

available at www.sciencedirect.comjournal homepage: www.ejconline.com

Estimates of cancer incidence and mortality in Europe in 2008

J. Ferlay ^{a,*}, D.M. Parkin ^b, E. Steliarova-Foucher ^a

^a International Agency for Research on Cancer, 150 Cours Albert Thomas, 69372 Lyon Cedex 08, France

^b Clinical Trial Service Unit and Epidemiological Studies Unit, University of Oxford, Oxford OX3 7LF, UK

ARTICLE INFO

Article history:

Received 23 October 2009

Received in revised form 2

December 2009

Accepted 4 December 2009

Available online 29 January 2010

Keywords:

Cancer

Deaths

Europe

Incidence

Mortality

Predictions

ABSTRACT

Up-to-date statistics on cancer occurrence and outcome are essential for the planning and evaluation of programmes for cancer control. Since the relevant information for 2008 is not generally available as yet, we used statistical models to estimate incidence and mortality data for 25 cancers in 40 European countries (grouped and individually) in 2008. The calculations are based on published data. If not collected, national rates were estimated from national mortality data and incidence and mortality data provided by local cancer registries of the same or neighbouring country. The estimated 2008 rates were applied to the corresponding country population estimates for 2008 to obtain an estimate of the numbers of cancer cases and deaths in Europe in 2008.

There were an estimated 3.2 million new cases of cancer and 1.7 million deaths from cancer in 2008. The most common cancers were colorectal cancers (436,000 cases, 13.6% of the total), breast cancer (421,000, 13.1%), lung cancer (391,000, 12.2%) and prostate cancer (382,000, 11.9%). The most common causes of death from cancer were lung cancer (342,000 deaths, 19.9% of the total), colorectal cancer (212,000 deaths, 12.3%), breast cancer (129,000, 7.5%) and stomach cancer (117,000, 6.8%).

© 2009 Elsevier Ltd. All rights reserved.

1. Introduction

Accurate statistics on cancer occurrence and outcome are essential both for the purposes of research (into causes, prevention and treatment of cancer) and for the planning and evaluation of programmes for cancer control.^{1,2} Several agencies have published statistics on cancer mortality and incidence in the countries of Europe (the EUROSTAT and WHO, for example^{3,4}). The International Agency for Research on Cancer (IARC), through its programme of collaboration with the cancer registries of Europe in the European Network of Cancer Registries (ENCR) has done so since 1980.^{5–7}

In the provision of observed incidence and mortality rates, there is an inherent delay between the moment when the event occurs and the time when it becomes available for annual reporting. However, for purposes of planning public

health policies, it is important to know the most up-to-date cancer burden in absolute terms. Statistical models, based on the most recently observed data available and subjected to certain assumptions may be used to overcome the lack of current figures.

In this paper, we provide estimates of the incidence of and mortality from 25 cancers in forty European countries in 2008, using the most recent data published in international studies coordinated by the IARC, statistics published by national cancer registries on the Internet and the WHO mortality database.⁸ Since, at the time of writing, no countries had completed processing and publishing rates of cancer incidence and mortality for 2008 (except France⁹), we generated short-term predictions whenever possible. Additional estimation was required where national incidence data were not available, by using incidence and mortality

* Corresponding author: Tel.: +33 4 72 73 84 90; fax: +33 4 72 73 80 22.

E-mail address: ferlay@iarc.fr (J. Ferlay).

0959-8049/\$ - see front matter © 2009 Elsevier Ltd. All rights reserved.

doi:10.1016/j.ejca.2009.12.014

Table 1 – Data availability and method of estimation.

Country	Mortality	Incidence
Albania	1995–2004 > 2008 ^a	Estimated mortality → incidence (I:M ratio from Bulgaria and central Serbia)
Austria	1998–2007 > 2008	National incidence 1990–2004 > 2008 (NORDPRED)
Belarus	1989–2003 > 2008 ^b (NORDPRED)	National incidence 1978–2002 > 2008 (NORDPRED)
Belgium	2004 = 2008	National incidence 2005 = 2008
Bosnia Herzegovina	Simple mean of Albania, Macedonia, Serbia, Croatia and Slovenia rates	
Bulgaria	1985–2004 > 2008 (NORDPRED)	National incidence 1996–2005 > 2008
Croatia	1991–2005 > 2008 (NORDPRED)	National incidence 1991–2005 > 2008 (NORDPRED)
Cyprus	(2004, 2006) = 2008	National incidence 2003–2005 = 2008
Czech Republic	1998–2007 > 2008	National incidence 1986–2005 > 2008 (NORDPRED)
Denmark	1997–2006 > 2008	National incidence 1997–2006 > 2008
Estonia	1986–2005 > 2008 (NORDPRED)	National incidence 1978–2002 > 2008 (NORDPRED)
Finland	1998–2007 > 2008	National incidence 1998–2007 > 2008
France	National estimates 2008 ^c	National estimates 2008
Germany	1991–2005 > 2008 (NORPRED)	Estimated mortality → incidence (I:M ratio from German cancer registries) ^d
Greece	1998–2007 > 2008	Estimated mortality → incidence (I:M ratio from Bulgaria and central Serbia)
Hungary	1986–2005 > 2008 (NORPRED)	Estimated mortality → incidence (I:M ratio from Czech Republic and Slovakia)
Iceland	2006–2007 = 2008	National incidence 2006–2007 = 2008
Ireland	1998–2007 > 2008	National incidence 1996–2005 > 2008
Italy	1984–2003 > 2008 (NORDPRED)	Estimated mortality → incidence (I:M ratio from Italian cancer registries) ^d
Latvia	1998–2007 > 2008	National incidence 1983–2002 > 2008 (NORDPRED)
Lithuania	1998–2007 > 2008	National incidence 1986–2002 > 2008 (NORDPRED)
Luxembourg	1986–2005 > 2008 (NORPRED)	Estimated mortality → incidence (I:M ratio from French and German cancer registries)
FYR Macedonia	1991–2003 > 2008 ^a	Estimated mortality → incidence (I:M ratio from Bulgaria and central Serbia)
Malta	2005–2007 = 2008	National incidence 1997–2006 > 2008
Moldova	1999–2007 > 2008	Estimated mortality → Incidence (I:M ratio from Ukraine)
Montenegro	Simple mean of Albania and Serbia rates	
Norway	1986–2005 > 2008 (NORDPRED)	National incidence 1998–2007 > 2008
Poland	1999–2006 > 2008	Estimated mortality → incidence (I:M ratio from Polish cancer registries) ^d
Portugal	1984–2003 > 2008 (NORDPRED)	Estimated mortality → incidence (I:M ratio from Portuguese cancer registries)
Romania	1998–2007 > 2008	Estimated mortality → incidence (I:M ratio from Bulgaria, Slovakia and Cluj cancer registries)
Russian Federation	1999–2006 > 2008 ^b	Estimated mortality → incidence (I:M ratio from Belarus and Ukraine)
Serbia	1998–2007 > 2008	Estimated mortality → incidence (I:M ratio from Serbian cancer registries)
Slovakia	1991–2005 > 2008 (NORDPRED)	National incidence 1985–2004 > 2008
Slovenia	1998–2007 > 2008	National incidence 1986–2005 > 2008 (NORDPRED)
Spain	1985–2004 > 2008 (NORDPRED)	Estimated mortality → incidence (I:M ratio from Spanish cancer registries) ^d
Sweden	1986–2005 > 2008 (NORDPRED)	National incidence 1998–2007 > 2008
Switzerland	1986–2005 > 2008 (NORDPRED)	Estimated mortality → incidence (I:M ratio from Swiss cancer registries) ^d
The Netherlands	1998–2007 > 2008	National incidence 1991–2005 > 2008 (NORDPRED)
Ukraine	1991–2005 > 2008 ^b (NORDPRED)	National incidence 2005 = 2008
United Kingdom	1998–2007 > 2008	Incidence (England, Scotland and Wales) 1986–2005 > 2008 (NORDPRED)

'>' Projected to.

'→' Converted to incidence.

'=' Applied to.

^a Corrected for under-reporting. Missing sites: mean average of the estimated mortality rates for Bulgaria and Greece.

^b Main category (ICD special list) only. Other category partitioned using data from Ukrainian and Russian cancer registries.

^c Liver (C22), gallbladder (C23–24), pancreas (C25) and leukaemia (C91–95): average of national mortality rates (2005–2006).

^d Breast (C50) and prostate (C61) cancers: estimated national incidence for 2000 was projected to 2008 using country-specific incidence trends.

data from local (sub-national) cancer registries in the same country.

The results are presented for the 27 countries of the European Union, the European Economic Area (EEA) plus Switzerland, for four areas of Europe as defined by the UN (Central and Eastern, Northern, Southern and Western)¹⁰ and for the whole of Europe. Here we present a summary of the results; the complete set of estimates by sex, age-group, cancer and country will be made available at the ECO web site¹¹ and in the forthcoming update of GLOBOCAN¹² for the year 2008.

2. Data sources and methods

Estimates of cancer incidence and mortality for 2008 are made for each of the thirty-nine European countries (as defined by the United Nations¹⁰), and Cyprus. The source of the incidence and mortality data together with a summary of the methods of estimation are shown in Table 1. Results are presented for the following cancer sites defined by the 10th edition of the International Classification of Diseases (ICD-10)¹³: oral cavity and pharynx (ICD-10 C00–14), oesophagus (C15), stomach (C16), colorectal cancer (C18–21), liver (C22), gallbladder (C23–24), pancreas (C25), larynx (C32), lung (including trachea, C33–34), melanoma of skin (C43), female breast (C50), cervix uteri (C53), corpus uteri (C54), ovary (C56), prostate (C61), kidney (including renal pelvis and ureter, C64–66), bladder (C67), brain and central nervous system (C70–72), thyroid (C73), Hodgkin disease (C81), non-Hodgkin lymphoma (C82–85, C96), multiple myeloma (C88+C90), leukaemia (C91–95) and all cancers combined, excluding non-melanoma skin cancer (C00–96 but C44). This last category was calculated by summing the estimated numbers for each individual cancer site, and the estimated number in a residual category ‘other and unspecified cancers’ (for which results are not shown). No attempt was made to estimate incidence and mortality from non-melanoma skin cancer because of the incompleteness, or absence, of incidence data from cancer registries. These 2008 European estimates were prepared for 10 age groups (0–14, 15–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75+) of each sex.

The methods used to estimate country-specific incidence and mortality rates for 2008 are adapted from those used in previous estimates (for 2006),¹⁴ and involve projection of the most recent national rates to 2008. When 15 or more years of historic data were available, prediction of rates for 2008 used the NORDPRED programme, based on age-period-cohort modelling.¹⁵ When the prediction base was shorter, or when recent (2006, 2007) data were available, a programme developed at IARC based on the methods of Dyba and Hakulinen¹⁶ was used to make short-term predictions. Sex and cancer-specific prediction of the national incidence and mortality rates was performed when at least 50 cancer cases or cancer deaths (all ages) were recorded per year for very short-term predictions, and when at least 100 cancer cases or deaths (all ages) were recorded per 5-year period for NORDPRED. If not, the rates for 2008 were estimated as the annual average for the most recent 5-year period available. For France, we used the national incidence and mortality estimates for 2008 available at the INVS web site.⁹ No data were available

for Bosnia Herzegovina and Montenegro, and incidence and mortality rates for these two countries were estimated as the simple average of the rates (age-, sex- and site specific) of those of the neighbouring countries.

The rates were age-standardised (ASRs per 100,000 person-years) using the direct method and the European standard population.¹⁷ The number of cancer cases and deaths in 2008 was computed for each country by multiplying the predicted 2008 age and sex-specific incidence and mortality rates by the corresponding 2008 population estimates from the UN Population Division (the 2006 revision).¹⁰

2.1. Mortality

Historical and recent (up to 2007) mortality data and respective population figures were extracted from the WHO mortality database.⁸ The data available for estimation of 2008 rates, and the methods used to do so, are summarised in Table 1.

For Albania and Macedonia, vital registration is known to be particularly incomplete during the period of study (40% and 8%, respectively⁸), and the source data were corrected using the estimated percentage of under-reporting.⁸ The change from ICD-8 to ICD-10 in 1995 in Switzerland caused discontinuities in trends¹⁸ and the Swiss data prior to 1995 have been corrected accordingly.

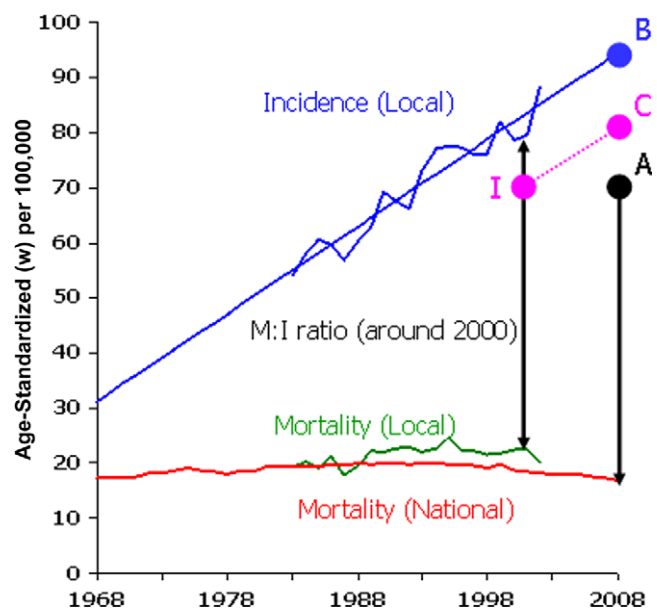


Fig. 1 – Illustration of the production of the predicted incidence rate for breast cancer in 2008. The vertical arrows represent the M:I ratio, based on local mortality and incidence rates from around 2000: (A) Predicted national incidence rate (2008) based on estimated national mortality (2008) and M:I ratio (around 2000). (B) Predicted national incidence rate (2008) based on the projection of local incidence rates. I: Predicted national incidence rate (2000) based on national mortality (2000) and M:I ratio (around 2000). (C) European 2008 estimates: Predicted incidence rate (2008) based on predicted incidence rate (2000) and projection to 2008 using trends observed in local cancer registries.

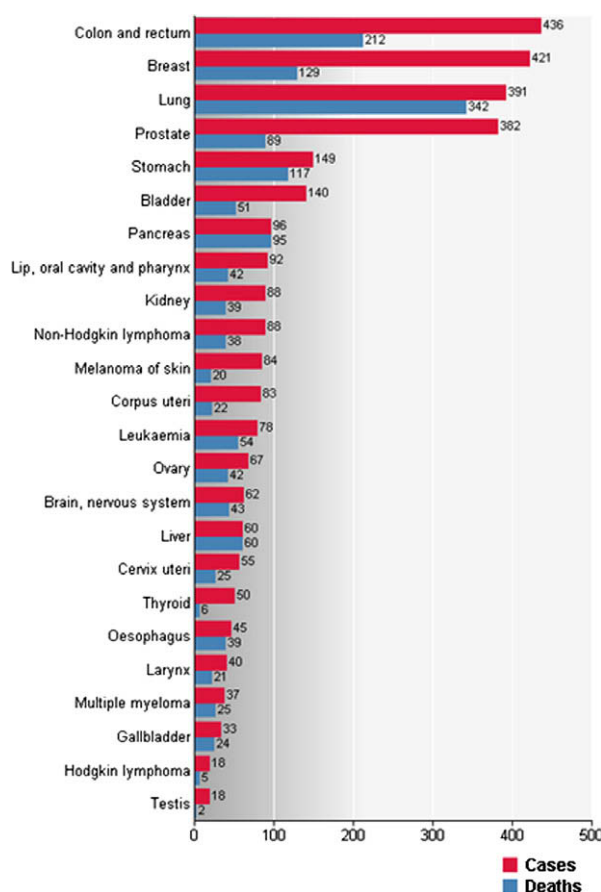
Table 2 – Estimated numbers of cancer cases and deaths from cancer in Europe in 2008 (in thousands).

