



# AFRICA REGION: EPIDEMIOLOGY, CLINICAL FEATURES, AND RESOURCE CONSTRAINTS

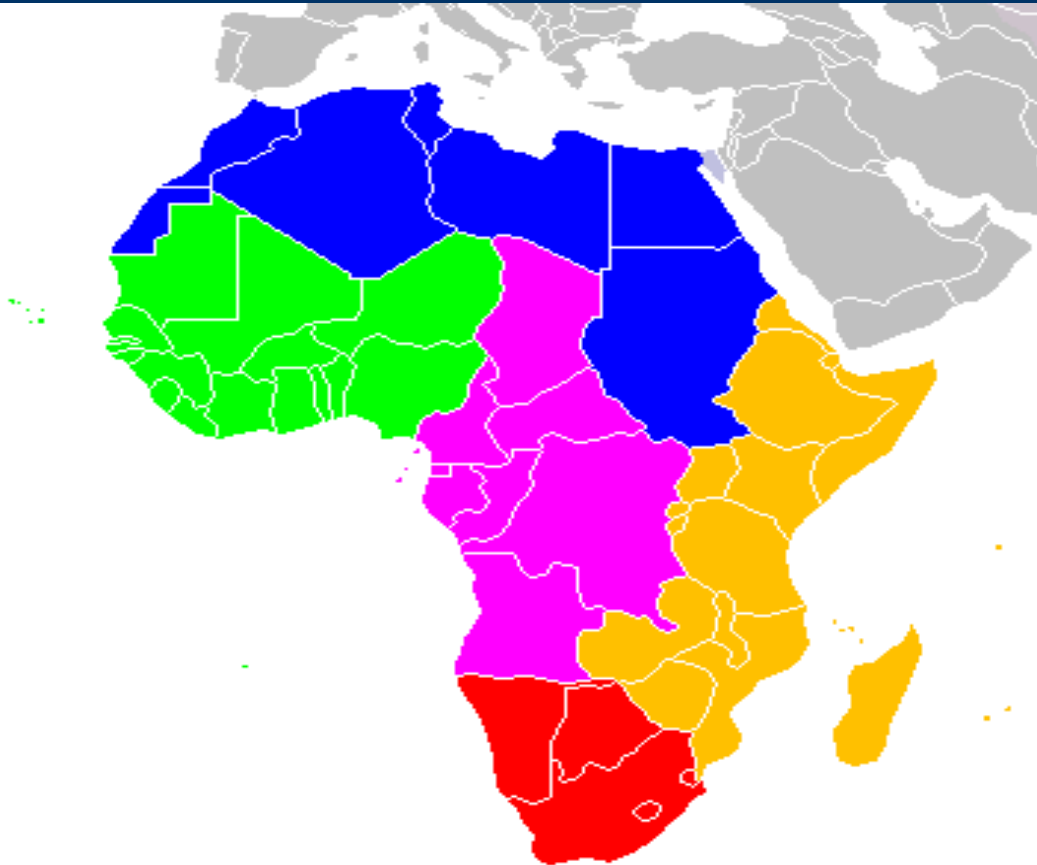
Breast Cancer  
in Developing  
World:  
Meeting the  
Unforeseen  
Challenge to  
Women,  
Health and  
Equity

