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

Cancer Incidence, Mortality and Survival in Western Australia, 2017

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Cancer incidence, mortality and survival in Western Australia, 2017

A report of the Western Australian Cancer Registry

Statistical Series Number 112

Contact regarding enquiries and additional information

Principal Data Management Officer
Western Australian Cancer Registry
Department of Health
1st Floor, C Block
189 Royal St
East Perth WA 6004
AUSTRALIA

Phone: +61 (0)8 9222 4022

E-mail: wacanreg@health.wa.gov.au

Department of Health home page www.health.wa.gov.au

Western Australian Cancer Registry home page:
https://ww2.health.wa.gov.au/Articles/U_Z/Western-Australian-Cancer-Registry

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Executive Summary

All cancers

- In 2017, there were 13,361 new diagnoses of cancer in Western Australia residents, comprising 7,379 cancers diagnosed in males (55.2%) and 5,982 in females (44.8%). Males reported the lowest incidence rate with 549 cases per 100,000 males since 2001.
- In 2017, there were 4,147 deaths due to cancer among Western Australian residents, comprising 2323 deaths in males (56.0%) and 1824 deaths in females (44.0%). Both males and females have reported the lowest rate of deaths due to cancer since 1983.
- In the period 2013-2017 the five-year relative survival rate in WA for all cancers was 71.7%. This increased from 69.2% in the period 2008-2012, and from 60.4% in the period 1993-1997.
- Female residents living in the Kimberley and Pilbara health regions reported a higher number of new cancer cases than males.
- The estimated cumulative risk of being diagnosed with cancer by age 75 years was 1 in 3 for males and 1 in 4 for females.
- The estimated cumulative risk of death due to cancer before age 75 years was 1 in 10 for males and 1 in 13 for females.

Cancer in the Aboriginal population

- In 2017, 180 new cases of cancer were reported for Aboriginal persons, representing 1.3% of all cancers in Western Australia.
- For persons diagnosed in the period 2013-2017, the Aboriginal population reported a five-year observed survival rate of 58.1% compared to the non-Aboriginal population observed survival rate of 72.9%, a difference of 14.8 percentage points.

Selected cancer types

- Prostate cancer was the most commonly reported cancer in males at 2,093 cases, accounting for 28.4% of total male cancer cases. This was followed by melanoma (11.8%), colorectal (9.5%) and lung cancer (8.6%)
- Breast cancer was the most common cancer in females at 1,830 cases, accounting for 30.6% of all female cancer cases. This was followed by colorectal (10.1%), melanoma (9.9%) and lung cancer (7.9%).
- Lung cancer was the most commonly reported death due to cancer in males at 411 deaths, accounting for 17.7% of total male cancer deaths. Prostate (11.6%), colorectal (9.6%), pancreatic (7.1%) and unknown primary cancer types (5.3%) were the next most common cancer deaths in males.
- The most commonly reported cancer death in females was also lung cancer at 306 deaths, accounting for 16.8% of total female cancer deaths. This was followed by breast (14.7%), colorectal (9.1%), pancreatic (7.6%) and unknown primary cancer types (6.4%).
- Thyroid cancer has the highest five-year survival with a rate of 97.2%, followed by prostate (94.5%), melanoma (94.2%), breast (92.8%) and lymphoma cancers (82.1%).
- The poorest five-year survival was reported in mesothelioma (7.6%), pancreatic (14.1%), brain cancer (21.7%), liver (24.5%) and lung (24.6%) cancers.

- Since 2014, the rates of new breast cancer cases are among the highest on record, reporting between 125.4 and 132.2 cases per 100,00 females. However, the mortality in the same period has been the lowest, at 18.2 to 18.6 deaths per 100,000 females.
- Melanoma in men recorded 7.0 deaths per 100,000 males, the lowest rate for 20 years since 6.7 deaths per 100,000 males were reported in 1997.
- Lung cancer incidence in males has been decreasing since collection began, with 2017 reporting the lowest rate on record with 47.9 cases per 100,000 males. In contrast, females diagnosed with lung cancer have steadily increased since collection began. Female incidence rates since 2015 being amongst the highest, reporting between 31.8 and 36.8 cases per 100,000 females.
- Incidence and mortality for persons diagnosed with liver cancer have steadily increased over time. In 2017, the male and female incidence rates were 10.0 cases and 4.2 cases per 100,000 respectively since 2014, more than double the rates 20 years in ago in 1998 when male and female incidence reported 4.7 and 2.1 cases per 100,000 persons.
- Kidney cancer in males has been steadily increasing, with 2017 reporting an incidence rate of 19.2 cases per 100,000 males. In contrast, survival for kidney cancer has improved by more than 20%, increasing from 57.3% in 1993-1997 to 80.7% in 2013-2017.
- Brain cancer survival has remained steady in recent years with 21.7% survival reported in 2013-2017, a marginal decline from the periods 2008-2012 (22.2%), and 2003-2007 (22.9%).
- For 2017, colorectal incidence and mortality are among the lowest on record for both males and females. Males reported 52.9 new cases per 100,000 males and females reported 41.6 new cases per 100,000 females. There were 17.3 deaths per 100,000 males and 10.8 deaths per 100,000 females, approximately half the mortality rate for persons diagnosed through the 1990s.

Acronyms

AIHW	Australian Institute of Health and Welfare
ASR	Age standardised rate
AAR	Age adjusted rate
EMHS	East Metropolitan Health Service
HMDS	Hospital Morbidity Data System
NMHS	North Metropolitan Health Service
Risk	Lifetime risk to age 75 years
SMHS	South Metropolitan Health Service
WA	Western Australia
WACHS	WA Country Health Service
WACR	Western Australian Cancer Registry

Introduction

About the Western Australian Cancer Registry

Since 1982, the Western Australian Cancer Registry (WACR) has provided population-based cancer data for use in the planning of health care services and the support of cancer-related research at local, national and international levels. This report is primarily concerned with invasive tumours, or “cancers”, using standardised collection, coding and epidemiological practices aligned with Australian and international cancer registries. The main statistics presented are cancer incidence and cancer-related mortality counts, age-standardised rates, risk and cancer survival in Western Australian residents.

The latest data on notifiable cancers collected for a complete calendar year by the WACR is presented in this report. Incidence, mortality and risk are presented for 2017 and trends over time where appropriate. Survival is presented for all cases diagnosed in five-year windows from 1993-1997 to 2013-2017.

Information is presented for all cancers combined, common cancers, Aboriginal persons, and detailed summary statistics for the 18 common and selected cancers.

The main information sources are reports from pathologists and haematologists, supplemented by death registrations, hospital statistical discharge (HMDS) records, as well as information from hospital files and clinical information systems, and responses to enquiries directed to treating medical practitioners.

The WACR is managed within the Information and Performance Governance branch of the Purchasing and System Performance Division of the Western Australian Department of Health.

Legislative basis

The WA Cancer Registry operates under the *Health (Western Australian Cancer Register) Regulations 2011*. This legislation describes the legal requirement to notify WACR of a malignant neoplasm within 30 days by appropriate health practitioners. This information is to be kept in a register and used to:

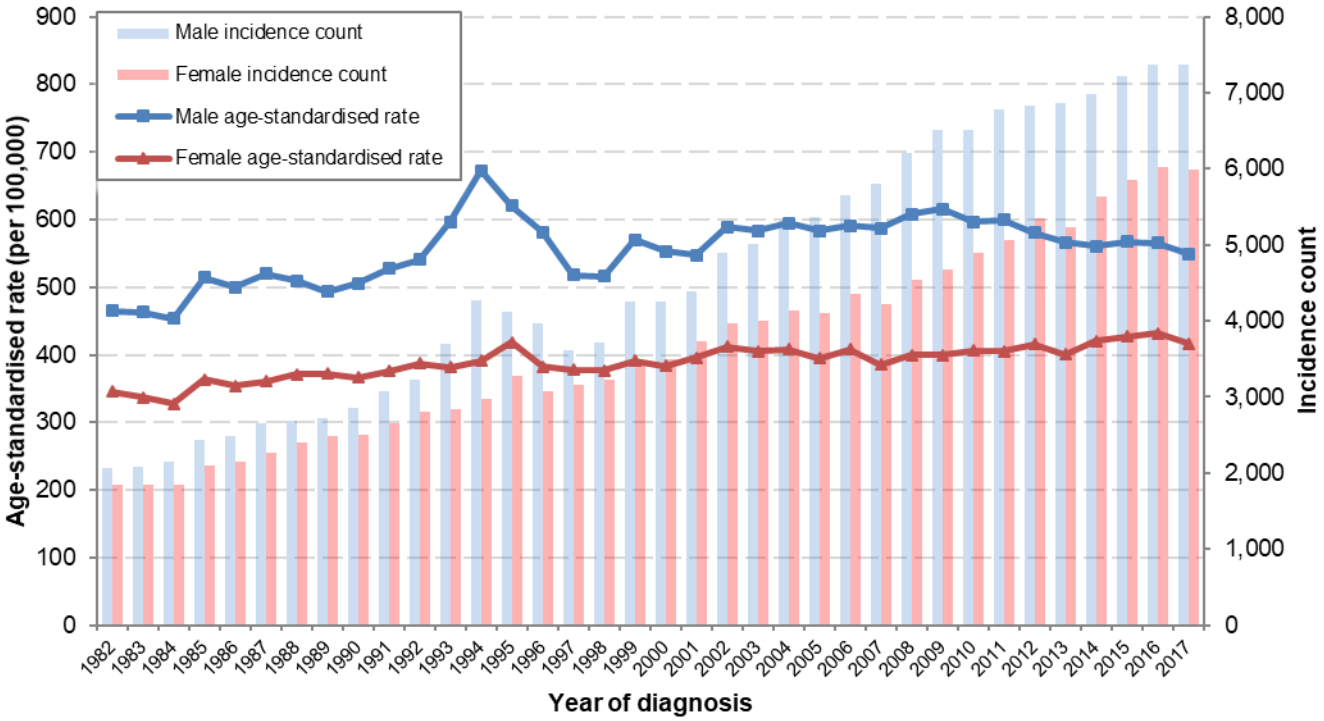
- monitor the number of cases of cancer in Western Australia
- plan, monitor and evaluate services for the control of cancer and the care of cancer patients in Western Australia
- compile and publish general or statistical information relating to cancer
- carry out research into the causes, prevention, screening and treatment of cancer.

All cancers

Incidence

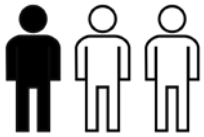
In 2017 there were 13,361 new diagnoses of cancer in Western Australia, representing a 0.3% decrease compared to the 13,397 cases reported in 2016. There were 7,379 cancers diagnosed in males (age-standardised rate (ASR) 549.1 per 100,000 males) and 5,982 in females (ASR 416.4 per 100,000 females) in 2017. Age-standardised rates indicate a marginal reduction of 1.6% per annum in male cancer incidence between 2015 and 2017, as well as a 3.6% decrease for females from 2016 to 2017 (Figure 1). Cancer in males accounted for 55.2% of all cases.

Figure 1. Incidence counts and age-standardised incidence rates, all cancers, Western Australia, 1982-2017



The estimated cumulative risk of being diagnosed with cancer by age 75 years was 1 in 3 for males and 1 in 4 for females (Figure 2).

Figure 2. Lifetime risk to age 75 years, by sex, Western Australia, 2017



1 in 3 males

1 in 4 females

Presented in Figure 3 are the 2017 age-specific incidence rate for all cancers. Each age bracket is presented as a proportion of the total population in each five-year age category for the relevant sex distribution.

- For all cancers combined, age-specific incidence rates were higher for females aged 30 to 54 than males, whereas males aged 55 and older were higher than females.

Figure 3. Age-specific incidence rate by five-year age categories and sex, all cancers, Western Australia, 2017

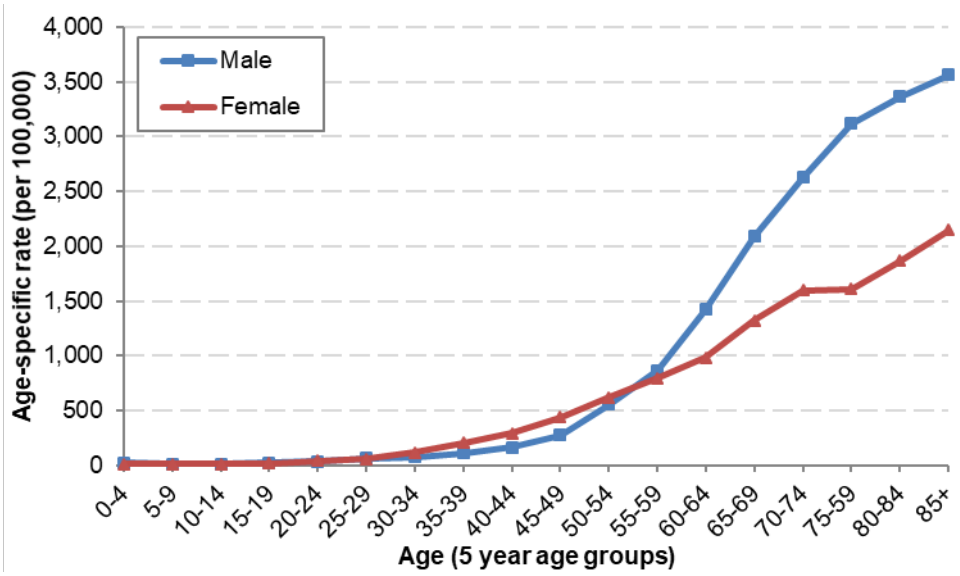


Figure 4 presents the count of cancer cases in each five-year age category as a percentage of the total diagnosed cases, by sex, for all 2017 cancer cases in WA.

- The highest percentage of cancer cases in 2017 occurred in the 65-69 age group for both males and females, with 1,233 cases (16.7% of total cases) diagnosed in 65-69 year old males and 787 cases (13.2%) diagnosed in females.

Figure 4. Incidence age-sex pyramid, all cancers, Western Australia, 2017

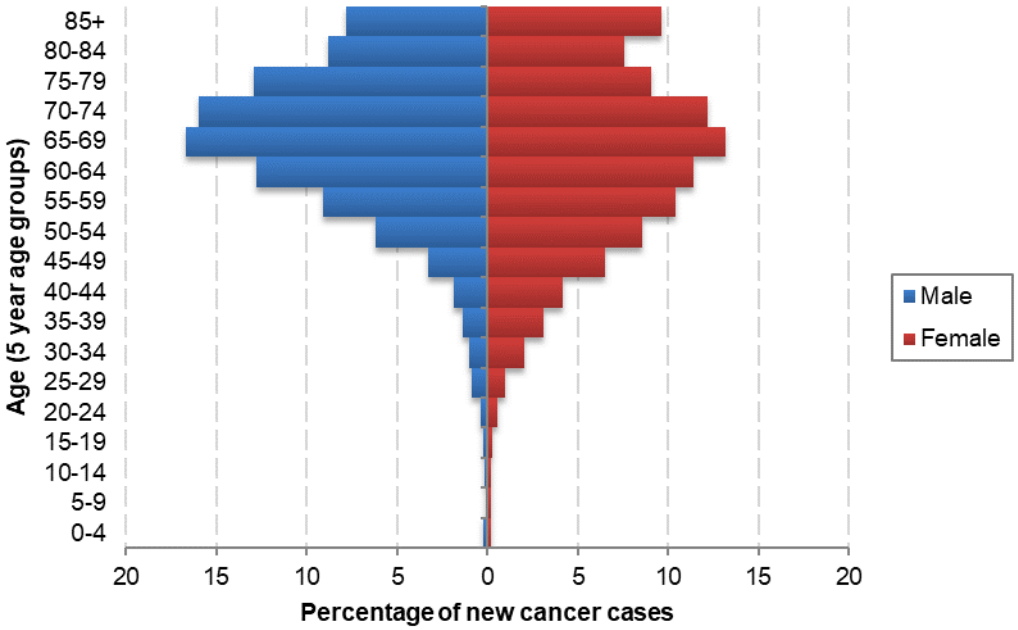


Table 1 describes the number of cancer cases by health service area and region in Western Australia in 2017. The cancer incidence counts for the WA metropolitan area in 2017 was 5,640 for males and 4,712 for females.

- Both the Kimberley and Pilbara health regions reported higher cancer cases for females than males.

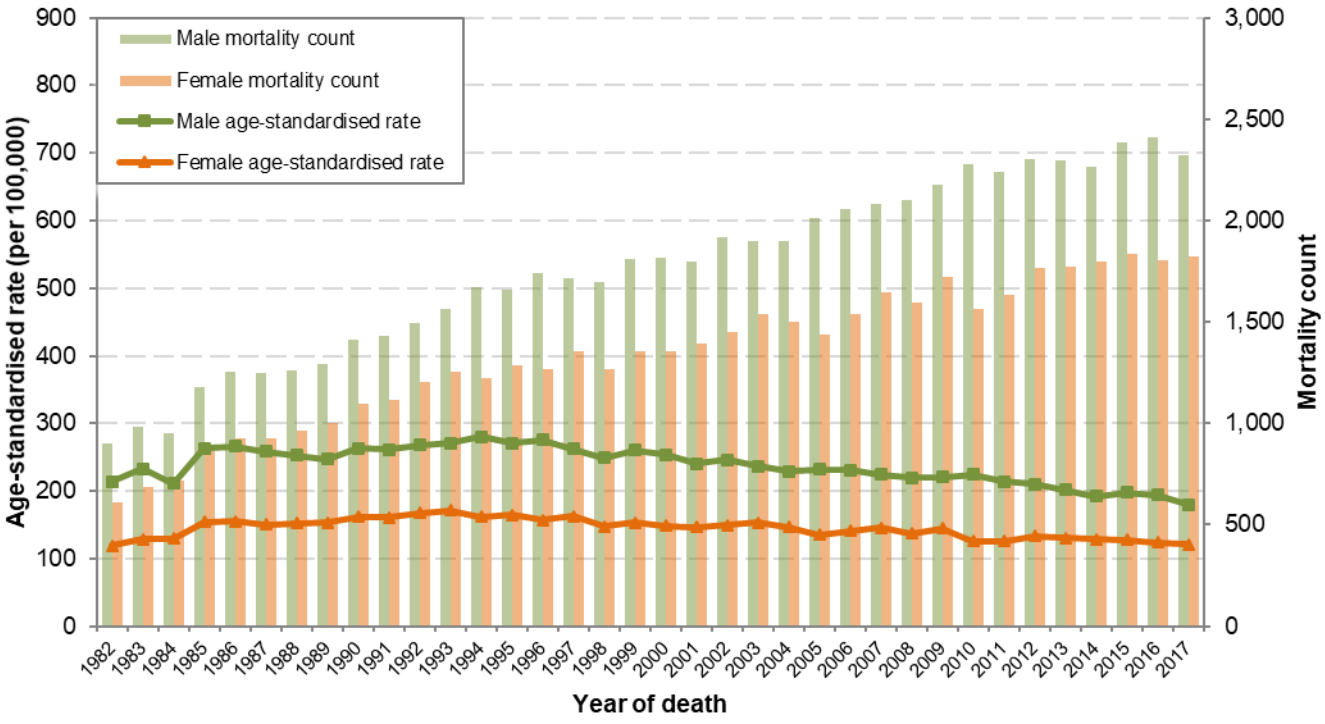
Table 1. Incidence counts, all cancers, by health service area and region, Western Australia, 2017

Health Service Area	Health Region	Male	Female
NMHS	**NMHS**	1,939	1,614
SMHS	**SMHS**	1,907	1,507
EMHS	**EMHS**	1,794	1,591
WACHS	**WACHS**	1,737	1,269
	Kimberley	*71*	*76*
	Pilbara	*49*	*56*
	Midwest	*271*	*150*
	Wheatbelt	*286*	*206*
	Goldfields	*158*	*114*
	Great Southern	*252*	*149*
	South West	*650*	*518*
Other WA address		2	1
Total WA		7,379	5,982

Mortality

There were 4,147 deaths due to cancer among Western Australian residents in 2017, representing a 1.7% decrease in all cancer deaths compared to 4,218 deaths in 2016. In 2017, there were 2,323 deaths in males and 1,824 deaths in females. Over the 10-year period between 2008 to 2017, both the male and female ASR decreased significantly, with males reporting 219.3 deaths per 100,000 males in 2008 compared to 180.1 deaths per 100,000 males in 2017, and females reporting 136.7 deaths per 100,000 females in 2008 compared to 120.7 deaths per 100,000 females in 2017.

Figure 5. Mortality counts and age-standardised mortality rate, all cancers, Western Australia, 1982-2017



The estimated cumulative risk of death due to cancer before age 75 years was 1 in 10 for males and 1 in 13 for females, which was unchanged from recent years (Figure 6).

Figure 6. Lifetime risk of death by 75 years

Figure 7 presents the 2017 age-specific mortality rate for all cancers. Each age bracket is presented as a proportion of the total population in each five-year age category for the relevant sex distribution.

- All-cancer death rates in males were consistently higher than females from age 55 onwards.
- Age-specific mortality rate was highest for the 85+ age group at 2,735.1 deaths per 100,000 males and 1,650.0 deaths per 100,000 for females.

Figure 7. Age-specific mortality rate, all cancers, Western Australia, 2017

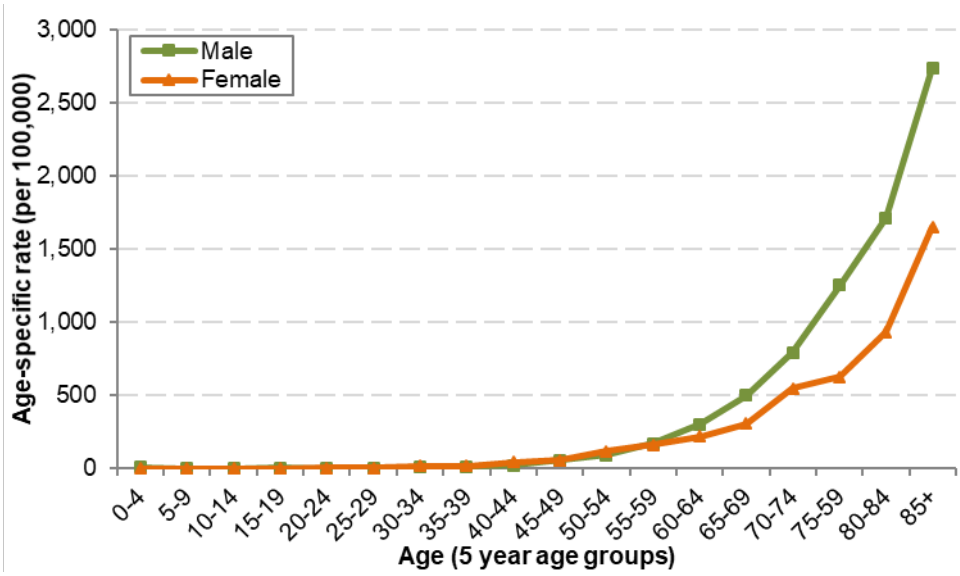


Figure 8 presents the number of cancer deaths in each five-year category as a percentage of total cancer deaths by sex, in Western Australia in 2017

- The highest number of cancer deaths in 2017 occurred in the 85+ age group, with 442 deaths (19% of total) in males and 443 cases (24%) in females.
- However, there was a lower percentage of cancer deaths in females aged 65 to 84 compared to males.

Figure 8. Mortality age-sex pyramid, all cancers, Western Australia, 2017

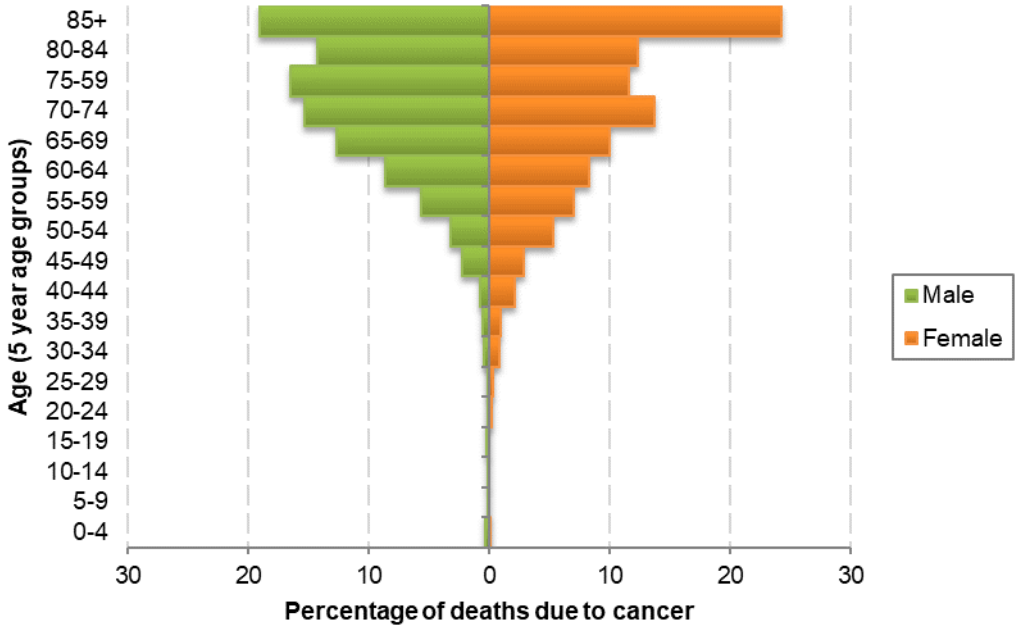


Table 2 details the number of cancer deaths by health service area and region in Western Australia in 2017. The cancer mortality count for the WA metropolitan health service area was 1,730 for males and 1,448 for females. Within the WA country area, the South West region had the highest number of cancer deaths for both males and females.

Table 2. Mortality counts, all cancers, by health service region, Western Australia, 2017

Health Service Area	Health Region	Male	Female
NMHS	**NMHS**	518	480
SMHS	**SMHS**	625	479
EMHS	**EMHS**	587	489
WACHS	**WACHS**	593	376
	Kimberley	*31*	*19*
	Pilbara	*18*	*15*
	Midwest	*92*	*44*
	Wheatbelt	*108*	*76*
	Goldfields	*55*	*30*
	Great Southern	*83*	*52*
	South West	*206*	*140*
Other WA address		-	-
Total WA		2,323	1,824

Survival

Relative survival is the primary measure of survival presented throughout this report. Relative survival is an estimate of the net survival where a person cannot die of anything other than the disease of interest, in this case cancer. The survival estimate adjusts for non-cancer related deaths and enables comparisons to be made across time and across jurisdictions where the general population mortality can differ.