	Incidence			Mortality		
	Both sexes	Male	Female	Both sexes	Male	Female
Oral cavity and pharynx	91.9	68.1	23.8	41.7	32.9	8.8
Oesophagus	44.7	34.1	10.6	38.6	29.4	9.2
Stomach	149.2	89.4	59.8	116.6	69.1	47.5
Colon and rectum	435.6	231.4	204.2	212.1	110.5	101.6
Liver	60.2	39.2	21.0	60.1	38.4	21.7
Gallbladder	32.9	12.4	20.5	23.7	8.6	15.1
Pancreas	96.0	48.8	47.2	95.2	48.3	46.9
Larynx	40.4	36.6	3.8	21.1	19.4	1.7
Lung	390.9	291.3	99.6	342.1	255.3	86.8
Melanoma of skin	84.0	39.2	44.8	20.1	10.6	9.5
Breast			420.8			129.3
Cervix uteri			54.8			25.0
Corpus uteri			82.5			21.7
Ovary			66.7			41.9
Prostate		382.3			89.3	
Testis		18.3			1.7	
Kidney	88.4	56.0	32.4	39.3	24.8	14.5
Bladder	139.5	109.7	29.8	51.3	38.7	12.6
Brain, nervous system	61.5	33.3	28.2	43.1	23.2	19.9
Thyroid	49.6	11.6	38.0	6.4	2.1	4.3
Hodgkin disease	17.5	9.3	8.2	5.5	3.1	2.4
Non-Hodgkin lymphoma	88.4	46.0	42.4	38.2	20.2	18.0
Multiple myeloma	37.2	18.7	18.5	24.6	12.1	12.5
Leukaemia	78.3	42.8	35.5	54.0	29.2	24.8
All sites (excluding skin)	3233.5	1730.0	1503.5	1718.8	959.0	759.8

There are large variations in the accuracy of death certificates related to cancer of the uterus, with many deaths recorded as ‘uterus cancer, not otherwise specified’ (ICD-10 C55). By default, the cancer deaths coded as ‘uterus unspecified’ were reallocated to either cervix (C53) or corpus (C54) uterine cancer according to age-specific proportions of each.¹⁹ In Sweden, around 40% of the uterine cancers are coded to uterus, NOS (C55). To redistribute these cancer deaths, we first estimated the number of deaths from cervix (C53) and corpus (C54) uteri cancers using the estimated incidence in 2008 and the corresponding 5-year relative survival.²⁰ The total number of cancer deaths from uterine cancers (C53–55) estimated in 2008 was then partitioned into cervix (C53) and corpus (C54) cancers using the proportions obtained from the survival analysis, then by age using age-specific death counts extracted from the WHO database.

For Belarus and Ukraine, mortality data were not available at the level of detail required by the study. For gallbladder (ICD-10 C23–24), testis (C62), kidney (C64–66), thyroid (C73) and Hodgkin disease (C81), the mortality rates from Ukrainian cancer registries 1999–2000²¹ were applied to the 2008 national population. In addition, the category ‘corpus uteri and uterus, NOS’ (ICD-10 C54–55) was first partitioned into two components using proportions from Ukrainian cancer registries mortality data. ‘Uterus, NOS’ (C55) was then distributed into cervix (C53) and corpus uteri (C54) using age-specific proportions from the same source.

As noted above, projections were carried out only when a minimum threshold number of deaths were recorded per year for a given cancer site, otherwise, the mortality rates (from the most recent 5 year period) were applied to the 2008 population.

**Fig. 2 – Estimated numbers of cancer cases and cancer deaths in the 40 European countries (in thousands).**

2.2. Incidence

The sources of data used to estimate national incidence rates are summarised in Table 1. Recent (up to 2007) incidence data were extracted from reports available on the Internet for the national cancer registries in Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Ireland, Luxembourg, Malta, the

Netherlands, Slovakia, Slovenia and Ukraine.^{22–34} Data for the five Nordic countries Denmark, Finland, Iceland, Norway and Sweden were obtained from the NORDCAN database of the Association of the Nordic Cancer Registry.³⁵ In the United Kingdom, historical incidence data were available for the populations of England, Scotland and Wales.^{36–38} Additional historical national incidence data for Belarus, Estonia, Latvia

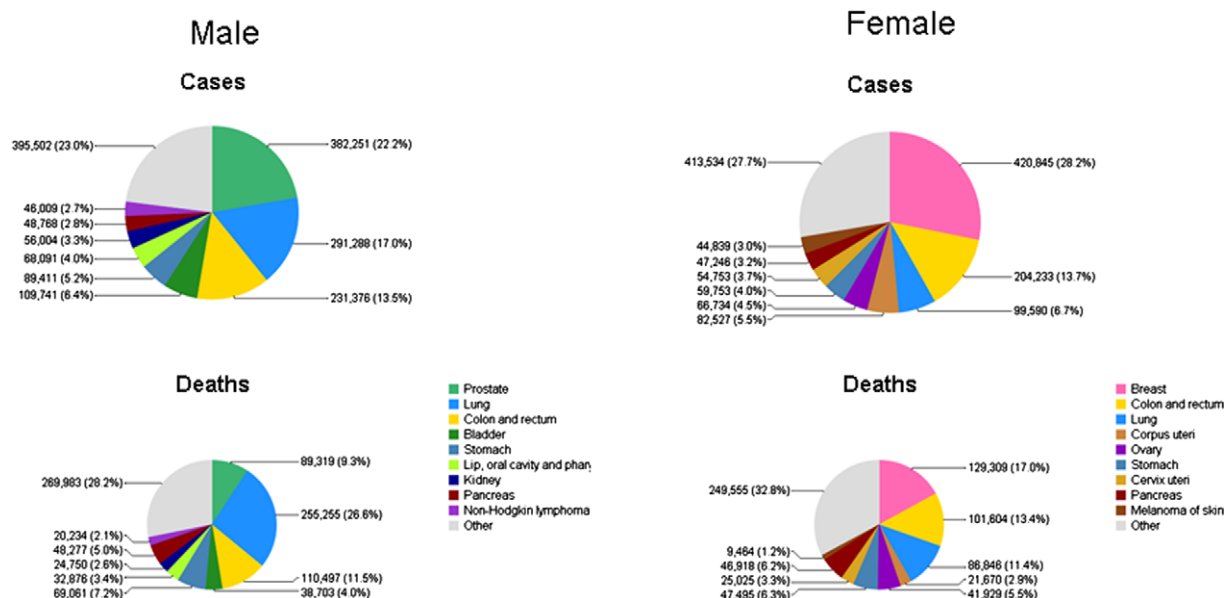


Fig. 3 – Distribution of the expected cases and deaths for the 10 most common cancers in Europe in 2008. For each sex, the area of the segment of the pie chart reflects the proportion of the total number of cases or deaths.

Table 3 – Estimated numbers of cancer cases and deaths from cancer in the European Union (EU-27) in 2008 (in thousands).

	Incidence			Mortality		
	Both sexes	Male	Female	Both sexes	Male	Female
Oral cavity and pharynx	66.6	48.9	17.7	27.1	20.8	6.3
Oesophagus	33.3	25.0	8.3	28.8	21.6	7.2
Stomach	82.7	50.4	32.3	61.5	36.9	24.6
Colon and rectum	333.4	183.0	150.4	148.8	80.0	68.8
Liver	46.6	31.7	14.9	46.5	30.5	16.0
Gallbladder	23.5	9.3	14.2	17.2	6.4	10.8
Pancreas	68.5	34.6	33.9	70.2	35.2	35.0
Larynx	28.9	25.8	3.1	12.9	11.6	1.3
Lung	288.1	208.2	79.9	252.5	181.9	70.6
Melanoma of skin	67.4	32.1	35.3	14.1	7.8	6.3
Breast			332.8			89.8
Cervix uteri			31.4			13.6
Corpus uteri			55.9			12.9
Ovary			45.3			28.8
Prostate		338.7			70.8	
Testis		15.3			1.0	
Kidney	71.6	45.7	25.9	31.5	19.7	11.8
Bladder	110.5	86.3	24.2	38.2	28.3	9.9
Brain, nervous system	40.2	22.0	18.2	31.4	17.0	14.4
Thyroid	33.0	8.3	24.7	3.6	1.3	2.3
Hodgkin disease	11.6	6.3	5.3	2.6	1.4	1.2
Non-Hodgkin lymphoma	73.7	38.6	35.1	31.1	16.4	14.7
Multiple myeloma	32.0	16.4	15.6	20.9	10.4	10.5
Leukaemia	59.7	33.2	26.5	40.4	22.2	18.2
All sites (excluding skin)	2457.6	1344.4	1113.4	1231.2	691.2	540.0

Table 4A – Estimated ASRs (European standard) of cancer incidence by sex, cancer site and country, 2008.

	Oral cavity and pharynx C00–14		Oesophagus C15		Stomach C16		Colon and rectum C18–21		Liver C22		Gallbladder C23–24		Pancreas C25		Larynx C32		Lung C33–34		Melanoma C43		Breast C50	Cervix C53
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	F	F
Europe	17.7	4.6	8.7	1.8	22.2	10.3	57.1	35.4	9.8	3.5	3.0	3.3	12.2	7.9	9.5	0.8	73.2	18.7	10.1	9.6	88.4	12.8
EU-27	17.8	5.1	8.6	2.1	16.7	7.8	60.5	37.2	10.6	3.6	3.0	3.3	11.6	8.1	9.2	1.0	70.6	22.2	11.5	11.3	103.7	11.0
EEA and Switzerland	17.6	5.1	8.6	2.1	16.5	7.7	60.3	37.3	10.6	3.5	3.0	3.3	11.6	8.1	9.1	1.0	70.2	22.3	11.8	11.7	103.9	10.9
Central and Eastern Europe	19.7	3.6	8.2	1.1	34.1	14.1	50.8	31.2	7.3	3.4	3.3	3.8	13.9	7.7	11.4	0.6	83.9	13.4	6.2	5.5	58.0	17.8
Belarus	24.1	2.8	9.0	0.5	49.4	21.4	44.1	29.6	3.8	1.5	1.6	1.5	10.1	5.1	12.8	0.3	85.1	6.6	4.5	5.7	55.6	15.9
Bulgaria	14.2	3.0	3.2	0.6	23.2	9.7	53.2	34.4	8.0	3.3	2.3	3.0	12.6	8.0	14.4	0.6	72.0	11.1	4.5	3.0	75.6	25.7
Czech Republic	17.5	4.3	7.0	1.2	15.7	8.2	91.2	44.3	8.8	3.6	6.3	7.6	16.1	11.1	8.3	0.8	77.9	23.0	18.0	15.3	93.1	16.6
Hungary	46.1	10.3	9.9	1.5	24.0	10.1	93.8	43.8	10.9	3.0	5.7	6.6	17.2	10.8	16.0	3.0	113.7	39.8	12.6	10.4	78.7	19.5
Moldova	20.1	3.7	5.9	0.7	29.9	12.6	49.6	29.7	20.3	7.5	1.0	2.1	14.8	8.1	11.8	0.4	56.0	9.6	3.2	2.8	47.2	22.1
Poland	16.4	3.7	6.4	1.0	20.3	6.8	49.3	25.7	4.6	2.2	2.9	4.9	11.8	7.2	15.4	1.5	103.3	25.7	7.1	4.1	66.3	16.5
Romania	24.4	2.8	5.9	0.7	21.7	9.3	41.2	27.9	11.1	4.8	2.7	2.7	14.6	7.8	13.5	0.7	79.6	14.2	3.6	4.6	63.6	29.0
Russian Federation	17.0	3.4	9.9	1.5	43.1	17.2	46.7	32.0	7.8	4.0	3.8	4.0	14.7	8.1	9.5	0.3	82.6	9.5	5.3	5.0	51.9	16.2
Slovakia	31.5	3.8	9.5	1.1	24.2	10.4	88.6	43.9	8.7	3.7	5.6	8.1	15.3	8.4	11.4	0.6	74.3	13.3	12.6	12.3	71.2	18.0
Ukraine	22.0	3.2	7.7	0.7	36.6	14.7	43.3	27.4	4.6	2.2	1.9	1.9	12.3	6.1	11.8	0.4	74.1	9.2	4.6	5.0	52.7	17.4
Northern Europe	12.0	5.3	12.1	4.3	13.1	6.3	54.5	36.9	5.6	2.4	1.9	2.2	10.7	8.2	5.3	0.8	59.9	32.3	15.6	14.8	113.5	9.7
Denmark	16.5	7.3	8.6	3.5	11.6	5.3	68.4	52.6	5.8	1.9	2.3	2.9	13.9	11.0	6.2	1.6	65.7	52.8	20.2	26.6	120.8	12.9
Estonia	16.7	4.4	5.8	0.9	30.9	15.4	47.7	32.8	5.0	2.3	2.2	2.7	14.1	7.6	9.3	0.8	93.4	13.1	7.9	8.5	67.6	19.1
Finland	9.3	5.2	4.9	1.5	11.1	6.5	41.4	29.1	8.8	3.7	3.0	3.0	14.5	11.4	3.4	0.4	46.0	16.0	15.9	13.2	117.0	4.4
Iceland	7.9	5.7	8.4	3.0	13.1	7.3	51.9	37.4	2.6	0.0	2.7	2.5	6.6	5.5	3.2	0.0	43.4	40.1	11.3	16.4	115.9	6.5
Ireland	12.4	4.4	12.6	5.7	15.3	7.2	66.9	42.9	5.2	2.3	2.4	3.9	9.5	8.4	7.3	0.9	57.9	36.4	14.6	18.9	126.5	12.9
Latvia	16.1	2.3	8.9	0.7	31.3	13.5	45.5	28.8	6.7	2.6	2.1	2.2	14.3	7.7	9.6	0.7	80.0	10.2	5.2	7.2	64.5	15.1
Lithuania	23.2	3.2	10.2	0.7	33.8	14.4	49.9	29.3	6.1	2.1	3.0	3.2	15.3	7.8	10.7	0.4	81.0	9.6	6.6	6.5	62.4	25.6
Norway	9.8	5.6	5.4	1.4	10.7	6.2	62.8	52.5	3.2	1.3	2.1	2.2	12.2	9.3	3.3	0.5	55.3	35.8	23.1	23.5	102.1	11.0
Sweden	9.1	5.2	5.0	1.5	8.6	4.7	47.8	38.4	4.6	2.0	1.8	2.9	7.5	6.4	2.7	0.6	29.0	25.8	19.9	20.4	110.7	8.7
United Kingdom	11.8	5.4	15.0	5.6	12.4	5.5	54.9	35.4	5.6	2.6	1.6	1.8	10.1	7.9	5.5	0.9	63.8	35.4	14.8	13.1	119.1	8.4
Southern Europe	16.8	4.5	5.8	0.9	20.9	10.1	59.7	36.1	14.5	4.9	3.6	3.7	11.2	7.4	11.3	0.8	72.7	15.0	8.3	8.1	92.7	9.9
Albania	13.6	8.6	4.9	1.9	36.7	19.6	16.6	12.7	8.1	3.3	0.8	1.0	15.5	5.9	8.3	2.8	65.4	20.9	2.9	1.7	63.7	7.6
Bosnia Herzegovina	18.2	5.8	5.6	1.1	28.3	12.8	50.0	27.9	8.4	3.3	2.9	3.9	12.5	6.7	12.4	1.7	81.2	20.3	8.9	7.5	75.8	17.5
Croatia	23.4	4.0	7.6	0.9	27.3	11.5	66.1	35.6	11.3	3.6	4.2	4.9	13.3	7.7	14.7	0.8	93.4	20.6	11.2	10.0	76.9	11.5
Cyprus	4.3	1.5	0.7	0.2	8.8	3.6	34.3	23.4	3.1	0.8	2.3	1.9	4.7	2.1	3.5	0.0	31.4	7.1	3.3	4.1	88.3	5.1
Greece	6.8	2.0	2.6	0.5	11.8	6.0	24.7	17.1	8.1	3.3	2.1	1.8	10.3	6.7	6.6	0.4	77.9	12.5	3.5	2.2	61.9	4.6
Italy	12.8	4.5	4.7	1.1	22.1	11.4	68.3	43.7	19.9	6.8	4.7	4.7	12.3	9.0	10.4	0.9	68.1	16.6	11.6	10.6	115.1	8.2
FYR Macedonia	12.7	6.0	2.9	1.0	34.4	14.1	43.3	24.4	8.1	3.2	1.8	4.6	10.9	4.0	16.8	2.1	80.8	10.7	10.1	6.4	69.9	27.1
Malta	13.8	4.7	4.0	0.5	14.6	6.2	47.9	29.9	3.6	0.8	1.7	1.9	11.1	7.2	7.6	0.0	49.3	8.5	7.2	8.5	98.0	2.9
Montenegro	15.1	6.3	5.0	1.5	27.0	13.6	32.0	20.6	7.0	3.3	1.3	1.9	12.4	6.6	11.0	1.9	78.7	23.0	4.0	3.2	70.9	15.9
Portugal	22.3	3.8	9.4	0.9	28.3	12.8	61.6	34.4	5.1	1.6	2.8	2.2	7.1	3.9	10.0	0.3	41.9	8.5	4.7	7.2	78.8	15.0
Serbia	16.7	5.6	5.3	1.0	16.7	7.8	49.0	29.3	6.9	3.8	2.1	3.6	10.0	7.2	13.3	1.6	92.0	25.0	6.3	5.9	77.3	24.5
Slovenia	24.0	5.2	6.7	1.1	25.8	11.3	74.6	37.4	7.9	2.7	5.6	5.2	12.7	8.8	8.4	1.1	74.7	23.9	13.7	13.7	88.7	16.0
Spain	23.5	4.9	7.4	0.8	18.1	8.0	60.4	34.1	13.9	3.8	2.9	2.9	10.2	6.2	13.3	0.6	77.8	10.7	6.3	7.1	81.1	7.6
Western Europe	18.9	5.9	9.7	2.3	13.7	6.6	62.4	39.7	10.6	3.1	2.8	2.8	11.5	8.3	7.4	1.0	66.0	23.4	13.9	15.0	120.7	8.4
Austria	15.0	4.2	6.5	1.5	14.0	8.0	55.5	33.4	13.6	4.4	2.4	3.0	12.5	10.2	5.2	0.7	52.8	23.2	14.4	11.1	94.4	9.4
Belgium	20.7	6.6	11.3	3.0	13.6	6.2	66.3	42.3	4.7	2.2	2.0	2.0	8.5	6.6	9.3	1.3	85.6	22.6	10.5	15.4	145.8	11.2
France	24.7	7.4	9.5	2.3	11.5	4.3	54.8	36.4	15.4	3.2	2.3	2.2	9.9	7.2	8.4	1.4	69.0	20.4	9.9	11.1	133.8	8.5
Germany	16.6	4.9	9.2	2.1	15.7	8.4	68.5	41.5	9.2	3.3	3.3	3.4	13.2	9.3	7.2	0.8	63.5	23.2	15.5	15.7	110.1	8.6
Luxembourg	31.1	5.1	8.9	2.3	14.3	8.3	63.8	38.1	16.7	5.6	0.8	0.0	14.0	11.2	7.6	1.4	69.8	25.5	12.5	14.0	114.5	8.3
The Netherlands	12.5	6.5	13.6	4.0	12.5	5.9	65.1	46.2	2.8	1.1	2.6	2.1	9.4	6.8	6.1	1.2	69.1	36.5	18.2	22.6	129.3	6.4
Switzerland	14.2	4.3	9.2	2.1	10.8	4.6	46.3	31.9	11.4	3.3	2.5	3.1	11.3	8.1	5.0	0.6	56.6	24.3	24.0	25.1	120.7	4.8

