

Cancer in Queensland

A statistical overview 1982-2021

Annual update 2012



the
Partnership
queensland cancer control safety
and quality partnership



Acknowledgements

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Message from the Chair

As Chair of the Queensland Cancer Control Safety and Quality Partnership I am pleased to introduce, *Cancer in Queensland: A statistical overview 1982-2021, Annual Update 2012*. This report is a comprehensive epidemiological report of cancer incidence and survival in Queensland and is a follow up to *Cancer in Queensland: A statistical overview 2012*. Once again, our aim with this publication is to provide 'data for today' and share the most up to date cancer data that is available.

The report begins with cancer projections for 2021. We follow up the projections with an analysis of cancer incidence, mortality and survival in Queensland from 1982-2012. This data underpins our ability to estimate the impact of cancer in Queensland in 2021. It supports cancer services planning, evaluation and monitoring, and research. In the final part of the report we present cancer incidence and mortality data by Hospital and Health Service.

We invite your feedback on the value and benefits of this report and hope that this information can make a positive contribution to the future of cancer care.



Euan Walpole
Chair
Queensland Cancer Control Safety and Quality Partnership



Highlights and summary

Cancer in Queensland: A Statistical Overview 1982-2021, Annual update 2012 provides information on cancer incidence and mortality for the state and individual Hospital and Health Services (HHS). This report presents cancer data for 2012 and projections for 2021 and is the second of a series which will provide information on patterns and trends for cancer, the largest cause of premature death and disability in Queensland¹.

Cancer incidence rates in Queensland are among the highest in the world. Incidence rates are fairly uniform across the state, with a tendency to slightly lower rates recorded in remote and very remote areas.

The growth in **new cases of cancer** is largely being driven by population growth and ageing. The underlying cancer rate has increased only slightly since 1982:

- In 2012, 25,614 new cases of cancer were diagnosed; of these 14,513 were reported in males and 11,101 in females.
- The most common cancer diagnoses in males were prostate cancer (28%) and melanoma (14%), followed by colorectal (11%) and haematological cancers (10%).
- The most common cancer diagnoses in females were breast cancer (28%), melanoma (13%), colorectal cancer (12%) and haematological cancers (10%).
- In children the most common diagnoses were haematological cancers (44%), cancers of the central nervous system (15%) and cancers of bone and soft tissue (14%).
- In 2021, an estimated 33,905 new cases of cancer will be diagnosed in Queensland.

The prevalence of cancer is increasing as more people are diagnosed with cancer and survival improves:

- By the end of 2012, more than 85,000 people were living with a diagnosis of cancer in the previous five years (nearly 2% of all Queenslanders).
- Prostate cancer followed by melanoma and breast cancer were the most prevalent.

Cancer survival appears to be improving for some cancers:

- The average five-year relative survival for 2008-2012 was 70%, compared to 67% for 2003-2007.
- The greatest gains were observed for myeloma, non-Hodgkin lymphoma and oesophageal cancer.

The number of cancer deaths continues to increase in Queensland:

- In 2012, 4,856 deaths were attributed to cancer in males and 3,510 deaths to cancer in females.
- Lung cancer was the most common cause of cancer death, accounting for 22% of deaths in males and 19% of deaths in females.
- Prostate and colorectal cancers (14% and 11% respectively) were the next most common causes of cancer death in males, and breast and colorectal cancers (15% and 13% respectively) the next most common causes of cancer death in females.
- In 2021, an estimated 11,550 deaths will be attributed to cancer.

The mortality rate for cancer has been in decline since the mid-1990s. Mortality rates from cancer are fairly similar in remote and very remote areas compared to major cities.

The presentation of **cancer data by Queensland Hospital and Health Service** demonstrates the significant regional variation in the burden of cancer across the state.