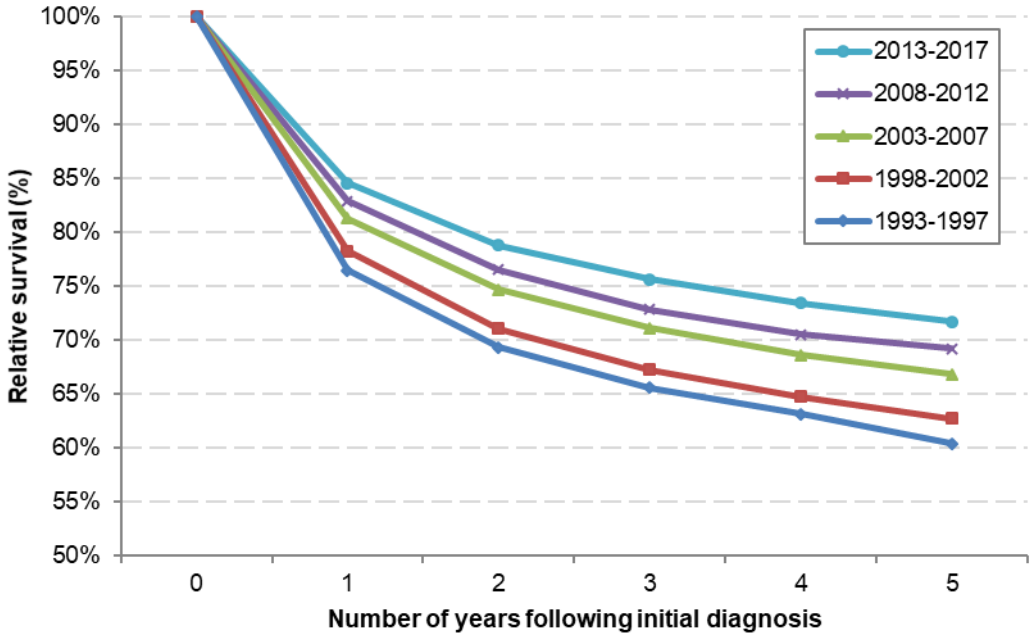
Table 3 and Figure 9 presents survival for each year following diagnoses up to five years, for five time periods 1993-1997 through to 2013-2017.

- In the period 2013-2017 the five-year relative survival rate in WA for all cancers was 71.7%. This increased from 69.2% in the period 2008-2012.
- The one-year survival rate for all cancers increased by 12.1 percentage points, from 76.4% in 1993-1997 to 84.5% in 2013-2017, whereas the five-year survival rate for all cancers increased by 11.3 percentage points from the period 1993-1997 to 2013-2017.

Table 3. Relative survival, all cancers, 1993-1997 to 2013-2017, Western Australia

Number of years following initial diagnosis	Survival (%) for period of diagnosis				
	1993-1997	1998-2002	2003-2007	2008-2012	2013-2017
0	100.0%	100.0%	100.0%	100.0%	100.0%
1	76.4%	78.2%	81.3%	82.9%	84.5%
2	69.3%	71.0%	74.7%	76.5%	78.8%
3	65.6%	67.2%	71.1%	72.8%	75.6%
4	63.1%	64.7%	68.6%	70.5%	73.4%
5	60.4%	62.7%	66.8%	69.2%	71.7%

Figure 9. Relative survival, all cancers, 1993-1997 to 2013-2017, Western Australia



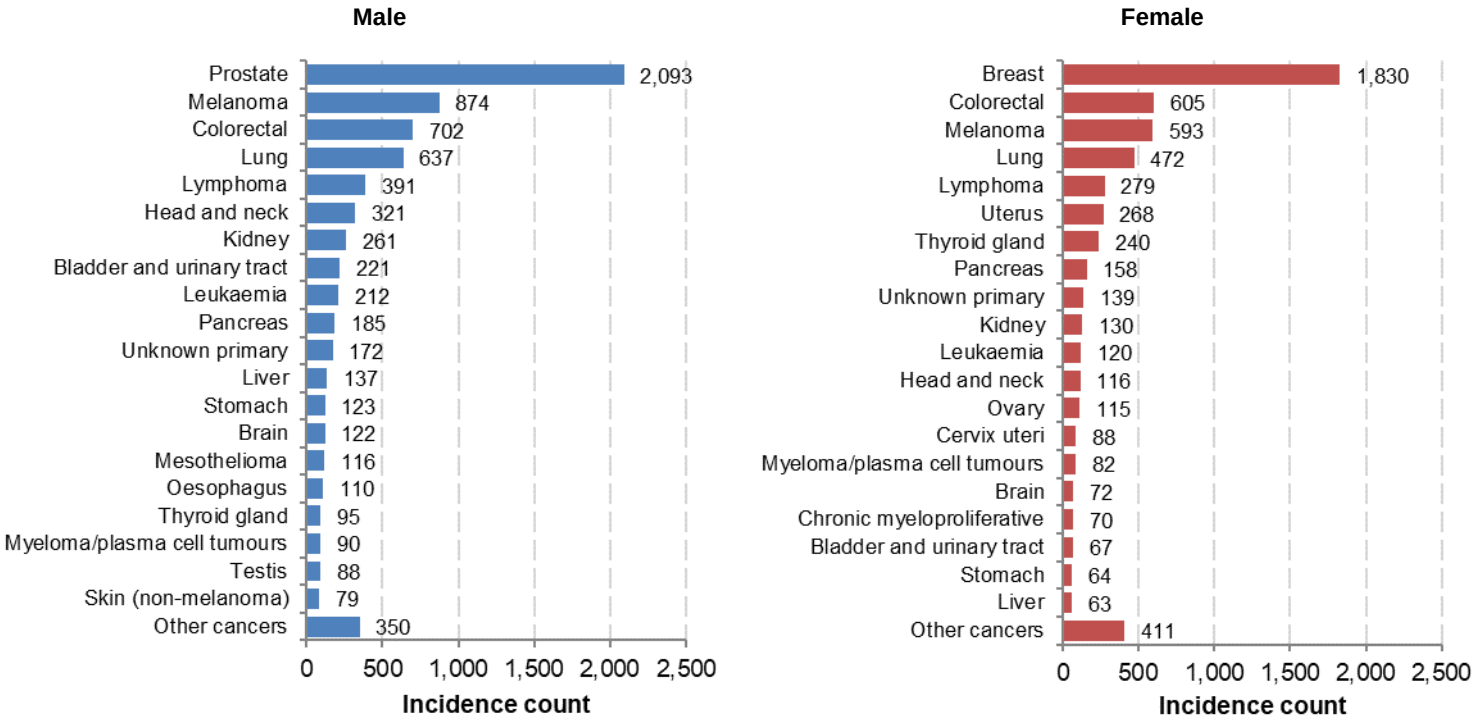
Common cancers

Top 20 cancers for 2017 for both male and female are presented in Figure 10. More details on selected cancers can be found in the subsequent chapters.

- Prostate cancer was the most commonly reported cancer in males at 2,093 new cases, accounting for 28.4% of total male cancer cases. This was followed by melanoma (11.8%), colorectal (9.5%) and lung cancer (8.6%)
- Breast cancer was the most common cancer in females at 1,830 cases, accounting for 30.6% of all female cancer cases. This was followed by colorectal (10.1%), melanoma (9.9%) and lung cancer (7.9%).

Incidence

Figure 10. Top 20 cancer incidence count by sex, Western Australia, 2017

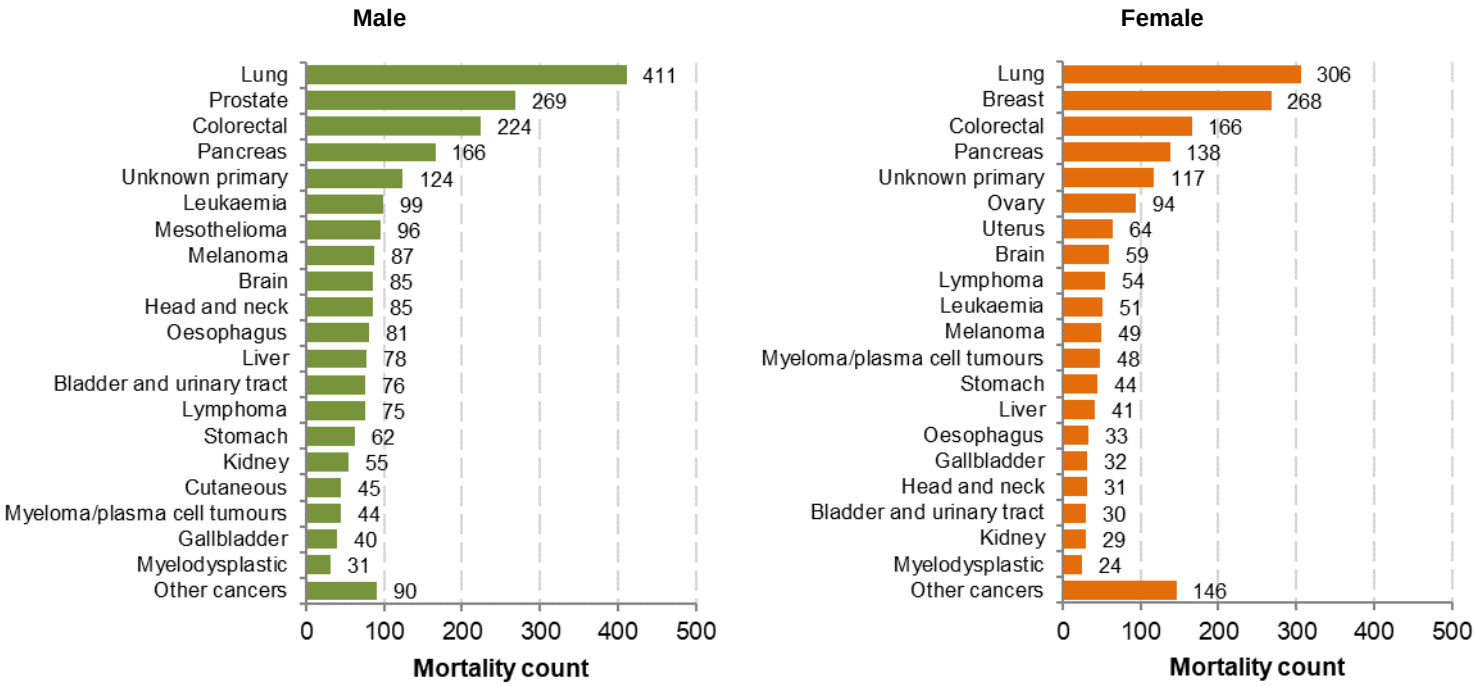


Mortality

Figure 11 depicts the top 20 cancer deaths for males and females in Western Australia in 2017.

- Lung cancer was the most commonly reported cancer death in males at 411 deaths, accounting for 17.7% of total male cancer deaths. Prostate (11.6%), colorectal (9.6%), pancreatic (7.1%) and unknown primary cancer types (5.3%) were the next most common cancer deaths in males.
- The most commonly reported cancer death in females was also lung cancer at 306 deaths, accounting for 16.8% of total female cancer deaths. This was followed by breast (14.7%), colorectal (9.1%), pancreatic (7.6%) and unknown primary cancer types (6.4%).

Figure 11. Top 20 cancer mortality count, Western Australia, 2017



Survival

Figure 12 presents the five-year relative survival and their 95% confidence intervals for major cancer types for the period 2013-2017 in Western Australia.

- Thyroid cancer has the highest five-year survival with a rate of 97.2%, followed by prostate (94.5%), melanoma (94.2%), breast (92.8%) and lymphoma cancers (82.1%).
- The poorest five-year survival was reported in mesothelioma (7.6%), pancreatic (14.1%), and brain cancer cases (21.7%).

Figure 12. Five-year survival, selected cancers, Western Australia, 2013-2017

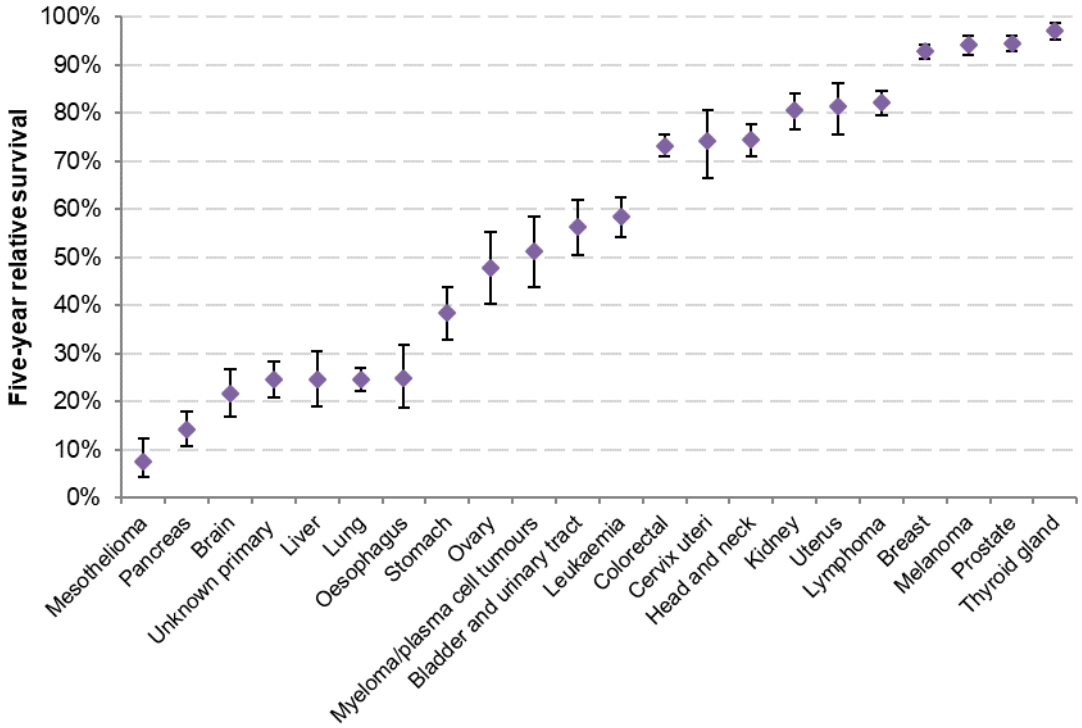


Table 4. Five-year survival, selected cancers, Western Australia, 2013-2017

Cancer Type	Five-year survival (%)
Thyroid gland	97.2%
Prostate	94.5%
Melanoma	94.2%
Breast	92.8%
Lymphoma	82.1%
Uterus	81.3%
Kidney	80.7%
Head and neck	74.4%
Cervix uteri	74.3%
Colorectal	73.2%
Leukaemia	58.4%
Bladder and urinary tract	56.2%
Myeloma/plasma cell tumours	51.2%
Ovary	47.9%
Stomach	38.3%
Oesophagus	24.9%
Lung	24.6%
Liver	24.5%
Unknown primary	24.5%
Brain	21.7%
Pancreas	14.1%
Mesothelioma	7.6%

Cancer in the Western Australian Aboriginal population

The use of the term Aboriginal within this document respectfully refers to Western Australians of both Aboriginal and Torres Strait Islander descent. This section reports on incidence and mortality counts for the Western Australian Aboriginal population by sex and observed survival against the non-Aboriginal population. Observed survival compares survival rates using the cause of death as coded by WA Cancer Registry officers. It is used in place of relative survival as the background mortality of the Aboriginal population are not available at the jurisdictional level. The primary data sources for identifying Aboriginality includes pathology forms, hospital morbidity records, clinician letters, and death registration certificates. Improving the quality of accurately identifying Aboriginal persons is an ongoing challenge for all health collections.

Figure 13. Incidence counts, Aboriginal population, by sex, Western Australia, 1998-2017

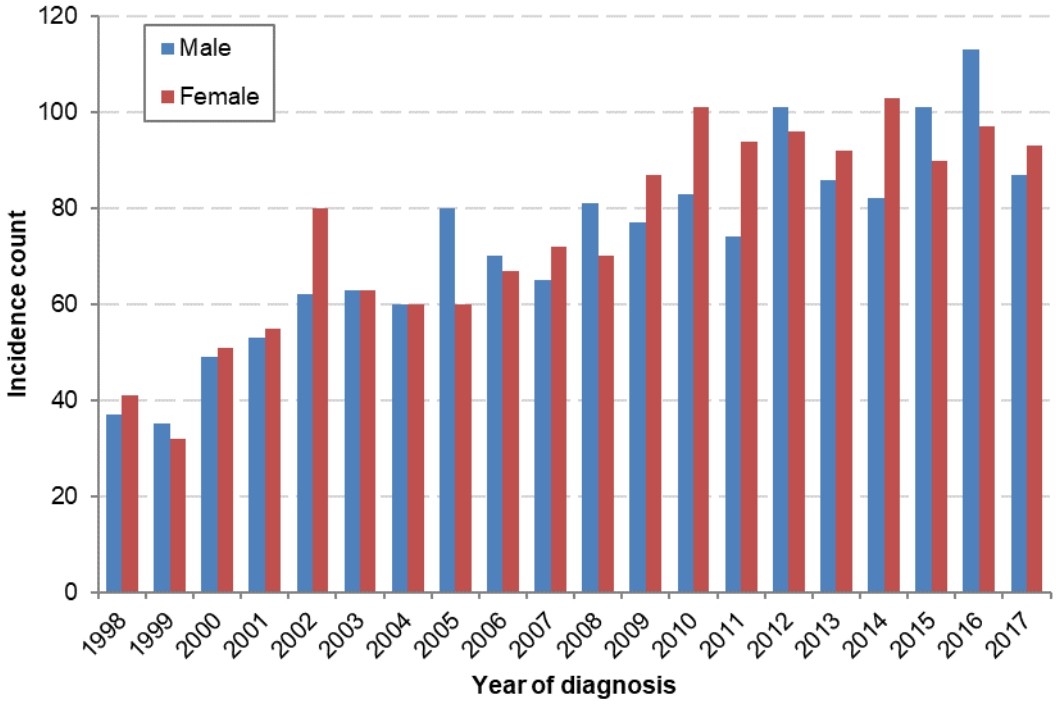
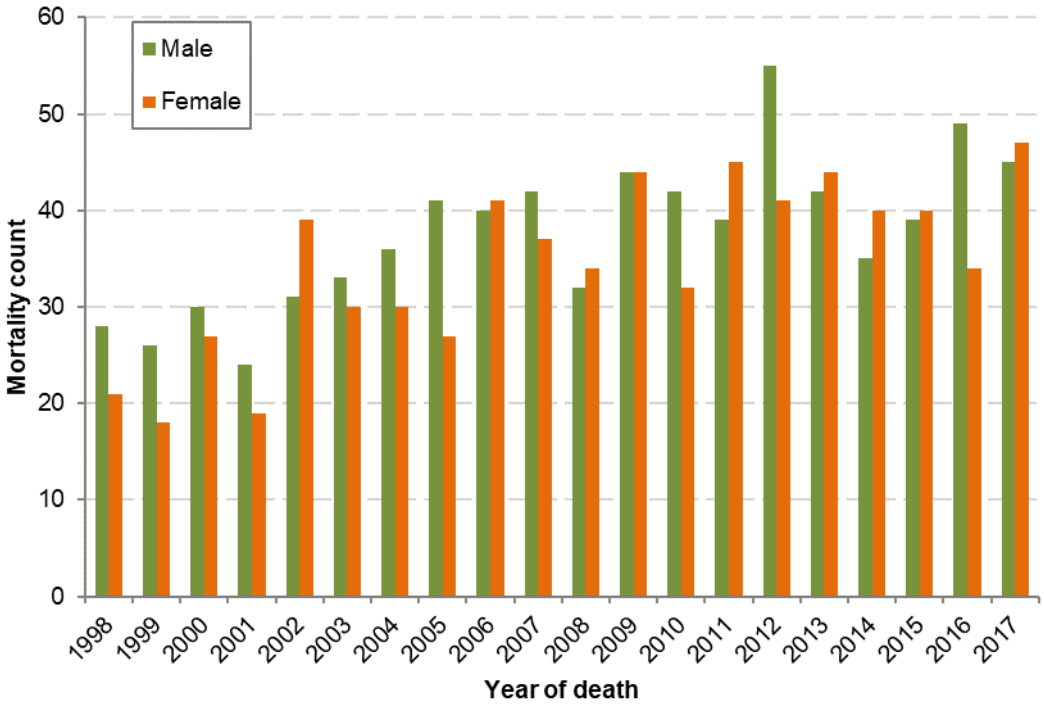


Figure 14. Mortality counts, Aboriginal population, by sex, Western Australia, 1998-2017



- In 2017, Aboriginal females reported 93 new cases, whereas males reported 87 new cases, similar to previous years (Figure 13). For mortality (Figure 14), the number of female deaths was the highest on record with 47 deaths reported in 2017.

Table 5. Incidence and mortality counts, Aboriginal population, by WA health area and region, 2017

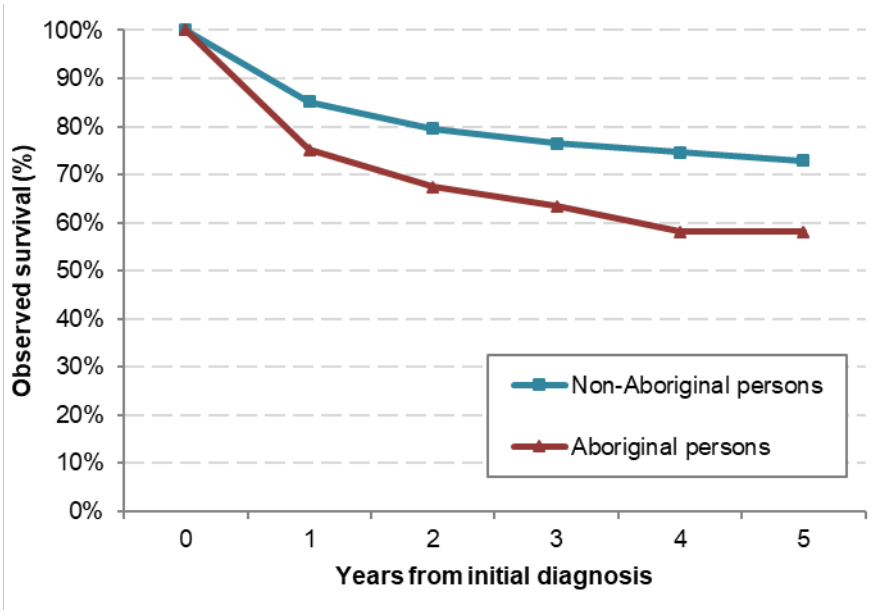
Health Service Area	Health Region	Aboriginal Incidence	Aboriginal Mortality
NMHS	**NMHS**	14	12
SMHS	**SMHS**	17	6
EMHS	**EMHS**	34	17
WACHS	**Total**	114	58
	Kimberley	43	28
	Pilbara	19	10
	Midwest	25	10
	Wheatbelt	7	3
	Goldfields	11	3
	Great Southern	3	3
	South West	6	1
Other WA address		1	0
Total WA		180	93

- In the period 2013-2017, the Aboriginal population reported a five-year observed survival rate of 58.1% compared to the non-Aboriginal population observed survival rate of 72.9%.
- For this period, the Aboriginal population was 14.8 percentage points lower than the non-Aboriginal population.

Table 6. Observed survival in Aboriginal person populations, 2013-2017

Number of years following diagnosis	Aboriginal persons	Non-Aboriginal persons
0	100.0%	100.0%
1	75.2%	85.1%
2	67.4%	79.6%
3	63.4%	76.5%
4	58.1%	74.6%
5	58.1%	72.9%

Figure 15. Observed survival in Aboriginal and non-Aboriginal populations, 2013-2017



Detailed statistics for selected cancers

This section presents a suite of statistics for 18 selected cancers. The cancer types presented here are common cancers based on 2017 incidence and cancers of interest from various stakeholders throughout the past year. It is intended they serve as a useful two-page reference, easily printed with details of the cancer of interest. Many information requests from health planners, clinicians, and the community are for statistics on specific cancer types and this section fulfils that need.

The first table for each cancer type describes incidence and mortality counts by age group and sex, and the lifetime risk to age 75 for the 2017 calendar year. One-year and five-year relative survival is presented in five-year blocks from 1993-1997 to 2013-2017 is also presented in this table, and visually, in the respective survival graphs.

Under each table are age-standardised incidence and mortality rates, by sex, from 1982-2017. These rates have been standardised using the 2001 Australian standard population. These rates are not comparable to rates in other reports that have been generated using the 1960 world standard population. The second page for each cancer type presents age-specific rates and the incidence and mortality counts for each health service area and region in 2017.

The underlying data for each graph is available online alongside this report or by contacting the WA Cancer Registry.