	Corpus C54	Ovary C56	Prostate C61	Testis C62	Kidney C64–66		Bladder C67		Brain C70–72		Thyroid C73		Hodgkin C81		NHL C82–85, C96		Multiple myeloma C88+C90		Leukaemia C91–95		All sites C00–96/C44	
	F	F	M	M	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Europe	16.7	13.7	93.4	4.9	14.2	6.1	26.9	5.0	8.9	6.3	3.1	8.9	2.5	2.1	11.7	8.0	4.6	3.2	11.0	7.0	432.7	294.1
EU-27	16.2	13.5	110.5	6.2	15.8	7.1	28.3	5.8	8.1	5.7	3.1	8.7	2.5	2.0	13.5	9.6	5.4	3.9	11.5	7.5	454.0	317.9
EEA and Switzerland	16.3	13.5	111.5	6.3	15.8	7.0	28.3	5.9	8.1	5.7	3.1	8.7	2.5	2.0	13.5	9.6	5.4	3.9	11.6	7.4	454.3	318.4
Central and Eastern Europe	17.3	14.6	42.0	2.7	11.4	4.9	23.5	3.5	10.2	7.2	2.6	8.5	2.4	1.9	6.7	4.4	2.4	2.0	9.0	5.8	377.7	247.6
Belarus	21.1	15.2	40.5	2.1	18.6	8.4	23.1	2.6	5.4	3.9	4.8	17.6	2.8	2.6	6.3	4.3	1.9	1.9	10.1	7.0	382.5	246.1
Bulgaria	23.2	18.5	35.6	4.4	12.4	6.2	24.7	5.3	9.7	7.6	1.2	4.7	2.0	1.4	4.9	3.8	1.8	1.6	7.2	4.2	345.9	272.8
Czech Republic	25.0	17.6	98.6	8.4	33.6	15.0	33.0	8.7	8.4	5.7	2.8	11.2	2.4	1.9	11.8	8.6	3.7	3.1	11.6	6.8	503.6	352.0
Hungary	17.7	13.7	51.0	7.8	17.2	6.5	32.2	8.8	6.6	4.6	3.3	4.3	1.7	1.3	11.0	5.7	3.9	3.2	12.6	8.1	516.2	325.6
Moldova	14.9	9.5	23.3	2.3	9.1	5.3	18.3	4.9	11.5	6.7	1.9	4.2	1.1	1.3	6.9	4.1	1.3	1.3	6.1	4.6	316.1	219.2
Poland	16.7	17.0	69.4	3.9	15.5	7.1	29.4	4.7	11.2	8.3	1.8	5.6	2.3	1.8	7.0	4.1	4.4	3.1	8.5	6.0	418.0	258.0
Romania	8.9	13.0	32.0	1.9	8.1	4.2	20.5	4.3	10.5	7.7	1.3	4.0	1.2	1.1	7.9	4.6	2.5	2.2	8.2	5.0	345.2	246.2
Russian Federation	15.8	14.4	34.3	1.6	6.2	2.5	21.9	2.6	10.1	7.3	3.2	10.2	2.6	2.0	6.3	4.5	1.9	1.7	8.6	5.5	365.0	237.7
Slovakia	25.0	15.5	59.8	8.5	20.6	10.5	23.7	5.5	8.0	6.5	2.3	7.1	2.0	2.4	8.8	7.1	6.3	4.9	12.5	8.2	458.6	303.6
Ukraine	21.8	13.5	27.7	2.1	13.8	6.5	20.1	2.4	11.8	7.9	1.8	7.0	2.5	2.2	4.7	2.9	1.5	1.2	9.4	5.9	333.6	224.3
Northern Europe	17.6	16.6	131.3	7.1	13.8	7.0	23.0	6.4	8.1	5.2	1.8	5.3	2.8	2.1	16.0	11.6	6.0	3.9	12.0	7.3	445.0	345.4
Denmark	19.3	15.7	110.2	12.5	13.0	6.9	39.2	10.8	8.0	6.2	1.7	4.4	3.4	2.3	16.3	11.4	5.2	3.2	10.6	6.5	489.8	432.5
Estonia	20.3	14.4	67.7	2.9	24.2	9.5	25.0	4.5	6.9	4.8	1.7	9.1	1.5	2.8	10.6	8.5	3.9	3.6	13.2	6.6	413.9	276.9
Finland	20.7	12.3	145.3	5.4	13.8	8.3	18.1	4.3	8.0	6.0	2.9	8.8	2.5	2.0	17.6	13.3	4.8	3.1	10.6	6.4	414.1	317.7
Iceland	15.1	10.0	153.3	6.6	21.6	10.4	27.2	8.5	5.3	6.8	3.2	15.1	1.3	2.4	15.1	8.3	6.6	7.6	7.9	5.5	436.2	362.1
Ireland	16.1	18.2	183.1	8.1	13.4	9.1	21.4	9.1	10.7	7.3	1.7	4.3	2.6	2.1	16.3	13.5	6.3	4.4	12.9	6.2	515.2	395.9
Latvia	24.1	19.3	104.5	3.4	26.1	13.2	23.5	4.1	12.0	7.0	1.8	6.0	1.5	2.4	7.7	6.1	2.7	2.1	11.5	7.0	442.0	262.5
Lithuania	23.5	18.7	104.8	2.4	24.8	11.0	24.7	3.6	8.2	6.5	2.8	12.9	1.9	2.5	9.9	7.8	4.6	4.3	13.6	8.5	462.4	281.7
Norway	22.4	15.8	172.7	11.5	15.3	7.5	34.4	9.2	8.3	5.8	2.9	6.9	2.7	2.1	17.5	12.2	6.9	4.4	12.2	7.5	497.3	366.7
Sweden	20.0	12.3	168.6	6.9	10.8	6.6	26.8	7.1	6.8	4.7	1.8	4.8	1.9	1.5	14.0	9.5	5.2	3.5	10.7	7.4	412.8	328.5
United Kingdom	15.7	17.5	122.5	6.9	13.1	6.2	20.4	6.1	8.0	4.8	1.6	4.4	3.0	2.1	16.6	12.1	6.4	4.1	12.4	7.4	440.2	347.4
Southern Europe	15.2	11.7	78.7	4.5	13.1	5.2	31.8	5.0	8.6	6.0	3.2	10.6	2.9	2.5	12.9	9.6	5.1	4.3	11.3	8.0	423.5	289.4
Albania	8.4	7.2	30.7	2.4	15.7	10.4	22.7	3.7	10.0	7.7	3.0	5.4	3.5	2.6	3.5	2.2	1.0	1.3	8.3	7.3	302.8	223.0
Bosnia Herzegovina	16.5	13.8	52.4	5.9	13.5	6.3	25.6	4.6	11.1	8.5	2.4	7.1	3.0	2.8	7.7	5.4	3.1	2.3	9.9	6.6	387.4	275.7
Croatia	15.1	16.1	70.0	7.1	16.8	7.8	27.2	6.7	11.8	10.0	3.4	13.9	2.9	2.5	9.6	7.5	4.5	3.2	12.7	8.2	469.5	299.7
Cyprus	16.6	6.9	73.3	6.5	6.9	2.6	24.4	3.9	4.3	2.9	4.0	12.0	3.7	2.9	14.7	8.6	4.2	3.4	9.5	7.4	265.8	220.0
Greece	13.6	13.8	31.1	2.4	10.0	4.3	24.4	3.7	11.4	7.6	1.2	3.3	2.8	3.5	4.0	2.4	3.3	2.6	10.2	6.4	281.4	199.2
Italy	15.3	11.6	91.2	6.4	15.2	6.1	30.6	5.3	7.1	4.8	4.9	17.0	3.2	2.5	16.4	12.3	6.4	5.5	12.6	10.1	452.2	339.8
FYR Macedonia	17.3	15.7	33.9	5.4	8.2	2.3	36.3	3.2	12.8	9.4	1.0	3.4	3.9	3.0	6.1	4.4	2.6	2.0	8.7	6.0	359.9	254.3
Malta	23.3	13.6	76.6	4.1	8.4	2.2	22.6	4.4	7.0	3.9	0.9	9.2	3.8	2.0	12.7	8.6	2.7	2.3	12.1	6.9	339.1	271.2
Montenegro	13.1	11.6	31.9	3.6	12.4	6.9	22.5	3.7	11.6	8.3	2.4	3.7	3.5	3.6	6.8	3.6	2.1	1.7	9.1	6.4	325.0	251.5
Portugal	11.3	7.3	76.6	2.4	7.2	3.4	22.6	4.8	9.1	6.5	4.0	7.5	1.9	2.2	12.5	9.2	3.7	2.7	10.7	5.9	381.9	255.1
Serbia	17.8	15.6	32.9	4.8	9.1	4.3	23.1	5.0	12.6	9.5	1.1	1.6	2.5	3.2	9.0	5.5	2.6	1.7	9.2	5.3	347.6	279.2
Slovenia	23.3	14.0	94.0	10.1	18.2	6.4	18.6	4.5	8.1	6.2	2.8	10.9	2.7	2.0	9.6	7.1	4.2	3.4	10.1	6.2	454.3	316.9
Spain	15.2	10.8	88.9	2.7	12.3	4.4	41.5	4.8	8.1	5.4	2.0	7.1	2.8	2.0	13.0	10.0	5.0	4.3	10.6	7.0	450.3	253.6
Western Europe	16.1	12.3	142.3	8.0	18.4	8.2	28.1	6.3	7.5	5.3	4.1	10.0	2.4	2.0	14.5	10.3	5.8	3.8	12.3	7.6	489.7	343.2
Austria	17.0	12.2	122.6	7.1	18.0	9.1	25.0	7.5	8.6	6.5	4.7	11.5	2.2	1.4	11.8	8.7	3.7	2.9	10.8	7.4	422.4	301.7
Belgium	18.4	12.8	152.9	5.5	16.2	8.3	25.3	5.1	8.2	5.2	3.0	8.3	3.3	2.4	17.0	11.1	6.6	4.7	12.8	9.1	515.3	372.1
France	14.1	10.7	178.7	7.3	15.9	5.7	23.3	3.1	7.1	5.3	6.2	18.6	2.5	2.7	15.9	10.9	7.1	4.5	13.6	8.2	523.9	346.7
Germany	16.9	13.7	125.6	8.7	21.7	10.2	30.3	7.7	7.7	5.4	3.2	5.5	2.0	1.5	13.0	9.9	5.2	3.5	11.5	7.1	480.3	338.3
Luxembourg	19.5	16.4	115.5	8.7	9.6	9.7	19.4	4.8	10.6	2.6	4.0	14.2	2.9	0.9	17.3	12.4	4.8	7.2	9.5	6.3	477.8	357.8
The Netherlands	17.6	9.9	110.3	8.2	13.3	7.0	38.7	9.7	6.8	4.7	1.6	3.3	2.9	1.9	17.3	11.5	5.4	3.5	12.9	7.8	461.6	370.4
Switzerland	15.5	12.0	137.1	9.1	13.6	5.6	28.1	6.5	8.3	5.2	2.7	6.8	2.9	2.4	15.6	8.2	5.0	2.9	11.9	7.0	451.7	322.2

Countries for which no data were available are in italics.

Table 4B – Estimated ASRs (European standard) of cancer mortality by sex, cancer site and country, 2008.

