

# Making sense of the data: Europe-wide comparisons



EUROPEAN NETWORK  
OF CANCER REGISTRIES

European Cancer Observatory



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IARC • Lyon

UKACR-NCIN Conference 2011

- Background
- The three components:
  - EUCAN
  - EUROCAN
  - EUROCIM
- Future steps / Timeline
- Screenshots

European Cancer Observatory

- Background



International Agency for Research on Cancer



**to promote the use of  
cancer registries in cancer  
control, health-care  
planning, and research**

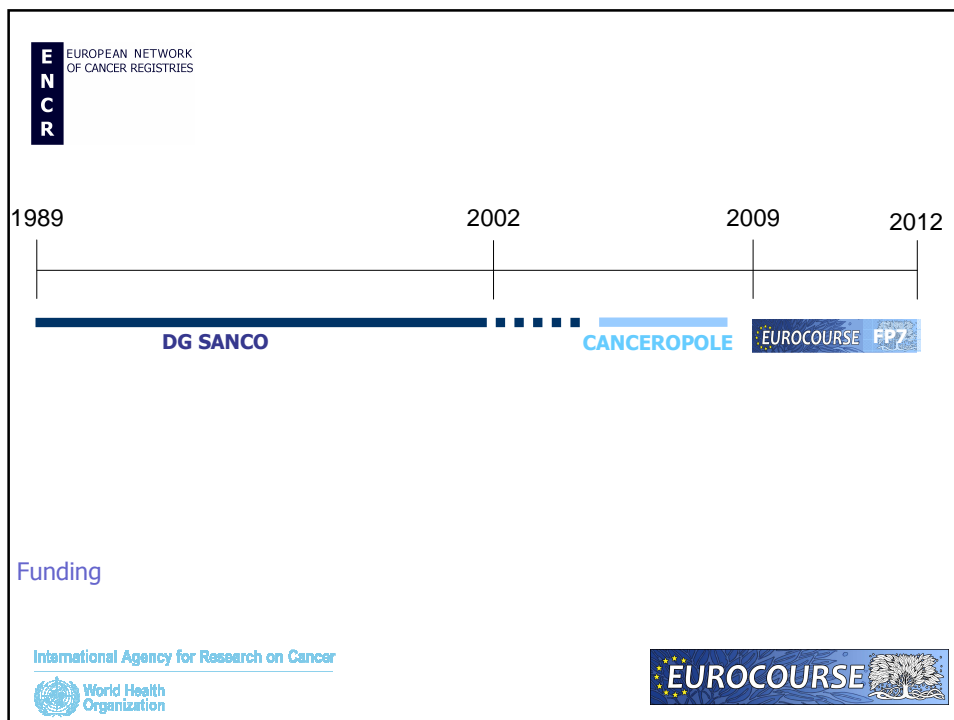
**to improve quality,  
comparability and  
availability of cancer  
incidence data**

**Objectives of the**



**to create a solid basis for  
monitoring incidence and  
mortality in the European  
Union**

**to provide regular  
information on the  
burden of cancer in  
Europe**



# EUROCOURSE

## Objectives:

- to improve quality, comparability and availability of cancer incidence data, and thus strengthen the basis for monitoring cancer incidence and mortality;
- to provide regular and timely information on the burden of cancer;
- to develop a strategy for programme owners for monitoring cancer and for promoting research on cancer using existing databases.

