



The worldwide burden of cancer – challenges and opportunities

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UKACR/NCIN meeting: Liberating Information & Improving Outcomes – June 2011

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

[International Agency for Research on Cancer](http://www.iarc.fr)



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

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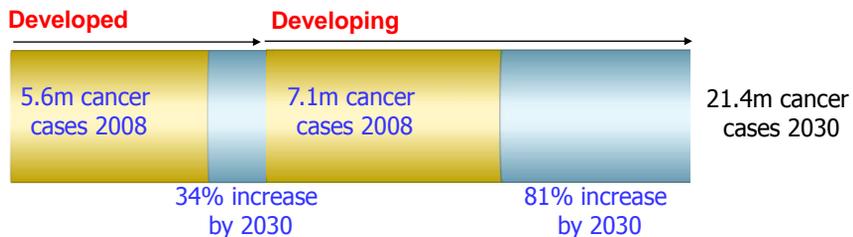
*assuming no change in risk from 2008

globocan.iarc.fr

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



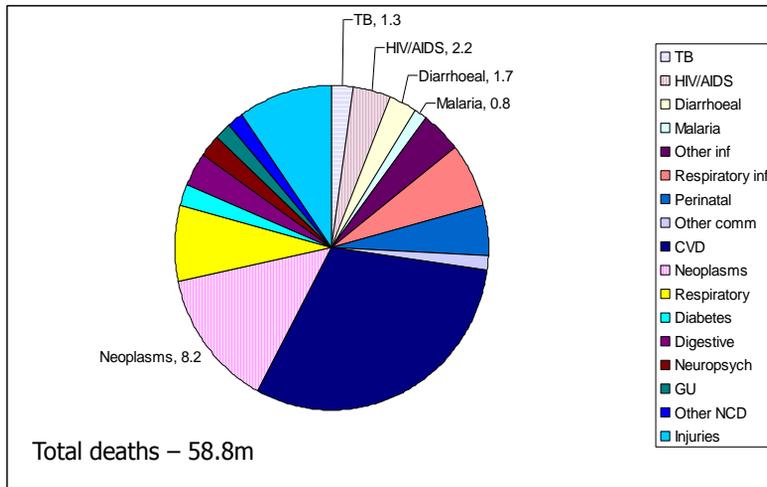
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GLOBOCAN 2008

Cancer Incidence and Mortality Worldwide

Estimated global deaths ('000s) 2008 by major cause

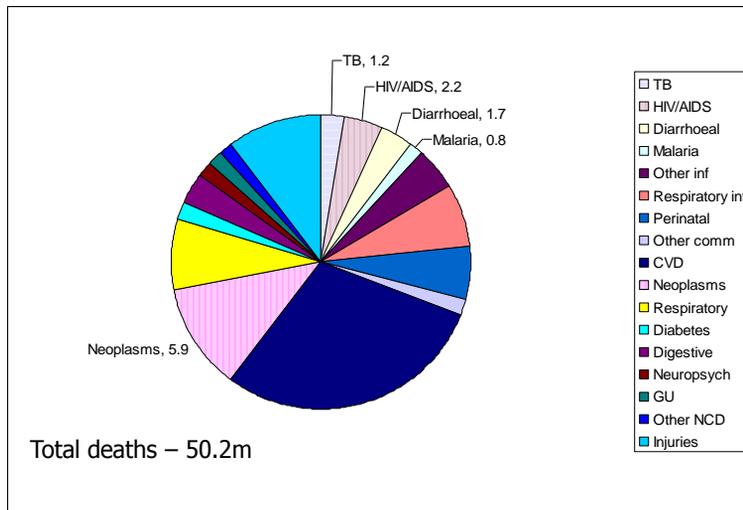


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WHO Estimates – Global Burden of Disease