*Marina Njelekela, M.D., PhD.*

Head, Department of Physiology, Muhimbili  
University, Tanzania, and

Chairperson, Tanzania Medical Women Association

# AFRICA – Socio-demographic Characteristics

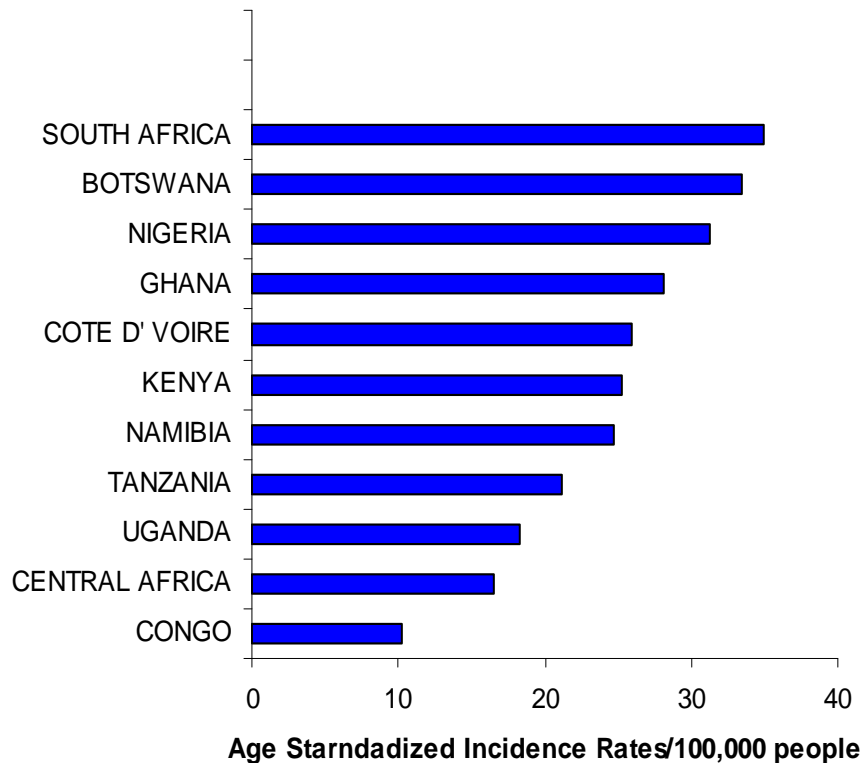


- ❖ Five Regions
- ❖ Inhabitants – mainly Bantu, Arabs, Hamites etc
- ❖ About 10% of the world's population
- ❖ 57.8 % live on < US\$ 1
- ❖ Vicious cycle of poor health and poverty
- ❖ Difference in breast cancer incidence in Africa

# Breast Cancer in Africa

- Is not rare in Africa
- Recording approximately more than 50,000 new cases per year
- Substantial variation in breast cancer incidence and mortality rates among the Regions in Africa

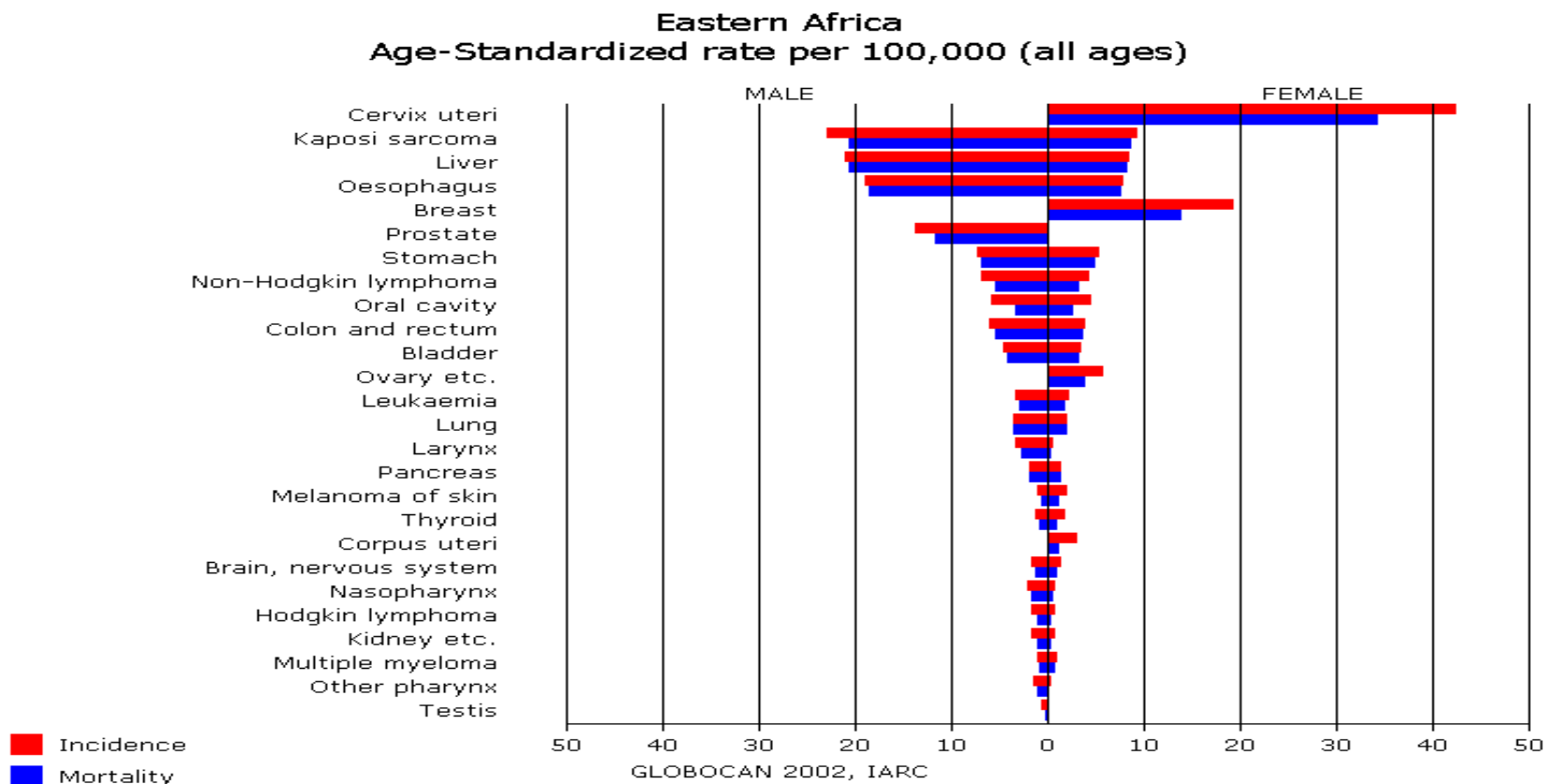
# Variation in Breast Cancer Age Standardized Incidence Rates Among Countries in Africa