International Agency for Research on Cancer

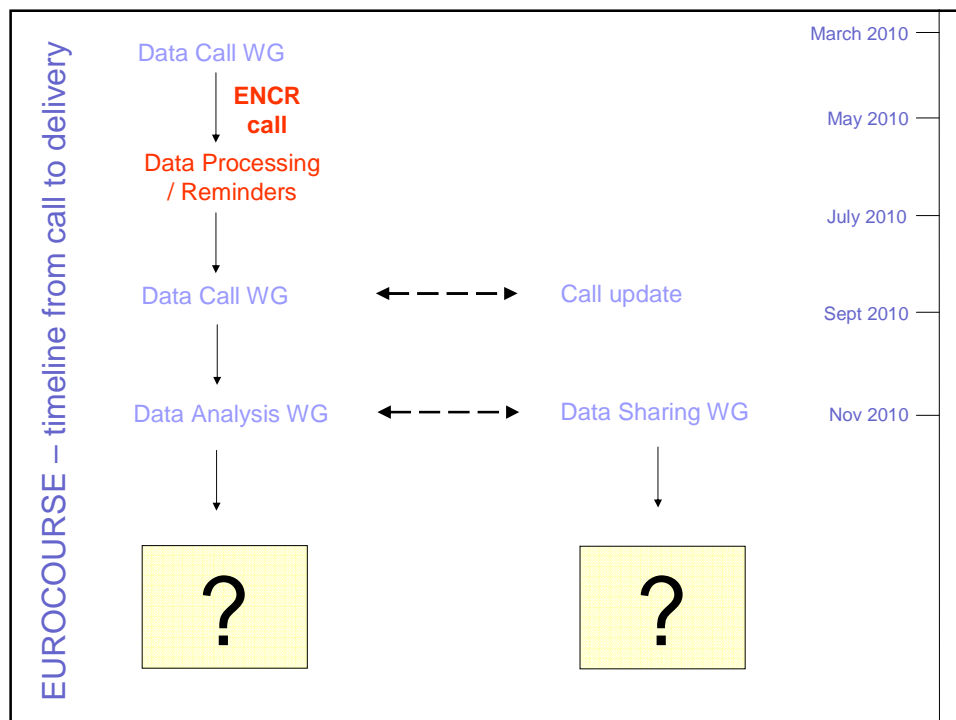
World Health Organization

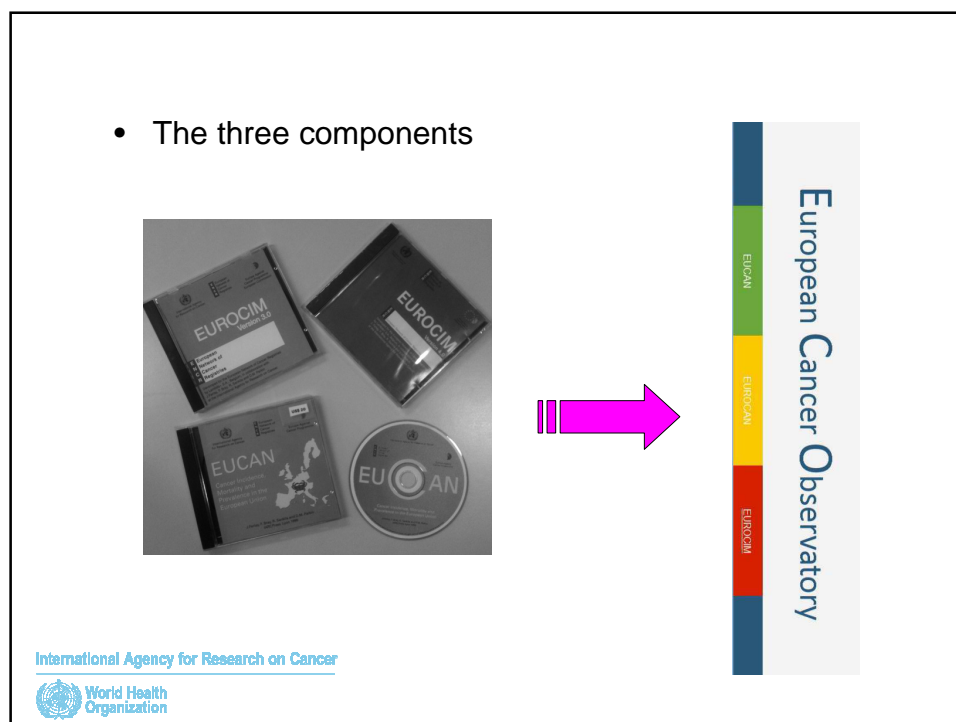
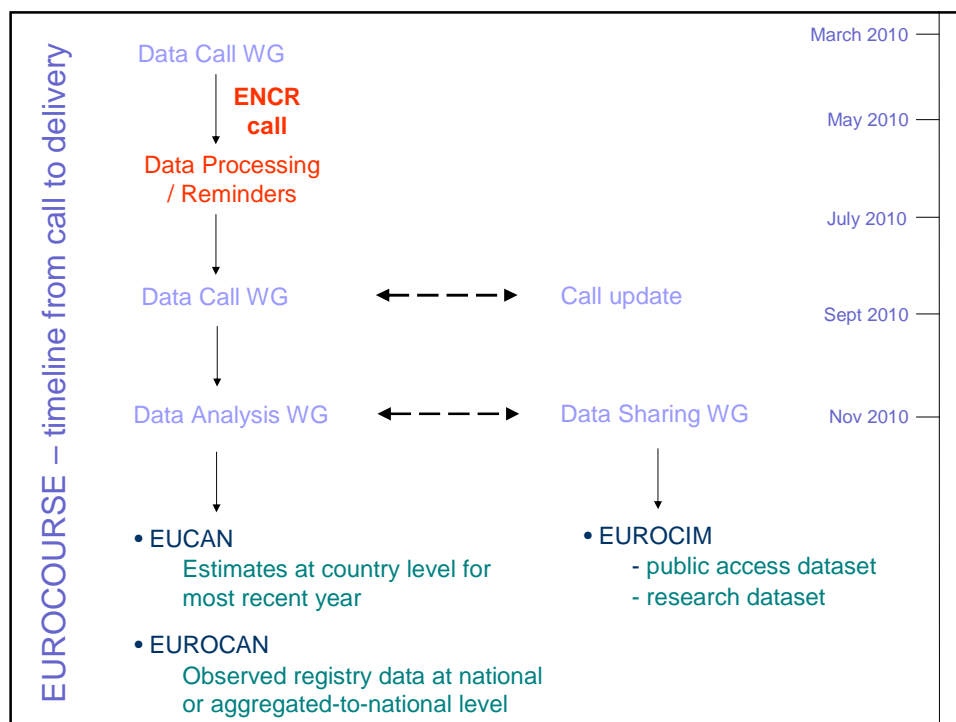
EUROCOURSE

