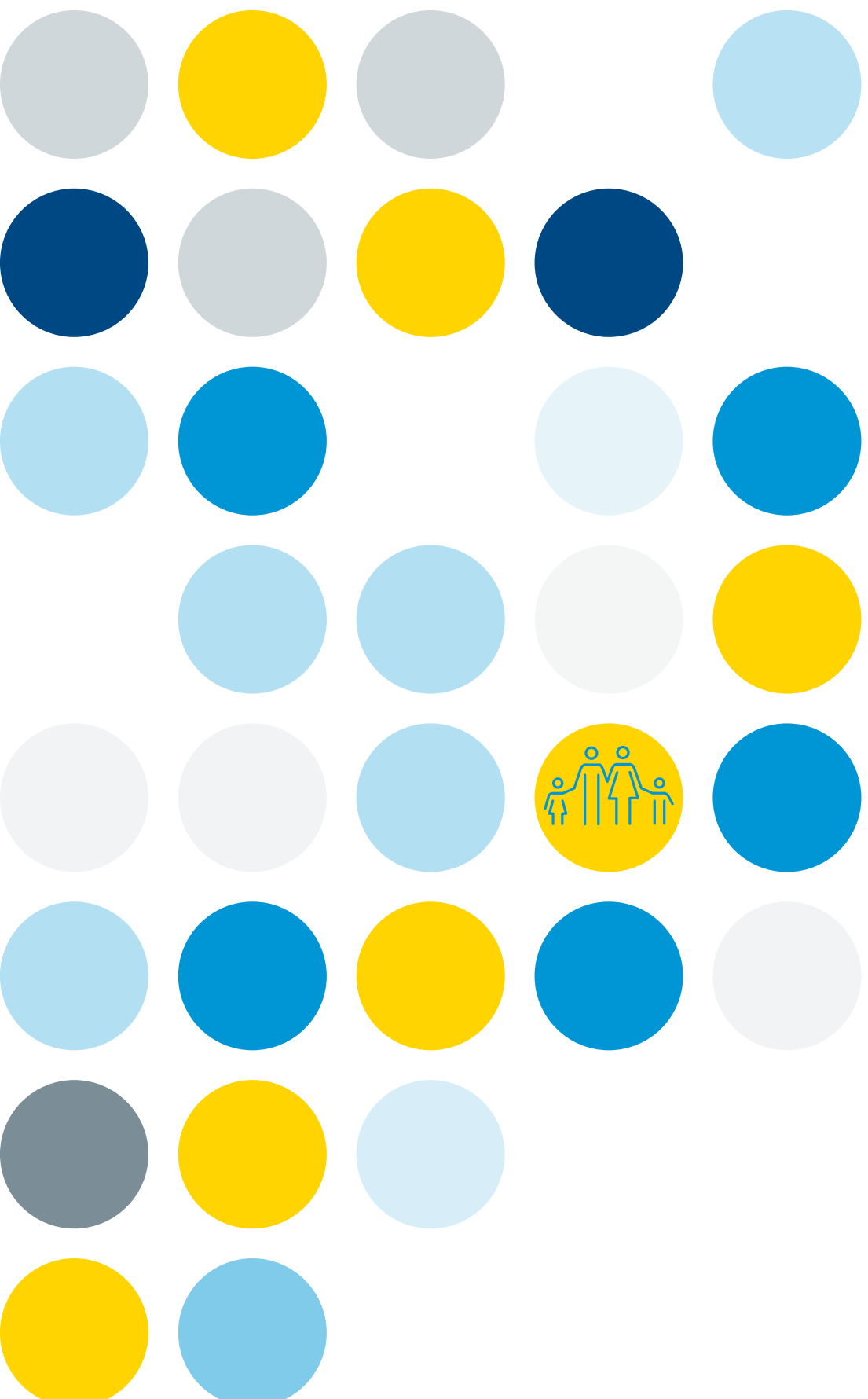


# CANCER IN VICTORIA

## STATISTICS & TRENDS 2011



# Cancer in Victoria: Statistics and trends 2011

This report is a compilation of the latest available Victorian cancer statistics. It includes Victorian cancer incidence and mortality data for 2011, incidence and mortality trends for select cancers 1982-2011, cancer survival statistics to 2010 and cancer incidence and mortality projections to 2026.

## **Published by Cancer Council Victoria**

1 Rathdowne Street  
Carlton Victoria 3053  
Australia

T: +61 03 9635 5000

F: +61 03 9635 5270

E: [enquiries@cancervic.org.au](mailto:enquiries@cancervic.org.au)

W: [www.cancervic.org.au](http://www.cancervic.org.au)

Editors: Vicky Thursfield and Helen Farrugia  
November 2012, Cancer Council Victoria, Melbourne

© Cancer Council Victoria 2012

To view or download the publication visit [www.cancervic.org.au/about-our-research/registry-statistics](http://www.cancervic.org.au/about-our-research/registry-statistics)

To request a hardcopy or join our e-mailing list [VCR@cancervic.org.au](mailto:VCR@cancervic.org.au)

To select, customise or download data, use our interactive web reporting tool  
<http://vcldata.cancervic.org.au:8082/ccv/>

For enquiries or more detailed data contact:

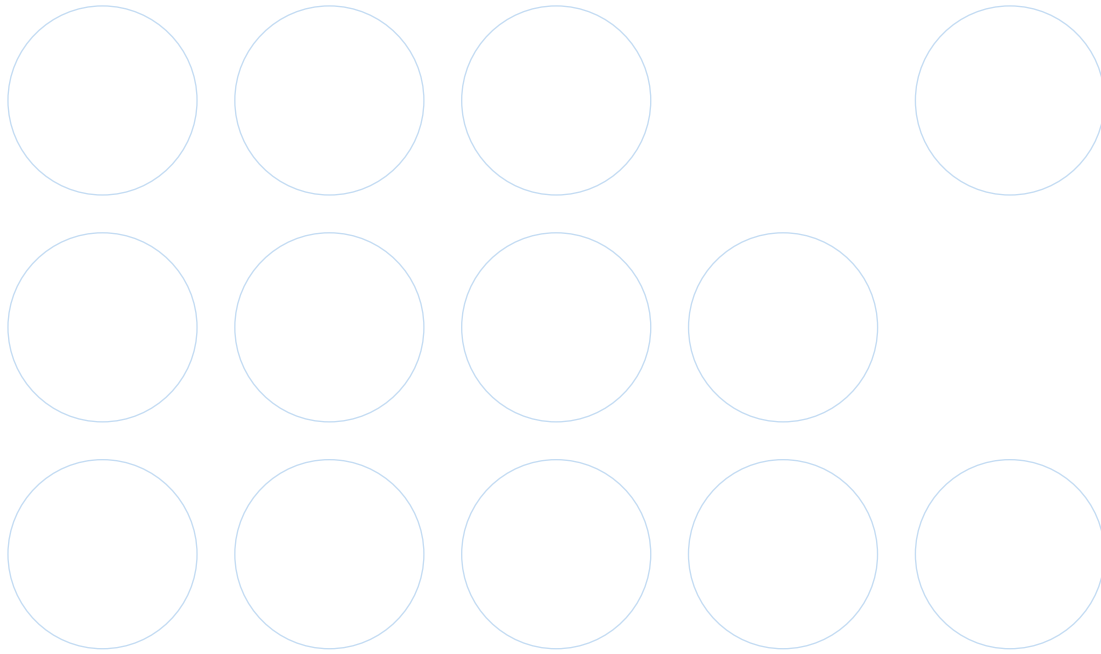
Vicky Thursfield, Cancer Information Manager, Victorian Cancer Registry

T: +61 3 9635 5162

E: [vicky.thursfield@cancervic.org.au](mailto:vicky.thursfield@cancervic.org.au)

For support and assistance call our helpline 13 11 20

Suggested citation Thursfield V, Farrugia H. Cancer in Victoria: Statistics and trends 2011. Cancer Council Victoria, Melbourne 2012

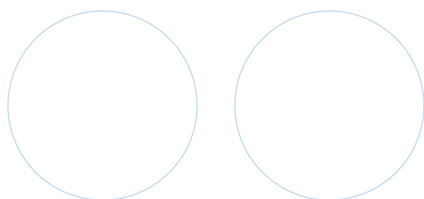


# **Cancer in Victoria** **Statistics and trends 2011**

Editors: Vicky Thursfield and Helen Farrugia

November 2012

Cancer Council Victoria, Melbourne



## **Victorian Cancer Registry staff**

**Director** Helen Farrugia

**Electronic Notifications Coordinator** Fiona Kennett

**Operations Manager** Jodi Nicholls

**Programmer** Jonathan Yue

**Systems Maintenance and Training Officer** Kelli Anderson

**Electronic Notifications Coordinator** Loretta Costa

**Training and QA officer** Naida Gordon

**Project Manager** Sue Douglas

**Cancer Information Manager** Vicky Thursfield

## **Medical Coders**

Cherry Wolfe

Christine Le

Grace Torresyap-Cortes

Hien Nguyen

Jeanette Huybers

Jenette McKenzie

Joy D'Agostino

Kris Camm

Liliana Laskaris

Rachael Gass

Ricklin Le Rossignol

Roselyn Santos

Suvana Haris

**Consultant Pathologist** John Slavin

## **Data Release Committee**

**Director** Victorian Cancer Registry

**Chief Executive Officer** Cancer Council Victoria

**Chairperson** Cancer Council Victoria's Human Research Ethics Committee

# Table of contents

<b>Message from the Director</b>	<b>6</b>
<b>Key findings</b>	<b>7</b>
<b>Victoria – demography and population</b>	<b>8</b>
Figure 1: Map of Victoria	8
Figure 2: Population pyramid, Victoria 2011	9
Table 1: Population by age group and sex, Victoria 2011	9
<b>Cancer incidence and mortality overview 2011</b>	<b>10</b>
Figure 3: Leading causes of death, Victoria 2010	11
<b>Leading cancers</b>	<b>12</b>
Figure 4: Cancer incidence and mortality 2011 – Leading cancer types by sex	12
Figure 5: Cancer incidence 2011 – Leading cancer types by age group and sex	13
<b>Summary tables by cancer site</b>	<b>14</b>
Table 2: Cancer incidence 2011 – New cancers and rates by type and sex	14
Table 3: Cancer mortality 2011 – Deaths and rates by cancer type and sex	16
<b>Trends in incidence and mortality</b>	<b>18</b>
Figures 6 and 7: Trends in incidence and mortality from 1982-2011 for all cancers, for the 8 most common cancers and for cervical cancer	18
<b>Cancer survival</b>	<b>20</b>
Figure 8: Survival by cancer type for Victorian men and women with cancer in 2006-2010	22
Figure 9: Survival in the 5 years from diagnosis for all cancer and leading cancers	23
Figure 10: Trends in survival for all cancer, 1986-1990 to 2006-2010	23
Table 4: Survival by sex, age, tumour morphology and region of usual residence	24
<b>Cancer projections</b>	<b>26</b>
Figure 11: All cancer incidence and mortality, 1982-2011, with projections to 2026	27
Table 5: Incidence projections for selected common cancers to 2026	28
Table 6: Mortality projections for selected common cancers to 2026	30
<b>Appendices</b>	<b>32</b>
A1: About the Victorian Cancer Registry	32
A2: Cancer incidence reporting	33
A3: Details of cancer sites and groups used in this report by ICD-10 codes	34
A4: Statistical methods and mortality coding	36
A5: In situ cancers 2011	37
A6: Detailed tables of cancer incidence 2011 by age, sex and cancer type	38
A7: Indices of data quality	49
A8: References and Victorian Cancer Registry publications	50

# Message from the Director



I am delighted to present Cancer In Victoria: Statistics and Trends 2011, which is a compendium of statewide cancer statistics compiled by the Victorian Cancer Registry. I am pleased to make available Victorian incidence and mortality statistics for a calendar year within 12 months of completion. This makes our data amongst the most current in the world.

I would like to acknowledge the funding support of the Cancer Council Victoria and the Department of Health that enables the Registry to collect and collate new notifications of cancer and deaths. I would also like to thank each notifying hospital, pathology laboratory and prescribed register for their contributions and ongoing support. I am also grateful to the Registrar of Births, Deaths and Marriages, Victoria for her continued and valuable assistance.

Victorian Cancer Registry staff are to be praised for their patience, hard work and diligence in ensuring the quality of the data, upon which this reports is based. I would like to acknowledge the work of statisticians Kavitha Krishnan and Emily Karahalios from the Cancer Epidemiology Centre of the Cancer Council Victoria who have enabled statistics on cancer survival and cancer incidence and mortality projections to be included in this report.

The thirty years of cancer incidence and mortality data held by the Victorian Cancer Registry (VCR) is a valuable resource for cancer control activities, and our aim is to make these data and statistics accessible in a variety of formats to suit all of our audiences. As well as “Cancer in Victoria: Statistics & Trends 2011” and customisable data from our interactive web reporting tool, more detailed data, in terms of cancer site, type and demographics, are available on request. We would be happy to discuss your data requirements with you and encourage you to contact the VCR with any questions or requests.

**Helen Farrugia**  
Director, Victorian Cancer Registry

# Key findings

## Incidence

- Cancer is a leading cause of disease burden in Victoria with 78 new diagnoses of cancer every day.
- A total of 28,405 Victorians was diagnosed with cancer in 2011.
- Cancer incidence rates continue to increase with annual % increases of 0.8% for men and 0.6% for women.
- Nearly 60% of cancers were diagnosed in Victorians aged over 65 years.

## Mortality

- Cancer is a leading cause of death, causing 30% of all deaths in Victorians.
- A total of 10,631 Victorians died from cancer in 2011, an average of 29 cancer deaths every day.
- Cancer death rates have declined steadily since 1982 with average falls of 1.5% per year for males and 1.2% for females.

## Survival

- During the period 1986-2010, five-year survival increased from 47% to 65%.
- Cancers with the highest survival were testis, thyroid, prostate, melanoma, female breast and Hodgkin lymphoma
- Cancers with the poorest survival were liver, lung, unknown primary, mesothelioma and pancreas.

## Projections

- By 2022-2026 the average annual incidence of cancer is projected to reach over 45,000, an increase of 60% from 2007-2011.
- During the same period, annual deaths from cancer will increase to over 12,000.

## Leading Cancers

- Breast cancer remains the most common new cancer for Victorian women with over 3,700 diagnoses in 2011 (29% of all cancers).
- Prostate cancer remains the most common new cancer for Victorian men with almost 4,700 new diagnoses in 2011 (30% of total cancers).
- The five leading cancers in Victoria - prostate, bowel, breast, lung and melanoma - account for almost 60% of all new cancers and half of all cancer deaths.

# Demography and population

This section describes the people of Victoria - where they live, where they were born and selected vital statistics. This provides some background context to the information about the cancer experience of Victorians which is covered in the rest of the report.

## Population

In 2011, the population of Victoria was 5,534,526 making it the second most populous state after New South Wales. One in four Australians live in Victoria with nearly three-quarters of these in Metropolitan Melbourne. Most of the remainder live in small provincial cities with only 0.1% in remote areas.

At the 2011 census, the indigenous population was 37,990 making up 0.7% of the Victorian population and 7% of the national Indigenous population.

Victoria has an area of 227,420 km<sup>2</sup> and makes up less than 3% of the Australian continent. It is the most densely populated state with an average population density of 24 persons per km<sup>2</sup> (Australia 2.9 persons per km<sup>2</sup>)

## Age and sex

The age-sex distribution is illustrated opposite. Although the shape of its pyramid has been modified by its immigrant history, Victoria has the type of population distribution expected in a country of late demographic transition. With a declining birth rate, a steady ageing of the population is occurring and the pyramid will become increasingly rectangular as more people survive to older ages and the younger strata are not replaced.

In 2011, 18% of Victorians were aged under 15 years and 14% over 65 years. By 2021 these proportions are expected to be 16% aged less than 15 years and 19% over 65 years.

## Ethnicity

At the 2011 census, 24% of the population (1,304,701 persons) was described as overseas born. Of these migrants, 41% were from Asia (India 9%, China 7%, Vietnam 5%, Sri Lanka 3%, Malaysia 3%), 18% from Southern Europe (Italy 6%, Greece 4%), 17% from Great Britain, 10% from the rest of Europe and the former USSR, 7% from the Middle East and smaller numbers from South and North America, Africa and Oceania.

## Vital statistics\*

The birth rate has been steadily declining since the early 1970s. In 2010, the crude rate was 12.7 per 1,000 population. Life expectancy at birth was, in 2010, 80.0 years for males and 84.3 for females. In the last decade, this has increased by 3 and 2 years for males and females respectively.

There were 35,623 deaths of Victorian residents in 2010. Male deaths (17,935) slightly outnumbered female (17,688).

Cancer caused 30% of all deaths, ischaemic heart disease 15%, cerebrovascular disease 7%, chronic lower respiratory disease 4%, diabetes 3%, suicide 2% and transport accidents 1%.

\*2011 figures not available at time of publication.

Figure 1: Map of Victoria





Figure 2: Population pyramid, Victoria 2011.

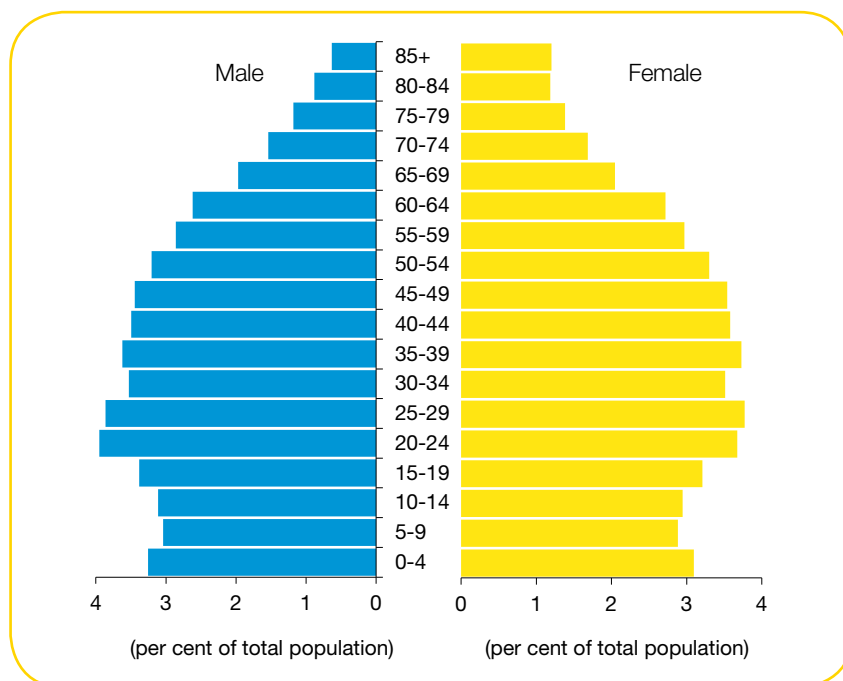


Table 1: Population by age group and sex, Victoria 2011.