	Oral cavity and pharynx C00–14		Oesophagus C15		Stomach C16		Colon and rectum C18–21		Liver C22		Gallbladder C23–24		Pancreas C25		Larynx C32		Lung C33–34		Melanoma C43		Breast C50	Cervix C53
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	F	F
Europe	77.0	1.6	7.4	1.5	17.1	8.0	26.8	16.4	9.5	3.5	2.1	2.4	12.0	7.7	5.0	0.3	63.7	15.7	2.7	1.8	24.3	5.2
EU-27	7.5	1.7	7.4	1.7	12.0	5.6	25.6	15.3	10.0	3.6	2.0	2.4	11.7	8.1	4.0	0.4	60.6	18.6	2.7	1.7	23.9	4.1
EEA and Switzerland	7.4	1.7	7.3	1.7	11.9	5.6	25.5	15.3	9.9	3.6	2.0	2.4	11.7	8.1	4.0	0.4	60.2	18.7	2.7	1.7	23.9	4.1
Central and Eastern Europe	12.3	1.7	7.3	1.0	28.8	11.9	31.4	18.2	8.0	3.4	2.4	2.8	12.9	7.1	7.9	0.3	74.6	11.3	2.6	1.9	23.8	8.3
Belarus	14.5	1.1	8.0	0.5	43.8	17.0	29.8	17.4	4.4	1.2	1.0	0.6	10.3	4.7	12.0	0.2	81.3	5.4	2.2	1.8	21.8	6.4
Bulgaria	5.6	1.1	1.9	0.5	18.4	8.3	26.5	14.6	10.9	5.5	1.4	1.5	11.3	6.6	8.0	0.4	55.7	9.2	1.7	1.1	20.0	10.0
Czech Republic	9.3	2.1	6.6	1.0	12.7	6.2	40.3	19.1	8.6	3.8	4.5	6.4	16.2	11.5	4.2	0.3	70.2	19.5	3.6	1.8	22.6	5.7
Hungary	27.8	5.1	9.5	1.5	19.6	8.4	53.3	25.2	11.7	3.6	4.8	5.6	16.4	10.4	9.1	1.1	106.4	34.9	3.6	2.2	28.1	7.6
Moldova	15.3	1.9	5.6	0.6	27.1	11.6	34.3	20.8	22.2	8.0	0.9	1.5	14.7	7.7	8.6	0.3	57.1	9.5	1.5	1.2	26.7	11.6
Poland	8.2	1.9	6.5	1.0	18.6	6.5	29.8	15.7	5.4	3.0	2.6	4.4	11.8	7.8	8.5	0.7	90.8	21.8	3.2	1.9	21.0	8.5
Romania	15.6	1.8	5.4	0.7	21.0	7.9	25.2	14.7	14.3	5.8	1.8	1.8	13.2	7.1	9.3	0.5	68.8	12.8	1.6	1.4	22.5	16.2
Russian Federation	11.1	1.5	8.6	1.3	35.8	14.5	31.1	19.4	8.0	3.5	2.5	2.7	13.2	7.1	7.4	0.2	73.0	7.9	2.6	1.9	24.3	7.5
Slovakia	21.6	1.7	8.7	0.8	17.2	8.0	46.9	20.2	9.0	4.1	4.3	6.1	14.7	8.2	7.0	0.4	64.9	11.5	4.2	2.2	22.2	6.4
Ukraine	14.9	1.3	6.6	0.5	31.0	12.1	29.0	16.5	4.9	2.0	1.2	1.4	11.4	5.2	8.3	0.2	68.6	7.5	2.2	2.0	25.6	7.9
Northern Europe	4.5	1.5	10.8	3.8	8.9	4.3	22.8	15.3	5.7	2.7	1.0	1.4	11.0	8.5	2.0	0.3	49.8	28.4	3.5	2.2	25.8	3.2
Denmark	6.9	2.6	8.6	3.1	6.8	3.7	29.8	22.7	6.7	2.3	1.2	1.5	14.6	9.5	2.5	0.7	62.0	44.6	4.3	2.5	30.4	3.3
Estonia	11.3	2.0	6.7	0.8	23.6	12.4	29.0	16.7	7.6	3.0	2.0	1.5	16.1	7.9	7.5	0.4	77.6	12.7	3.0	2.2	22.8	6.5
Finland	2.8	1.5	4.4	1.7	8.5	4.9	16.8	11.0	7.6	3.3	2.0	2.5	14.5	10.9	1.1	0.1	44.0	13.3	3.8	1.6	21.1	1.2
Iceland	3.7	3.6	7.7	2.6	8.4	5.8	19.5	14.2	5.7	2.9	3.2	1.1	13.2	11.1	1.0	0.0	44.4	38.5	4.3	5.4	27.2	2.0
Ireland	5.1	1.8	10.0	4.6	9.9	4.8	27.9	15.4	5.1	4.0	0.8	1.4	10.4	8.8	3.6	0.4	49.9	28.8	2.8	2.0	28.1	4.2
Latvia	11.1	1.6	8.2	1.0	28.6	10.8	29.2	18.3	7.6	2.9	1.5	1.6	13.5	8.6	7.1	0.2	79.3	11.0	2.8	2.5	24.0	9.7
Lithuania	12.9	1.3	10.6	0.9	29.9	10.2	29.1	16.7	6.1	2.1	1.3	2.1	15.7	7.2	8.8	0.4	77.6	8.2	3.1	2.1	23.1	9.2
Norway	3.8	1.5	4.8	1.7	8.2	4.4	28.0	21.3	2.6	1.5	1.5	1.3	12.0	9.3	1.4	0.2	44.4	26.8	5.6	3.6	20.8	3.1
Sweden	2.7	1.1	4.9	1.5	6.7	3.6	20.6	15.4	6.2	2.7	2.7	3.9	11.1	9.8	0.6	0.1	29.1	23.2	3.8	3.1	21.3	2.6
United Kingdom	4.1	1.5	13.1	4.9	7.7	3.5	21.9	14.4	5.5	2.7	0.5	0.8	9.9	8.0	1.6	0.3	50.3	31.7	3.2	2.0	27.0	2.7
Southern Europe	6.8	1.5	4.9	0.8	14.9	7.2	25.8	14.8	12.7	4.6	2.5	2.7	10.7	7.2	5.2	0.4	64.0	12.5	2.2	1.5	22.1	3.4
Albania	6.4	3.9	3.7	1.7	30.5	17.1	8.9	6.6	11.1	5.1	0.8	0.9	15.7	5.9	5.5	1.8	55.7	19.2	1.4	0.5	17.6	2.9
Bosnia Herzegovina	9.0	2.4	5.2	1.1	22.4	10.3	28.7	15.3	10.4	4.5	2.4	3.3	12.5	7.0	7.2	0.9	73.6	17.5	3.5	2.1	25.1	7.6
Croatia	12.4	1.1	7.3	1.0	20.4	8.6	40.0	18.7	9.8	3.7	2.9	4.0	10.9	7.3	8.0	0.4	82.6	16.8	2.8	2.4	24.1	4.5
Cyprus	2.3	0.7	2.6	0.2	7.5	2.7	12.4	9.3	5.9	2.3	1.6	1.8	6.4	4.5	2.1	0.2	33.1	6.2	1.2	1.3	21.0	2.5
Greece	2.8	0.9	2.1	0.4	10.1	5.2	14.6	10.1	11.5	4.5	1.7	1.5	10.4	6.8	4.4	0.3	69.3	11.1	1.4	0.9	22.3	2.1
Italy	5.4	1.6	3.7	0.9	14.0	7.1	23.6	14.3	16.0	5.6	3.3	3.3	11.0	8.2	3.7	0.3	59.5	13.4	2.5	1.5	23.1	2.1
FYR Macedonia	5.9	3.0	2.6	0.9	27.7	11.4	26.2	13.9	11.6	5.0	1.6	3.5	10.9	4.2	10.2	1.1	69.9	9.9	5.3	2.7	26.4	13.5
Malta	6.7	1.8	4.4	1.5	9.8	4.7	25.8	18.0	5.3	1.4	1.3	1.4	13.4	8.8	4.9	0.0	47.9	8.1	2.6	1.4	28.1	2.3
Montenegro	6.8	2.3	3.9	1.0	21.8	11.8	19.7	12.6	10.3	5.2	1.9	2.1	14.3	7.2	6.6	0.9	69.7	20.4	2.3	0.7	24.7	6.8
Portugal	10.7	1.2	8.5	1.0	22.6	10.2	30.6	16.6	5.1	1.6	1.9	1.8	8.9	5.1	6.6	0.2	41.8	7.8	1.7	1.3	19.1	4.8
Serbia	9.4	2.1	4.8	0.9	14.9	7.1	31.4	18.6	9.6	5.5	2.5	3.6	11.4	8.5	7.9	0.7	84.7	22.6	3.1	2.2	31.5	11.7
Slovenia	11.0	1.9	7.1	0.9	18.6	7.6	37.4	18.9	9.7	3.7	4.5	4.7	13.7	8.9	4.2	0.3	75.0	19.4	4.9	3.0	25.6	4.7
Spain	7.7	1.3	6.4	0.8	13.2	5.9	28.6	15.0	11.2	3.7	1.8	2.0	10.0	6.2	6.3	0.3	66.3	8.7	1.7	1.2	18.4	2.5
Western Europe	7.1	1.7	7.8	1.7	9.1	4.5	24.1	15.0	10.0	3.1	1.9	2.0	12.1	8.4	2.5	0.3	55.9	18.6	2.7	1.7	25.4	2.8
Austria	7.5	1.6	5.7	0.9	10.5	6.1	24.4	14.0	10.6	3.9	2.1	2.3	13.2	9.6	2.7	0.3	48.3	18.2	3.6	2.0	24.2	3.8
Belgium	6.6	1.8	8.1	2.0	7.9	3.5	22.7	15.5	6.5	3.0	0.9	1.0	10.8	6.7	3.6	0.5	76.9	17.1	2.2	2.0	30.7	2.7
France	8.3	1.7	7.9	1.4	7.4	3.0	23.0	14.0	15.3	3.6	1.4	1.3	11.9	7.5	2.8	0.3	57.7	15.6	2.3	1.5	25.5	2.4
Germany	7.0	1.6	7.1	1.6	10.5	5.7	25.0	15.4	7.8	2.9	2.4	2.7	12.5	9.0	2.4	0.3	52.4	18.6	2.6	1.6	24.5	3.2
Luxembourg	9.9	0.4	6.9	1.9	8.4	4.3	22.1	13.2	13.9	5.4	0.0	0.7	12.4	10.0	1.7	0.0	56.1	19.7	3.6	2.4	21.3	2.6
The Netherlands	3.8	1.7	12.0	3.3	8.7	4.4	26.0	18.5	4.3	1.9	1.4	1.5	12.0	9.2	1.8	0.4	65.3	32.5	4.1	2.9	28.2	2.1
Switzerland	5.8	1.8	7.1	1.8	6.8	3.0	18.2	12.0	9.2	2.9	1.7	2.1	10.5	7.7	1.6	0.2	44.1	17.3	3.1	1.9	23.1	1.3

	Corpus C54	Ovary C56	Prostate C61	Testis C62	Kidney C64–66		Bladder C67		Brain C70–72		Thyroid C73		Hodgkin C81		NHL C82–85, C96		Multiple myeloma C88+C90		Leukaemia C91–95		All sites C00–96/C44	
	F	F	M	M	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Europe	3.8	7.9	20.7	0.4	6.1	2.4	9.2	1.8	6.0	4.1	0.5	0.7	0.8	0.5	5.0	3.0	2.9	2.0	7.2	4.3	236.4	132.6
EU-27	3.0	7.6	21.1	0.4	6.5	2.7	8.8	2.0	6.1	4.2	0.4	0.5	0.5	0.3	5.4	3.4	3.3	2.3	7.2	4.3	226.2	132.5
EEA and Switzerland	3.0	7.6	21.3	0.4	6.5	2.7	8.7	2.0	6.1	4.2	0.4	0.5	0.5	0.3	5.4	3.4	3.3	2.3	7.2	4.3	225.5	132.4
Central and Eastern Europe	4.9	8.5	17.8	0.7	5.7	2.0	10.5	1.5	6.0	4.2	0.6	1.0	1.3	0.7	3.7	2.1	1.7	1.3	7.0	4.3	265.6	134.2
Belarus	6.1	8.1	19.2	1.0	10.2	3.5	12.5	1.2	4.9	3.7	0.5	0.7	1.3	0.7	2.8	1.6	1.6	1.4	8.3	4.8	293.5	122.4
Bulgaria	3.7	6.6	15.3	0.8	4.1	1.2	7.0	1.7	6.9	4.4	0.6	0.6	0.9	0.5	2.3	1.2	0.7	0.5	4.9	3.3	210.1	116.5
Czech Republic	4.7	9.9	22.8	0.6	12.6	5.3	9.0	2.4	6.2	5.0	0.4	0.6	0.5	0.4	4.8	3.1	3.0	2.2	7.5	4.8	265.2	154.1
Hungary	3.6	8.3	22.4	0.9	8.4	3.4	11.7	2.9	6.7	4.6	0.7	0.6	0.5	0.3	5.8	3.0	2.8	2.2	9.7	6.2	347.8	180.0
Moldova	5.2	6.2	13.2	0.8	4.8	2.2	8.9	2.2	5.2	3.0	0.7	0.9	0.9	0.8	4.6	2.6	0.9	1.0	4.8	3.6	249.4	139.8
Poland	3.6	10.1	20.9	0.8	8.7	3.4	12.8	2.0	8.4	6.7	0.4	0.6	0.8	0.5	4.4	2.6	3.3	2.4	8.1	4.9	285.4	152.4
Romania	2.5	7.0	14.7	0.7	4.4	1.8	8.6	1.8	7.7	5.6	0.4	0.6	0.6	0.4	3.8	2.3	1.4	1.2	6.5	4.0	243.8	131.0
Russian Federation	5.1	8.5	17.4	0.6	3.2	1.0	10.8	1.3	5.2	3.7	0.8	1.3	1.6	0.8	3.5	2.0	1.3	1.1	6.4	4.0	265.3	130.6
Slovakia	5.3	8.5	21.6	0.8	10.4	4.3	8.7	1.7	7.9	5.5	0.6	0.5	0.6	0.4	4.6	2.9	4.1	2.2	8.1	5.7	287.1	142.7
Ukraine	6.5	8.0	14.8	0.8	6.8	2.4	9.7	1.0	5.0	3.1	0.6	0.9	1.7	1.1	3.0	1.4	1.0	0.8	7.1	4.2	250.4	123.4
Northern Europe	3.4	9.6	27.2	0.2	6.7	3.2	7.8	2.7	6.4	4.2	0.4	0.5	0.4	0.3	6.2	3.9	3.7	2.5	6.6	3.9	209.4	150.2
Denmark	3.8	10.1	34.5	0.5	6.3	3.2	11.1	3.9	7.8	4.9	0.5	0.5	0.4	0.3	5.8	3.7	3.2	2.1	7.3	4.3	242.0	181.1
Estonia	3.5	10.4	33.4	0.6	12.3	1.9	9.7	1.8	8.3	5.2	1.1	0.7	0.0	0.4	6.5	3.0	3.2	2.4	8.9	4.8	285.7	132.9
Finland	3.5	8.3	23.1	0.2	6.1	2.8	5.1	1.3	4.9	4.1	0.5	0.5	0.4	0.2	6.5	4.6	3.8	2.5	5.7	3.4	174.3	114.4
Iceland	2.6	8.8	28.4	0.6	10.2	4.4	9.1	1.6	7.9	5.6	1.3	1.8	0.0	0.4	5.5	3.6	1.6	2.7	9.8	3.3	199.0	160.7
Ireland	3.4	12.2	25.0	0.4	5.3	3.2	5.6	2.3	7.3	4.8	0.5	0.6	0.5	0.5	6.2	3.9	3.9	2.6	7.4	4.0	205.0	155.8
Latvia	5.0	10.1	37.3	1.0	12.4	4.3	11.5	2.0	7.6	6.3	1.0	0.8	0.6	0.5	4.5	2.7	2.5	1.5	8.1	4.7	293.7	141.9
Lithuania	5.0	10.4	38.6	0.7	11.9	4.3	10.9	1.7	7.3	6.4	0.6	0.7	0.8	0.5	4.3	2.4	2.9	2.3	8.3	5.2	302.0	134.2
Norway	4.3	9.6	32.7	0.3	6.0	2.8	8.1	2.8	6.8	4.3	0.4	0.5	0.3	0.1	6.3	3.6	4.3	2.9	5.6	4.0	196.6	142.7
Sweden	3.7	8.9	37.4	0.0	6.2	3.6	6.6	2.2	5.8	4.0	0.3	0.5	0.1	0.1	5.6	3.7	3.8	2.6	6.0	3.7	175.6	134.9
United Kingdom	3.1	9.6	24.1	0.2	6.4	3.1	7.8	2.9	6.3	3.9	0.3	0.4	0.5	0.4	6.3	4.1	3.7	2.6	6.6	3.7	207.8	155.2
Southern Europe	3.1	6.1	18.3	0.4	4.9	1.9	10.3	1.7	6.1	4.1	0.5	0.5	0.7	0.4	5.3	3.5	3.1	2.3	7.3	4.4	229.3	121.5
Albania	2.9	2.8	16.3	0.6	6.8	3.6	8.6	1.5	7.7	5.0	0.9	0.7	1.6	0.7	1.5	0.8	0.8	0.8	5.9	5.6	213.5	123.1
Bosnia Herzegovina	3.6	7.1	22.3	0.8	6.2	2.4	10.1	1.9	8.5	5.7	0.6	0.6	1.2	0.6	3.8	2.6	2.0	1.7	6.8	4.6	256.2	141.5
Croatia	3.8	8.4	24.4	0.8	7.7	2.3	8.4	2.1	7.6	5.7	0.3	0.7	0.7	0.6	5.0	3.5	2.6	2.3	7.2	4.3	282.3	138.1
Cyprus	2.6	5.5	20.0	1.2	2.5	1.0	6.8	0.6	4.0	2.1	0.2	0.7	0.9	0.7	5.9	3.7	3.4	1.9	6.5	3.3	148.7	90.5
Greece	2.9	6.3	18.0	0.3	4.4	1.9	10.1	1.5	8.6	5.8	0.4	0.5	1.5	1.2	1.7	1.0	2.2	1.8	8.6	5.3	206.3	109.9
Italy	2.9	6.0	15.8	0.3	5.0	2.0	8.9	1.6	4.5	3.1	0.5	0.6	0.5	0.3	6.4	4.2	3.3	2.5	7.8	4.5	218.0	124.7
FYR Macedonia	3.3	7.5	17.5	1.0	4.3	1.0	12.9	1.5	10.2	6.9	0.9	0.5	1.8	1.0	2.5	1.6	1.6	1.1	6.4	4.4	246.9	135.9
Malta	6.4	9.5	12.0	0.5	7.9	3.2	11.6	3.1	2.7	1.8	0.9	0.9	0.9	0.5	4.9	3.7	3.4	3.0	7.7	3.7	194.6	130.7
Montenegro	3.4	5.0	18.6	0.3	5.2	2.7	9.3	2.0	8.8	5.3	0.3	0.7	0.6	0.0	2.3	1.5	1.7	1.3	6.6	4.4	236.8	144.0
Portugal	2.1	4.7	26.1	0.4	3.5	1.2	7.3	1.7	6.9	4.5	0.4	0.4	0.5	0.3	5.4	4.0	3.3	2.6	6.6	3.9	220.0	109.8
Serbia	4.2	8.0	20.9	0.6	4.9	2.5	10.1	2.3	9.9	6.7	0.5	0.7	1.0	0.7	3.9	2.5	2.1	1.4	7.3	4.3	260.6	163.9
Slovenia	4.3	8.7	32.4	0.8	7.3	3.2	10.8	2.1	6.9	4.5	0.6	0.6	0.7	0.1	6.3	3.9	3.2	3.0	7.7	4.1	276.8	145.4
Spain	3.1	5.7	18.5	0.2	4.6	1.7	13.3	1.9	6.2	3.9	0.4	0.5	0.5	0.3	5.2	3.4	3.3	2.4	6.6	3.8	236.8	106.1
Western Europe	2.7	7.2	21.7	0.3	7.0	2.9	7.3	1.9	5.6	3.8	0.4	0.5	0.4	0.2	5.3	3.3	3.5	2.3	7.3	4.3	213.5	127.0
Austria	2.9	7.8	20.8	0.5	6.3	3.1	6.5	1.8	5.4	3.8	0.6	0.6	0.5	0.2	5.5	3.3	3.0	2.2	7.6	4.7	206.1	129.6
Belgium	2.1	8.2	20.5	0.2	4.9	2.8	9.2	2.0	5.6	4.0	0.5	0.5	0.7	0.4	5.1	3.2	3.1	2.4	7.7	4.4	232.2	133.1
France	3.5	6.3	22.9	0.2	6.3	2.5	9.2	1.8	4.9	3.1	0.4	0.4	0.5	0.3	5.4	3.2	3.8	2.4	7.9	4.5	223.1	117.4
Germany	2.2	7.5	20.1	0.3	7.6	3.1	5.9	1.9	6.0	4.2	0.5	0.5	0.2	0.2	5.0	3.3	3.5	2.4	6.9	4.1	204.6	128.1
Luxembourg	1.1	8.7	15.8	0.0	3.9	3.0	5.6	1.5	8.5	1.8	0.0	0.0	0.0	0.0	5.2	3.3	2.8	3.8	6.7	3.7	198.2	120.1
The Netherlands	3.0	8.3	24.6	0.3	8.9	4.2	8.2	2.7	5.8	3.9	0.3	0.5	0.5	0.3	6.2	4.0	3.6	2.3	6.5	4.1	227.0	155.1
Switzerland	3.0	7.1	25.7	0.4	5.2	2.1	6.1	2.2	6.1	3.9	0.5	0.7	0.4	0.3	6.4	3.5	3.6	2.0	6.4	3.8	195.7	119.9

Countries for which no data were available are in italics.