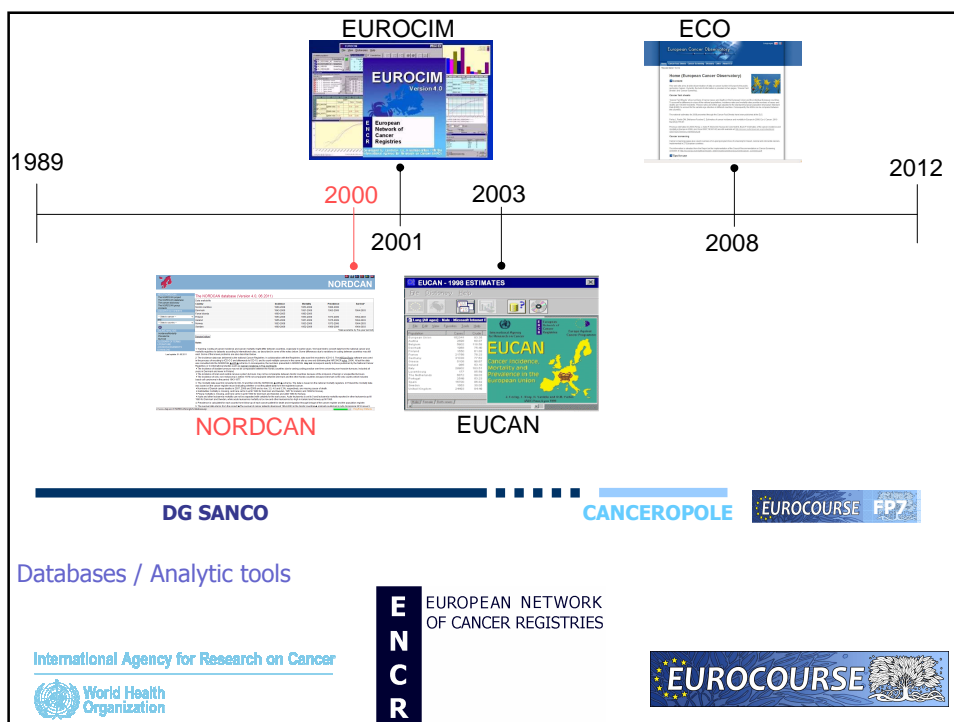
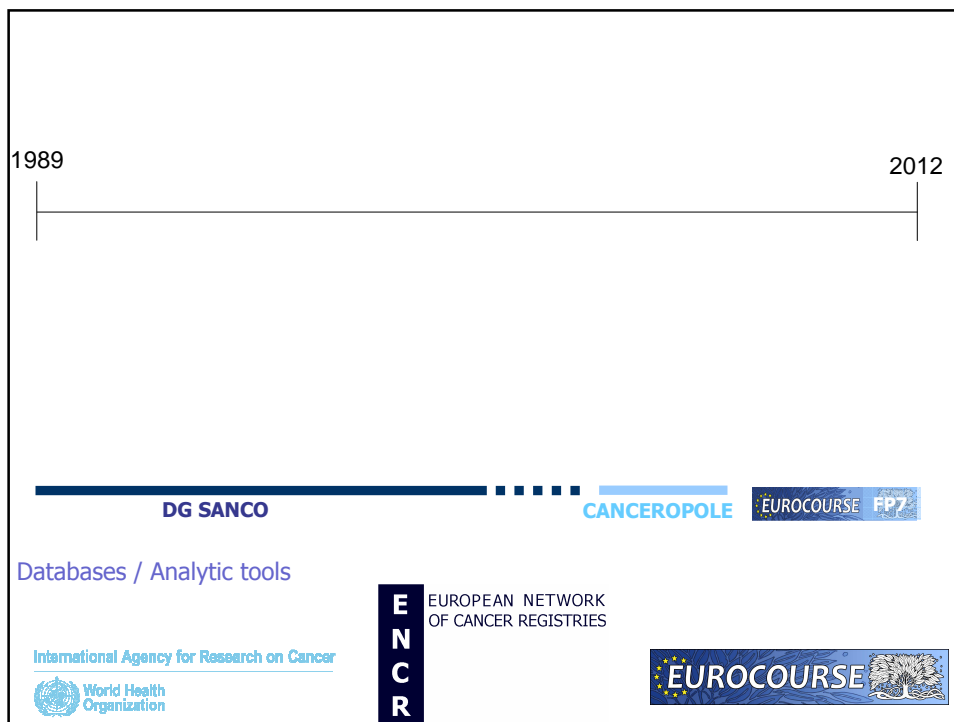
## WP4 The development, analysis, harmonization and exchange of European cancer registry data for monitoring cancer control

- Creation of a quality-controlled data submission mechanism to manage incoming and outgoing European registry data
- Develop analytic capacity to produce, from this data, key statistics and reports on the cancer burden in Europe
- Produce a public access dataset as well as a research dataset with more restricted access

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# European Cancer Observatory

EUROCIM



A data extraction tool.

- Input from *Data Sharing & Ownership WG* re content of:

D 4.1 Public access dataset for routine situation analyses

D 4.2 Research dataset with access restricted to the registries and researchers



# European Cancer Observatory

EUCAN



D 4.5 Development of a European Cancer Observatory: the formation of a comprehensive programme of work on cancer intelligence

- An online analysis tool for investigating the geographical patterns of cancer incidence & mortality according major sites of cancer.
- National *estimates* for 2012 will be derived for the 40 countries of greater-Europe.