Age	Males	Females	Persons
0-4	180,672	171,108	351,780
5-9	168,552	160,509	329,061
10-14	168,864	160,012	328,876
15-19	181,747	173,713	355,460
20-24	211,099	201,340	412,439
25-29	214,551	210,220	424,771
30-34	195,787	195,795	391,582
35-39	195,133	200,036	395,169
40-44	195,859	203,270	399,129
45-49	188,009	193,710	381,719
50-54	178,895	184,902	363,797
55-59	159,350	165,339	324,689
60-64	146,923	154,212	301,135
65-69	114,191	118,332	232,523
70-74	86,486	93,325	179,811
75-79	65,546	77,519	143,065
80-84	49,196	66,015	115,211
85+	35,912	68,397	104,309
<b>Total</b>	<b>2,736,772</b>	<b>2,797,754</b>	<b>5,534,526</b>

Source: Australian Bureau of Statistics. Population by age and sex: Australian states and territories. (Cat. No. 3201.0)

# Cancer incidence and mortality overview 2011

- 28,405 Victorians were diagnosed with cancer<sup>1</sup> and 10,631 died from cancer in 2011.
- The most common new cancers were prostate, breast, bowel, and lung cancers and melanoma.
- The leading cancers for mortality were lung, bowel, prostate, breast and pancreatic cancers.

## Numbers

Each year, over 28,000 Victorians develop cancer, other than one of the common skin cancers<sup>1</sup>, and over 10,500 deaths are caused by it. In 2011, 15,695 men and 12,710 women presented with new cancers and 5,921 men and 4,710 women died from cancer.

## Age and sex

Cancer was very age-dependent with less than 1% of tumours occurring before age 15 and 58% in persons over 65 years. More men than women developed cancer: 123 for every 100 females. The male excess was largely due to tobacco-related cancers and a large number of prostate cancers.

## Incidence

The standardised incidence rates (per 100,000) were 353.1 for males and 271.0 for females. The cumulative rates per cent to age 75 were 41.4% for males and 30.4% for females. At least one in three Victorians will develop a cancer other than non-melanocytic skin cancer by the age of 75, with risks of over 1 in 3 for men and 1 in 4 for women.

See Appendix 6 (pages 38-47) for incidence rates by sex and individual cancer types.

## Mortality

See Appendix 4 (page 36) regarding coding of cancer mortality. Age-standardised mortality rates for cancer were 115.3 per 100,000 males and 78.6 per 100,000 females.

Cancer death rates for men and women continue to decrease by more than 1% per year. The years of potential

life lost (YPLL) to age 75 were 33,237 for males and 28,745 for females.

Figure 3 shows the proportion of deaths in Victoria 2010 caused by cancer and the years of potential life lost compared with other leading causes of death.

A table summarising mortality rates by sex and individual sites is given in Table 3 (page 16). In 2011, there were 30 deaths from the less common skin cancers, including Merkel cell tumours, DFSP, MFH and skin appendage tumours, reported on pages 16 as "other skin cancer". There were also 56 deaths (46 male and 10 female) from the common non-melanocytic skin cancers - squamous and basal cell carcinomas - which are not included elsewhere in this report.

## Leading cancers

The leading cancers for Victoria are shown in Figures 4 and 5 (pages 12 and 13).

**Prostate cancer** was again the leading new cancer in 2011 (4,698 cases, 17% of all cancers and 30% of cancers for men). Incidence rates rose steeply between 1987 and 1995 largely due to the introduction of Prostate Specific Antigen (PSA) testing to detect early asymptomatic cancers. Rates increased rapidly again from 1999-2009 but have shown a decline in 2010 and 2011. Prostate cancer was the second ranking cause of cancer death for men (832 deaths, 14%) in 2011.

In 2011, **bowel (colon and rectum) cancer** was the third most common new cancer in Victorians with 3,711 cases (13.1% of all cancers). It was the second ranking site of fatal cancer (1,310 deaths, 12.3%).

**Breast cancer** overtook bowel cancer in 2011 as the second most common new cancer, accounting for 13.3% (3,773) of new cases and 30% of all cancers for women. It was the fourth ranking cause of cancer death (702 deaths, 6.6%). Incidence rates have stabilised recently after a decade of increase, largely due to mammographic detection, whilst mortality rates have shown a downward trend since 1994.

**Lung cancer** is the fourth type of new cancer (2,480 new cases) in 2011 and remains the leading cause of cancer death (1,946 deaths, 18% of all cancer deaths). Incidence and mortality rates continue to decline for males and there are encouraging signs that incidence rates for females may have reached their peak with rates for the last two years being lower than those for the preceding three years.

**Figure 3: Leading causes of death, Victoria 2010.**

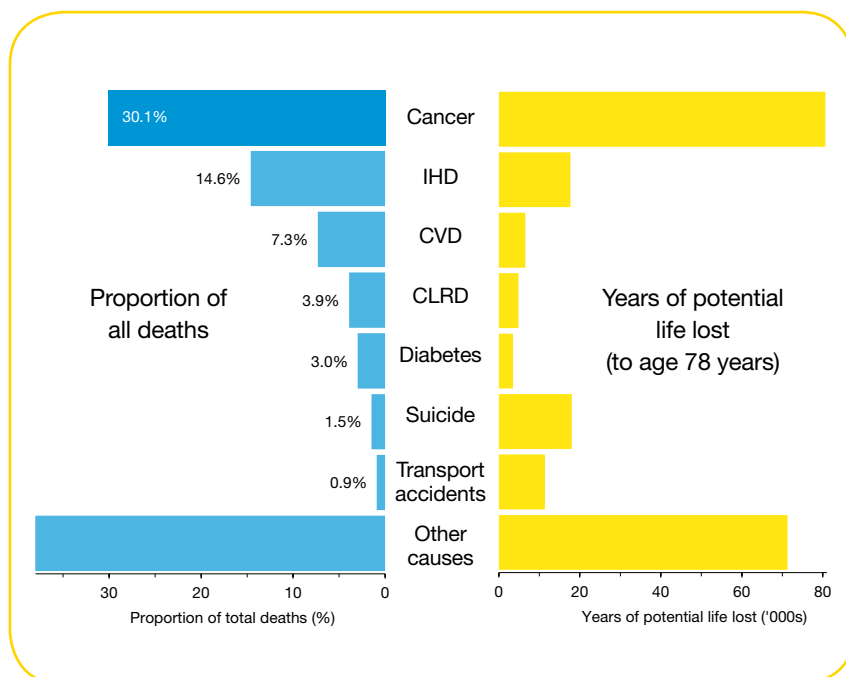


Figure 3 shows the proportion of all deaths and years of potential life lost (YPLL) for each of the leading causes of death.

YPLL measures the extent of “premature” mortality, assumed to be any death between 1 and 78 years and is a measure of the relative significance of specific causes of premature death.

IHD=Ischaemic heart disease;  
CVD=Cerebro-vascular disease (stroke);  
CLRD=Chronic lower respiratory disease (asthma and emphysema).

Source: Causes of Death, Australia 2010 (Australian Bureau of Statistics Cat. No. 3303.0)

Note that 2011 figures were not available at time of publication.

**Melanoma** is the fifth ranking new cancer in Victorians (2,044 cases, 7% of total) and was the tenth cause of cancer death 322 deaths, 3% of total). Mortality rates are stable whilst incidence continues to increase for older age groups.

The difference in rank orders of incidence and mortality reflects the differing survivorship of patients with different cancers. Lung cancer is both common and quickly fatal and, therefore, ranks high in both new cancers and cancer deaths. Pancreatic cancer is not so common but is usually rapidly lethal so its mortality ranking is higher than its incidence ranking.

**Cancers of unspecified primary site** form a substantial group of new cancers with 702 (2%) diagnoses in 2011. We do not include cancers of unknown primary site in our leading sites figures as these are a very heterogeneous group. Numerically these cancers would appear in the top ten cancer sites for incidence and, because they are often advanced or widespread at the time of diagnosis, rank in the top five for mortality.

There are estimated to be nearly 40,000 new diagnoses in Victoria each year of the common types of skin cancer (squamous and basal cell carcinomas). These skin cancers are not collected by the registry and not included in this report. However, incidence of the less common skin cancers (including Merkel cell tumours, MFH and DFSP) is reported as “other skin cancer”.

<sup>1</sup> “All malignant tumours” = all tumours with a behaviour code /3 in ICDO-3 (Ref 1) EXCEPT basal and squamous cell carcinomas of skin, the common non-melanocytic skin cancers (NMSC). This INCLUDES Myelodysplastic syndromes (MDS) and Myeloproliferative disorders (MPD) that are classified as malignant neoplasms in ICDO-3 (the classification used by IARC) but not in ICD-10-AM (Ref 2) (as reported in Australian Bureau of Statistics publications).

<sup>2</sup> The behaviour codes for some tumours changed between ICDO editions 2 and 3 (in which the Victorian Cancer Registry has coded since 2003). These changes affect the range of tumours included in incidence reporting. In particular, ovarian tumours of borderline malignancy and superficial (non-invasive) transitional cell cancers of the bladder are no longer coded as malignant tumours and are therefore not included. Conversely, myelodysplastic syndromes and myeloproliferative disorders are now classified as malignant and are included in this report. Changes to reported rates prior to and after 2003 may reflect these coding changes.

Figure 4: Cancer incidence and mortality 2011 – leading cancer types by sex.

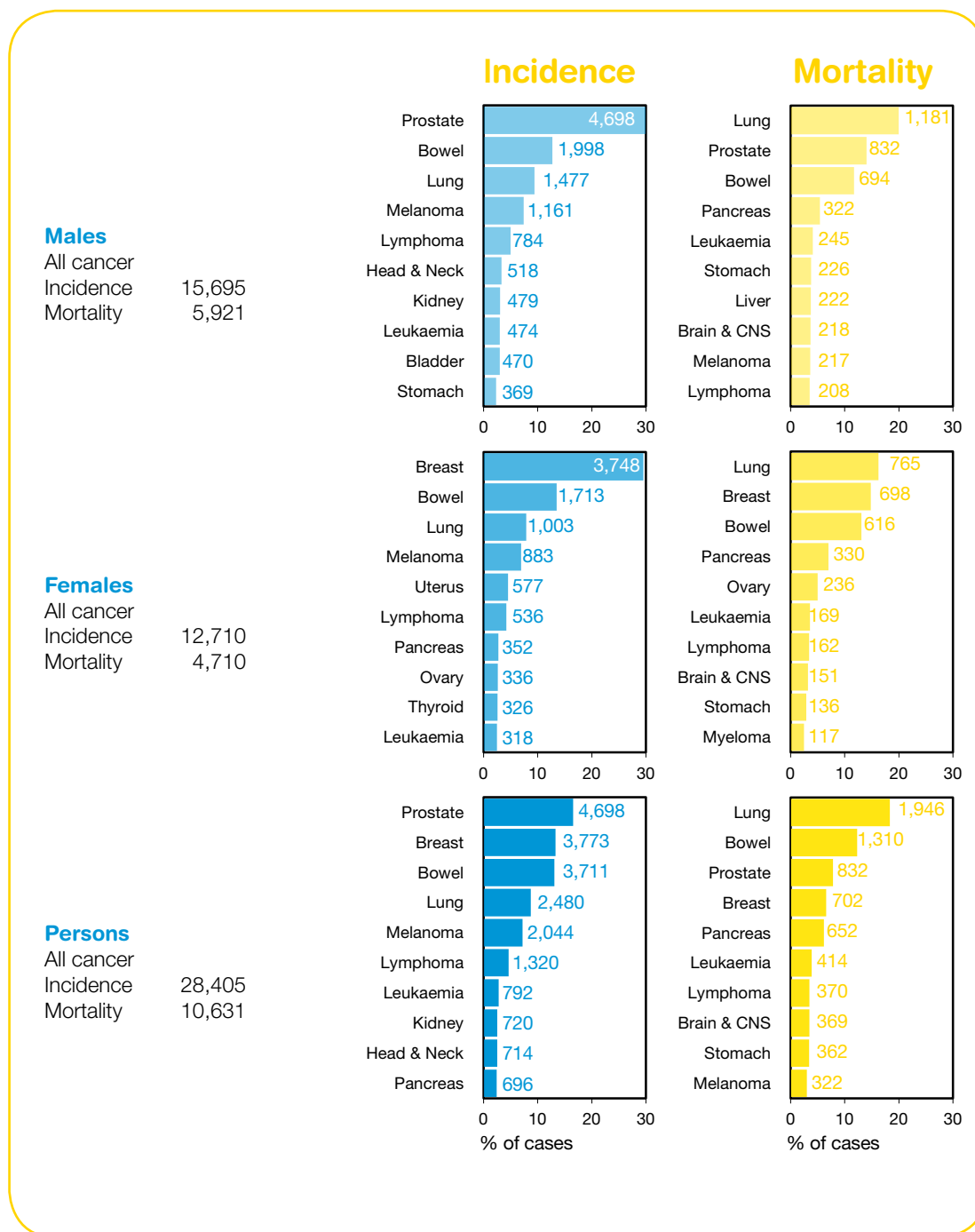


Figure 4 shows the ten top-ranking sites for cancer incidence and mortality in Victoria for males, females and persons. The bars represent the percentages of total new cases or deaths in each site. Numbers of cases/deaths are also shown on the graphs.

Figure 5: Cancer incidence 2011 – leading cancer types by age group and sex.

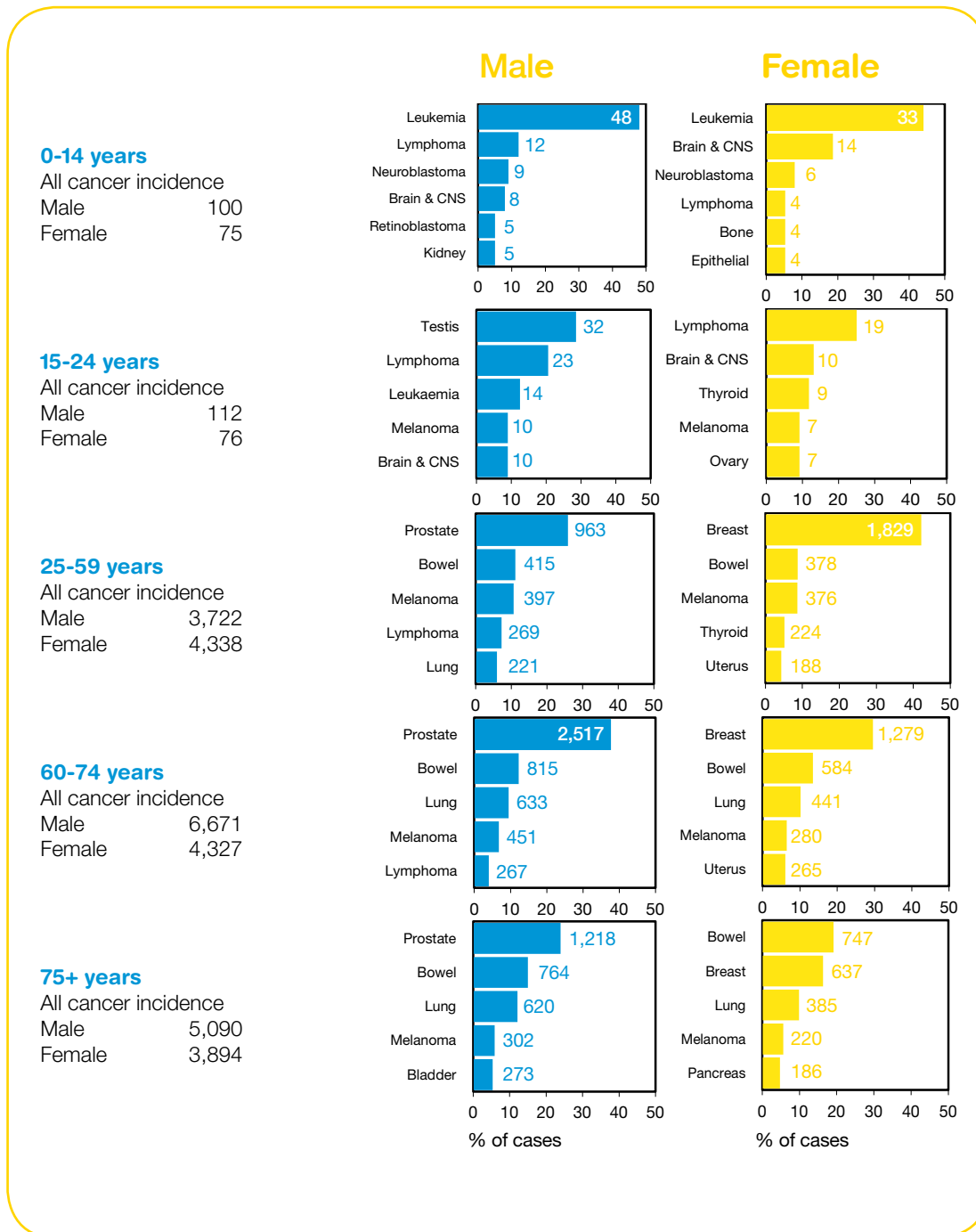


Figure 5 shows the percentage of total new cancers, plotted together with the numbers of cases, for the leading cancers in each age group.