- Contemporary ethnic variation
- Differences in risk factor exposure

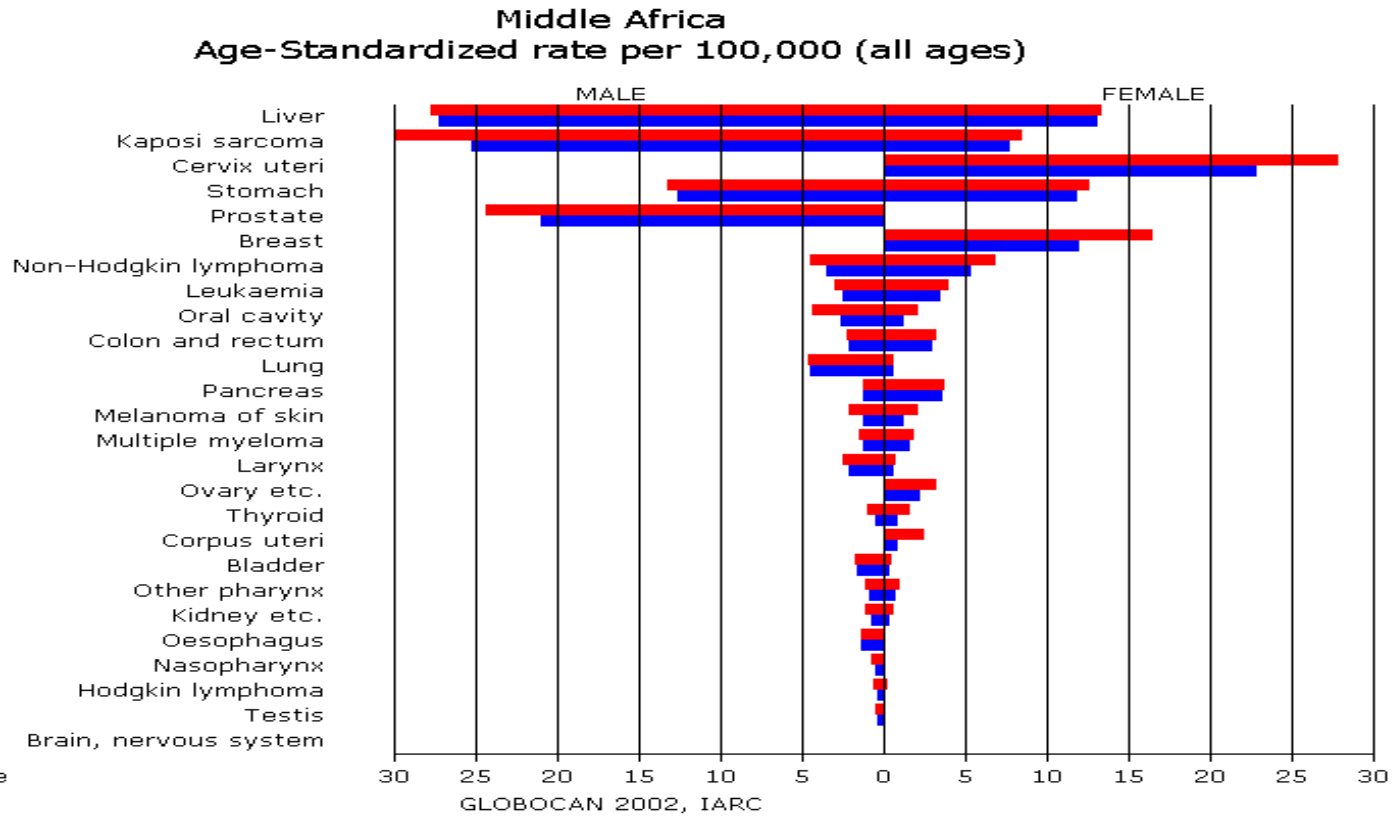
# Breast Cancer Burden in Eastern Africa, 2002

