Government of **Western Australia**
Department of **Health**

The Data Behind ‘Your Say On Cancer In WA’

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Contents

Introduction

This document contains the source statistics used to produce the visualisations (data images) presented in the *Your Say On Cancer In WA* consultation (yoursayoncancer.health.wa.gov.au) which will inform the next Chief Health Officer's Report.

The statistics focus on the seven cancers with the biggest impact on the WA community, and which offer opportunities for prevention. These cancers include:

- Bowel cancer
- Breast cancer
- Cervical cancer
- Lung cancer
- Melanoma
- Oesophageal and stomach cancer
- Prostate cancer

For a detailed description of how these specific cancers were selected, please refer to the document *1. Choosing cancers for 'Your Say On Cancer In WA'* available from: yoursayoncancer.health.wa.gov.au, or by request from the Epidemiology Branch of the WA Department of Health (epi@health.wa.gov.au).

The data visualisations were produced by Edith Cowan University Graphic Design Students for the Department of Health Western Australia, with the exception of the visualisations which appear in the section *'Preventing Cancer in WA'* which were produced by the Epidemiology Branch of the Department of Health.

The statistics in this document were prepared by the Epidemiology Branch in the WA Department of Health. All the Western Australian statistics were created using data from the Western Australian Cancer Registry, Hospital and Morbidity Data System, and Death Registration database. Statistics on Australian cancer survival were generated using Globocan incidence and mortality data from the International Agency for Research on Cancer. The preventability of cancer is sourced from a series of meta-analyses by Parkin *et al.* in the British Journal of Cancer (2011)[1].

[1] Parkin, D.M., L. Boyd, and L.C. Walker, 16. The fraction of cancer attributable to lifestyle and environmental factors in the UK in 2010. Br J Cancer, 2011. 105(S2): p. S77-S81.

New Cancer Cases in WA

This section presents the source statistics presented in the consultation page '2. New Cancer Cases in WA'. These tables are also the source for the number of new cases presented in the visualisations for the seven specific cancers shown on individual pages of the consultation.

Table 1 Number and age standardised rate of new cancer cases in WA females, 2012

Cancer Site	Number of Cases	% Total Number	ASR*
Breast	1,608	30.6	122.9
Colorectal	602	11.5	44.5
Melanoma (skin)	453	8.6	35.1
Lung	451	8.6	33.8
Lymphoma[1]	219	4.2	17
Thyroid gland	188	3.6	15
Uterus	183	3.5	13.7
Ovary	133	2.5	9.9
Pancreas	128	2.4	9.4
Leukaemia[2]	118	2.2	9.3
Unknown primary	127	2.4	8.7
Cervix	97	1.8	8
Kidney	99	1.9	7.7
Oesophageal and Stomach	98	1.9	7.3
Myeloma	79	1.5	6
Brain	75	1.4	6
Bladder & urinary tract	75	1.4	5.5
Oropharyngeal/Larynx	63	1.2	4.7
Skin (NMSC exc. SCC/BCC)	51	1.0	3.9
Liver	45	0.9	3.3
Gallbladder / bile ducts	41	0.8	3
Myelodysplastic diseases	36	0.7	2.5
Connective/ soft tissues	31	0.6	2.4
Lip (external)	31	0.6	2.3
Other Head & Neck	28	0.5	2.1
All Other Cancers	191	3.64	
Sub-Total – Coloured Cancers	*3,309*	*63.0*	
Total (all cancers)	5,250	100	

* Age-Standardised Rates per 100,000 were calculated using the 2001 Australian Standard Population.
[1] Lymphoma includes Hodgkin's lymphoma, non-Hodgkin's lymphoma and lymphoma not otherwise specified.
[2] Leukaemia includes lymphoid leukaemia, myeloid leukaemia and leukaemia not otherwise specified.

Table 2 Number and age standardised rate of new cancer cases in WA males, 2012

Cancer	Number of Cases	% Total Number	ASR*
Prostate	2,108	31.5	165.8
Melanoma (skin)	696	10.4	56.1
Colorectal	647	9.7	53.0
Lung	580	8.7	47.8
Lymphoma[1]	309	4.6	25.4
Oesophageal and Stomach	240	3.6	19.3
Bladder & urinary tract	210	3.1	17.5
Oropharyngeal/Larynx	206	3.1	16.2
Kidney	205	3.1	16.2
Unknown primary	156	2.3	13.5
Leukaemia[2]	167	2.5	13.4
Pancreas	138	2.1	11.3
Brain	106	1.6	8.6
Liver	102	1.5	8.2
Myeloma	97	1.5	7.8
Mesothelioma	88	1.3	7.3
Lip (external)	87	1.3	7.2
Skin (NMSC exc. SCC/BCC)	75	1.1	6.5
Testis	81	1.2	6.3
Thyroid gland	74	1.1	5.7
Myelodysplastic diseases	62	0.9	5.4
Connective/ soft tissues	36	0.5	2.9
Other Head & Neck	36	0.5	2.9
Gallbladder / bile ducts	33	0.5	2.8
Myeloprolif. d/o (chronic)	26	0.4	2.2
All other cancers	124	1.9	
Sub-Total – Coloured Cancers	*4,271*	*63.9*	
Total (All cancers)	6,689	100	