Table 5A – Estimated number of new cancer cases (hundreds) by sex, cancer site and country, 2008.

	Oral cavity and pharynx C00–14		Oesophagus C15		Stomach C16		Colon and rectum C18–21		Liver C22		Gallbladder C23–24		Pancreas C25		Larynx C32		Lung C33–34		Melanoma C43		Breast C50	Cervix C53
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	F	F
Europe	680.9	237.6	340.7	106.4	894.1	597.5	2313.8	2042.3	392.4	210.3	124.4	205.0	487.7	472.5	365.7	38.3	2912.9	995.9	392.2	448.4	4208.5	547.5
EU-27	489.0	176.5	250.0	83.5	503.9	322.8	1829.7	1503.6	316.6	149.1	93.5	142.4	346.0	338.9	257.5	31.3	2082.2	799.0	321.1	353.2	3327.7	314.0
EEA and Switzerland	497.7	180.5	255.7	85.3	512.0	327.9	1868.7	1541.0	322.5	151.6	95.2	145.1	354.7	347.5	260.6	31.8	2123.1	823.7	337.5	371.5	3417.0	319.1
Central and Eastern Europe	265.8	75.1	109.0	25.7	450.7	309.3	664.8	671.4	96.5	74.9	43.4	88.3	183.6	170.9	154.1	11.6	1110.3	279.1	83.9	105.7	1098.0	313.0
Belarus	10.0	2.0	3.7	0.4	20.2	15.0	17.7	20.6	1.5	1.1	0.7	1.1	4.1	3.8	5.3	0.2	34.4	4.7	1.9	3.6	33.8	9.0
Bulgaria	6.2	1.7	1.4	0.4	10.8	6.2	24.6	20.6	3.6	2.0	1.1	1.9	5.7	5.0	6.1	0.3	31.9	6.3	2.0	1.5	38.4	11.4
Czech Republic	9.8	3.0	4.0	0.9	8.8	6.5	51.4	34.8	5.0	2.9	3.5	6.2	9.1	9.0	4.8	0.5	44.1	17.3	10.0	9.9	63.5	9.9
Hungary	23.4	6.7	5.1	1.1	12.5	8.5	48.9	35.6	5.7	2.5	3.0	5.8	8.9	9.0	8.2	1.9	58.8	28.5	6.5	7.1	53.5	11.0
Moldova	3.2	0.8	0.9	0.2	4.6	2.8	7.5	6.6	3.0	1.7	0.1	0.5	2.2	1.8	1.9	0.1	8.5	2.1	0.5	0.6	10.0	4.6
Poland	31.0	9.8	11.9	2.5	37.4	19.0	90.5	68.4	8.5	6.3	5.3	13.7	22.0	19.6	29.0	3.6	190.8	63.5	13.3	10.0	155.7	37.7
Romania	26.0	4.1	6.3	1.1	24.4	14.0	45.9	41.4	12.4	7.1	3.1	4.1	16.2	11.9	14.4	0.9	86.2	20.0	4.0	6.1	81.5	34.0
Russian Federation	101.0	34.6	57.1	16.1	247.5	180.8	264.2	331.0	44.9	42.2	21.2	44.9	85.2	85.5	56.3	2.6	478.3	99.2	32.4	47.6	476.5	141.1
Slovakia	8.1	1.3	2.4	0.4	5.7	3.7	21.0	15.3	2.1	1.3	1.3	2.9	3.6	3.0	2.8	0.2	17.7	4.5	3.2	3.9	22.8	5.4
Ukraine	47.1	11.1	16.3	2.8	78.8	52.8	93.2	97.1	9.8	7.8	4.0	7.1	26.5	22.5	25.3	1.3	159.7	33.0	10.1	15.3	162.3	48.9
Northern Europe	65.2	34.7	70.1	34.4	77.6	48.9	321.4	279.6	32.5	19.3	11.0	17.1	62.2	64.0	29.7	5.4	353.3	233.9	85.3	87.8	693.4	53.3
Denmark	5.2	2.6	2.9	1.4	3.9	2.1	22.9	21.7	1.9	0.8	0.8	1.2	4.6	4.5	2.0	0.5	22.1	20.2	6.4	8.5	41.7	3.9
Estonia	1.1	0.5	0.4	0.1	2.0	1.7	3.1	3.8	0.3	0.3	0.1	0.3	0.9	0.9	0.6	0.1	6.0	1.5	0.5	0.8	6.3	1.5
Finland	3.0	2.1	1.6	0.8	3.6	2.9	13.5	12.6	2.9	1.7	1.0	1.5	4.8	5.3	1.1	0.2	15.1	6.8	4.9	4.7	40.8	1.4
Iceland	0.1	0.1	0.1	0.1	0.2	0.1	0.8	0.6	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.7	0.7	0.2	0.3	1.8	0.1
Ireland	2.5	1.0	2.5	1.4	3.0	1.8	13.3	10.2	1.1	0.6	0.5	1.0	1.9	2.1	1.4	0.2	11.5	8.6	3.0	4.3	27.3	2.8
Latvia	1.8	0.4	1.0	0.1	3.5	2.6	5.1	5.8	0.7	0.5	0.2	0.5	1.6	1.6	1.1	0.1	8.8	1.9	0.6	1.2	10.4	2.1
Lithuania	3.6	0.8	1.6	0.2	5.4	3.9	8.0	8.0	1.0	0.6	0.5	0.9	2.4	2.2	1.6	0.1	12.7	2.6	1.1	1.4	14.1	5.2
Norway	2.6	1.7	1.5	0.5	3.0	2.2	17.4	17.9	0.9	0.5	0.6	0.8	3.4	3.4	0.9	0.2	15.1	11.2	6.1	6.5	28.3	2.8
Sweden	5.2	3.5	3.0	1.1	5.4	3.5	30.0	28.4	2.8	1.5	1.1	2.1	4.6	4.4	1.6	0.3	17.9	17.3	11.3	11.7	65.1	4.5
United Kingdom	40.1	21.8	55.4	28.6	47.4	28.0	206.4	169.6	20.9	12.9	6.2	8.8	37.7	39.3	19.3	3.7	242.2	162.6	51.1	48.2	455.7	28.8
Southern Europe	146.4	51.3	51.9	11.8	202.1	129.4	585.3	449.6	139.4	66.6	36.6	51.0	106.8	100.5	100.2	8.5	686.0	170.1	72.5	78.7	923.5	87.8
Albania	1.8	1.2	0.6	0.3	4.7	2.8	2.1	1.8	1.0	0.5	0.1	0.1	2.0	0.8	1.1	0.4	8.2	2.9	0.4	0.2	8.9	1.1
Bosnia Herzegovina	3.7	1.5	1.1	0.3	5.7	3.4	10.2	7.3	1.7	0.9	0.6	1.1	2.5	1.8	2.5	0.4	16.5	5.2	1.8	1.8	18.1	3.9
Croatia	6.0	1.4	2.0	0.4	7.3	4.6	17.7	13.5	3.0	1.5	1.1	2.1	3.5	3.1	3.8	0.3	24.7	7.3	2.9	3.1	24.2	3.2
Cyprus	0.2	0.1	0.0	0.0	0.4	0.2	1.5	1.2	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.0	1.4	0.3	0.1	0.2	4.2	0.3
Greece	4.7	1.9	1.9	0.5	9.1	6.0	19.3	16.5	6.6	3.5	1.7	1.8	7.8	6.7	4.7	0.4	56.8	10.8	2.3	1.8	48.7	3.1
Italy	46.4	20.4	18.4	5.6	91.3	63.2	285.6	231.3	80.8	40.8	20.7	28.0	50.4	53.7	39.5	3.9	281.6	84.7	40.1	39.9	474.7	28.8
FYR Macedonia	1.2	0.7	0.3	0.1	3.2	1.7	4.1	2.8	0.8	0.4	0.2	0.5	1.0	0.5	1.6	0.2	7.7	1.2	1.0	0.7	7.5	2.9
Malta	0.3	0.1	0.1	0.0	0.3	0.2	1.1	0.8	0.1	0.0	0.0	0.1	0.3	0.2	0.2	0.0	1.1	0.2	0.2	0.2	2.5	0.1
Montenegro	0.5	0.3	0.2	0.1	0.8	0.5	1.0	0.8	0.2	0.1	0.0	0.1	0.4	0.3	0.3	0.1	2.4	0.9	0.1	0.1	2.4	0.5
Portugal	12.6	3.0	5.4	0.9	17.6	10.6	39.1	28.7	3.2	1.4	1.8	2.0	4.4	3.5	5.7	0.3	25.6	6.7	2.8	5.0	52.8	9.4
Serbia	8.5	3.5	2.7	0.6	8.8	5.0	25.8	18.6	3.6	2.5	1.1	2.4	5.3	4.7	6.8	0.9	47.5	14.8	3.2	3.4	44.4	13.1
Slovenia	2.7	0.7	0.8	0.2	2.9	1.9	8.4	6.1	0.9	0.5	0.6	0.9	1.4	1.5	1.0	0.1	8.4	3.5	1.5	1.8	12.0	1.8
Spain	57.8	16.5	18.5	2.9	49.7	29.2	169.0	120.1	37.2	14.4	8.5	11.8	27.6	23.6	32.8	1.5	203.5	31.6	16.1	20.4	222.4	19.7
Western Europe	203.6	76.5	109.8	34.6	163.8	110.0	742.3	641.7	124.0	49.5	33.5	48.7	135.1	137.1	81.7	12.8	763.3	312.7	150.6	176.3	1493.5	93.4
Austria	7.0	2.3	3.1	0.9	7.1	5.8	27.9	23.1	6.8	3.2	1.3	2.3	6.2	7.5	2.5	0.4	25.9	13.7	6.8	5.9	52.4	4.7
Belgium	12.3	4.5	7.0	2.5	9.0	5.7	44.1	36.3	3.0	1.7	1.4	1.8	5.6	5.4	5.8	0.9	55.5	16.0	6.3	9.6	96.9	6.6
France	82.8	29.9	33.6	10.8	43.4	23.1	205.0	184.2	55.5	15.5	8.7	12.2	36.1	36.5	28.8	5.5	242.4	81.9	33.7	41.6	510.1	29.1
Germany	83.2	30.7	48.8	14.3	87.0	65.1	380.2	323.2	50.6	25.8	18.5	28.1	72.7	74.1	36.6	4.5	346.4	149.3	76.4	85.9	641.5	44.7
Luxembourg	0.8	0.1	0.2	0.1	0.4	0.3	1.6	1.5	0.4	0.2	0.0	0.0	0.3	0.4	0.2	0.0	1.8	0.8	0.3	0.4	3.4	0.2
The Netherlands	11.6	6.8	12.9	4.7	12.0	7.2	62.4	54.4	2.7	1.2	2.5	2.5	8.9	8.0	5.8	1.2	66.0	38.0	16.6	21.3	129.6	5.9
Switzerland	5.9	2.2	4.1	1.3	4.9	2.8	20.8	18.8	5.0	2.0	1.1	1.9	5.2	5.1	2.1	0.3	25.1	12.9	10.2	11.5	59.2	2.2