Incidence ASR 19.5/100,000 (15,564), Mortality ASR 14.1/100,000



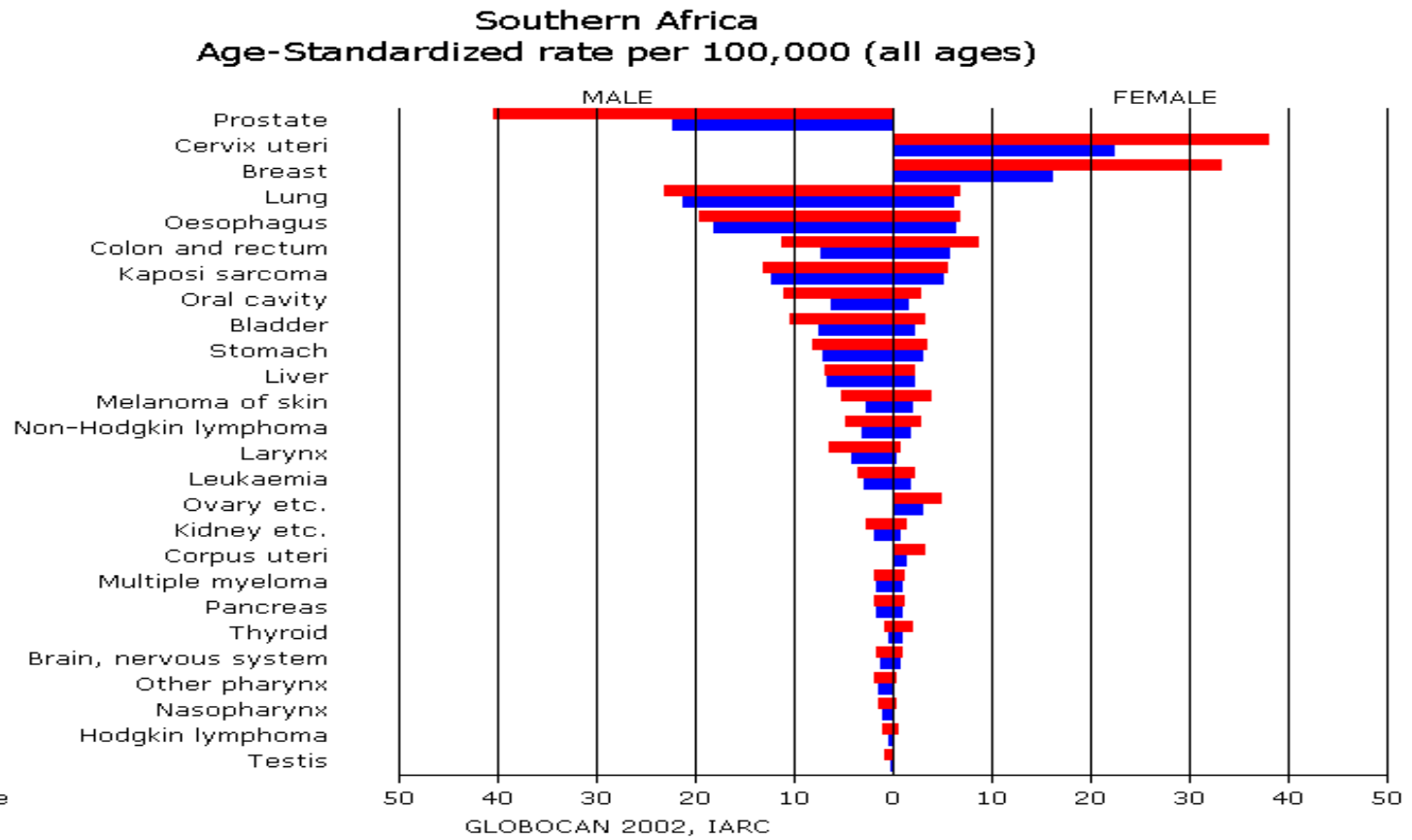
# Breast Cancer Burden in Middle Africa, 2002