* Age-Standardised Rates per 100,000 were calculated using the 2001 Australian Standard Population.
[1] Lymphoma includes Hodgkin's lymphoma, non-Hodgkin's lymphoma and lymphoma not otherwise specified.
[2] Leukaemia includes lymphoid leukaemia, myeloid leukaemia and leukaemia not otherwise specified.

Deaths from Cancer in WA

This section presents the source statistics presented in the consultation page '3. Deaths from Cancer in WA'. These tables are also the source for the number of deaths presented in the visualisations for the seven specific cancers shown on individual pages of the consultation.

Table 3 Number and age standardised rate of deaths from cancer in WA females, 2012

Cancer	Number of Deaths	% Total Number	ASR*
Lung	361	20.9	27.5
Breast	285	16.5	21
Colorectal	175	10.1	12.3
Pancreas	113	6.5	8.2
Ovary	80	4.6	6
Unknown primary	85	4.9	5.7
Lymphoma[1]	62	3.6	4.5
Oesophageal and Stomach	59	3.4	4.3
Leukaemia[2]	54	3.1	4
Brain	52	3.0	3.9
Myeloma	46	2.7	3.3
Uterus	40	2.3	2.9
Melanoma (skin)	38	2.2	2.9
Gallbladder / bile ducts	31	1.8	2.3
Bladder & urinary tract	34	2.0	2.3
Liver	26	1.5	1.9
Oropharyngeal/Larynx	22	1.3	1.7
Myelodysplastic diseases	23	1.3	1.6
Kidney	18	1.0	-
Skin (NMSC exc. SCC/BCC)	17	1.0	-
Cervix	14	0.8	-
Other Head & Neck	5	0.3	-
Connective/ soft tissues	<5	0.2	-
Thyroid gland	<5	0.2	-
Lip (external)	-	-	-
All Other Cancers	81	4.68	
Sub-Total – Coloured Cancers	*932*	*53.9*	
Total (all cancers)	1,729	100	

* Age-Standardised Rates per 100,000 were calculated using the 2001 Australian Standard Population.
[1] Lymphoma includes Hodgkin's lymphoma, non-Hodgkin's lymphoma and lymphoma not otherwise specified.
[2] Leukaemia includes lymphoid leukaemia, myeloid leukaemia and leukaemia not otherwise specified.
To protect confidentiality, cells containing case numbers less than 5 are replaced with '<5'
- ASRs are not calculated where the number of deaths is less than 20

Table 4 Number and age standardised rate of deaths from cancer in WA males, 2012

Cancer	Number of Deaths	% Total Number	ASR*
Lung	488	21.5	41.4
Prostate	230	10.1	20.8
Colorectal	240	10.6	20.2
Oesophageal and Stomach	174	7.7	14.4
Pancreas	129	5.7	10.9
Melanoma (skin)	109	4.8	9.1
Unknown primary	98	4.3	8.6
Lymphoma[1]	99	4.4	8.6
Bladder & urinary tract	70	3.1	6.4
Brain	77	3.4	6.1
Liver	68	3.0	5.6
Skin (NMSC exc. SCC/BCC)	63	2.8	5.6
Mesothelioma	59	2.6	5.2
Oropharyngeal/Larynx	62	2.7	4.9
Leukaemia[2]	54	2.4	4.7
Kidney	54	2.4	4.6
Myeloma	44	1.9	3.8
Myelodysplastic diseases	36	1.6	3.1
Gallbladder / bile ducts	28	1.2	2.5
Myeloprolif. d/o (chronic)	11	0.5	-
Thyroid gland	9	0.4	-
Other Head & Neck	9	0.4	-
Connective/ soft tissues	7	0.3	-
Lip (external)	<5	0.0	-
Testis	<5	0.1	-
All other cancers	51	2.2	
Sub-Total – Coloured Cancers	*1,241*	*54.6*	
Total (All cancers)	2,273	100	

* Age-Standardised Rates per 100,000 were calculated using the 2001 Australian Standard Population.
[1] Lymphoma includes Hodgkin's lymphoma, non-Hodgkin's lymphoma and lymphoma not otherwise specified.
[2] Leukaemia includes lymphoid leukaemia, myeloid leukaemia and leukaemia not otherwise specified.
To protect confidentiality, cells containing case numbers less than 5 are replaced with '<5'
- ASRs are not calculated where the number of deaths is less than 20

Preventing Cancer in WA

This section presents the source statistics presented in the consultation page '4. Preventing Cancer in WA'. The data in Table 5 were also used for each of the seven individual cancer's risk factor visualisations.