**Table 2: Cancer incidence 2011 – new cancers and rates by cancer type and sex.**

ICD	Site	Males				Females			
		N	CR	CR%	SR	N	CR	CR%	SR
C00	Lip	126	4.6	0.4	3.1	53	1.9	0.1	1.0
C01,C02	Tongue	114	4.2	0.3	2.8	50	1.8	0.1	1.0
C07,C08	Salivary glands	30	1.1	0.1	0.7	27	1.0	0.1	0.6
C03	Gum	13	0.5	0.0	0.3	11	0.4	0.0	0.2
C04	Floor of mouth	32	1.2	0.1	0.8	8	0.3	0.0	0.1
C05, C06	Other mouth	35	1.3	0.1	0.8	28	1.0	0.1	0.5
<b>C01-C06</b>	<b>Oral cavity</b>	<b>194</b>	<b>7.1</b>	<b>0.6</b>	<b>4.6</b>	<b>97</b>	<b>3.5</b>	<b>0.2</b>	<b>1.9</b>
C09, C10	Oropharynx	89	3.3	0.3	2.2	20	0.7	0.1	0.5
C11	Nasopharynx	24	0.9	0.1	0.6	9	0.3	0.0	0.2
C12, C13	Hypopharynx	17	0.6	0.1	0.4	6	0.2	0.0	0.1
<b>C09-C13</b>	<b>Pharynx</b>	<b>130</b>	<b>4.8</b>	<b>0.4</b>	<b>3.3</b>	<b>35</b>	<b>1.3</b>	<b>0.1</b>	<b>0.8</b>
C14	Other oral	12	0.4	0.0	0.3	7	0.3	0.0	0.1
C15	Oesophagus	216	7.9	0.5	4.7	93	3.3	0.2	1.5
C16	Stomach	369	13.5	0.9	7.7	199	7.1	0.4	3.6
C17	Small Intestine	58	2.1	0.1	1.3	51	1.8	0.1	1.0
C18	Colon	1,227	44.8	2.9	25.3	1,209	43.2	2.4	21.3
C19-C20	Rectum	771	28.2	2.1	17.2	504	18.0	1.2	10.1
<b>C18-C20</b>	<b>Bowel</b>	<b>1,998</b>	<b>73.0</b>	<b>5.0</b>	<b>42.5</b>	<b>1,713</b>	<b>61.2</b>	<b>3.6</b>	<b>31.5</b>
C21	Anus	38	1.4	0.1	0.9	61	2.2	0.2	1.3
C22	Liver	277	10.1	0.7	6.2	101	3.6	0.2	1.9
C23, C24	Gallbladder	90	3.3	0.2	1.8	134	4.8	0.2	2.3
C25	Pancreas	344	12.6	0.8	7.1	352	12.6	0.6	5.8
C30, C31	Nasal Cavities	35	1.3	0.1	0.8	17	0.6	0.0	0.4
C32	Larynx	117	4.3	0.3	2.7	13	0.5	0.0	0.3
C33, C34	Lung	1,477	54.0	3.6	30.5	1,003	35.9	2.4	19.1
C37, C38	Thymus etc	16	0.6	0.0	0.4	4	0.1	0.0	0.1
C40, C41	Bone	31	1.1	0.1	0.9	25	0.9	0.1	0.8
C43	Melanoma	1,161	42.4	3.1	27.6	883	31.6	2.2	20.0
C44	Other skin	43	1.6	0.1	0.9	38	1.4	0.1	0.8
C45	Mesothelioma	102	3.7	0.2	2.0	29	1.0	0.1	0.5
C46	Kaposi Sarcoma	18	0.7	0.1	0.5	8	0.3	0.0	0.1
C48	Peritoneum	9	0.3	0.0	0.4	25	0.9	0.1	0.7
C47, C49	Connective Tissue	110	4.0	0.3	2.9	70	2.5	0.2	1.5
C50	Breast	25	0.9	0.1	0.6	3,748	134.0	10.1	89.0
C53	Cervix	-	-	-	-	182	6.5	0.5	4.9
C54, C55	Uterus	-	-	-	-	577	20.6	1.6	12.7
C56	Ovary	-	-	-	-	336	12.0	0.8	7.3
C58	Placenta	-	-	-	-	1	0.0	0.0	0.0
C51, C52, C57	Vulva etc	-	-	-	-	131	4.7	0.3	2.6
C61	Prostate	4,698	171.7	14.1	106.6	-	-	-	-
C62	Testis	178	6.5	0.5	5.9	-	-	-	-
C60, C63	Penis etc	48	1.8	0.1	1.0	-	-	-	-
C64	Kidney	479	17.5	1.4	11.7	241	8.6	0.7	5.4
C67	Bladder	470	17.2	0.8	8.6	135	4.8	0.2	2.1
C65, C66, C68	Renal pelvis etc	50	1.8	0.1	0.9	49	1.8	0.1	0.8

ICD	Site	Males				Females			
		N	CR	CR%	SR	N	CR	CR%	SR
C69	Eye	25	0.9	0.0	0.7	17	0.6	0.0	0.4
C70	Meninges	2	0.1	0.0	0.0	2	0.1	0.0	0.0
C71	Brain	281	10.3	0.8	7.1	211	7.5	0.5	5.5
C72	Other CNS	6	0.2	0.0	0.2	4	0.1	0.0	0.1
<b>C70-C72</b>	<b>Brain &amp; CNS</b>	<b>289</b>	<b>10.6</b>	<b>0.8</b>	<b>7.3</b>	<b>217</b>	<b>7.8</b>	<b>0.6</b>	<b>5.6</b>
C73	Thyroid	148	5.4	0.4	4.0	326	11.7	0.9	8.7
C74, C75	Other endocrine	17	0.6	0.1	0.7	9	0.3	0.0	0.4
C26, C39, C76-C79	Ill-defined site	37	1.4	0.1	0.7	46	1.6	0.1	0.7
C80	Unspecified site	351	12.8	0.7	6.7	351	12.5	0.5	5.3
C81	Hodgkin lymphoma	104	3.8	0.3	3.3	61	2.2	0.2	2.0
C82	Nodular NHL	178	6.5	0.5	4.3	126	4.5	0.3	2.8
C83	Diffuse NHL	360	13.2	0.9	8.5	242	8.6	0.5	4.9
C84	T-cell lymphoma	48	1.8	0.1	1.1	31	1.1	0.1	0.7
C85	Other NHL	94	3.4	0.2	1.9	76	2.7	0.1	1.3
<b>C82-C85</b>	<b>Non-Hodgkin lymphoma</b>	<b>680</b>	<b>24.8</b>	<b>1.8</b>	<b>15.9</b>	<b>475</b>	<b>17.0</b>	<b>1.1</b>	<b>9.8</b>
C88	Immunoproliferative	26	1.0	0.1	0.5	15	0.5	0.0	0.2
C90	Multiple myeloma	233	8.5	0.5	4.9	208	7.4	0.5	3.9
C91	Lymphoid leukaemia	223	8.1	0.6	6.6	138	4.9	0.3	3.6
C91.0	Acute lymphoblastic leukaemia	61	2.2	0.2	3.1	37	1.3	0.1	1.9
C91.1	Chronic lymphatic leukaemia	145	5.3	0.4	3.1	95	3.4	0.2	1.6
C92	Myeloid leukaemia	225	8.2	0.5	5.2	165	5.9	0.4	3.5
C92.0	Acute myeloid leukaemia	90	3.3	0.2	2.1	71	2.5	0.2	1.7
C92.1	Chronic myeloid leukaemia	56	2.0	0.2	1.4	48	1.7	0.1	1.1
C93	Monocytic leukaemia	17	0.6	0.0	0.4	8	0.3	0.0	0.2
C94	Other leukaemia	4	0.1	0.0	0.1	1	0.0	0.0	0.0
C95	Unspecified leukaemia	5	0.2	0.0	0.1	6	0.2	0.0	0.1
C96	Other haematopoietic	4	0.1	0.0	0.1	2	0.1	0.0	0.1
<b>C91-C95</b>	<b>All leukaemia</b>	<b>474</b>	<b>17.3</b>	<b>1.2</b>	<b>12.4</b>	<b>318</b>	<b>11.4</b>	<b>0.7</b>	<b>7.4</b>
D45-D47	Myeloproliferative	358	13.1	0.6	6.9	226	8.1	0.4	4.1
C00-C96, D45-D47	<b>All malignant tumours</b>	<b>15,695</b>	<b>573.5</b>	<b>41.4</b>	<b>353.1</b>	<b>12,710</b>	<b>454.3</b>	<b>30.4</b>	<b>271.0</b>

Table 2 shows N Number of cases  
– CR Crude Rate – CR% Cumulative  
Rate to age 75 ) – .SR Standard Rate  
per 100,000 (Age-standardised to  
World Standard Population

**Table 3: Cancer mortality 2011 – deaths and rates by cancer type and sex.**

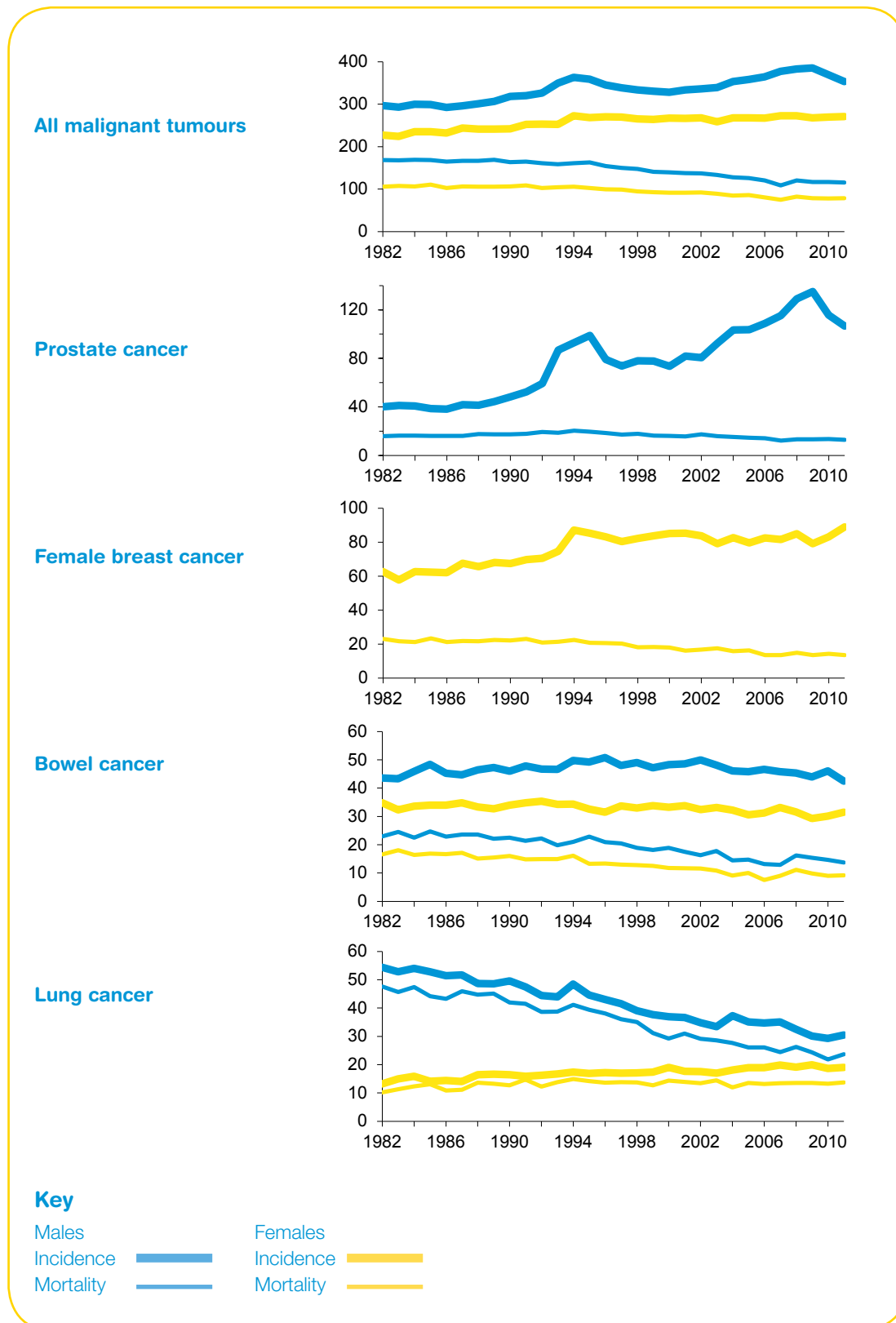
ICD	Site	Males				Females			
		N	CR	YPLL	SR	N	CR	YPLL	SR
C00	Lip	0	0.0	0	0.0	0	0.0	0	0.0
C01,C02	Tongue	37	1.4	266	0.8	15	0.5	122	0.3
C07,C08	Salivary glands	4	0.1	86	0.1	5	0.2	35	0.1
C03	Gum	1	0.0	0	0.0	5	0.2	2	0.1
C04	Floor of mouth	4	0.1	9	0.1	7	0.3	38	0.1
C05, C06	Other mouth	10	0.4	86	0.2	8	0.3	30	0.1
<b>C01-C06</b>	<b>Oral cavity</b>	<b>52</b>	<b>1.9</b>	<b>362</b>	<b>1.1</b>	<b>35</b>	<b>1.3</b>	<b>193</b>	<b>0.5</b>
C09, C10	Oropharynx	21	0.8	195	0.5	6	0.2	31	0.1
C11	Nasopharynx	7	0.3	126	0.2	2	0.1	0	0.0
C12, C13	Hypopharynx	18	0.7	80	0.4	2	0.1	7	0.0
<b>C09-C13</b>	<b>Pharynx</b>	<b>46</b>	<b>1.7</b>	<b>401</b>	<b>1.0</b>	<b>10</b>	<b>0.4</b>	<b>38</b>	<b>0.2</b>
C14	Other oral	7	0.3	25	0.1	2	0.1	0	0.0
C15	Oesophagus	165	6.0	1,000	3.3	79	2.8	308	1.1
C16	Stomach	226	8.3	1,432	4.6	136	4.9	805	2.3
C17	Small Intestine	18	0.7	136	0.4	18	0.6	111	0.3
C18	Colon	445	16.3	2,219	8.6	436	15.6	1,925	6.4
C19-C20	Rectum	238	8.7	1,448	4.9	160	5.7	797	2.4
<b>C18-C20</b>	<b>Bowel</b>	<b>683</b>	<b>25.0</b>	<b>3,675</b>	<b>13.5</b>	<b>596</b>	<b>21.3</b>	<b>2,726</b>	<b>8.8</b>
C21	Anus	11	0.4	63	0.2	20	0.7	160	0.4
C22	Liver	222	8.1	1,639	4.7	76	2.7	309	1.2
C23, C24	Gallbladder	58	2.1	363	1.2	85	3.0	299	1.3
C25	Pancreas	322	11.8	2,101	6.6	330	11.8	1,357	5.1
C30, C31	Nasal Cavities	13	0.5	66	0.3	9	0.3	90	0.2
C32	Larynx	41	1.5	165	0.8	7	0.3	28	0.1
C33, C34	Lung	1,181	43.2	6,398	23.7	765	27.3	4,636	13.7
C37, C38	Thymus etc	9	0.3	133	0.3	5	0.2	47	0.1
C40, C41	Bone	9	0.3	250	0.3	6	0.2	188	0.2
C43	Melanoma	217	7.9	1,915	4.6	105	3.8	919	1.9
C44	Other skin	14	0.5	32	0.2	16	0.6	26	0.2
C45	Mesothelioma	103	3.8	517	2.1	20	0.7	106	0.3
C46	Kaposi Sarcoma	1	0.0	0	0.0	0	0.0	0	0.0
C48	Peritoneum	5	0.2	34	0.1	27	1.0	212	0.6
C47, C49	Connective Tissue	41	1.5	708	1.1	20	0.7	210	0.4
C50	Breast	4	0.1	11	0.1	698	24.9	6,468	13.4
C53	Cervix	-	-	-	-	51	1.8	607	1.0
C54, C55	Uterus	-	-	-	-	99	3.5	637	1.7
C56	Ovary	-	-	-	-	236	8.4	1,760	4.3
C58	Placenta	-	-	-	-	0	0.0	0	0.0
C51, C52, C57	Vulva etc	-	-	-	-	45	1.6	101	0.6
C61	Prostate	832	30.4	1,095	12.8	-	-	-	-
C62	Testis	4	0.1	139	0.1	-	-	-	-
C60, C63	Penis etc	5	0.2	16	0.1	-	-	-	-
C64	Kidney	131	4.8	808	2.7	74	2.6	495	1.3
C67	Bladder	194	7.1	601	3.4	78	2.8	249	1.1
C65, C66, C68	Renal pelvis etc	22	0.8	96	0.4	25	0.9	40	0.3



ICD	Site	Males				Females			
		N	CR	YPLL	SR	N	CR	YPLL	SR
C69	Eye	7	0.3	54	0.2	13	0.5	120	0.3
C70	Meninges	3	0.1	16	0.0	4	0.1	28	0.1
C71	Brain	214	7.8	2,495	5.1	147	5.3	1,206	3.0
C72	Other CNS	1	0.0	11	0.0	0	0.0	0	0.0
<b>C70-C72</b>	<b>Brain &amp; CNS</b>	<b>218</b>	<b>8.0</b>	<b>2,522</b>	<b>5.2</b>	<b>151</b>	<b>5.4</b>	<b>1,235</b>	<b>3.1</b>
C73	Thyroid	15	0.5	100	0.3	23	0.8	71	0.3
C74, C75	Other endocrine	6	0.2	78	0.1	5	0.2	89	0.1
C26, C39, C76-C79	III-defined site	30	1.1	120	0.5	33	1.2	80	0.4
C80	Unspecified site	362	13.2	1,542	6.6	321	11.5	1,136	4.5
C81	Hodgkin lymphoma	3	0.1	20	0.1	8	0.3	33	0.1
C82	Nodular NHL	29	1.1	139	0.5	27	1.0	104	0.4
C83	Diffuse NHL	145	5.3	829	2.9	79	2.8	375	1.2
C84	T-cell lymphoma	9	0.3	46	0.2	15	0.5	61	0.2
C85	Other NHL	22	0.8	61	0.4	33	1.2	113	0.4
<b>C82-C85</b>	<b>Non-Hodgkin lymphoma</b>	<b>205</b>	<b>7.5</b>	<b>1,075</b>	<b>4.0</b>	<b>154</b>	<b>5.5</b>	<b>653</b>	<b>2.2</b>
C88	Immunoproliferative	6	0.2	23	0.1	5	0.2	0	0.0
C90	Multiple myeloma	127	4.6	465	2.3	117	4.2	410	1.8
C91	Lymphoid leukaemia	72	2.6	846	1.6	46	1.6	218	0.7
C91.0	Acute lymphoblastic leukaemia	22	0.8	777	0.8	7	0.3	145	0.2
C91.1	Chronic lymphatic leukaemia	41	1.5	55	0.7	36	1.3	73	0.4
C92	Myeloid leukaemia	152	5.6	702	2.9	104	3.7	615	1.7
C92.0	Acute myeloid leukaemia	112	4.1	551	2.2	83	3.0	537	1.4
C92.1	Chronic myeloid leukaemia	10	0.4	66	0.2	5	0.2	0	0.0
C93	Monocytic leukaemia	13	0.5	169	0.3	8	0.3	79	0.1
C94	Other leukaemia	3	0.1	13	0.1	3	0.1	45	0.1
C95	Unspecified leukaemia	5	0.2	11	0.1	8	0.3	0	0.1
C96	Other haematopoietic	1	0.0	0	0.0	1	0.0	31	0.0
<b>C91-C95</b>	<b>All leukaemia</b>	<b>245</b>	<b>9.0</b>	<b>1,742</b>	<b>5.0</b>	<b>169</b>	<b>6.0</b>	<b>957</b>	<b>2.6</b>
D45-D47	Myeloproliferative	56	2.0	112	0.9	32	1.1	47	0.4
<b>C00-C96, D45-D47</b>	<b>All malignant tumours</b>	<b>5,921</b>	<b>216.3</b>	<b>33,237</b>	<b>115.3</b>	<b>4,710</b>	<b>168.3</b>	<b>28,745</b>	<b>78.6</b>

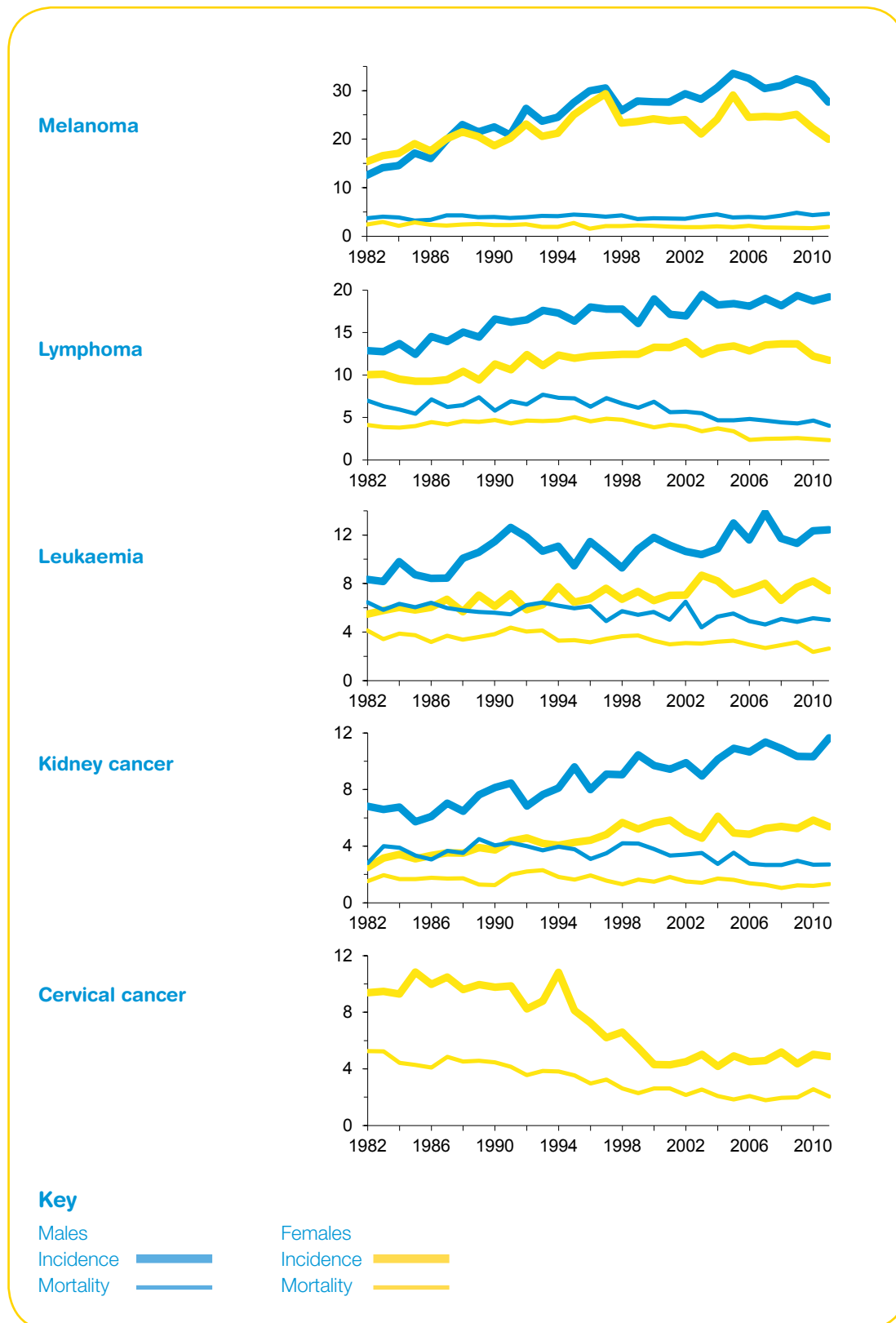
Table 3 shows N Number of deaths  
– CR Crude Rate – YPLL Years of  
potential life lost to age 75 – SR Standard  
Rate per 100,000 (Age-standardised to  
World Standard Population)

**Figure 6:** Trends in incidence and mortality from 1982-2011 for all cancers, for the 8 most common cancers and for cervical cancer – part 1.