Incidence ASR 16.5/100,000, (5,173), Mortality ASR 12.1/100,000



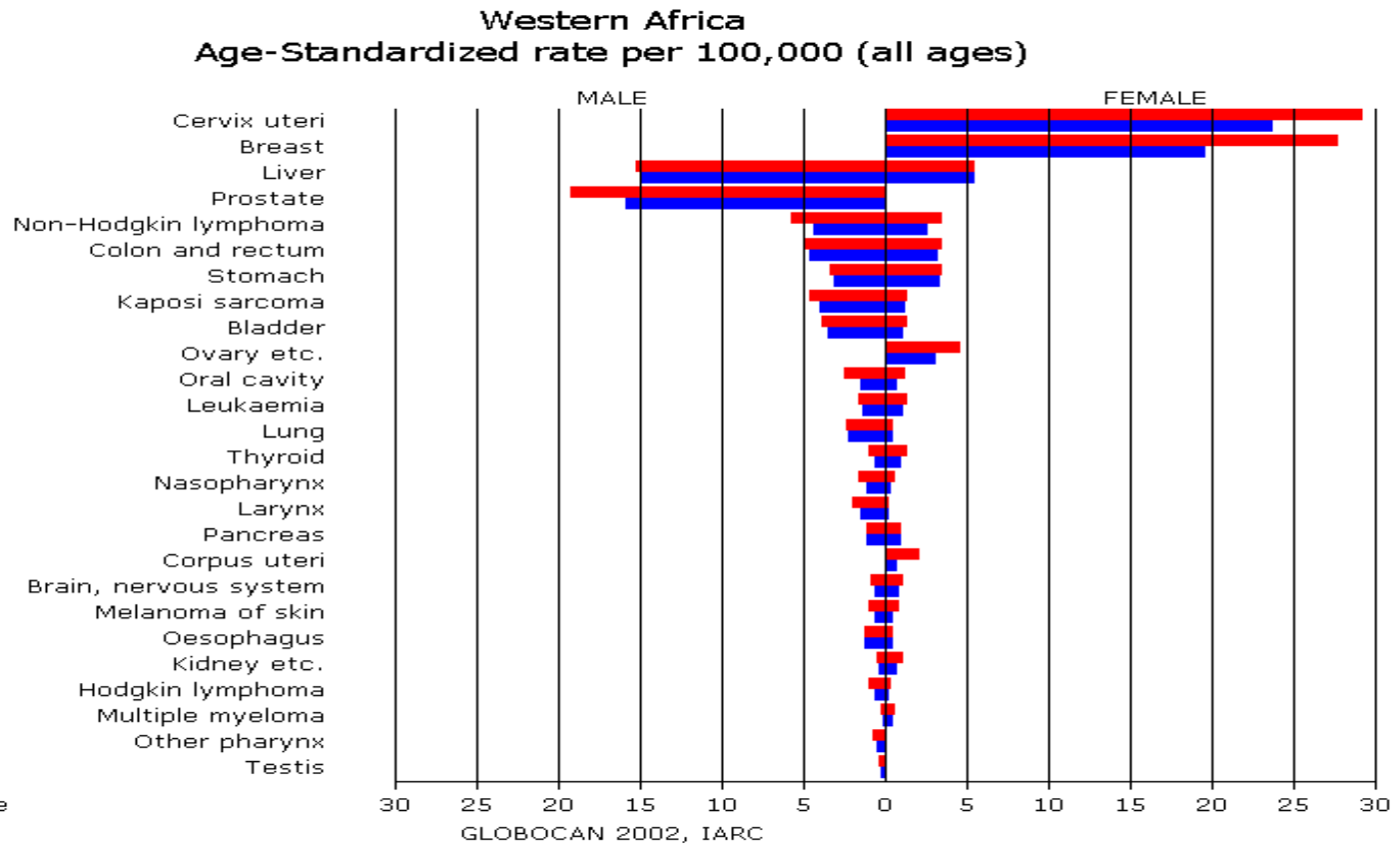
# Breast Cancer Burden in Southern Africa, 2002

