



# GUIDELINES FOR NIGERIA: INTRODUCTION TO RESOURCE STRATIFIED GUIDELINES

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Seattle, Washington

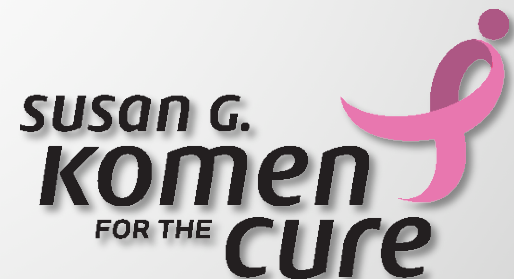


# *The* Breast Health Global Initiative

[www.bhgi.info](http://www.bhgi.info)



**FRED HUTCH**  
CURES START HERE







## GUIDELINES FOR NIGERIA – OVERVIEW

- U.S and Global Cancer Trends
- Early Detection and Treatment
- Adapting to Existing Resources

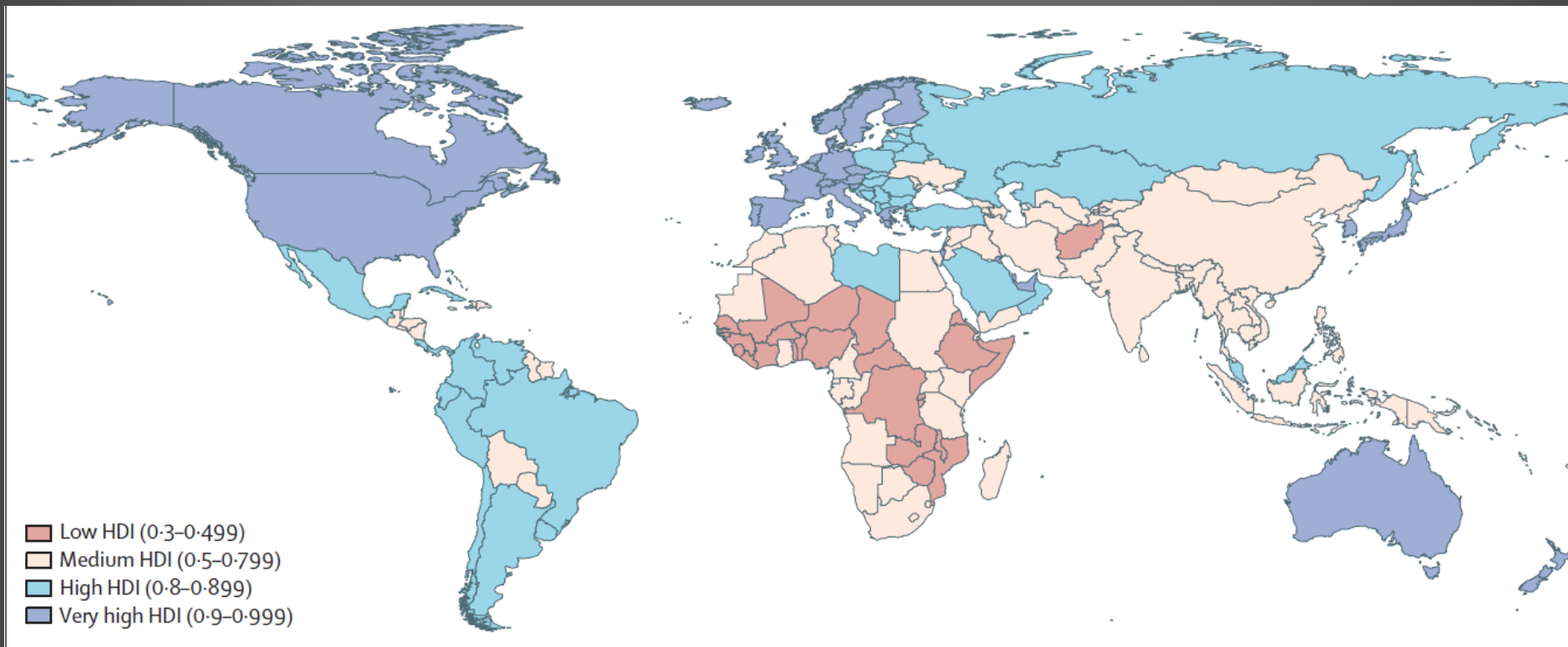


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## GLOBAL CANCER TRENDS (IARC) HUMAN DEVELOPMENT INDEX (2008-2030)



- **Highest HDI:** Breast, lung, colorectum, prostate cancers (over 50%)
- **Medium HDI:** Add esophagus, stomach, liver; **Low HDI:** cervical cancer

Bray, et al, Lancet Oncol 13:790, 2012



# GLOBAL CANCER TRENDS (IARC)

## HUMAN DEVELOPMENT INDEX (2008-2030)

- 12.7 million cases in 2008 predicted to rise to 22.2 million by 2030

	Men			Women			Scenario-based prediction for 2030*
	Medium HDI	High HDI	Very high HDI	Medium HDI	High HDI	Very high HDI	
Stomach	-2.7%	-2.6%	-2.8%	-1.9%	-2.5%	-2.5%	2.5% annual decrease in all HDI areas per year
Cervix uteri	..	..	..	-1.8%	-1.2%	-2.6%	2% annual decrease in all HDI areas per year
Lung	-1.5%	-1.3%	-1.6%	-0.5%	0.5%	1.8%	1% annual decrease in high HDI and very high HDI areas (men) 1% annual increase in high HDI and very high HDI areas (women)
Liver	0.1%	0.2%	2.5%	-0.4%	0.4%	2.1%	Difficult to generalise, assume no change
Colorectum	1.5%	2.8%	0.6%	1.5%	1.8%	0.3%	1% annual increase in all HDI areas per year
Breast	..	..	..	2.1%	2.6%	1.6%	2% annual increase in all HDI areas per year
Prostate	3.2%	7.0%	4.4%	..	..	..	3% annual increase in all HDI areas per year

- Reductions in infection-related cancers are offset by increases in cancers associated with reproductive, dietary and hormonal factors





## CANCER CONTROL STRATEGIES BACKGROUND

Between one-third and one-half of cancers can be prevented through avoidance of known risk factors.

For the remaining 50%, a substantial proportion of cause specific mortality could be averted through early detection followed by effective treatment.

Data from high-income countries (HICs) indicate that prevention and early detection programs are cost-effective at reducing cancer mortality.

Vineis and Wild. Lancet 383:549, 2014

7 Beaglehole et al. Public Health 125:821, 2011



# CANCER CONTROL STRATEGIES

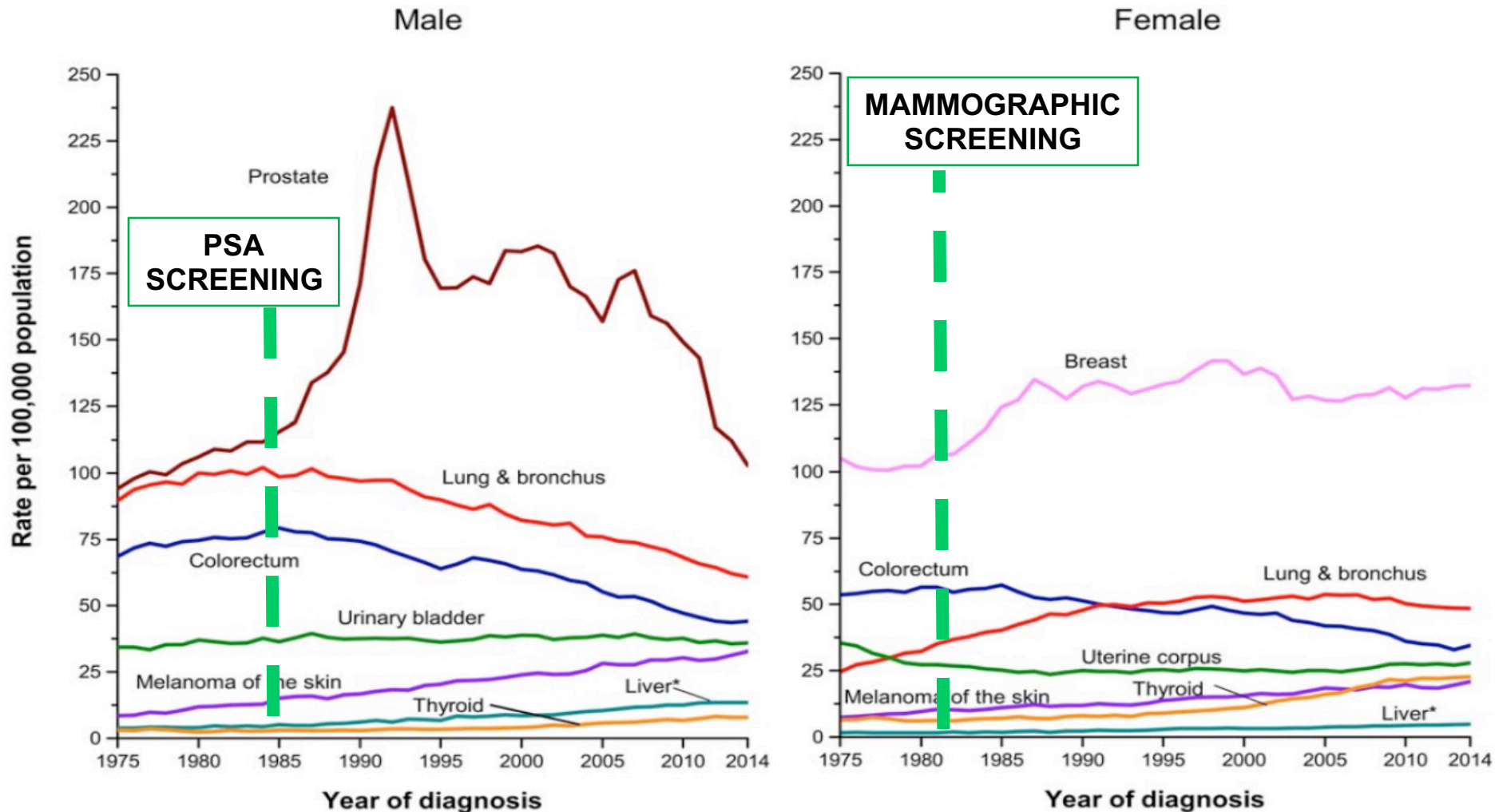
## PRIMARY PREVENTION

Population-Attributable Fraction (PAF) reflects potential prevention impact

Etiology	Carcinogenic risk factor (associated PAF)	Overall PAF (%)	Risk reduction programs	Key multisectoral partners	Estimated cost-effectiveness
Infectious etiologies	HPV (cervical cancer 90–100%)* Hepatitis B and C (HCC 77%)* <i>H. pylori</i> (gastric cancer 75%)*	18	Vaccinations	Health care workers Pharmaceutical companies Legislative bodies	Very cost-effective
Behavioral factors	Tobacco (30%)† Obesity (20%)† Diet (5%)† Alcohol (4%)†	66	Tobacco cessation Exercise programs Public education and outreach	General population (health literacy) Legislative bodies Health care workers	Very cost-effective
Environmental factors	Air pollution Aflatoxins	4	Environmental regulations	Legislative bodies Business sector	Potentially cost-effective
Clinical interventions	Chemoprevention (such as tamoxifen, aspirin, celecoxib, or finasteride) Surgical procedures (such as prophylactic mastectomy or prophylactic oophorectomy)	N/A	Insurance coverage for correctly selected individuals at elevated risk	Health care workers Pharmaceutical companies General population	Cost-effective