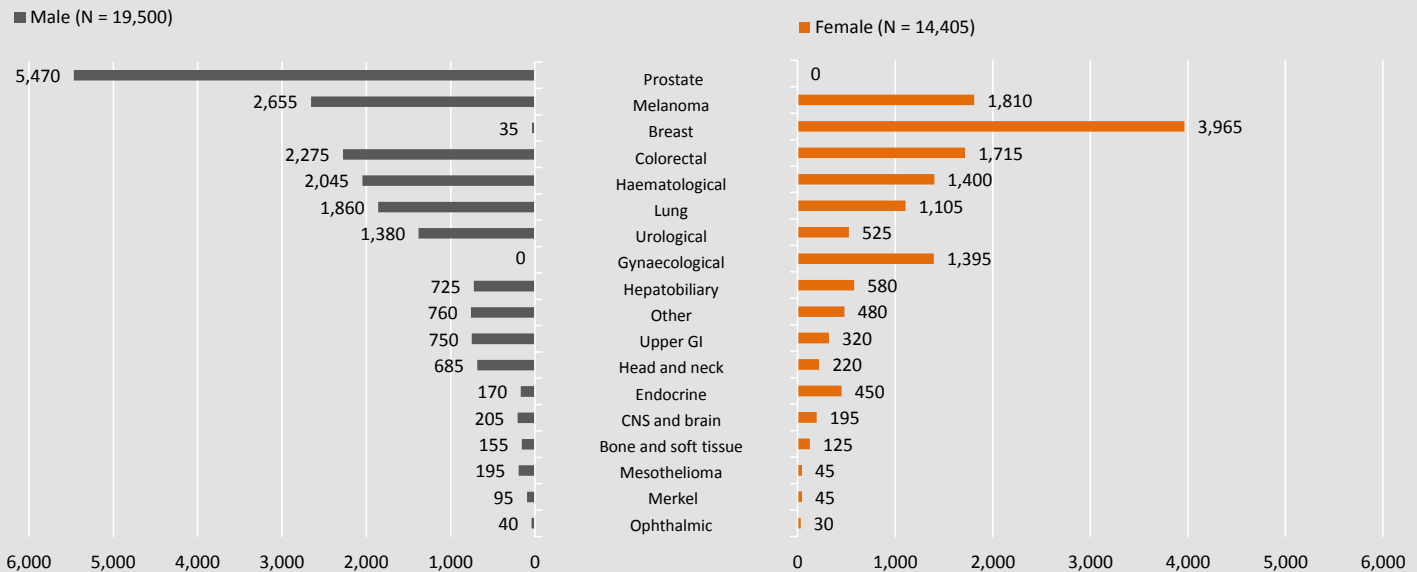
Cancer projections



Cancer projections Queensland, 2021

In 2021, an estimated 33,905 new cases of invasive cancers will be diagnosed among Queensland residents (Figure 1), while an estimated 11,550 Queenslanders will die of the disease (Figure 2).