Prostate

Table 7. Prostate cancer - incidence, mortality by age group, cumulative risk for 2017, survival in five-year periods, WA

Incidence		Mortality		Survival *(Males)*		
	Male		*Male*		*1 year*	*5 year*
0-14 yrs	0	**0-14 yrs**	0	**1993-1997**	97.6%	88.3%
15-39 yrs	2	**15-39 yrs**	1	**1998-2002**	96.3%	87.7%
40-64 yrs	732	**40-64 yrs**	17	**2003-2007**	97.7%	91.7%
65+ yrs	1359	**65+ yrs**	251	**2008-2012**	99.1%	96.8%
Total	2093	**Total**	269	**2013-2017**	98.6%	94.5%
Risk	1 in 8	**Risk**	1 in 146			

Figure 16 & 17. Prostate cancer - age-standardised incidence and mortality rates, 1982-2017, WA

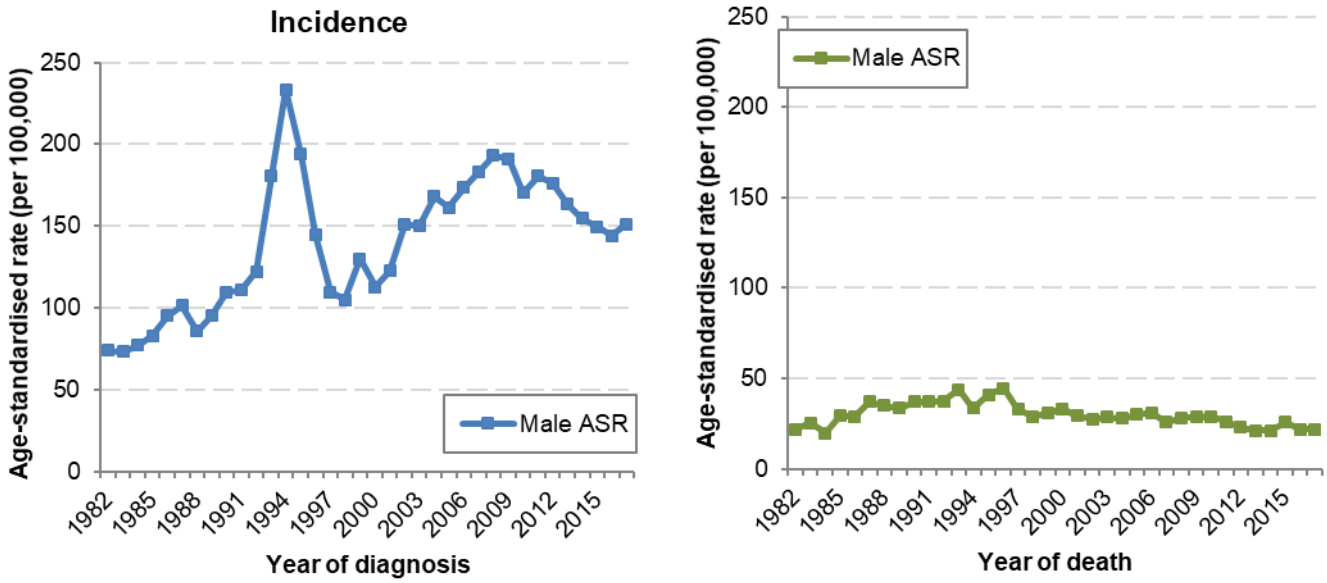


Figure 18. Prostate cancer - relative survival, 1993-1997 to 2013-2017, WA

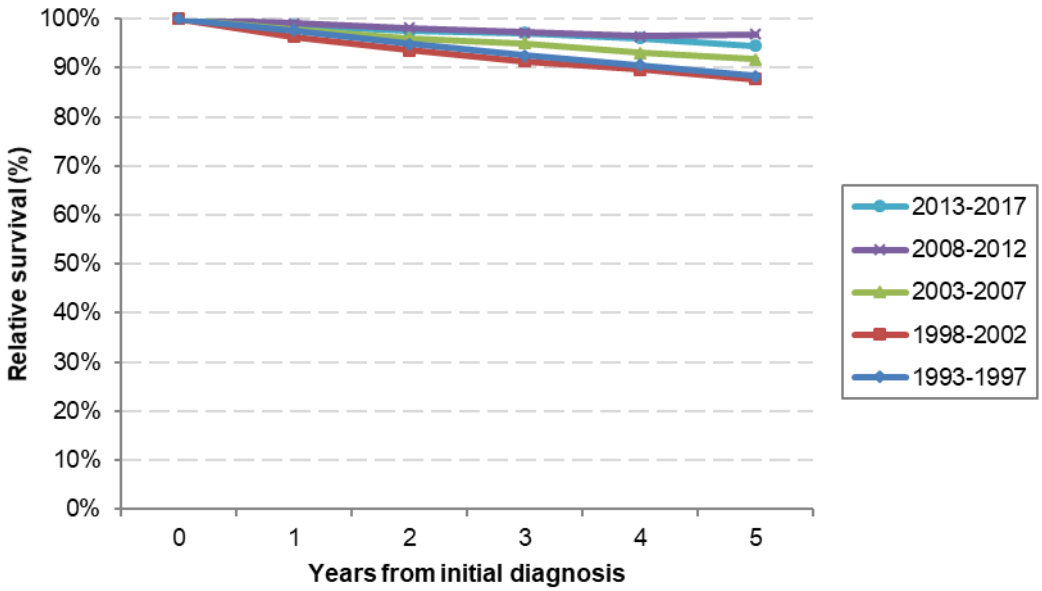


Figure 19 & 20. Prostate cancer - age-specific incidence and mortality rates, 2017, WA

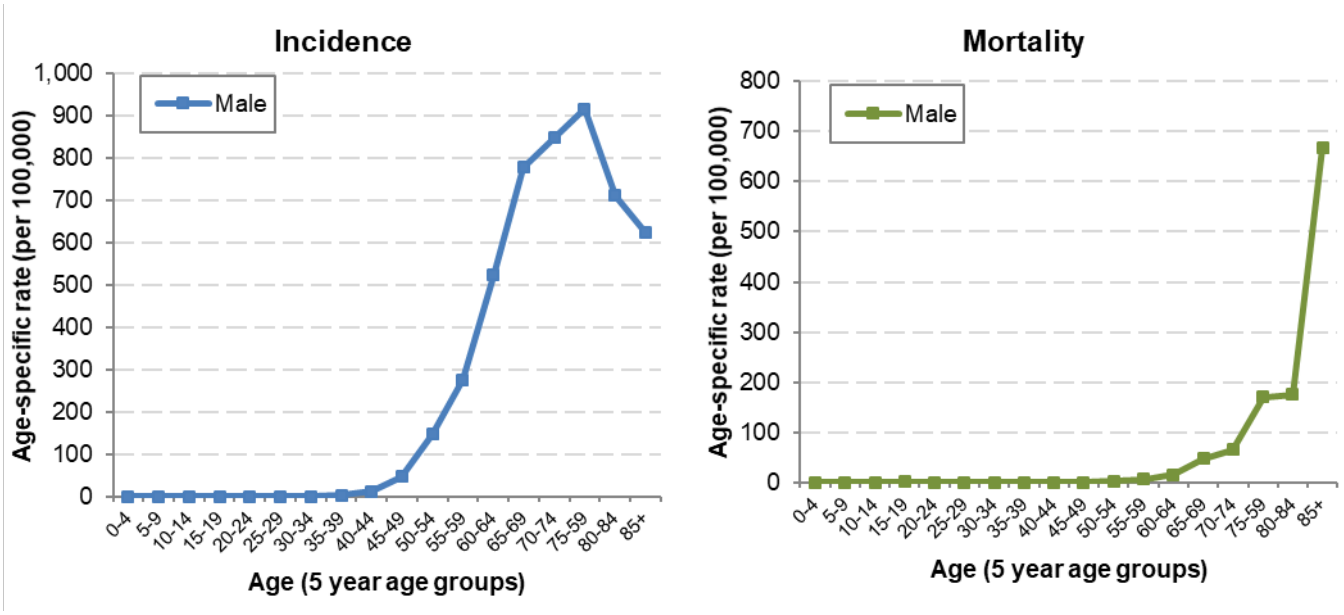


Table 8 & 9. Prostate cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Health Service Area	Health Region	Male Mortality
NMHS	**NMHS**	605	**NMHS**	**NMHS**	67
SMHS	**SMHS**	554	**SMHS**	**SMHS**	80
EMHS	**EMHS**	454	**EMHS**	**EMHS**	60
WACHS	**WACHS**	480	**WACHS**	**WACHS**	62
	Kimberley	18		*Kimberley*	1
	Pilbara	4		*Pilbara*	1
	Midwest	79		*Midwest*	15
	Wheatbelt	78		*Wheatbelt*	10
	Goldfields	36		*Goldfields*	3
	Great Southern	85		*Great Southern*	12
	South West	180		*South West*	20
Other WA address		-	Other WA address		-
Total WA		2,093	**Total WA**		269

Breast

Table 10. Breast cancer - incidence, mortality and cumulative risk for 2017, survival in five -year periods, WA

Incidence			Mortality			Survival *(Females)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	0	0	**0-14 yrs**	0	0	**1993-1997**	96.4%	82.6%
15-39 yrs	1	109	**15-39 yrs**	0	9	**1998-2002**	98.1%	88.5%
40-64 yrs	2	960	**40-64 yrs**	0	110	**2003-2007**	98.1%	90.4%
65+ yrs	10	761	**65+ yrs**	1	149	**2008-2012**	98.0%	89.8%
Total	13	1830	**Total**	1	268	**2013-2017**	98.7%	92.9%
Risk	1 in 1135	1 in 10	**Risk**	-	1 in 80			

** Male counts included for incidence and mortality only, all survival and rates graphs are for females only.

Figure 21 & 22. Breast cancer - age-standardised incidence and mortality rates, females, 1982-2017, WA

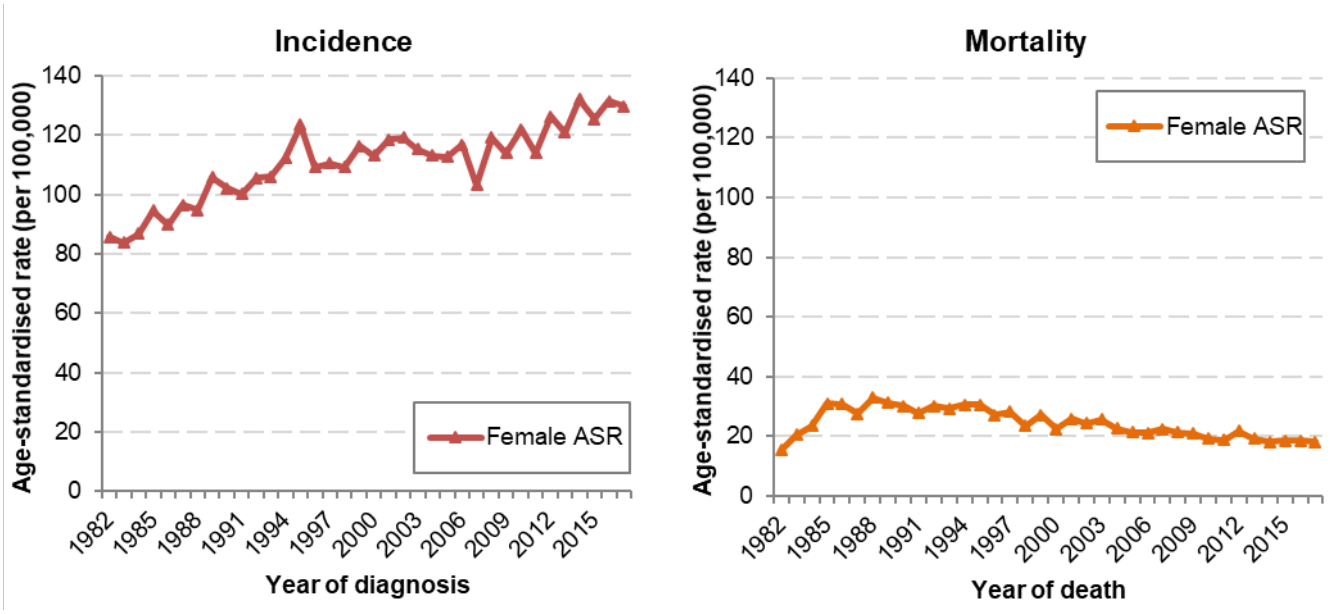


Figure 23. Breast cancer - relative survival, females, 1993-1997 to 2013-2017, WA

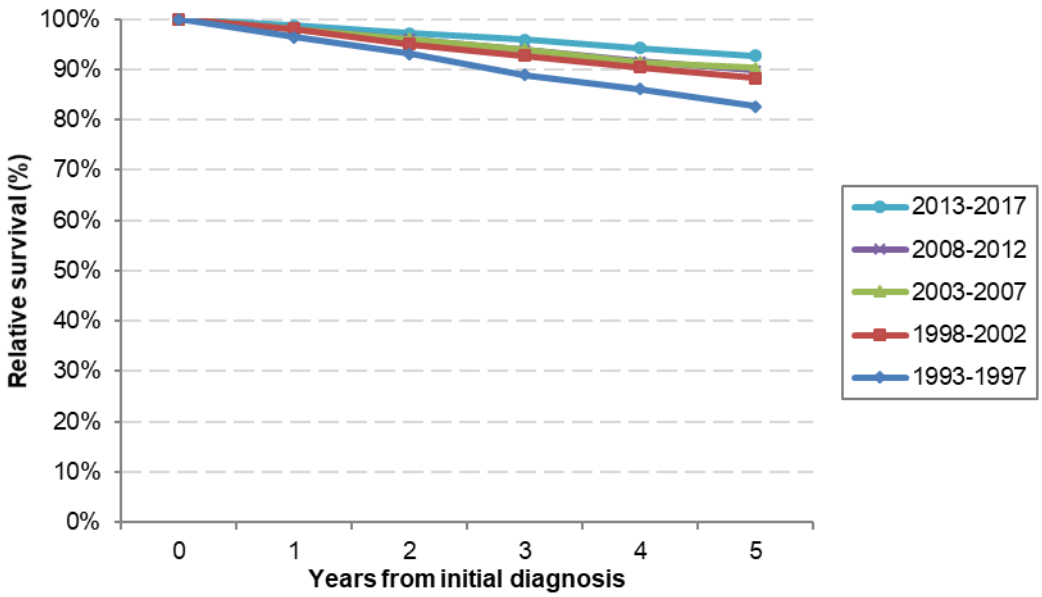


Figure 24 & 25. Breast cancer - age-specific incidence and mortality rates, females, 2017, WA

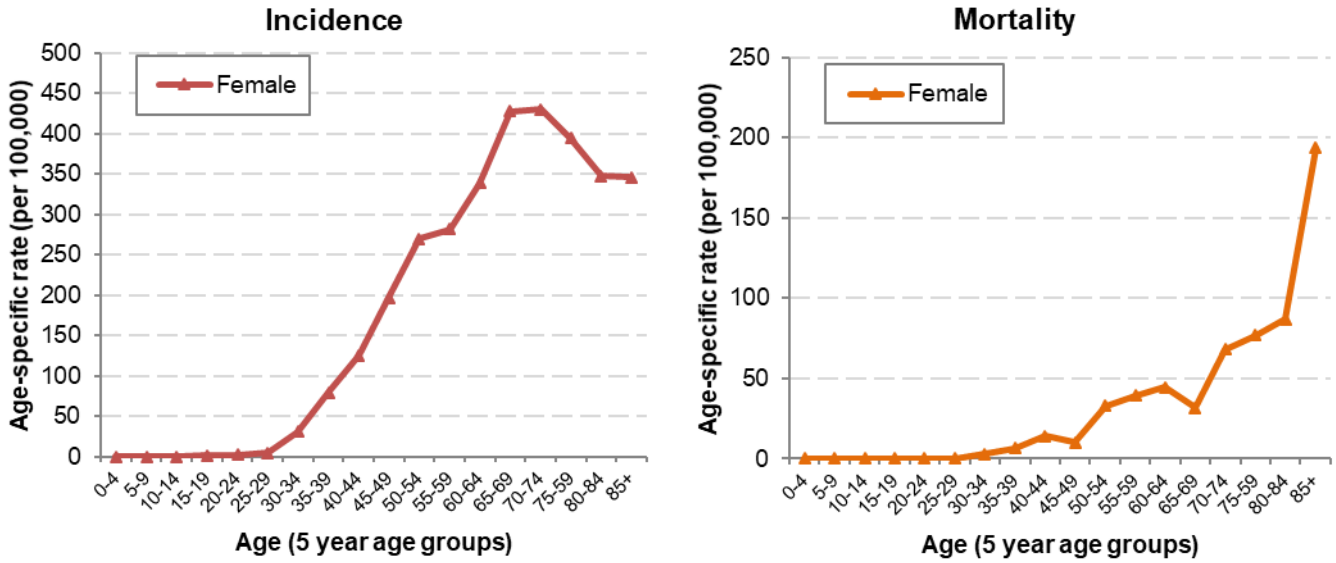


Table 11 & 12. Breast cancer - incidence and mortality, by health service area and region, females, 2017, WA

Health Service Area	Health Region	Female Incidence	Health Service Area	Health Region	Female Mortality
NMHS	**NMHS**	514	**NMHS**	**NMHS**	63
SMHS	**SMHS**	466	**SMHS**	**SMHS**	81
EMHS	**EMHS**	486	**EMHS**	**EMHS**	63
WACHS	**WACHS**	364	**WACHS**	**WACHS**	61
	Kimberley	20		*Kimberley*	3
	Pilbara	18		*Pilbara*	3
	Midwest	35		*Midwest*	8
	Wheatbelt	58		*Wheatbelt*	19
	Goldfields	30		*Goldfields*	2
	Great Southern	35		*Great Southern*	7
	South West	168		*South West*	19
Other WA address		-	Other WA address		-
Total WA		1,830	**Total WA**		268

Head and neck

Table 13. Head and neck cancer - incidence, mortality and cumulative risk for 2017, survival in five -year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	1	1	**0-14 yrs**	0	0	**1993-1997**	85.4%	64.1%
15-39 yrs	10	8	**15-39 yrs**	0	1	**1998-2002**	86.2%	68.0%
40-64 yrs	152	49	**40-64 yrs**	29	9	**2003-2007**	87.6%	70.1%
65+ yrs	158	58	**65+ yrs**	56	21	**2008-2012**	88.0%	69.7%
Total	321	116	**Total**	85	31	**2013-2017**	88.3%	74.4%
Risk	1 in 48	1 in 153	**Risk**	1 in 233	1 in 812			

Figure 26 & 27. Head and neck cancer - age-standardised incidence and mortality rates, 1982-2017, WA

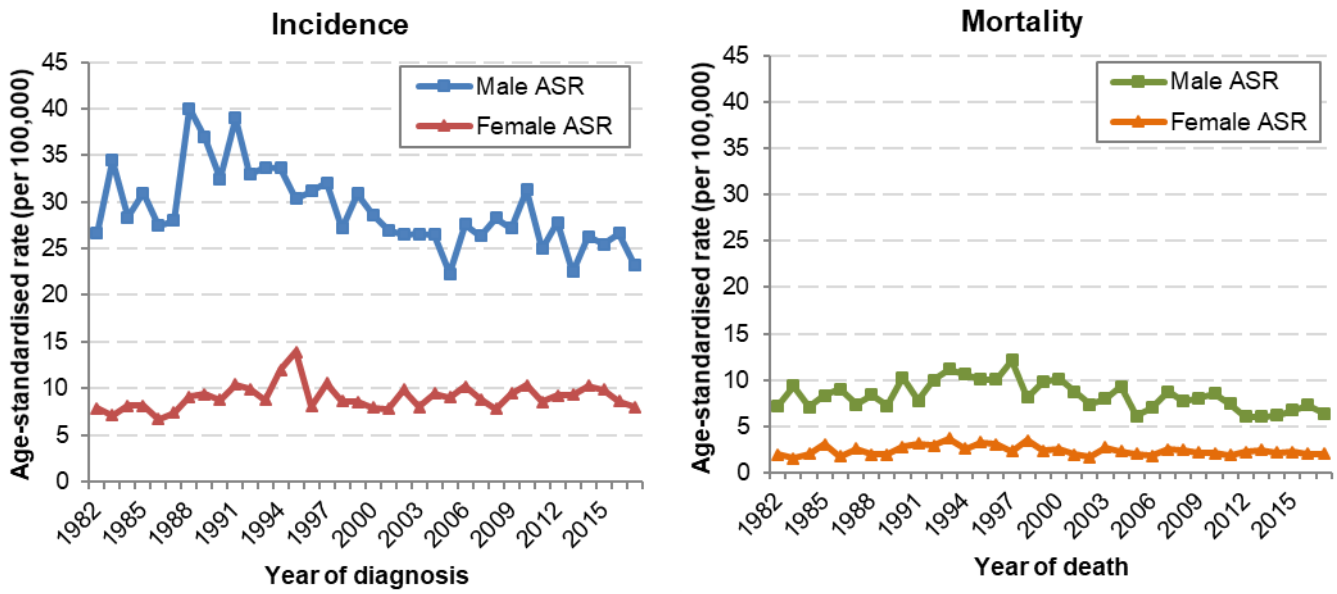


Figure 28. Head and neck cancer - relative survival, 1993-1997 to 2013-2017, WA

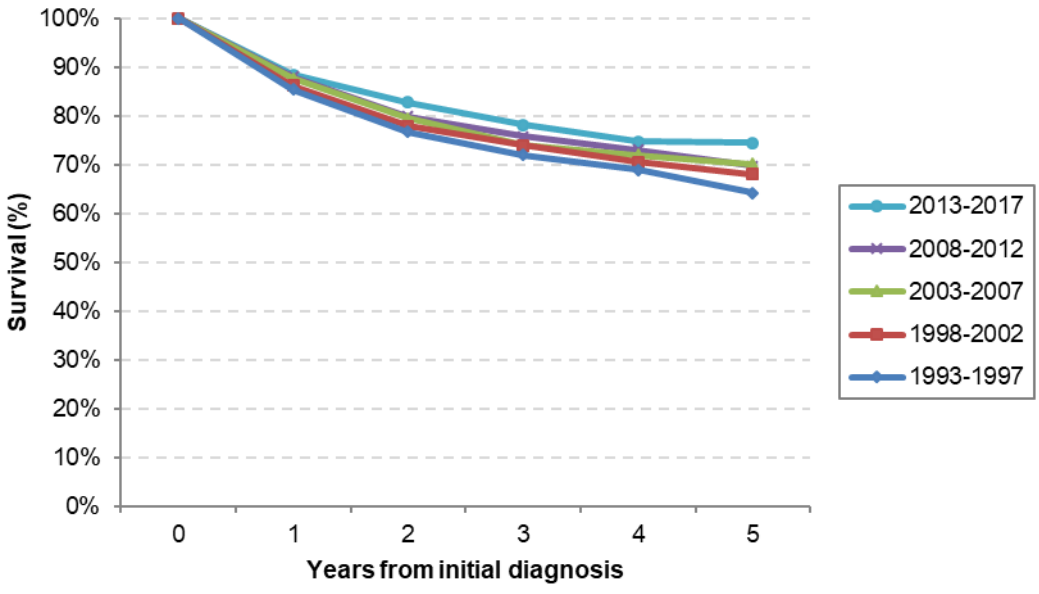
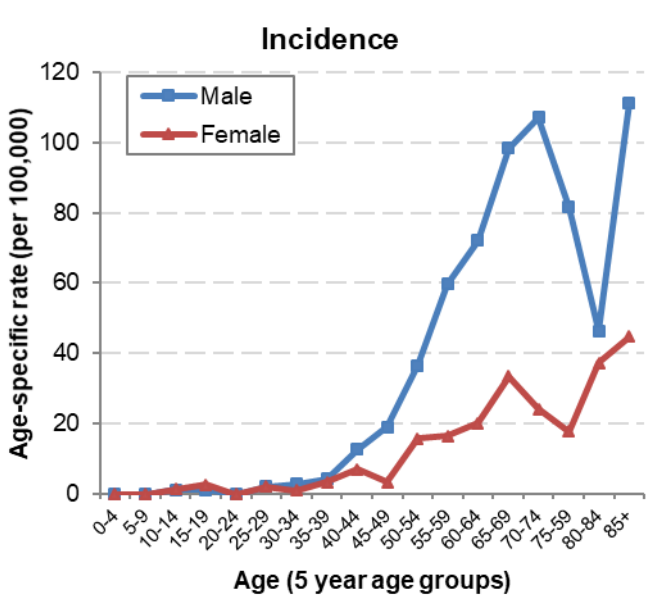


Figure 29 & 30. Head and neck cancer - age-specific incidence and mortality rates, 2017, WA



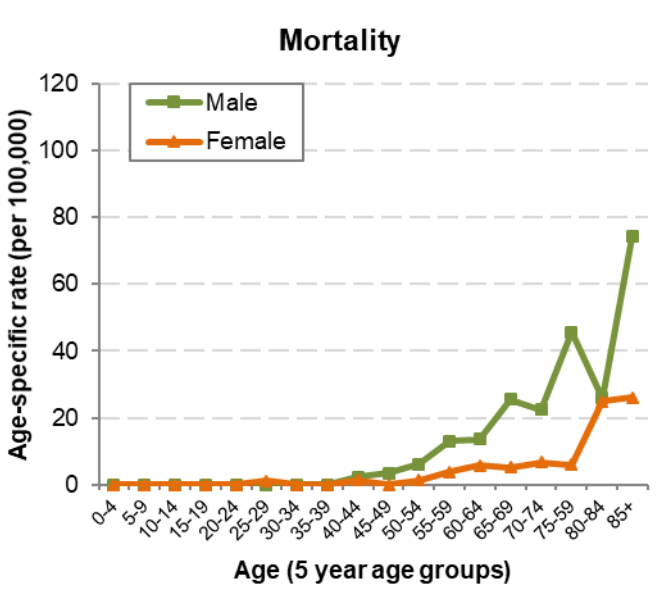


Table 14 & 15. Head and neck cancer - Incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	69	29	**NMHS**	**NMHS**	16	9
SMHS	**SMHS**	81	32	**SMHS**	**SMHS**	19	5
EMHS	**EMHS**	68	37	**EMHS**	**EMHS**	18	7
WACHS	**WACHS**	103	18	**WACHS**	**WACHS**	32	10
	Kimberley	10	5		*Kimberley*	9	1
	Pilbara	5	1		*Pilbara*	2	4
	Midwest	14	2		*Midwest*	4	-
	Wheatbelt	19	2		*Wheatbelt*	5	1
	Goldfields	9	2		*Goldfields*	2	-
	Great Southern	11	-		*Great Southern*	2	2
	South West	35	6		*South West*	8	2
Other WA address		-	-	Other WA address		-	-
Total WA		321	116	**Total WA**		85	31

Melanoma

Table 16. Melanoma cancer - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	1	0	**0-14 yrs**	0	0	**1993-1997**	98.2%	93.7%
15-39 yrs	53	62	**15-39 yrs**	4	5	**1998-2002**	97.9%	92.0%
40-64 yrs	306	252	**40-64 yrs**	21	12	**2003-2007**	98.2%	90.8%
65+ yrs	514	279	**65+ yrs**	62	32	**2008-2012**	97.4%	90.8%
Total	874	593	**Total**	87	49	**2013-2017**	98.2%	94.2%
Risk	1 in 21	1 in 30	**Risk**	1 in 350	1 in 409			

