abnormalities
- Need to **optimize tissue sampling and pathology services**
- More early detection, and more **Radiation Therapy centers** reduce **mastectomy rates**
- Need for Integration of services within **multidisciplinary settings**
- **Reduce barriers to access** of cancer treatment and drugs



# DETECTION STRATEGIES AND GOALS:

## EARLY DETECTION

	BASIC	LIMITED	ENHANCED
<b>Public Education and Awareness</b>	<ul style="list-style-type: none"> <li>Development of culturally sensitive, linguistically appropriate local education programs for target populations to teach value of early detection, breast cancer risk factors and breast health awareness (education + self-examination)</li> </ul>	<ul style="list-style-type: none"> <li>Culturally and linguistically appropriate targeted outreach/ education encouraging CBE for age groups at higher risk administered at district/provincial level using healthcare providers in the field</li> </ul>	<ul style="list-style-type: none"> <li>Regional awareness programs regarding breast health linked to general health and women's health programs</li> </ul>
<b>Detection Methods</b>	<ul style="list-style-type: none"> <li>Clinical history and CBE</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostic breast US +/- diagnostic mammography in women with positive CBE</li> <li>Mammographic screening of target group<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>Mammographic screening every 2 years in women ages 50-69<sup>1</sup></li> <li>Consider mammographic screening every 12-18 months in women ages 40-49<sup>1</sup></li> </ul>
<b>Evaluation Goal</b>	<ul style="list-style-type: none"> <li>Breast health awareness regarding value of early detection in improving breast cancer outcome</li> </ul>	<ul style="list-style-type: none"> <li>Downsizing of symptomatic disease</li> </ul>	<ul style="list-style-type: none"> <li>Downsizing and/ or downstaging of asymptomatic disease in women in highest yield target groups</li> </ul>

# Radiation Therapy Issues in LMICs

- **Number of RT centers:** Few, only in Major cities: To be increased
- **Physicians, Physicists and Technologists:** need more
- **Accessibility to patients:** Daily travel, long distance
- **Types of RT:**
  - **Cobalt machines:** Easier to handle, less maintenance
  - **Linear Accelerators** are increasing
- **Quality Control** is variable: Radiation safety, maintenance, monitoring of efficacy and side effects: Great roles for **IAEA** (Intl Atomic Energy Agency)

# Overview of Initiatives to improve outcome of breast cancer patients in LMICs, & worldwide

- Local Initiatives: Essential
- Regional Initiatives
- International Initiatives
  - ASCO
  - ESMO
  - Italian / Scandinavian / American Institutions / European Union & European Parliament/
  - Breast Health Global Initiative BHGI:  
a Guideline and Project-Development group
- International dedicated organizations: WHO, UICC, IAEA
- International Collaborative Research
  
- Activities of “International Breast Disease Centers”: ...



## MISSION STATEMENT

The *Breast Health Global Initiative (BHGI)* strives to develop, implement and study evidence-based, economically feasible, and culturally appropriate guidelines for international breast health and cancer control for low and middle income countries to improve breast health outcomes.





# BHGI GUIDELINE DEVELOPMENT

- Comprehensive guidelines by selected expert panels
- Consensus opinions based on evidence review
- Publication of a) consensus and b) individual manuscripts

Global Summit 2002: Health Care Disparities

Global Summit 2005: Resource Stratification

Global Summit 2007: Guideline Implementation

Global Summit 2010: Optimizing Delivery of Care

Global Summit 2012: Supportive & Survivorship Care



# GLOBAL SUMMIT 2005 – BETHESDA

## RESOURCE STRATIFICATION

- **Basic level:** Core resources or fundamental services necessary for any breast health care system to function.
- **Limited level:** Second-tier resources or services that produce major improvements in outcome such as survival.
- **Enhanced level:** Third-tier resources or services that are optional but important, because they increase the number and quality of therapeutic options and patient choice.
- **Maximal level:** Highest-level resources or services used in some high resource countries that have *lower priority* on the basis of extreme cost and/or impracticality.

# Survivorship care: Issues need more attention in LMICs (& everywhere!)

- Examples:
- Long-term complications:
- Physical
- Fatigue, insomnia
- Lymphedema & Shoulder morbidity
- Women's Health issues
- Lifestyle , diet, exercise issues

# Reducing Disparities in the Management of patients with Breast Cancer

- **Full Multi-Disciplinary Tumor Boards**
- **Mini-Tumor Boards**, if a full team is not available
  
- **Usual: Discuss Primary Breast Cancer cases**
- **Encourage: Discuss Metastatic cases**
- **Encourage: Discuss Supportive/Palliative Care!**
- **Rely more on: Implementation of Guidelines, and not only expert opinions!**

El Saghir et al. Survey Arab Countries 2011

El Saghir, et al. ASCO Tumor Boards 2014 ... ..

