The Global Cancer Epidemic

Tim Byers MD MPH
Colorado School of Public Health
This year there will be more deaths in the World from cancer than from:
This year there will be more deaths in the World from cancer than from:

☑️ Malaria
This year there will be more deaths in the World from cancer than from:

- ✔ Malaria
- ✔ Tuberculosis
This year there will be more deaths in the World from cancer than from:

- Malaria
- Tuberculosis
- HIV
This year there will be more deaths in the World from cancer than from:

- Malaria
- Tuberculosis
- HIV
- Childhood diarrhea
This year there will be more deaths in the World from cancer than from:

- Malaria
- Tuberculosis
- HIV
- Childhood diarrhea

Combined
Deaths in the World in 2010

- Cancer 8,000,000
- Diarrhea 1,400,000
- HIV 1,500,000
- TB 1,200,000
- Malaria 1,200,000
- IHD 7,000,000
- Stroke 5,900,000
- COPD 2,900,000
Deaths by cause and income level of country in the World, 2008
Lung Cancer

• Tobacco causes 71% of all lung cancer deaths
• Tobacco causes 22% of all cancer deaths
• Risk largely reversible with cessation before 40
Food, Nutrition, Physical Activity, and the Prevention of Cancer:
a Global Perspective

Published November, 2007
WCRF Preventable Fraction Estimates for Nutritional Factors (%)

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>UK</th>
<th>Brazil</th>
<th>China</th>
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<tr>
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<tr>
<td>Breast</td>
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</table>
Breast Cancer

- Higher risk in developed countries
- Risk increasing in many developing countries
- Obesity, physical activity, screening

[Image: Map showing estimated age-standardised incidence rate per 100,000 Breast, all ages]
Colorectal Cancer

- Higher rates in developed countries
- Risk changes quickly after migration
- Several nutritional factors
- Largely preventable by removing adenomas
Esophagus Cancer

- Incidence higher in developing countries
- Micronutrient deficiency? Hot beverages?
- Obesity (developed countries)
Stomach Cancer

- Was the leading cancer in the US 100 years ago
- More common in developing countries
- Helicobacter pylori, nutritional deficiencies
- Highest rates in Asia, South America
Prostate Cancer

- PSA screening explains variation in incidence
- Mortality similar in Africans, African Americans
- No good preventive measures yet

Estimated age-standardised incidence rate per 100,000
Prostate, all ages

Estimated age-standardised mortality rate per 100,000
Prostate, all ages
Liver Cancer

• Caused by chronic hepatitis virus infection
• Vaccines for Hep B can lower risk
• Africa, Asia, Western Pacific are hot spots
Cervix Cancer

- Was the leading cause of cancer death in US 100 years ago
- Caused by chronic HPV infection
- Vaccination and screening both work
## Cancer deaths in the World, 2008

<table>
<thead>
<tr>
<th>Site</th>
<th>Deaths (1000’s)</th>
<th>% preventable</th>
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<tr>
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<tr>
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<tr>
<td>esophagus</td>
<td>407</td>
<td></td>
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<tr>
<td>All sites</td>
<td>7,564</td>
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Cancer deaths in the World, 2008

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Organizational Roles

UN/WHO: Country policies, development

IARC, NCI: Research, cancer surveillance

ACS/UICC/WCRF: NGO advocacy
Political declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases

1. Acknowledge that the global burden and threat of non-communicable diseases constitutes one of the major challenges for development in the twenty-first century, which undermines social and economic development throughout the world, and threatens the achievement of internationally agreed development goals;

2. Recognize that non-communicable diseases are a threat to the economies of many Member States, and may lead to increasing inequalities between countries and populations;

3. Recognize the primary role and responsibility of Governments in responding to the challenge of non-communicable diseases and the essential need for the efforts

Total of 65 declarations
Priority Opportunities

- Tobacco
- Nutrition
- Persistent infections
- Early detection
- Treatment
- Palliative care
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