## U.S. CANCER INCIDENCE (ALL)



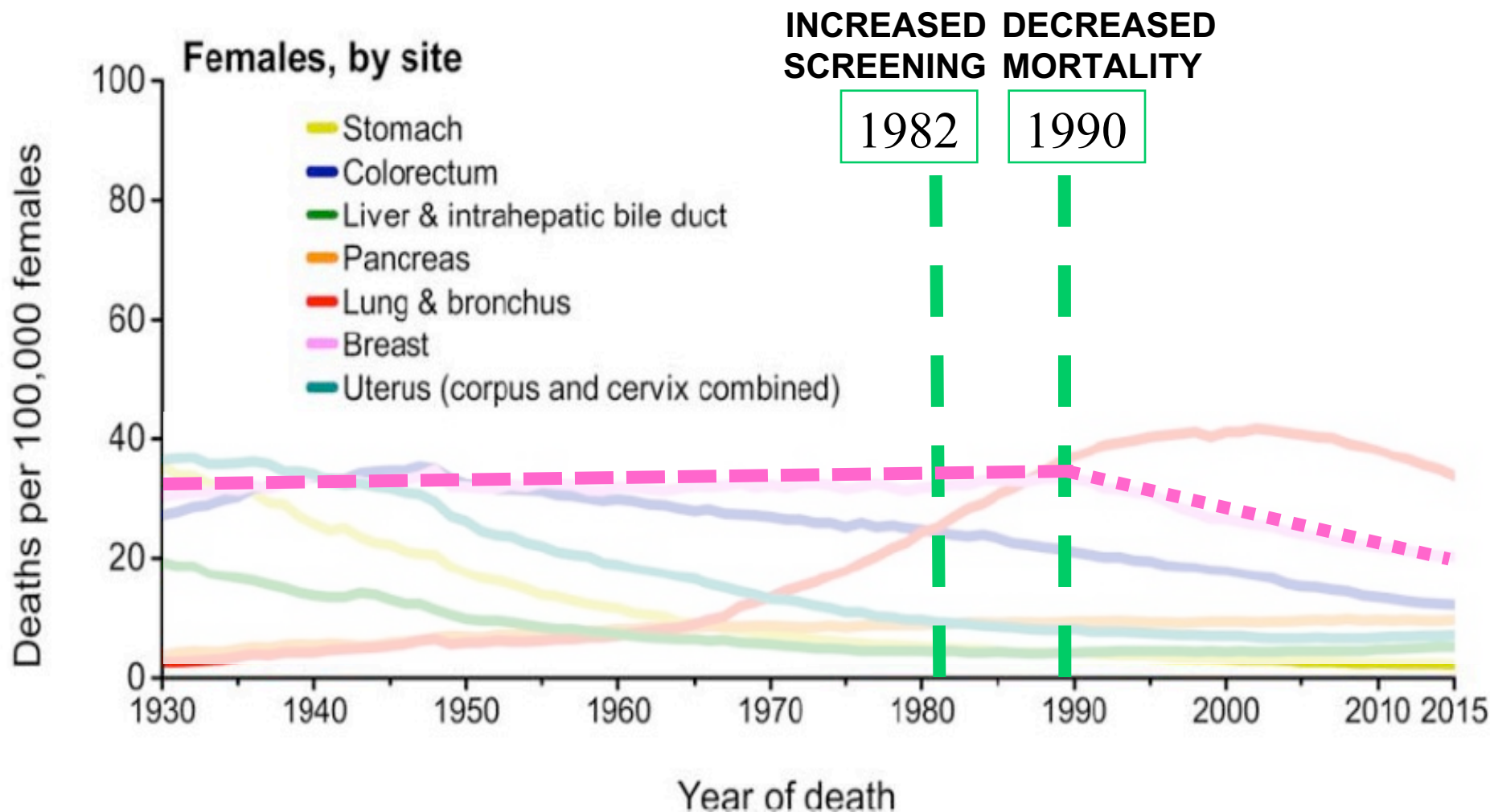
SOURCE: Seigel Ca Cancer J Clin 68:7, 2018

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## U.S. CANCER MORTALITY (FEMALE)



SOURCE: Seigel Ca Cancer J Clin 68:7, 2018



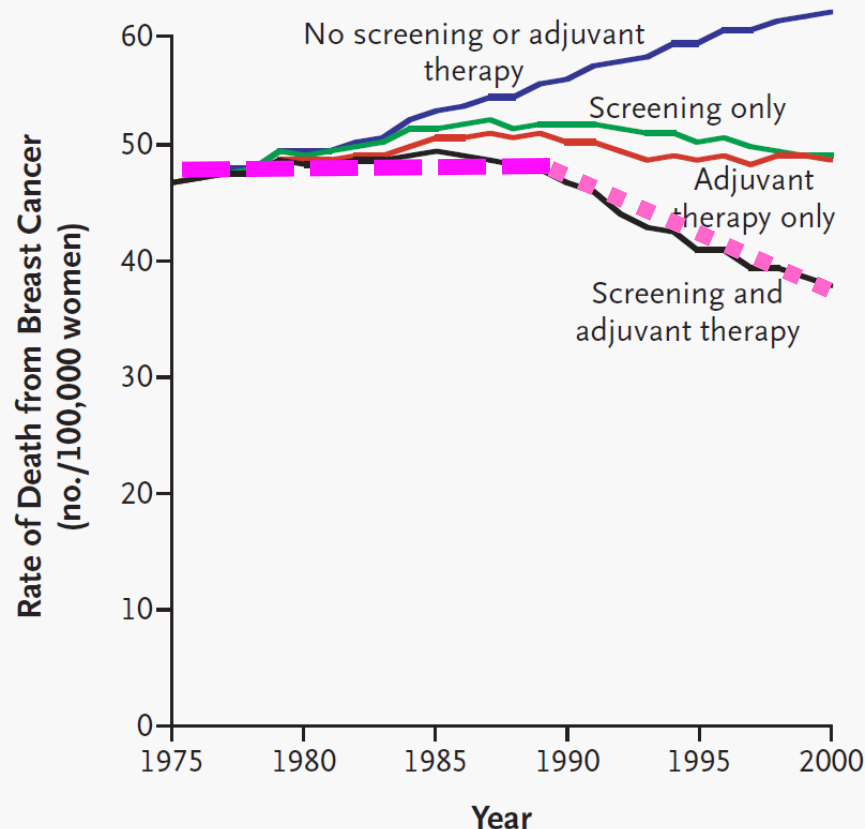


## MORTALITY MODELING

### SCREENING AND ADJUVANT THERAPY

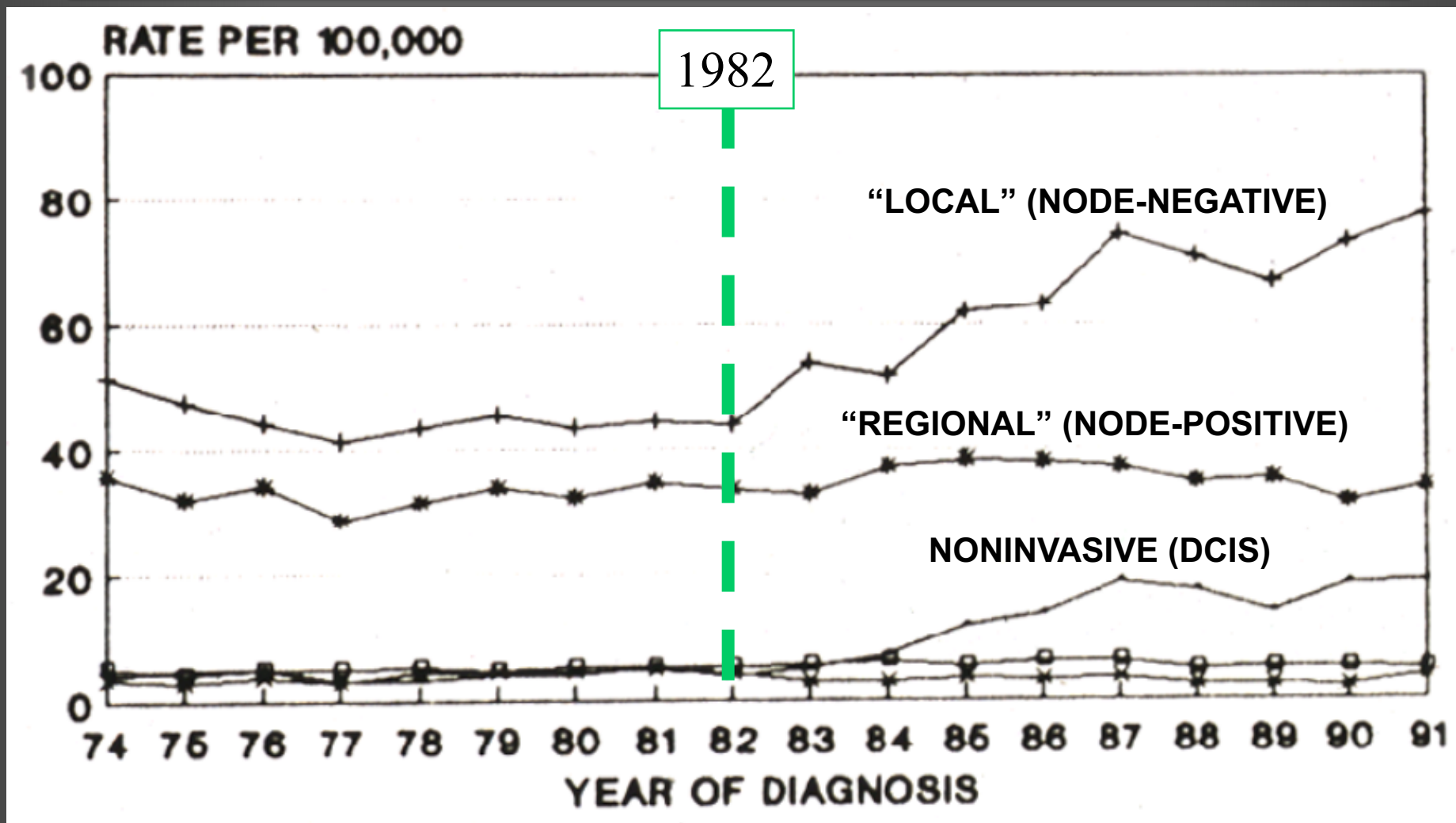
- Early detection is essential to improving outcome.
- Early detection works when followed by appropriate breast cancer treatment.
- To save lives, screening programs must be linked to timely, effective treatment.