Figure 1: Expected cancer incidence, common cancers, Queensland, 2021

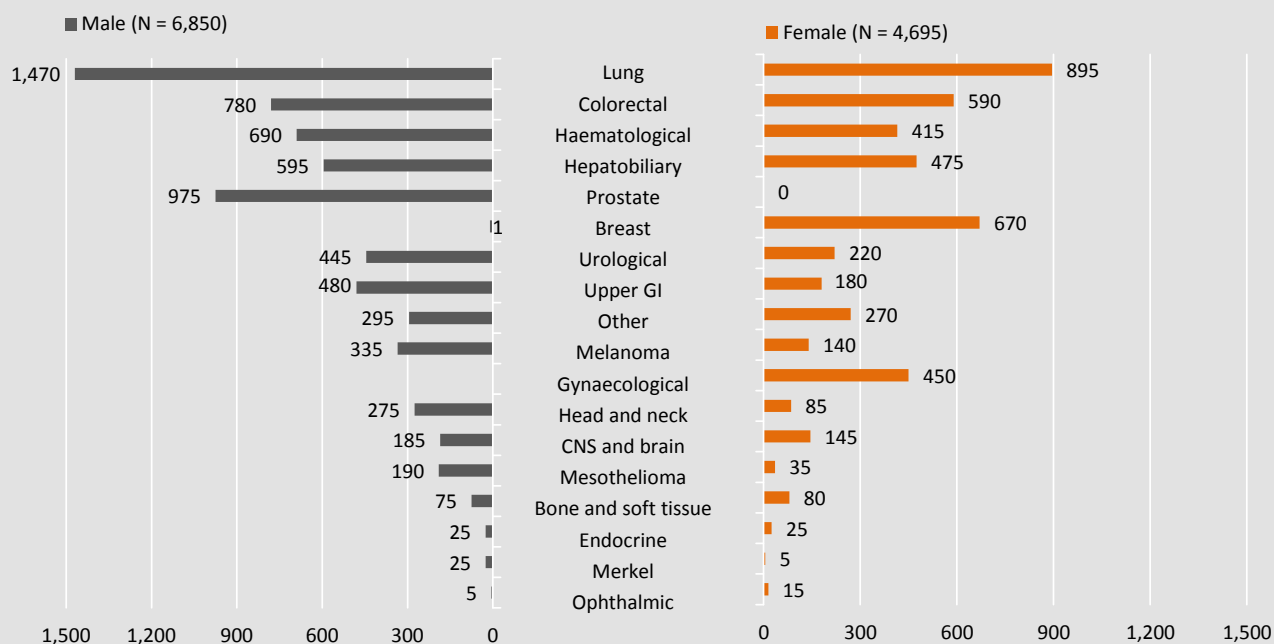


Source: Oncology Analysis System, Queensland Cancer Control Analysis Team. The figures, which have been rounded to the nearest five cases, are provided as a guide and should be used with care. Projections are calculated by applying the most recent of cancer rates (2012), stratified by age and sex, to the expected Queensland population in 2021.

Nearly 60% of new cancers as well as cancer deaths will be among males. Prostate and breast cancers are expected to remain the most commonly diagnosed cancers in males and females respectively, while lung cancer will continue to be the leading cause of cancer death in both sexes. In Queensland melanoma rates are expected to continue to be the highest in the world with more than 4400 cases expected to be diagnosed in 2021³.

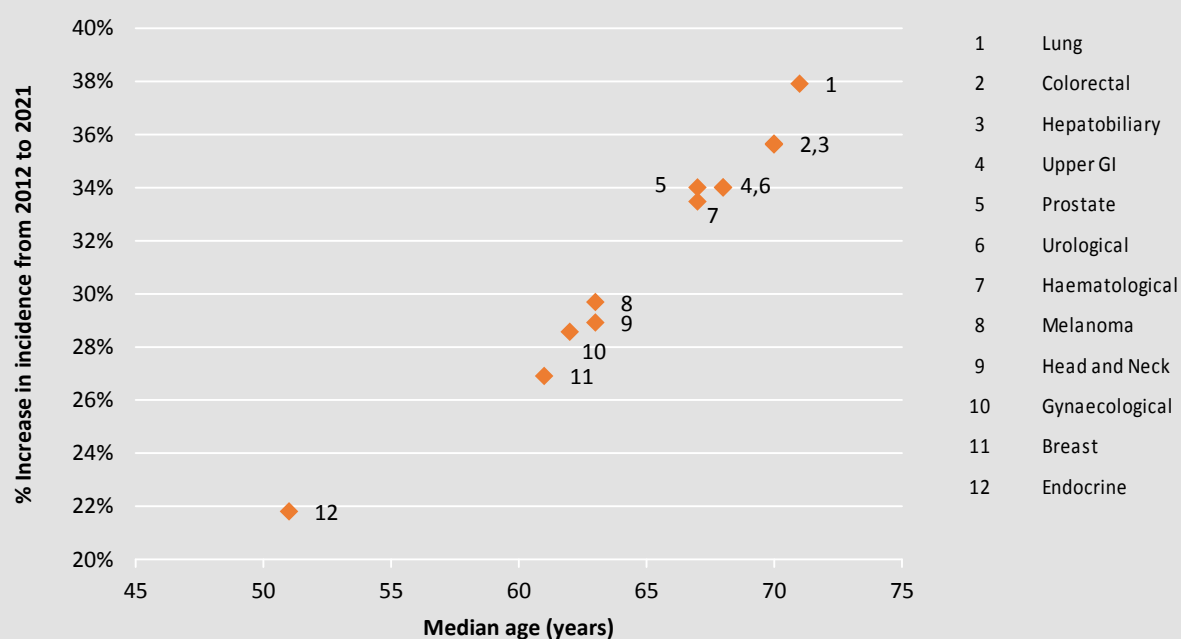
These projections provide an indication of the likely burden of cancer and the demand for the cancer services in 2021. As with any forecast, they should be used with care and amended to reflect local trends whenever possible.

Figure 2: Expected cancer mortality, common cancers, Queensland, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team. The figures, which have been rounded to the nearest five cases, are provided as a guide and should be used with care. Projections are calculated by applying the most recent of cancer rates (2012), stratified by age and sex, to the expected Queensland population in 2021.

Figure 3: Relationship between the projected increase in cancer incidence from 2012 to 2021 and the median age at diagnosis for common cancers (see text for details)



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 3 shows the expected relative increases in the incidence of common cancers from 2012 to 2021. Assuming no change in incidence rates over this period, cancers which are common in older persons (e.g. lung cancers) are projected to increase at a faster rate than cancers which are common in younger people (e.g. endocrine cancers). These trends are a direct consequence of projected changes in the age distribution of Queensland over this period, as the number of people aged 65 years and older is expected to grow at a much faster rate than the rest of the population.