Figure 31 & 32. Melanoma cancer - age-standardised incidence and mortality rates, 1982-2017, WA

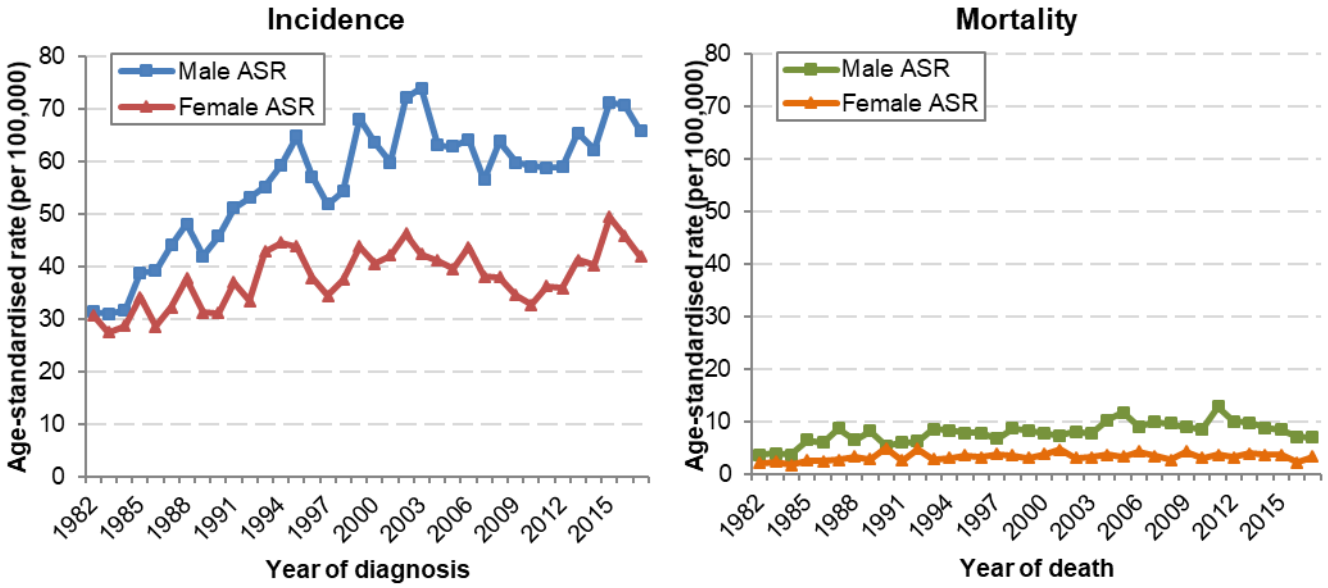


Figure 33. Melanoma cancer - relative survival, 1993-1997 to 2013-2017, WA

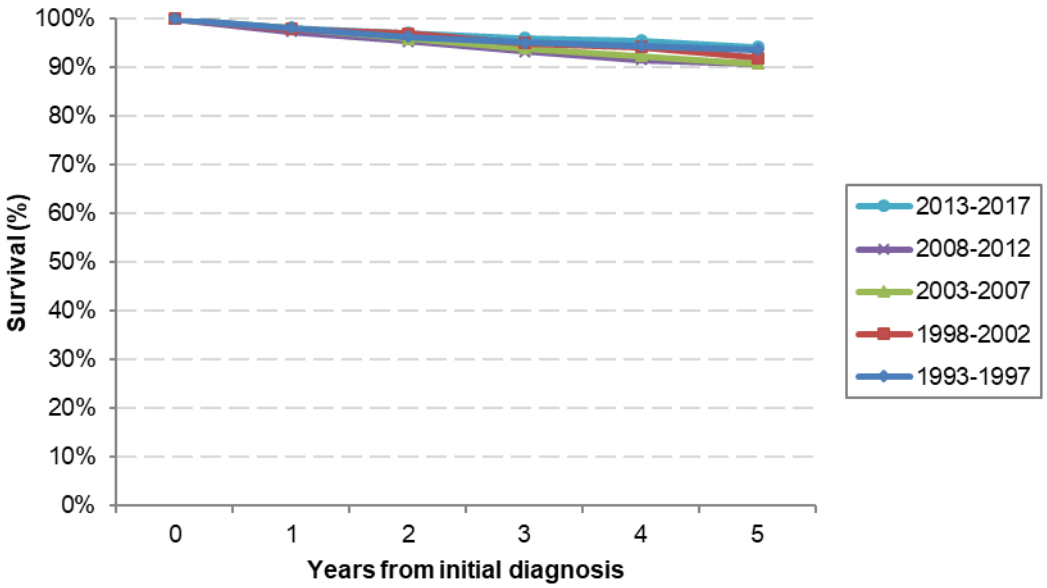


Figure 34 & 35. Melanoma cancer - age-specific incidence and mortality rates, 2017, WA

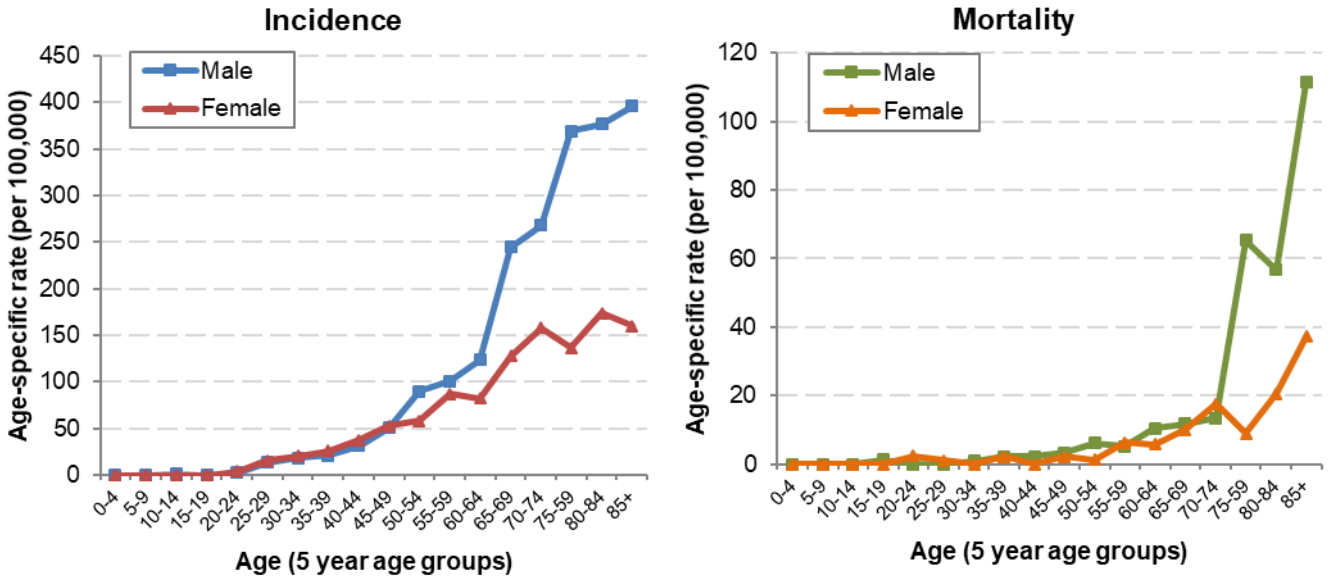


Table 17 & 18. Melanoma cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	250	146	**NMHS**	**NMHS**	19	13
SMHS	**SMHS**	212	152	**SMHS**	**SMHS**	26	13
EMHS	**EMHS**	198	129	**EMHS**	**EMHS**	14	15
WACHS	**WACHS**	214	166	**WACHS**	**WACHS**	28	8
	Kimberley	5	11		*Kimberley*	1	-
	Pilbara	8	4		*Pilbara*	1	-
	Midwest	29	20		*Midwest*	5	1
	Wheatbelt	30	19		*Wheatbelt*	7	3
	Goldfields	13	13		*Goldfields*	2	1
	Great Southern	24	15		*Great Southern*	3	-
	South West	105	84		*South West*	9	3
Other WA address		-	-	Other WA address		-	-
Total WA		874	593	**Total WA**		87	49

Colorectal

Table 19. Colorectal cancer - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	1	2	**0-14 yrs**	0	0	**1993-1997**	78.6%	55.1%
15-39 yrs	30	39	**15-39 yrs**	4	2	**1998-2002**	80.6%	61.8%
40-64 yrs	231	182	**40-64 yrs**	46	40	**2003-2007**	83.6%	65.5%
65+ yrs	440	382	**65+ yrs**	174	124	**2008-2012**	86.1%	71.8%
Total	702	605	**Total**	224	166	**2013-2017**	87.6%	73.2%
Risk	1 in 26	1 in 33	**Risk**	1 in 109	1 in 157			

Figure 36 & 37. Colorectal cancer - age-standardised incidence and mortality rates, 1982-2017, WA

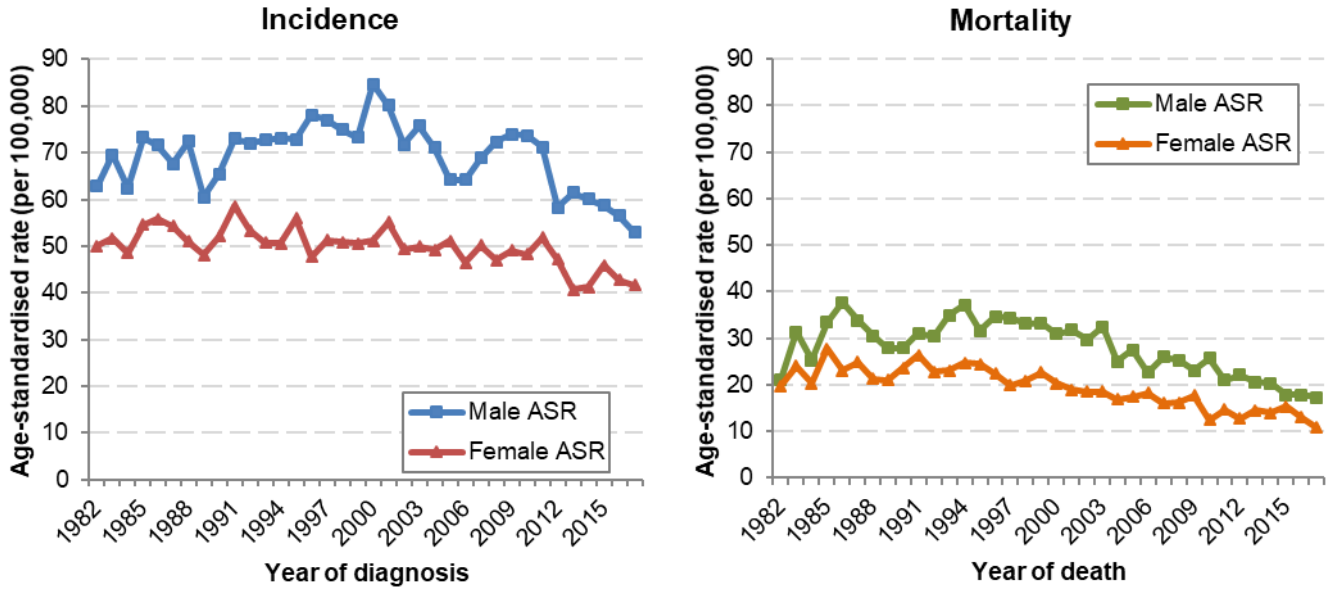


Figure 38. Colorectal cancer - relative survival, 1993-1997 to 2013-2017, WA

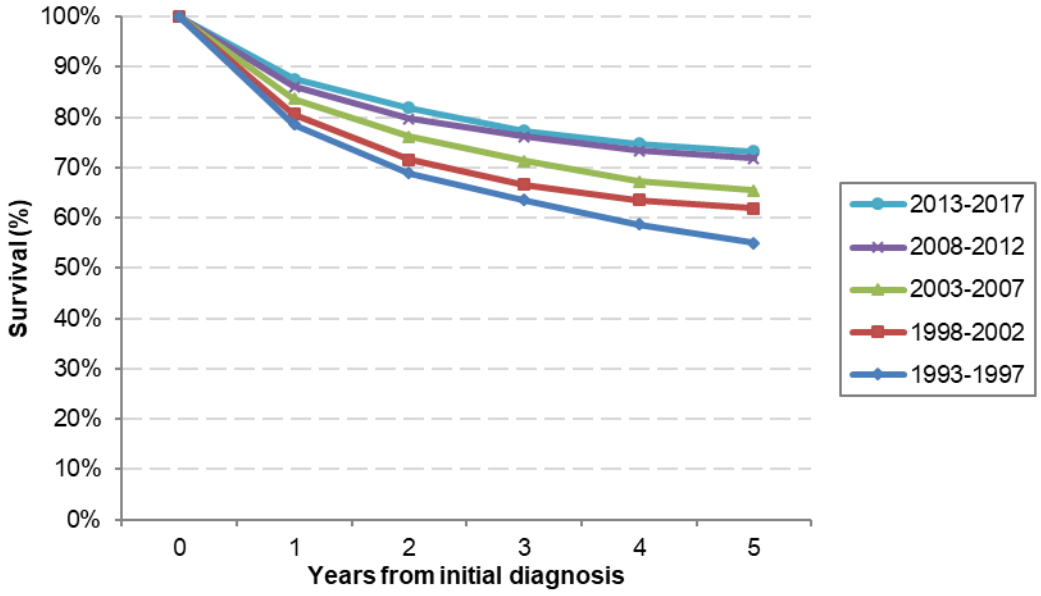


Figure 39 & 40. Colorectal cancer - age-specific incidence and mortality rates, 2017, WA

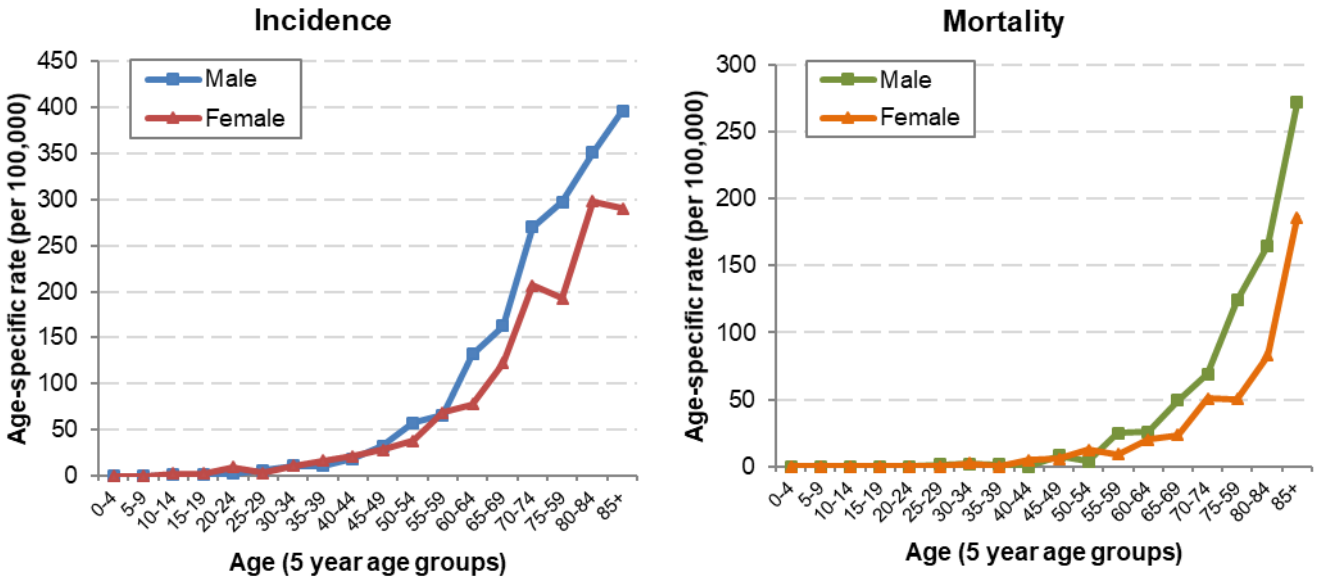


Table 20 & 21. Colorectal cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	157	167	**NMHS**	**NMHS**	50	38
SMHS	**SMHS**	176	145	**SMHS**	**SMHS**	41	44
EMHS	**EMHS**	202	163	**EMHS**	**EMHS**	64	49
WACHS	**WACHS**	167	129	**WACHS**	**WACHS**	69	35
	Kimberley	5	5		*Kimberley*	2	1
	Pilbara	4	2		*Pilbara*	-	-
	Midwest	36	15		*Midwest*	15	6
	Wheatbelt	28	23		*Wheatbelt*	11	4
	Goldfields	15	7		*Goldfields*	9	2
	Great Southern	22	28		*Great Southern*	10	8
	South West	57	49		*South West*	22	14
Other WA address		-	1	Other WA address		-	-
Total WA		702	605	**Total WA**		224	166

Lung

Table 22. Lung cancer - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	0	0	**0-14 yrs**	0	0	**1993-1997**	36.0%	13.4%
15-39 yrs	4	4	**15-39 yrs**	2	1	**1998-2002**	38.0%	12.7%
40-64 yrs	159	152	**40-64 yrs**	89	87	**2003-2007**	40.9%	16.1%
65+ yrs	474	316	**65+ yrs**	320	218	**2008-2012**	45.2%	16.9%
Total	637	472	**Total**	411	306	**2013-2017**	51.8%	24.6%
Risk	1 in 31	1 in 39	**Risk**	1 in 49	1 in 67			

Figure 41 & 42. Lung cancer - age-standardised incidence and mortality rates, 1982-2017, WA

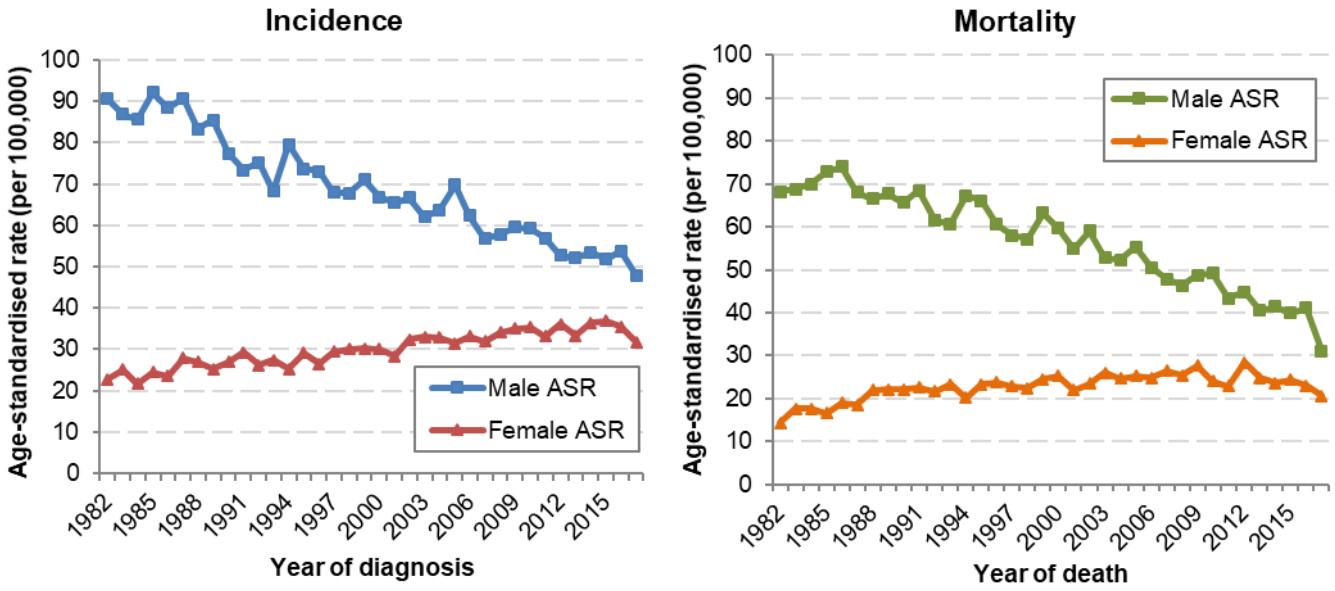


Figure 43. Lung cancer - relative survival, 1993-1997 to 2013-2017, WA

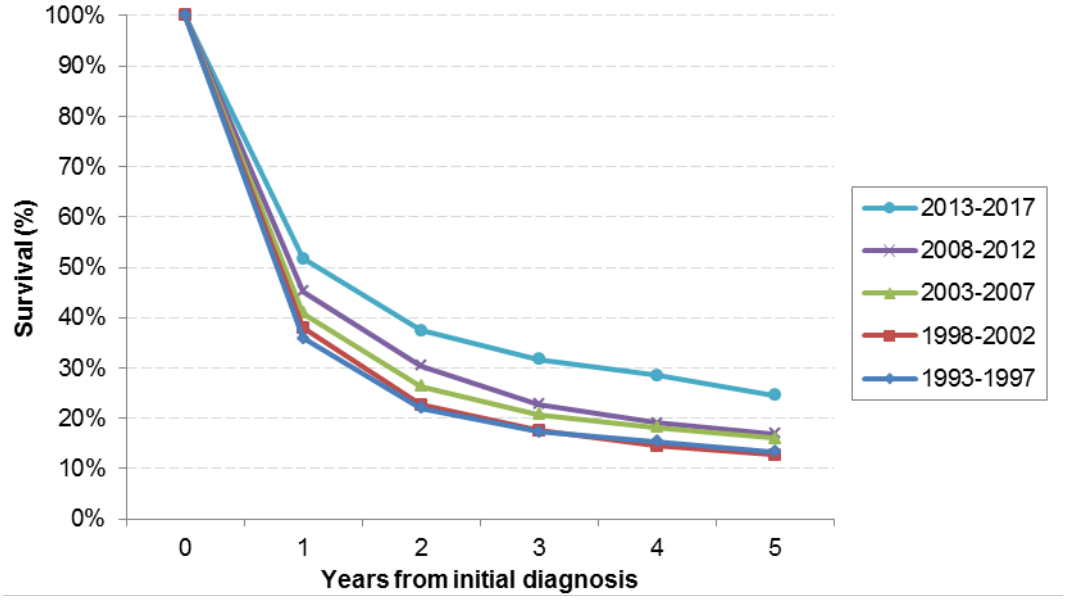


Figure 44 & 45. Lung cancer - age-specific incidence and mortality rates, 2017, WA

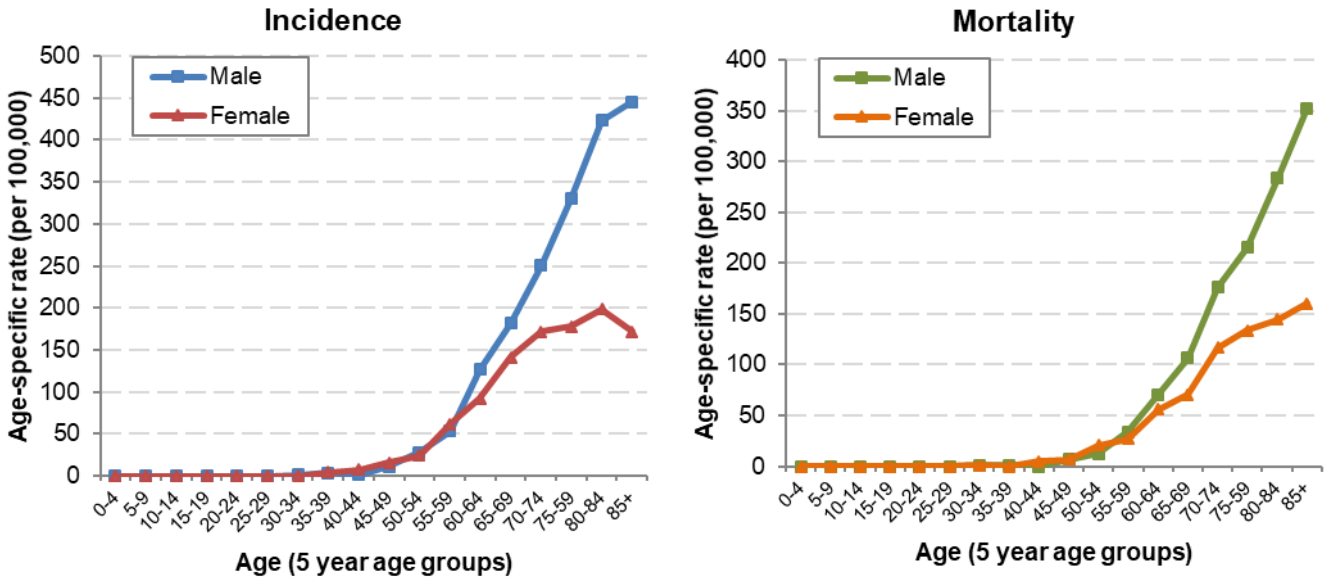


Table 23 & 24. Lung cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	119	117	**NMHS**	**NMHS**	74	77
SMHS	**SMHS**	179	120	**SMHS**	**SMHS**	119	84
EMHS	**EMHS**	178	152	**EMHS**	**EMHS**	109	81
WACHS	**WACHS**	161	83	**WACHS**	**WACHS**	109	64
	Kimberley	10	6		*Kimberley*	9	6
	Pilbara	4	5		*Pilbara*	4	2
	Midwest	36	10		*Midwest*	19	6
	Wheatbelt	38	16		*Wheatbelt*	22	13
	Goldfields	15	9		*Goldfields*	13	5
	Great Southern	20	11		*Great Southern*	12	6
	South West	38	26		*South West*	30	26
Other WA address		-	-	Other WA address		-	-
Total WA		637	472	**Total WA**		411	306

Pancreas

Table 25. Pancreatic cancer - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	0	0	**0-14 yrs**	0	0	**1993-1997**	19.7%	8.5%
15-39 yrs	3	5	**15-39 yrs**	2	1	**1998-2002**	24.4%	5.4%
40-64 yrs	46	42	**40-64 yrs**	48	30	**2003-2007**	26.6%	6.4%
65+ yrs	136	111	**65+ yrs**	116	107	**2008-2012**	36.9%	11.3%
Total	185	158	**Total**	166	138	**2013-2017**	43.2%	14.1%
Risk	1 in 99	1 in 150	**Risk**	1 in 129	1 in 193			