**B**





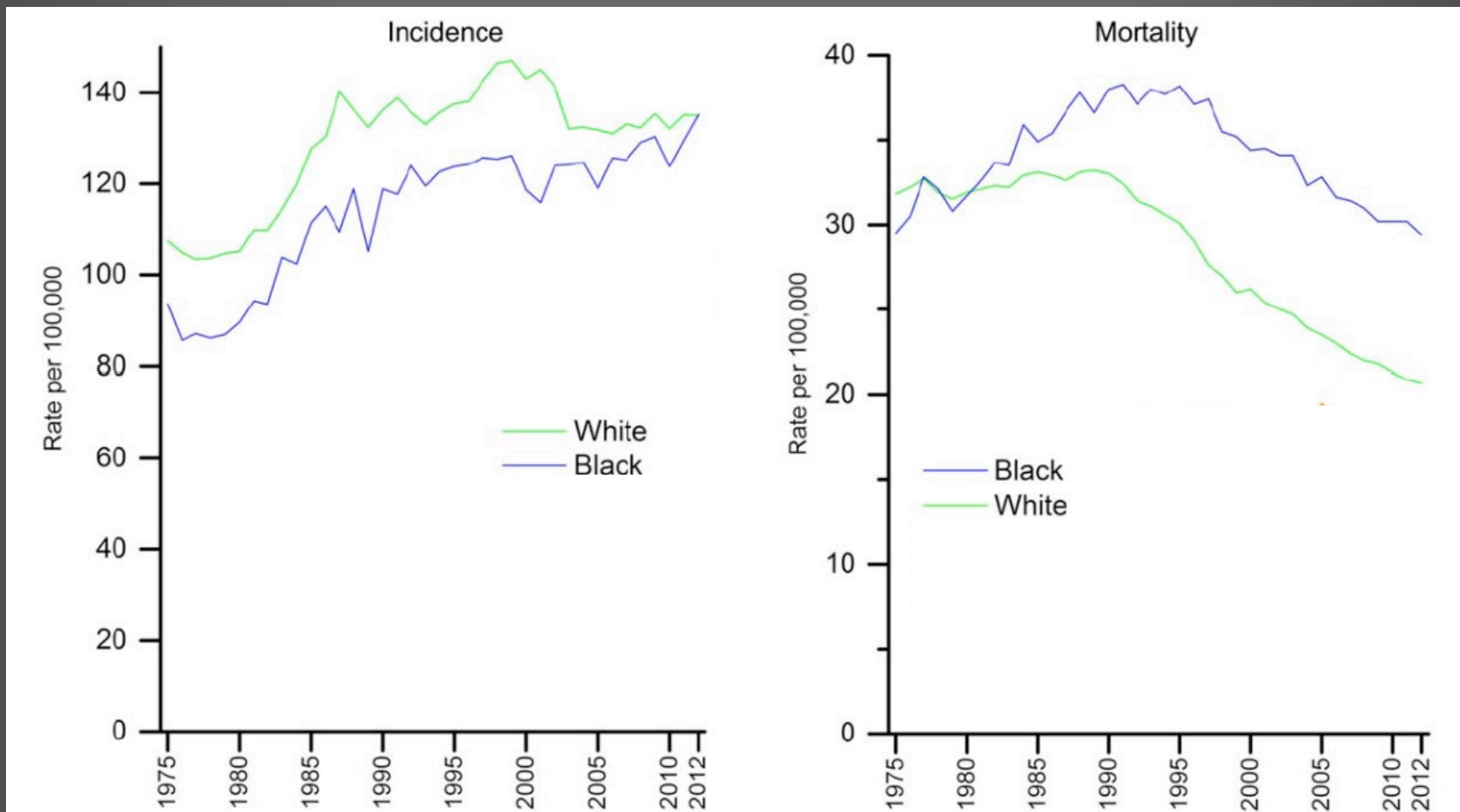
## U.S. BREAST CA INCIDENCE 1973-1991





## TRENDS BY RACE / ETHNICITY

### BREAST CANCER INCIDENCE AND MORTALITY

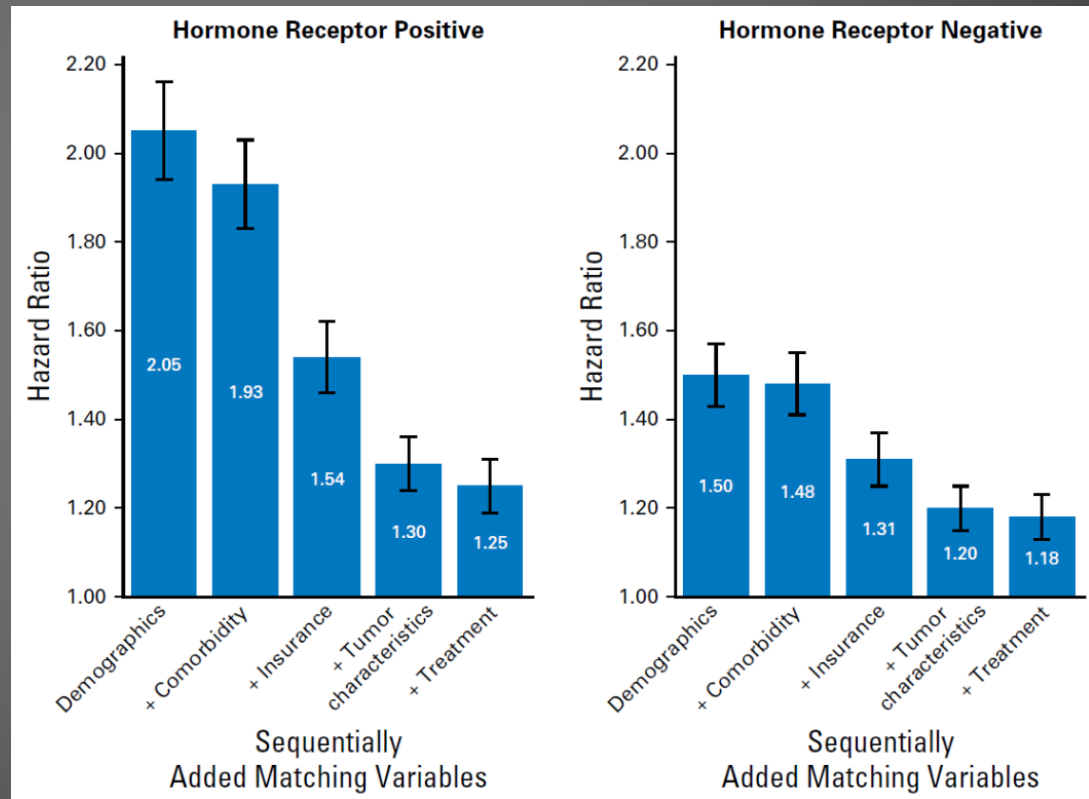




## TRENDS BY RACE / ETHNICITY

### EXCESS DEATH AMONG BLACK WOMEN AGE 18 – 64

- Insurance differences accounted for one-third of the excess risk of death in black women.
- Improved access to care could substantially reduce ethnic/racial disparities in overall breast cancer mortality.



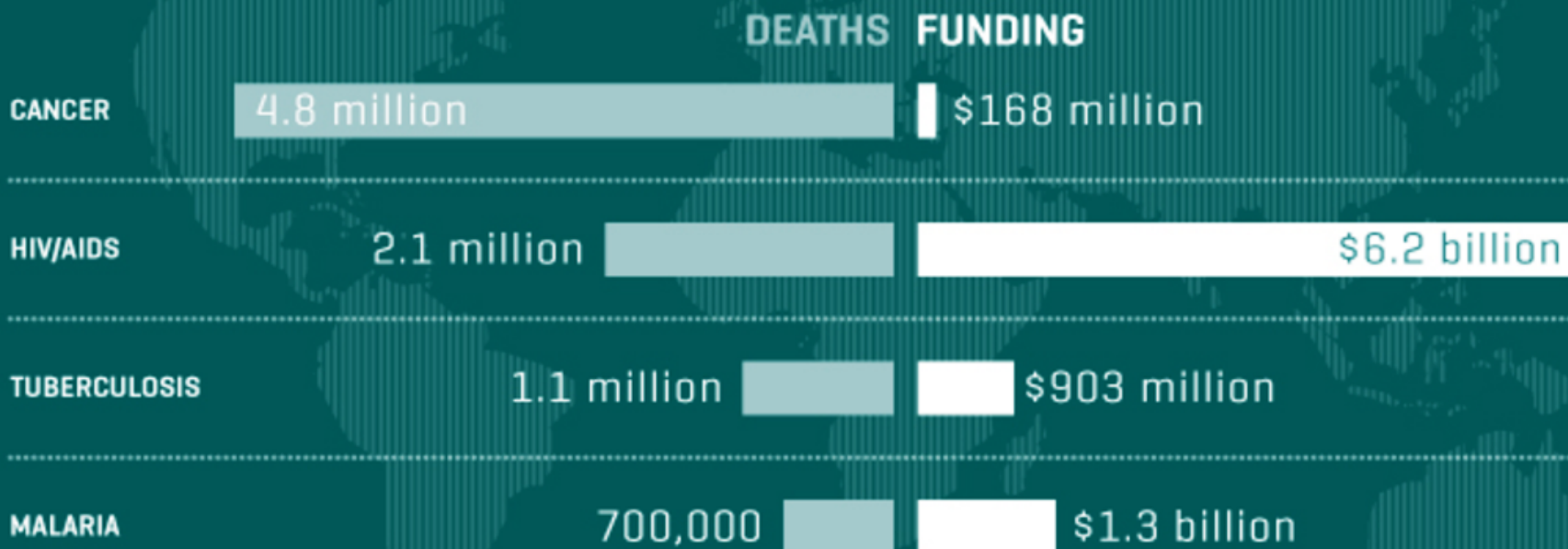


# GLOBAL HEALTH CARE FUNDING

## LOW AND MIDDLE INCOME COUNTRIES (LMICs)

### THE CANCER FUNDING GAP

Global health funding for cancer in low- and middle-income countries is minimal relative to mortality rates and compared to support of other life-threatening diseases.