Cancers which are more common in older people are projected to increase at a faster rate than cancers which are more common in younger people.

Cancer in Queensland

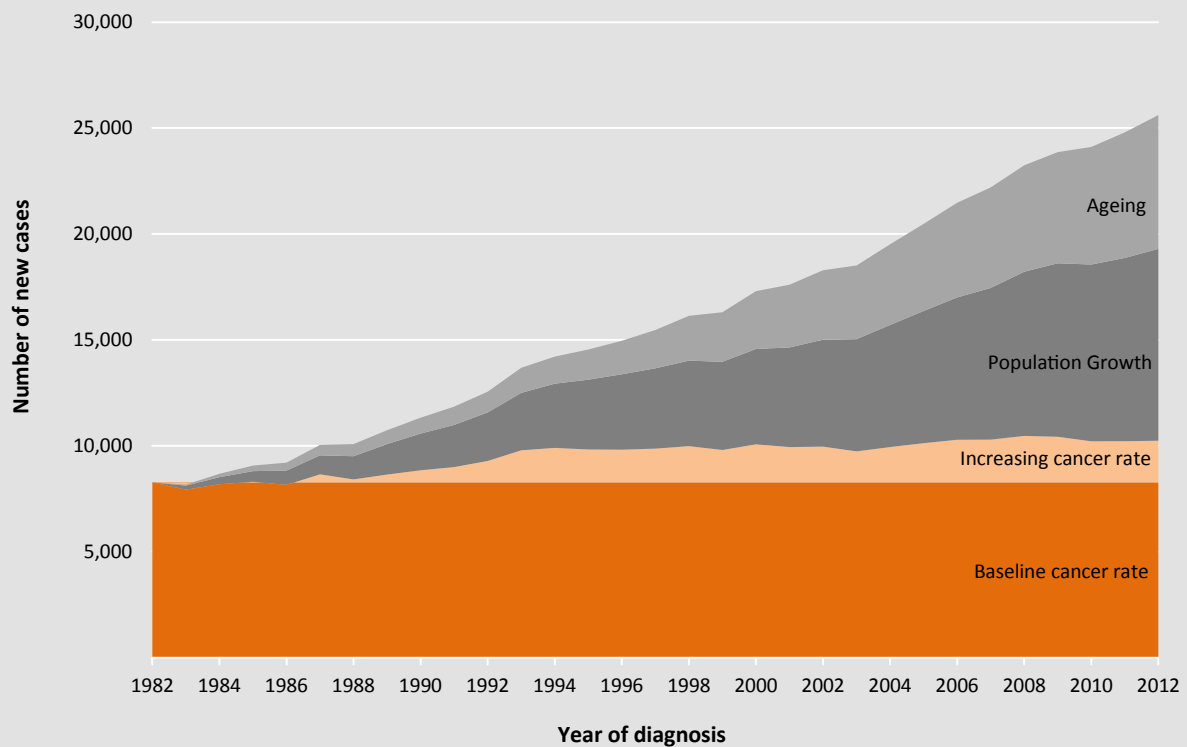


Incidence and mortality

The number of new cases of cancer among Queensland residents has increased by more than 177% between 1982 and 2012. For males, the number of new cases increased from 4,597 in 1982 to 14,513 (216%) in 2012; for females, the number of new cases increased from 3,678 to 11,101 (202%). These increases are due largely to population growth and ageing (Figure 4).