Estimates of cancer incidence and mortality in Europe in 2008

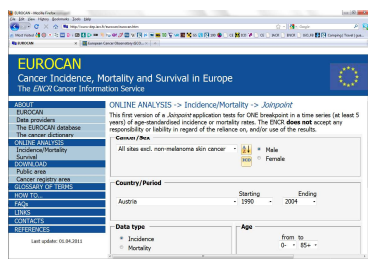
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# European Cancer Observatory

EUROCAN



D 4.5 Development of a **European Cancer Observatory**: the formation of a comprehensive programme of work on cancer intelligence

- Tabular and graphical analyses of country-specific patterns and trends on the basis of:
  1. *recorded data* from national registries or
  2. via aggregation of *recorded data* from regional registries to the national level.

Statistical methods (estimation)

EUCAN

EUROCAN

## Incidence

### National Registries:

Predictions to 2012:

- NORDPRED  $\geq 15$  years
- Dyba/Hakulinen  $\geq 5-14$  years

### Regional Registries:

- Mortality applied to country-specific Registry I:M ratio

### Otherwise:

- Mortality applied to area-specific Registry I:M ratio

## Mortality

WHO mortality predictions to 2012:

- NORDPRED  $\geq 15$  years
- Dyba/Hakulinen  $\geq 5-14$  years

### Otherwise:

- Projection of recent data to 2012
- Simple means

## Incidence

Aggregation of regional registry data to national:

- Larger numerator (more Registries) vs. greater span (select those with longer data series)
- Select only in CI5 XI

## Mortality

National Cancer Registry

Regional Cancer Registries

International Agency for Research on Cancer





	EUCAN	EUROCAN
Presentation (graphics)	<p><b>Maps</b></p> <ul style="list-style-type: none"> <li>- registration coverage in Europe</li> <li>- mortality coverage based on WHO</li> <li>- ASR/CR by country (2012)</li> </ul> <p><b>Bar charts (for 2012)</b></p> <ul style="list-style-type: none"> <li>- Cancer-specific #/rates by country/sex</li> <li>- Country-specific #/rates by cancer/sex</li> </ul> <p><b>Line charts</b></p> <p>Age-specific incidence rates by country/cancer/sex</p>	<p><b>Maps</b></p> <ul style="list-style-type: none"> <li>- registration coverage in Europe</li> <li>- span of data series by Registry</li> <li>- ASR/CR by Registry*</li> </ul> <p><b>Bar charts (for specified period)</b></p> <ul style="list-style-type: none"> <li>- Cancer-specific rates by Registry/sex</li> <li>- Country-specific rates by cancer/sex</li> </ul> <p><b>Line charts</b></p> <p>Age-specific incidence rates by Registry/cancer/sex</p> <p>Trends</p> <ul style="list-style-type: none"> <li>- Rates versus period by age</li> <li>- Rates versus period by age</li> <li>- ASR/CR versus period by country/cancer/sex</li> </ul>

International Agency for Research on Cancer

World Health Organization

EUROCOURSE

## Web technology - in with the new..

### THE OLD

- Inconsistent design & layout of disparate websites
- Built in ASP - old technology
- Export options are limited and user-unfriendly
- Options for modifying graph appearance limited
- Graphing technology outdated
- Poor validation - empty graphs / tables can appear

### THE NEW

- New websites built from scratch
- Built-in ASP.Net technology (.Net 2.0)
- Single, consistent point of entry for EUCAN, EUROCAN, EUROCIM
- Uses current UI design technologies
  - *JQuery*, *AJAX* and *MooTools*
- Tables and graphs:
  - Dynamic appearance editing (fonts, sizing, themes etc.)
  - Based on dynamically generated XML & built-in Microsoft Reporting Services (RDLC)
  - Graphs based on *FusionCharts* & *PowerCharts*

# European Cancer Observatory

EUCAN

EUROCAN

EUROCIM

## EUCAN 2012

- online analysis tool for investigating:
  - patterns of incidence & mortality
  - By country & cancer site
  - for most recent year available
- National *estimates* for 2012 for the 40 countries of greater-Europe.

## EUROCAN

- online analysis tool for investigating:
  - time trends in incidence & mortality
  - by country & cancer site
  - for available data series
- 1. *Recorded* data from national registries, *or*
- 2. Via *aggregation* of *recorded* data from regional registries (to the national level).

## EUROCIM

- A data extraction tool:
  - Public access dataset
  - Research dataset

- Future steps / Timeline



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## Future steps

- EUCAN
  - Update of incidence and mortality estimates for 2012.
    - Methods for estimating national incidence → EUROCOURSE WP3 WG
- EUROCAN
  - Inclusion criteria
    - Representativeness of national vs. regional registries → EUROCOURSE WP3 WG
- EUROCIM
  - Public and research datasets – content and to whom
    - Data Sharing and Ownership WP4 WG
- Integration of components of European Cancer Observatory
  - Further analyses: predictions 2015-2030 (incidence and mortality)
  - Other indicators: Prevalence – Survival – DALYs
- Establish:
  - Beta-testing group
  - EUROCAN Steering Group
    - Springboard for research?
- Communication
  - EUROCOURSE Executive Board, ENCR Steering Committee and ENCR Members
  - Other Networks