Figure 46 & 47. Pancreatic cancer - age-standardised incidence and mortality rates, 1982-2017, WA

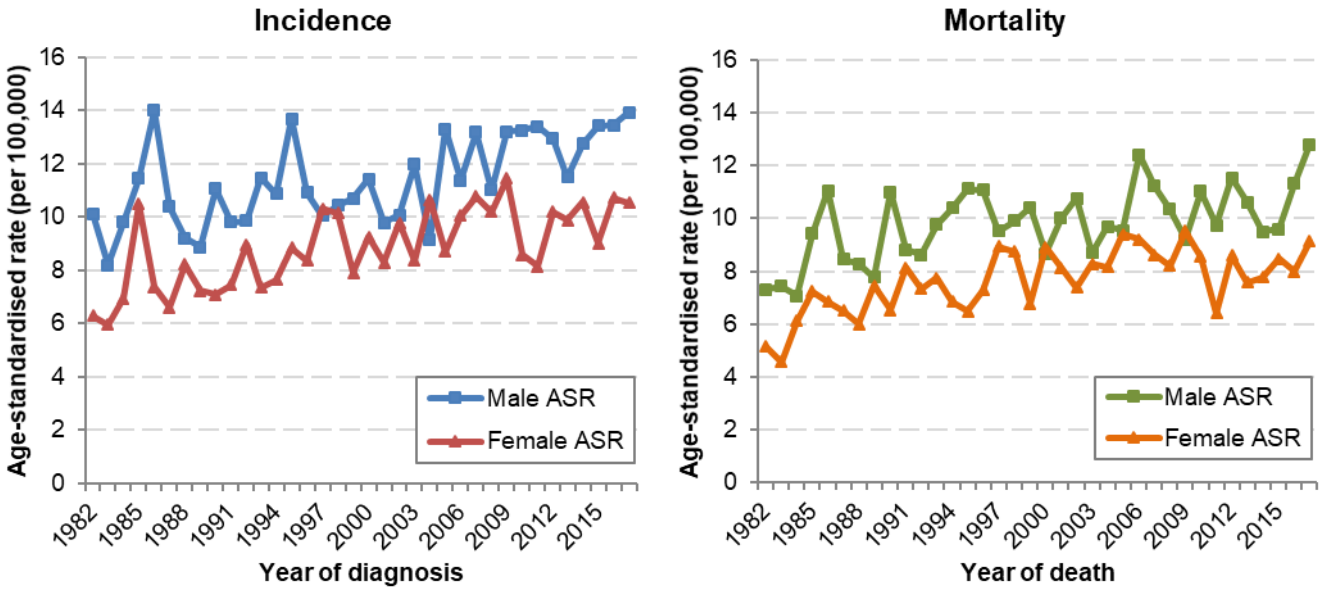


Figure 48. Pancreatic cancer - relative survival, 1993-1997 to 2013-2017, WA

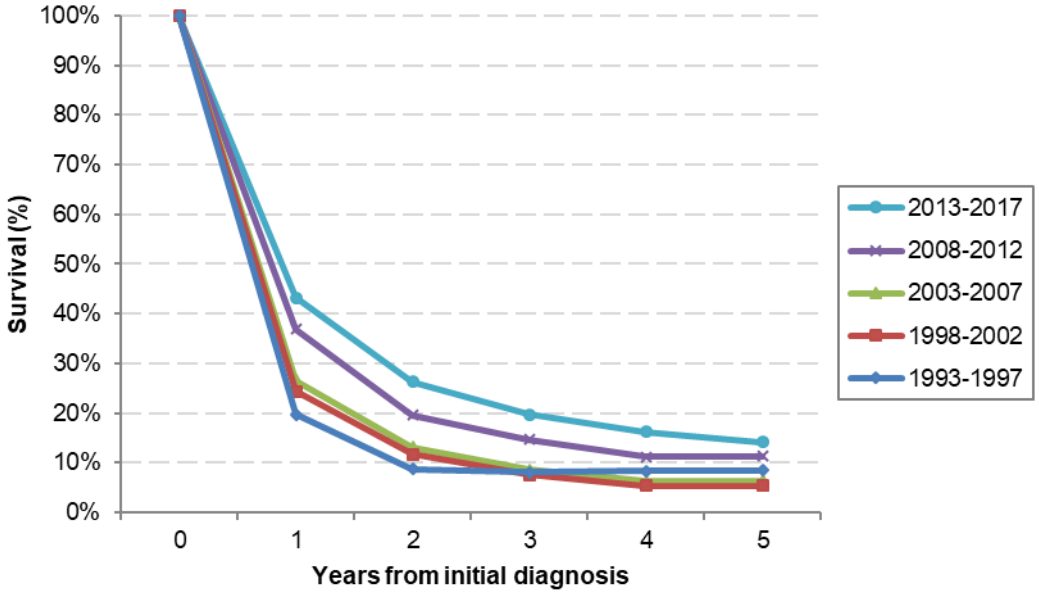


Figure 49 & 50. Pancreatic cancer - age-specific incidence and mortality rates, 2017, WA

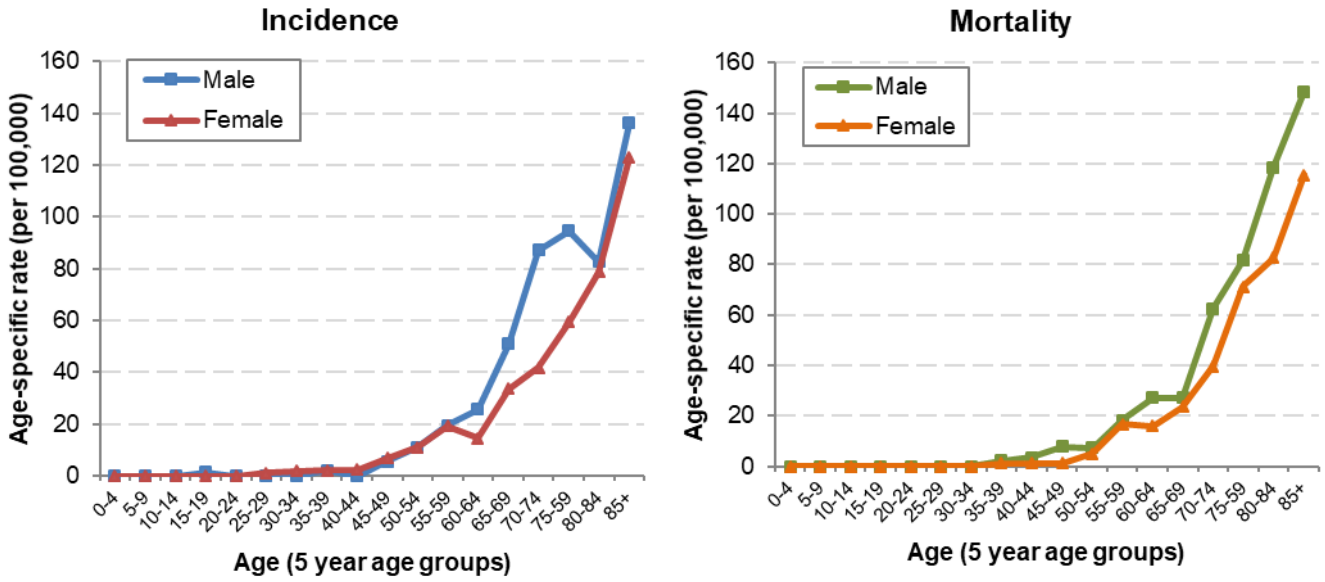


Table 26 & 27. Pancreatic cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	50	40	**NMHS**	**NMHS**	40	34
SMHS	**SMHS**	49	43	**SMHS**	**SMHS**	50	34
EMHS	**EMHS**	46	42	**EMHS**	**EMHS**	38	40
WACHS	**WACHS**	40	33	**WACHS**	**WACHS**	38	30
	Kimberley	-	1		*Kimberley*	2	2
	Pilbara	-	-		*Pilbara*	2	1
	Midwest	5	4		*Midwest*	5	2
	Wheatbelt	6	9		*Wheatbelt*	3	7
	Goldfields	4	2		*Goldfields*	6	2
	Great Southern	3	6		*Great Southern*	6	7
	South West	22	11		*South West*	14	9
Other WA address		-	-	Other WA address		0	0
Total WA		185	158	**Total WA**		166	138

Liver

Table 28. Liver cancer - incidence, mortality and cumulative risk for 2017, survival in five-year age blocks, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	1	1	**0-14 yrs**	0	0	**1993-1997**	29.5%	14.1%
15-39 yrs	2	2	**15-39 yrs**	1	3	**1998-2002**	33.0%	14.3%
40-64 yrs	65	23	**40-64 yrs**	31	12	**2003-2007**	43.0%	14.5%
65+ yrs	69	37	**65+ yrs**	46	26	**2008-2012**	48.1%	23.7%
Total	137	63	**Total**	78	41	**2013-2017**	54.2%	24.5%
Risk	1 in 132	1 in 322	**Risk**	1 in 233	1 in 605			

Figure 51 & 52. Liver cancer - age-standardised incidence and mortality rates, 1982-2017, WA

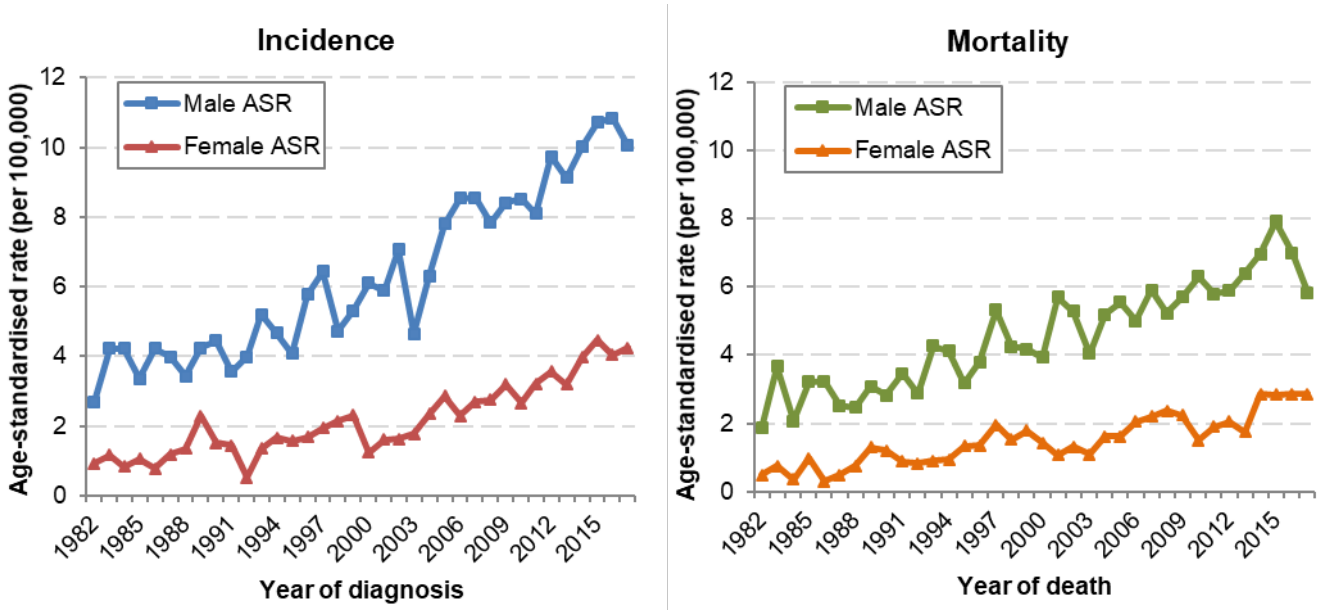


Figure 53. Liver cancer - relative survival, 1993-1997 to 2013-2017, WA

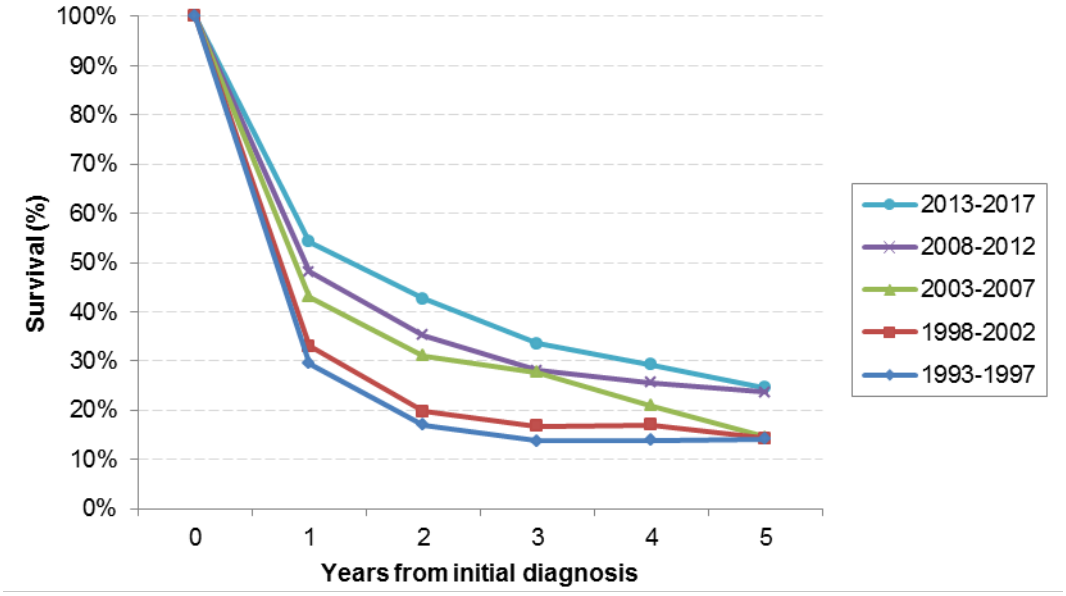


Figure 54 & 55. Liver cancer - age-specific incidence and mortality rates, 2017, WA

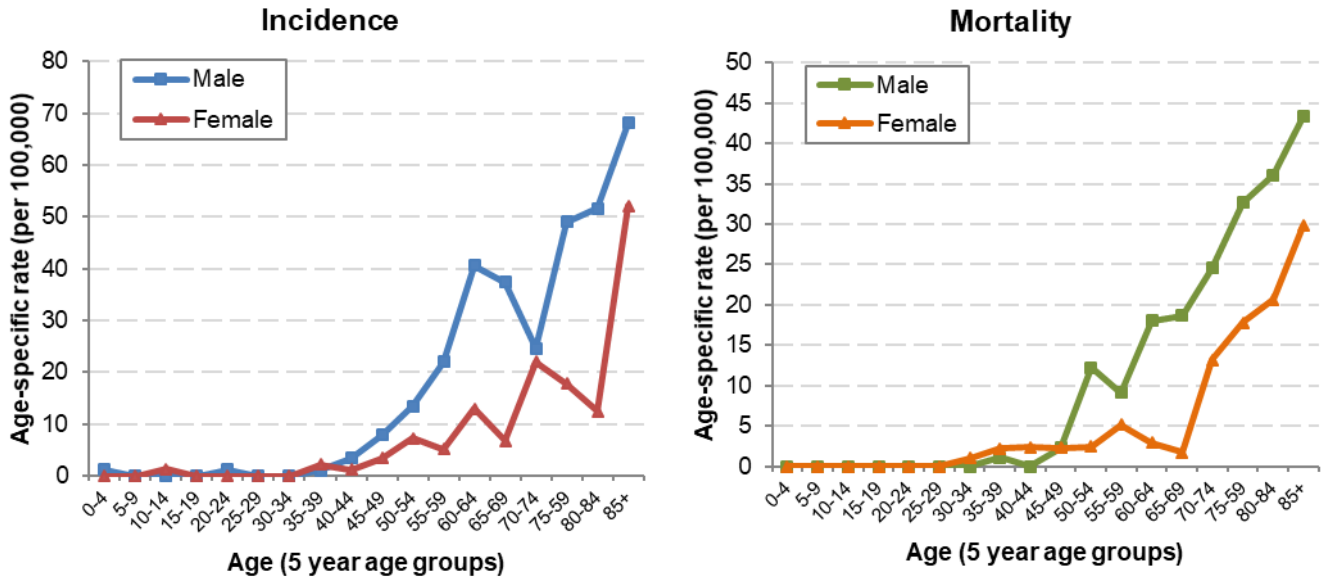


Table 29 & 30. Liver cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence
NMHS	**NMHS**	35	13
SMHS	**SMHS**	39	9
EMHS	**EMHS**	28	20
WACHS	**WACHS**	34	21
	Kimberley	5	3
	Pilbara	2	1
	Midwest	3	6
	Wheatbelt	2	6
	Goldfields	4	-
	Great Southern	3	1
	South West	15	4
Other WA address		1	-
Total WA		137	63

Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	16	10
SMHS	**SMHS**	23	11
EMHS	**EMHS**	18	10
WACHS	**WACHS**	21	10
	Kimberley	2	-
	Pilbara	1	2
	Midwest	4	3
	Wheatbelt	-	3
	Goldfields	1	-
	Great Southern	5	-
	South West	8	2
Other WA address		-	-
Total WA		78	41

Cervical

Table 31. Cervical cancer - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence		Mortality		Survival *(Females)*		
	Female		*Female*		*1 year*	*5 year*
0-14 yrs	0	**0-14 yrs**	0	**1993-1997**	88.8%	75.4%
15-39 yrs	33	**15-39 yrs**	1	**1998-2002**	85.2%	67.7%
40-64 yrs	40	**40-64 yrs**	9	**2003-2007**	88.4%	71.4%
65+ yrs	15	**65+ yrs**	10	**2008-2012**	90.8%	79.4%
Total	88	**Total**	20	**2013-2017**	90.9%	74.3%
Risk	1 in 210	**Risk**	1 in 835			

Figure 56 & 57. Cervical cancer - age-standardised incidence and mortality rates, 1982-2017, WA

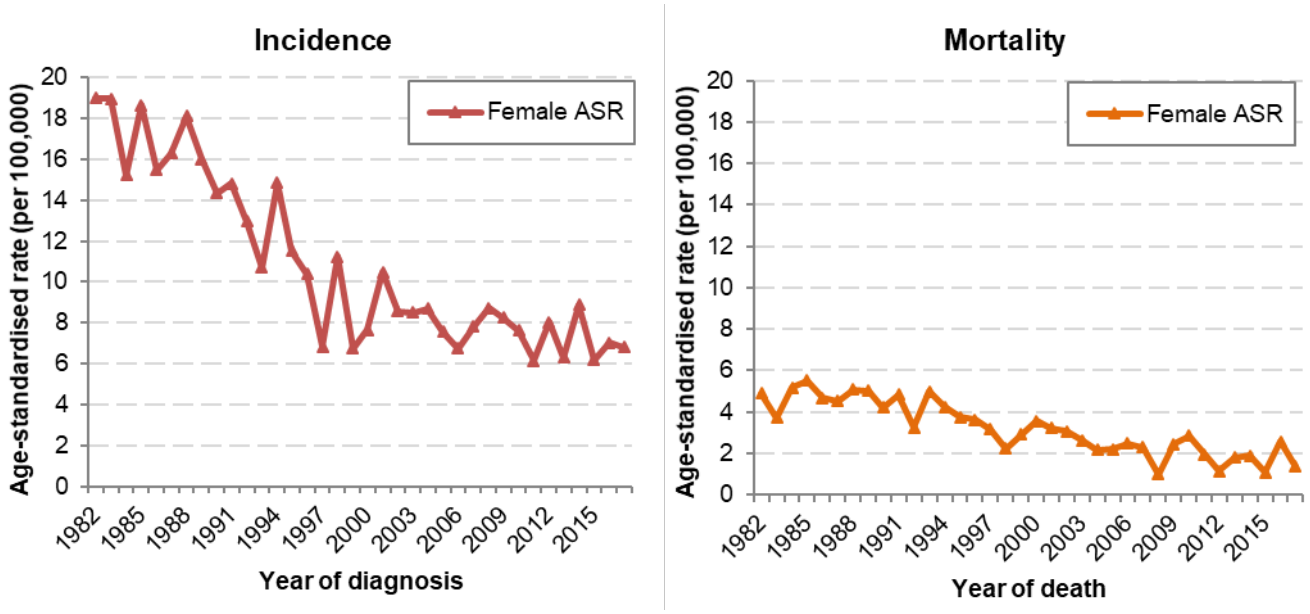


Figure 58. Cervical cancer - relative survival, 1993-1997 to 2013-2017, WA

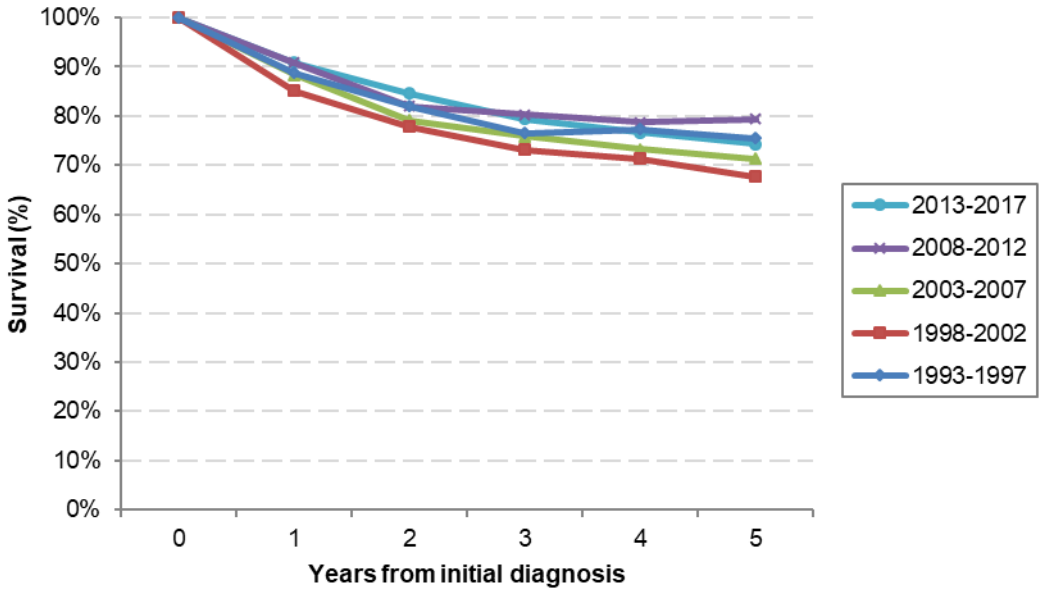


Figure 59 & 60. Cervical cancer - age-specific incidence and mortality rates, 2017, WA

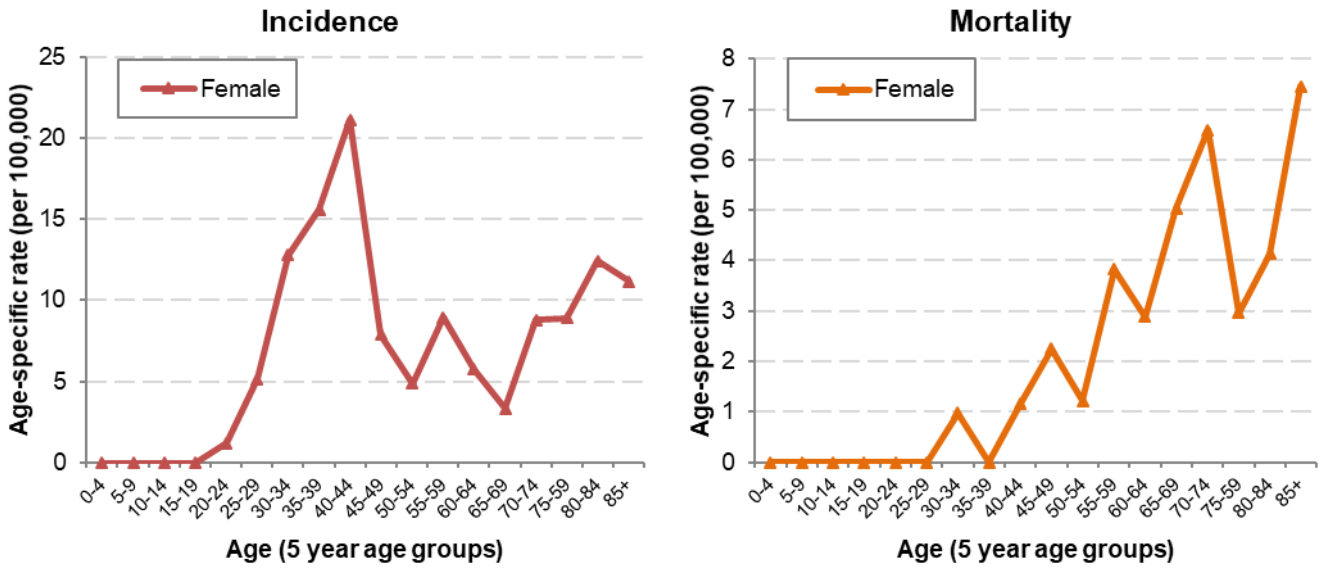


Table 32 & 33. Cervical cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Female Incidence
NMHS	**NMHS**	14
SMHS	**SMHS**	24
EMHS	**EMHS**	28
WACHS	**WACHS**	22
	Kimberley	2
	Pilbara	3
	Midwest	2
	Wheatbelt	3
	Goldfields	5
	Great Southern	3
	South West	4
Other WA address		-
Total WA		88

Health Service Area	Health Region	Female Mortality
NMHS	**NMHS**	1
SMHS	**SMHS**	8
EMHS	**EMHS**	6
WACHS	**WACHS**	5
	Kimberley	1
	Pilbara	-
	Midwest	-
	Wheatbelt	3
	Goldfields	-
	Great Southern	-
	South West	1
Other WA address		-
Total WA		20

Mesothelioma

Table 34. Mesothelioma cancer - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	0	0	**0-14 yrs**	0	0	**1993-1997**	33.8%	1.6%
15-39 yrs	1	0	**15-39 yrs**	0	0	**1998-2002**	42.5%	3.3%
40-64 yrs	24	4	**40-64 yrs**	20	4	**2003-2007**	49.5%	12.2%
65+ yrs	91	15	**65+ yrs**	76	18	**2008-2012**	51.5%	6.3%
Total	116	19	**Total**	96	22	**2013-2017**	51.3%	7.6%
Risk	1 in 205	1 in 854	**Risk**	1 in 236	1 in 823			

