The worldwide burden of cancer – challenges and opportunities

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The worldwide burden of cancer

- UK 2008 (info.cancerresearchuk.org)
  - 310,000 new cases and 156,000 cancer-related deaths

- World 2008 (globocan.iarc.fr)
  - 12.7m new cases and 7.6m cancer-related deaths
  - 56% of new cancer cases and 63% of deaths in developing regions of the world
The worldwide burden of cancer

- **UK 2030**
  - c. 400,000 new cases and 210,000 cancer-related deaths
  - Increases of 29% and 26% from 2008

- **World 2030**
  - c. 21.4m new cases and 13.1m cancer-related deaths
  - Increases of 69% and 72% from 2008

*assuming no change in risk from 2008

globocan.iarc.fr

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The worldwide burden of cancer

**2030***

- Approx. 21.4 million new cases will be diagnosed in 2030 - up 69% from 12.7 million in 2008

*assuming no change in risk from 2008

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*developed vs. developing countries*

- **Developed**
  - 5.6m cancer cases 2008
  - 34% increase by 2030

- **Developing**
  - 7.1m cancer cases 2008
  - 81% increase by 2030

21.4m cancer cases 2030
Estimated global deaths ('000s) 2008 by major cause

**WHO Estimates – Global Burden of Disease**

Total deaths – 58.8m

Estimated global deaths (millions) 2008 by major cause

**Low and middle income countries**

Total deaths – 50.2m
Projected deaths by cause and income, 2004 to 2030

High income
Middle income
Low income

Deaths (millions)

HIV, TB, malaria
Other infectious
Mat/peri/nutritional
CVD
Cancers
Other NCD
Road traffic accidents
Other unintentional
Intentional injuries
Other NCD accidents

WHO GBD 2004

2011 UN Summit on non-communicable diseases

Current context

- UN General Assembly resolution (May 2010) on prevention and control of non-communicable diseases.
- Ministerial meeting (Moscow, Apr 2011)
- UN High-level Summit (NY, 19-20 Sep 2011)

- Halt the increasing trends in premature deaths from NCDs worldwide...particular focus on developing countries.
- IARC/WHO to play a major role in developing and utilizing standardized indicators

- Opportunity for a quantum improvement in cancer surveillance as a key deliverable from UN High Level Summit on Non-Communicable Diseases (New York, Sept 2011)
Cervical cancer in the UK

- In the UK, there were 3000 new cases and 1000 deaths due to cervix cancer in 2008
- Cervix cancer was the 11th most common female cancer and the 18th most common cause of female cancer death

info.cancerresearchuk.org

Age-standardised rates per 100,000

Worldwide in 2008, there were 530,000 new cases and 275 deaths from cervical cancer.

87% of these occurred in less developed regions of the world.
Human Development Index

High: $0.8 \leq \text{HDI} < 1$; Medium: $0.5 \leq \text{HDI} < 0.8$; Low: $0.3 \leq \text{HDI} < 0.5 = 2007$
Differing patterns – differing control strategies

France

GLOBOCAN 2008
Cancer Incidence and Mortality Worldwide
China

Uganda
Using global estimates for epidemiology

Highest national age standardised rates – selected sites

<table>
<thead>
<tr>
<th>Cancer</th>
<th>Country</th>
<th>Est. national rate</th>
<th>Est. world avg rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lip, oral</td>
<td>Papua New Guinea</td>
<td>24.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Liver</td>
<td>Mongolia</td>
<td>94.4</td>
<td>10.8</td>
</tr>
<tr>
<td>Kidney</td>
<td>Czech Republic</td>
<td>16.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Ovary</td>
<td>Latvia</td>
<td>14.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Thyroid</td>
<td>Rep. of Korea</td>
<td>35.4</td>
<td>3.1</td>
</tr>
<tr>
<td>NHL</td>
<td>Israel</td>
<td>16.6</td>
<td>5.1</td>
</tr>
</tbody>
</table>

The current and future global cancer burden

http://globocan.iarc.fr
GLOBOCAN 2008: Incidence - methods of estimation

Coverage of cancer registration worldwide
% of the population covered (around 2000)

16.5% total
(21% in 2006 - 8% in Asia)
Supporting the development of cancer registration in low and medium resource countries

Issues:

- Global initiative (July 6-7th 2011)
- Cancer Registration Development Fund
- Regional IARC registry support hubs
- Training courses
- Updated manuals and textbook
- CanReg5
- Wider use of data
- Advocacy
- Twinning

Wales – Sierra Leone twinning initiative in Cancer Registration

Welsh Assembly
WCISU
Velindre Cancer Link
Sierra Leone Cancer Trust
The worldwide burden of cancer

Challenges to cancer registries

- Placing cancer and its surveillance firmly on the emerging global non-communicable diseases agenda
- Quantum improvements in cancer registration in low and middle income countries
- Maintenance of and enhancements to quality of global cancer statistics

Opportunities for cancer registries

- Rational basis to cancer control planning
- Monitoring the impact of interventions e.g. GAVI and HPV vaccination
- Support to the cancer research agenda
Thanks to:
Freddie Bray
Jacques Ferlay
Eva Steliarova
CIN Section, IARC

We welcome collaborations:

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Use our software:

Cancer mondial http://www-dep.iarc.fr/
GLOBOCAN2008 http://globocan.iarc.fr/
CI5 http://ci5.iarc.fr/

WHO Cancer mortality database http://wwwdep.iarc.fr/WHOdb/WHOdb.htm