Rate\* = Annual age – standardised incidence/ mortality rate per 100,000 persons.

**Figure 7: Trends in incidence and mortality from 1982-2011 for all cancers, for the 8 most common cancers and for cervical cancer – part 2.**



Rate\* = Annual age – standardised incidence/ mortality rate per 100,000 persons.

# Cancer survival

- Survival for Victorians with cancer in 2006-2010 was 65%,
- Survival was slightly higher for women (66%) than for men (64%)

Cancer survival has been included in our annual statistics update since 2009. A comprehensive report on Cancer Survival in Victoria 2012 (Ref3) was published in August 2012 which included survival figures for Victorians with cancer in 2006-2010 and comparisons with earlier years from 1986-1990. On these pages, we provide some of the figures from this report for Victorians with cancer in 2006-2010. More detailed tables are available on request.

The figures shown are relative survival proportions five years after diagnosis. Relative survival is net survival from cancer – the proportion who would have survived if cancer was the only cause of death (see page 21 for detailed explanation).

Overall five year cancer survival was 65%, an increase from 60% in 2001-2005.

Table 4 (page 24) shows detailed survival by sex, age group, tumour morphology and region of usual residence for Victorians with all cancers in 2006-2010. The following paragraphs report on significant differences by sex, age group, and region of residence for individual cancers.

## Cancer type

Cancers with the highest five-year survival were testis (98%), thyroid (93%), prostate (91%), melanoma (90%), female breast (89%) and Hodgkin lymphoma (88%). Cancers with the lowest survival remain liver (14%), lung (14%), unknown primary (13%), mesothelioma (6%) and pancreas (6%).

Figure 8 (Page 22) shows the five-year survival by cancer site for males and females separately and Figure 9 (page 23) the survival curves from diagnosis to five years for all cancer and the leading sites of new cancer. This clearly shows the very different survival patterns for different cancers.

## Sex

Generally survival was similar for men and women. Where differences occurred – all cancers, cancers of the salivary

glands and lung, melanoma and CNS, women usually had the better prognosis. Survival was higher for men only for bladder cancer and unknown primary cancers.

## Age at diagnosis

Most cancers showed decreasing five-year survival with increasing age though the steepness of the decline varied between cancer types. For example, ovarian cancer survival declined from 71% for women aged <45 to 15% for those aged >75, whereas breast cancer survival decreased from 88% to 80% between the same ages.

## Tumour morphology

For most cancers, there were differences in survival by tumour morphology. Table 4 (on page 24) shows survival by morphology for all cancers which varied from 11% for tumours without histological confirmation and 6% for mesothelioma to 77% for other specified cancers (mostly melanoma), 74% for adenocarcinoma and 75% for lymphoma.

## Regional variation

Generally, survival from cancer for residents of metropolitan Melbourne (66%) was better than that for residents from the rest of Victoria (63%).

The reasons for this difference is not clear, and we currently lack data on cancer staging and treatment to assist interpretation. It is possible that Victorians who reside outside of Melbourne have poorer access to cancer services than their metropolitan counterparts and, as a consequence may delay seeking medical attention and present with more advanced cancers.

It must also be kept in mind that cancer services are provided to non-metropolitan residents by a combination of local services, visiting oncologists and by referrals to other (usually metropolitan) providers. It is therefore not possible to accurately attribute differences in survival by region of residence to regional differences in the totality of cancer services provided.

## Trends in survival

For almost all of the cancers in this analysis survival has increased significantly between 1986-1990 and 2006-2010. The only cancers for which no gains have been made are cancers of the larynx and renal pelvis.

Many of the cancers for which the increases in survival are proportionally the highest are those with very poor prognosis. For example, survival from oesophageal cancer increased from 10% to 16%, for gallbladder from 12% to 18%, for CML from 33% to 77%, for liver cancer from 5% to 14%, and for cancer of unknown primary from 6% to 13%. For the last three listed cancers, there were also significant survival gains between the last two periods.

Significant increases have also been observed in overall cancer survival and in survival for the leading types of new cancer - prostate, bowel, breast, lung and melanoma. Survival improvements reflect advances in treatment as well as the successes of programs to increase earlier detection for some cancers such as cervical and breast cancer and melanoma.

### Methods

As with our previous reports, the tables use “period” survival analysis. This uses only the most recent interval survival estimate for cases diagnosed in different calendar years (cross-sectional estimate of survival). The estimate of period 5-year survival for persons in 2006-2010 uses the 1-year interval survival for patients diagnosed in 2010, the 2-year interval survival from patients diagnosed in 2009, and so on. Because the “period” method uses only the most recent survival experience, when there is an increasing trend in survival it provides a more up-to-date measure of recent survival.

The figures shown are relative survival (RS) i.e. net survival from cancer or the proportion (%) who would have survived if cancer was the only cause of death.

$RS = (\text{Observed survival proportion in cancer cohort}) / (\text{expected survival in whole population})$

So 56% five-year survival does not mean that 56/100 cancer patients are alive 5 years later but 56% (about half) as many of this group would survive compared with a group the same age and sex without cancer. Thus the actual proportion surviving would differ between age groups even if relative survival were the same.

Example: Relative survival for two fictional groups of 100 cancer patients aged <30 and >85 years. In the whole (non-cancer) population we would expect to have 95 and 35 persons surviving after 5 years. If the relative survival was 56% for each group, the number of cancer patients who survived would be (56% of 95)=53 persons for the younger group and (56% of 35)=20 persons for the older group. So the same relative survival proportion does not mean the same proportion of deaths in the cancer group but means the same excess proportion of deaths.

---

**Statistical analysis undertaken by Emily Karahalios of the Cancer Council Victoria's Cancer Epidemiology Centre**

### 1986-2010 time period for survival analysis

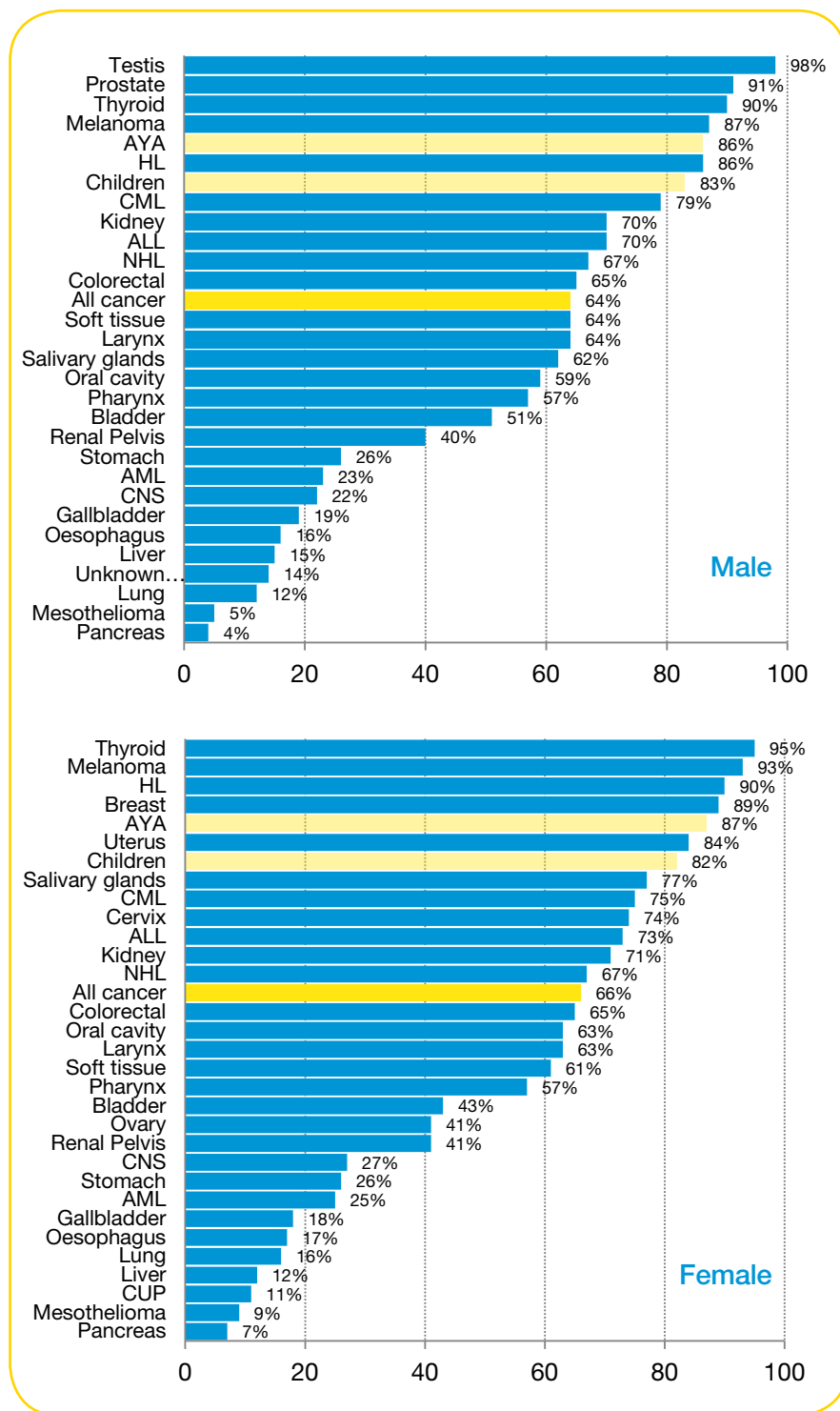
Survival estimates for Victorians with cancer from 1986-2010 are presented on the following pages though the rest of the publication includes statistics from 1982-2011.

In order to present accurate survival statistics, it is necessary to identify deaths occurring in all Australian States and Territories for persons included in the incidence data. Many persons resident in Victoria at time of diagnosis subsequently move interstate. In particular, there is considerable retiree migration from Victoria to Queensland.

Notification of deaths occurring within Victoria are received monthly from the Victorian Registrar of Births, Deaths and Marriages but, for deaths in other States, it is necessary to link the annual incidence file to the National Death Index (at the Australian Institute of Health and Welfare). This linkage, and subsequent update of the registry database with interstate death details for survival analysis, was not achievable within the time frame of this report.

The first year included in survival analysis was chosen to be 1986 because linkage of incidence data to death notifications was less complete prior to this date. The period 1986-2010 provides us with twenty-five years of cases, divided into five-year time intervals, for the comparison of time trends in survival.

**Figure 8: Survival by cancer type for Victorian men and women with cancer in 2006-2010. Figures show five-year relative survival (%) in descending order by cancer type.**

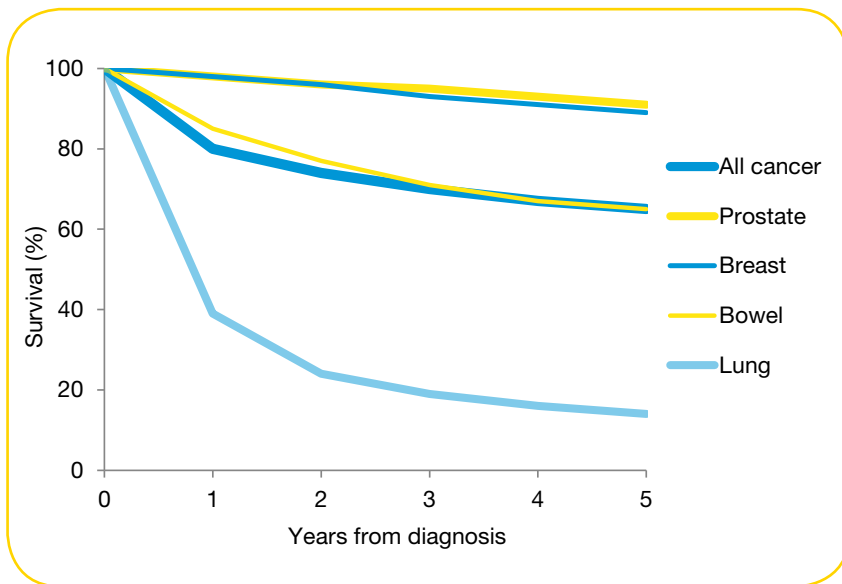


**Abbreviations**

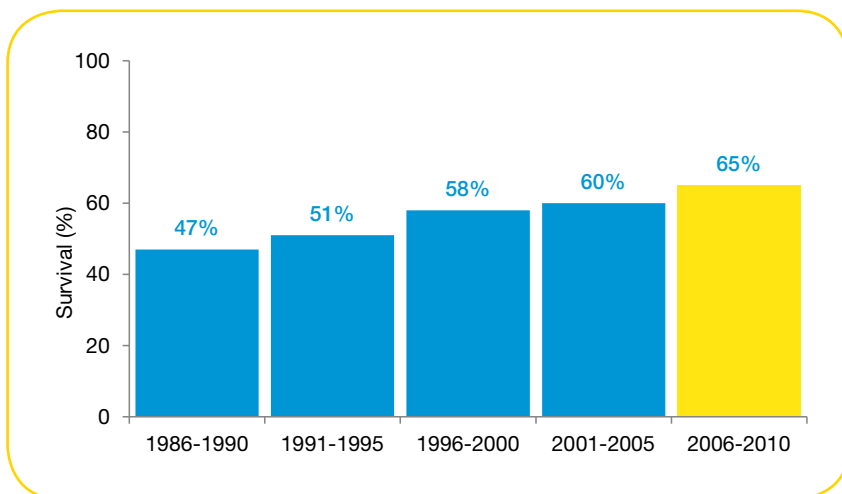
CNS: Brain and central nervous system  
 HL: Hodgkin lymphoma  
 NHL: Non-Hodgkin lymphoma  
 ALL: Acute lymphoblastic leukaemia  
 AML: Acute myeloid leukaemia  
 CML: Chronic myeloid leukaemia

AYA: Cancer in adolescents and young adults (15-24 years)  
 Children: Cancer in children aged under 15 years  
 CUP: Cancer of unknown primary site

**Figure 9:** Survival in the five years following diagnosis for all cancers, and the five leading cancers, in Victoria.



**Figure 10:** Trends in survival for all cancers, Victoria 1982-2010. The figure shows the five-year relative survival in each of the five-year periods from 1986-1990 to 2006-2010.



**Table 4: Survival by sex, age group, tumour morphology and region of usual residence for Victorians with cancer in 2006-2010.**

<b>Years after diagnosis</b>	<b>Number of deaths</b>	<b>Survival (%)</b>	<b>95% confidence Interval</b>		
1	27,219	80	(80, 81)		
2	10,450	74	(73, 74)		
3	6,185	70	(69, 70)		
4	4,552	67	(67, 67)		
5	3,525	65	(65, 65)		
<b>By subgroup</b>	<b>Number of deaths</b>	<b>5-year survival (%)</b>	<b>95% confidence Interval</b>	<b>p-value</b>	
<b>All cases</b>	51,931	65	(65, 65)		
<b>Sex</b>					
Male	30,446	64	(64, 65)		<0.01
Female	21,485	66	(66, 66)		
<b>Age at diagnosis</b>					
0-14	125	82	(80, 85)		<0.01
15-29	250	88	(87, 89)		
30-44	1,366	84	(83, 85)		
45-54	3,649	76	(76, 77)		
55-64	7,971	73	(73, 74)		
65-74	12,896	65	(65, 66)		
75+	25,674	46	(46, 47)		
<b>Region of residence</b>					
Melbourne	34,954	66	(66, 66)		<0.01
Rest of Victoria	16,977	63	(62, 63)		
<b>Integrated Cancer Services Region</b>					
Southern	14,097	66	(66, 67)		<0.01
Western and Central	8,985	63	(62, 63)		
North-Eastern	11,872	68	(67, 68)		
Barwon	4,354	63	(62, 64)		
Grampians	2,704	60	(59, 62)		
Loddon-Mallee	3,671	65	(63, 66)		
Hume	2,978	64	(63, 65)		
Gippsland	3,270	60	(59, 62)		
<b>Tumour Morphology group</b>					
Squamous and transitional cell	5,538	52	(51, 53)		<0.01
Adenocarcinoma	23,889	74	(74, 74)		
Other specific carcinoma	3,739	31	(30, 33)		
Unspecified carcinoma	1,902	17	(16, 19)		
Sarcomas and soft tissue tumours	508	61	(59, 64)		
Kaposi sarcoma	31	84	(72, 94)		
Mesothelioma	648	6	(4, 8)		
Other specified types of cancer	4,944	77	(76, 78)		
Leukaemia	1,803	51	(49, 52)		
Lymphoma	1,929	75	(73, 76)		
No histological confirmation	6,999	11	(11, 12)		



For selected periods	Number of deaths	5-year survival (%)	95% confidencep-value Interval
1986-1990	39,689	47	(47, 48) <0.01/<0.011
1991-1995	46,123	51	(51, 52)
1996-2000	47,292	58	(57, 58)
2001-2005	48,929	60	(60, 61)
2006-2010	51,931	65	(65, 65)

Table 4

Deaths = total deaths in 2006-2010 in Victorians with cancer

Survival = five-year survival proportion (expressed as %) with 95% CI = 95% confidence interval for survival

p-value = statistical significance between groups. The first p-value tests for difference in survival for the two most recent periods (i.e. the period from 2001-2005 with the period from 2006-2010). The second p-value tests fro the trend across all periods shown.