Table 5 Percentage of cancers attributable to modifiable lifestyle and environmental risk factors by cancer site from Parkin et al 2011[2]

Risk Factor	Cancer Site							
	Breast	Cervical	Bowel	Lung	Melanoma	Prostate[1]	Stomach	Oesophagus
Tobacco smoking		7.2	8.1	85.6			22.2	65.5
Alcohol consumption	6.4		11.6					20.6
Insufficient fruit & vegetables				8.8			35.8	46.1
Excessive meat consumption			21.1					
Insufficient fibre			12.2					
Excessive salt consumption							24.0	
Overweight & obesity	8.7		13.0					21.7
Insufficient physical exercise	3.4		3.3					
Post-menopausal hormones	3.2							
Infections		100.0	2.2				31.7	
X-Ray radiation	0.9		1.6	4.7			1.2	2.7
UV radiation					85.9			
Occupational exposures	4.6	0.7		13.2			2.0	2.6
Reproduction (including breastfeeding)	3.1							
All of the Above*	26.8	100	54.4	89.2	85.9		74.9	89.0

1 Prostate cancer is not listed in the Parkin, et al (2011) and there is limited consistency in the literature on what proportion of prostate cancers is the result of modifiable risk factor exposures.
*Note: The 'All of the above' attributable fraction value does not relate to a simple summation of the risk factors listed as this would result in an overestimate due to multiple risk factor interactions on carcinogenic pathways in some cancers.

The population attributable fraction (PAF) of cancer cases attributable to the 14 lifestyle and environmental risk factors identified by Parkin et al (2011) for each sex were applied to the number of incident cases in each sex in WA during 2012. Cancers resulting from exposure to these risk factors are considered preventable. A limitation with this method is that the PAFs use UK prevalence data, and therefore the resulting figures should be considered as estimates only.

Formula: *PAF % * number of 2012 incident cases in WA = estimated number of cases preventable in WA*

[2] Parkin, D.M., L. Boyd, and L.C. Walker, 16. The fraction of cancer attributable to lifestyle and environmental factors in the UK in 2010. Br J Cancer, 2011. 105(S2): p. S77-S81.

For example: 45.3% of all male cancers are attributable to avoidable risk factors, therefore the number of preventable cancer cases in WA males in 2012 is 0.453*6689=3030 (rounded to nearest whole number).

Table 6 represents the application of the PAF from Table 5 to the number of cases by cancer site in WA in 2012.

Table 6 Estimated number of preventable new cancer cases in WA in 2012 by cancer site

Cancer Site	Preventable (%)	N New Cases	N Cases Preventable	N Cases Remaining
Prostate*	??%	2,108	0	2,108
Breast	27%	1,608	431	1,177
Bowel	54%	1,249	679	570
Melanoma	86%	1,149	987	162
Lung	89%	1,031	920	111
Oesophageal and Stomach	75%	338	253	85
Cervical	100%	97	97	0
Total		11,939	3,367	4,213

*Prostate cancer is not listed in the Parkin, Boyd and Walker (2011) and there is limited consistency in the literature on what proportion of prostate cancers is the result of modifiable risk factor exposures.

The data presented in Table 7 was used to visualise the total number of preventable cancer cases in WA in 2012 by each risk factor. For simplicity in the visualisations, the four diet related risk factors (insufficient fruit & vegetables, excessive meat, insufficient fibre and excessive salt) are combined into a single 'poor diet' category, and the data is presented for both sexes combined.