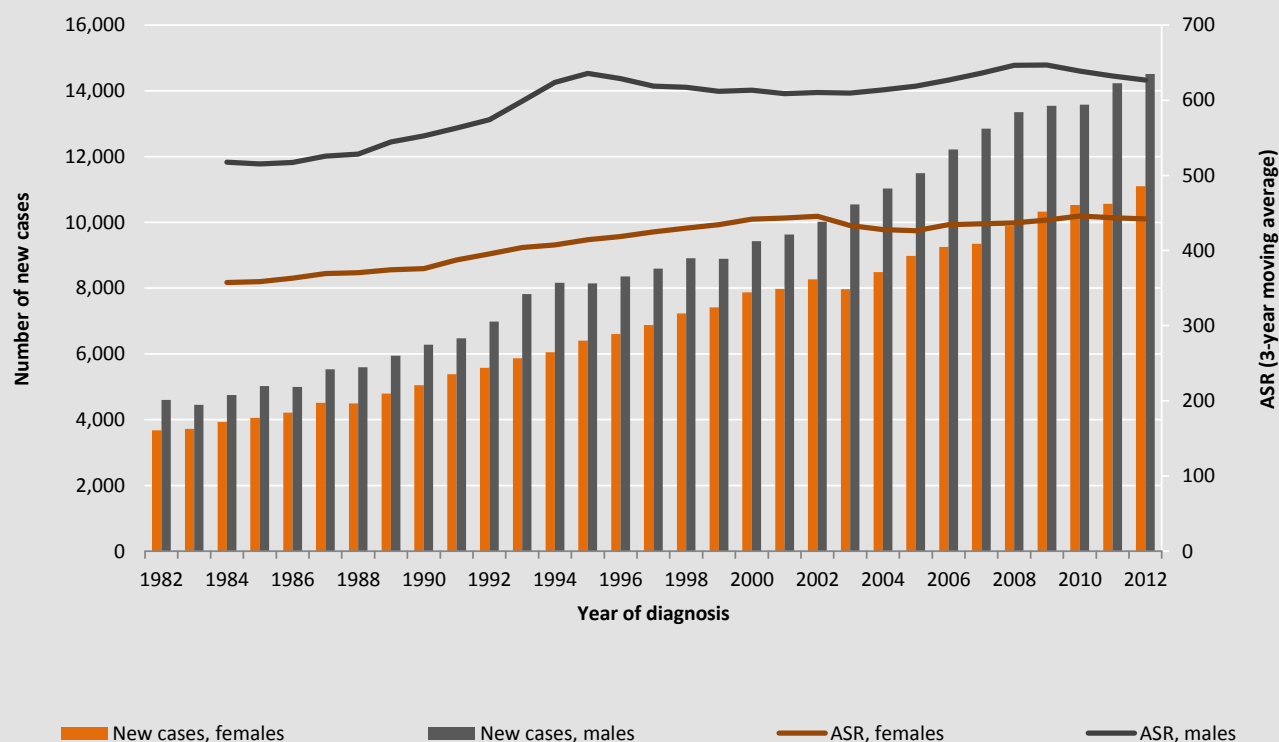
Queensland's population increased from 2.4 million in 1982 to 4.6 million in 2012, an increase of 92%, making Queensland one of the fastest growing states in Australia and among the fastest in developed countries. The proportion of persons 65 years and older also increased, from 9.7% in 1982 to 13.3% in 2012. Changes in cancer incidence rate accounted for only a small proportion of the total increase in incidence.

Figure 4: Growth in new cases of cancer, Queensland 1982-2012



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

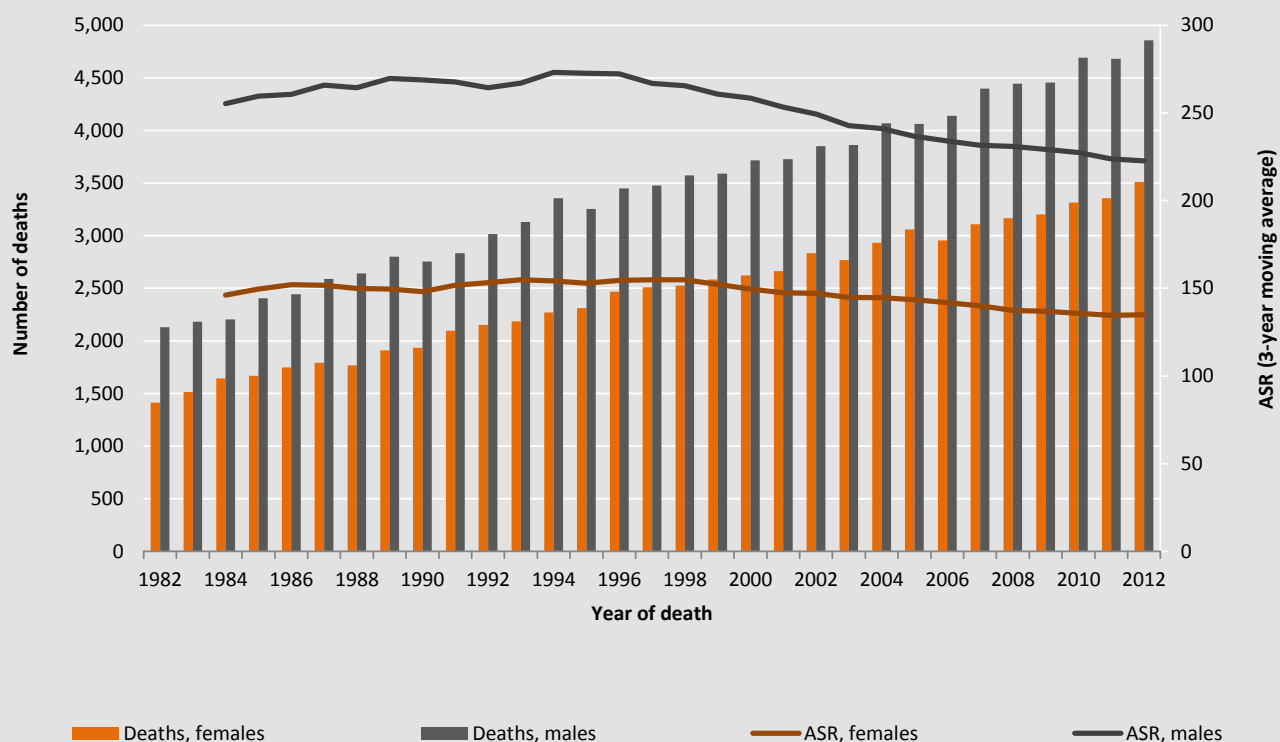
Figure 5: Trends in numbers and rates of new cases for all cancers, Queensland 1982-2012