# Cancer projections

- In 2022-2026, we estimate that over 45,000 Victorians will be diagnosed with cancer and 12,000 will die from cancer
- Incidence rates are estimated to increase to 684.9 per 100,000 men and 405.3 per 100,000 women.
- The changes in rates from 2007-2011 to 2022-2026 represent a 17% increase for men and a 2% increase for women.

Projections of cancer incidence and mortality estimate the increasing burden of cancer in Victoria for 2012-2026. Much of this increase is due to the growth and ageing of the Victorian population but historical trends in rates by cancer type, age group and sex are also used in estimating the projected numbers and rates. A brief summary of the method is given below.

The number of new diagnoses per year is predicted to increase 60% by 2022-2026 and deaths by 20%. This represents an additional 17,000 new diagnoses and almost 2,000 deaths per year compared with 2007-2011.

Numbers of new cases are not predicted to fall for any of the cancers examined - the smallest increases are seen for stomach and ovarian cancers (25% increase by 2022-2026).

Figure 11 shows cancer incidence (new cases and age-standardised rates) from 1982-2011 with projections for 2012-2016, 2017-2021 and 2022-2026.

## All cancer

By 2022-2026, the annual diagnoses of cancer are forecast to increase by 75% for males and 41% for females. For men, a large part of this increase is attributable to prostate cancer (see following section) - the increase in all cancers excluding prostate cancer (65%) is closer to that for women). Over the same period, the number of deaths is predicted to increase by around 23% for men and 15% for women.

However, projections of age-standardised rates of incidence and mortality show very different trends to those for diagnoses and deaths. Mortality rates are predicted to decrease by 22% for both men and women. Overall male cancer rates are predicted to increase by 17% in 2022-2026, a trend that is dominated by prostate cancer. For all cancers excluding prostate for men (9%) and all cancers for women (2%), projected rates are more similar to those in 2007-2011.

## Prostate cancer

Prostate cancer incidence rose steeply after the introduction of PSA testing in the early 1990s, peaking in 1995 and then decreasing from 1997 to 1999. There followed a period of fluctuating, but steady, increase with a marked fall in the 2010-2011 rates. The volatile rates make it difficult to project prostate cancer incidence rates with any confidence.

The AIHW conducted an analysis of Medicare Benefits Schedule (MBS) data for PSA screening tests and prostate cancer incidence rates, by ten-year age group, for 2002-2007. They found a constant relationship between the two over time for all groups except men aged 75-84 years. Assuming the same relationships, estimates were calculated for incidence to 2011 using the MBS data - these estimates showed a marked fall in incidence numbers in 2009 and 2011.

Victorian incidence decreased by almost 700 diagnoses in 2010, (though unlike the national estimates, was still rising in 2009) with the greatest decreases being for younger men. Without a more detailed analysis using the MBS data for Victoria, the projections for prostate cancer incidence should be treated with some caution.

## Breast cancer

A similar approach to that used for prostate cancer, was used in modelling female breast cancer incidence rates. A small increase (5%) is expected in incidence rates by 2022-2026 and a decline in mortality rates (about 22%).

## Methods

An age-period-cohort (APC) model with a power link function was used to project cancer incidence and mortality by sex for the next 15 years. Statistical analysis was performed using the Nordpred software package in R.

Figure 11: All cancer incidence and mortality by sex, 1982-2011 with projections to 2022-2026.

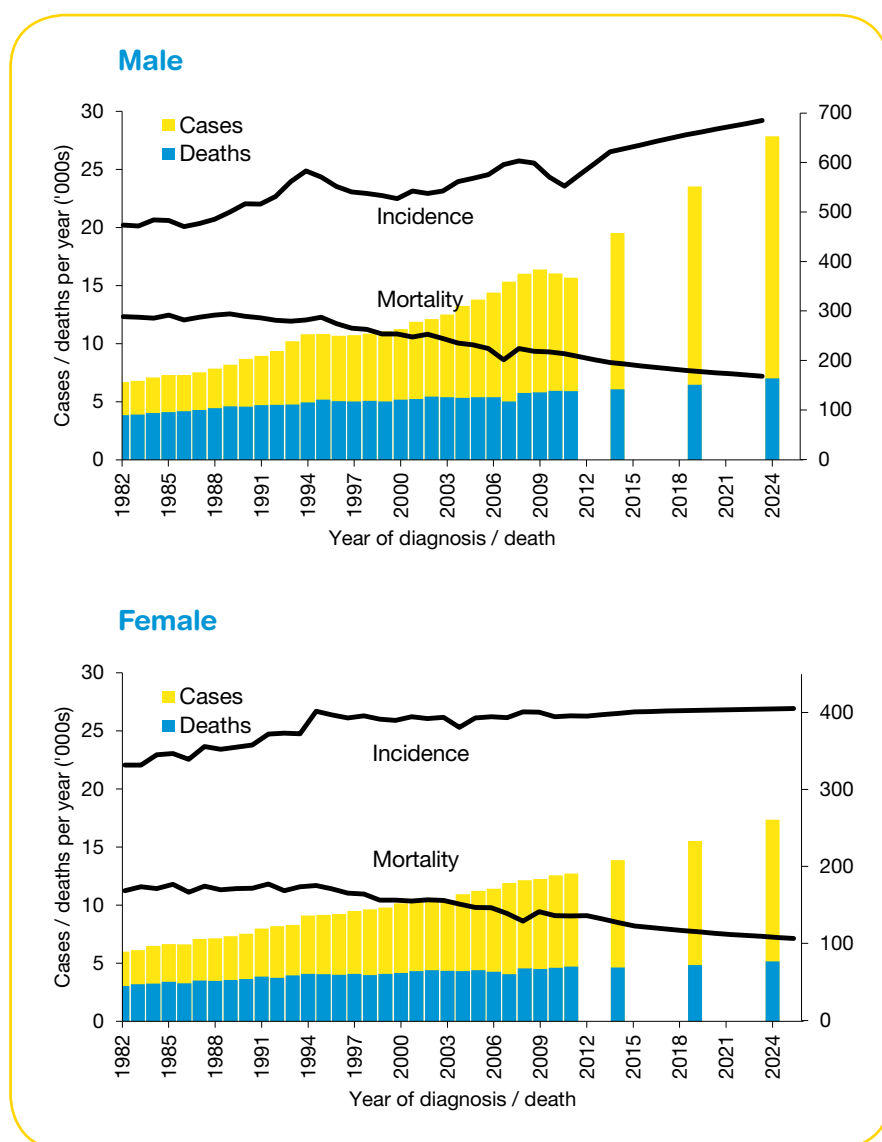


Figure 11 shows counts of new cases and deaths (as bars) and age-standardised incidence and mortality rates per 100,000 men/women (as lines) for Victorian men and women.

For incidence projection, incidence and population data were aggregated into 5-year age groups and 5-year periods from 1982-2011 for all cancers except bladder, female breast and prostate cancers. Projection was based on the last 15, 20, 25 or 30 years depending on a goodness of fit test. For bladder, female breast and prostate cancers, incidence and population data were aggregated into 3-year age groups and 3-year periods from 1997 to 2011. Projection was based on the last 9, 12 or 15 years depending on a goodness of fit test. This method was used to reduce the influence of mammographic screening and PSA testing for female breast and prostate cancer projections. Bladder cancer projections were based on the years 1996 onwards because the coding of bladder cancer changed in 1996.

Mortality projection was similar to incidence projection except female breast and prostate cancers were aggregated into 5-year age groups and 5-year periods instead.

Number of cases of bladder, female breast and prostate cancer and number of deaths of bladder cancer were projected for five 3-year periods, 2012-2014, 2015-2017, 2018-2020, 2021-2023 and 2024-2026. Cases and deaths of all other cancers were projected for three 5-year periods 2012-2016, 2017-2021 and 2022-2026. For both 3-year and 5-year periods, observed and projected incidence given are the average for that period.

Only age groups with at least 10 cases or deaths in total were used in the APC model for projections. Age groups with less than 10 cases or deaths were projected as the average from the last 10 years.

**Statistical analysis undertaken by Kavitha Krishnan of the Cancer Council Victoria's Cancer Epidemiology Centre**

**Table 5:** Incidence projections for selected common cancers for 2012-2016 to 2022-2026.

Cancer	Year	Males		Females	
		Cases	Rate	Cases	Rate
<b>All malignant tumours</b>					
	2007-2011	15,906	585.6	12,311	397.5
	2012-2016	19,538	621.9	13,883	400.9
	2017-2021	23,533	655.9	15,527	403.4
	2022-2026	27,852	684.9	17,346	405.3
<b>Head and neck</b>					
	2007-2011	497	18.1	189	6.1
	2012-2016	538	17.2	210	6.2
	2017-2021	580	16.6	234	6.3
	2022-2026	627	16.4	263	6.5
<b>Stomach</b>					
	2007-2011	352	13.1	194	6.0
	2012-2016	365	11.7	206	5.6
	2017-2021	389	10.9	223	5.4
	2022-2026	425	10.5	251	5.4
<b>Bowel</b>					
	2007-2011	1,991	73.9	1,638	50.9
	2012-2016	2,215	71.1	1,805	49.7
	2017-2021	2,450	68.6	1,998	48.9
	2022-2026	2,719	67.3	2,233	49.0
<b>Pancreas</b>					
	2007-2011	353	13.2	326	9.9
	2012-2016	456	14.6	398	10.6
	2017-2021	564	15.8	473	11.1
	2022-2026	673	16.6	555	11.4
<b>Lung</b>					
	2007-2011	1,476	55.1	986	31.1
	2012-2016	1,549	49.6	1,164	32.2
	2017-2021	1,636	45.5	1,328	32.4
	2022-2026	1,767	43.2	1,477	31.8
<b>Melanoma</b>					
	2007-2011	1,248	46.2	972	32.4
	2012-2016	1,420	46.0	1,033	30.7
	2017-2021	1,563	44.5	1,101	29.3
	2022-2026	1,689	42.3	1,196	28.2
<b>Breast (female)</b>					
	2009-2011			3,507	114.5
	2012-2014			3,748	115.1
	2015-2017			3,991	116.0
	2018-2020			4,282	117.7
	2021-2023			4,584	119.4
	2024-2026			4,875	120.5
<b>Uterus</b>					
	2007-2011			576	18.8
	2012-2016			681	19.9
	2017-2021			794	21.0
	2022-2026			920	22.1

Cancer	Year	Males		Females	
		Cases	Rate	Cases	Rate
<b>Ovary</b>	2007-2011			360	11.7
	2012-2016			391	11.3
	2017-2021			420	11.0
	2022-2026			452	10.7
<b>Prostate</b>	2009-2011	5,101	178.7		
	2012-2014	5,745	183.0		
	2015-2017	6,524	192.2		
	2018-2020	7,520	206.3		
	2021-2023	8,695	223.9		
	2024-2026	10,019	243.4		
<b>Kidney</b>	2007-2011	435	15.9	235	7.7
	2012-2016	550	17.7	280	8.1
	2017-2021	670	19.2	328	8.5
	2022-2026	791	20.4	380	8.7
<b>Bladder</b>	2009-2011	477	17.7	149	4.3
	2012-2014	511	16.9	170	4.5
	2015-2017	536	16.2	178	4.4
	2018-2020	575	15.9	184	4.2
	2021-2023	623	15.6	198	4.2
	2024-2026	679	15.4	210	4.1
<b>Thyroid</b>	2007-2011	115	4.3	302	10.7
	2012-2016	182	6.1	407	13.4
	2017-2021	257	7.8	516	15.6
	2022-2026	327	9.2	615	17.0
<b>Lymphoma</b>	2007-2011	739	27.3	564	18.4
	2012-2016	868	28.4	617	18.0
	2017-2021	1,001	29.0	673	17.7
	2022-2026	1,136	29.4	727	17.2
<b>Leukaemia</b>	2007-2011	467	17.6	320	10.2
	2012-2016	570	18.8	375	10.8
	2017-2021	668	19.5	428	11.1
	2022-2026	773	20.0	484	11.3

Table 5 shows cancer incidence by sex in 2007-2011 with projections for 2012-2016, 2017-2021 and 2022-2026.

**Cases** = actual / projected new diagnoses in period

**Rate** = age-standardised rate per 100,000 males/females

The age standardised rates presented are standardised to the Australian 2001 population in order to allow comparison with other Australian cancer projections.

Note that the rates presented elsewhere in this report are standardised to the World Standard Population.

**Table 6: Mortality projections for selected common cancers for 2012-2016 to 2022-2026.**

Cancer	Year	Males		Females	
		Deaths	Rate	Deaths	Rate
<b>All malignant tumours</b>					
	2007-2011	5,686	215.3	4,477	134.9
	2012-2016	6,083	195.7	4,645	122.7
	2017-2021	6,467	179.6	4,834	113.1
	2022-2026	7,012	168.4	5,155	106.4
<b>Head and neck</b>					
	2007-2011	168	6.2	73	2.2
	2012-2016	189	6.0	79	2.1
	2017-2021	212	5.9	84	2.0
	2022-2026	236	5.7	93	1.9
<b>Stomach</b>					
	2007-2011	234	8.8	131	3.9
	2012-2016	289	9.3	134	3.5
	2017-2021	354	9.9	139	3.2
	2022-2026	427	10.5	151	3.2
<b>Bowel</b>					
	2007-2011	700	26.5	585	17.2
	2012-2016	779	25.1	590	15.3
	2017-2021	863	24.1	618	14.2
	2022-2026	968	23.6	660	13.5
<b>Pancreas</b>					
	2007-2011	304	11.4	279	8.3
	2012-2016	372	11.9	309	8.1
	2017-2021	441	12.3	341	7.8
	2022-2026	511	12.5	382	7.6
<b>Lung</b>					
	2007-2011	1,172	44.0	741	22.9
	2012-2016	1,188	38.1	833	22.6
	2017-2021	1,220	33.9	919	22.0
	2022-2026	1,297	31.5	1,006	21.1
<b>Melanoma</b>					
	2007-2011	197	7.4	93	2.8
	2012-2016	249	8.1	96	2.7
	2017-2021	292	8.3	101	2.5
	2022-2026	329	8.1	106	2.4
<b>Breast (female)</b>					
	2007-2011			699	21.8
	2012-2016			702	19.4
	2017-2021			712	17.8
	2022-2026			756	17.0
<b>Uterus</b>					
	2007-2011			95	2.9
	2012-2016			105	2.8
	2017-2021			119	2.8
	2022-2026			135	2.9

Cancer	Year	Males		Females	
		Deaths	Rate	Deaths	Rate
<b>Ovary</b>					
	2007-2011			221	6.9
	2012-2016			232	6.3
	2017-2021			238	5.8
	2022-2026			248	5.4
<b>Prostate</b>					
	2007-2011	789	30.9		
	2012-2016	814	26.4		
	2017-2021	842	23.2		
	2022-2026	917	21.3		
<b>Kidney</b>					
	2007-2011	128	4.8	69	2.1
	2012-2016	130	4.2	61	1.6
	2017-2021	136	3.8	55	1.3
	2022-2026	145	3.6	54	1.1
<b>Bladder</b>					
	2009-2011	190	7.1	73	2.0
	2012-2014	229	7.6	72	1.8
	2015-2017	254	7.7	74	1.7
	2018-2020	292	8.1	78	1.7
	2021-2023	322	8.1	80	1.6
	2024-2026	377	8.6	82	1.6
<b>Thyroid</b>					
	2007-2011	12	0.5	18	0.5
	2012-2016	17	0.6	24	0.6
	2017-2021	22	0.6	29	0.7
	2022-2026	27	0.7	32	0.7
<b>Lymphoma</b>					
	2007-2011	210	7.9	160	4.7
	2012-2016	203	6.6	138	3.5
	2017-2021	207	5.8	124	2.8
	2022-2026	227	5.6	117	2.3
<b>Leukaemia</b>					
	2007-2011	237	9.1	171	5.0
	2012-2016	263	8.6	182	4.7
	2017-2021	289	8.1	197	4.4
	2022-2026	321	7.7	215	4.2

Table 6 shows cancer mortality by sex in 2007-2011 with projections for 2012-2016, 2017-2021 and 2022-2026.

**Deaths** = actual / projected deaths in period

**Rate** = age-standardised rate per 100,000 males/females

The age standardised rates presented are standardised to the Australian 2001 population in order to allow comparison with other Australian cancer projections.

Note that the rates presented elsewhere in this report are standardised to the World Standard Population.

# Appendix 1: About the Victorian Cancer Registry

## The minimum data set collected for each cancer consists of:

- Registry identification number
- Name(s)
- Residential address
- Date of birth
- Indigenous status
- Country of birth
- Sex
- Vital status
- Date of last contact
- Number of primary tumours
- Date of diagnosis
- Site of cancer
- Cancer histology
- Tumour grade
- Method of diagnosis

The Victorian Cancer Registry has been a population-based registry since 1982. Amendments to the Cancer Act in 1981 made it mandatory for all hospitals and pathology laboratories to notify the cancer registry of the presence of cancer in patients or human tissues. Canstat No 37 "A Guide to the Victorian Cancer Registry" describes in more detail the legislation, history, purpose and operation of the registry.

All malignant neoplasms are registered, as are in situ carcinoma of breast and cervix and in situ melanoma. Basal and squamous cell carcinomas (SCC) of the skin are not registered except for SCC of genital and perianal skin and the vermilion border of lip.

Squamous and basal cell carcinomas of other skin sites are not registered by the Victorian Cancer Registry as many are treated in doctors' surgeries using destructive techniques which preclude histological confirmation and also as they vastly outnumber all other forms of cancer.

All other non-melanocytic skin cancers (NMSC), such as Merkel cell tumour, malignant fibrous histiocytoma (MFH), dermatofibroma protuberans (DFSP), sweat gland and skin appendage tumours are registered and reported as "other skin cancer".

Currently, over 200 hospitals and 30 pathology laboratories notify cancer to the registry, increasingly via electronic media. In preparing the 2011 incidence data, around 100,000 notifications were processed. In addition, death certificates

are obtained from the Registrar of Births, Deaths and Marriages in computerised format on a regular basis.

The first task at the registry is to match incoming notifications against the register to see if the case has already been registered from another source. Demographic details and codes for tumour site and histology are entered on the system and data are checked for internal consistency and completeness. Further notifications for cancers already on the system are also processed, with any differences being resolved by follow-up, and a censoring date for survival analysis obtained.

Additional information is recorded for some cancer sites e.g. size, hormone receptor status and TNM stage for breast cancer, Clark's level and Breslow thickness for malignant melanoma. Specially trained staff interpret pathology reports to extract and code these data elements, assisted by a consultant pathologist.