Sources: PRI.org, WHO, UNAIDS, GLOBOCAN, IHME and CGO 2008  
Graphic by Jim Woolace / Fred Hutch



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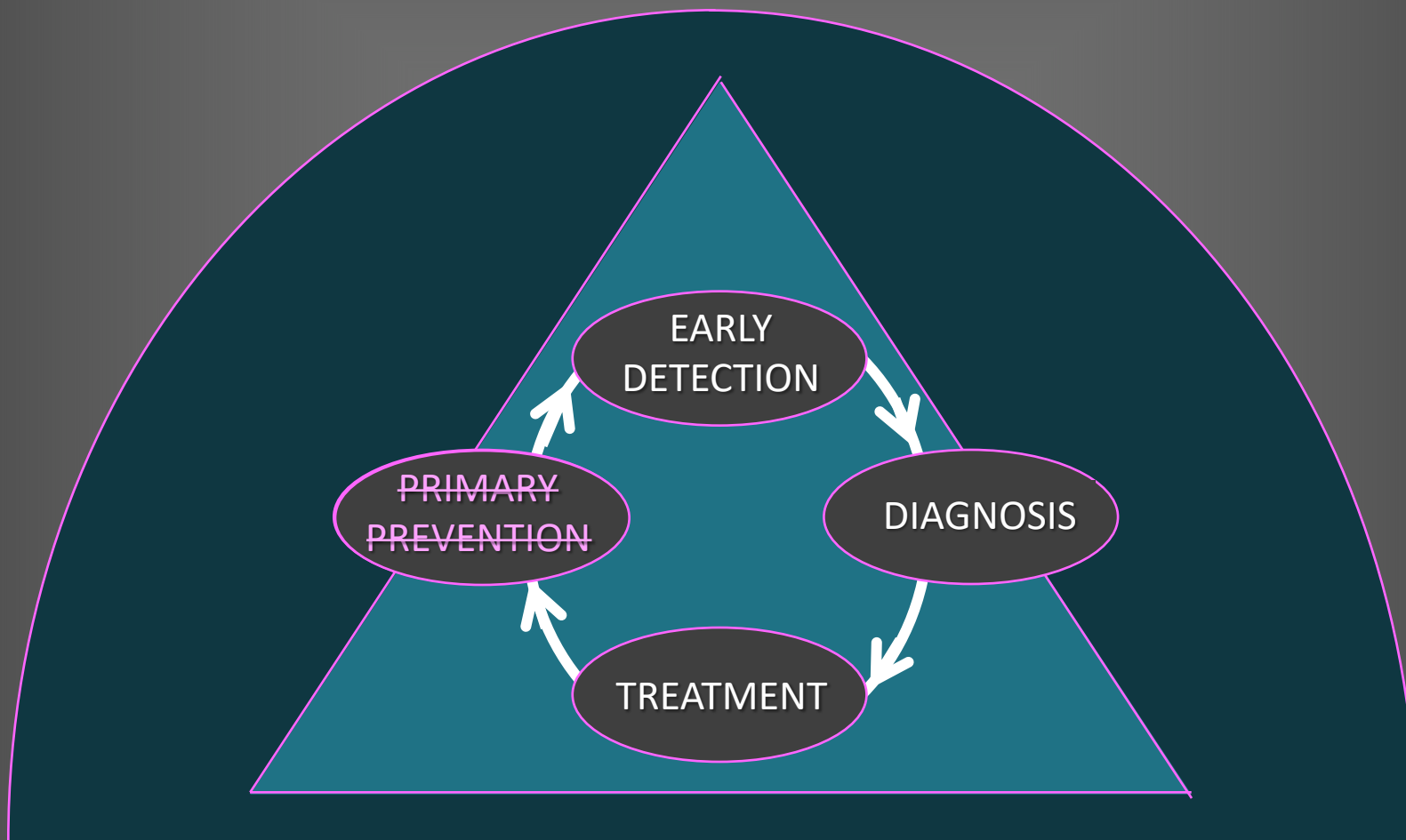


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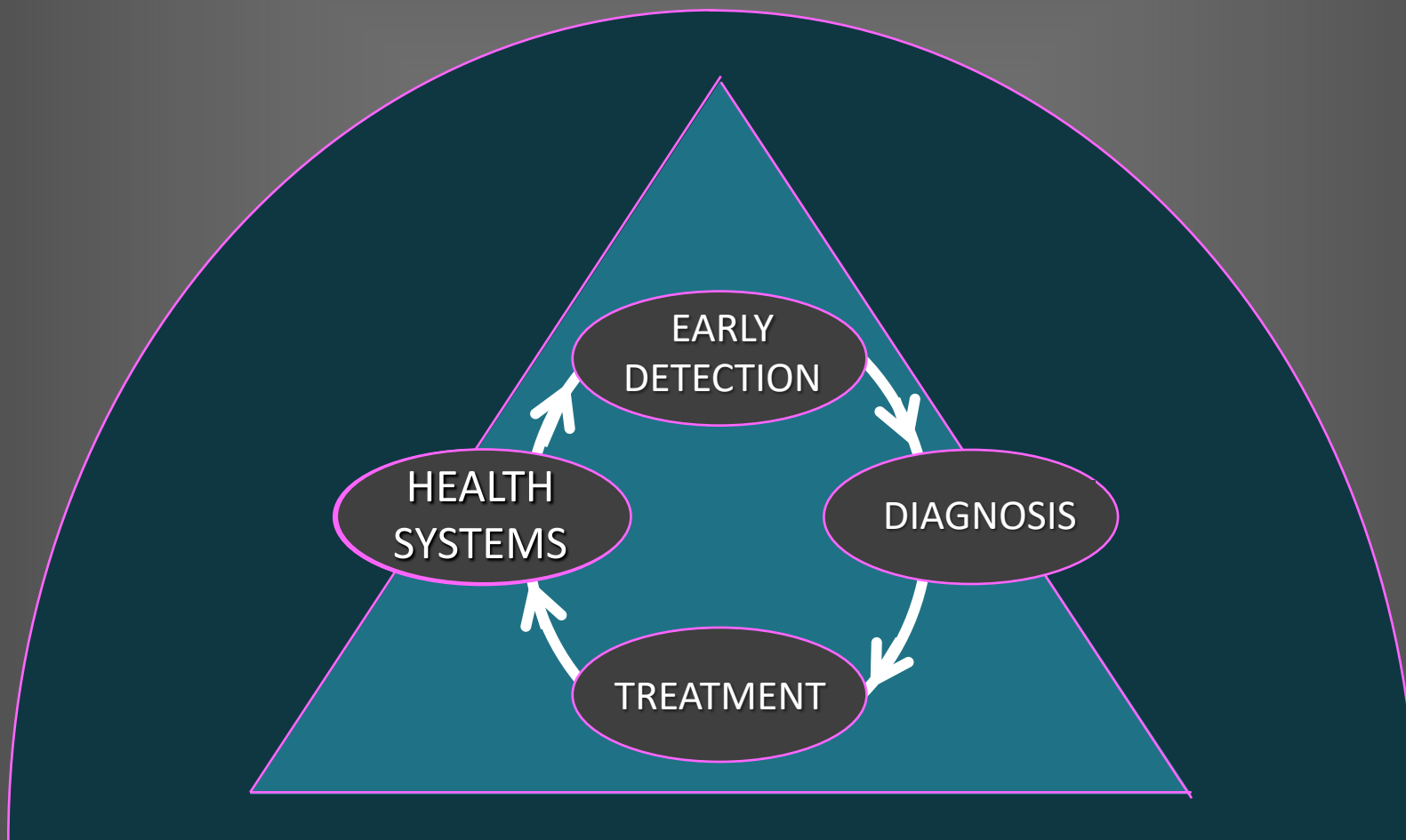
## CANCER CONTROL STRATEGIES DISEASE-BASED APPROACH