## Tentative timeline to launch

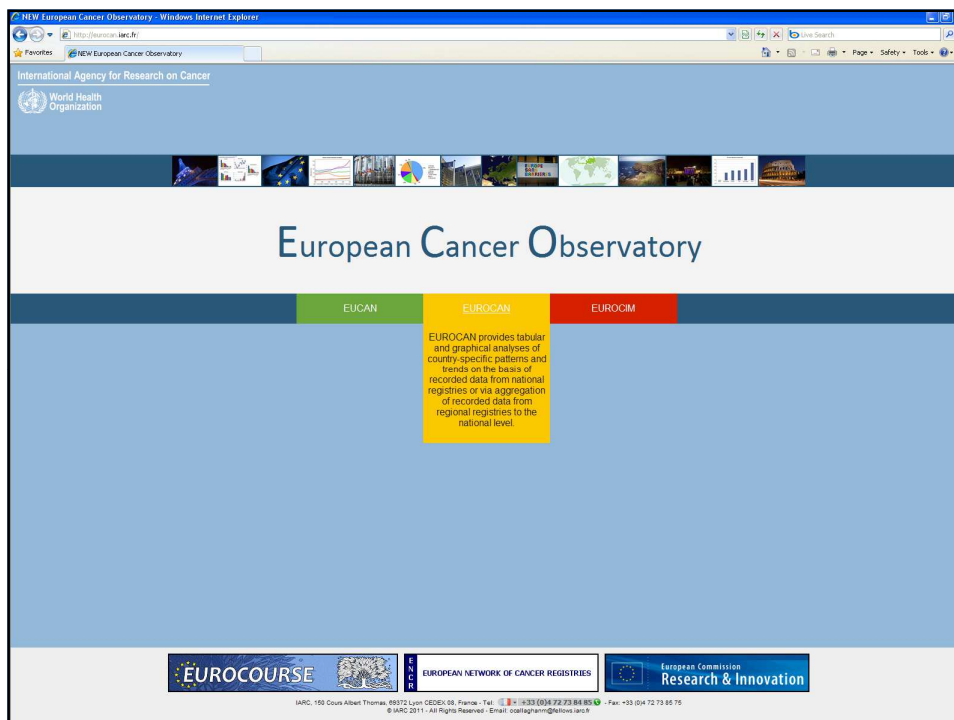
- June-Dec 11: development of **ECO**
- Oct 11: beta-testing group established
- Nov 11: beta-testing (EUROCAN)
- Dec 11: beta-testing (EUCAN)
- Jan 11: beta-testing (EUROCIM)
- Feb 11: ECO steering group appointed
- Feb 11: ECO trial version to ENCR Members
- Apr 12: launch of **ECO**

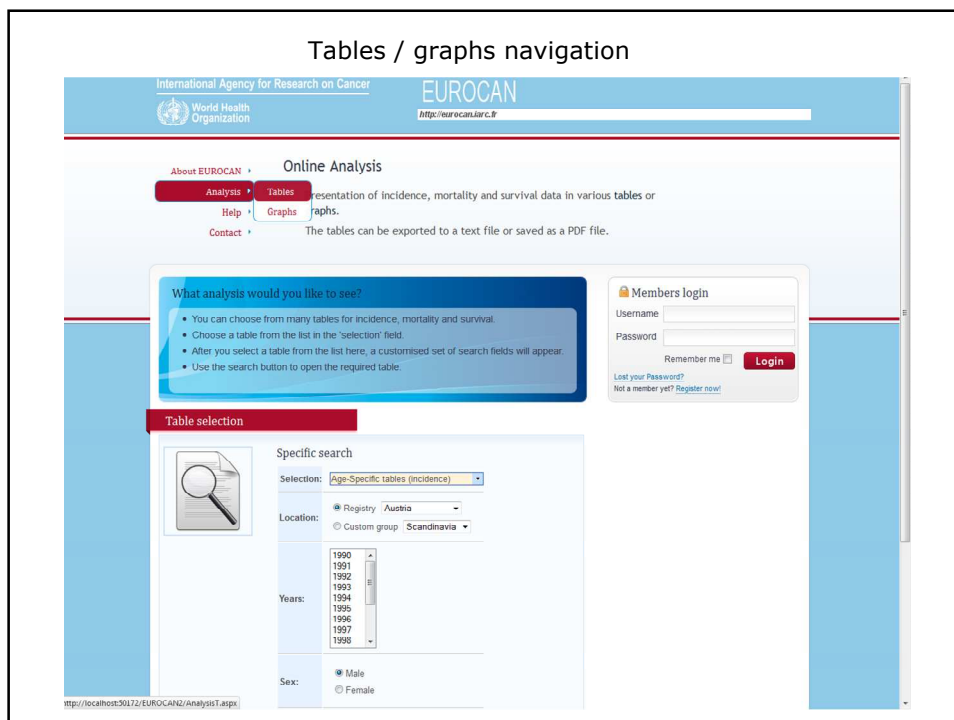
- Screenshots



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## Tabular options

Contact » The tables can be exported to a text file or saved as a PDF file.

What analysis would you like to see?

- You can choose from many tables for incidence, mortality and survival.
- Choose a table from the list in the 'selection' field.
- After you select a table from the list here, a customised set of search fields will appear.
- Use the search button to open the required table.