Table 7 Estimated number of preventable new cancer cases by sex and risk factor in WA, 2012

Risk Factor	Males		Females	
	PAF (%)	N Cases Preventable	PAF (%)	N Cases Preventable
Tobacco smoking	23	1,538	15.6	819
Alcohol consumption	4.6	308	3.3	173
Insufficient fruit & vegetables	6.1	408	3.4	179
Excessive meat consumption	3.5	234	1.9	100
Insufficient fibre	1.4	94	1.7	89
Excessive salt consumption	0.9	60	0.2	11
Overweight & obesity	4.1	274	6.9	362
Insufficient physical exercise	0.4	27	1.7	89
Post-menopausal hormones			1.1	58
Infections	2.5	167	3.7	194
X-ray radiation	1.7	114	2	105
UV radiation	3.5	234	3.6	189
Occupational exposures	4.9	328	2.4	126
Reproduction (breastfeeding)			1.7	89
All of the above*	45.3	3,030	40.1	2,105
2012 Incident Cases	6,689		5,250	

*Note: The 'All of the above' attributable fraction is used as a 'total', this value does not relate to a simple summation of the risk factors listed as this would result in an overestimate due to multiple risk factor interactions on carcinogenic pathways in some cancers.

Average Years Lost Per Death

The average potential years of life lost (PYLL) were calculated by assuming all persons in WA who died of cancer in 2012 would have lived to the age of 74. The number of years between each individual's age at death and the age of 74 are considered the potential years of life lost per death, after adjustment for other potential causes of death. These values are summed and then divided by the number of individuals who died to produce the average PYLL. Individuals who died of cancer at the age of 74 or older are excluded from the analysis. Each cancer site's average PYLL was presented individually on their specific page of the consultation.

Table 8 Average potential years of life lost per death in WA by cancer site and sex in 2012

Cancer Site	Males	Females
Bowel	12.75	10.2
Breast	-	15.23
Cervical	-	22.35
Lung	9.64	9.51
Melanoma	16.00	15.21
Oesophageal & Stomach	10.75	15.53
Prostate	7.75	-

Relative Five Year Survival

The relative 5-year survival of people diagnosed with cancer provides the proportion of those individuals who survive five years after diagnosis in comparison to the general population. This method takes in to account the proportion of the general population which dies during the same time period. This survival method relies on individual-level data as opposed to the population-level data used for the mortality to incidence ratio (MIR) survival method commonly used for international comparisons. Each cancer site's relative 5-year survival was presented individually on their specific page of the consultation.

Table 9 Five year survival (relative to the general population) from 2004-2008 of people diagnosed with cancer in WA by cancer site and sex

Cancer Site	Males	Females
Bowel	67%	67%
Breast	-	91%
Cervical	-	72%
Lung	17%	14%
Melanoma	90%	94%
Oesophageal & Stomach	21%	25%
Prostate	94%	-

Days in Hospital

The number of days in hospital is the summation of the total number of days spent in hospital from 2008 to 2012 where the principle diagnosis for the admission was cancer of the specific site. Each cancer site's total hospital admitted days was presented individually on their specific page of the consultation.

Table 10 Number of hospital admitted days from 2008 to 2012 in WA by cancer site and sex

Cancer Site	Males	Females
Bowel	64,710	48,779
Breast		66,273
Cervical	4,604	
Lung	46,602	36,312
Melanoma	16,526	8,981
Oesophageal & Stomach	24,861	9,987
Prostate	61,210	

International Survival Comparisons

In order to make comparisons between Australia and other countries on cancer survival, data from the International Agency for Research on Cancer project *Globocan 2012*[3] was used. This World Health Organization initiative produces estimates with the most recent data available to the project at the time.

Using the Globocan 2012 project's age-standardised incidence and mortality rates for Organisation for Economic Cooperation and Development (OECD) countries, of which Australia is a member, the Epidemiology Branch calculated the compliment of the mortality to incidence ratio (MIR). The MIR is the best available method for international comparisons of cancer survival. The MIR is frequently used by the Australian Institute of Health and Welfare (AIHW) for international comparisons in the *Cancer in Australia* report series[4]. Additionally, the AIHW produces the MIR by cancer site in the *Australian Cancer Incidence and Mortality*[5] data books.

While the 5-year relative survival (calculated for WA only and presented above) is considered the best estimate for cancer survival, it is an impractical option for international comparisons due to the detailed individual-level data required to produce the statistic. The Globocan 2012 project makes use of population-level rates and does not provide the detail required to calculate 5-year relative survival.

The MIR is effectively a ratio of the number of people who are diagnosed within a given year, to the number of people who died of the same cancer type, within the same year. To use the MIR to estimate cancer survival, an assumption of a stable incidence and mortality rate is made. This may not be the case for all countries in the OECD for all the cancers selected for individual attention. It is possible for major improvements in cancer detection or prevention in recent years to skew an MIR if mortality has not also improved similarly. Similarly, recent improvements in the collection of cancer diagnoses or deaths will alter the MIR survival estimate. These factors are beyond the scope of this analysis.

Additionally, by choosing to present country MIR survival estimates by ranks only, our visualisations lack the detail necessary to show how close to the higher ranks Australia may be. This decision was made in the interest of simplicity for a general audience; however the detailed data are presented in Tables 11- 17 below for completeness.