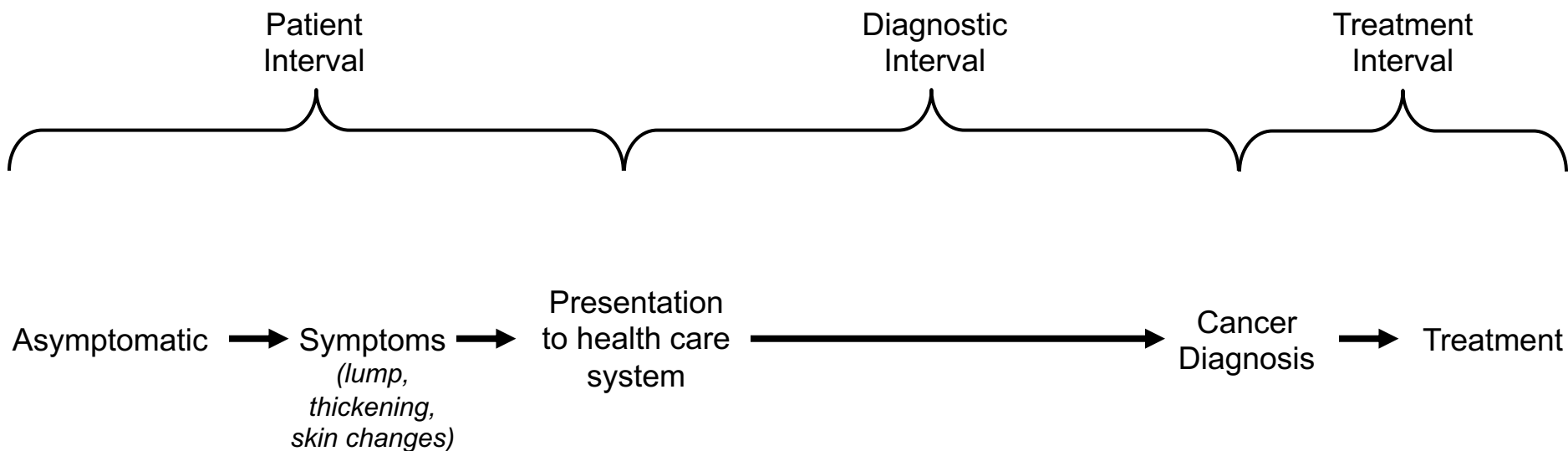
## CANCER CONTROL STRATEGIES COMPREHENSIVE PERSPECTIVE





## CANCER CONTROL STRATEGIES

### BREAST CANCER PATHWAY



# BREAST CANCER EPIDEMIOLOGY

## STAGE AT DIAGNOSIS: UNITED STATES VS. INDIA

STAGE	EXTENT	5 year SURVIVAL	DISTRIBUTION	
			USA	INDIA
0	Noninvasive	100%	16%	----
I	Early stage disease	100%	40%	1%
II	Early stage disease	86%	34%	23%
III	Locally advanced	57%	6%	52%
IV	Metastatic disease	20%	4%	24%

**USA:**  
90% DCIS or early staged invasive disease at diagnosis

**INDIA:**  
76% locally advanced or metastatic at diagnosis

Sources: SEER Survival Monograph (NCI), 2007;  
Chopra, Cancer Institute Chennai, 2001

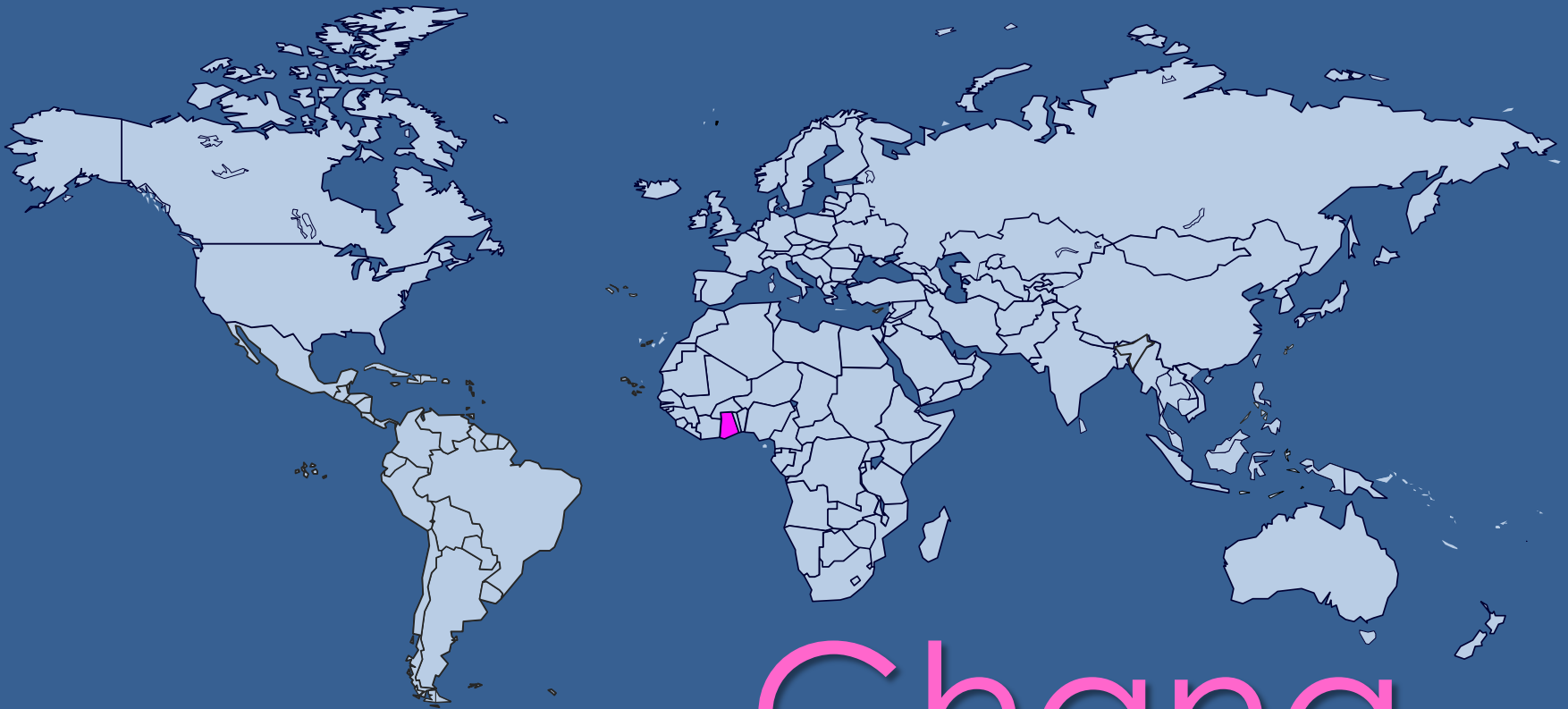






# LMC IMPLEMENTATION RESEARCH

LOWER-MIDDLE INCOME COUNTRY



# Ghana



The Breast Health Global Initiative

# BCI2.5



## Ghana Situation Analysis 2004

Main hospital entrance  
Komfo Anokye Teaching Hospital (KATH)





The Breast Health Global Initiative

# BCI2.5



## Ghana Situation Analysis 2004

Breast Health Clinic  
Komfo Anokye Teaching Hospital (KATH)



**HISTORY**

11/8/04

108Vee

For excision biopsy

Hs 12.5

Sm AS

For anaesthetic assessment pl

Chenelene

Medical History form 3



## Ghana Situation Analysis 2004

Patient with breast cancer  
(Note visible tethering of patient's left nipple)





## Ghana Situation Analysis 2004

Peace and Love Hospital (Kumasi Private Hospital)  
T4N1Mx – Stage IIIB -- locally advanced presentation



## Ghana Situation Analysis 2004

Peace and Love Hospital (Kumasi Private Hospital)  
Recurrent breast cancer in axillary lymph node bed



## 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





## A.H.M THREE BROTHERS HERBAL CLINIC



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26827. Mobile: 024

254451, SUNYANI

OR Box 8935, KUMASI

- NUFOO YADEE (BREAST CANCER)
- ASIKYIRE YADEE
- MOGYA BROSOO (STROKE)
- BABASO
- DWONSO MOGYA ANAA OBI A
- ONTUMI NNDWONSO
- OBEREMA A WAYE MMERE
- KOOKO
- AWOO (ANIDANE)
- AKOMA YADEE
- NTABUNU
- ABO (ASOFITIE)
- ETWARE (ASRAM)
- ETE (ANIYADEE)
- NTEHYEEWA
- NKWEE
- SISIYADEE ETC.

**MOTTO:**

**WITH ALLAH EVERYTHING IS AGREEABLE**

Ghana Situation Analysis 2004

Photo credit: Anna Kirby

Street billboard advertising local herbal medicine clinic in Kumasi claiming breast cancer treatment is provided





## Ghana Situation Analysis 2004

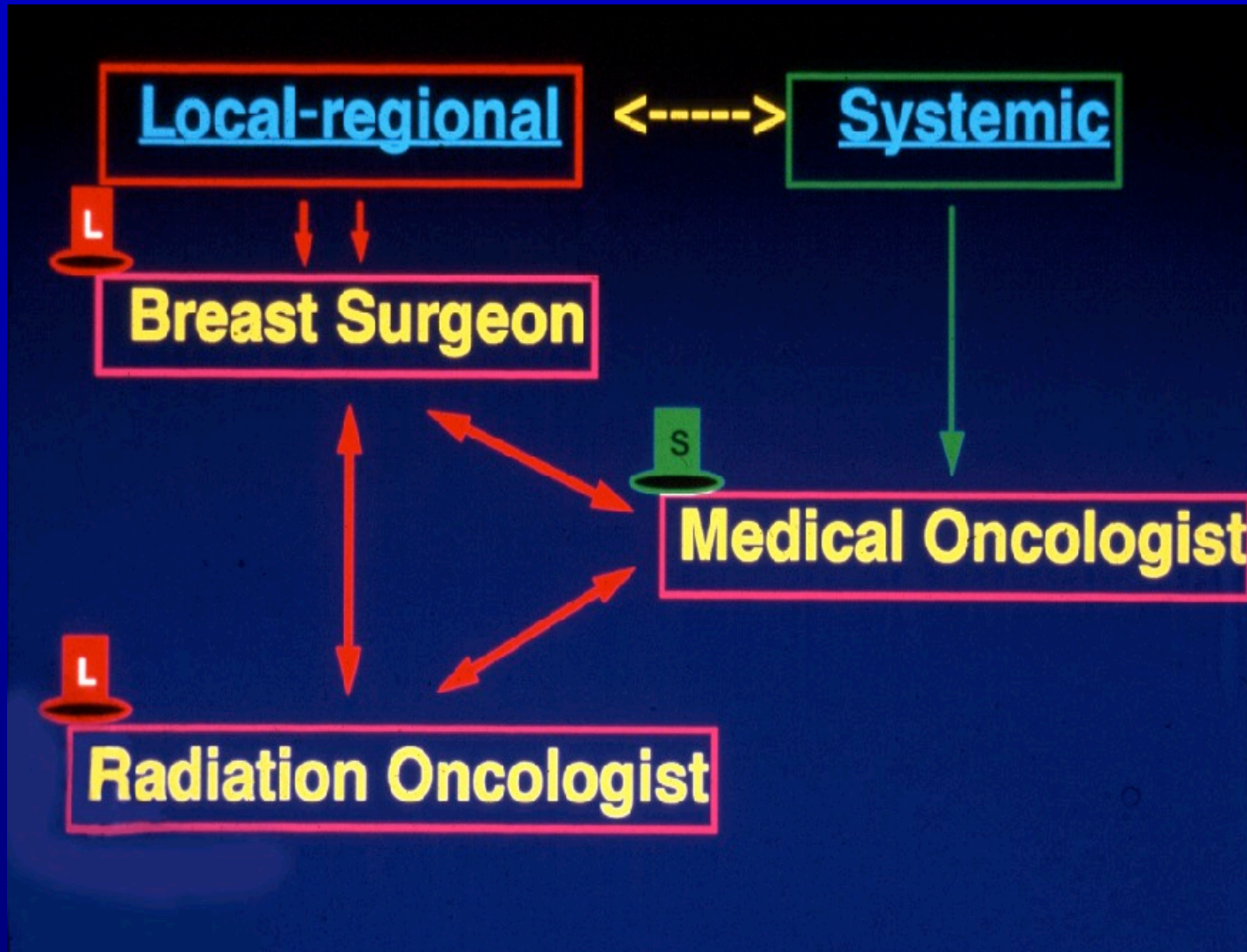
Komfo Anokye Teaching Hospital (KATH)  
Multispecialty breast cancer team