Incidence ASR 33.4/100,000 (6,474), Mortality ASR 16.3/100,000

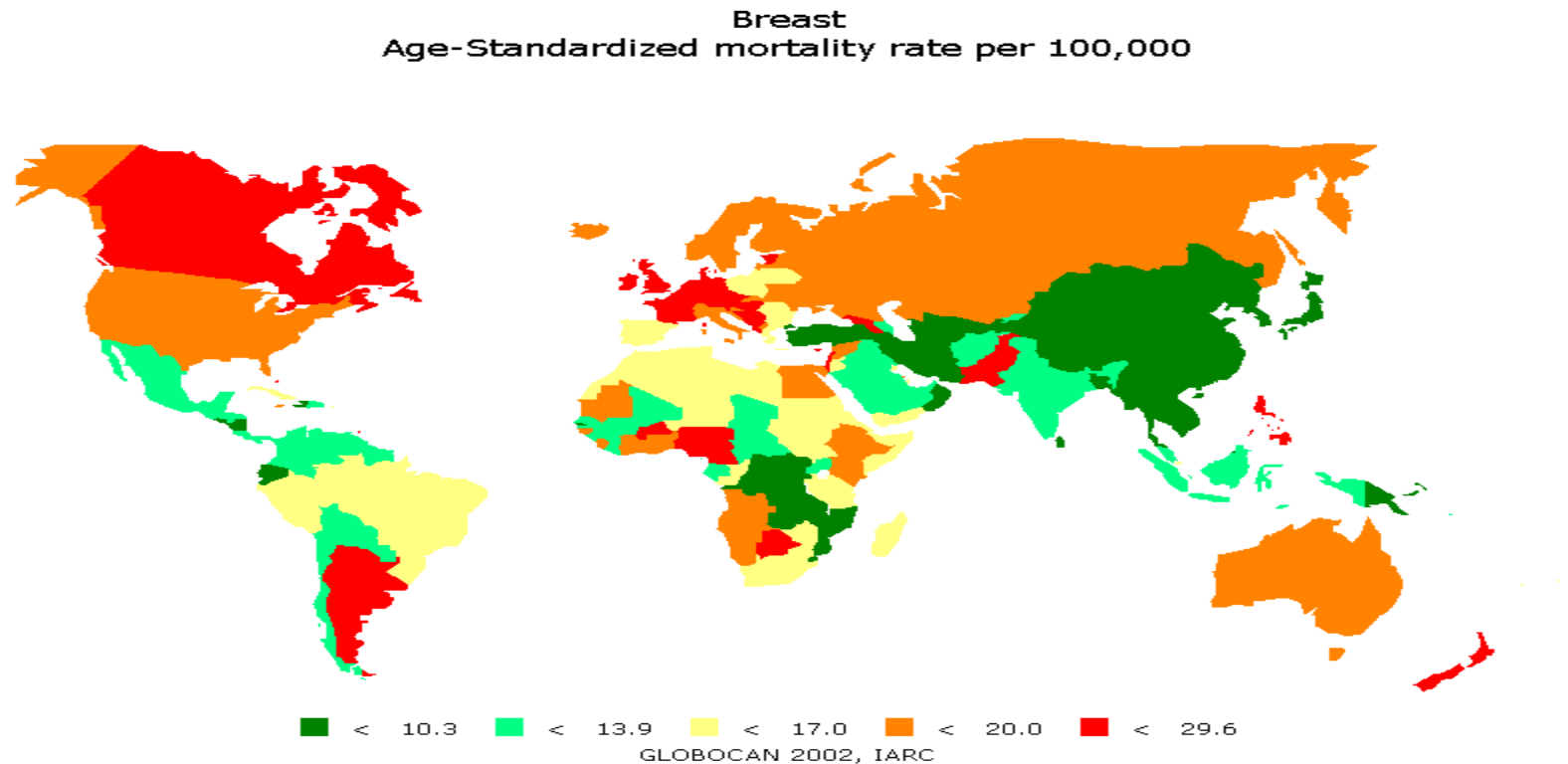


# Breast Cancer Burden in Western Africa, 2002

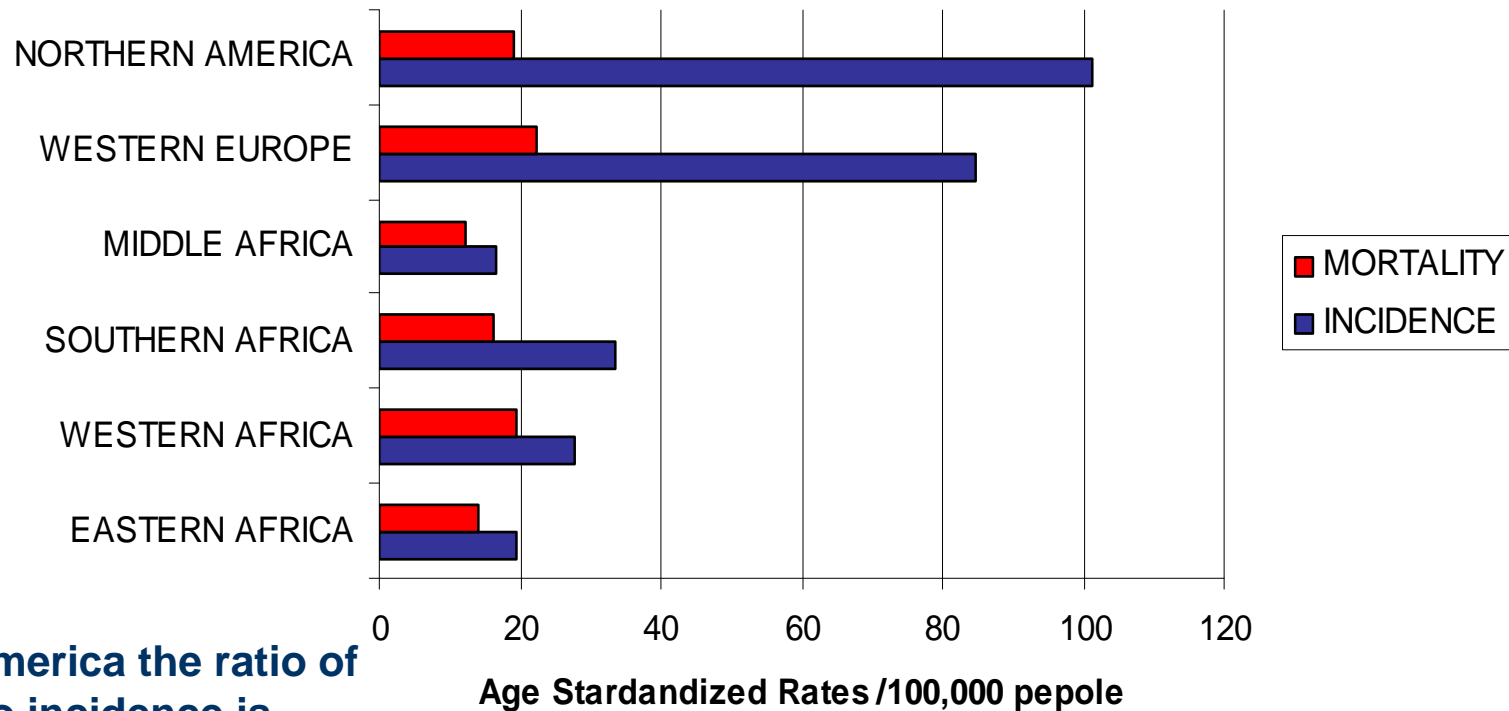
Incidence ASR 27.8 /100,000 (21,397), Mortality ASR 19.6/100,000