The incidence tables in Appendix 6 (pages 38-47) give site, sex and age-specific numbers and rates for most 3-digit ICD-10 rubrics. Age standardised rates (ASR) with standard errors (SE) are given for each site. Confidence limits (95%) for each rate may be obtained by calculating  $(ASR \pm 1.96 \times SE)$ . A brief explanation of the statistical methods used may be found in Appendix 4 (page 36).



# Appendix 2:

## Cancer incidence reporting

The incidence data in this report are the 2011 statistics as they stood on 4th October 2012.

Future requests for data and publications may not exactly correspond to the figures in this report, as they will reflect subsequent additions to the dataset.

### Incidence

Cancer incidence is defined as the occurrence of new cancers in a defined population in a specified time period. This report includes all cancers notified to the registry that were first diagnosed in Victorian residents between January 1st and December 31st 2011. Tumour morphology and topography are coded to the International Classification of Diseases for Oncology, Third Edition (ICDO-3) (Ref1).

In this report, cancers are grouped by ICD-10 (Ref 2) as described in Appendix 3 (pages 34-35). Figures include chronic myeloproliferative disorders and myelodysplastic syndromes which are classified as malignant in ICDO-3 (though these conditions have uncertain behaviour codes in ICD-10).

### Multiple primary tumours

Incidence reflects the number of primary tumours rather than the number of individuals with cancer. The Victorian Cancer Registry database records multiple primary cancers in the same person, of which only some are counted for incidence purposes according to the rules of the International Agency for Research on Cancer and the International Association of Cancer Registries (Ref 5).

The rules, in brief, state that:

1. The recognition of the existence of two or more primary cancers does not depend on time.
2. A primary cancer is one that originates in a primary site or tissue and is not an extension, nor a recurrence, nor a metastasis.
3. Only one tumour is recognised as arising in an organ or pair of organs or tissue. Some groups of codes are considered to be a single organ for the purposes of defining multiple tumours - in this report we use the ICDO-3 groups defined

by IARC (Ref 5). Multifocal tumours - discrete masses apparently not in continuity with other primary cancers originating in the same primary site or tissue, for example bladder - are counted as a single cancer.

4. Rule 3 does not apply in two circumstances: Systemic (or multicentric) cancers potentially involving many different organs are only counted once in any individual. These are Kaposi sarcoma (group 15) and tumours of the haematopoietic system (groups 8-14 in IARC).

Neoplasms of different morphology should be regarded as multiple cancers (even if they are diagnosed simultaneously in the same site). If the morphological diagnoses fall into one category, and arise in the same primary site, they are considered to be the same morphology for the purpose of counting multiple primaries. If the morphological diagnoses fall into two or more of the categories, even if they concern the same site, the morphology is considered to be different, and two or more cases should be counted.

If, however, one morphology is not specific (groups 5, 14 and 17) and a specific morphology is available, the case should be reported with the specific histology and the non-specific diagnosis ignored.

### Publication of incidence reports

There are usually at least twelve months from year of diagnosis to publication of incidence data. This is due to the time delay between the date of cancer diagnosis and receipt of all relevant notifications to the Victorian Cancer Registry, and to the considerable time spent on matching, classifying and checking of cases at the registry.

It should also be noted that despite intensive efforts to ensure the completeness of incidence data before publication, the incidence rates for a given time period change by a small percentage over time. The registry will continue to receive notifications for cases already counted in incidence, and the tumour morphology (based on microscopic diagnosis) or date of diagnosis may be amended as a result of this later notification. Reports for previously uncounted cases diagnosed in a particular year will continue to arrive at the registry for some years after the incidence for that period has been published.

The database is therefore continually being updated and the quality of data improved across the entire period of cancer reporting.

## Appendix 3: Details of cancer sites and codes used in this report<sup>1</sup> by ICD-10 codes<sup>(Ref 2)</sup>

ICD-10 description	ICD-10	Label in tables
<b>Lip, oral cavity and pharynx (C00–C14)</b>		
Lip	C00	Lip
Tongue	C01,C02	Tongue
Gum	C03	Gum
Floor of mouth	C04	Floor of mouth
Other and unspecified parts of mouth	C05,C06	Other mouth
Oral Cavity	C01–C06	Oral Cavity
Major salivary glands	C07,C08	Salivary glands
Oropharynx	C09,C10	Oropharynx
Nasopharynx	C11	Nasopharynx
Hypopharynx including pyriform sinus	C12,C13	Hypopharynx
Pharynx	C09–C13	Pharynx
Other and unspecified sites of lip, oral cavity and pharynx	C14	Other oral
<b>Digestive organs (C15–C26)</b>		
Oesophagus	C15	Oesophagus
Stomach	C16	Stomach
Small intestine including duodenum	C17	Small intestine
Colon	C18	Colon
Rectum including rectosigmoid, anal canal and anus	C19–C21	Rectum
Bowel	C18–C21	Bowel
Liver and intrahepatic bile ducts	C22	Liver
Gallbladder and other biliary tract	C23,C24	Gallbladder
Pancreas	C25	Pancreas
<b>Respiratory system and intrathoracic organs (C30–C39)</b>		
Nose, nasal cavities, middle ear and accessory sinuses	C30,C31	Nasal cavities
Larynx	C32	Larynx
Trachea, bronchus and lung	C33,C34	Lung
Thymus, heart, mediastinum and pleura	C37,C38	Thymus etc
<b>Bones, joints and articular cartilage (C40–C41)</b>		
Bone and articular cartilage	C40,C41	Bone
<b>Melanoma (C43)</b>		
<b>Melanoma of skin</b>	<b>C43</b>	<b>melanoma</b>
<b>Other malignant neoplasms of skin (C44)</b>		
Other skin cancer <sup>2</sup>	C44	Other skin
<b>Mesothelial and soft tissue (C45–C49)</b>		
Mesothelioma	C45	Mesothelioma
Kaposi sarcoma	C46	Kaposi sarcoma
Retroperitoneum and peritoneum	C48	Peritoneum
Other connective tissue (incl. peripheral nerves etc)	C47,C49	Connective tissue
<b>Breast (C50) and female genital organs (C51–C58)</b>		
Breast	C50	Breast
Cervix uteri	C53	Cervix
Body of uterus	C54, C55	Uterus
Ovary	C56	Ovary
Placenta	C58	Placenta
Vulva and other/unspecified female genital organs	C51, C52, C57	Vulva etc
<b>Male genital organs (C60–C63)</b>		
Prostate	C61	Prostate
Testis	C62	Testis
Penis and other male genital organs	C60,C63	Penis etc

ICD-10 description	ICD-10	Label in tables
<b>Urinary tract (C64–C68)</b>		
Kidney, except renal pelvis	C64	Kidney
Bladder	C67	Bladder
Renal pelvis and other/unspecified urinary organs	C65,C66,C68	Renal pelvis etc
<b>Eye, brain and other parts of central nervous system (C69–C72)</b>		
Eye	C69	Eye
Meninges	C70	Meninges
Brain	C71	Brain
Cranial nerves, spinal cord and unspecified CNS	C72	Other CNS
Brain and CNS	C70–C72	Brain and CNS
<b>Thyroid and other endocrine glands (C73–C75)</b>		
Thyroid gland	C73	Thyroid
Other endocrine glands and related structures	C74,C75	Other endocrine
<b>Unknown primary site (C26, C39, C76–C80)</b>		
Other and ill-defined sites	C26, C39, C76–79	Ill-defined sites
Unspecified site	C80	Unspecified site
<b>Malignant neoplasms of lymphoid, haematopoietic and related tissue (C81–96, D45–47)</b>		
Hodgkin lymphoma	C81	Hodgkin lymphoma
Nodular non-Hodgkin lymphoma	C82	Nodular NHL
Diffuse non-Hodgkin lymphoma	C83	Diffuse NHL
Peripheral and cutaneous T-cell lymphoma	C84	T-cell lymphoma
Other/unspecified non-Hodgkin lymphoma	C85	Other NHL
Non-Hodgkin lymphoma	C82–85	All NHL
All lymphoma	C81–85	Lymphoma
Malignant immunoproliferative disease	C88	Immunoproliferative
Multiple myeloma and malignant plasma cell neoplasms	C90	Multiple myeloma
Lymphoid leukaemia	C91	Lymphoid leukaemia
Acute lymphoblastic leukaemia	C91.0	
Chronic lymphocytic leukaemia	C91.1	
Myeloid leukaemia	C92	Myeloid leukaemia
Acute myeloid leukaemia	C92.0	
Chronic myeloid leukaemia	C92.1	
Monocytic leukaemia	C93	Monocytic leukaemia
Other specified leukaemia	C94	Other leukaemia
Unspecified cell leukaemias	C95	Unspecified leukaemia
All leukaemia	C91–C95	All leukaemia
Other and unspecified haematopoietic neoplasms	C96	Other haematopoietic
Chronic myeloproliferative and myelodysplastic syndromes	D45–D47	Myeloproliferative
<b>All malignant tumours<sup>2</sup></b>	<b>C00–C96, D45–D47</b>	<b>all malignant tumours</b>
<b>The following in situ tumours are also reported:</b>		
In situ melanoma (D03)		
Carcinoma in situ of breast (D05)		
Carcinoma in situ of cervix (D06)		

1. Reportable neoplasms include all C00-C96 plus the chronic myeloproliferative disorders and myelodysplastic syndromes which are classified as malignant in ICDO-3 (though these conditions have uncertain behaviour codes in ICD-10)

2. Excludes squamous and basal cell carcinomas of skin)

# Appendix 4:

## Statistical methods and mortality coding

### Statistical methods

The following statistical terms and abbreviations have been used in this report.

#### Incidence and mortality rates

Incidence and mortality rates were calculated using the estimated resident population for Victoria in 2011 (page 49) and expressed as diagnoses or deaths per 100,000 population per annum.

#### Crude rates

The crude rate is defined as the number of new cases (or deaths) divided by the whole population at risk in the specified time period, expressed as an annual rate per 100,000 population.

#### Age-specific rates

Age-specific rates are calculated in the same way as the crude rate by dividing the number of cases in each five-year age and sex stratum by the population estimate for that stratum and multiplying by 100,000 (to give rates per 100,000).

#### Age-standardised rates

Rates are adjusted to enable comparisons between populations having different age structures. The Victorian standardised rates (ASR) in this publication were based on the World Standard Population (Cancer Incidence in Five Continents, Volume IV, 1982, IARC). These rates are calculated using the direct method by summation of the weighted age-specific rates. The standard error (SE) of each ASR is given in the tables; a 95% confidence interval for the rate can be estimated by  $(\text{rate} \pm 1.96 \text{ SE})$ .

#### Cumulative rates (to age 75 years)

Five-year age–sex specific rates per person are multiplied by five and summed over age groups from 0–4 to 70–74. This rate is then expressed as a percentage. The rate is a good estimator of lifetime risk.

#### Risk to age 75 years

This risk is a measure of the risk of contracting a particular cancer by the age of 75 years if the risks at the time of calculation continued throughout life. It is calculated from the cumulative rate using the following formula and expressed as a “1 in x” proportion.

$$\text{Risk to age 75} = 1/\text{cumulative risk where} \\ \text{Cumulative risk} = 1 - e^{-(\text{cumulative rate})/100}$$

#### Years of Potential Life Lost (to age 75 years)

Years of potential life lost (YPLL) is a measure of the number of years of life lost per year due to premature death from a particular cause given population life expectancy. All deaths in age groups from 0–4 to 70–74 were used in calculations, as deaths before the age of 75 years are considered premature.

### Mortality coding

VCR staff coded cause of death for all Victorians dying in 2011 who ever had a diagnosis of cancer. WHO rules (Ref 6) are used to determine the underlying cause of death from information supplied by the certifying doctor on the death certificate. Deaths are coded to the 4-digit ICD10 code if cancer was the underlying cause, otherwise they are recorded as non-cancer deaths.

Since 2007 we have presented our own cancer mortality figures, having previously reported coded causes of death from the Australian Bureau of Statistics (ABS).

The reasons for this change include;

#### Data quality and specificity

The registry has additional information, not available to the ABS, regarding each person’s cancer diagnosis/diagnoses, including recent hospital admissions for recurrent or metastatic disease. This information may assist in deciding whether cancer was the underlying cause of death and in determining the most accurate cancer cause of death code.

#### Haematological malignancies

There is rarely sufficient information on a death certificate to allow the detailed coding of haematological malignancies. Tumour morphology is required to classify accurately into ICD-10 4-digit rubrics or the WHO haematological groups which we use in reporting. By matching the cause of death to existing registry tumour records we can allocate a more precise code.

Inevitably, there were some small changes in reported cancer mortality resulting from this change of coding practice. The overall number of cancer deaths coded by VCR in 2010 was about 2% lower than was reported by ABS. Generally we code slightly more deaths to specific cancers and fewer to ill-defined and unknown sites than the ABS. When comparing trends over time, these changes should be taken into account.

## Appendix 5: In situ cancers 2011

Incidence rates are reported for in situ melanomas and carcinoma in situ of female breast and cervix. In situ cancers are localised lesions that have not invaded beyond the epithelial layer. If untreated, some in situ neoplasms may progress to become invasive cancer and metastasise to other body sites through the lymphatics or bloodstream.

The BreastScreen and PapScreen Victoria programs provide women in Victoria with access to regular breast and cervical screening. These services offer two-yearly screening with the aim of maximising early detection of cancer or pre-malignant abnormalities.

The SunSmart program has made considerable impact on the early detection of melanoma with extensive education programs for medical practitioners and the general public.

The reporting of in situ incidence of these cancers will be of interest in monitoring the effects of interventions. We would expect to see in situ incidence increasing with early detection, to be accompanied eventually by decreasing numbers of invasive cancers.

Note: For the purposes of this report, carcinoma in situ of the cervix includes CIN II-III lesions as well as CIN III lesions.

Age group	Cervix Female		Breast Female		Melanoma			
	Cases	Rate	Cases	Rate	Male Cases	Male Rate	Female Cases	Female Rate
0- 4	0	0.0	0	0.0	0	0.0	0	0.0
5- 9	0	0.0	0	0.0	0	0.0	0	0.0
10-14	0	0.0	0	0.0	0	0.0	0	0.0
15-19	15	8.6	0	0.0	0	0.0	1	0.6
20-24	353	175.3	1	0.5	1	0.5	4	2.0
25-29	638	303.5	2	1.0	4	1.9	16	7.6
30-34	450	229.8	5	2.6	13	6.6	16	8.2
35-39	293	146.5	15	7.5	17	8.7	32	16.0
40-44	167	82.2	33	16.2	35	17.9	46	22.6
45-49	121	62.5	43	22.2	48	25.5	65	33.6
50-54	54	29.2	98	53.0	60	33.5	66	35.7
55-59	42	25.4	78	47.2	108	67.8	77	46.6
60-64	22	14.3	75	48.6	125	85.1	82	53.2
65-69	18	15.2	71	60.0	129	113.0	86	72.7
70-74	4	4.3	41	43.9	127	146.8	82	87.9
75-79	2	2.6	19	24.5	89	135.8	60	77.4
80-84	0	0.0	7	10.6	77	156.5	68	103.0
85+	1	1.5	6	8.8	57	158.7	53	77.5
<b>Total cases</b>	<b>2,180</b>		<b>494</b>		<b>890</b>		<b>754</b>	
<b>Cumulative rate (%)</b>	<b>5.5</b>		<b>1.5</b>		<b>2.5</b>		<b>1.9</b>	
<b>Lifetime risk (to age 75)</b>	<b>1 in 19</b>		<b>1 in 65</b>		<b>1 in 41</b>		<b>1 in 53</b>	
<b>Age-standardised rate</b>	<b>74.0</b>		<b>12.5</b>		<b>20.8</b>		<b>17.0</b>	

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE	
<b>C00 Lip</b>																							
Male	0	0	0	0	0	0	2	1	5	7	12	9	21	12	13	20	10	8	6	126			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	2.6	3.6	6.4	5.0	13.2	8.2	11.4	23.1	15.3	16.3	16.7	4.6	3.1	0.3	
Male	0	0	0	0	0	1	0	2	2	1	5	5	7	3	6	11	4	4	6	53			
Female	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.0	1.0	1.0	0.5	2.7	3.0	4.5	2.5	6.4	14.2	6.1	8.8	1.9	1.1	0.1	
<b>C01, C02 Tongue</b>																							
Male	0	0	0	0	0	0	1	1	4	5	17	15	16	16	17	17	15	4	3	114			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	2.0	2.7	9.5	9.4	10.9	14.0	19.7	22.9	8.1	8.4	8.4	4.2	2.8	0.2	
Male	0	0	0	0	0	1	0	1	1	4	7	6	5	4	4	9	4	4	4	50			
Female	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.5	2.1	3.8	3.6	3.2	3.4	4.3	11.6	6.1	5.9	1.8	1.1	0.1		
<b>C07, C08 Salivary glands</b>																							
Male	0	0	0	0	0	0	0	2	1	3	3	2	2	2	4	4	4	5	2	30			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	1.6	1.7	1.3	1.4	1.8	4.6	6.1	10.2	5.6	1.1	0.7	0.1		
Male	0	0	1	0	1	0	0	1	1	1	7	3	1	2	2	0	1	1	6	27			
Female	0.0	0.0	0.6	0.0	0.5	0.0	0.0	0.5	0.5	0.5	3.8	1.8	0.7	1.7	2.1	0.0	1.5	8.8	1.0	0.6	0.1		
<b>C03 Gum</b>																							
Male	0	0	0	0	0	0	0	0	0	1	1	1	2	4	0	0	1	3	0	13			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6	1.4	3.5	0.0	1.5	6.1	0.0	0.0	0.5	0.3	0.1	
Male	0	0	0	0	0	1	0	0	0	0	0	1	2	1	1	1	2	2	2	11			
Female	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.6	1.3	0.9	1.1	1.3	3.0	2.9	0.4	0.2	0.0		
<b>C04 Floor of mouth</b>																							
Male	0	0	0	0	0	0	0	1	1	1	4	9	5	5	3	1	1	1	1	32			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	2.2	5.7	3.4	4.4	3.5	1.5	2.0	2.8	1.2	0.8	0.1		
Male	0	0	0	0	0	0	0	0	0	1	0	2	1	0	1	0	1	2	2	8			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.2	0.7	0.0	1.1	0.0	1.5	2.9	0.3	0.2	0.0		
<b>C05, C06 Other mouth</b>																							
Male	0	0	0	0	0	0	0	1	0	1	3	3	9	5	2	2	3	3	6	35			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	1.7	1.9	6.1	4.4	2.3	3.1	6.1	16.7	1.3	0.8	0.1		
Male	0	0	0	0	0	0	0	0	2	1	2	6	1	4	3	0	3	6	6	28			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	1.1	3.6	0.7	3.4	3.2	0.0	4.5	8.8	1.0	0.6	0.1		