## 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 took 4 – 6 months

# BREAST CANCER TREATMENT





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United Nations

A/RES/66/2



## General Assembly

Distr.: General  
24 January 2012

Sixty-sixth session  
Agenda item 117

### Resolution adopted by the General Assembly

*[without reference to a Main Committee (A/66/L.1)]*

#### **66/2. Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases**

*The General Assembly*

*Adopts the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases annexed to the present resolution.*

*3rd plenary meeting  
19 September 2011*



# GLOBAL HEALTH CARE FUNDING

## WORLD BANK CLASSIFICATION (ATLAS METHOD)

World Bank Country Groups (GNI per capita)	Low Income (\$995 or less)	Lower Middle Income (\$996 - \$3,945)	Upper Middle Income (\$3,946 - \$12,195)	High Income (\$12,196 or more)
Average female life expectancy at birth	57.8 yrs	69.3 yrs	74.4 yrs	82.4 yrs
Average GNI per capita (2009 US dollars)	\$403	\$1,723	\$6,314	\$36,953
Total national health expenditure per capita	\$22	\$76	\$458	\$4,266
Fraction of GDP spent on health care	5.1%	4.3%	6.4%	11.2%

Health expenditure figures 2010 for calendar year 2007; GNI = gross national income

<http://data.worldbank.org/data-catalog/health-nutrition-and-population-statistics>.

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## BHGI GUIDELINE DEVELOPMENT

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

### GUIDELINE DEVELOPMENT SUMMITS:

Global Summit 2002: Health Care Disparities

Global Summit 2005: Resource Stratification

### GUIDELINE VALIDATION SUMMITS:

Global Summit 2007: Guideline Implementation

Global Summit 2010: Healthcare Delivery

Global Summit 2012: Supportive Care and QOL

### IMPLEMENTATION SUMMIT:

Global Summit 2018: Phased Implementation



## 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.



## BHGI GUIDELINE TABLES

### HEALTH CARE SYSTEMS

Level of resources	Patient and Family Education	Human Resource Capacity Building	Patient Navigation	Cancer Care Facility	Breast Care Center
Basic	General education regarding primary prevention of cancer, early detection and self examination Development of culturally adapted patient and family education services	Primary care provider education re breast cancer detection, diagnosis and treatment Nursing education re cancer patient management and emotional support Pathology technician education re tissue handling and specimen preparation Trained community worker	Field nurse, midwife or healthcare provider triages patients to central facility for diagnosis and treatment	Health facility Operating facility Outpatient care facility Pharmacy Home hospice support External consultation Pathology laboratory	Breast healthcare access integrated into existing healthcare infrastructure
Limited	Group or one-on-one counseling involving family and peer support Education regarding nutrition and complementary therapies	Nursing education re breast cancer diagnosis, treatment and pt management Imaging technician education re imaging technique and quality control Volunteer recruitment corp to support care	On site patient navigator (staff member or nurse) facilitates patient triage through diagnosis and treatment	Clinical information systems Health system network Imaging facility Internal pathology laboratory Radiation therapy	'Breast Center' with clinician, staff and breast imaging access Breast prostheses for mastectomy pts
Enhanced	Education regarding survivorship Lymphedema education Education regarding home care	Organization of national volunteer network Specialized nursing oncology training Home care nursing Psychotherapist & lymphedema therapist On-site cytopathologist	Patient navigation team from each discipline supports patient 'handoff' during key transitions from specialist to specialist to ensure completion of breast	Centralized referral cancer center(s) Radiation therapy: low energy linear accelerator, electrons, brachytherapy, treatment planning system	Multidisciplinary breast programs Oncology nurse specialists Physician assistants
Maximal		Organization of national medical breast health groups		Satellite (non-centralized or regional) cancer centers	

### EARLY DETECTION

Level of resources	Public Education and Awareness	Detection Methods
Basic	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)	Clinical history and CBE
Limited	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	Diagnostic breast US +/- diagnostic mammography in women with positive CBE Mammographic screening of target group*
Enhanced	Regional awareness programs regarding breast health linked to general health and women's health programs	Mammographic screening every 2 years in women ages 50-59 <sup>†</sup> Consider mammographic screening every 12-18 months in women ages 40-49 <sup>†</sup>
Maximal	National awareness campaigns regarding breast health using media	Consider annual mammographic screening in women ages 40 and older Other imaging technologies as appropriate for high-risk groups <sup>†</sup>

### DIAGNOSIS

Level of resources	Clinical	Imaging and Lab Tests	Pathology
Basic	History Physical examination Clinical breast examination (CBE) Tissue sampling for cancer diagnosis (cytologic or histologic) prior to initiation of treatment		Pathology diagnosis obtained for every breast lesion by any available sampling procedure Pathology report containing appropriate diagnostic and prognostic predictive information to include tumor size, lymph node status, histologic type and tumor grade Process to establish hormone receptor status possibly including empiric assessment of response to therapy Determination and reporting of TNM stage
Limited	US-guided FNAB of sonographically suspicious axillary nodes Sentinel lymph node (SLN) biopsy with blue dye <sup>‡</sup>	Diagnostic breast ultrasound (US) Pain chest and skeletal radiography Liver US Blood chemistry profile <sup>§</sup> Complete blood count (CBC) <sup>†</sup>	Determination of ER status by IHC Determination of margin status, DCIS content, presence of LV Frozen section or touch prep SLN analyses <sup>§</sup>
Enhanced	Image guided breast sampling Preoperative needle localization under mamm and/or US guidance SLN biopsy using radiotracer <sup>‡</sup>	Diagnostic mammography Specimen radiography Bone scan, CT scan Cardiac function monitoring	Measurement of HER-2/neu overexpression or gene amplification <sup>§</sup> Determination of PR status by IHC
Maximal		PET scan, MIBI scan, breast MRI, BRCA1/2 testing Mammographic double reading	IHC staining of sentinel nodes for cytokeratin to detect micrometastases Pathology double reading Gene profiling tests

### STAGE I

Level of resources	Local-Regional Treatment		Systemic Treatment (Adjuvant)		
	Surgery	Radiation Therapy	Chemotherapy	Endocrine Therapy	Biological Therapy
Basic	Modified radical mastectomy			Oophorectomy in premenopausal women Tamoxifen*	
Limited	Breast conserving surgery† Sentinel lymph node (SLN) biopsy with blue dye‡		Classical CMF§ AC, EC, or FAC§		
Enhanced	SLN biopsy using radiotracer‡ Breast reconstruction surgery	Breast-conserving whole-breast irradiation as part of breast-conserving therapy†	Taxanes	Aromatase inhibitors LH-RH agonists	Trastuzumab for treating HER-2/ neu positive disease§
Maximal			Growth factors Dose-dense chemotherapy		

### STAGE II

Level of resources	Local-Regional Treatment		Systemic Treatment (Adjuvant)		
	Surgery	Radiation Therapy	Chemotherapy	Endocrine Therapy	Biological Therapy
Basic	Modified radical mastectomy	.	Classical CMF <sup>§</sup> AC, EC, or FAC <sup>§</sup>	Oophorectomy in premenopausal women Tamoxifen <sup>†</sup>	
Limited	Breast conserving surgery <sup>†</sup> Sentinel lymph node (SLN) biopsy with blue dye <sup>‡</sup>	Postmastectomy irradiation of chest wall and regional nodes for high-risk cases <sup>*</sup>			<sup>¶</sup>
Enhanced	SLN biopsy using radiotracer <sup>‡</sup> Breast reconstruction surgery	Breast-conserving whole-breast irradiation as part of breast-conserving therapy <sup>†</sup>	Taxanes	Aromatase inhibitors LH-RH agonists	Trastuzumab for treating HER-2/ neu positive disease <sup>§</sup>
Maximal			Growth factors Dose-dense chemotherapy		

### LOCALLY ADVANCED

Level of resources	Local-Regional Treatment		Systemic Treatment (Adjuvant or Neoadjuvant)		
	Surgery	Radiation Therapy	Chemotherapy	Endocrine Therapy	Biological Therapy
Basic	Modified radical mastectomy	•	Preoperative chemotherapy with AC, EC, FAC or CMF†	Oophorectomy in premenopausal women Tamoxifen†	
Limited		Postmastectomy irradiation of chest wall and regional nodes*			§
Enhanced	Breast-conserving surgery Breast reconstruction surgery	Breast-conserving whole-breast irradiation as part of breast-conserving therapy†	Taxanes	Aromatase inhibitors LH-RH agonists	Trastuzumab for treating HER-2 neu positive disease§
Maximal			Growth factors Dose-dense chemotherapy		

### METASTATIC

Level of resources	Local-Regional Treatment		Systemic Treatment (Palliative)		
	Surgery	Radiation Therapy	Chemotherapy	Endocrine Therapy	Supportive Therapy
Basic	Total mastectomy for (ipsilateral breast tumor recurrence after breast conserving surgery)*			Oophorectomy in premenopausal women Tamoxifen†	Nonopioid and opioid analgesics and symptom management
Limited		Palliative radiation therapy	Classical CMF‡ Anthracycline monotherapy or in combination‡		
Enhanced			Sequential single agent or combination chemotherapy Trastuzumab Lapatinib	Aromatase inhibitors	Bisphosphonates
Maximal			Bevacizumab	Fulvestant	Growth factors