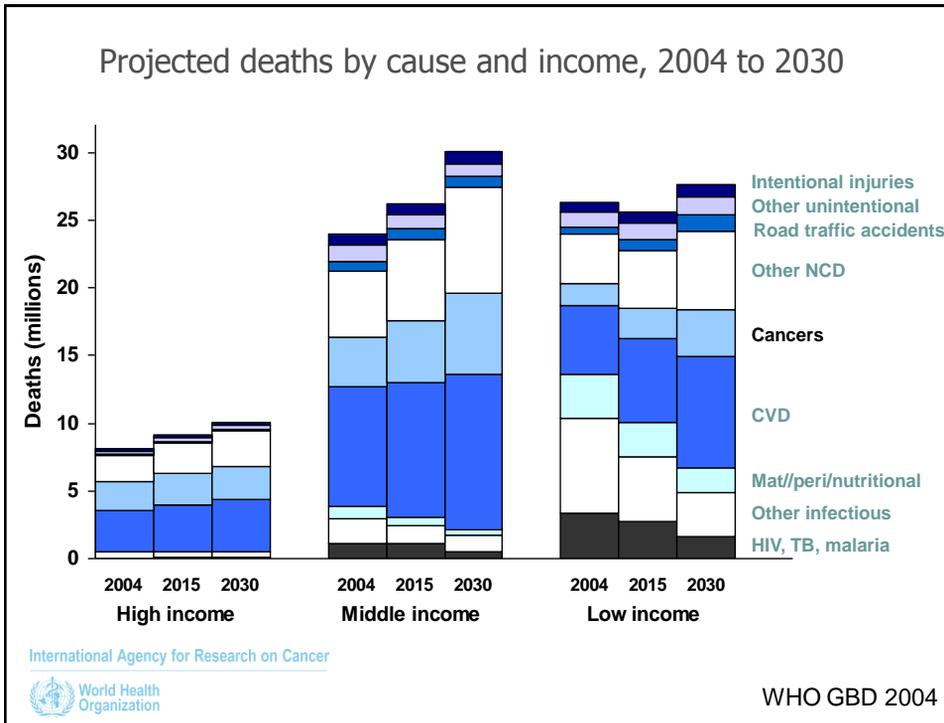
Estimated global deaths (millions) 2008 by major cause Low and middle income countries



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WHO Estimates – Global Burden of Disease



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)

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**Global status report
on noncommunicable diseases
2010**

World Health Organization

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World Health Organization

The NCD Alliance
www.ncdalliance.org

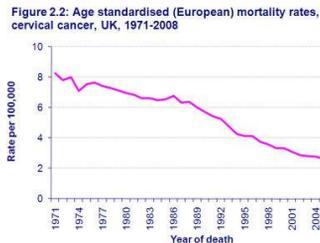
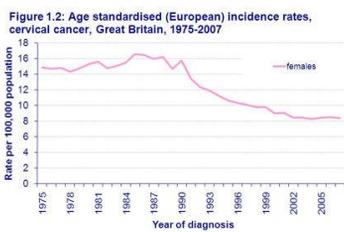
**NCD ALLIANCE
PLAN**

for the
**UNITED NATIONS
HIGH LEVEL SUMMIT ON
NON-COMMUNICABLE
DISEASES**
(Summary Version)

International Diabetes Federation
UICC
World Heart Federation
International Union Against Tuberculosis and Lung Disease

Cervical cancer in the UK

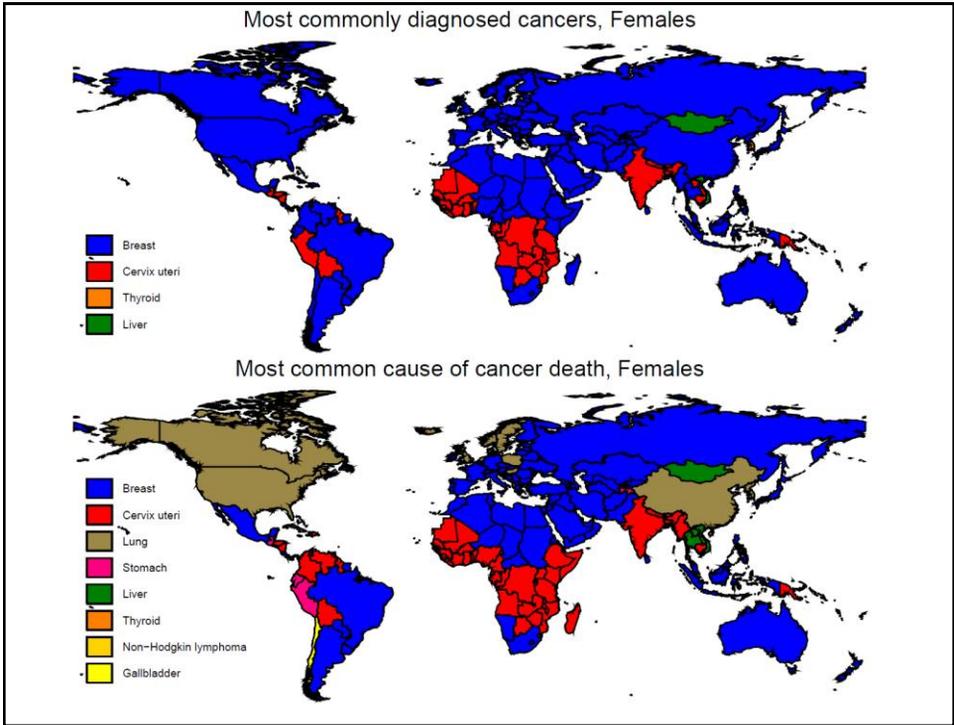
- In the UK, there were 3000 new cases and 1000 deaths due to cervix cancer in 2008
- Cervix cancer was the 11th most common female cancer and the 18th most common cause of female cancer death