# Breast Cancer Mortality in Africa, 2002



# Africa Breast Cancer Rates Lower than USA and Europe



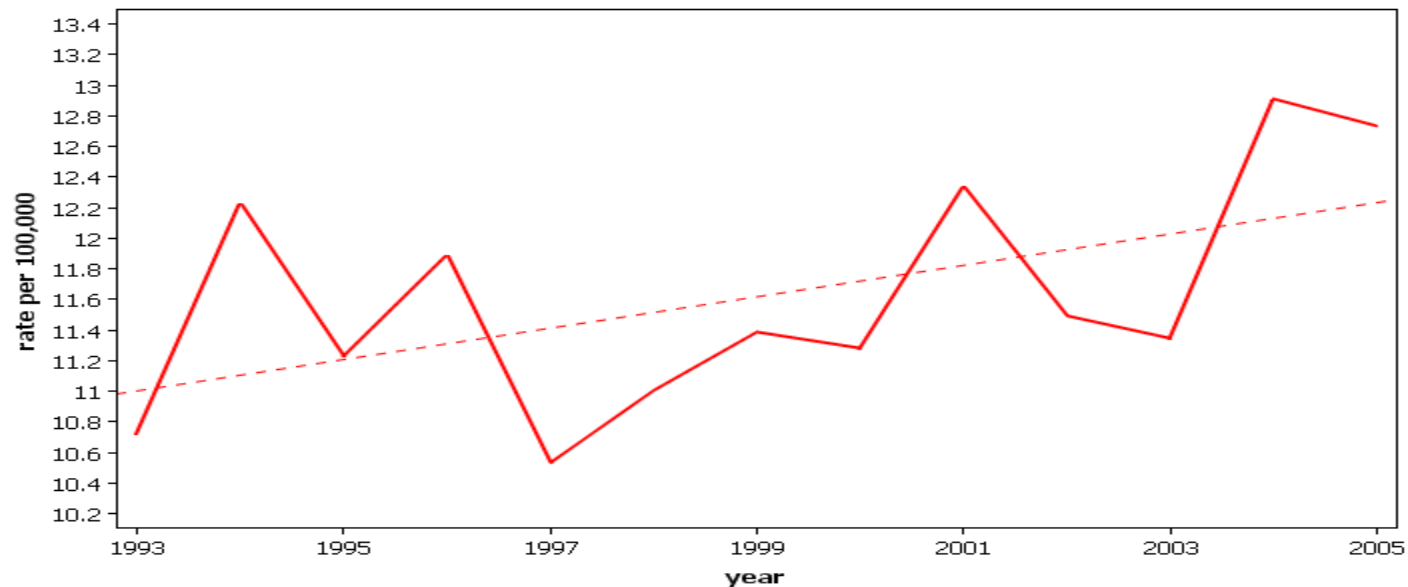
In North America the ratio of mortality to incidence is below 0.23 and in Africa 0.73