[3] globocan.iarc.fr/
[4] AIHW & AACR 2012. Cancer in Australia: an overview 2012. Cancer series no. 74. Cat. no. CAN 70. Canberra: AIHW.
[5] http://www.aihw.gov.au/acim-books/

Bowel Cancer

Table 11 Estimated bowel cancer incidence and mortality age standardised rate, survival and rank in Organisation for Economic Cooperation and Development (OECD) countries, by country and sex for all ages (2012)

Country	Females				Males			
	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank
Australia	32.0	7.6	76%	3	45.5	10.7	76%	1
Austria	19.6	7.2	63%	22	34.0	13.3	61%	22
Belgium	29.5	9.5	68%	9	45.2	14.7	67%	6
Canada	28.5	8.8	69%	5	42.6	13.2	69%	4
Chile	14.4	7.9	45%	33	15.7	9.4	40%	33
Czech Republic	27.1	9.9	63%	20	54.0	22.6	58%	24
Denmark	35.7	12.5	65%	17	45.9	16.8	63%	17
Estonia	22.6	7.9	65%	15	35.1	17.5	50%	28
Finland	19.7	6.9	65%	18	28.2	10.2	64%	16
France	24.9	8.0	68%	7	36.1	12.9	64%	15
Germany	23.3	8.1	65%	14	39.7	13.1	67%	8
Greece	11.2	6.1	46%	32	16.3	9.2	44%	32
Hungary	30.5	14.5	52%	29	58.9	30.1	49%	29
Iceland	28.2	5.8	79%	1	28.9	9.3	68%	5
Ireland	27.7	8.9	68%	8	43.1	16.0	63%	18
Israel	30.3	10.0	67%	10	43.0	12.6	71%	3
Italy	27.5	8.6	69%	6	41.5	13.5	67%	7
Japan	23.5	9.2	61%	23	42.1	15.0	64%	14
Korea, Republic of	33.3	7.8	77%	2	58.7	14.6	75%	2
Luxembourg	21.6	8.8	59%	25	42.1	13.9	67%	9
Mexico	6.7	3.5	48%	30	8.9	4.8	46%	30
New Zealand	33.5	13.7	59%	26	41.5	16.8	60%	23
Norway	35.8	12.1	66%	12	42.6	14.2	67%	10
Poland	19.5	10.3	47%	31	37.2	20.6	45%	31
Portugal	23.6	9.4	60%	24	41.8	19.0	55%	26
Slovakia	29.3	12.0	59%	27	61.6	26.9	56%	25
Slovenia	27.0	11.2	59%	28	49.7	22.9	54%	27
Spain	24.2	8.4	65%	13	43.9	17.1	61%	21
Sweden	26.5	9.7	63%	21	32.3	12.2	62%	19
Switzerland	23.6	6.4	73%	4	36.3	12.8	65%	12
The Netherlands	33.9	11.2	67%	11	47.5	16.0	66%	11
Turkey	13.1	7.8	40%	34	20.5	12.6	39%	34
United Kingdom	24.4	8.7	64%	19	36.8	13.0	65%	13
United States of America	22.0	7.7	65%	16	28.5	11.0	61%	20

1 Age standardised rate per 100,000 persons.
2 Compliment of the Mortality to Incidence Ratio, MIR = 1-(Mortality/Incidence)

Breast Cancer

Table 12 Estimated female breast cancer incidence and mortality age standardised rate, survival and rank in Organisation for Economic Cooperation and Development (OECD) countries, by country for all ages (2012)

Country	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank
Australia	86.0	14.0	84%	7
Austria	68.0	14.4	79%	25
Belgium	111.9	20.3	82%	17
Canada	79.8	13.9	83%	13
Chile	34.8	11.5	67%	33
Czech Republic	70.3	12.8	82%	19
Denmark	105.0	18.8	82%	15
Estonia	51.6	10.5	80%	23
Finland	89.4	13.6	85%	4
France	104.5	16.4	84%	5
Germany	91.6	15.5	83%	10
Greece	43.9	14.1	68%	32
Hungary	54.5	16.2	70%	31
Iceland	96.3	14.4	85%	3
Ireland	92.3	19.1	79%	24
Israel	80.5	17.3	79%	26
Italy	91.3	15.8	83%	12
Japan	51.5	9.8	81%	20
Korea, Republic of	52.1	6.1	88%	1
Luxembourg	89.1	13.1	85%	2
Mexico	35.4	9.7	73%	30
New Zealand	85.0	17.1	80%	22
Norway	73.1	12.5	83%	11
Poland	51.9	13.8	73%	29
Portugal	67.6	13.1	81%	21
Slovakia	57.5	13.1	77%	27
Slovenia	66.5	15.6	77%	28
Spain	67.3	11.8	82%	14
Sweden	80.4	13.4	83%	9
Switzerland	83.1	13.6	84%	8
The Netherlands	99.0	18.0	82%	18
Turkey	39.1	13.4	66%	34
United Kingdom	95.0	17.1	82%	16
United States of America	92.9	14.9	84%	6