	Corpus C54	Ovary C56	Prostate C61	Testis C62	Kidney C64–66		Bladder C67		Brain C70–72		Thyroid C73		Hodgkin C81		NHL C82–85, C96		Multiple myeloma C88+C90		Leukaemia C91–95		All sites C00–96/C44	
	F	F	M	M	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Europe	825.3	667.3	3822.5	182.9	560.0	323.5	1097.4	297.7	333.2	282.3	115.8	380.0	93.3	82.0	460.1	423.7	186.7	184.5	428.3	355.2	17299.7	15035.4
EU-27	559.4	453.0	3387.3	152.6	457.5	258.7	863.4	241.9	220.2	181.5	82.5	247.0	63.2	53.2	386.3	350.9	163.7	155.8	332.1	265.4	13441.9	11134.2
EEA and Switzerland	574.6	464.1	3498.4	158.8	467.9	264.5	886.2	249.1	225.7	185.7	84.5	252.0	65.0	54.7	397.9	359.4	167.9	159.2	340.5	271.5	13783.1	11419.7
Central and Eastern Europe	329.2	275.2	540.0	40.3	152.5	97.0	308.2	77.8	138.9	126.0	37.9	151.9	33.7	31.5	89.9	87.5	32.3	40.4	118.5	111.6	5003.1	4906.5
Belarus	12.7	9.1	15.8	1.1	7.9	5.2	9.2	1.9	2.4	2.1	2.3	9.6	1.3	1.4	2.7	2.8	0.8	1.3	4.1	4.3	156.3	155.2
Bulgaria	12.2	9.3	17.4	1.7	5.3	3.3	11.3	3.2	4.1	3.7	0.5	2.1	0.8	0.6	2.1	2.0	0.8	0.9	3.0	2.1	155.7	145.4
Czech Republic	17.7	12.0	55.5	4.5	18.9	11.2	18.6	6.7	4.6	3.7	1.5	6.8	1.3	1.1	6.5	6.3	2.1	2.4	6.3	4.9	282.7	252.0
Hungary	12.7	9.5	26.9	3.9	8.9	5.0	16.8	6.5	3.3	3.1	1.7	2.8	0.8	0.7	5.7	4.3	2.0	2.4	6.5	6.1	267.0	235.5
Moldova	3.1	2.0	3.3	0.4	1.4	1.1	2.7	1.1	1.9	1.4	0.3	0.9	0.2	0.3	1.1	0.9	0.2	0.3	1.0	0.9	48.3	47.2
Poland	39.9	39.9	125.2	7.8	28.9	18.4	54.5	12.8	20.9	20.2	3.4	12.9	4.4	3.8	13.0	10.4	8.1	8.1	15.5	15.0	771.4	640.6
Romania	11.5	17.1	37.4	2.2	8.7	5.8	22.9	6.5	11.1	9.4	1.4	4.7	1.3	1.2	8.5	6.1	2.8	3.0	8.9	6.8	379.1	330.1
Russian Federation	144.1	130.7	185.7	11.2	37.8	23.2	123.6	28.1	63.4	59.6	22.2	90.2	17.6	16.1	37.9	43.5	10.9	16.4	50.5	51.1	2114.3	2280.8
Slovakia	8.0	5.0	13.6	2.5	5.1	3.5	5.6	1.9	2.0	2.0	0.6	2.1	0.6	0.7	2.2	2.3	1.5	1.7	3.0	2.7	110.5	100.4
Ukraine	67.2	40.9	59.3	4.9	29.7	20.2	43.1	9.0	25.3	20.9	4.0	19.6	5.6	5.7	10.3	8.9	3.2	4.0	19.7	17.8	717.5	719.2
Northern Europe	113.7	105.3	778.2	34.2	77.7	47.7	138.3	51.0	42.4	31.1	9.4	28.8	13.7	10.6	89.7	79.2	35.2	29.3	67.6	49.8	2582.8	2313.0
Denmark	7.1	5.5	37.6	3.3	4.2	2.7	13.2	4.3	2.5	2.1	0.5	1.3	1.0	0.6	5.2	4.3	1.7	1.3	3.4	2.3	161.7	159.4
Estonia	2.0	1.4	4.5	0.2	1.5	1.0	1.6	0.6	0.4	0.4	0.1	0.8	0.1	0.2	0.7	0.9	0.3	0.4	0.8	0.7	26.8	27.8
Finland	8.1	4.6	47.6	1.4	4.4	3.5	6.0	2.0	2.3	1.9	0.9	2.7	0.7	0.6	5.5	5.4	1.6	1.4	3.2	2.4	133.5	122.3
Iceland	0.3	0.2	2.3	0.1	0.3	0.2	0.4	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	6.7	5.9
Ireland	3.5	4.0	36.0	1.9	2.7	2.0	4.3	2.2	2.2	1.7	0.3	1.0	0.6	0.5	3.3	3.1	1.3	1.1	2.6	1.5	102.9	90.1
Latvia	4.0	3.0	11.7	0.4	2.9	2.3	2.6	0.9	1.3	1.0	0.2	0.9	0.2	0.3	0.8	1.1	0.3	0.4	1.2	1.2	48.8	45.2
Lithuania	5.3	4.3	17.0	0.4	3.9	2.6	4.0	1.0	1.3	1.4	0.5	2.6	0.3	0.5	1.6	2.0	0.7	1.2	2.2	2.1	73.5	67.4
Norway	6.6	4.6	47.1	2.7	4.1	2.5	9.6	3.1	2.1	1.6	0.8	1.8	0.7	0.5	4.6	3.8	1.9	1.5	3.2	2.3	134.9	111.4
Sweden	13.8	7.6	104.0	3.0	6.4	4.4	17.0	5.3	3.4	2.5	0.9	2.5	0.9	0.7	8.3	6.6	3.1	2.5	6.2	4.9	249.9	210.7
United Kingdom	62.9	69.9	468.1	20.7	47.0	26.4	79.2	31.3	26.8	18.4	5.2	15.0	9.3	6.7	59.2	51.9	24.2	19.4	44.4	32.3	1636.5	1466.3
Southern Europe	160.9	121.4	806.4	34.8	119.9	60.0	311.5	65.8	72.8	60.3	26.8	92.2	23.1	20.4	116.6	109.8	49.3	53.0	103.1	85.5	4037.8	3165.7
Albania	1.2	1.1	3.7	0.4	2.0	1.5	2.8	0.5	1.4	1.1	0.5	0.8	0.5	0.4	0.5	0.3	0.1	0.2	1.2	1.1	38.9	31.5
Bosnia Herzegovina	4.1	3.3	10.8	1.2	2.7	1.6	5.2	1.2	2.2	2.0	0.5	1.6	0.6	0.6	1.5	1.3	0.6	0.6	2.0	1.6	78.6	67.9
Croatia	5.1	5.1	19.3	1.6	4.3	2.7	7.3	2.6	2.9	3.0	0.9	3.7	0.7	0.6	2.4	2.4	1.2	1.2	3.2	2.7	123.8	101.5
Cyprus	0.8	0.3	3.2	0.3	0.3	0.1	1.1	0.2	0.2	0.1	0.2	0.6	0.2	0.1	0.6	0.4	0.2	0.2	0.4	0.3	11.5	10.6
Greece	10.8	10.5	27.9	1.4	7.3	3.9	19.7	3.8	7.6	6.1	0.7	2.1	1.8	2.5	2.9	2.1	2.5	2.5	7.7	6.0	213.6	168.7
Italy	69.6	50.8	400.2	18.0	58.9	29.5	127.8	30.1	24.7	20.2	16.2	58.1	9.7	7.8	61.2	59.6	26.3	28.9	47.6	44.3	1836.4	1561.6
FYR Macedonia	1.9	1.7	3.1	0.6	0.8	0.3	3.5	0.4	1.3	1.0	0.1	0.4	0.4	0.3	0.6	0.5	0.3	0.2	0.8	0.6	34.3	28.0
Malta	0.6	0.3	1.7	0.1	0.2	0.1	0.5	0.1	0.2	0.1	0.0	0.2	0.1	0.0	0.3	0.2	0.1	0.1	0.3	0.2	7.6	7.0
Montenegro	0.5	0.4	1.1	0.1	0.4	0.3	0.7	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.2	9.9	9.1
Portugal	8.4	5.2	50.0	1.3	4.3	2.5	14.4	4.4	5.2	4.6	2.1	4.4	1.0	1.3	7.5	7.0	2.3	2.2	6.3	4.3	235.7	188.7
Serbia	10.4	8.8	18.6	2.5	4.7	2.7	12.3	3.5	6.3	5.2	0.6	1.0	1.3	1.7	4.6	3.2	1.3	1.0	4.7	3.1	181.7	164.9
Slovenia	3.2	1.9	10.5	1.0	2.0	1.0	2.1	0.8	0.8	0.8	0.3	1.3	0.3	0.2	1.1	1.1	0.5	0.6	1.1	0.9	50.7	45.3
Spain	44.3	32.0	255.6	6.3	31.8	14.0	113.9	18.0	19.8	15.8	4.7	17.9	6.6	4.6	33.1	31.5	13.9	15.3	27.4	20.2	1211.8	778.7
Western Europe	221.6	165.5	1697.9	73.7	210.0	118.7	339.4	103.1	79.1	64.9	41.7	107.1	22.8	19.6	164.0	147.1	69.8	61.8	139.1	108.2	5676.1	4650.3
Austria	10.0	7.1	60.6	3.0	8.7	5.8	12.7	5.1	3.9	3.5	2.1	5.5	0.9	0.6	5.7	5.4	1.9	2.0	5.2	4.6	207.1	180.8
Belgium	13.8	9.3	99.9	2.8	10.3	6.5	17.4	4.7	4.7	3.2	1.7	4.9	1.7	1.2	10.6	8.5	4.4	3.9	7.9	6.6	331.3	266.5
France	61.4	44.3	658.6	21.5	55.9	25.2	89.4	17.3	23.5	19.7	19.8	62.1	7.8	8.4	55.8	47.8	26.9	22.6	48.0	35.5	1889.1	1437.8
Germany	108.5	87.6	707.9	36.2	116.2	70.2	169.4	60.6	37.2	31.4	15.5	28.2	8.7	6.7	68.5	67.8	29.2	27.2	60.9	49.5	2598.2	2192.9
Luxembourg	0.6	0.5	2.9	0.2	0.2	0.3	0.5	0.2	0.3	0.1	0.1	0.3	0.1	0.0	0.4	0.4	0.1	0.3	0.2	0.3	12.0	11.4
The Netherlands	18.8	10.3	105.7	6.5	12.5	7.7	37.2	11.4	6.1	4.6	1.4	3.0	2.4	1.6	16.1	12.6	5.1	4.1	11.8	8.1	436.8	391.1
Switzerland	8.3	6.3	61.7	3.4	6.0	3.1	12.8	3.9	3.4	2.5	1.1	3.0	1.1	1.0	6.8	4.6	2.3	1.8	5.1	3.7	199.6	168.2

Countries for which no data were available are in italics.

Table 5B – Estimated number of cancer deaths (hundreds) by sex, cancer site and country, 2008.

	Oral cavity and pharynx C00–14		Oesophagus C15		Stomach C16		Colon and rectum C18–21		Liver C22		Gallbladder C23–24		Pancreas C25		Larynx C32		Lung C33–34		Melanoma C43		Breast C50	Cervix C53
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	F	F
Europe	329.0	88.4	294.3	92.4	691.0	475.2	1105.5	1016.5	384.1	216.9	85.6	151.5	483.0	469.4	194.3	17.4	2553.4	868.6	105.8	94.6	1293.9	250.5
EU-27	207.9	62.6	215.9	72.3	368.9	246.1	799.9	688.0	304.8	160.1	64.3	108.2	352.3	350.1	116.4	13.1	1819.2	705.8	77.5	63.2	898.0	136.2
EEA and Switzerland	211.5	64.2	220.5	74.1	374.5	249.8	816.9	704.4	309.7	162.6	65.5	110.2	360.7	358.7	117.6	13.3	1852.1	724.6	80.5	65.6	918.5	137.8
Central and Eastern Europe	165.4	34.7	96.7	22.9	378.8	261.6	407.5	407.1	105.2	74.6	30.7	64.5	169.8	155.8	105.4	6.6	978.9	237.4	34.9	37.0	476.2	157.3
Belarus	6.1	0.8	3.3	0.4	17.7	12.3	11.9	12.6	1.8	0.8	0.4	0.5	4.2	3.4	5.0	0.1	32.8	3.9	0.9	1.2	14.0	4.1
Bulgaria	2.4	0.7	0.9	0.3	8.5	5.3	12.6	9.5	4.9	3.3	0.7	1.0	5.2	4.0	3.5	0.3	24.7	5.3	0.8	0.6	11.2	5.0
Czech Republic	5.2	1.5	3.7	0.8	7.1	5.1	22.7	16.1	4.9	3.1	2.5	5.4	9.1	9.4	2.4	0.2	39.8	14.7	2.0	1.3	17.4	3.9
Hungary	14.2	3.4	4.9	1.1	10.2	7.3	27.9	22.0	6.1	3.0	2.5	5.0	8.5	8.8	4.7	0.7	55.3	25.7	1.9	1.7	21.7	5.0
Moldova	2.4	0.4	0.9	0.1	4.1	2.6	5.0	4.7	3.3	1.8	0.1	0.4	2.2	1.7	1.3	0.1	8.6	2.1	0.2	0.3	5.8	2.5
Poland	15.5	5.1	12.0	2.8	34.3	18.6	54.8	45.4	10.0	8.7	4.7	12.5	21.9	21.7	15.9	1.7	166.3	55.1	6.0	4.8	53.8	20.6
Romania	16.5	2.6	5.8	1.0	23.5	12.3	28.5	22.8	15.8	8.8	2.1	2.8	14.6	10.8	10.0	0.7	74.8	18.3	1.8	1.9	30.9	20.6
Russian Federation	65.8	15.0	49.2	14.0	202.6	152.3	171.0	206.0	45.8	36.5	14.1	29.5	76.3	74.3	43.2	2.2	414.2	81.4	15.4	18.3	231.5	69.5
Slovakia	5.5	0.6	2.1	0.3	4.1	3.0	10.9	7.5	2.1	1.5	1.0	2.2	3.5	3.0	1.7	0.1	15.4	4.0	1.0	0.8	7.6	2.0
Ukraine	31.8	4.6	14.0	2.0	66.8	42.8	62.2	60.6	10.5	7.1	2.6	5.2	24.3	18.8	17.6	0.5	147.0	26.9	4.8	6.2	82.3	24.1
Northern Europe	25.2	11.5	63.2	31.7	53.9	35.6	138.3	128.2	33.5	21.4	6.0	11.5	64.9	68.6	11.3	2.2	297.7	216.1	19.7	15.6	182.9	20.9
Denmark	2.2	1.1	2.9	1.3	2.3	1.6	10.2	10.3	2.3	1.0	0.4	0.6	4.9	4.0	0.8	0.3	20.9	17.9	1.4	0.9	12.0	1.2
Estonia	0.7	0.2	0.4	0.1	1.5	1.4	1.9	2.1	0.5	0.4	0.1	0.2	1.0	0.9	0.5	0.0	5.0	1.4	0.2	0.2	2.3	0.6
Finland	0.9	0.7	1.4	0.9	2.8	2.3	5.6	5.3	2.5	1.6	0.7	1.2	4.7	5.2	0.3	0.1	14.5	5.8	1.2	0.7	8.5	0.5
Iceland	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.7	0.7	0.1	0.1	0.5	0.0
Ireland	1.0	0.4	2.0	1.2	2.0	1.2	5.6	3.9	1.0	1.0	0.2	0.3	2.1	2.2	0.7	0.1	9.9	6.9	0.6	0.5	6.6	0.9
Latvia	1.2	0.3	0.9	0.2	3.1	2.3	3.2	3.9	0.8	0.6	0.2	0.4	1.5	1.8	0.8	0.0	8.8	2.2	0.3	0.4	4.1	1.6
Lithuania	2.0	0.3	1.6	0.2	4.8	2.9	4.7	5.0	1.0	0.7	0.2	0.7	2.5	2.2	1.4	0.1	12.2	2.4	0.5	0.5	5.8	2.1
Norway	1.0	0.5	1.3	0.6	2.4	1.6	8.1	8.2	0.7	0.6	0.4	0.5	3.3	3.4	0.4	0.1	12.3	8.6	1.5	1.2	6.7	0.9
Sweden	1.7	0.9	3.1	1.2	4.3	3.0	13.5	13.0	3.9	2.3	1.7	3.2	7.0	7.9	0.4	0.1	18.4	16.5	2.3	2.2	14.9	1.8
United Kingdom	14.4	6.9	49.3	25.9	30.5	19.2	84.9	75.8	20.6	13.1	2.1	4.3	37.4	40.5	5.9	1.5	194.0	153.2	11.5	8.8	121.0	11.1
Southern Europe	60.5	18.9	45.3	11.1	148.1	98.3	263.5	206.5	126.5	67.5	26.1	39.0	104.0	100.1	49.0	4.3	617.7	149.4	20.6	16.7	259.6	34.6
Albania	0.8	0.6	0.5	0.2	3.9	2.4	1.1	0.9	1.4	0.7	0.1	0.1	2.0	0.8	0.7	0.3	7.0	2.7	0.2	0.1	2.5	0.4
Bosnia Herzegovina	1.8	0.6	1.1	0.3	4.5	2.8	5.8	4.2	2.1	1.3	0.5	0.9	2.5	1.9	1.5	0.2	15.1	4.5	0.7	0.5	6.3	1.8
Croatia	3.2	0.4	1.9	0.4	5.5	3.5	10.8	7.7	2.6	1.6	0.8	1.7	2.9	2.9	2.1	0.1	22.0	6.1	0.7	0.8	8.8	1.5
Cyprus	0.1	0.0	0.1	0.0	0.3	0.1	0.6	0.5	0.3	0.1	0.1	0.1	0.3	0.2	0.1	0.0	1.5	0.3	0.1	0.1	1.1	0.1
Greece	2.0	0.9	1.6	0.5	7.9	5.3	12.1	10.6	9.2	4.8	1.4	1.5	7.9	6.9	3.4	0.3	51.9	10.0	1.0	0.8	20.2	1.7
Italy	20.6	8.6	15.1	5.1	60.3	43.8	103.5	87.5	68.4	36.7	14.6	20.7	46.2	50.3	15.1	1.6	252.8	72.7	9.5	7.3	116.4	9.0
FYR Macedonia	0.6	0.3	0.2	0.1	2.6	1.4	2.4	1.6	1.1	0.6	0.1	0.4	1.0	0.5	1.0	0.1	6.7	1.1	0.5	0.3	2.9	1.5
Malta	0.2	0.1	0.1	0.1	0.2	0.1	0.6	0.5	0.1	0.0	0.0	0.0	0.3	0.3	0.1	0.0	1.1	0.2	0.1	0.0	0.8	0.1
Montenegro	0.2	0.1	0.1	0.0	0.7	0.5	0.6	0.5	0.3	0.2	0.1	0.1	0.4	0.3	0.2	0.0	2.1	0.8	0.1	0.0	0.9	0.2
Portugal	6.1	1.0	5.0	1.0	14.5	9.1	20.3	15.5	3.3	1.5	1.3	1.7	5.6	4.8	3.9	0.2	26.0	6.4	1.1	1.1	15.2	3.4
Serbia	4.8	1.4	2.5	0.6	8.0	4.8	17.0	12.7	5.1	3.7	1.3	2.4	6.1	5.7	4.1	0.5	44.3	13.8	1.6	1.3	19.6	7.0
Slovenia	1.2	0.3	0.8	0.2	2.1	1.3	4.2	3.4	1.1	0.7	0.5	0.9	1.5	1.6	0.5	0.1	8.5	3.0	0.6	0.5	4.0	0.7
Spain	19.0	4.6	16.3	2.7	37.5	23.1	84.3	60.7	31.3	15.6	5.3	8.4	27.2	23.9	16.4	0.9	178.4	27.5	4.6	3.9	60.8	7.2
Western Europe	77.9	23.4	89.2	26.7	110.3	79.8	296.1	274.7	118.9	53.5	22.9	36.4	144.2	144.9	28.7	4.3	659.2	265.7	30.6	25.3	375.3	37.7
Austria	3.5	1.0	2.7	0.6	5.5	4.6	12.6	11.1	5.3	2.9	1.1	1.8	6.7	7.1	1.3	0.2	24.0	11.4	1.8	1.3	15.9	2.3
Belgium	4.0	1.4	5.2	1.8	5.5	3.6	16.0	15.1	4.3	2.9	0.7	1.1	7.3	6.7	2.3	0.4	52.0	13.3	1.4	1.5	24.2	2.0
France	28.4	7.3	28.5	7.3	28.8	17.0	91.3	82.4	57.1	19.9	5.5	7.7	44.1	41.1	10.1	1.3	209.1	68.8	8.2	6.9	117.7	9.9
Germany	35.7	10.7	37.8	11.7	58.8	46.7	141.9	133.5	43.6	23.3	13.5	22.4	69.3	73.0	12.6	1.8	289.5	126.0	13.9	11.2	171.2	20.4
Luxembourg	0.2	0.0	0.2	0.1	0.2	0.2	0.6	0.5	0.3	0.2	0.0	0.0	0.3	0.4	0.0	0.0	1.4	0.6	0.1	0.1	0.7	0.1
The Netherlands	3.6	1.9	11.5	4.1	8.5	5.7	25.2	24.0	4.1	2.4	1.4	2.0	11.6	11.6	1.7	0.5	63.1	35.8	3.9	3.1	32.1	2.4
Switzerland	2.5	1.0	3.2	1.1	3.1	2.0	8.5	8.0	4.2	1.9	0.8	1.4	4.9	5.0	0.7	0.1	19.9	9.6	1.4	1.1	13.4	0.7