Figure 61 & 62. Mesothelioma cancer - age-standardised incidence and mortality rates, 1982-2017, WA

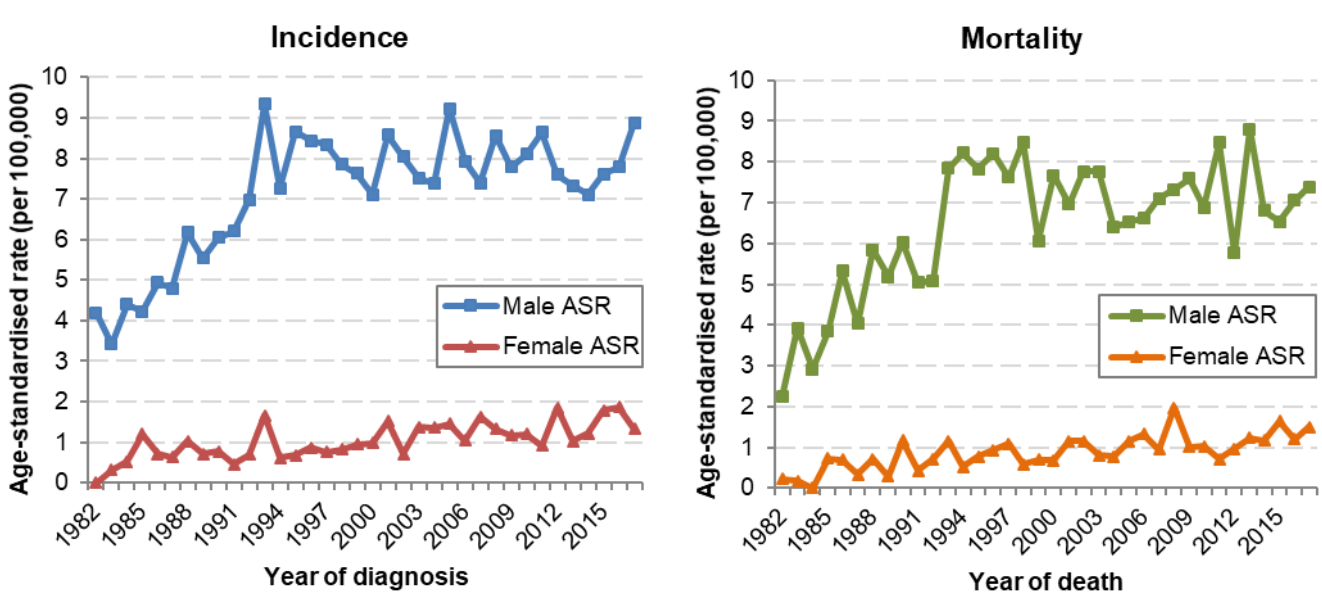


Figure 63. Mesothelioma cancer - relative survival, 1993-1997 to 2013-2017, WA

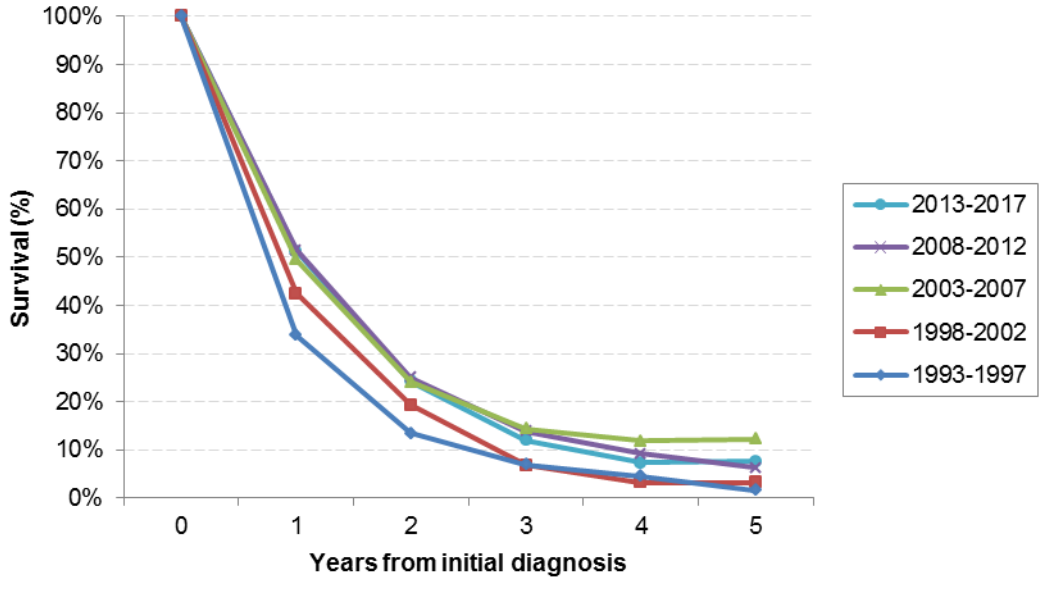


Figure 64 & 65. Mesothelioma cancer - age-specific incidence and mortality rates, 2017, WA

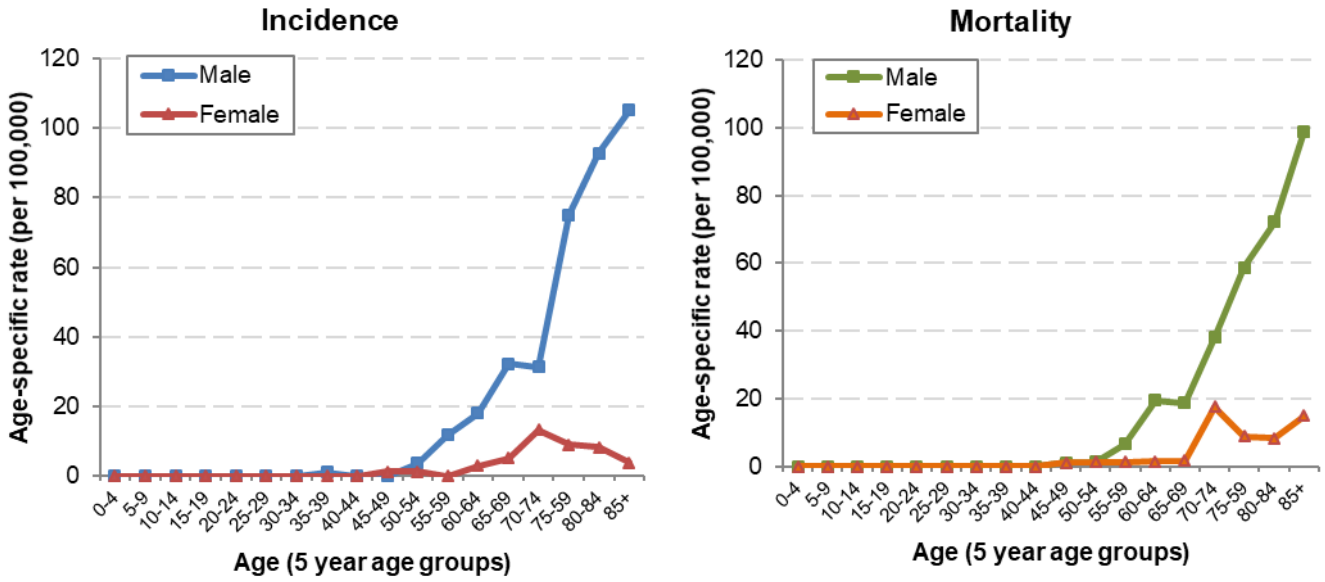


Table 35 & 36. Mesothelioma cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	30	3	**NMHS**	**NMHS**	20	5
SMHS	**SMHS**	31	7	**SMHS**	**SMHS**	24	3
EMHS	**EMHS**	30	4	**EMHS**	**EMHS**	33	8
WACHS	**WACHS**	24	5	**WACHS**	**WACHS**	19	6
	Kimberley	-	-		*Kimberley*	1	-
	Pilbara	1	-		*Pilbara*	-	1
	Midwest	3	1		*Midwest*	2	-
	Wheatbelt	1	-		*Wheatbelt*	2	1
	Goldfields	5	1		*Goldfields*	3	1
	Great Southern	3	-		*Great Southern*	3	1
	South West	11	3		*South West*	8	2
Other WA address		1	-	Other WA address		-	-
Total WA		116	19	**Total WA**		96	22

Ovary

Table 37. Ovarian cancer– incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence		Mortality		Survival *(Females)*		
	Female		*Female*		*1 year*	*5 year*
0-14 yrs	3	**0-14 yrs**	1	**1993-1997**	69.5%	34.8%
15-39 yrs	10	**15-39 yrs**	5	**1998-2002**	74.4%	40.4%
40-64 yrs	48	**40-64 yrs**	22	**2003-2007**	77.0%	49.4%
65+ yrs	54	**65+ yrs**	66	**2008-2012**	80.7%	46.1%
Total	115	**Total**	94	**2013-2017**	80.8%	47.9%
Risk	1 in 161	**Risk**	1 in 217			

Figure 66 & 67. Ovarian cancer - age-standardised incidence and mortality rates, 1982-2017, WA

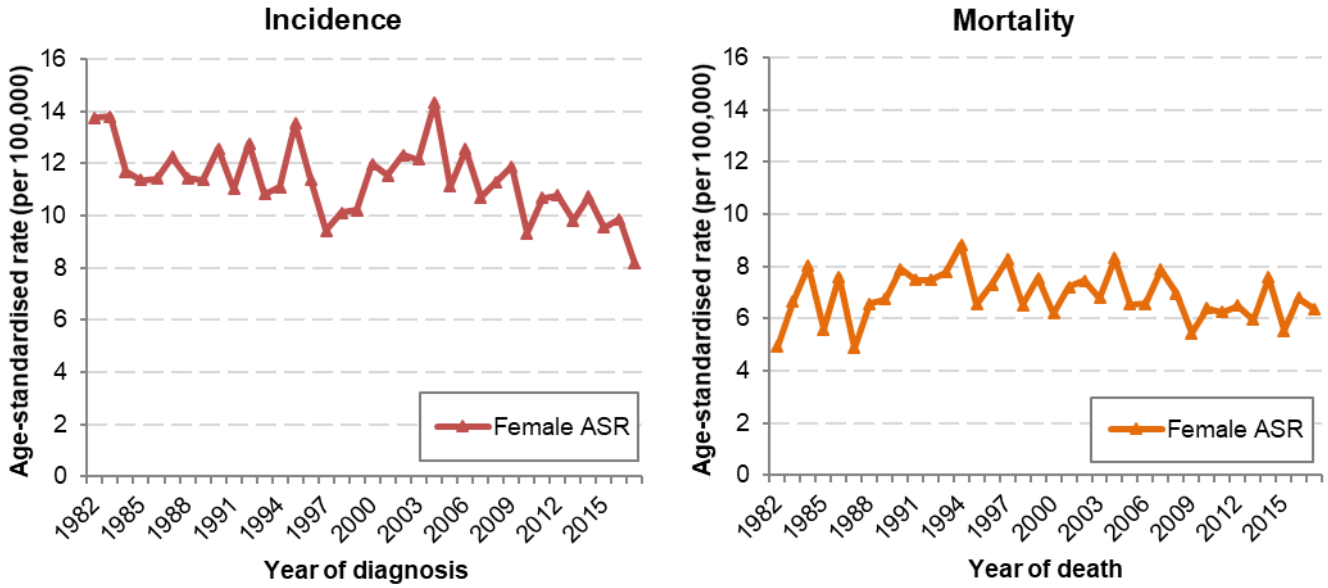


Figure 68. Ovarian cancer - relative survival, 1993-1997 to 2013-2017, WA

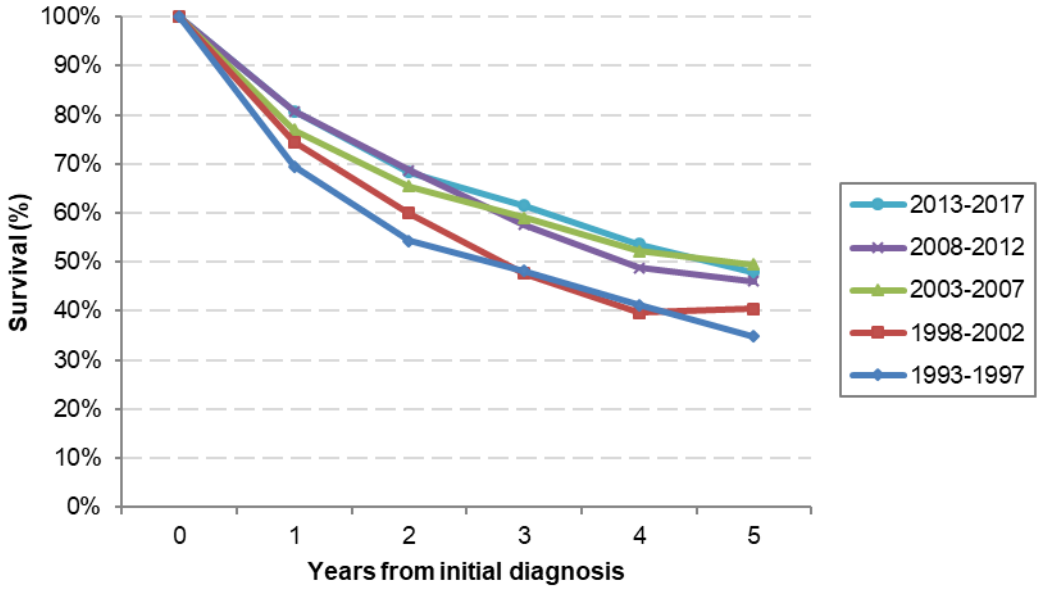


Figure 69 & 70. Ovarian cancer - age-specific incidence and mortality rates, 2017, WA

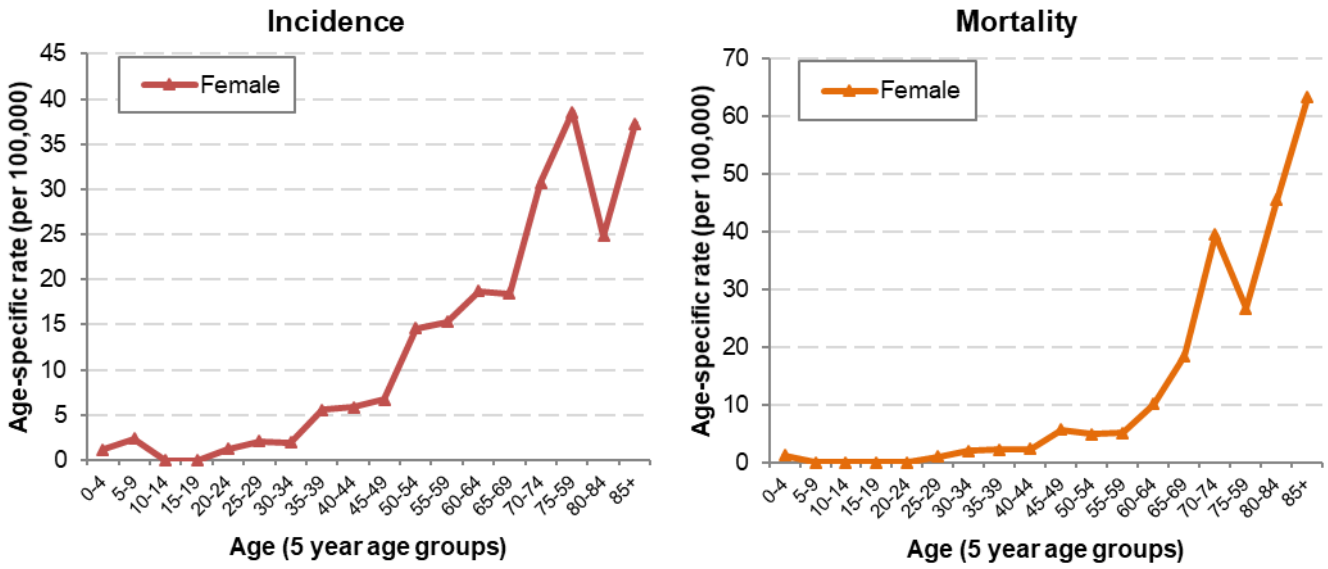


Table 38 & 39. Ovarian cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Female Incidence
NMHS	**NMHS**	38
SMHS	**SMHS**	29
EMHS	**EMHS**	18
WACHS	**WACHS**	30
	Kimberley	1
	Pilbara	1
	Midwest	-
	Wheatbelt	7
	Goldfields	3
	Great Southern	3
	South West	15
Other WA address		-
Total WA		115

Health Service Area	Health Region	Female Mortality
NMHS	**NMHS**	16
SMHS	**SMHS**	28
EMHS	**EMHS**	30
WACHS	**WACHS**	20
	Kimberley	1
	Pilbara	-
	Midwest	3
	Wheatbelt	4
	Goldfields	1
	Great Southern	4
	South West	7
Other WA address		-
Total WA		94

Kidney

Table 40. Kidney cancer– incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	6	1	**0-14 yrs**	1	0	**1993-1997**	76.1%	57.3%
15-39 yrs	7	7	**15-39 yrs**	0	0	**1998-2002**	79.9%	67.7%
40-64 yrs	112	53	**40-64 yrs**	15	9	**2003-2007**	84.2%	71.2%
65+ yrs	136	69	**65+ yrs**	39	20	**2008-2012**	88.3%	75.4%
Total	261	130	**Total**	55	29	**2013-2017**	90.7%	80.7%
Risk	1 in 60	1 in 133	**Risk**	1 in 435	1 in 1282			

Figure 71 & 72. Kidney cancer - age-standardised incidence and mortality rates, 1982-2017, WA

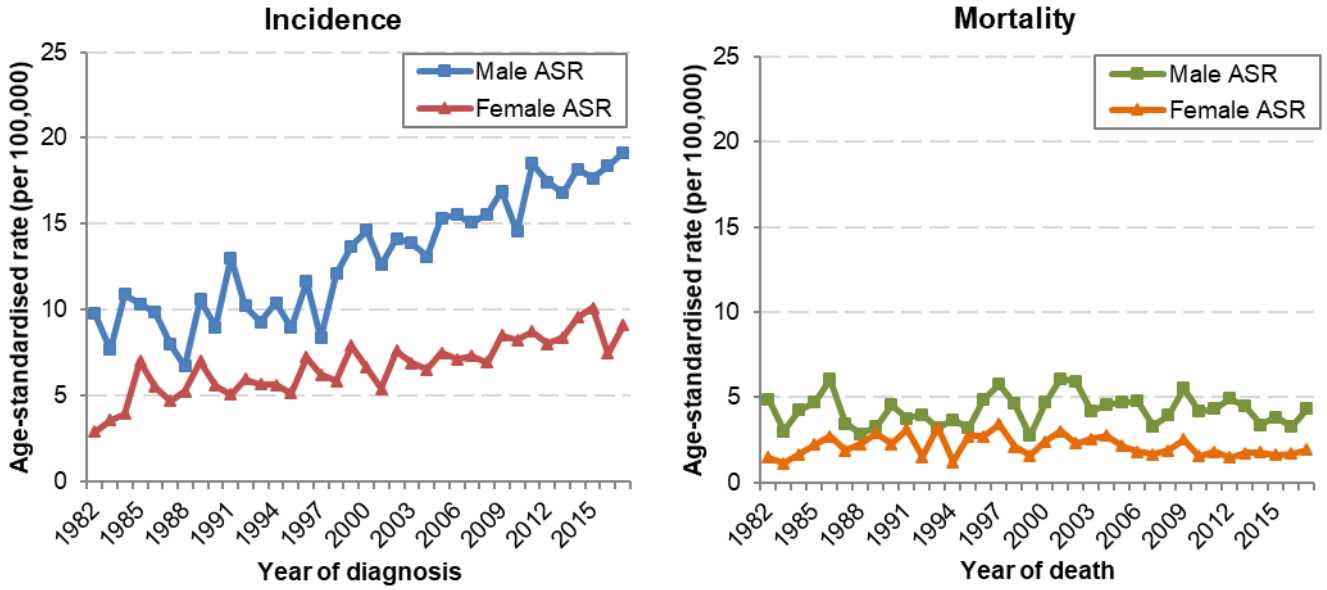


Figure 73. Kidney cancer - relative survival, 1993-1997 to 2013-2017, WA

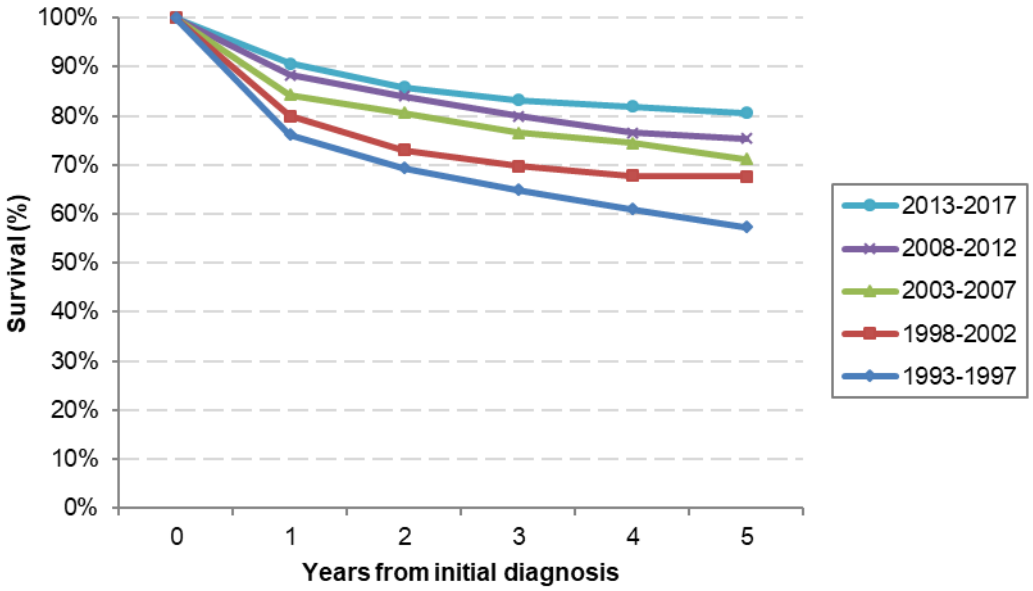


Figure 74 & 75. Kidney cancer - age-specific incidence and mortality rates, 2017, WA

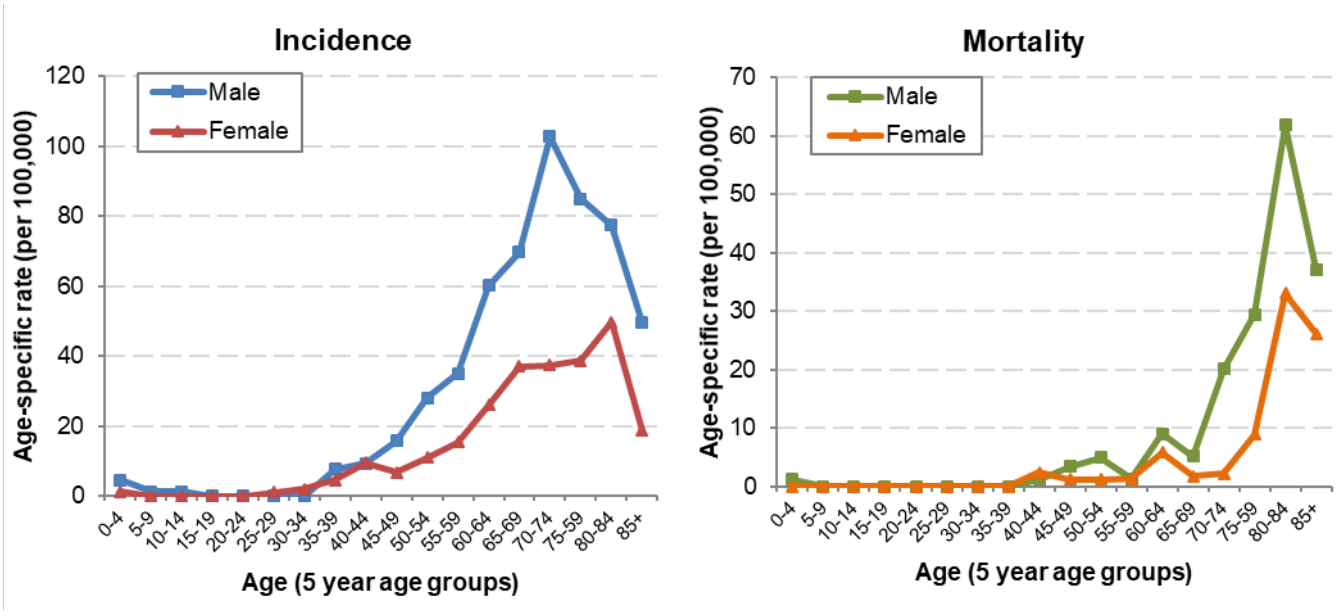


Table 41 & 42. Kidney cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	67	26	**NMHS**	**NMHS**	12	10
SMHS	**SMHS**	59	33	**SMHS**	**SMHS**	21	7
EMHS	**EMHS**	74	40	**EMHS**	**EMHS**	11	4
WACHS	**WACHS**	61	31	**WACHS**	**WACHS**	11	8
	Kimberley	3	3		*Kimberley*	1	-
	Pilbara	3	-		*Pilbara*	-	-
	Midwest	11	5		*Midwest*	1	2
	Wheatbelt	10	3		*Wheatbelt*	2	-
	Goldfields	2	3		*Goldfields*	-	-
	Great Southern	11	6		*Great Southern*	2	2
	South West	21	11		*South West*	5	4
Other WA address		-	-	Other WA address		-	-
Total WA		261	130	**Total WA**		55	29

Lymphoma

Table 43. Lymphoma - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	2	3	**0-14 yrs**	0	0	**1993-1997**	76.2%	56.8%
15-39 yrs	36	34	**15-39 yrs**	0	0	**1998-2002**	78.7%	63.4%
40-64 yrs	139	92	**40-64 yrs**	13	6	**2003-2007**	82.9%	70.4%
65+ yrs	214	150	**65+ yrs**	62	48	**2008-2012**	86.0%	75.1%
Total	391	279	**Total**	75	54	**2013-2017**	88.1%	82.1%
Risk	1 in 47	1 in 65	**Risk**	1 in 365	1 in 706			