# Improving Care of Cancer Patients in LMCs:

## Reduce “Brain drain”: Onsite training / Improve local conditions & infrastructures

- On-site training by International Experts (of physicians, medical oncologists, radiologists, pathologists, nurses, nurse practitioners, pharmacists and all health care providers)
- Short-term stays overseas reduce chances of staying there
- Encourage commitment of traveling trainees to returning back home
- Improve local facilities and working environments
- Increase local supporting staff
- Better compensation in their homeland
- And, of course: Encourage socio-economic and political reforms (and revolutions that lead forward to progress!)

# Examples: Costs & local dilemma in LMCs

- Reliable **Receptors by IHC** may not be available
- **Anthracycline**-based therapy: generally available
- Addition of **taxanes: becoming more usable** because of availability of generics
- **Trastuzumab**: Need for accurate HER2 testing
- **Trastuzumab Duration**: 6 months may be OK for Policy Makers! (“Phare” study borderline results)
- **Tamoxifen and AI studies**: Tamoxifen is still ALIVE!
- **Generics**: costs are not really very low in LMICs!
- **Newest targeted therapies**: High costs, borderline results, burden!

# Addressing various disparities in patient & family education worldwide

- “The doctor did not tell me”, “having pain is inevitable”, ...
- **Adequate patient education** improves compliance, pain management & satisfaction
- **Topics of patient education:** disease, treatment toxicities, women’s health issues (sexuality, fertility, menopause, etc)
- **Recommendations:** include printed material, videos, language, culturally-sensitive texts, ..
- ...

# Breast Cancer Screening & LMICs

- Prevention recommendations: Diet, exercise
- Awareness Campaigns
- Breast Self Exam
- Clinical Breast Exam
- Limited role of screening mammography in LMICs
- Abuse of Breast MRI in LMIC (Field experience)
- Prevention of LABC Locally Advanced Breast Cancer should be a priority: Example: Observations from Lebanon
- Risk-assessment & Risk-specific guidelines

Anderson BO, Lancet Oncol 2011

El Saghir & Anderson, The Breast 2012

El Saghir & Charara: Breast Cancer Management 2014



# **LMCs & and the Future for applicability of new Guidelines**

- **Electronic Health Records (EHR):**
- Paperwork, inadequate documentation, personal efforts, litigations
- Regulations: Hospitals, Insurance Agencies, Governements
- **Personalized Medicine**
- **Clinical Trials:**
- **Local** trials & issues
- **Phase III:** Pharma-sponsored: getting better
- **Phase I & II:** Importance of being part of trials in era of targeting and personalized Medicine!



## Example of BHGI Field Work:

### GHANA WEST AFRICA

- Former British colony
- 20 million population:
  - Two-thirds rural
- Literacy:
  - 76% male, 54% female
- Life expectancy:
  - 57 years of age
  - “Low level” resources
- 3.6% HIV positive





## Ghana Situation Analysis 2004

Komfo Anokye Teaching Hospital (KATH)  
Multispecialty breast cancer team



## PUBLIC MISCONCEPTIONS

- Breast cancer invariably fatal
- Cancer caused by social misbehavior
  - Oral / nipple contact
  - Dirty clothing
  - Wearing money in bra
- Mastectomy leads to death within few years