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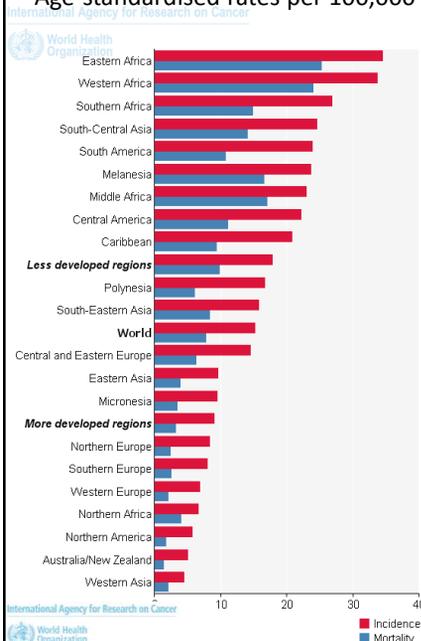


info.cancerresearchuk.org



Cervical cancer: estimated incidence & mortality (2008)

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

GLOBOCAN 2008 (globocan.iarc.fr)

A Practical Manual on Visual Screening for Cervical Neoplasia

S. Santharamangalam, MD
Wastley S. Wastley, MD

Quick Clinical Reference Chart for Visual Inspection with Acetic Acid (VIA)

VIA NEGATIVE

No definite acetowhite area Acetowhiting of the mucus on columnar epithelium Mucus plug Nabothian cysts Polyp Acetowhite area far away from SCJ

VIA POSITIVE

Well-defined acetowhite lesions touching the SCJ or close to the os Acetowhite area on the entire cervix

CANCER

Acetowhiting of growth on the cervix Acetowhiting of growth on the cervix partly obliterated by bleeding SCJ Squamocolumnar junction

Source: S. Santharamangalam, Sangeeta S. Wastley. A practical manual on visual screening for cervical neoplasia. (2007). Technical publication 401. Available from: <http://www.who.int/cancer/prevention/401>

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World Health Organization

Human Development Index

HDI tertiles

■ Low (0.3 - 0.5)
■ Medium (0.5 - 0.8)
■ High (0.8 - 1)

High: $0.8 \leq \text{HDI} < 1$; Medium: $0.5 \leq \text{HDI} < 0.8$; Low: $0.3 \leq \text{HDI} < 0.5 \approx 2007$

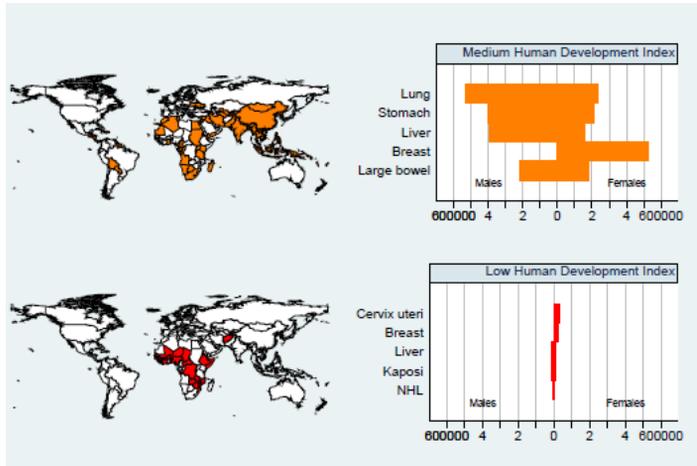
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World Health Organization