1 Age standardised rate per 100,000 persons.
2 Compliment of the Mortality to Incidence Ratio, MIR = 1-(Mortality/Incidence)

Cervical Cancer

Table 13 Estimated female cervical cancer incidence and mortality age standardised rate, survival and rank in Organisation for Economic Cooperation and Development (OECD) countries, by country all ages (2012)

Country	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank
Australia	5.5	1.6	71%	21
Austria	5.8	2.0	66%	26
Belgium	8.6	1.9	78%	4
Canada	6.3	1.7	73%	17
Chile	12.8	6.0	53%	32
Czech Republic	14.1	3.2	77%	7
Denmark	10.6	1.9	82%	2
Estonia	19.9	4.5	77%	6
Finland	4.3	1.0	77%	8
France	6.8	1.9	72%	19
Germany	8.2	1.7	79%	3
Greece	5.2	1.8	65%	27
Hungary	18.0	5.3	71%	22
Iceland	7.9	0.4	95%	1
Ireland	13.6	3.3	76%	11
Israel	4.6	2.3	50%	34
Italy	6.7	1.5	78%	5
Japan	10.9	2.8	74%	14
Korea, Republic of	9.5	2.6	73%	18
Luxembourg	4.9	2.4	51%	33
Mexico	23.3	8.0	66%	25
New Zealand	5.3	1.4	74%	15
Norway	9.8	2.3	77%	9
Poland	12.2	5.4	56%	31
Portugal	9.0	3.7	59%	30
Slovakia	16.1	5.2	68%	24
Slovenia	10.5	3.0	71%	20
Spain	7.8	2.1	73%	16
Sweden	7.4	1.9	74%	13
Switzerland	3.6	1.1	69%	23
The Netherlands	6.8	1.6	76%	10
Turkey	4.3	1.7	60%	28
United Kingdom	7.1	1.8	75%	12
United States of America	6.6	2.7	59%	29

1 Age standardised rate per 100,000 persons.
2 Compliment of the Mortality to Incidence Ratio, MIR = 1-(Mortality/Incidence)

Lung Cancer

Table 14 Estimated lung cancer incidence and mortality age standardised rate, survival and rank in Organisation for Economic Cooperation and Development (OECD) countries, by country and sex for all ages (2012)

Country	Females				Males			
	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank
Australia	21.5	14.1	34%	5	33.3	23.6	29%	1
Austria	19.5	13.8	29%	10	37.1	29.2	21%	10
Belgium	19.8	13.3	33%	7	56.6	51.2	10%	31
Canada	34.4	25.1	27%	14	42.5	32.5	24%	5
Chile	10.2	8.8	14%	31	17.1	17.0	1%	34
Czech Republic	17.8	12.9	28%	13	50.9	39.7	22%	8
Denmark	37.6	28.4	24%	15	41.6	35.2	15%	20
Estonia	9.4	7.1	24%	16	48.2	39.5	18%	16
Finland	12.2	9.5	22%	21	29.9	25.6	14%	22
France	20.2	12.9	36%	3	52.0	39.9	23%	6
Germany	17.9	14.5	19%	26	38.8	31.3	19%	15
Greece	9.0	7.9	12%	33	50.9	45.4	11%	28
Hungary	33.2	26.6	20%	24	76.6	66.6	13%	25
Iceland	28.9	22.9	21%	23	31.0	26.4	15%	21
Ireland	27.4	18.2	34%	6	36.1	29.8	17%	17
Israel	14.4	9.8	32%	8	29.5	27.5	7%	33
Italy	13.2	10.4	21%	22	38.5	33.6	13%	26
Japan	12.9	8.3	36%	4	38.8	28.9	26%	3
Korea, Republic of	16.2	9.8	40%	1	45.5	36.5	20%	14
Luxembourg	18.5	14.4	22%	20	39.9	33.2	17%	19
Mexico	4.9	4.3	12%	32	10.5	9.4	10%	29
New Zealand	23.2	19.2	17%	28	29.2	22.8	22%	9
Norway	26.1	18.7	28%	12	34.8	26.6	24%	4
Poland	21.8	17.6	19%	25	60.5	55.5	8%	32
Portugal	8.3	6.3	24%	18	34.2	27.0	21%	11
Slovakia	14.3	8.8	38%	2	47.5	39.5	17%	18
Slovenia	17.5	14.3	18%	27	53.8	42.5	21%	12
Spain	11.3	8.0	29%	11	52.5	40.3	23%	7
Sweden	19.1	16.1	16%	30	19.4	17.0	12%	27
Switzerland	20.7	15.7	24%	17	35.1	25.3	28%	2
The Netherlands	31.6	24.5	22%	19	44.4	38.4	14%	23
Turkey	8.8	7.8	11%	34	63.9	57.5	10%	30
United Kingdom	25.8	21.4	17%	29	34.9	30.2	13%	24
United States of America	33.7	23.4	31%	9	44.2	35.1	21%	13