Figure 76 & 77. Lymphoma - age-standardised incidence and mortality rates, 1982-2017, WA

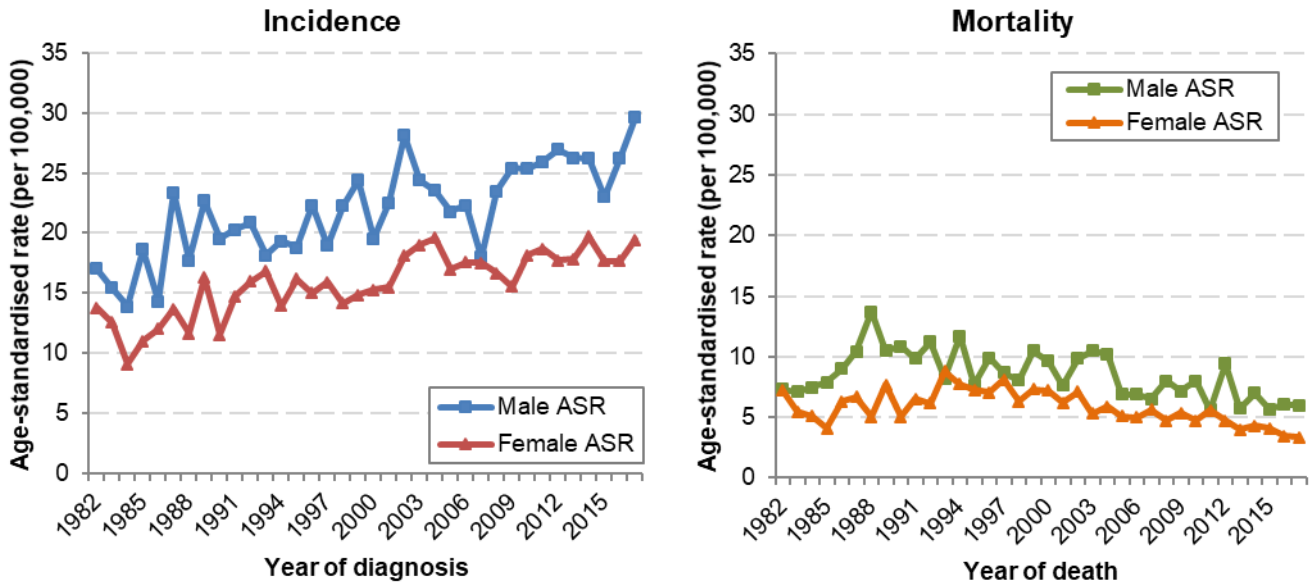


Figure 78. Lymphoma - relative survival, 1993-1997 to 2013-2017, WA

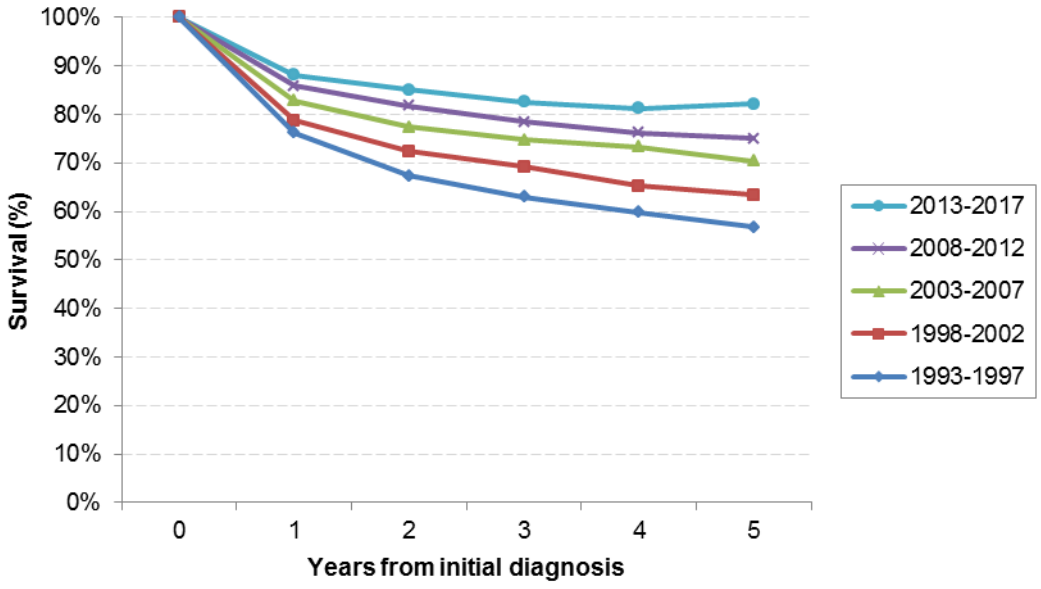


Figure 79 & 80. Lymphoma - age-specific incidence and mortality rates, 2017, WA

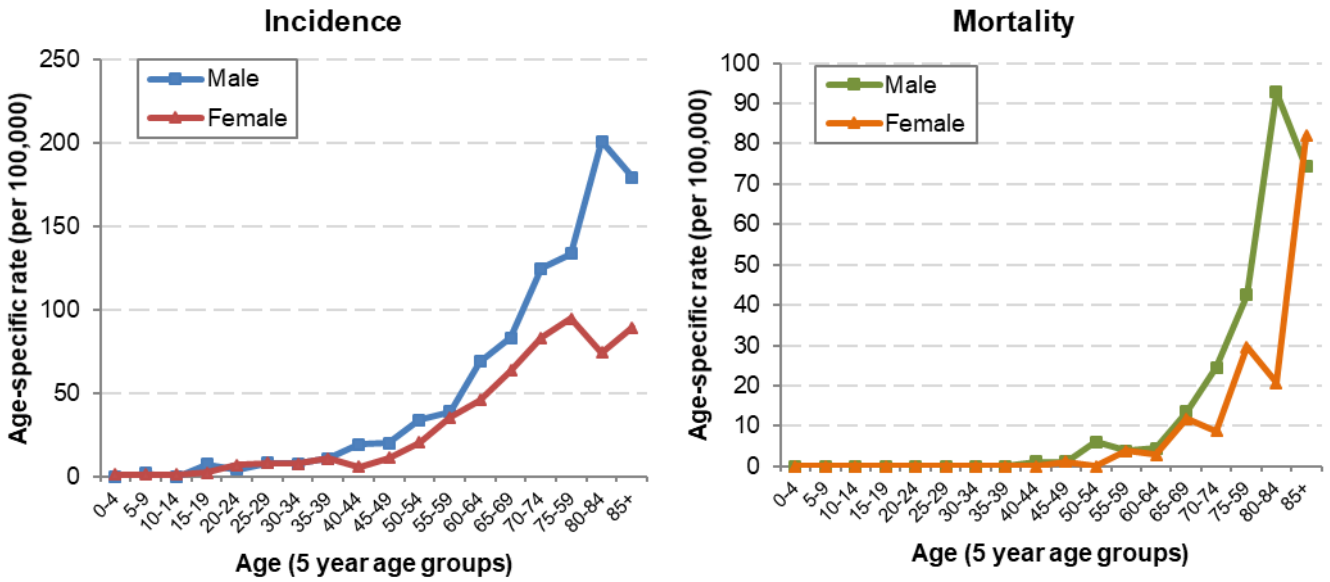


Table 44 & 45. Lymphoma - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	114	80	**NMHS**	**NMHS**	17	18
SMHS	**SMHS**	96	67	**SMHS**	**SMHS**	25	15
EMHS	**EMHS**	85	74	**EMHS**	**EMHS**	18	10
WACHS	**WACHS**	96	58	**WACHS**	**WACHS**	15	11
	Kimberley	1	3		*Kimberley*	-	-
	Pilbara	5	1		*Pilbara*	-	-
	Midwest	14	10		*Midwest*	1	-
	Wheatbelt	16	9		*Wheatbelt*	6	1
	Goldfields	11	4		*Goldfields*	-	1
	Great Southern	15	7		*Great Southern*	3	1
	South West	34	24		*South West*	5	8
Other WA address		-	-	Other WA address		-	-
Total WA		391	279	**Total WA**		75	54

Leukaemia

Table 46. Leukaemia - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	9	9	**0-14 yrs**	2	0	**1993-1997**	70.6%	45.3%
15-39 yrs	6	8	**15-39 yrs**	4	3	**1998-2002**	71.4%	45.7%
40-64 yrs	58	44	**40-64 yrs**	12	16	**2003-2007**	75.6%	57.4%
65+ yrs	139	59	**65+ yrs**	81	32	**2008-2012**	77.1%	56.7%
Total	212	120	**Total**	99	51	**2013-2017**	74.3%	58.4%
Risk	1 in 91	1 in 155	**Risk**	1 in 276	1 in 436			

Figure 81 & 82. Leukaemia - age-standardised incidence and mortality rates, 1982-2017, WA

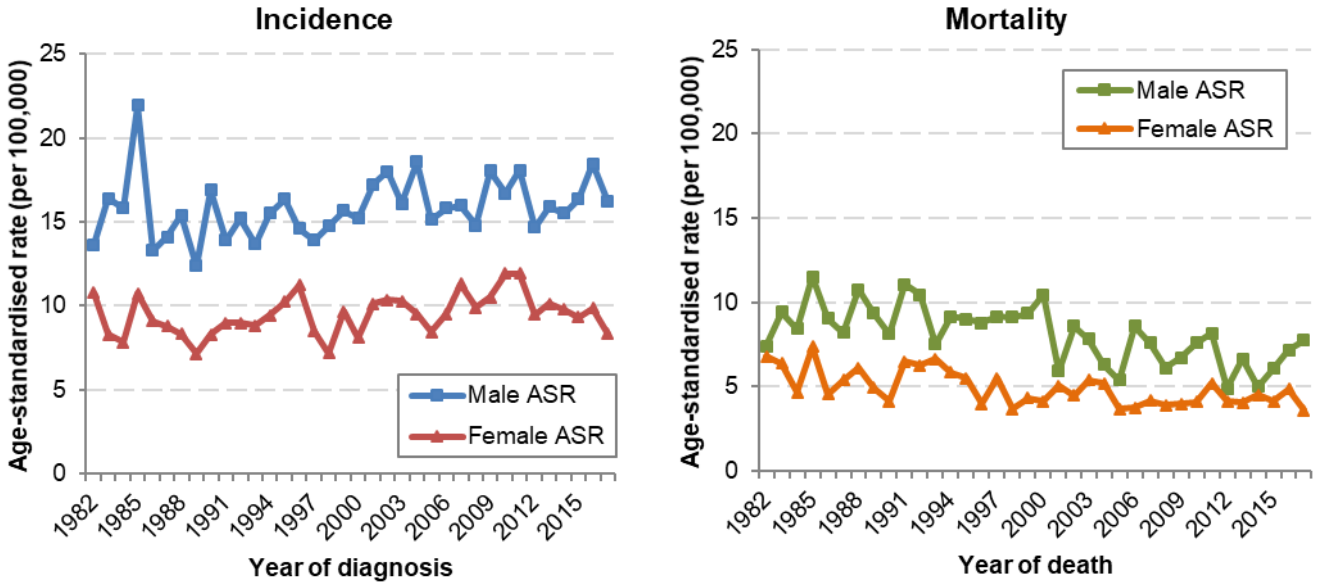


Figure 83. Leukaemia - relative survival, 1993-1997 to 2013-2017, WA

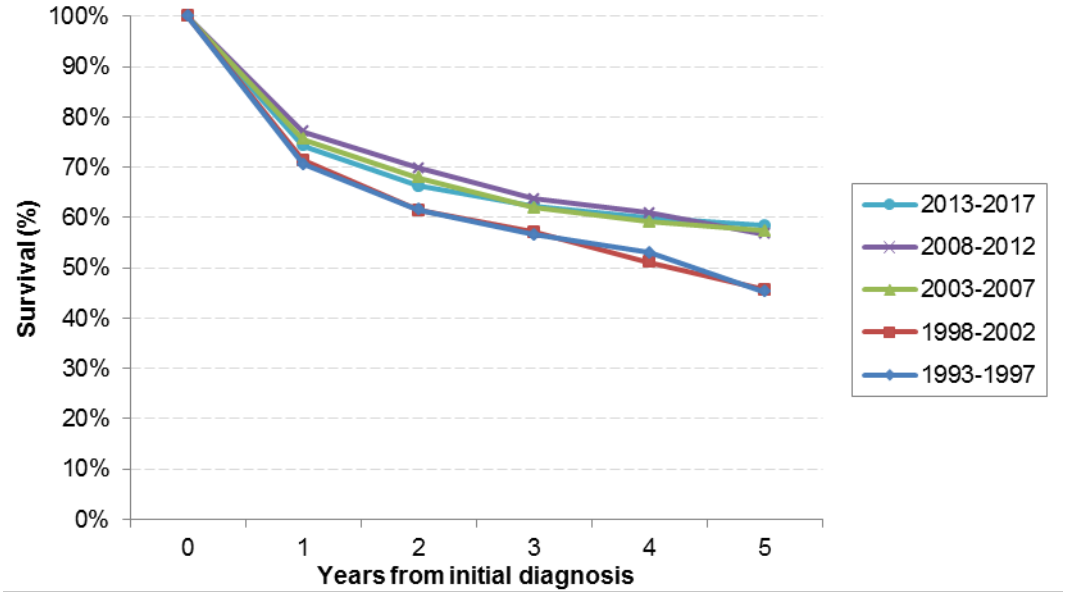


Figure 84 & 85. Leukaemia - age-specific incidence and mortality rates, 2017, WA

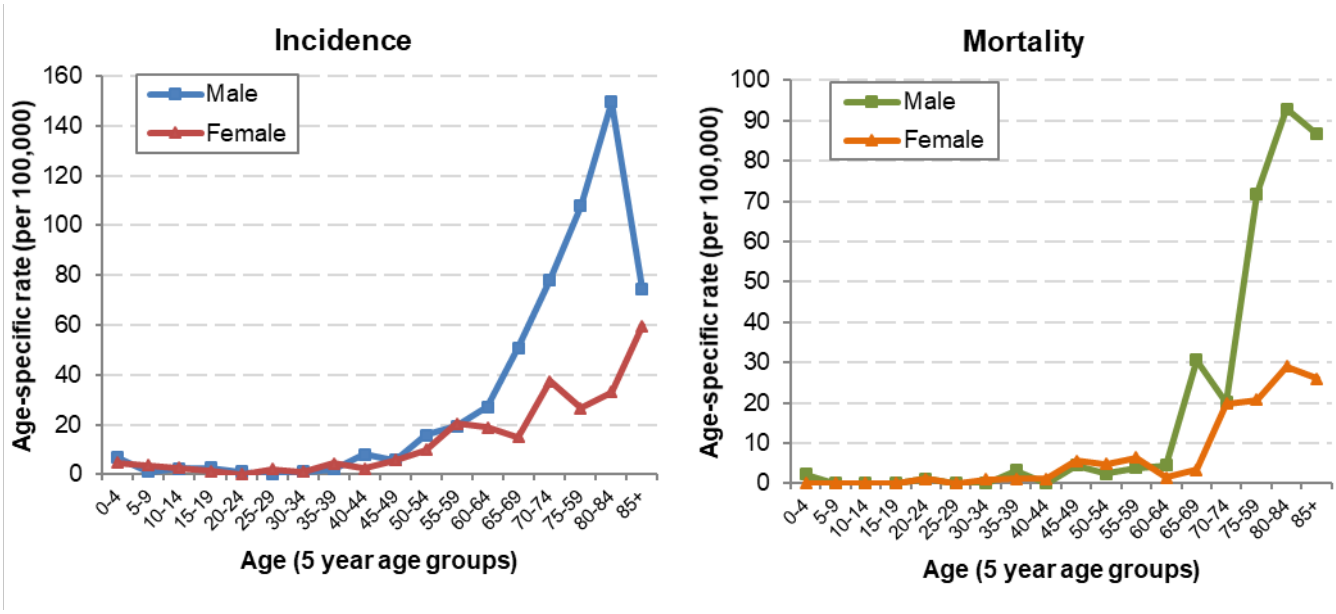


Table 47 & 48. Leukaemia - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	53	42	**NMHS**	**NMHS**	24	14
SMHS	**SMHS**	51	31	**SMHS**	**SMHS**	27	16
EMHS	**EMHS**	53	25	**EMHS**	**EMHS**	26	16
WACHS	**WACHS**	55	22	**WACHS**	**WACHS**	22	5
	Kimberley	3	-		*Kimberley*	-	-
	Pilbara	3	1		*Pilbara*	-	1
	Midwest	9	1		*Midwest*	2	-
	Wheatbelt	6	7		*Wheatbelt*	3	1
	Goldfields	3	1		*Goldfields*	1	-
	Great Southern	11	6		*Great Southern*	2	3
	South West	20	6		*South West*	14	-
Other WA address		-	-	Other WA address		-	-
Total WA		212	120	**Total WA**		99	51

Bladder and urinary tract

Table 49. Bladder and urinary tract cancer - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	0	0	**0-14 yrs**	0	0	**1993-1997**	79.0%	60.6%
15-39 yrs	0	1	**15-39 yrs**	0	0	**1998-2002**	76.3%	48.7%
40-64 yrs	46	12	**40-64 yrs**	7	1	**2003-2007**	77.1%	57.1%
65+ yrs	175	54	**65+ yrs**	69	29	**2008-2012**	76.5%	55.7%
Total	221	67	**Total**	76	30	**2013-2017**	78.6%	56.2%
Risk	1 in 102	1 in 480	**Risk**	1 in 395	1 in 1491			

Figure 86 & 87. Bladder and urinary tract cancer - age-standardised incidence and mortality rates, 1982-2017, WA

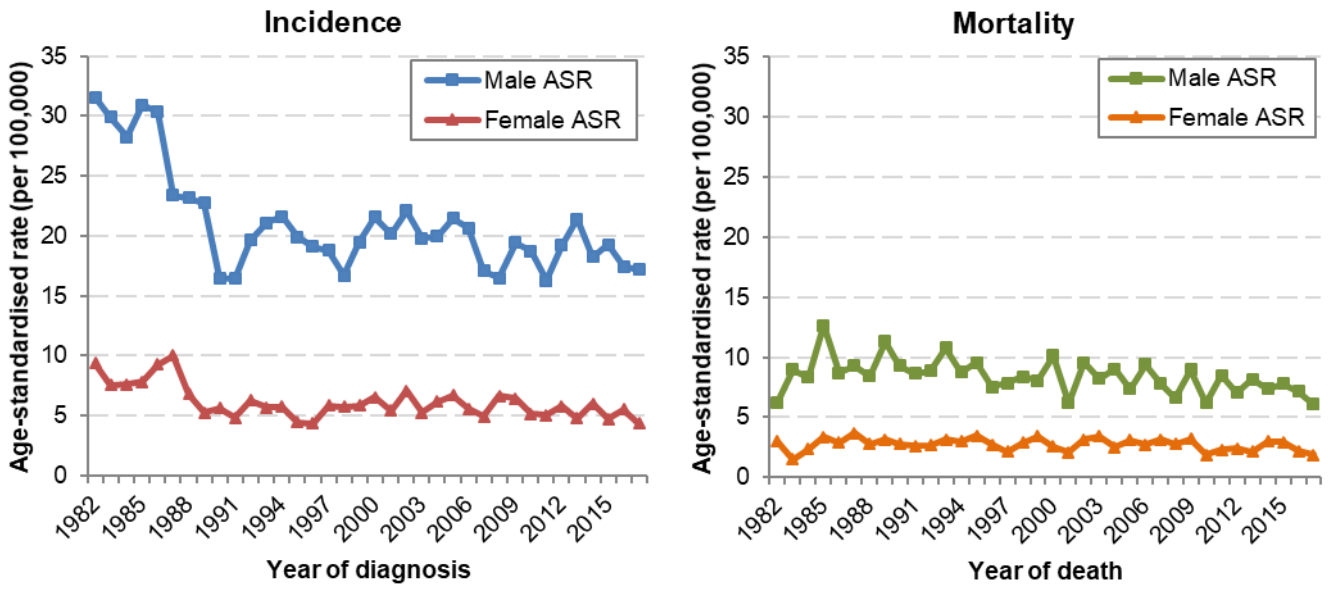


Figure 88. Bladder and urinary tract cancer - relative survival, 1993-1997 to 2013-2017, WA

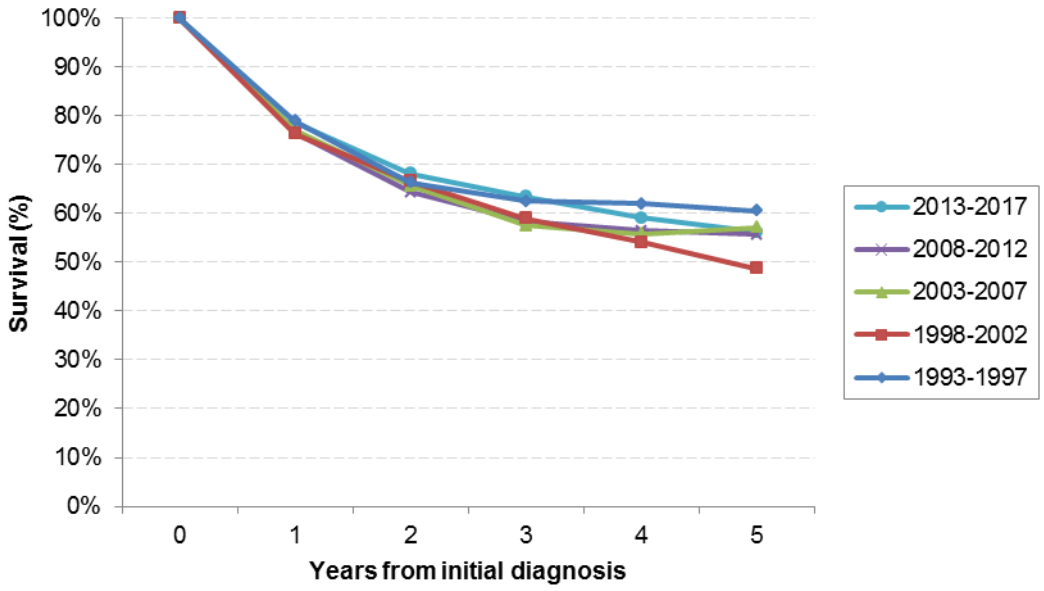


Figure 89 & 90. Bladder and urinary tract cancer - age-specific incidence and mortality rates, 2017, WA

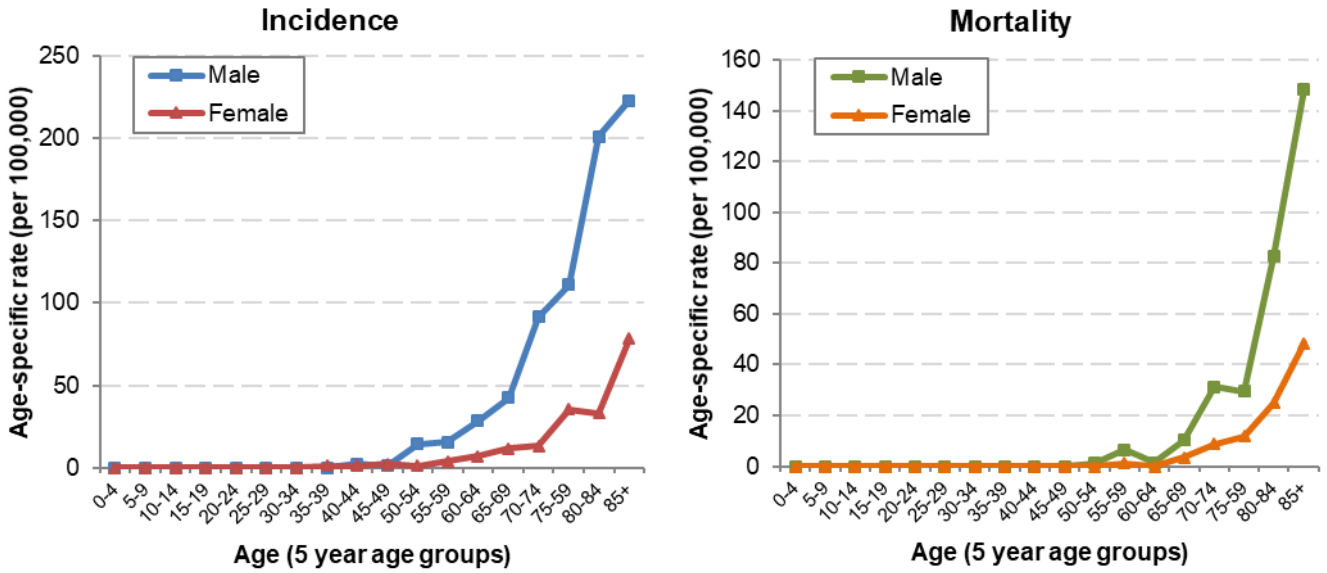


Table 50 & 51. Bladder and urinary tract cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	61	16	**NMHS**	**NMHS**	9	6
SMHS	**SMHS**	66	16	**SMHS**	**SMHS**	21	7
EMHS	**EMHS**	58	22	**EMHS**	**EMHS**	27	9
WACHS	**WACHS**	36	13	**WACHS**	**WACHS**	19	8
	Kimberley	1	1		*Kimberley*	-	-
	Pilbara	-	1		*Pilbara*	-	-
	Midwest	1	-		*Midwest*	4	1
	Wheatbelt	10	2		*Wheatbelt*	5	1
	Goldfields	-	-		*Goldfields*	-	1
	Great Southern	5	4		*Great Southern*	4	1
	South West	19	5		*South West*	6	4
Other WA address		-	-	Total WACHS		-	-
Total WA		221	67	**Total WA**		76	30

Unknown primary

Table 52. Unknown primary - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	0	0	**0-14 yrs**	0	0	**1993-1997**	20.4%	11.5%
15-39 yrs	3	5	**15-39 yrs**	3	2	**1998-2002**	22.6%	13.3%
40-64 yrs	44	26	**40-64 yrs**	16	15	**2003-2007**	26.0%	16.4%
65+ yrs	125	108	**65+ yrs**	105	100	**2008-2012**	28.9%	20.3%
Total	172	139	**Total**	124	117	**2013-2017**	36.5%	24.5%
Risk	1 in 128	1 in 246	**Risk**	1 in 242	1 in 348			