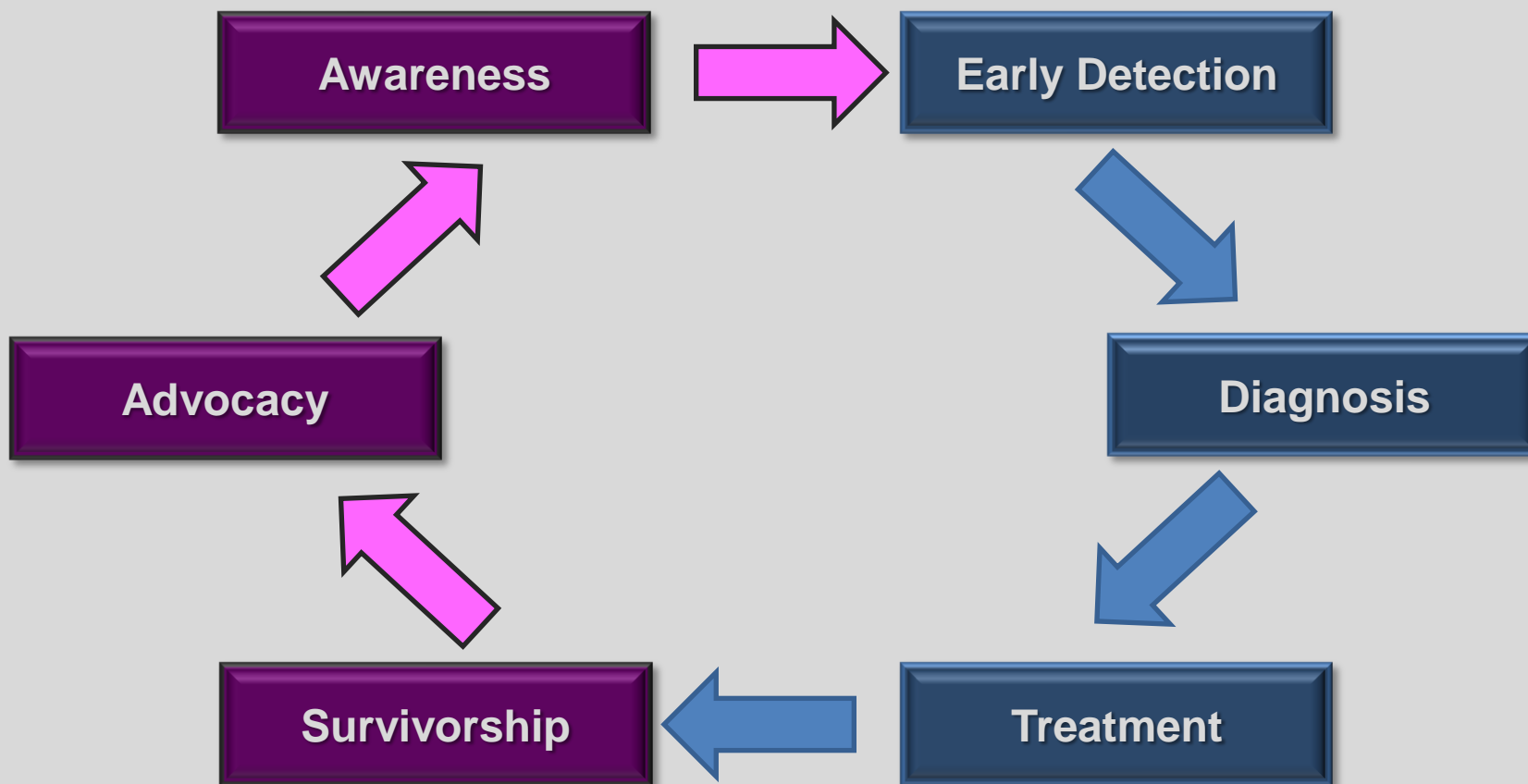
## OBSTACLES TO CARE

- Advanced cancer stage at diagnosis
- Mastectomy without adjuvant treatment
  - No post-surgical radiation therapy
  - Inadequate adjuvant systemic therapy
- One pathologist for a 1,000 bed hospital
- Pathology report takes 4 – 6 months

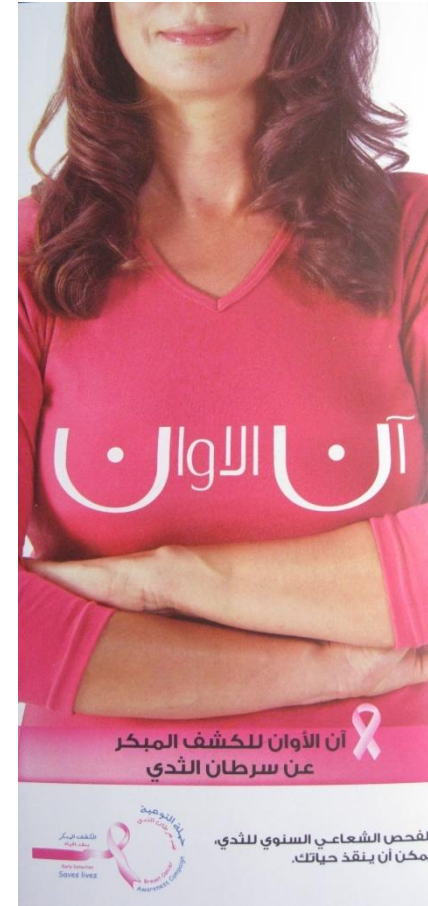


Public Participation

Health Care Delivery



# Awareness campaigns, Doctors, Nurses, Survivors & Media: We still have lots of work to do!!!



Thank you!