	Corpus C54	Ovary C56	Prostate C61	Testis C62	Kidney C64–66		Bladder C67		Brain C70–72		Thyroid C73		Hodgkin C81		NHL C82–85, C96		Multiple myeloma C88+C90		Leukaemia C91–95		All sites C00–96/C44	
	F	F	M	M	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Europe	216.9	419.4	893.4	17.2	247.6	144.7	387.2	125.9	231.8	198.9	20.7	43.1	31.1	23.9	202.4	180.4	120.7	125.0	292.2	247.6	9593.1	7601.3
EU-27	129.0	288.4	708.2	9.7	197.2	117.6	283.3	99.4	170.0	144.3	13.2	22.7	14.2	12.1	163.6	147.3	104.5	105.0	221.7	181.9	6912.5	5399.7
EEA and Switzerland	132.6	295.9	731.8	9.9	201.4	120.1	288.9	102.2	174.5	147.6	13.6	23.4	14.4	12.3	168.4	151.0	107.4	107.6	226.4	185.8	7062.6	5526.4
Central and Eastern Europe	102.1	166.8	226.5	10.0	75.5	42.0	135.4	35.5	81.7	77.3	8.7	22.9	18.5	13.4	49.3	42.4	22.8	27.8	92.0	85.7	3489.7	2815.6
Belarus	4.1	5.1	7.5	0.4	4.3	2.4	4.9	1.0	2.2	2.0	0.2	0.5	0.6	0.4	1.2	1.1	0.6	0.9	3.5	3.1	119.2	83.6
Bulgaria	2.1	3.6	7.7	0.3	1.8	0.7	3.3	1.1	2.9	2.2	0.3	0.3	0.4	0.2	1.0	0.7	0.3	0.3	2.1	1.7	95.6	68.2
Czech Republic	3.8	7.2	12.8	0.3	7.1	4.3	5.0	2.1	3.4	3.4	0.3	0.5	0.3	0.3	2.7	2.5	1.7	1.8	4.2	3.8	149.3	121.5
Hungary	3.1	6.4	11.9	0.5	4.4	2.9	6.2	2.5	3.4	3.4	0.3	0.6	0.2	0.2	3.0	2.5	1.5	1.9	5.1	5.0	181.0	143.1
Moldova	1.2	1.3	1.9	0.2	0.7	0.5	1.3	0.5	0.9	0.6	0.1	0.2	0.2	0.2	0.7	0.6	0.1	0.2	0.8	0.8	37.7	30.6
Poland	9.7	24.9	38.6	1.5	16.1	9.6	23.6	6.1	15.5	17.0	0.8	1.8	1.4	1.3	8.2	7.0	6.1	6.6	14.9	13.1	526.1	409.0
Romania	3.5	9.5	17.3	0.8	4.8	2.6	9.7	3.0	8.2	7.1	0.4	0.9	0.7	0.5	4.1	3.1	1.6	1.7	7.1	5.4	268.7	186.4
Russian Federation	50.3	80.5	92.3	4.0	19.1	9.5	58.5	14.4	32.4	31.3	4.7	14.7	10.7	7.2	20.8	19.4	7.8	11.0	37.3	37.9	1506.6	1306.7
Slovakia	1.9	2.8	4.9	0.2	2.5	1.5	2.0	0.7	2.0	1.8	0.2	0.2	0.2	0.1	1.1	1.0	1.0	0.8	1.9	2.0	68.3	50.3
Ukraine	22.5	25.3	31.7	1.8	14.6	8.0	20.8	4.1	10.8	8.5	1.4	3.1	3.8	2.9	6.5	4.5	2.2	2.7	15.2	12.9	537.3	416.3
Northern Europe	27.3	68.0	177.0	1.3	39.4	25.2	49.6	24.4	34.6	26.3	2.3	4.0	2.5	2.3	36.7	31.9	22.3	21.3	39.4	30.5	1262.0	1160.6
Denmark	1.7	4.1	12.2	0.1	2.1	1.4	3.9	1.9	2.5	1.8	0.2	0.2	0.1	0.1	1.9	1.6	1.1	0.9	2.4	1.9	82.0	75.6
Estonia	0.4	1.1	2.2	0.0	0.8	0.3	0.6	0.3	0.5	0.5	0.1	0.1	0.0	0.0	0.4	0.4	0.2	0.3	0.6	0.6	18.6	15.1
Finland	1.6	3.5	7.8	0.1	2.0	1.4	1.7	0.7	1.5	1.5	0.2	0.3	0.1	0.1	2.1	2.2	1.3	1.2	1.8	1.5	57.4	51.4
Iceland	0.1	0.2	0.5	0.0	0.2	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.1	3.2	2.9
Ireland	0.8	2.8	5.1	0.1	1.1	0.8	1.1	0.6	1.5	1.1	0.1	0.2	0.1	0.1	1.3	1.0	0.8	0.7	1.5	1.0	41.1	38.0
Latvia	1.1	1.8	4.2	0.1	1.4	0.9	1.3	0.5	0.8	1.0	0.1	0.2	0.1	0.1	0.5	0.5	0.3	0.3	0.9	0.9	32.4	27.7
Lithuania	1.4	2.6	6.3	0.1	1.9	1.2	1.8	0.6	1.2	1.5	0.1	0.2	0.1	0.1	0.7	0.7	0.5	0.7	1.3	1.4	48.0	36.3
Norway	1.6	3.1	10.1	0.1	1.7	1.1	2.5	1.2	1.8	1.3	0.1	0.2	0.1	0.0	1.8	1.3	1.2	1.2	1.6	1.5	56.2	50.0
Sweden	3.1	6.2	26.5	0.0	4.0	3.0	4.6	2.0	3.1	2.4	0.2	0.4	0.1	0.1	3.7	3.2	2.5	2.3	3.9	3.0	115.0	105.2
United Kingdom	15.5	42.5	101.6	0.7	24.3	15.1	31.9	16.6	21.6	15.1	1.3	2.2	1.7	1.7	24.2	20.9	14.4	13.6	25.0	18.6	804.5	755.4
Southern Europe	41.1	71.7	206.9	2.9	48.3	26.2	109.4	27.6	53.9	44.0	4.5	7.3	6.0	4.9	51.8	47.9	31.7	33.0	72.8	57.7	2273.7	1569.0
Albania	0.4	0.4	2.0	0.1	0.9	0.5	1.0	0.2	1.0	0.7	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.8	0.8	27.0	17.4
Bosnia Herzegovina	1.0	1.8	4.4	0.2	1.2	0.7	2.0	0.5	1.7	1.4	0.1	0.2	0.3	0.2	0.8	0.7	0.4	0.5	1.4	1.2	51.9	36.9
Croatia	1.5	2.9	6.8	0.2	2.0	1.0	2.4	0.9	2.0	1.9	0.1	0.3	0.2	0.2	1.3	1.3	0.7	0.9	1.9	1.6	75.4	52.7
Cyprus	0.1	0.3	0.9	0.1	0.1	0.1	0.3	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.1	0.3	0.2	6.6	4.8
Greece	2.8	5.4	16.7	0.2	3.5	1.9	8.8	1.8	6.0	5.1	0.3	0.5	1.2	1.0	1.3	1.0	1.8	1.8	7.0	5.6	162.5	105.7
Italy	17.2	30.8	77.4	1.1	21.1	11.9	41.0	11.1	16.3	13.8	2.0	3.3	1.8	1.6	26.6	25.6	15.0	15.9	32.6	26.4	936.9	712.1
FYR Macedonia	0.4	0.8	1.6	0.1	0.4	0.1	1.2	0.2	1.0	0.8	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.6	0.5	23.3	15.4
Malta	0.2	0.3	0.3	0.0	0.2	0.1	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	4.4	3.8
Montenegro	0.1	0.2	0.6	0.0	0.2	0.1	0.3	0.1	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	7.3	5.6
Portugal	2.0	3.9	18.8	0.2	2.3	1.1	5.0	1.9	4.1	3.4	0.3	0.4	0.3	0.2	3.4	3.4	2.2	2.4	4.2	3.4	141.3	95.0
Serbia	2.8	4.8	12.1	0.3	2.6	1.8	5.6	1.7	5.0	3.8	0.3	0.5	0.5	0.4	2.0	1.5	1.1	0.9	3.9	2.7	138.6	104.8
Slovenia	0.7	1.3	3.6	0.1	0.8	0.6	1.2	0.4	0.8	0.7	0.1	0.1	0.1	0.0	0.7	0.7	0.4	0.6	0.9	0.7	31.1	24.3
Spain	11.9	18.8	61.5	0.4	13.0	6.5	40.3	8.6	15.5	12.2	1.1	1.8	1.3	1.0	14.7	13.0	9.7	9.6	18.8	14.4	665.6	389.4
Western Europe	46.3	113.0	283.0	3.0	84.4	51.1	92.8	38.5	61.7	51.3	5.2	9.0	4.1	3.4	64.7	58.3	43.9	42.9	87.9	73.7	2567.7	2056.1
Austria	2.2	5.2	11.3	0.2	3.2	2.4	3.5	1.6	2.6	2.2	0.3	0.5	0.2	0.2	2.8	2.5	1.5	1.7	3.9	3.5	104.5	91.5
Belgium	1.9	7.1	15.7	0.1	3.4	2.6	6.6	2.2	3.4	2.8	0.3	0.5	0.4	0.3	3.4	3.1	2.1	2.5	5.3	4.1	159.3	117.2
France	18.6	31.2	99.3	0.7	24.1	13.8	37.4	11.2	16.9	13.0	1.4	2.4	1.6	1.2	21.2	18.4	15.1	14.3	30.9	25.4	848.7	606.6
Germany	17.8	55.3	118.6	1.5	42.6	25.8	34.1	18.2	30.7	27.4	2.6	4.4	1.3	1.1	28.2	26.9	19.9	20.0	38.6	33.0	1139.1	976.7
Luxembourg	0.1	0.3	0.4	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	5.0	4.2
The Netherlands	3.8	9.6	24.5	0.3	8.5	5.1	8.1	3.7	5.3	3.9	0.3	0.6	0.4	0.4	5.9	4.9	3.5	2.9	6.2	5.2	219.6	185.5
Switzerland	1.9	4.2	13.0	0.2	2.4	1.3	3.0	1.6	2.6	2.0	0.3	0.5	0.2	0.2	3.0	2.3	1.7	1.3	2.9	2.4	90.7	73.7

Countries for which no data were available are in italics.

and Lithuania, together with local incidence data used for modelling purpose were extracted from the Cancer Incidence in Five Continents series.^{39,40}

The methods to estimate the 2008 national sex and age-specific incidence rates fall into one of the following categories, in priority order:

1. National incidence data: When historical data and sufficient numbers of cases recorded were available, incidence rates were projected to 2008 using either NORDPRED¹⁵ or Dyba¹⁶ methods. Otherwise, the incidence rates from the most recently available 5 year period were applied to the 2008 population.
2. Local incidence data and national mortality data: National incidence (I_N) was estimated by applying a set of sex-site- and age-specific incidence to mortality ratios (I_R/M_R) obtained from the aggregation of local cancer registry data, to the corresponding national mortality estimate for 2008 (M_N):

$$I_N = M_N * I_R/M_R \quad (1)$$

Before aggregation, each registry dataset was weighted according to the square root of its population to take account of the relative size of the population covered. In practice, the I_R/M_R ratios are obtained from a Poisson regression model, including terms for sex and age.^{6,7} Depending on the accuracy and on the availability of local data, one of two variants of the method is used:

2A. Country-specific model (Germany, Italy, Poland, Portugal, Spain, Serbia and Switzerland) was used for countries with several local cancer registries in operation: the I_R/M_R ratios were obtained from the most recent country-specific data (generally around year 2000), under the assumption that the I_R/M_R ratios will have changed little subsequently. This assumption would not hold for some cancers, particularly following the introduction of screening programmes, which may have resulted in marked fluctuations in the ratio of recorded cases to deaths. In this instance, we first estimated the national incidence around 2000 using the country-specific model and national mortality in 2000. The estimated incidence rates for 2000 were projected to 2008 using the age-specific trends observed in the aggregation of local cancer registries, and applied to the national 2008 population (Fig. 1). To achieve a better stability of the incidence to mortality ratios, additional incidence and mortality data from local cancer registries in neighbouring countries in the same area were added where the country-specific local data were too sparse. We applied a redistribution procedure of the number of cancer deaths coded as 'uterus unspecified (ICD-10 C55)' described above to the local mortality used in the model.

2B. Regional model (Albania, Greece, Hungary, Luxembourg, Macedonia, Republic of Moldova, Romania and Russian Federation) was used when no country-specific national or local incidence data existed (or when they were not of sufficient quality): the I_R/M_R ratios were obtained by the aggregation of cancer registry data in neighbouring countries (Table 1). For Luxem-

bourg, when no cancer death was recorded for a particular combination of sex and cancer, we applied the incidence rates recorded by the national pathological registry²⁹ to the national 2008 population.

3. Results

Table 2 and Fig. 2 summarise the estimated numbers of cases and deaths in Europe in 2008 (in thousands), by type of cancer.

There were an estimated 3.2 million cancer (excluding non-melanoma skin cancers) cases diagnosed, 53% (1.7 million) occurring in men and 47% (1.5 million) in women. The most common forms of cancers were colorectal cancers (436,000 cases, 13.6% of all cancer cases), followed by breast cancer (421,000, 13.1%), lung cancer (391,000, 12.2%) and prostate cancer (382,000, 11.9%).

There were an estimated 1.72 million deaths from cancer (56% (0.96 million) in men and 44% (0.76 million) in women). Lung cancer, with an estimated 342,000 deaths (19.9% of total) was the most common cause of death from cancer followed by colorectal cancer (212,000 deaths, 12.3%), breast cancer (129,000, 7.5%) and stomach cancer (117,000, 6.8%).

Fig. 3 shows the contributions of the 10 most common cancers to the total number of cases and deaths, in males and females. Prostate cancer is the most numerous cancer diagnosed in men (382,000, 22.2% of the total), followed by lung (291,000, 17.0%), colorectal (231,000, 13.5%), bladder (110,000, 6.4%) and stomach (89,000, 5.2%) cancers. In women, the major cancer was by far breast cancer (421,000, 28.2% of the total), followed by colorectal (204,000, 13.7%), lung (almost 100,000, 6.7%), corpus uteri (82,000, 5.5%) and ovarian (67,000, 4.5%) cancers. In men, lung cancer (255,000 deaths, 26.6% of the total) remains by far the most common cause of death, followed by colorectal (110,000, 11.5%) and prostate (89,000, 9.3%) cancers. Breast cancer was the leading cause of death in women (129,000, 17%), followed by colorectal (102,000, 13.4%) and lung (87,000, 11.4%) cancers.

Table 3 shows the same results – estimated numbers of cases and deaths by site of cancer and sex- for the 27 countries of the European Union (EU-27). The EU-27 accounted for an estimated 2.4 million new cases (75.8% of the European total) and 1.2 million deaths (71.6% of the European total) in 2008.

Tables 4A and 4B show the estimates of ASRs (European standard) of incidence and mortality, respectively, by sex and site, for all 40 countries, and Appendix Tables 5A and 5B show the estimates of numbers of cases and deaths for the same categories.

4. Discussion

Short term prediction methods have been used to prepare estimates of incidence and mortality in 2008 from the most recently available data – specifically, national mortality rates for the years 2004–2007, and national incidence rates for 2002–2007, depending on the country. Although predictions are based on trends in historical data which may not continue into the future, they will be accurate when the disease rates

show clear stable trend (incidence and mortality from stomach cancer for example). Changes in the tumour classification may affect temporal mortality trends, although this is not likely to have presented a significant problem for the time periods and cancers considered in this study.

National incidence rates were provided by 22 European countries, which represent only 30% of the total European population. For the others, it was necessary to estimate incidence using the predicted national mortality in 2008 and mortality to incidence ratios (M:I) of aggregated data from either local cancer registries or neighbouring countries. The use of M:I ratios from cancer registries in the same country to estimate national incidence rates has been widely used since the first set of European estimates.³ It corrects for any discrepancy between local and national rates of incidence, and is also robust to any deficiencies in the quality of mortality data, provided these are similar nationally and locally. The only assumption involved is that national M:I ratios are similar to those observed locally. In practice, this means similarity in survival, since the M:I ratio provides a proxy measure of case fatality ($1 - \text{survival probability}$).⁴¹ Empirically, the method has been shown to work well.³ Where it is likely that M:I ratios will be changing rapidly (so that ratios from 8 years ear-

lier would be inappropriate), national incidence rates have been derived from the estimated national incidence in 2000 (using the M:I method) and projected to 2008 using local country-specific data. This method was used for cancers of the breast and prostate, for which recent screening programmes have greatly perturbed the ratio between recorded new cases and deaths.^{42,43} However, it may also produce a slight overestimation of the incidence rates at those sites if the increasing trends observed in local registries do not apply to the national population. In the absence of local cancer registry data, M:I ratios from cancer registries in neighbouring countries had to be used. This is not ideal. Because the national M_N and the regional M_R in Eq. (1) are not from the same vital statistics systems, the resulted incidence I_N could be distorted, for example when the national mortality data M_N is of poor quality with an evident over-estimation at some cancer sites (such as liver and brain tumours with the inclusion of metastatic or unknown behaviour diagnoses), and the survival obtained from the regional I_R/M_R is high. This method was used to estimate the incidence of cancer in the Russian Federation, by far the most populous country of Europe, so that these results should be interpreted with a particular caution (Table 1).