ASR: Age-standardised rate per 100,000, standardised to 2001 Australian population.

Trends in incidence rates for all invasive cancers and the number of new cases diagnosed annually are summarised in Figure 5. Since 2009 the incidence rate for all invasive female cancers has remained stable with approximately 444 per 100,000 population. For males the incidence rate has decreased from 647 in 2009 to 627 per 100,000 population in 2012.

Figure 6: Trends in numbers and rates of deaths for all cancers, Queensland 1982-2012



ASR: Age-standardised rate per 100,000, standardised to 2001 Australian population.

Mortality rates have been in decline since the mid-1990s for both males and females (Figure 6). The number of deaths, however, has continued to rise due to the increase in the number of new cases each year and the ageing population.

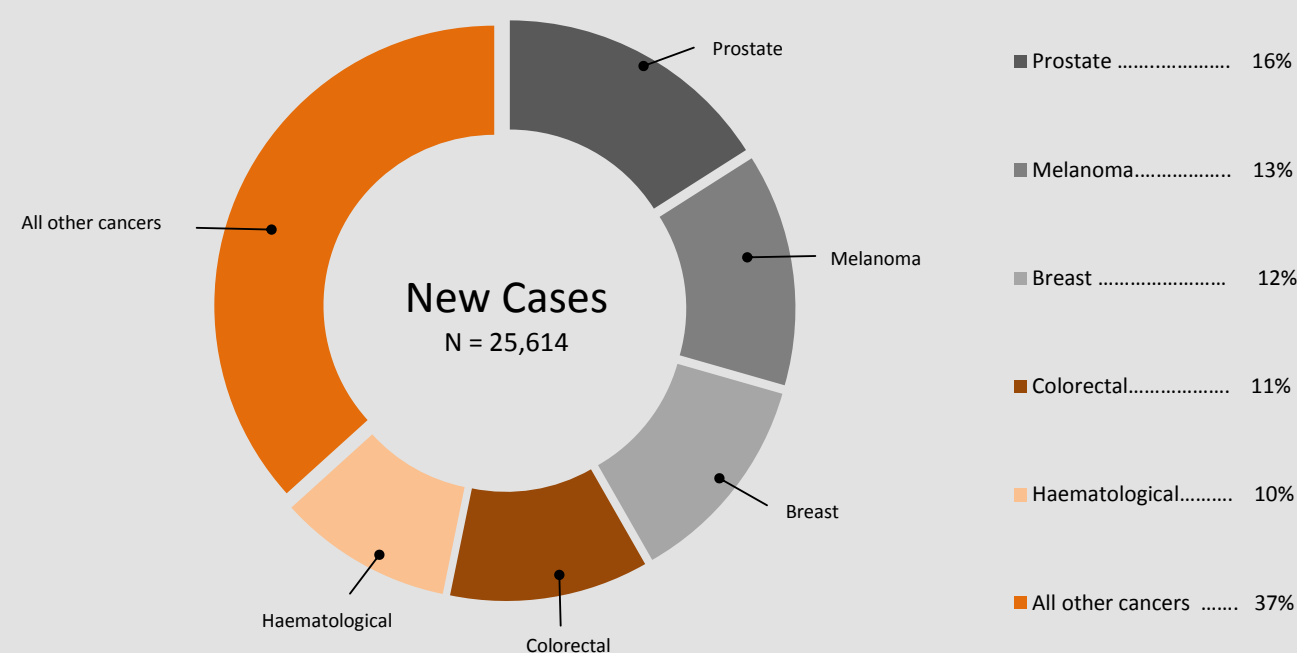
Mortality rates have been in decline since the mid 1990's for both males and females.