Appendix 6 Numbers (Blue) and age-specific rates (black)  
 – CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C01-C06 Oral cavity</b>																						
Male	0	0	0	0	0	0	1	3	5	8	25	28	32	30	22	19	11	10	194			
	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.5	2.6	4.3	14.0	17.6	21.8	26.3	25.4	29.0	22.4	27.9		7.1	4.6	0.3
Female	0	0	0	0	0	1	1	1	3	6	9	15	9	9	9	10	10	14	97			
	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.5	3.1	4.9	9.1	5.8	7.6	9.6	12.9	15.2	20.5		3.5	1.9	0.2
<b>C09, C10 Oropharynx</b>																						
Male	0	0	0	0	0	0	0	3	5	5	13	21	10	13	7	6	3	3	89			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.6	2.7	7.3	13.2	6.8	11.4	8.1	9.2	6.1	8.4		3.3	2.2	0.2
Female	0	0	0	0	0	0	0	1	1	1	3	2	2	4	2	1	1	2	20			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.6	1.2	1.3	3.4	2.1	1.3	1.5	2.9		0.7	0.5	0.1
<b>C11 Nasopharynx</b>																						
Male	0	0	0	0	1	0	1	0	4	5	3	2	1	1	3	1	1	1	24			
	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	2.0	2.7	1.7	1.3	0.7	0.9	3.5	1.5	2.0	2.8		0.9	0.7	0.1
Female	0	0	0	0	0	0	0	1	0	1	2	2	2	0	0	0	0	1	9			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	1.1	1.2	1.3	0.0	0.0	0.0	0.0	1.5		0.3	0.2	0.1
<b>C12, C13 Hypopharynx</b>																						
Male	0	0	0	0	0	0	0	0	0	0	1	3	3	3	3	2	2	0	17			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.9	2.0	2.6	3.5	3.1	4.1	0.0		0.6	0.4	0.1
Female	0	0	0	0	0	0	0	1	0	0	1	0	0	3	0	0	1	0	6			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	2.5	0.0	0.0	1.5	0.0		0.2	0.1	0.0
<b>C09-C13 Pharynx</b>																						
Male	0	0	0	0	1	0	1	3	9	10	17	26	14	17	13	9	6	4	130			
	0.0	0.0	0.0	0.0	0.5	0.0	0.5	1.5	4.6	5.3	9.5	16.3	9.5	14.9	15.0	13.7	12.2	11.1		4.8	3.3	0.3
Female	0	0	0	0	0	0	0	3	1	2	6	4	4	7	2	1	2	3	35			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.5	1.0	3.2	2.4	2.6	5.9	2.1	1.3	3.0	4.4		1.3	0.8	0.1
<b>C14 Other oral</b>																						
Male	0	0	0	0	0	0	0	0	0	0	0	3	3	2	1	1	2	0	12			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.0	1.8	1.2	1.5	4.1	0.0		0.4	0.3	0.1
Female	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	4	7			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.9	1.1	0.0	0.0	5.9		0.3	0.1	0.0

Appendix 6 Numbers (Blue) and age-specific rates (black)

– CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C15 Oesophagus</b>																						
Male	0	0	0	0	0	1	1	1	4	8	14	19	35	29	26	31	25	22	216			
Female	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	2.0	4.3	7.8	11.9	23.8	25.4	30.1	47.3	50.8	61.3	93	7.9	4.7	0.3
Female	0	0	0	0	0	0	0	0	0	4	0	3	7	13	13	15	21	17	93			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	1.8	4.5	11.0	13.9	19.4	31.8	24.9	3.3	1.5	0.1	
<b>C16 Stomach</b>																						
Male	0	0	0	0	1	1	1	1	5	9	18	30	41	56	60	55	55	36	369			
Female	0.0	0.0	0.0	0.0	0.5	0.5	0.5	2.6	4.8	10.1	18.8	27.9	49.0	69.4	83.9	111.8	100.3	100.3	13.5	7.7	0.4	
Female	0	0	0	0	1	3	5	5	5	12	9	14	29	29	29	25	32	30	199			
Female	0.0	0.0	0.0	0.0	0.5	1.5	2.5	2.5	2.5	2.6	6.5	5.4	9.1	24.5	31.1	32.3	48.5	43.9	7.1	3.6	0.2	
<b>C17 Small Intestine</b>																						
Male	0	0	0	0	0	2	0	1	3	4	4	5	9	7	7	4	10	5	58			
Female	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	1.6	2.2	3.1	6.1	6.1	6.1	8.1	6.1	20.3	13.9	2.1	1.3	0.1	
Female	0	0	0	0	0	1	0	2	0	2	8	8	5	8	6	3	8	8	51			
Female	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.0	0.0	1.1	4.8	4.8	3.2	6.8	6.4	3.9	12.1	11.7	1.8	1.0	0.1	
<b>C18 Colon</b>																						
Male	0	0	0	0	4	6	6	3	10	38	67	82	130	166	191	206	195	123	1,227			
Female	0.0	0.0	0.0	0.0	1.9	2.8	3.1	1.5	5.1	20.2	37.5	51.5	88.5	145.4	220.8	314.3	396.4	342.5	44.8	25.3	0.7	
Female	0	0	0	0	2	5	11	17	18	39	66	78	115	124	165	167	186	216	1,209			
Female	0.0	0.0	0.0	0.0	1.0	2.4	5.6	8.5	8.9	20.1	35.7	47.2	74.6	104.8	176.8	215.4	281.8	315.8	43.2	21.3	0.6	
<b>C19-C20 Rectum</b>																						
Male	0	0	0	0	0	3	9	9	15	37	57	73	121	83	124	98	91	51	771			
Female	0.0	0.0	0.0	0.0	0.0	1.4	4.6	4.6	7.7	19.7	31.9	45.8	82.4	72.7	143.4	149.5	185.0	142.0	28.2	17.2	0.6	
Female	0	0	0	1	1	5	5	7	11	29	36	51	65	52	63	69	47	62	504			
Female	0.0	0.0	0.0	0.6	0.5	2.4	2.6	3.5	5.4	15.0	19.5	30.9	42.2	43.9	67.5	89.0	71.2	90.7	18.0	10.1	0.4	
<b>C18-C20 Bowel</b>																						
Male	0	0	0	0	4	9	15	12	25	75	124	155	251	249	315	304	286	174	1,998			
Female	0.0	0.0	0.0	0.0	1.9	4.2	7.7	6.2	12.8	39.9	69.3	97.3	170.8	218.1	364.2	463.8	581.4	484.5	73.0	42.5	0.9	
Female	0	0	0	1	3	10	16	24	29	68	102	129	180	176	228	236	233	278	1,713			
Female	0.0	0.0	0.0	0.6	1.5	4.8	8.2	12.0	14.3	35.1	55.2	78.0	116.7	148.7	244.3	304.4	353.0	406.5	61.2	31.5	0.7	

Appendix 6 Numbers (Blue) and age-specific rates (black)  
 – CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000



**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C21 Anus &amp; Anal canal</b>																						
Male	0	0	0	0	0	0	0	1	1	6	4	8	3	3	6	3	3	0	38			
Female	0	0	0	0	0	0	1	2	1	2	7	6	8	10	8	5	6	5	61	1.4	0.9	0.1
	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.5	1.0	3.8	3.6	5.2	8.5	8.6	6.5	9.1	7.3	2.2	1.3	0.1	
<b>C22 Liver</b>																						
Male	0	0	0	0	1	0	0	3	4	9	27	41	39	39	32	44	29	9	277			
Female	0	0	0	0	0	0	0	3	1	5	3	5	13	12	16	14	14	14	101	10.1	6.2	0.4
	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.5	0.5	2.6	1.6	3.0	8.4	10.1	17.1	18.1	21.2	20.5	3.6	1.9	0.2	
<b>C23, C24 Gallbladder</b>																						
Male	0	0	0	0	0	0	1	0	1	2	2	6	6	12	21	12	14	13	90			
Female	0	0	0	0	0	0	0	1	1	4	6	12	14	17	9	24	20	25	134	3.3	1.8	0.2
	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	2.1	3.2	7.3	9.1	14.4	9.6	31.0	30.3	36.6	4.8	2.3	0.2	
<b>C25 Pancreas</b>																						
Male	0	0	0	0	0	0	0	3	3	13	14	26	39	51	48	55	52	40	344			
Female	0	0	0	0	0	0	0	1	1	6	7	16	25	30	41	54	60	72	352	12.6	7.1	0.4
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.5	2.6	8.7	15.1	19.5	34.7	45.0	69.7	90.9	105.3	12.6	5.8	0.3	
<b>C30, C31 Nasal Cavities</b>																						
Male	0	0	1	0	0	0	0	1	0	1	5	3	6	1	8	1	6	2	35			
Female	0	0	0	0	0	0	0	0	0	0	2	1	4	1	2	0	3	1	17	1.3	0.8	0.1
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.1	0.6	2.6	0.9	2.1	0.0	4.5	1.5	0.6	0.4	0.1	
<b>C32 Larynx</b>																						
Male	0	0	0	0	0	0	0	1	2	5	7	13	21	22	12	17	10	7	117			
Female	0	0	0	1	0	0	0	0	0	1	3	8	14	19	13	25	20	19	13	4.3	2.7	0.2
	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.6	2.0	0.9	2.1	2.6	1.5	1.5	0.5	0.3	0.1	

Appendix 6 Numbers (Blue) and age-specific rates (black)  
 – CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C33, C34 Lung</b>																						
Male	0	0	0	1	1	3	2	3	14	34	72	93	173	223	237	238	214	168	1,477			
	0.0	0.0	0.0	0.6	0.5	1.4	1.0	1.5	7.2	18.1	40.3	58.4	117.8	195.3	274.0	363.1	435.0	467.8	54.0	30.5	0.8	
Female	0	0	0	0	2	2	2	2	12	22	61	76	129	156	156	156	124	105	1,003			
	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	5.9	11.4	33.0	46.0	83.7	131.8	167.2	201.2	187.8	153.5	35.9	19.1	0.6	
<b>C37, C38 Thymus etc</b>																						
Male	0	0	0	0	0	0	0	1	1	1	1	1	2	5	0	3	1	0	16			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.6	0.6	1.4	4.4	0.0	4.6	2.0	0.0	0.6	0.4	0.1	
Female	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0	4			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.1	0.0	3.0	0.0	0.1	0.1	0.0	
<b>C40, C41 Bone</b>																						
Male	0	0	3	0	2	1	1	2	4	5	2	1	1	3	1	3	1	1	31			
	0.0	0.0	1.8	0.0	1.0	0.5	0.5	1.0	2.0	2.7	1.1	0.6	0.7	2.6	1.2	4.6	2.0	2.8	1.1	0.9	0.1	
Female	0	1	3	2	0	1	1	1	1	1	2	2	5	1	3	0	0	1	25			
	0.0	0.6	1.9	1.2	0.0	0.5	0.5	0.5	0.5	0.5	1.1	1.2	3.2	0.9	3.2	0.0	0.0	1.5	0.9	0.8	0.1	
<b>C43 Melanoma</b>																						
Male	0	1	0	2	8	22	24	24	65	68	100	94	171	146	134	111	105	86	1,161			
	0.0	0.6	0.0	1.1	3.8	10.3	12.3	12.3	33.2	36.2	55.9	59.0	116.4	127.9	154.9	169.4	213.4	239.5	42.4	27.6	0.8	
Female	0	0	0	1	6	19	26	44	58	76	78	75	97	109	74	66	80	74	883			
	0.0	0.0	0.0	0.6	3.0	9.0	13.3	22.0	28.5	39.2	42.2	45.4	62.9	92.1	79.3	85.1	121.2	108.2	31.6	20.0	0.6	
<b>C44 Other skin</b>																						
Male	0	0	0	0	0	0	0	3	1	4	2	4	3	1	4	5	8	8	43			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.5	2.1	1.1	2.5	2.0	0.9	4.6	7.6	16.3	22.3	1.6	0.9	0.1	
Female	2	0	0	0	1	1	1	3	0	1	1	3	3	2	5	2	3	10	38			
	1.2	0.0	0.0	0.0	0.5	0.5	0.5	1.5	0.0	0.5	0.5	1.8	2.0	1.7	5.4	2.6	4.5	14.6	1.4	0.8	0.1	
<b>C45 Mesothelioma</b>																						
Male	0	0	0	0	0	0	0	0	1	1	2	4	9	19	15	15	21	15	102			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.1	2.5	6.1	16.6	17.3	22.9	42.7	41.8	3.7	2.0	0.2	
Female	0	0	0	0	0	0	0	0	1	1	0	2	4	2	5	4	3	7	29			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	1.2	2.6	1.7	5.4	5.2	4.5	10.2	1.0	0.5	0.1	

Appendix 6 Numbers (Blue) and age-specific rates (black)  
 – CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C46 Kaposi Sarcoma</b>																						
Male	0	0	0	0	2	0	0	3	2	3	1	0	0	0	4	1	0	2	18			
Female	0.0	0.0	0.0	0.0	0.9	0.0	1.5	1.0	1.6	1.6	0.6	0.0	0.0	0.0	4.6	1.5	0.0	5.6	8	0.7	0.5	0.1
Female	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	3	8			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	1.1	1.3	1.5	4.4		0.3	0.1	0.0
<b>C48 Peritoneum</b>																						
Male	4	0	0	0	0	0	0	1	1	1	0	0	2	1	0	0	0	0	9			
Female	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	1.4	0.9	0.0	0.0	0.0	0.0	25	0.3	0.4	0.1
Female	2	0	0	0	0	0	1	0	0	0	2	1	8	5	3	1	2	0	25			
Female	1.2	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.1	0.6	5.2	4.2	3.2	1.3	3.0	0.0		0.9	0.7	0.1
<b>C47, C49 Connective Tissue</b>																						
Male	3	1	0	2	1	2	3	6	2	11	10	7	16	13	8	7	7	11	110			
Female	1.7	0.6	0.0	1.1	0.5	0.9	1.5	3.1	1.0	5.9	5.6	4.4	10.9	11.4	9.3	10.7	14.2	30.6	4.0	2.9	0.3	
Female	0	1	0	1	0	0	0	2	4	8	2	5	11	4	8	6	5	12	70			
Female	0.0	0.6	0.0	0.6	0.5	0.0	0.0	1.0	2.0	4.1	1.1	3.0	7.1	3.4	8.6	7.7	7.6	17.5		2.5	1.5	0.2
<b>C50 Breast</b>																						
Male	0	0	0	0	0	0	1	0	0	1	1	2	3	6	4	1	4	2	25			
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.6	1.3	2.0	5.3	4.6	1.5	8.1	5.6	0.9	0.6	0.1	
Female	0	0	0	0	3	14	63	147	263	422	507	413	540	466	273	201	207	229	3,748			
Female	0.0	0.0	0.0	0.0	1.5	6.7	32.2	73.5	129.4	217.9	274.2	249.8	350.2	393.8	292.5	259.3	313.6	334.8		134.0	89.0	1.4
<b>C53 Cervix</b>																						
Female	0	0	0	0	3	13	23	13	21	25	18	14	13	8	11	4	9	7	182			
Female	0.0	0.0	0.0	0.0	1.5	6.2	11.8	6.5	10.3	12.9	9.7	8.5	8.4	6.8	11.8	5.2	13.6	10.2		6.5	4.9	0.3
<b>C54, C55 Uterus</b>																						
Female	0	0	0	0	0	1	6	10	17	24	46	84	106	89	70	46	36	42	577			
Female	0.0	0.0	0.0	0.0	0.0	0.5	3.1	5.0	8.4	12.4	24.9	50.8	68.7	75.2	75.0	59.3	54.5	61.4		20.6	12.7	0.5
<b>C56 Ovary</b>																						
Female	0	0	0	1	1	6	4	4	10	15	22	30	40	35	38	34	30	35	336			
Female	0.0	0.0	0.0	0.6	0.6	3.0	1.9	2.0	5.0	7.4	11.4	18.1	25.9	29.6	40.7	43.9	45.4	51.2		12.0	7.3	0.4

Appendix 6 Numbers (Blue) and age-specific rates (black)  
 – CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C51, C52, C57 Vulva etc,</b>																						
Female	0	0	1	0	0	1	0	5	1	6	13	10	11	18	15	20	13	17	131	4.7	2.6	0.2
	0.0	0.0	0.6	0.0	0.0	0.5	0.0	2.5	0.5	3.1	7.0	6.1	7.1	15.2	16.1	25.8	19.7	24.9	171.7	106.6	1.5	
<b>C61 Prostate</b>																						
Male	0	0	0	0	0	0	2	20	107	266	568	819	983	715	525	399	294	4,698	171.7	106.6	1.5	
	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10.2	56.9	148.7	356.5	557.4	860.8	826.7	801.0	811.0	818.7	818.7	171.7	106.6	1.5	
<b>C62 Testis</b>																						
Male	1	0	0	4	28	26	30	32	26	14	3	1	4	4	2	1	0	2	178	6.5	5.9	0.4
	0.6	0.0	0.0	2.2	13.3	12.1	15.3	16.4	13.3	7.5	1.7	0.6	2.7	3.5	2.3	1.5	0.0	5.6	6.5	5.9	0.4	
<b>C60, C63 Penis etc</b>																						
Male	0	0	0	0	0	0	0	3	0	6	2	4	3	4	8	3	8	7	48	1.8	1.0	0.1
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	3.2	1.1	2.5	2.0	3.5	9.3	4.6	16.3	19.5	1.8	1.0	0.1	
<b>C64 Kidney</b>																						
Male	6	0	0	0	1	1	2	14	20	28	41	54	79	69	54	51	34	25	479	17.5	11.7	0.5
	3.3	0.0	0.0	0.0	0.5	0.5	1.0	7.2	10.2	14.9	22.9	33.9	53.8	60.4	62.4	77.8	69.1	69.6	17.5	11.7	0.5	
Female	3	0	0	0	1	2	5	5	5	13	20	33	32	39	33	16	21	18	241	8.6	5.4	0.3
	1.8	0.0	0.0	0.0	0.5	1.0	2.5	2.5	2.5	6.7	10.8	20.0	20.8	33.0	35.4	20.6	31.8	26.3	8.6	5.4	0.3	
<b>C67 Bladder</b>																						
Male	0	0	0	0	0	0	0	1	1	4	20	24	34	54	59	90	90	93	470	17.2	8.6	0.4
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	2.1	11.2	15.1	23.1	47.3	68.2	137.3	182.9	259.0	17.2	8.6	0.4	
Female	0	0	0	0	0	0	0	0	1	2	5	5	12	17	11	24	26	32	135	4.8	2.1	0.2
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	2.7	3.0	7.8	14.4	11.8	31.0	39.4	46.8	4.8	2.1	0.2	
<b>C65, C66, C68 Renal pelvis etc,</b>																						
Male	0	0	0	0	0	0	0	0	0	0	1	3	2	10	5	16	9	4	50	1.8	0.9	0.1
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.9	1.4	8.8	5.8	24.4	18.3	11.1	1.8	0.9	0.1	
Female	0	0	0	0	0	0	0	0	0	1	1	1	3	7	11	10	10	5	49	1.8	0.8	0.1
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.6	2.0	5.9	11.8	12.9	15.2	7.3	1.8	0.8	0.1	