1 Age standardised rate per 100,000 persons.
2 Compliment of the Mortality to Incidence Ratio, MIR = 1-(Mortality/Incidence)

Melanoma

Table 15 Estimated melanoma incidence and mortality age standardised rate, survival and rank in Organisation for Economic Cooperation and Development (OECD) countries, by country and sex for all ages (2012)

Country	Females				Males			
	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank
Australia	30.0	2.3	92%	2	40.5	5.8	86%	2
Austria	10.1	1.3	87%	19	9.9	2.8	72%	25
Belgium	15.2	1.2	92%	3	9.1	1.7	81%	14
Canada	9.1	1.2	87%	21	10.4	2.4	77%	21
Chile	1.6	0.5	69%	30	1.3	0.6	54%	33
Czech Republic	12.0	1.2	90%	13	13.8	2.2	84%	5
Denmark	22.1	1.8	92%	4	16.6	2.5	85%	3
Estonia	8.4	1.6	81%	26	6.4	2.9	55%	32
Finland	11.2	1.1	90%	12	14.4	2.7	81%	15
France	10.6	1.1	90%	14	10.0	1.9	81%	16
Germany	12.0	1.1	91%	7	11.1	1.7	85%	4
Greece	2.0	0.7	65%	31	2.9	1.2	59%	30
Hungary	6.5	1.4	78%	27	8.1	2.4	70%	26
Iceland	15.3	2.2	86%	22	9.2	2.5	73%	24
Ireland	14.7	1.4	90%	9	12.9	2.6	80%	19
Israel	10.2	1.5	85%	23	13.0	2.8	78%	20
Italy	11.7	1.1	91%	8	11.1	1.8	84%	8
Japan	0.7	0.2	71%	29	0.5	0.2	60%	28
Korea, Republic of	0.8	0.3	63%	32	1.0	0.4	60%	29
Luxembourg	11.9	0.9	92%	1	11.2	1.4	88%	1
Mexico	1.5	0.4	73%	28	2.1	0.7	67%	27
New Zealand	33.1	2.8	92%	6	39.2	6.9	82%	10
Norway	19.1	2.5	87%	20	19.0	4.7	75%	23
Poland	3.9	1.6	59%	34	4.3	2.5	42%	34
Portugal	7.1	0.9	87%	18	6.1	1.1	82%	11
Slovakia	9.2	1.7	82%	25	10.9	2.6	76%	22
Slovenia	16.8	3.1	82%	24	16.0	3.2	80%	18
Spain	7.2	0.9	88%	17	6.6	1.2	82%	12
Sweden	18.8	2.1	89%	15	17.6	3.5	80%	17
Switzerland	20.8	1.7	92%	5	20.2	3.3	84%	9
The Netherlands	21.8	2.5	89%	16	17.2	3.2	81%	13
Turkey	2.1	0.8	62%	33	2.1	0.9	57%	31
United Kingdom	15.6	1.5	90%	11	13.7	2.2	84%	6
United States of America	12.6	1.2	90%	10	16.8	2.7	84%	7

1 Age standardised rate per 100,000 persons.
2 Compliment of the Mortality to Incidence Ratio, MIR = 1-(Mortality/Incidence)

Oesophageal & Stomach Cancer

Table 16 Estimated oesophageal & stomach cancer incidence and mortality age standardised rate, survival and rank in Organisation for Economic Cooperation and Development (OECD) countries, by country and sex for all ages (2012)

