Global Trends in Breast Cancer Incidence and Mortality

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

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Although breast cancer continues to be most prevalent in affluent countries, the risks of both breast cancer and related death are increasing worldwide

1.2 million new cases worldwide each year:

45% in low/middle resource countries

The greatest obstacle to understanding the global risk of breast cancer is the lack of

- Incidence based on data from small geographic areas--often pooled and extrapolated to large regions.
- Reported rates may reflect only women easiest to reach or with highest standard of living.
- Current global figures cannot truly reflect underlying economic and cultural diversity driving increased incidence and mortality
- GLOBOCAN 2002 is still the source used in

GLOBOCAN 2002, International Agency for Research on Cancer (IARC)

Sub-Saharan African Women: low

Reproductive protection

- Late menarche, early menopause
- 5-9 live births per woman
- Median age at first pregnancy=19

Review: Fregene & Newman, Cancer, 2005

‘Meat/sweet’ diet in Shanghai ~1500 cases and controls

Cui, et al., CEBP, 2007

- Diet patterns
  - Tofu, cauliflower, beans, bean sprouts, green leafy vegetables
  - Shrimp, chicken, beef, pork, candy, desserts
- Meat/sweet associated with increased risk in post menopausal women [OR 1.3 (1.0–1.7);

Factors promoting high mortality

- Advanced stage at diagnosis
- Suboptimal treatment
  - Inadequate resources

Advanced stage at

Sociological

Low awareness of risk
Fear of diagnosis and treatment
Limited access to care
Inadequate screening programs

Modifiable factors related to awareness, access and care

Biological

Aggressive tumor
- fast growing
- early metastasis

Modifiable risk factors related to biology

Over-representation of triple-negative breast cancer in African women, Huo et al, JCO, 2009

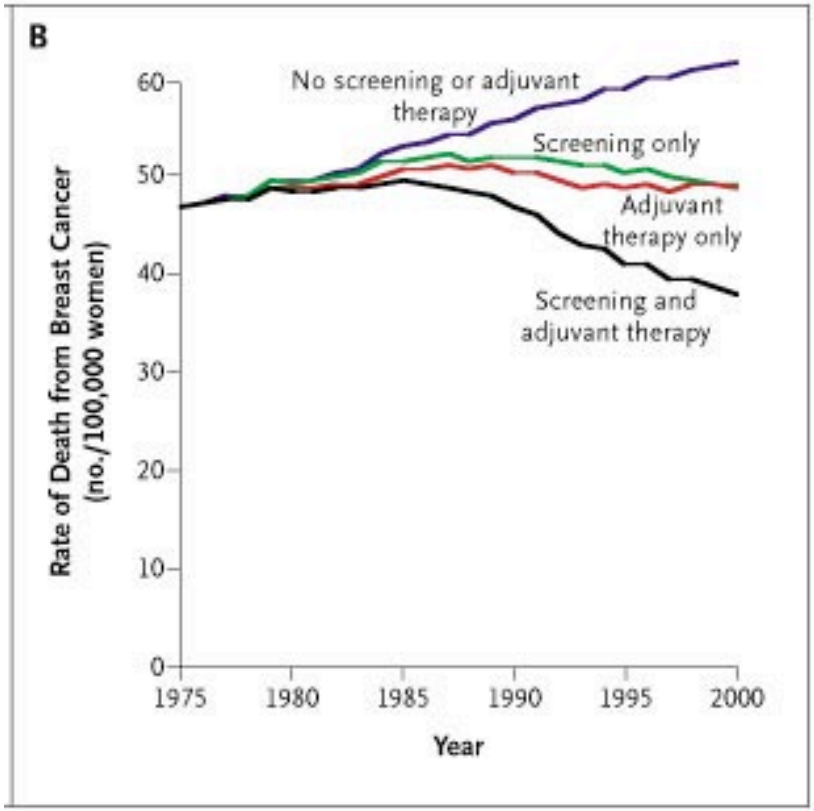
- 507 patients diagnosed with breast cancer between 1996 and 2007 at six geographic regions in Nigeria and Senegal
  - 76% ER negative
  - 80% PR negative

Caucasian women in the US:
30% ER negative and 20% triple negative

What has been effective in reducing mortality from breast cancer?

Effect of Screening and Adjuvant Therapy on Mortality from Breast Cancer Berry, et al, NEJM, 2005

Both screening and adjuvant therapy have contributed to decreased mortality in the US



Advocacy in the USA

- End to secrecy: Betty Ford, wife of President Ford announces her breast cancer to the public in 1974
- Public health advocates promote BSE campaign
- Funds raised-- 'Komen Race for the Cure'
- Political action-legislative, regulatory, funding changes
  - Mammography Quality Standards Act
  - funding for breast cancer at NCI--4x increased funding in the 1990's
- Promoting business, government, scientific

Reality: Breast cancer incidence will ~~continue to increase in developing~~

IMPROVED ECONOMY

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WOMEN ENTER WORK FORCE

↓

HAVE FEWER CHILDREN LATER/DECIDE NOT TO BREASTFEED

↓

COMPETE FOR HIGHER PAYING

Challenges

- Accurate data to assess incidence, mortality, stage and biology across countries, races, ethnicities, urban, rural and economic groups
- Effective strategies to reverse high mortality rates
- Down-staging of breast cancer by early detection
- How to make the economic investment

Success will require

- political will
- reliable data and research
- public and medical community awareness and involvement
- partnerships between community advocates, governments, non-governmental organizations and biotechnology

Thank you
Gracias
Merci
Obrigado
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谢谢
Danke
ありがとう
당신을 감사하십시오
Спасибо
Asante