GLOBOCAN 2008

Cancer Incidence and Mortality Worldwide

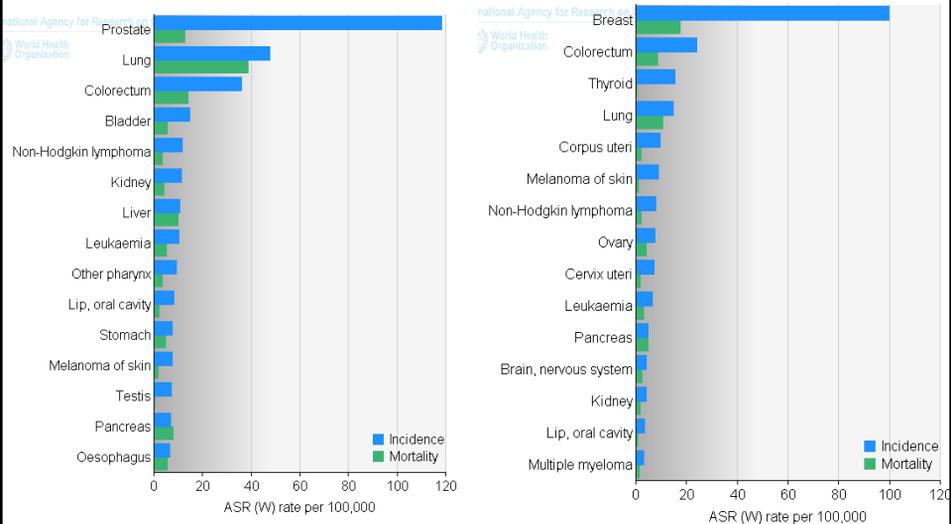
Differing patterns – differing control strategies



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France

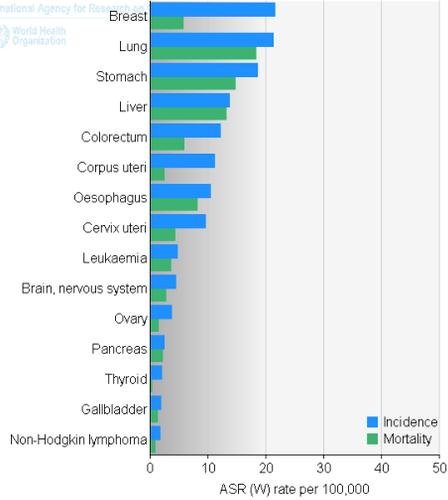
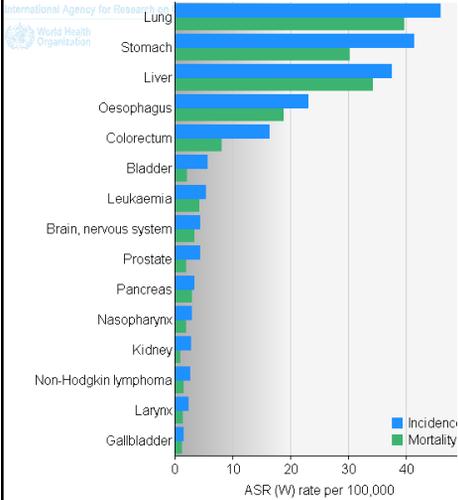


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GLOBOCAN 2008
Cancer Incidence and Mortality Worldwide

China

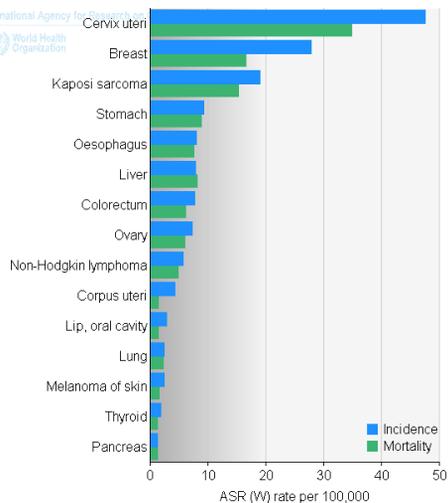
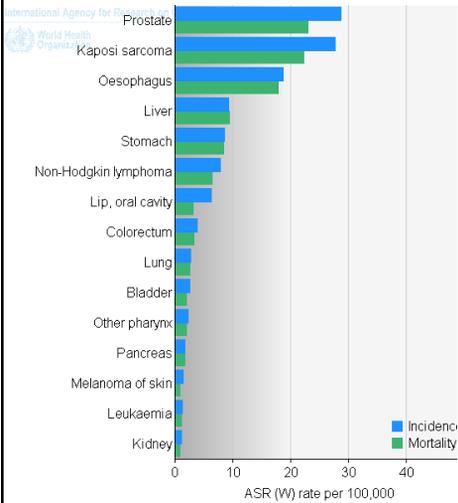


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GLOBOCAN 2008
Cancer Incidence and Mortality Worldwide

Uganda



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GLOBOCAN 2008
Cancer Incidence and Mortality Worldwide

Using global estimates for epidemiology Highest national age standardised rates – selected sites

Cancer	Country	Est. national rate	Est. world avege rate
Lip, oral	Papua New Guinea	24.0	3.9
Liver	Mongolia	94.4	10.8
Kidney	Czech Republic	16.2	3.9
Ovary	Latvia	14.6	3.3
Thyroid	Rep. of Korea	35.4	3.1
NHL	Israel	16.6	5.1