## DETECTION STRATEGIES AND GOALS:

### EARLY DETECTION

#### Public Education and Awareness

#### BASIC

- 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)

#### LIMITED

- 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

#### ENHANCED

- Regional awareness programs regarding breast health linked to general health and women's health programs

#### Detection Methods

- Clinical history and CBE

- Diagnostic breast US +/- diagnostic mammography in women with positive CBE

- Mammographic screening of target group<sup>1</sup>

- Mammographic screening every 2 years in women ages 50-69<sup>1</sup>
- Consider mammographic screening every 12-18 months in women ages 40-49<sup>1</sup>

#### Evaluation Goal

- Breast health awareness regarding value of early detection in improving breast cancer outcome

- Downsizing of symptomatic disease

- Downsizing and/ or downstaging of asymptomatic disease in women in highest yield target groups



## TREATMENT – LOCALLY ADVANCED

Level of resources	Local-Regional Treatment		Systemic Treatment (Adjuvant or Neoadjuvant)		
	Surgery	Radiation Therapy	Chemotherapy	Endocrine Therapy	Biological Therapy
Basic	Modified radical mastectomy	*	Preoperative chemotherapy with AC, EC, FAC or CMF†	Oophorectomy in premenopausal women Tamoxifen‡	
Limited		Postmastectomy irradiation of chest wall and regional nodes*			§
Enhanced	Breast-conserving surgery Breast reconstruction surgery	Breast-conserving whole-breast irradiation as part of breast-conserving therapy	Taxanes	Aromatase inhibitors LH-RH agonists	Trastuzumab for treating HER-2/neu positive disease§
Maximal			Growth factors Dose-dense chemotherapy		

Cancer: 113 (8 suppl), 2008



# LMC IMPLEMENTATION RESEARCH

LOWER-MIDDLE INCOME COUNTRY



# Vietnam



The Breast Health Global Initiative

# BCI2.5



Vietnam Situation Analysis - 2011

“K Hospital”  
Hanoi, Vietnam



Vietnam Situation Analysis - 2011

"K Hospital"  
Hanoi, Vietnam





The Breast Health Global Initiative

# BCI2.5



Vietnam Situation Analysis - 2011

KHU XẠ TRỊ GIA TỐC KỸ THUẬT CAO  
HIGH TECHNICAL ACCELERATOR RADIO THERAPY CENTER

“K Hospital”  
Hanoi, Vietnam



# **NCCN Framework for Resource Stratification of NCCN Guidelines (NCCN Framework™)**



# NCCN Framework™: Visual Display of Framework

The NCCN Framework™ is represented as follows:

Black Text: Included recommendation

Gray Text: Withheld recommendation

*Italicized Blue Text: Modified recommendation based on resource level*



National  
Comprehensive  
Cancer  
Network®

**NCCN Framework for Resource Stratification of NCCN Guidelines  
(NCCN Framework™)**

# **Invasive Breast Cancer**

**Enhanced Resources (Preliminary)**

Version 2.2017 — June 27, 2017

**NCCN.org**

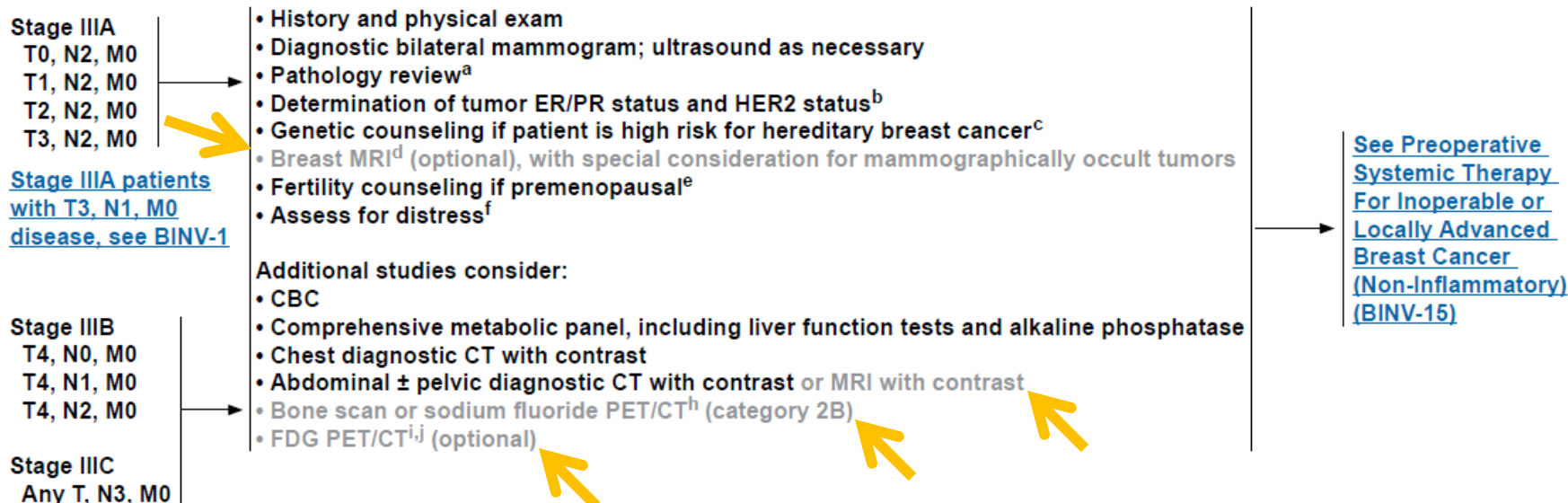


**NCCN Framework™**

**Continue**

PREOPERATIVE SYSTEMIC THERAPY FOR INOPERABLE OR LOCALLY ADVANCED BREAST CANCER (NON-INFLAMMATORY): WORKUP

CLINICAL STAGE WORKUP



<sup>a</sup>The panel endorses the College of American Pathologists Protocol for pathology reporting for all invasive and noninvasive carcinomas of the breast. <http://www.cap.org>.

<sup>b</sup>See Principles of HER2 Testing (BINV-A).

<sup>c</sup>See NCCN Guidelines for Genetic/Familial High-Risk Assessment: Breast and Ovarian.

<sup>d</sup>See Principles of Dedicated Breast MRI Testing (BINV-B).

<sup>e</sup>See Fertility and Birth Control (BINV-C).

<sup>f</sup>See NCCN Guidelines for Distress Management.

<sup>h</sup>If FDG PET/CT is performed and clearly indicates bone metastasis, on both the PET and CT component, bone scan or sodium fluoride PET/CT may not be needed.

<sup>i</sup>FDG PET/CT can be performed at the same time as diagnostic CT. The use of PET or PET/CT is not indicated in the staging of clinical stage I, II, or operable III breast cancer. FDG PET/CT is most helpful in situations where standard staging studies are equivocal or suspicious, especially in the setting of locally advanced or metastatic disease.

<sup>j</sup>FDG PET/CT may also be helpful in identifying unsuspected regional nodal disease and/or distant metastases in locally advanced breast cancer when used in addition to standard staging studies.

Note: This is the NCCN Framework for Resource Stratification of NCCN Guidelines. For definitions of the NCCN Framework™, see page FR-1.

All recommendations are category 2A unless otherwise indicated.

Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

PREOPERATIVE SYSTEMIC THERAPY FOR INOPERABLE OR LOCALLY ADVANCED BREAST CANCER (NON-INFLAMMATORY): WORKUP

CLINICAL STAGE WORKUP

Stage IIIA T0, N2, M0 T1, N2, M0 T2, N2, M0 T3, N2, M0	<ul style="list-style-type: none"> <li>• History and physical exam</li> <li>• Diagnostic bilateral mammogram; ultrasound as necessary</li> <li>• Pathology review<sup>a</sup></li> <li>• Determination of tumor ER/PR status and HER2 status<sup>b</sup></li> <li>• Genetic counseling if patient is high risk for hereditary breast cancer<sup>c</sup></li> <li>• Breast MRI<sup>d</sup> (optional), with special consideration for mammographically occult tumors</li> <li>• Fertility counseling if premenopausal<sup>e</sup></li> <li>• Assess for distress<sup>f</sup></li> </ul>
Stage IIIA patients with T3, N1, M0 disease, see BINV-14	
Stage IIIB T4, N0, M0 T4, N1, M0 T4, N2, M0	<p>Additional studies consider:</p> <ul style="list-style-type: none"> <li>• CBC</li> <li>• Comprehensive metabolic panel, including liver function tests and alkaline phosphatase</li> <li>• Chest diagnostic CT with contrast</li> <li>• Abdominal ± pelvic diagnostic CT with contrast or MRI with contrast</li> <li>• Bone scan or sodium fluoride PET/CT<sup>h</sup> (category 2B)</li> <li>• FDG PET/CT<sup>i,j</sup> (optional)</li> </ul>
Stage IIIC Any T, N3, M0	<ul style="list-style-type: none"> <li>• Chest x-ray</li> <li>• Abdominal ultrasound</li> <li>• Plain radiograph of symptomatic bony sites</li> </ul>

[See Preoperative Systemic Therapy For Inoperable or Locally Advanced Breast Cancer \(Non-Inflammatory\) \(BINV-15\)](#)

<sup>a</sup>The panel endorses the College of American Pathologists Protocol for pathology reporting for all invasive and noninvasive carcinomas of the breast. <http://www.cap.org>.

<sup>b</sup>See Principles of HER2 Testing (BINV-A).

<sup>c</sup>See NCCN Guidelines for Genetic/Familial High-Risk Assessment: Breast and Ovarian.

<sup>d</sup>See Principles of Dedicated Breast MRI Testing (BINV-B).

<sup>e</sup>See Fertility and Birth Control (BINV-C).

<sup>f</sup>See NCCN Guidelines for Distress Management.

<sup>h</sup>If FDG PET/CT is performed and clearly indicates bone metastasis, on both the PET and CT component, bone scan or sodium fluoride PET/CT may not be needed.