Most common cancers

FIVE MOST COMMON CANCERS

In 2012 there were 25,614 new cases of cancer diagnosed and there were 8,366 deaths attributed to cancer (Figures 7 and 8). The five most commonly diagnosed cancers in 2012 were prostate (4094 cases), melanoma (3443 cases), breast (3152 cases), colorectal (2942 cases), and haematological (2581 cases). These cancers combined accounted for 63% of all cancer diagnoses.

Figure 7: Most common cancer diagnoses, Queensland, 2012



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

MOST COMMON CANCERS BY SEX

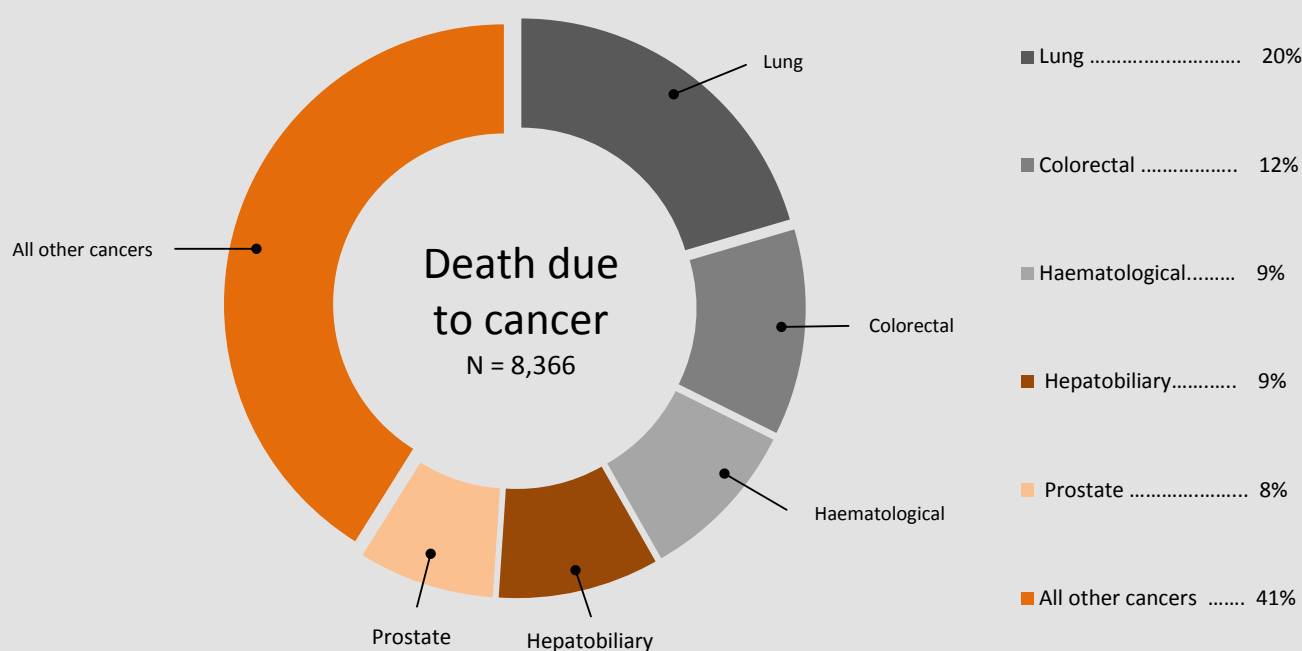
Cancers were more common in males (14,513 new cases, 637 per 100,000) than in females (11,101 cases, 485 per 100,000). For both sexes, three cancers accounted for over half of all incidence: in males, prostate cancer represented 28% of cases (4,094 cases), followed by melanoma (2,017 cases) and colorectal cancer (1,658 cases), accounting for 14% and 11% of all male cancers respectively. For females, breast cancer was the most common cancer representing 28% of cases (3,125 cases), followed by melanoma (1,426 cases) and colorectal cancer (1,284 cases), representing 13% and 12% respectively of cancers in females. Urological and head and neck cancers were much more common in males than in females; with incidence rates almost three times higher. On the other hand, endocrine cancers were close to three times more common in females than males (Figure 9).