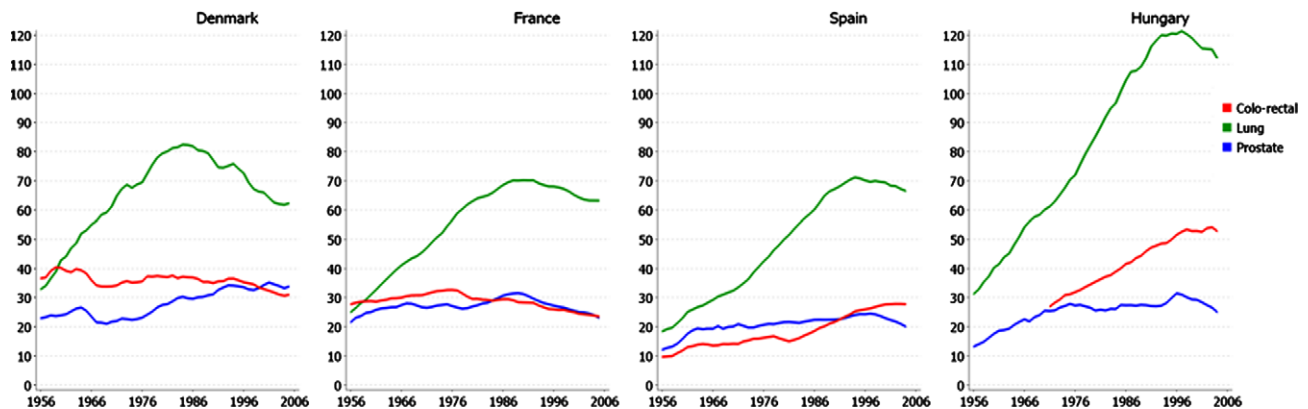


Fig. 4a – Trends in age-standardised (European standard) mortality rates from colorectal, lung and prostate cancers in males in Denmark, France, Spain and Hungary (Source: WHO mortality database⁸).

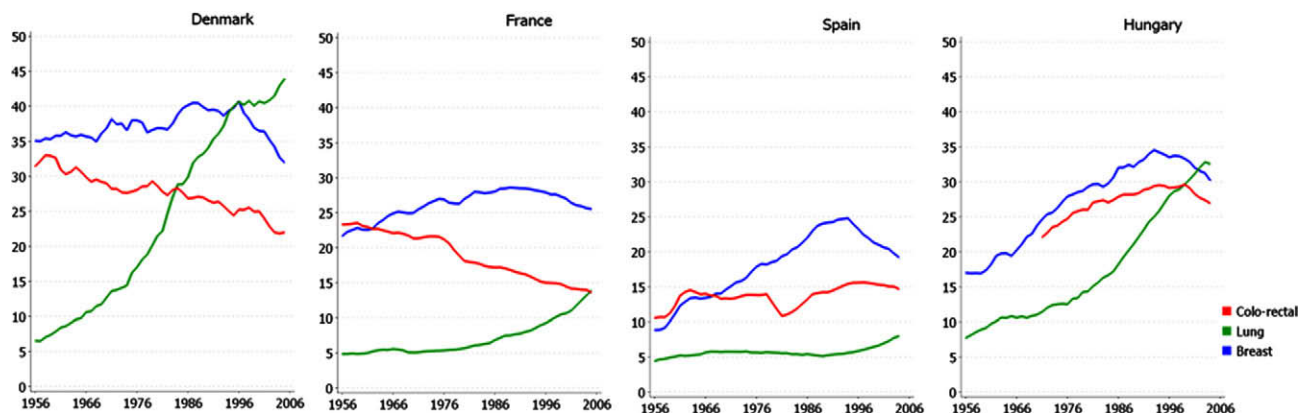


Fig. 4b – Trends in age-standardised (European standard) mortality rates from colorectal, lung and breast cancers in females in Denmark, France, Spain and Hungary (Source: WHO mortality database⁸).

The inclusion of non-invasive tumours of the bladder and brain, and the differences in coding borderline tumours of the ovary in cancer registry incidence files, together with the early detection of breast and prostate cancers lead to overestimation of the national incidence rates of these cancers. With respect to mortality, the inclusion of metastatic cancers along with primary neoplasms of the lung and liver would inflate the national estimates of mortality and possibly incidence, if the latter relies both on the national mortality statistics and on I_R/M_R ratios outside the country as explained earlier. The distribution of the deaths attributed to cancer of the uterus, not specified as cervix or corpus uteri, and the inaccuracy in certifying the cause of death are well-identified sources of error and bias.^{44,45}

Some care should be taken when comparing these estimates by country with those published earlier.^{5–7,14,46} Some of the observed differences may be the result of changes in the methodology due to extension of data availability (for Cyprus, Belgium, France and Germany for example), so that the present estimates will be more accurate. Nevertheless, some clear trends are evident since the analysis 13 years earlier.⁷ Figs. 4a and 4b show trends in mortality rates from the four most common fatal cancers (lung, colon-rectum, breast (in women) and prostate (in men)) in four countries, one from each region of Europe (Denmark, France, Spain and Hungary).

Lung cancer incidence and mortality in men is declining almost everywhere, although the rates remain high in Central and Eastern Europe (Fig. 4a). However, although the rate of increase in age-standardised rates in women has begun to slow or reverse in high risk countries (Denmark, Iceland, UK), the rates are still rising fast overall, particularly in Northern and Central Europe (Fig. 4b), so that the overall incidence has increased from 14.7 in 1995 to 18.7 in 2008. In women, the incidence of breast cancer has continued the increase that has been evident for decades (from an overall ASR of 76.0 in 1995 to 88.4 in 2008), although very recently declines have been observed in some countries (UK, Switzerland, Germany) in the incidence rates in post-menopausal women.^{47,48} However, mortality rates have fallen in many countries since the mid 1990s (Fig. 4b), probably due to earlier diagnosis and improved therapy^{49,50} – mortality rates in Europe are some 11% lower in 2008 than in 1995. Incidence of colorectal cancer has increased modestly in most European countries, particularly in males (15% increase in ASR since 1995), although mortality rates have in general declined⁴² (Fig. 4) by 2.5% in men and 11% in women since 1995. The incidence of prostate cancer is increasing dramatically (almost doubling from an ASR of 47.4 in 1995 to 93.4 in 2008), especially in countries where PSA testing of older men has become widespread.⁴² Mortality has however decreased in several countries (overall in Europe from an ASR of 23.5 in 1995 to 20.7 in 2008, Table 4B), which may be related to improved outcome following early diagnosis.^{51,52}

In addition to these trends, the incidence (and mortality) of stomach cancer continues to decline so that in European women ovarian cancer now appears as one of the five most common cancers. In women, the burden of gynaecological cancers (204,000 cases of the uterus and ovary) is the same as that of colorectal cancers.

Despite the provisos about data quality for some sites, the general patterns of cancer in Europe are clearly established,

and with the data presented herein, it is possible to define the priorities for cancer control actions in Europe.

5. Conflict of interest statement

None declared.

Acknowledgements

This work was conducted in the framework of the European Cancer Observatory (ECO), a project of the International Agency for Research on Cancer, funded by the Cancéropôle Lyon Auvergne Rhône-Alpes (CLARA) and by the Directorate General for Health and Consumers of the European Commission.

REFERENCES

1. Parkin DM. The evolution of the population-based cancer registry. *Nat Rev Cancer* 2006;6(8):603–12.
2. World Health Organization. National cancer control programmes. Policies and managerial guidelines. 2nd ed. Geneva: WHO; 2002.
3. Facts and Figures on Cancer in the EU. Health-EU. The public health portal of the European Union. EUROSTAT, <http://ec.europa.eu/health-eu/health_problems/cancer/index_en.htm>.
4. World Health Organization. Programmes and projects: Cancer, <<http://www.who.int/cancer/en/>>.
5. Jensen OM, Estève J, Møller H, Renard H. Cancer in the European Community and its member states. *Eur J Cancer* 1990;26:1167–256.
6. Black RJ, Bray F, Ferlay J, Parkin DM. Cancer incidence and mortality in the European Union: cancer registry data and estimates of national incidence for 1990. *Eur J Cancer* 1997;33:1075–107.
7. Bray F, Sankila R, Ferlay J, Parkin DM. Estimates of cancer incidence and mortality in Europe in 1995. *Eur J Cancer* 2002;38:99–166.
8. World Health Organization (WHO) Databank. Geneva, Switzerland: WHO Statistical Information System, <<http://www.who.int/whosis/>> [accessed May 2009].
9. Hospices Civils de Lyon/Institut de Veille Sanitaire/Institut National du Cancer/Francim/Institut National de la Santé et de la Recherche Médicale. Projections de l'incidence et de la mortalité par cancer en France pour l'année 2008. Rapport technique, <http://www.invs.sante.fr/surveillance/cancers>; Mars 2009 [accessed 17.06.09].
10. United Nations, Population division. World Population Prospects, the 2006 revision, <<http://www.un.org/>> [accessed 08.11.08].
11. ECO. European Cancer Observatory. Lyon: International Agency for Research on Cancer, <<http://eu-cancer.iarc.fr>>; 2009 [accessed 27.07.09].
12. Ferlay J, Bray B, Pisani P, Parkin DM. GLOBOCAN 2002: cancer incidence, mortality and prevalence worldwide. IARC CancerBase No. 5. Version 2.0. Lyon: IARCPress; 2004.
13. WHO International Statistical Classification of Diseases and Related Health Problems. Tenth Revision, vol. 2. Geneva, Switzerland: WHO; 1993.
14. Ferlay J, Autier P, Boniol M, Heanue M, Colombet M, Boyle P. Estimates of the cancer incidence and mortality in Europe in 2006. *Ann Oncol* 2007;18:581–92.

15. Nordpred. A software for predicting trends in cancer incidence, <<http://www.kreftregisteret.no/en/Research/Projects/Nordpred/>> [accessed 17.12.08].
16. Dyba T, Hakulinen T. Comparison of different approaches to incidence prediction based on simple interpolation techniques. *Stat Med* 2000;19(13):1741–52.
17. Doll R, Payne P, Waterhouse J, editors. Cancer incidence in five continents: A technical report. Berlin, Germany: Springer-Verlag (for IICC); 1966.
18. Lutz JM, Pury P, Fioretta G, Raymond L. The impact of coding process on observed cancer mortality trends in Switzerland. *Eur J Cancer Prev* 2004;13(1):77–81.
19. Loos AH, Bray F, McCarron P, Weiderpass E, Hakama M, Parkin DM. Sheep and goats: separating cervix and corpus uteri from imprecisely coded uterine cancer deaths, for studies of geographical and temporal variations in mortality. *Eur J Cancer* 2004;40:2794–803.
20. Sant M, Allemani C, Santaquilani M, Knijn A, Marchesi F, Capocaccia R. EUROCARE-4. Survival of cancer patients diagnosed in 1995–1999. Results and commentary, the EUROCARE Working Group. *Eur J Cancer* 2009;45:931–91.
21. European Network of Cancer Registries. EUROCIM version 4.0. European mortality database V2.4 (2003), Lyon 2001.
22. Jahrbuch der Gesundheit Statistik 2006. Wien: Statistic Austria; 2007.
23. Cancer Incidence in Belgium, 2004–2005. Brussels: Belgian Cancer Registry, <<http://www.kankerregister.org/>>; 2008 [accessed 12.02.09].
24. Bulgarian National Cancer Registry. National Oncological Hospital, <<http://www.onco-bg.com/str/nrr.html>>, [accessed 30.03.09].
25. Croatian National Cancer Registry, Croatian National Institute of Public Health. Bulletins No. 28–30. Cancer incidence in Croatia 2003–2005. Zagreb: Croatian National Institute of Public Health; 2005–2007.
26. Ministry of Health of the Republic of Cyprus – Health Monitoring – Statistics of Cancer – Cancer incidence data – Number of cases per cancer site, sex and year, 1998–2005, <<http://www.moh.gov.cy>> [accessed 06.05.09].
27. Cancer incidence in the Czech Republic 2005. Institute of Health Information and Statistics of the Czech Republic in collaboration with National Cancer Registry of the Czech Republic, 2008, Prague. <<http://www.uzis.cz>> [accessed 28.04.09].
28. The National Cancer Registry of Ireland, <<http://www.ncri.ie/>> [accessed 07.02.09].
29. Capesius C, Scheiden R, Groff P, Golinska B, Juchem JP, Wehenkel Cl. Nouveaux cas de cancer au Luxembourg – Monographies des années 2003–2004–2005. Luxembourg: Registre Morphologique des Tumeurs au Grand – Duché de Luxembourg, <<http://www.cancer-registry.lu>>; 2007 [accessed 03.06.09].
30. Malta National Cancer Registry. Malta: Department of Health Information, <<http://www.sahha.gov.mt>> [accessed 20.04.09].
31. Dutch Comprehensive Cancer Centres. <<http://www.iKcnet.nl>> [accessed 16.09.08].
32. Cancer incidence in the Slovak Republic 2004. Bratislava: Cancer Research Institute SAS, National Cancer Registry; 2008.
33. Cancer Incidence in Slovenia 2005. Ljubljana: Institute of Oncology Ljubljana, Cancer Registry of Slovenia, 2008.
34. Cancer in Ukraine 2005–2006. Kiev: Bulletin of National Cancer Registry of Ukraine, <http://users.iptelecom.net.ua/~ucr/>; 2007 [accessed 30.04.09].
35. Gerda Engholm, Jacques Ferlay, Niels Christensen, Freddie Bray, Marianne L. Gjerstorff, Åsa Klint, Jóanis E. Køtlum, Elínborg Ólafsdóttir, Eero Pukkala, Hans H. Storm. NORDCAN: Cancer incidence, mortality and prevalence in the Nordic countries, version 3.4. Danish Cancer Society: Association of Nordic Cancer Registries; 2009 <<http://www.ancr.nu>>.
36. The Office for National Statistics (ONS). Registrations of cancer diagnosed in 2006, England, <<http://www.statistics.gov.uk>> [accessed 31.03.09].
37. ISD Cancer Information Programme, <<http://www.isdscotland.org>> [accessed 27.01.09].
38. Welsh Cancer Intelligence and Surveillance Unit, <<http://www.wales.nhs.uk>> [accessed 28.03.09].
39. Parkin DM, Whelan SL, Ferlay J, Storm H. Cancer incidence in five continents, vols. I–VIII. IARC Cancer Base no. 7. Lyon; 2005.
40. Curado MP, Edwards B, Shin HR, Storm H, Ferlay J, Heanue M, Boyle P, editors. Cancer incidence in five continents, vol. IX. IARC Scientific Publications no. 160. Lyon: IARC; 2008.
41. Parkin DM, Bray F. Evaluation of data quality in the cancer registry: principles and methods Part II. Completeness. *Eur J Cancer* 2009;45(5):756–64.
42. Karim-Kos HE, de Vries E, Soerjomataram I, Lemmens V, Siesling S, Coebergh JW. Recent trends of cancer in Europe: a combined approach of incidence, survival and mortality for 17 cancer sites since the 1990s. *Eur J Cancer* 2008;44(10):1345–89.
43. Gondos A, Bray F, Hakulinen T, Brenner HE. UNICE Survival Working Group. Trends in cancer survival in 11 European populations from 1990 to 2009: a model-based analysis. *Ann Oncol* 2009;20(3):564–73.
44. Percy C, Muir C. The international comparability of cancer mortality data. Results of an international death certificate study. *Am J Epidemiol* 1989;129:934–46.
45. Mathers CD, Fat DM, Inoue M, Rao C, Lopez AD. Counting the dead and what they died from: an assessment of the global status of cause of death data. *Bull World Health Organ* 2005;83(3):171–7.
46. Boyle P, Ferlay J. Cancer incidence and mortality in Europe, 2004. *Ann Oncol* 2005;16(3):481–8.
47. Parkin DM. Is the recent fall in incidence of post-menopausal breast cancer in UK related to changes in use of hormone replacement therapy? *Eur J Cancer* 2009;45(9):1649–53.
48. Bouchardy C, Usel M, Verkooijen HM, Fioretta G, Benhamou S, Neyroud-Caspar I, Schaffar R, Vlastos G, Wespi Y, Schäfer P, Rapiti E. Changing pattern of age-specific breast cancer incidence in the Swiss canton of Geneva. *Breast Cancer Res Treat* 2009.
49. Bray F, McCarron P, Parkin DM. The changing global patterns of female breast cancer incidence and mortality. *Breast Cancer Res* 2004;6(6):229–39.
50. Héry C, Ferlay J, Boniol M, Autier P. Quantification of changes in breast cancer incidence and mortality since 1990 in 35 countries with Caucasian-majority populations. *Ann Oncol* 2008;19(6):1187.
51. Kvåle R, Auvinen A, Adami HO, Klint A, Hernes E, Møller B, et al. Interpreting trends in prostate cancer incidence and mortality in the five Nordic countries. *J Natl Cancer Inst* 2007;99(24):1881–7.
52. Bouchardy C, Fioretta G, Rapiti E, Verkooijen HM, Rapin CH, Schmidlin F, et al. Recent trends in prostate cancer mortality show a continuous decrease in several countries. *Int J Cancer* 2008;123(2):421–9.