Appendix 6 Numbers (Blue) and age-specific rates (black)  
 – CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C69 Eye</b>																						
Male	5	0	1	0	0	1	0	0	0	0	2	0	3	1	1	1	5	5	25			
	2.8	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.1	0.0	2.0	0.9	1.2	1.5	10.2	13.9		0.9	0.8	0.1
Female	2	0	0	0	0	1	0	0	1	1	0	0	3	2	1	3	1	2	17			
	1.2	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.5	0.0	0.0	2.0	1.7	1.1	3.9	1.5	2.9		0.6	0.5	0.1
<b>C70 Meninges</b>																						
Male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.8		0.1	0.0	0.0
Female	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.5	0.0		0.1	0.0	0.0
<b>C71 Brain</b>																						
Male	3	1	1	5	5	8	9	13	11	14	16	19	36	39	34	32	24	11	281			
	1.7	0.6	0.6	2.8	2.4	3.7	4.6	6.7	5.6	7.5	8.9	11.9	24.5	34.2	39.3	48.8	48.8	30.6		10.3	7.1	0.4
Female	4	5	5	7	3	4	10	8	9	13	13	15	19	24	22	18	13	19	211			
	2.3	3.1	3.1	4.0	1.5	1.9	5.1	4.0	4.4	6.7	7.0	9.1	12.3	20.3	23.6	23.2	19.7	27.8		7.5	5.5	0.4
<b>C72 Other CNS</b>																						
Male	0	2	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	1	6			
	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	1.2	0.0	0.0	2.8		0.2	0.2	0.1
Female	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	4			
	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.1	0.1	0.0
<b>C70-C72 Brain &amp; CNS</b>																						
Male	3	3	1	5	5	8	9	13	12	15	16	19	36	39	35	32	25	13	289			
	1.7	1.8	0.6	2.8	2.4	3.7	4.6	6.7	6.1	8.0	8.9	11.9	24.5	34.2	40.5	48.8	50.8	36.2		10.6	7.4	0.4
Female	4	5	5	7	3	4	11	9	9	13	15	16	19	24	22	18	14	19	217			
	2.3	3.1	3.1	4.0	1.5	1.9	5.6	4.5	4.4	6.7	8.1	9.7	12.3	20.3	23.6	23.2	21.2	27.8		7.8	5.6	0.4
<b>C73 Thyroid</b>																						
Male	0	0	0	2	5	6	4	18	6	11	13	21	11	20	13	9	8	1	148			
	0.0	0.0	0.0	1.1	2.4	2.8	2.0	9.2	3.1	5.9	7.3	13.2	7.5	17.5	15.0	13.7	16.3	2.8		5.4	4.0	0.3
Female	0	0	1	3	6	10	30	28	42	34	40	40	23	17	18	14	10	10	326			
	0.0	0.0	0.6	1.7	3.0	4.8	15.3	14.0	20.7	17.6	21.6	24.2	14.9	14.4	19.3	18.1	15.2	14.6		11.7	8.7	0.5

Appendix 6 Numbers (Blue) and age-specific rates (black)

– CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C74, C75 Other endocrine</b>																						
Male	4	1	1	1	0	1	0	2	0	1	1	1	0	3	1	0	0	0	17			
	2.2	0.6	0.6	0.6	0.0	0.5	0.0	1.0	0.0	0.5	0.6	0.6	0.0	2.6	1.2	0.0	0.0	0.0		0.6	0.7	0.1
Female	4	0	0	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	9			
	2.3	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.0	2.6	0.0	0.0		0.3	0.4	0.1
<b>C80 Unspecified site</b>																						
Male	0	0	0	0	0	0	0	0	3	9	14	25	34	36	43	57	61	69	351			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.8	7.8	15.7	23.1	31.5	49.7	87.0	124.0	192.1		12.8	6.7	0.3
Female	0	0	0	0	0	2	3	7	7	4	15	24	24	25	31	55	70	91	351			
	0.0	0.0	0.0	0.0	0.0	1.0	1.5	3.4	2.1	8.1	8.1	14.5	15.6	21.1	33.2	71.0	106.0	133.1		12.6	5.3	0.3
<b>C81 Hodgkin lymphoma</b>																						
Male	0	0	5	9	4	14	12	8	5	8	7	4	8	6	5	3	4	2	104			
	0.0	0.0	3.0	5.0	1.9	6.5	6.1	4.1	2.6	4.3	3.9	2.5	5.5	5.3	5.8	4.6	8.1	5.6		3.8	3.3	0.3
Female	1	0	1	7	8	7	5	4	3	1	2	7	3	3	4	1	1	3	61			
	0.6	0.0	0.6	4.0	4.0	3.3	2.6	2.0	1.5	0.5	1.1	4.2	2.0	2.5	4.3	1.3	1.5	4.4		2.2	2.0	0.2
<b>C82 Nodular NHL</b>																						
Male	0	0	0	0	0	1	3	6	8	15	14	23	17	27	29	18	10	7	178			
	0.0	0.0	0.0	0.0	0.0	0.5	1.5	3.1	4.1	8.0	7.8	14.4	11.6	23.6	33.5	27.5	20.3	19.5		6.5	4.3	0.3
Female	0	0	0	0	0	1	2	3	4	9	12	17	27	7	13	17	6	8	126			
	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.5	2.0	4.7	6.5	10.3	17.5	5.9	13.9	21.9	9.1	11.7		4.5	2.8	0.2
<b>C83 Diffuse NHL</b>																						
Male	1	3	1	4	4	3	4	8	14	22	22	41	37	46	40	54	31	25	360			
	0.6	1.8	0.6	2.2	1.9	1.4	2.0	4.1	7.2	11.7	12.3	25.7	25.2	40.3	46.3	82.4	63.0	69.6		13.2	8.5	0.4
Female	0	0	1	1	2	3	4	7	10	9	18	23	25	23	29	35	28	24	242			
	0.0	0.0	0.6	0.6	1.0	1.4	2.0	3.5	4.9	4.7	9.7	13.9	16.2	19.4	31.1	45.2	42.4	35.1		8.7	4.9	0.3
<b>C84 T-cell lymphoma</b>																						
Male	0	0	1	1	0	0	0	1	0	2	5	4	5	7	7	8	5	2	48			
	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.5	0.0	1.1	2.8	2.5	3.4	6.1	8.1	12.2	10.2	5.6		1.8	1.1	0.1
Female	0	0	0	0	1	0	1	2	1	2	2	4	2	3	4	4	2	3	31			
	0.0	0.0	0.0	0.0	0.5	0.0	0.5	1.0	0.5	1.0	1.1	2.4	1.3	2.5	4.3	5.2	3.0	4.4		1.1	0.7	0.1

Appendix 6 Numbers (Blue) and age-specific rates (black)  
 – CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE
<b>C85 Other NHL</b>																						
Male	0	0	1	0	1	1	1	1	0	4	2	6	7	7	19	16	15	13	94			
	0.0	0.0	0.6	0.0	0.5	0.5	0.5	0.5	0.0	2.1	1.1	3.8	4.8	6.1	22.0	24.4	30.5	36.2		3.4	1.9	0.2
Female	0	1	0	0	0	1	3	1	3	6	2	9	3	9	8	9	15	15	76			
	0.0	0.6	0.0	0.0	0.0	0.5	1.6	0.5	1.6	3.2	1.2	7.6	2.0	7.6	8.6	11.6	22.7	21.9		2.7	1.3	0.1
<b>C82-C85 Non-Hodgkin lymphoma</b>																						
Male	1	3	3	5	5	8	16	22	43	43	74	87	66	87	95	96	61	47	680			
	0.6	1.8	1.8	2.8	2.4	2.3	4.1	8.2	11.2	22.9	24.0	46.4	44.9	76.2	109.8	146.5	124.0	130.9		24.9	15.9	0.6
Female	0	1	1	1	3	4	8	15	16	23	38	46	57	42	54	65	51	50	475			
	0.0	0.6	0.6	0.6	1.5	1.9	4.1	7.5	7.9	11.9	20.6	27.8	37.0	35.5	57.9	83.9	77.3	73.1		17.0	9.8	0.4
<b>C88 Immunoproliferative</b>																						
Male	0	0	0	0	0	1	0	0	0	0	0	1	5	2	4	3	6	4	26			
	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.6	3.4	1.8	4.6	4.6	12.2	11.1		1.0	0.5	0.1
Female	0	0	0	0	0	0	0	0	0	0	0	1	3	1	0	3	4	3	15			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.0	0.9	0.0	3.9	6.1	4.4		0.5	0.2	0.0
<b>C90 Multiple myeloma</b>																						
Male	0	0	0	0	0	1	0	1	4	10	9	22	30	26	33	36	31	30	233			
	0.0	0.0	0.0	0.0	0.0	0.5	0.0	2.0	5.3	10.3	5.0	13.8	20.4	22.8	38.2	54.9	63.0	83.5		8.5	4.9	0.3
Female	0	0	0	0	0	0	0	2	4	19	14	22	28	22	36	27	25	31	208			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.1	10.3	8.5	18.6	18.2	18.6	38.6	34.8	37.9	45.3		7.4	3.9	0.3
<b>C91 Lymphoid leukaemia</b>																						
Male	22	10	6	5	3	1	0	4	4	5	16	14	16	25	31	28	13	20	223			
	12.2	5.9	3.6	2.8	1.4	0.5	0.0	2.1	2.0	2.7	8.9	8.8	10.9	21.9	35.8	42.7	26.4	55.7		8.2	6.6	0.4
Female	10	11	2	1	0	2	0	0	1	3	8	9	12	11	20	7	18	23	138			
	5.8	6.9	1.3	0.6	0.0	1.0	0.0	0.0	0.5	1.6	4.3	5.4	7.8	9.3	21.4	9.0	27.3	33.6		4.9	3.6	0.3
<b>C92 Myeloid leukaemia</b>																						
Male	1	2	2	4	2	4	4	4	11	6	11	17	24	20	30	33	30	20	225			
	0.6	1.2	1.2	2.2	1.0	1.9	2.0	2.1	5.6	3.2	6.2	10.7	16.3	17.5	34.7	50.4	61.0	55.7		8.2	5.2	0.3
Female	2	0	3	1	2	3	4	8	6	10	4	9	11	21	18	23	15	25	165			
	1.2	0.0	1.9	0.6	1.0	1.4	2.0	4.0	3.0	5.2	2.2	5.4	7.1	17.8	19.3	29.7	22.7	36.6		5.9	3.5	0.3

Appendix 6 Numbers (Blue) and age-specific rates (black)

– CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000

**Appendix 6: Detailed tables of cancer incidence 2011 by age, sex and cancer type**

Age	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+	Total	CR	ASR	SE	
<b>C93 Monocytic leukaemia</b>																							
Male	0	0	0	0	0	0	1	0	1	1	1	2	2	3	2	3	1	0	17				
	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.5	0.6	1.3	1.4	2.6	2.3	4.6	2.0	0.0			0.6	0.4	0.1
Female	1	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	1	2	8				
	0.6	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	1.5	2.9			0.3	0.2	0.1
<b>C94 Other leukaemia</b>																							
Male	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	0	4				
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	1.8	0.0	1.5	0.0	0.0			0.2	0.1	0.0
Female	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1				
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
<b>C95 Unspecified Leukaemia</b>																							
Male	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5				
	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	5.6			0.2	0.1	0.0
Female	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4	6				
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.5	5.9			0.2	0.1	0.0
<b>C91-C95 All leukaemia</b>																							
Male	23	12	9	9	5	5	5	8	16	12	28	34	42	50	65	65	44	42	474				
	12.7	7.1	5.3	5.0	2.4	2.3	2.6	4.1	8.2	6.4	15.7	21.3	28.6	43.8	75.2	99.2	89.4	117.0			17.3	12.4	0.5
Female	13	11	5	2	2	5	5	8	7	14	13	18	24	32	40	30	35	54	318				
	7.6	6.9	3.1	1.2	1.0	2.4	2.6	4.0	3.4	7.2	7.0	10.9	15.6	27.0	42.9	38.7	53.0	79.0			11.4	7.4	0.4
<b>D45-D47 Myeloproliferative &amp; myelodysplastic</b>																							
Male	3	0	1	0	0	0	1	2	8	6	14	18	31	35	41	50	65	83	358				
	1.7	0.0	0.6	0.0	0.0	0.0	0.5	1.0	4.1	3.2	7.8	11.3	21.1	30.7	47.4	76.3	132.1	231.1			13.1	6.9	0.4
Female	2	0	2	0	0	5	0	7	6	5	6	15	22	25	20	32	40	39	226				
	1.2	0.0	1.3	0.0	0.0	2.4	0.0	3.5	3.0	2.6	3.2	9.1	14.3	21.1	21.4	41.3	60.6	57.0			8.1	4.1	0.3
<b>C00-C96, D45-D47 All malignant tumours</b>																							
Male	53	21	26	40	72	113	125	199	305	569	944	1,467	2,102	2,384	2,185	1,996	1,740	1,354	15,695				
	29.3	12.5	15.4	22.0	34.1	52.7	63.8	102.0	155.7	302.7	527.7	920.6	1430.7	2087.7	2526.4	3045.2	3536.9	3770.3			573.5	353.1	2.8
Female	34	19	22	27	49	109	214	362	540	832	1,115	1,166	1,521	1,486	1,320	1,245	1,246	1,403	12,710				
	19.9	11.8	13.8	15.5	24.3	51.9	109.3	181.0	265.7	429.5	603.0	705.2	986.3	1255.8	1414.4	1606.1	1887.5	2051.3			454.3	271.0	2.4

Appendix 6 Numbers (Blue) and age-specific rates (black)  
 – CR crude incidence rate – ASR Age-standardised rate (Age-standardised to World Standard Population) – SE Standard error of ASR – All rates are per 100,000



## Appendix 7: Indices of data quality

Three indices of data quality are shown in the following table. These indices, as defined in Cancer Incidence in Five Continents Vol. V1 (Ref 6), are:

### Death certificate only (DCO%)

The proportion of cases registered for which no information was available other than a statement on the death certificate that the deceased died from or with cancer. A high DCO% suggests incomplete incidence notification, and such diagnoses may be less accurate. Registry staff seek additional information for cancers first notified by death certificate to identify possible missed registrations. If no further information is available, the cancer is registered as DCO on the basis of information provided on the death certificate. For DCO cases, the date of diagnosis is taken as the date of death.

### Histological verification (HV%)

The proportion of cases registered which had histological verification of diagnosis. A low HV% suggests incomplete

registration of pathology reports and consequently poorer verification of diagnoses and incomplete registration of cancers for which this is often the only source of notification, such as melanoma. The higher the HV% for cancers of less accessible sites, like brain and pancreas, the more confident one can be that the neoplasm existed and that it was primary rather than metastatic.

### The mortality to incidence ratio (M/I%)

– ratio of the number of deaths attributed to a specific cancer with the number of new cases of the same cancer diagnosed during the same period in the same population. If registration is complete and the incidence of the cancer is not changing rapidly, the mortality to incidence ratio should reflect long-term survival. If survival rates are comparable in two populations, a more complete case ascertainment is suggested by a lower M/I%.

Site	DCO (%)	HV (%)	M/I (%)
<b>All malignant tumours</b>	<b>1.9</b>	<b>92</b>	<b>37</b>
Head and neck	1.4	97	43
Oesophagus	0.6	93	79
Stomach	1.6	94	64
Bowel	1.0	95	34
Liver	4.5	48	79
Gallbladder	4.0	77	64
Pancreas	5.0	65	94
Lung	2.8	85	78
Melanoma	0.1	100	16
Breast	0.8	98	19
Cervix	0.0	98	28
Uterus	1.6	97	17
Ovary	2.4	88	70
Prostate	1.5	96	18
Testis	0.0	99	2
Kidney	1.7	88	28
Bladder	2.5	89	45
Brain and CNS	1.8	88	73
Thyroid	0.8	97	8
Unspecified site	7.4	66	97
Lymphoma	0.9	99	55
Multiple myeloma	2.9	97	55
Leukaemia	4.3	96	52

# Appendix 8: References and Victorian Cancer Registry publications

## References

1. Fritz A, Percy C Jack A et al eds. International Classification of Diseases for Oncology. Third Edition. World Health Organization, Geneva, 2000.
2. National Centre for Classification in Health. The International Statistical Classification of Diseases and Related Health Problems. Tenth Revision, Australian Modification (ICD-10-AM). Fourth edition. University of Sydney 2010.
3. Cancer Survival Victoria 2012: Estimates of survival in 2006-2010 (and comparison with earlier periods). Farrugia H, Thursfield V, Karahalios E, Giles G. Victorian Cancer Registry, The Cancer Council Victoria, Melbourne. August 2012.
4. Australian Institute of Health and Welfare and Association of Australasian Cancer Registries 2010. Cancer in Australia: an overview, 2010. (Appendix J: Estimating prostate cancer incidence in 2010. Prostate cancer and the effects of PSA testing.) Cancer Series no. 60. Cat. no. CAN56. Canberra: AIHW 7.
5. International rules for multiple primary cancers (ICDO 3rd Edition). Internal Report No. 2004/2. IARC, Lyon, 2004. [http://www.iacr.com.fr/MPrules\\_July2004.pdf](http://www.iacr.com.fr/MPrules_July2004.pdf)
6. Muir C, Waterhouse J, Mack T, et al. Cancer Incidence in Five Continents Vol V. IARC Scientific Publication No 88. Lyon: International Agency for Research on Cancer, 1987.

## Victorian Cancer Registry Publications

### Canstats

Annual data were published in the Canstat series from 1991-2009

#### Other Canstat titles include:

- Cancer in Adolescents and Young Adults
- Prostate Cancer
- Testicular Cancer
- Trends in Cancer Mortality, Australia 1910–1999
- Lung Cancer
- A Guide to the Victorian Cancer Registry
- Breast Cancer
- Skin Cancer
- Ovarian Cancer
- Cancer of the Brain and Central Nervous System
- Haematological malignancies (Neoplastic diseases of haematopoietic and lymphoid tissue)
- Childhood cancer 2010

### Reports

English D, Farrugia H, Thursfield V, Chang P, Giles G. April 2010. Cancer Survival Victoria 2010. Estimates of survival in 2004 (and comparison with earlier periods)

Karahalios E, English D, Thursfield V, Simpson J, Farrugia H, Giles G. Aug 2010. Second primary Cancers in Victoria.

Farrugia H, Thursfield V, Karahalios E, Giles G. Cancer Survival Victoria 2012: Estimates of survival in 2006-2010 (and comparison with earlier periods). Victorian Cancer Registry, The Cancer Council Victoria, Melbourne. August 2012.

All publications are available for download, in pdf format, from our website at :

<http://www.cancervic.org.au/about-our-research/cancer-statistics> How to obtain copies of our reports:

# How to obtain copies of our reports

To receive e-mail notification of new editions of Cancer in Victoria: Statistics and trends for viewing or download from our website, please e-mail us your details and we will add you to our mailing list.

We are attempting to minimise paper use and costs by reducing the mailing of printed publications. However, if you do not have access to e-mail or our on-line publications, or prefer to obtain a hard copy, we will be happy to post copies to you if you tick the box and fax or post us the coupon.

**Name:** .....

**Position held:** .....

**E-mail:** .....

**Or**

**Please post hard copy to**

**Address:** .....

.....

.....

..... **Postcode:** .....

.....

**Publication(s) requested:** .....

.....

.....

.....

**Return to:**

Victorian Cancer Registry,  
Cancer Council Victoria,  
1 Rathdowne Street,  
Carlton Victoria 3053, Australia  
Fax: (03) 9635 5330  
Email: [vcr@cancervic.org.au](mailto:vcr@cancervic.org.au)



**13 11 20**  
[www.cancervic.org.au](http://www.cancervic.org.au)

Cancer Council Victoria  
Reply Paid 75583  
1 Rathdowne Street  
Carlton VIC 3053

Supporters Hotline  
1300 65 65 85

Facsimile 9635 5270  
[enquiries@cancervic.org.au](mailto:enquiries@cancervic.org.au)