Members login

Username

Password

☐ Remember me

Lost your Password?  
Not a member yet? [Register now!](#)

Table selection

Specific search

Selection: **Age-Specific tables (incidence)**

Incidence tables:

[Age-specific tables](#)

[Rates by Registry](#)

[Rates by cancer](#)

[Rates by year](#)

Mortality tables:

[Age-specific tables](#)

[Rates by Registry](#)

[Rates by cancer](#)

[Rates by year](#)

Survival tables:

[Survival by Registry](#)

[Survival by cancer](#)

[Survival by period](#)

Sex: ☒ Male ☐ Female

Statistic: ☒ Rates ☐ Numbers

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Select a format

### Incidence Rates by Registry

Male, 0 to 74, National Cancer Registry Ireland, 2004,2005.

Crude and Age-Standardised Rate per 100,000

Cumulative Risk, percent

Cancer <sup>⊖</sup>	Numbers <sup>⊖</sup>	Crude rate <sup>⊖</sup>	ASR(W) <sup>⊖</sup>	ASR(E) <sup>⊖</sup>	Cumulative risk <sup>⊖</sup>
All sites excl. non-melanoma skin	12113	309.2	258.1	350.7	38.0
Bladder	403	10.3	8.4	11.7	1.3
Brain, central nervous system	330	8.4	7.5	9.1	0.8
Colon	957	24.4	20.0	28.0	3.2
Colorectum	1632	41.7	34.2	47.7	5.3
Gallbladder	59	1.5	1.2	1.7	0.2
Hodgkin disease	102	2.6	2.4	2.6	0.2
Kidney	374	9.5	8.0	10.6	1.1
Larynx	198	5.1	4.2	5.8	0.6
Leukaemia	372	9.5	8.3	10.5	1.1
Lip, oral cavity and pharynx	342	8.7	7.3	9.8	1.0
Liver	119	3.0	2.5	3.5	0.4
Lung	1423	36.3	29.8	41.8	4.8
Melanoma of skin	400	10.2	8.5	11.1	1.0
Multiple myeloma	148	3.8	3.1	4.3	0.5
Non-Hodgkin lymphoma	464	11.6	10.1	13.1	1.3
Oesophagus	312	8.0	6.6	9.2	1.0
Other and unspecified	821	21.0	18.0	23.6	2.5
Pancreas	228	5.8	4.8	6.7	0.7
Prostate	3670	93.7	77.5	108.6	12.4
Rectum and anus	675	17.2	14.3	19.7	2.2
Stomach	377	9.6	8.0	11.0	1.2
Testis	282	7.2	6.2	6.6	0.5
Thyroid	62	1.3	1.1	1.6	0.1

## Mortality per 100,000 by Age

Female, Cancer Registry of Norway, 2005,2006,2007,2008,2009.

Rates based on less than 10 cases are highlighted in red

Cancer	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	CR	ASR (W)	ASR (E)	ICD 5		
All	24506	1.1	2.3	1.7	3.2	2.8	6.7	9.8	24.1	38.6	79.8	143.4	207.2	362.0	475.8	654.7	958.4	1197.2	1555.0	208.7	91.3	137.8	C00-97/C44		
Bladder	507	-	-	-	-	-	-	-	-	0.2	0.1	0.6	1.7	1.3	3.5	6.5	11.8	20.8	31.7	50.7	4.3	1.4	2.3	C67	
Brain & CNS	628	0.4	1.4	0.4	1.1	-	1.8	1.6	2.1	2.7	3.5	5.5	7.6	10.9	15.6	16.0	22.4	17.6	15.6	5.3	3.2	4.3	C70-72		
Breast	3318	-	-	-	-	-	0.6	2.4	7.2	10.1	21.2	31.4	36.4	53.4	66.4	68.1	99.6	114.5	202.8	27.9	13.6	19.8	C50		
Buccal cavity	238	-	-	-	-	-	-	0.1	0.2	0.5	0.7	0.7	1.6	3.8	5.3	9.6	6.9	9.8	15.9	2	0.9	1.3	C00-14		
Cervix	401	-	-	-	-	-	0.4	0.6	0.6	2.3	3.0	3.5	5.7	4.4	5.7	7.4	13.0	14.4	12.3	3.4	1.9	2.6	C53		
Colon	3045	-	-	-	-	-	0.3	0.4	0.4	1.2	2.5	7.6	11.3	20.0	32.9	49.6	74.5	114.7	168.6	254.9	25.6	9.7	15.3	C18	
Colorectum	3951	-	-	-	-	-	0.3	0.4	0.5	1.5	4.1	10.0	15.2	26.7	45.0	63.0	97.2	149.3	218.1	324.0	33.2	12.7	19.9	C18-21	
Gallbladder	177	-	-	-	-	-	-	-	0.1	-	0.1	0.4	1.5	1.2	2.2	3.7	8.5	13.5	13.2	1.5	0.5	0.8	C23-24		
Kidney	428	0.3	-	-	-	-	-	0.2	-	0.4	0.7	1.6	1.9	5.2	8.3	12.6	18.9	29.1	27.7	3.6	1.4	2.2	C64		
Larynx	22	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	0.5	0.4	0.2	1.3	1.2	1.4	0.2	0.1	C32	
Leukemia	708	0.4	0.4	0.6	0.9	0.4	0.3	0.7	0.7	1.5	3.0	2.7	6.7	9.8	17.5	25.0	38.6	60.6	6	2.4	3.6	C91-95			
Liver	365	-	-	-	0.3	0.1	0.3	0.1	-	0.5	0.6	1.1	1.7	2.4	3.5	6.7	10.1	19.2	21.3	18.4	3.1	1.3	2	C22	
Lung	4183	-	-	-	-	-	-	0.3	0.4	1.5	3.2	9.6	31.1	48.1	87.0	108.9	156.5	192.7	170.4	112.1	35.2	17.6	26.2	C33-34	
Myeloma	571	-	-	-	-	-	-	-	-	0.2	1.6	3.9	8.0	8.5	18.0	26.6	34.8	38.4	4.6	1.8	2.9	C88-C90			
NHL	717	-	0.1	-	-	-	-	0.1	-	0.7	0.9	1.4	2.2	3.2	9.0	11.0	19.0	31.4	41.7	53.7	6	2.3	3.6	C82-85,C96	
Oesophagus	240	-	-	-	-	-	-	-	-	0.2	1.2	2.4	4.4	2.4	7.2	9.6	11.8	17.5	2	0.8	1.3	C15			
Other	3660	-	0.4	0.3	1.1	1.6	1.1	1.1	2.5	6.8	12.9	20.3	39.0	59.1	81.4	130.2	200.9	321.0	30.6	11.6	18	C40			
Ovary	1908	-	-	-	-	-	-	-	0.1	0.7	0.6	1.1	2.5	6.8	12.9	19.3	34.6	40.2	40.4	59.4	67.6	60.9	13.5	6.8	C56
Pancreas	1693	-	-	-	-	-	-	-	0.1	0.3	1.6	4.2	6.3	11.6	24.8	34.3	43.7	71.3	92.7	111.8	14.2	5.8	9	C25	
Rectum	906	-	-	-	-	-	-	-	0.1	0.2	1.6	2.4	3.8	6.7	12.1	13.4	22.7	34.8	49.5	69.1	7.6	3	4.7	C19-21	
Stomach	549	-	-	-	-	-	-	0.1	1.0	0.6	2.0	3.7	3.8	7.3	8.3	9.3	11.8	17.8	26.3	4.6	2.4	3.4	C43		
Stomach	837	-	-	-	-	-	-	0.1	0.3	0.9	0.8	1.1	2.2	5.1	4.7	7.5	13.8	21.2	31.7	47.8	64.1	7	2.8	C16	
Thyroid	30	-	-	-	-	-	-	-	0.1	0.2	0.1	-	-	0.3	0.2	1.2	1.1	2.8	1.6	0.3	0.1	0.2	C73		
Uterus	1162	-	-	-	-	-	0.6	0.6	1.0	2.5	3.5	5.4	8.8	8.3	14.7	21.9	32.6	42.6	49.8	69.3	9.6	4.5	6.7	C53-55	