# Incidence Rates Increasing in Africa

- Accurate data for breast cancer lacking in Africa
- Minimal data available - between the 1960s and the late 1990s increases in:
  - Twofold increase in Kampala from 11 per 100,000 to 22 per 100,000
  - Twofold increases in breast cancer incidence in Ibadan, Nigeria

# Breast Cancer Mortality in South Africa

Mortality from Breast Cancer  
South Africa  
Age-standardized rate (World) all ages



International Agency for Research on Cancer (IARC) - 27.10.2009

# Higher Mortality in Africa

- Delayed presentation
- Limited therapeutic modalities
- ? Tumours are biologically aggressive

# Features of the Changing Face of Cancer in Africa

- Increasing rates of cancers over time
  - ‘Westernization’ of lifestyles
  - Urbanization
  - Dietary habits and physical inactivity
  - Smoking
  - Exposure to carcinogens and infections (HIV, HPV)
  - Changes in reproductive factors such as lower rates of childbearing

# Clinical features of Breast Cancer in Africa

- Clinical stage of many patients in Africa is underestimated (under staging)
  - Due to lack of diagnostic facilities and well trained personnel
- Advanced stage distribution
  - 70-90% present with Stage III-IV
  - 50% present with matted axillary lymph nodes
  - Mean tumor diameter 10 cm

# Clinical Features of Breast Cancer in Africa

- Mainly premenopausal – (population age and overall life expectancy)
- Average age at diagnosis 35 - 45 years (10-15 y younger)
- More aggressive tumor biology among African women also exists
- The majority of tumors among African women are invasive ductal lesions (similar to Western populations)

# Resource Constraints

- Only 6-11% of African countries' gross national expenditure is spent on health care
  - Fewer hospitals with limited staff
  - Limited diagnostic equipments, and treatment facilities
  - Many African countries have no radiation facilities at all
  - Mastectomy is the treatment of choice for the majority of cases

# Resource Constraints

- In terms of Distribution of Radiation Services in Africa:
  - Only three countries have < 2million/machine – Libya, Cameroon and South Africa
  - Six countries have between 2 – 10 million/machine
  - Nine countries have > 10 million/machine
  - More than 20 African countries do not have any radiotherapy treatment facilities, despite their important role in cancer treatment
  - WHO Recommends a minimum of 0.4 radiation therapy units per 1 million people
- In comparison the USA has 12 machines per one million people

# Resource Constraints

- Recruiting, training and retaining healthcare professionals is a challenge due to limited resources
- Qualified physicians, nurses, and allied healthcare personnel are scarce in Africa
- Insufficient funds to fully equip hospitals and provide either competitive salaries or opportunities for career development
- Healthcare professionals migrate from rural to urban areas
- Emigrate from Africa to richer countries

# Cancer Registries in Africa



# Conclusion

The challenges for breast cancer care in Africa are quite substantial:

- Lack of cancer education and empowerment among the general population
- Lack of awareness, knowledge and capacity amongst health workers
- Very limited resources allocated for breast cancer care in Africa
  - Insufficient political priority and funding
  - Fragmented and underfinanced health care systems that have not been set up for chronic disease management.
  - Lack of diagnostic and treatment capacity
- Limited data on cancer incidence and mortality in most of African countries due to lack of functioning cancer registries and limited death certification

# Thank You For Your Attention



# Too Late Presentation to Hospital