Figure 91 & 92. Unknown primary - age-standardised incidence and mortality rates, 1982-2017, WA

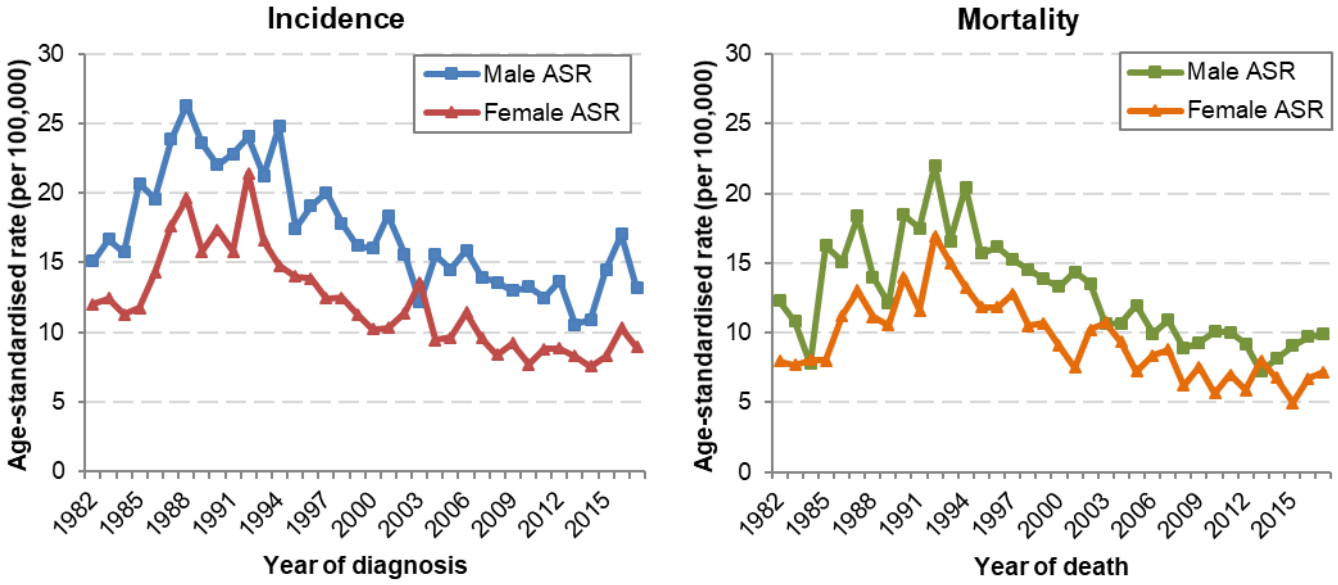


Figure 93. Unknown primary - relative survival, 1993-1997 to 2013-2017, WA

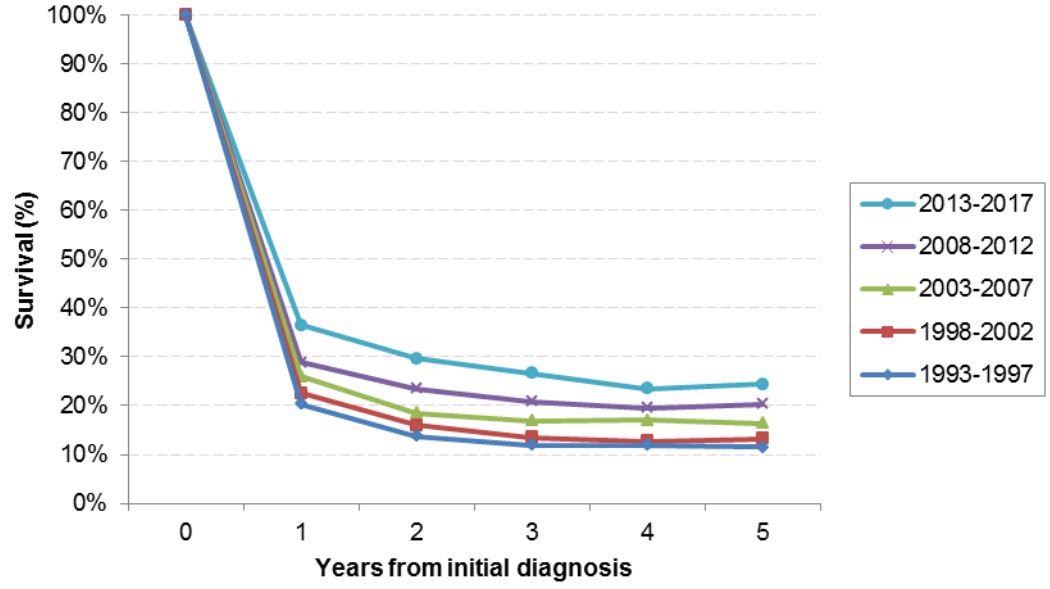


Figure 94 & 95. Unknown primary - age-specific incidence and mortality rates, 2017, WA

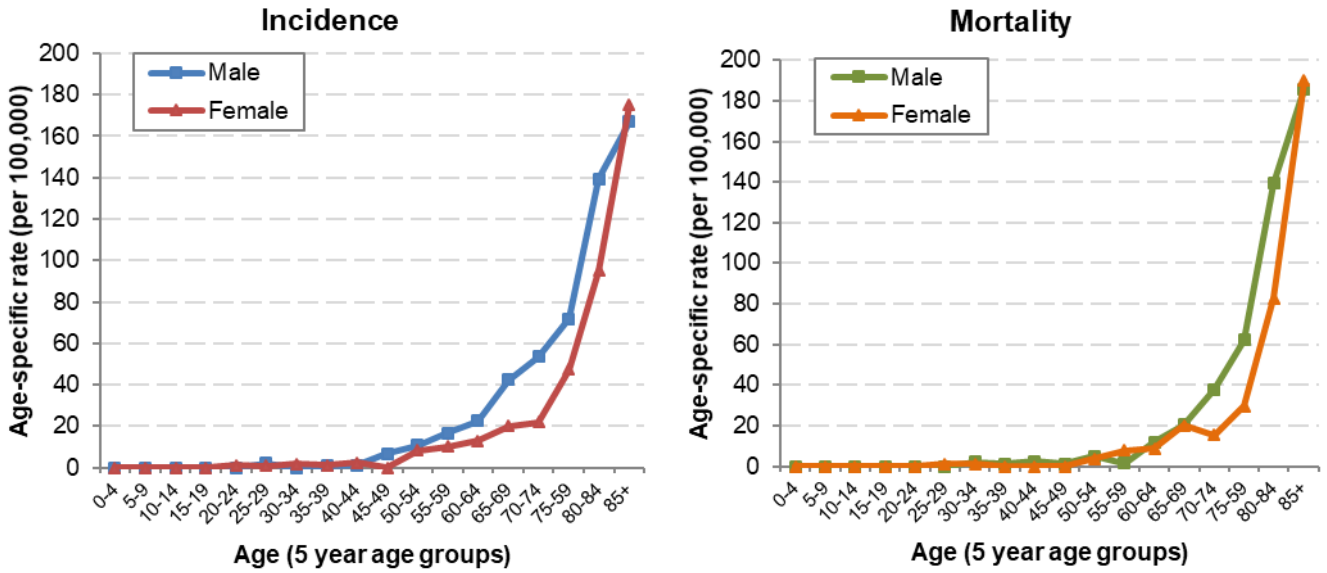


Table 53 & 54. Unknown primary - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male	Female
NMHS	**NMHS**	40	29	**NMHS**	**NMHS**	28	27
SMHS	**SMHS**	41	30	**SMHS**	**SMHS**	23	28
EMHS	**EMHS**	43	49	**EMHS**	**EMHS**	36	42
WACHS	**WACHS**	48	31	**WACHS**	**WACHS**	37	20
	Kimberley	5	3		*Kimberley*	1	-
	Pilbara	2	3		*Pilbara*	3	-
	Midwest	3	4		*Midwest*	2	2
	Wheatbelt	9	3		*Wheatbelt*	8	4
	Goldfields	6	6		*Goldfields*	4	6
	Great Southern	8	-		*Great Southern*	4	-
	South West	15	12		*South West*	15	8
Other WA address		-	-	Other WA address		-	-
Total WA		172	139	**Total WA**		124	117

Brain

Table 55. Brain cancer - incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	7	2	**0-14 yrs**	3	0	**1993-1997**	40.2%	18.4%
15-39 yrs	15	3	**15-39 yrs**	2	5	**1998-2002**	45.4%	17.4%
40-64 yrs	44	29	**40-64 yrs**	30	18	**2003-2007**	47.1%	22.9%
65+ yrs	56	38	**65+ yrs**	50	36	**2008-2012**	54.0%	22.2%
Total	122	72	**Total**	85	59	**2013-2017**	56.8%	21.7%
Risk	1 in 150	1 in 265	**Risk**	1 in 210	1 in 332			

Figure 96 & 97. Brain cancer - age-standardised incidence and mortality rates, 1982-2017, WA

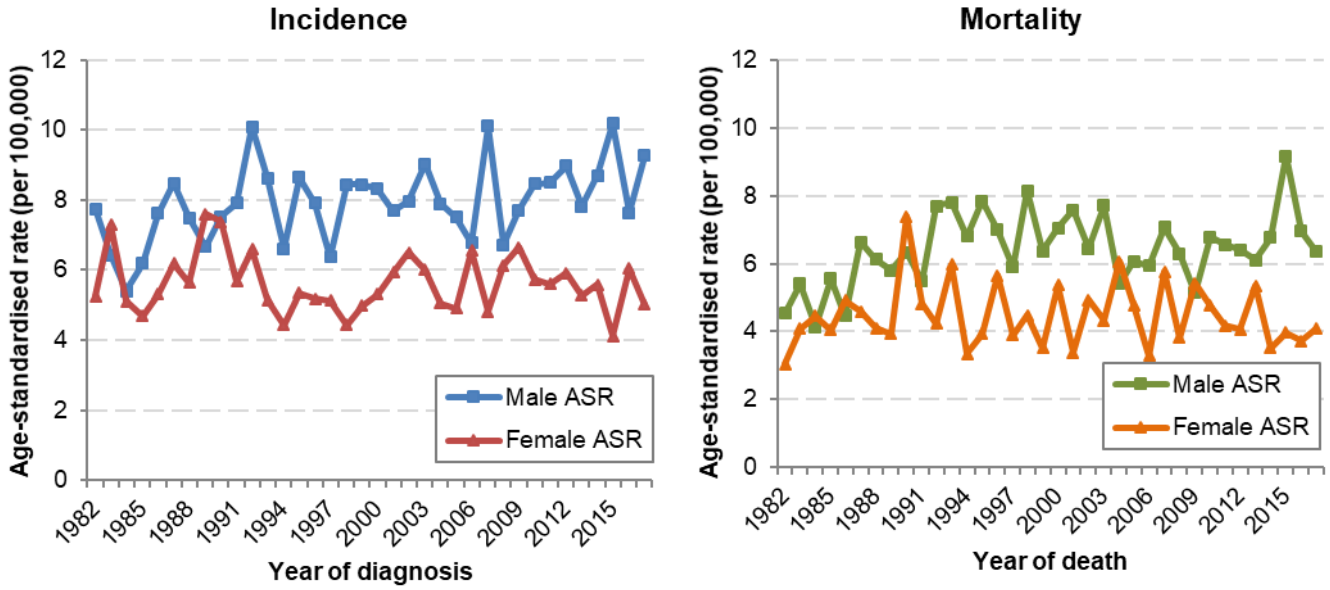


Figure 98. Brain cancer - relative survival, 1993-1997 to 2013-2017, WA

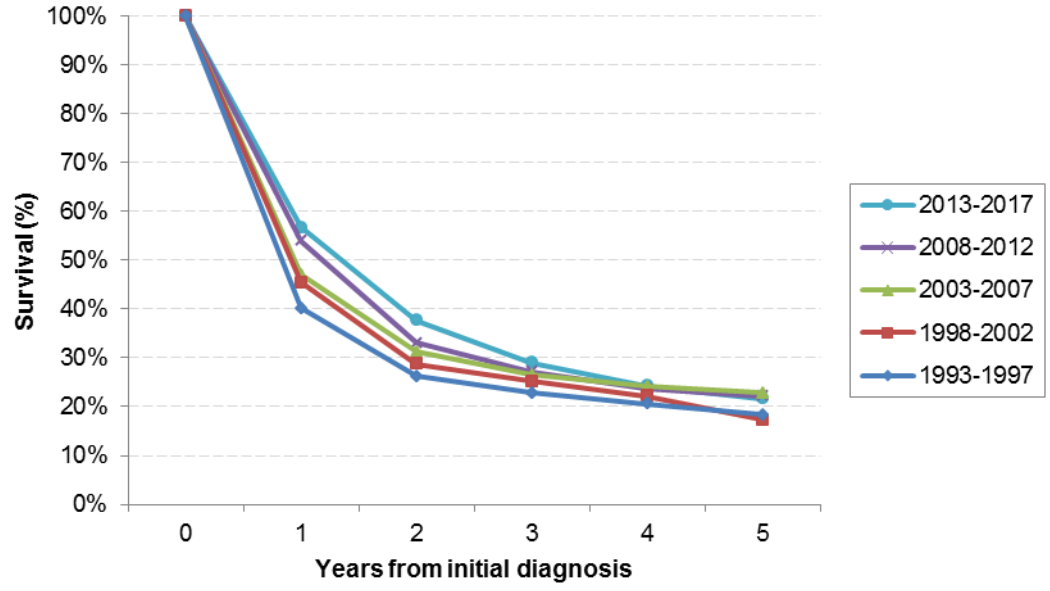


Figure 99 & 100. Brain cancer - age-specific incidence and mortality rates, 2017, WA

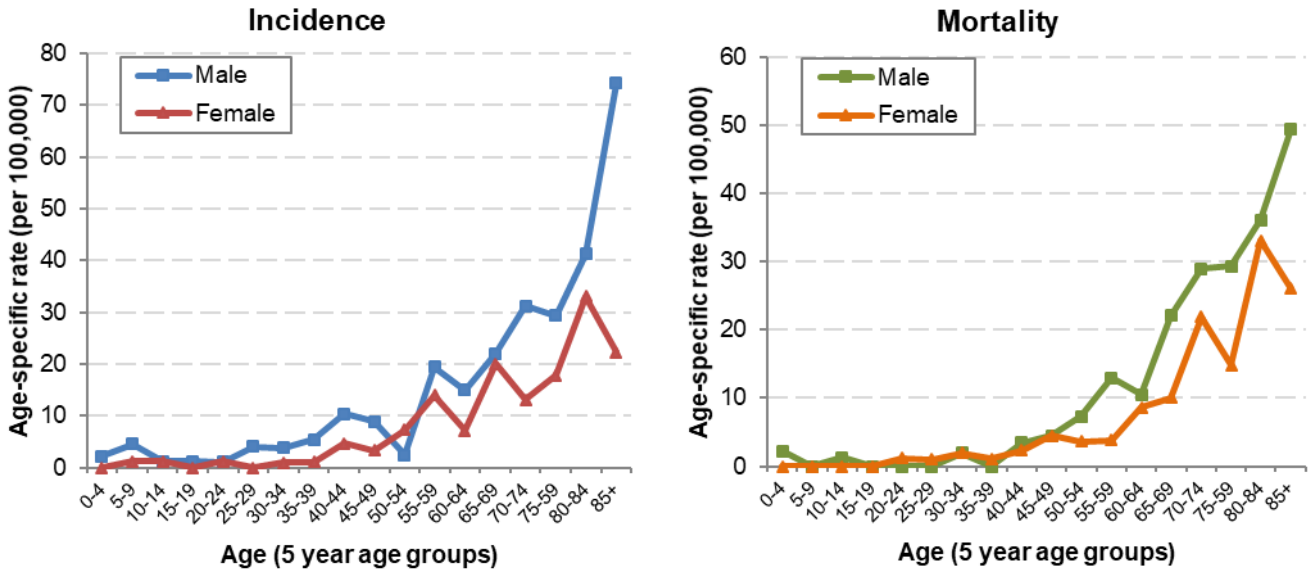


Table 56 & 57. Brain cancer - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence	Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	33	19	**NMHS**	**NMHS**	27	23
SMHS	**SMHS**	36	23	**SMHS**	**SMHS**	26	12
EMHS	**EMHS**	27	16	**EMHS**	**EMHS**	18	16
WACHS	**WACHS**	26	14	**WACHS**	**WACHS**	14	8
	Kimberley	-	-		*Kimberley*	-	-
	Pilbara	2	-		*Pilbara*	1	-
	Midwest	2	4		*Midwest*	1	2
	Wheatbelt	2	3		*Wheatbelt*	3	1
	Goldfields	2	-		*Goldfields*	-	-
	Great Southern	2	4		*Great Southern*	1	2
	South West	16	3		*South West*	8	3
Other WA address		-	-	Other WA address		-	-
Total WA		122	72	**Total WA**		85	59

Myeloproliferative neoplasm

Table 58. Myeloproliferative neoplasm – incidence, mortality and cumulative risk for 2017, survival in five-year periods, WA

Incidence			Mortality			Survival *(All persons)*		
	Male	*Female*		*Male*	*Female*		*1 year*	*5 year*
0-14 yrs	-	-	**0-14 yrs**	-	-	**1993-1997**	90.2%	69.1%
15-39 yrs	6	6	**15-39 yrs**	-	-	**1998-2002**	94.1%	74.1%
40-64 yrs	16	20	**40-64 yrs**	2	-	**2003-2007**	91.5%	80.3%
65+ yrs	35	44	**65+ yrs**	5	6	**2008-2012**	92.0%	65.5%
Total	57	70	**Total**	7	6	**2013-2017**	90.3%	78.4%
Risk	1 in 363	1 in 303	**Risk**	1 in 2754	-			

Figure 101 & 102. Myeloproliferative neoplasm - age-standardised incidence and crude mortality rates, 1993-2017, WA

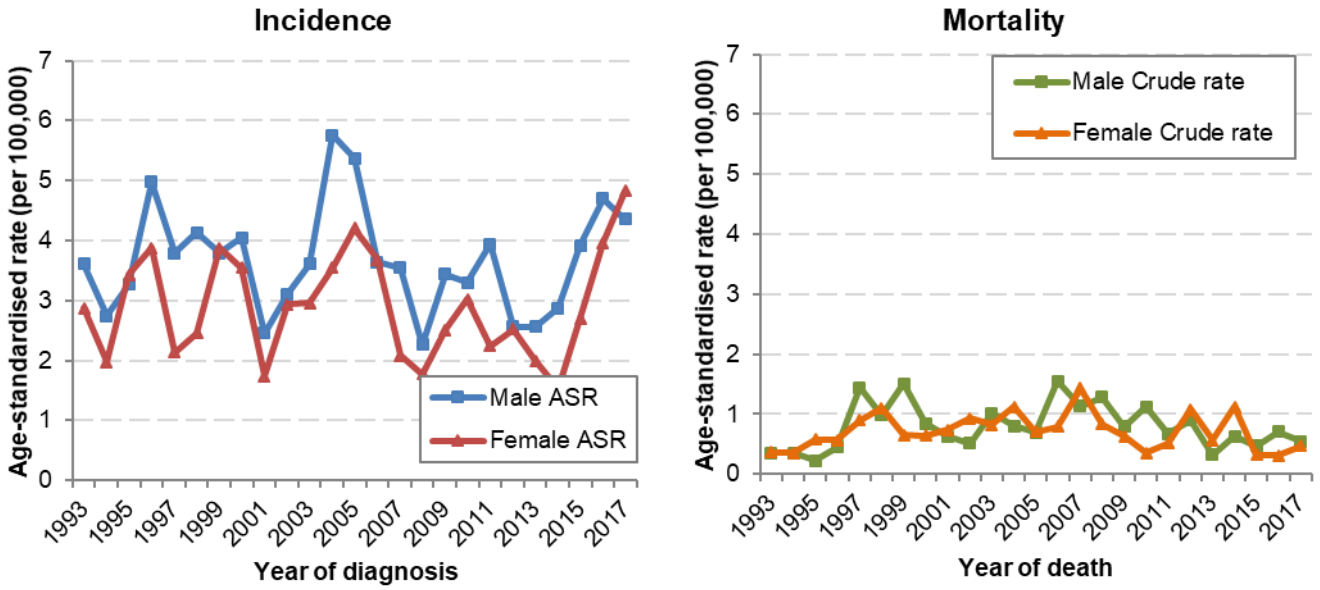


Figure 103. Myeloproliferative neoplasm - relative survival, 1993-1997 to 2013-2017, WA

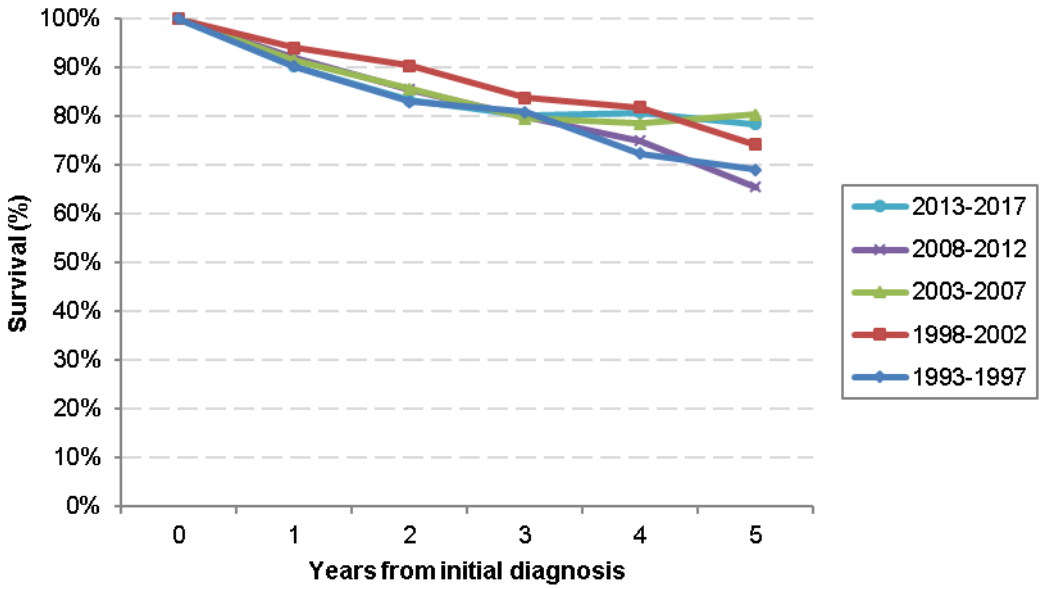


Figure 104 & 105. Myeloproliferative neoplasms - age-specific incidence and mortality rates, 2017, WA

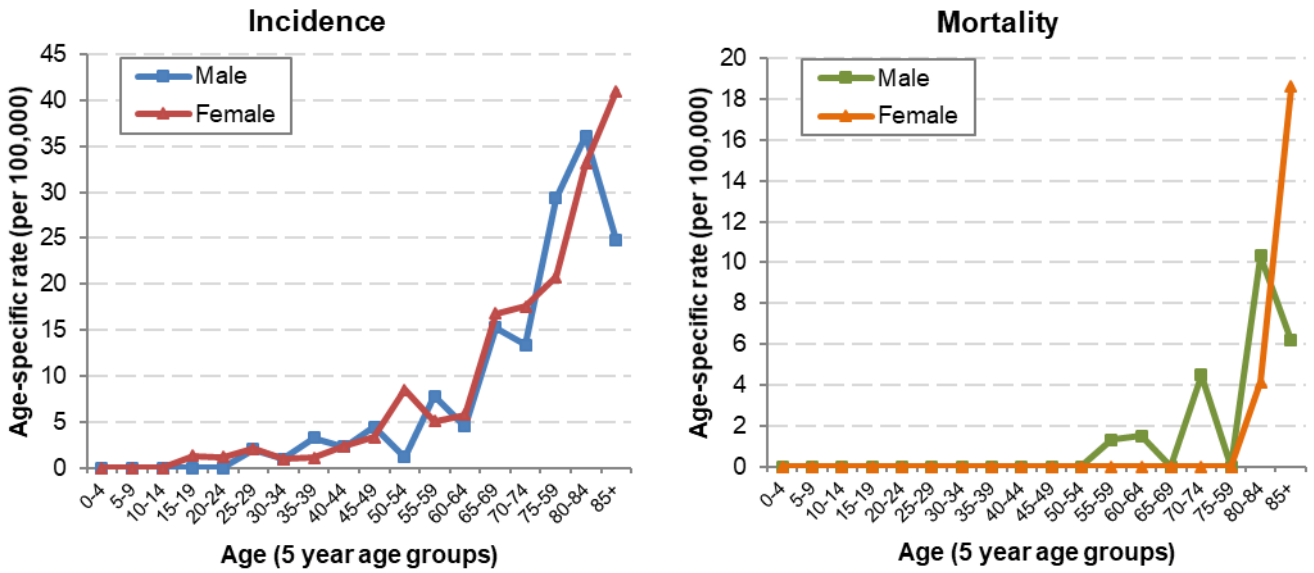


Table 59 & 60. Myeloproliferative neoplasms - incidence and mortality, by health service area and region, 2017, WA

Health Service Area	Health Region	Male Incidence	Female Incidence
NMHS	**NMHS**	15	13
SMHS	**SMHS**	16	16
EMHS	**EMHS**	14	19
WACHS	**WACHS**	12	22
	Kimberley	-	-
	Pilbara	2	2
	Midwest	-	1
	Wheatbelt	2	4
	Goldfields	-	4
	Great Southern	3	2
	South West	5	9
Other WA address		-	-
Total WA		57	70

Health Service Area	Health Region	Male Mortality	Female Mortality
NMHS	**NMHS**	1	2
SMHS	**SMHS**	2	2
EMHS	**EMHS**	1	1
WACHS	**Total**	3	1
	Kimberley	1	-
	Pilbara	-	-
	Midwest	-	-
	Wheatbelt	-	1
	Goldfields	-	-
	Great Southern	-	-
	South West	-	2
Other WA address		-	-
Total WA		7	6

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