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GLOBOCAN 2008
Cancer Incidence and Mortality Worldwide

The current and future global cancer burden

<http://globocan.iarc.fr>

THE GLOBOCAN PROJECT

Welcome to the GLOBOCAN project. The aim of the project is to provide contemporary estimates of the **incidence** of, and **mortality** from major type of **cancers**, at national level, for all **countries** of the world. The GLOBOCAN estimates are presented for **2008**, separately for each **sex** and for all **ages**. Please note that:

- These estimates are based on the most recent data available at IARC and on information publicly available on the internet, but more recent figures may be available directly from local sources.
- Because the sources of data are continuously improving in quality and extent, estimates may not be truly comparable overtime and care should be taken when comparing these estimates with those published earlier. The observed differences may be the result of a change in the methodology and should not be interpreted as a time trend effect.

Usage:

- Before you start using GLOBOCAN, we recommend that you first read the section **Data sources and methods**.
- For a quick access to a summary of the burden of cancer in a country or for a cancer, use the **FACT SHEETS** option. Fact Sheets are a collection of statistical summaries for the eight most common cancer types or for each country or region of the world. They were developed to provide a quick overview of frequently-requested cancer incidence and mortality statistics.
- If you want to perform simple analysis or create your own graphs using GLOBOCAN data, use the **ONLINE ANALYSIS** menu options.

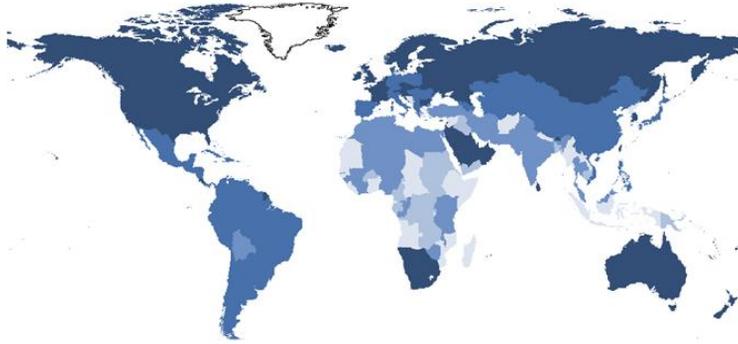
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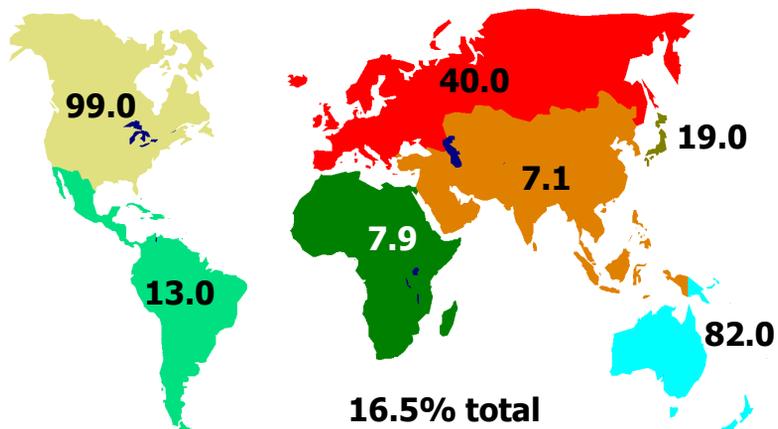
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GLOBOCAN 2008: Incidence - methods of estimation



- 1: National incidence data
- 2: Local incidence data and national mortality data
- 3: Local incidence data. No mortality data
- 4: Frequency data
- 5: No data

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



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Supporting the development of cancer registration in low and medium resource countries

Issues:

- Global initiative (July 6-7th 2011)
IARC, IACR, WHO, UICC, INCTR, IAEA-PACT, US-NCI, ACS, Harvard GEI, Public Health Canada etc
- Cancer Registration Development Fund
- Regional IARC registry support hubs
- Training courses
- Updated manuals and textbook
- CanReg5
- Wider use of data
- Advocacy
- Twinning

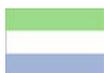


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Wales – Sierra Leone twinning initiative in Cancer Registration

Welsh Assembly
WCISU
Velindre Cancer Link
Sierra Leone Cancer Trust



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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

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The worldwide burden of cancer

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

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Thanks to:
Freddie Bray
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CIN Section, IARC



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We welcome collaborations:

cin@iarc.fr

formand@iarc.fr

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>