Country	Females				Males			
	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank
Australia	4.8	2.9	40%	6	12.1	8.2	32%	10
Austria	5.6	3.5	38%	11	14.2	9.1	36%	7
Belgium	5.8	3.6	38%	8	15.6	10.2	35%	8
Canada	4.3	2.8	35%	15	11.6	8.3	28%	15
Chile	11	9.6	13%	34	28.2	24.9	12%	34
Czech Republic	6.3	4.1	35%	14	15.9	11.3	29%	14
Denmark	5.4	3.9	28%	24	13.9	10.4	25%	23
Estonia	10.9	6.2	43%	5	24	17.3	28%	17
Finland	5.1	3.8	25%	27	10.4	7.8	25%	25
France (metropolitan)	4.5	2.8	38%	10	13	9.5	27%	19
Germany	6.8	4.2	38%	7	17.6	10.3	41%	4
Greece	3.8	3.2	16%	32	8.9	7.6	15%	31
Hungary	7.4	5.7	23%	29	20.6	16.7	19%	29
Iceland	5.2	3.7	29%	22	13	7.8	40%	5
Ireland	7.7	5.4	30%	20	17.2	12.6	27%	20
Israel	5.7	4.1	28%	23	11.4	7.1	38%	6
Italy	6.4	4.3	33%	18	13	9.6	26%	21
Japan	18.1	8.2	55%	3	56.8	25.2	56%	2
Korea, Republic of	25.1	8.1	68%	1	68.3	23.7	65%	1
Luxembourg	6.9	3	57%	2	16.7	8.5	49%	3
Mexico	6.5	5.2	20%	31	9.5	7.8	18%	30
New Zealand	5.6	3.7	34%	16	12.3	8.2	33%	9
Norway	5	3.4	32%	19	9.5	6.5	32%	11
Poland	5.8	4.6	21%	30	17.1	14.9	13%	32
Portugal	9.3	6.2	33%	17	24.3	18	26%	22
Slovakia	7.4	5.2	30%	21	20.4	15.3	25%	26
Slovenia	7.1	4.6	35%	13	19.1	13.9	27%	18
Spain	5.8	3.6	38%	9	15.4	10.6	31%	12
Sweden	3.8	2.8	26%	26	8.4	6.8	19%	28
Switzerland	5.5	3.1	44%	4	11.1	7.7	31%	13
The Netherlands	6.7	5	25%	28	17.6	13.2	25%	24
Turkey	13.9	12	14%	33	22.2	19.5	12%	33
United Kingdom	6.7	4.9	27%	25	16.4	12.8	22%	27
United States of America	3.8	2.4	37%	12	10.9	7.8	28%	16

1 Age standardised rate per 100,000 persons.
2 Compliment of the Mortality to Incidence Ratio, MIR = 1-(Mortality/Incidence)

Prostate Cancer

Table 17 Estimated male prostate cancer incidence and mortality age standardised rate, survival and rank in Organisation for Economic Cooperation and Development (OECD) countries, by country for all ages (2012)

Country	Incidence[1]	Mortality[1]	Survival[2]	Survival Rank
Australia	115.2	12.9	89%	6
Austria	74.7	10.2	86%	13
Belgium	90.9	12.7	86%	17
Canada	88.9	9.4	89%	4
Chile	52.4	17.1	67%	30
Czech Republic	72.2	11.8	84%	21
Denmark	91.3	19.5	79%	26
Estonia	94.4	19.3	80%	25
Finland	96.6	12	88%	9
France	127.3	10	92%	2
Germany	77.3	10.4	87%	12
Greece	20.2	9.8	51%	33
Hungary	37.5	10.4	72%	29
Iceland	106.6	14.8	86%	16
Ireland	114.2	12.5	89%	5
Israel	84.3	6.3	93%	1
Italy	67.6	7.9	88%	8
Japan	30.4	5	84%	22
Korea, Republic of	30.3	4.6	85%	19
Luxembourg	78.8	10.4	87%	11
Mexico	27.3	11.3	59%	32
New Zealand	92.2	12.8	86%	15
Norway	129.7	17.9	86%	14
Poland	35.9	12.2	66%	31
Portugal	63.6	10.7	83%	23
Slovakia	50	13.1	74%	28
Slovenia	82.9	18.5	78%	27
Spain	65.2	8.6	87%	10
Sweden	119	17.8	85%	18
Switzerland	107.2	12.2	89%	7
The Netherlands	83.4	13.5	84%	20
Turkey	40.6	22.8	44%	34
United Kingdom	73.2	13.1	82%	24
United States of America	98.2	9.8	90%	3

1 Age standardised rate per 100,000 persons.
2 Compliment of the Mortality to Incidence Ratio, MIR = 1-(Mortality/Incidence)

Conclusions

This document has provided detailed statistics on the seven cancers of focus for the next Chief Health Officer's report. For further information on the data or the methods used, please contact the Epidemiology Branch of the WA Department of Health (epi@health.wa.gov.au).

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