## Graphical options

World Health Organization

International Agency for Research on Cancer

EUROCAN

<http://eurocan.iarc.fr>

About EUROCAN

Analysis

Help

Contact

Online Analysis - Graphs

Presentation of incidence, mortality and survival data in various tables or graphs.

The tables can be exported to a text file or saved as a PDF file.

What analysis would you like to see?

Several time trend graphs are available: trends in age-standardised rates vs. calendar period, trends in rates vs. calendar period by age, and trends in rates vs. birth cohort by age. The y-axis can be log-transformed and the graphics window can be resized and saved.

Age-specific Trends Pop. Pyramid Survival-age Rel. survival Survival-cancer

Members login

Username

Password

Remember me

Login

Lost your Password?

Not a member yet? Register now!

Specific Search

Trend curves

Trend: Time trends (all ages)

Data Type: Inci Time trends (all ages) Mo Time trends (by age) Reg Trends (by cohort)

Registry label

Austria

Belgium

Bulgaria

Croatia

Czech Republic

Denmark

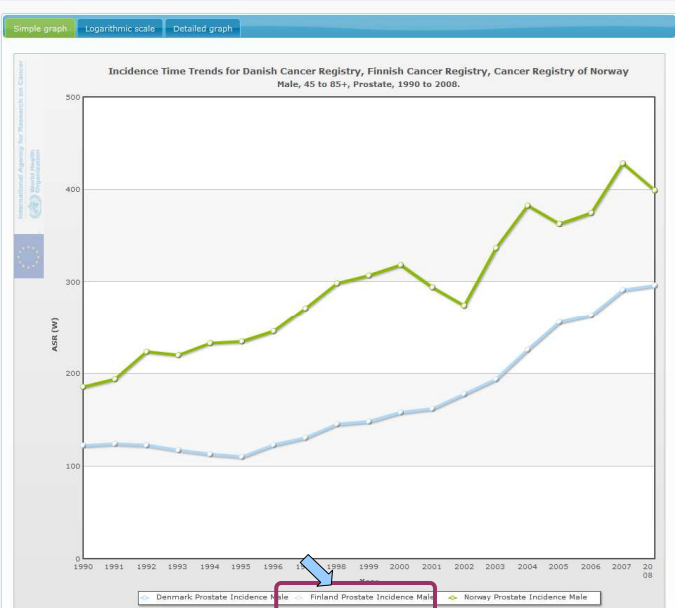
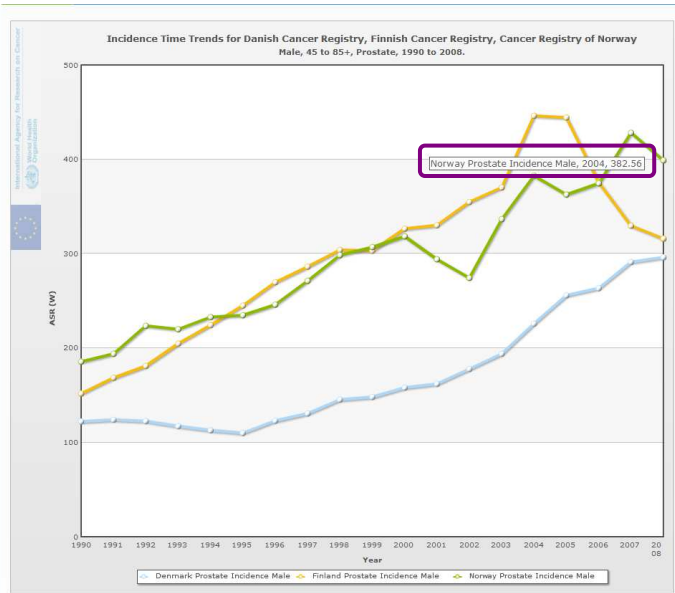
Estonia