<sup>i</sup>FDG PET/CT can be performed at the same time as diagnostic CT. The use of PET or PET/CT is not indicated in the staging of clinical stage I, II, or operable III breast cancer. FDG PET/CT is most helpful in situations where standard staging studies are equivocal or suspicious, especially in the setting of locally advanced or metastatic disease.

<sup>j</sup>FDG PET/CT may also be helpful in identifying unsuspected regional nodal disease and/or distant metastases in locally advanced breast cancer when used in addition to standard staging studies.

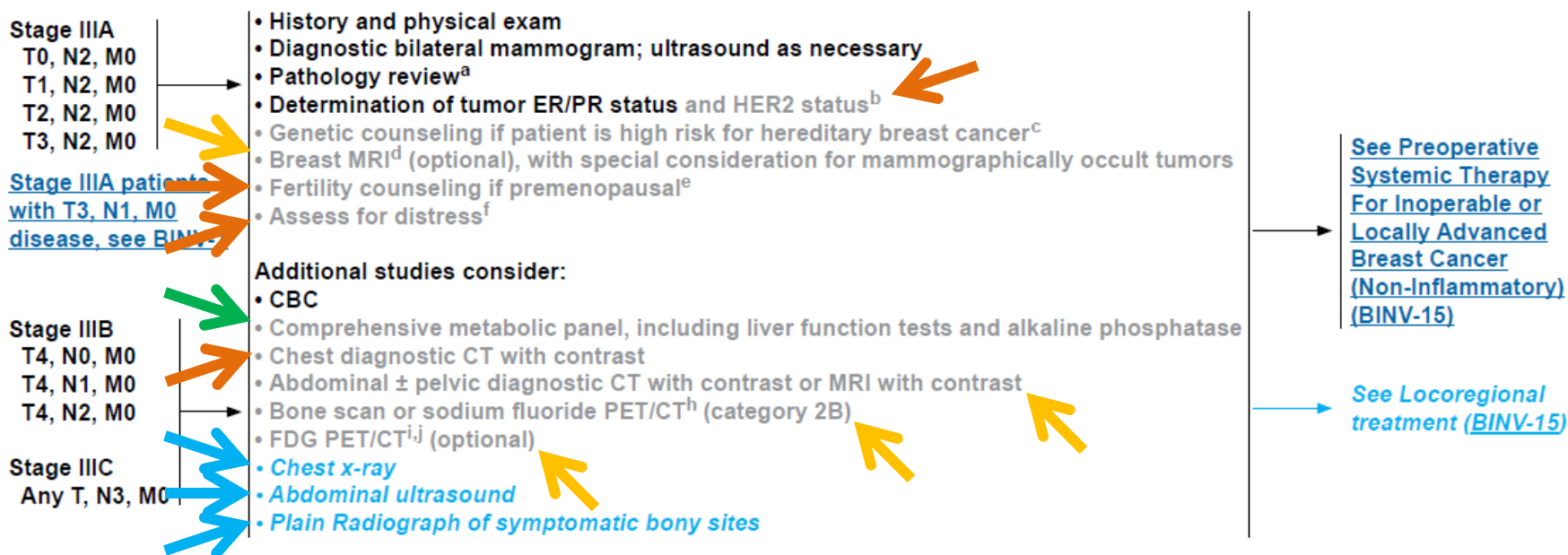
Note: This is the NCCN Framework for Resource Stratification of NCCN Guidelines. For definitions of the NCCN Framework™, see page FR-1.

All recommendations are category 2A unless otherwise indicated.

Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

PREOPERATIVE SYSTEMIC THERAPY FOR INOPERABLE OR LOCALLY ADVANCED BREAST CANCER (NON-INFLAMMATORY): WORKUP

CLINICAL STAGE WORKUP



<sup>a</sup>The panel endorses the College of American Pathologists Protocol for pathology reporting for all invasive and noninvasive carcinomas of the breast. <http://www.cap.org>.

<sup>b</sup>See Principles of HER2 Testing (BINV-A).

<sup>c</sup>See NCCN Guidelines for Genetic/Familial High-Risk Assessment: Breast and Ovarian.

<sup>d</sup>See Principles of Dedicated Breast MRI Testing (BINV-B).

<sup>e</sup>See Fertility and Birth Control (BINV-C).

<sup>f</sup>See NCCN Guidelines for Distress Management.

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LOCALLY ADVANCED BREAST CANCER (NON-INFLAMMATORY): WORKUP

CLINICAL STAGE

WORKUP

Stage IIIA

T0, N2, M0

T1, N2, M0

T2, N2, M0

T3, N2, M0

[Stage IIIA patients with T3, N1, M0 disease, see BINV-1](#)

- History and physical exam
- Diagnostic bilateral mammogram; ultrasound as necessary
- Pathology review<sup>a</sup>
- Determination of tumor ER/PR status

Additional studies consider:

- CBC

Stage IIIB

T4, N0, M0

T4, N1, M0

T4, N2, M0

Stage IIIC

Any T, N3, M0

- [Chest x-ray](#)
- [Abdominal ultrasound](#)
- [Plain Radiograph of symptomatic bony sites](#)

[See Preoperative Systemic Therapy For Inoperable or Locally Advanced Breast Cancer \(Non-Inflammatory\) \(BINV-15\)](#)

[See Locoregional treatment \(BINV-15\)](#)

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<sup>b</sup>See Principles of HER2 Testing (BINV-A).

<sup>c</sup>See NCCN Guidelines for Genetic/Familial High-Risk Assessment: Breast and Ovarian.

<sup>d</sup>See Principles of Dedicated Breast MRI Testing (BINV-B).

<sup>e</sup>See Fertility and Birth Control (BINV-C).

<sup>f</sup>See NCCN Guidelines for Distress Management.

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PREOPERATIVE SYSTEMIC THERAPY FOR INOPERABLE OR LOCALLY ADVANCED BREAST CANCER (NON-INFLAMMATORY): WORKUP

CLINICAL STAGE	WORKUP	
Stage IIIA T0, N2, M0 T1, N2, M0 T2, N2, M0 T3, N2, M0  <u>Stage IIIA patients with T3, N1, M0 disease, see BINV-1</u>	<ul style="list-style-type: none"> <li>History and physical exam</li> <li>Diagnostic bilateral mammogram; ultrasound as necessary</li> <li>Chest x-ray and ultrasound</li> <li>Pathology review<sup>a</sup></li> <li>Determination of tumor ER/PR status and HER2 status<sup>b,*</sup></li> <li>Genetic counseling if patient is high risk for hereditary breast cancer<sup>c,**</sup></li> <li>Breast MRI<sup>d</sup> (optional), with special consideration for mammographically occult tumors</li> <li>Fertility counseling if premenopausal<sup>e</sup></li> <li>Assess for distress<sup>f</sup></li> </ul>	
Stage IIIB T4, N0, M0 T4, N1, M0 T4, N2, M0  Stage IIIC Any T, N3, M0	Additional studies consider: <sup>g</sup> <ul style="list-style-type: none"> <li>CBC</li> <li>Comprehensive metabolic panel, including liver function tests and alkaline phosphatase</li> <li>Chest diagnostic CT with contrast</li> <li>Abdominal ± pelvic diagnostic CT with contrast or MRI with contrast</li> <li>Bone scan or sodium fluoride PET/CT<sup>h</sup> (category 2B)</li> <li>FDG PET/CT<sup>i,j</sup> (optional)</li> </ul>	<u>See Preoperative Systemic Therapy For Inoperable or Locally Advanced Breast Cancer (Non-Inflammatory) (BINV-15)</u>

\* If HER2 status unknown, follow the negative path.

\*\*At a basic level, have a discussion with patient and family members.

<sup>a</sup>The panel endorses the College of American Pathologists Protocol for pathology reporting for all invasive and noninvasive carcinomas of the breast. <http://www.cap.org>.

<sup>b</sup>See Principles of HER2 Testing (BINV-A).

<sup>c</sup>See NCCN Guidelines for Genetic/Familial High-Risk Assessment: Breast and Ovarian.

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<sup>j</sup>FDG PET/CT may also be helpful in identifying unsuspected regional nodal disease and/or distant metastases in locally advanced breast cancer when used in addition to standard staging studies.

Note: This is the NCCN Harmonized Guidelines™ for Sub-Saharan Africa. For definitions, see page DEF-1.

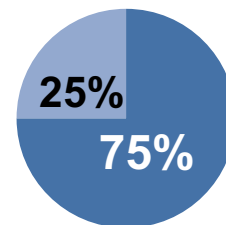
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# NCCN Framework™: Cancer Frameworks 2018

- Currently online (75% of all cancers globally):

- Adult Cancer Pain
- Bladder Cancer
- Breast Cancer
- Cervical Cancer
- Colon Cancer **NEW**
- Esophageal and Esophagogastric Junction Cancers
- Gastric Cancer
- Head and Neck Cancers – Cancers of the Lip and Oral Cavity
- Hepatobiliary Cancers
- Kidney Cancer
- Non-Small Cell Lung Cancer
- Palliative Care
- Pancreatic Cancer
- Prostate Cancer
- Rectal Cancer **NEW**
- Uterine Neoplasms – Endometrial Carcinoma



■ Cancer Cases  
Covered by  
Framework



## WORLD HEALTH ORGANIZATION



**World Health  
Organization**

**SEVENTIETH WORLD HEALTH ASSEMBLY  
Agenda item 15.6**

**A70/A/CONF./9  
25 May 2017**

### **Cancer prevention and control in the context of an integrated approach**

The Seventieth World Health Assembly,

**OP2 REQUESTS** the Director-General:

- (1) to develop or adapt stepwise and resource-stratified guidance and tool kits in order to establish and implement comprehensive cancer prevention and control programmes, including for childhood and adolescence cancer management, leveraging the work of other organizations;





## GUIDELINES FOR NIGERIA – OVERVIEW

### SUMMARY

- Cancer is increasingly affecting countries at all economic levels while health investment is failing to match the challenge.
- To improve breast cancer outcomes, patients presenting with early stage disease receive prompt accurate diagnosis followed by effective and timely multidisciplinary treatment.
- Resource-stratified guidelines provide a framework for prioritizing sustainable health care strategies.



*The* Breast Health Global Initiative

[www.bhgi.info](http://www.bhgi.info)

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# BREAST CANCER INITIATIVE 2.5

Making breast health a global priority

[www.BCI25.org](http://www.BCI25.org)

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