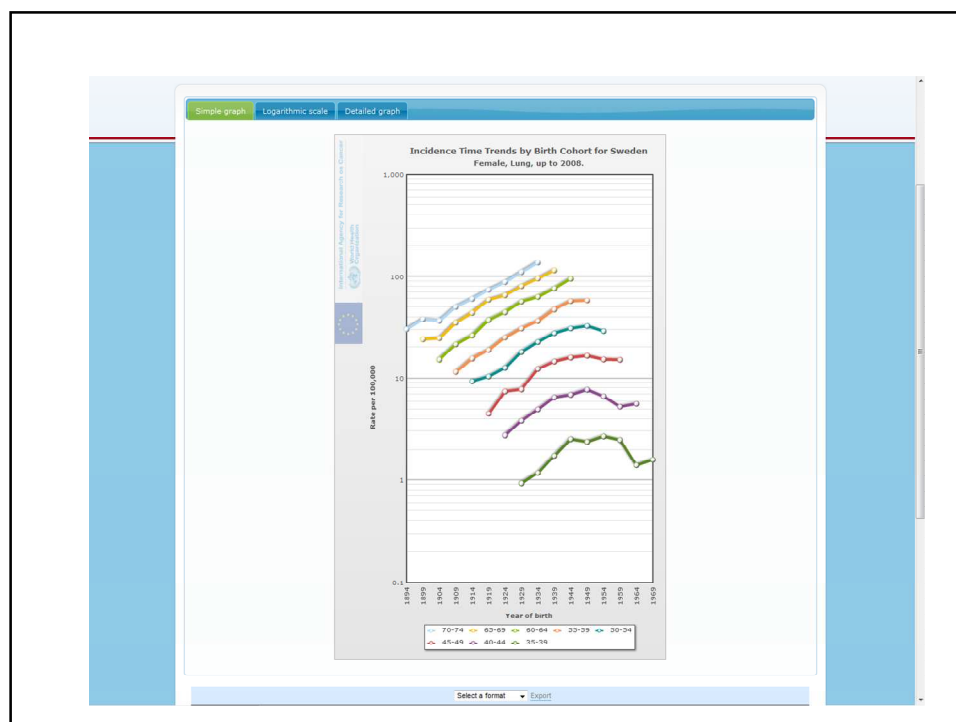
Finland

Ireland

Location:







## Dictionaries

How to edit custom groups

- You can use the icons on the grid below to edit, delete and add to custom groups
- To delete a group, click the trash icon
- To add a group to a custom group, click the plus icon
- To remove a group from a custom group, click the minus icon

Log in details

You are logged in to EUROCAN

### Add custom group

Select a label for your custom group in the textbox below. Then use the add (+) button for each of the registries that you want to include in your group. To remove a registry, hit the (-) button on the list of selected registries. When you are happy, hit the 'Create group' button

Custom group label:

Custom group description:

Reg code	Reg label	Reg type	Country	
EUAUT10	Austria	National	Austria	+
EUBEL10	Belgium	National	Belgium	+
EUBUL10	Bulgaria	National	Bulgaria	+
EUCRO10	Croatia	National	Croatia	+
EUCZE10	Czech Republic	National	Czech Republic	+
EUDEN10	Denmark	National	Denmark	+
EUEST10	Estonia	National	Estonia	+
EUFIN10	Finland	National	Finland	+
EUIRL10	Ireland	National	Ireland	+
EUNET10	Netherlands	National	Netherlands	+
EUNOR10	Norway	National	Norway	+
EUSLK10	Slovakia	National	Slovakia	+
EUSLN10	Slovenia	National	Slovenia	+

Create group

Selected registries	
EUDEN10 - Denmark	-
EUNOR10 - Norway	-
EUSWE10 - Sweden	-

new group  
ing groups

### a. Create new account

graphs.

The tables can be exported to a text file or saved as a PDF file.

Sign Up for Your New Account

User Name:

Password:

Confirm Password:

Email:

Security Question:

Security Answer:

[Create User](#)

### b. Log in

Log in details

You are logged in to EUROCAN

Username: mark

[Log out and forget me!](#)

Preferences

Custom registry groups

Click on a group to expand and view the associated registries.

- All custom groups
  - High income countries
  - Southern Spain
  - Scandinavia

[Create a new group](#)

[Edit existing groups](#)

Saved searches

Saved search selections will appear here.

[Go To](#)