Most common cancer deaths

MOST COMMON CANCER DEATHS

During 2012, lung cancer was the leading cause of cancer death with 1711 deaths (20%). Colorectal cancer was the next common cause of cancer death with 995 deaths (12%) followed by haematological cancer with 788 deaths (9%). More cancer deaths in Queensland were recorded for males (4,856 deaths, 213 per 100,000) than for females (3,510 deaths, 153 per 100,000). Lung cancer, prostate/breast cancer and colorectal cancer accounted for nearly half the deaths in both males (47%) and females (47%) (Figure 10).

Figure 8: Most common cancer deaths, Queensland, 2012

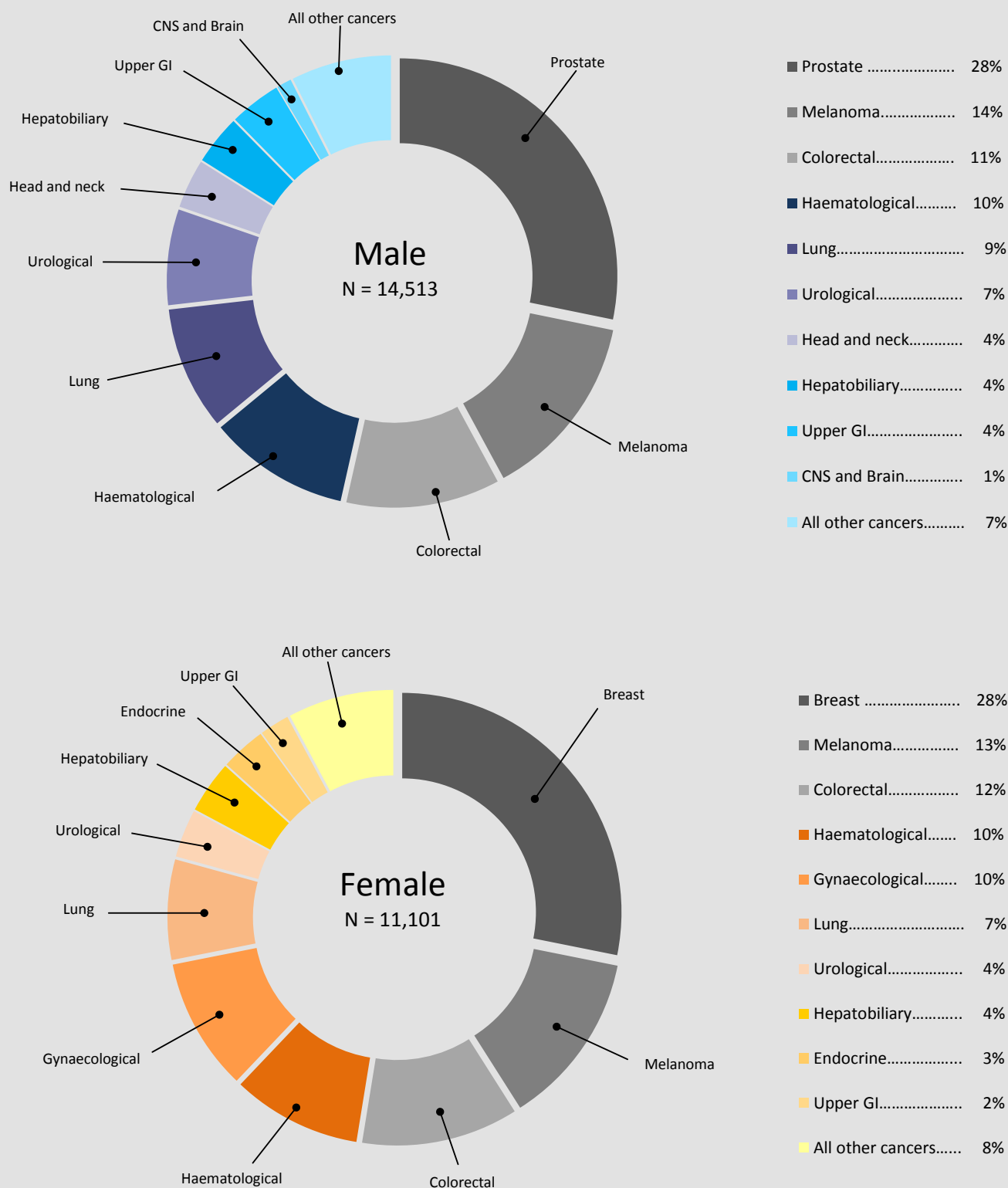


Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

The most common cancers in Queensland are prostate, breast, colorectal and melanoma.

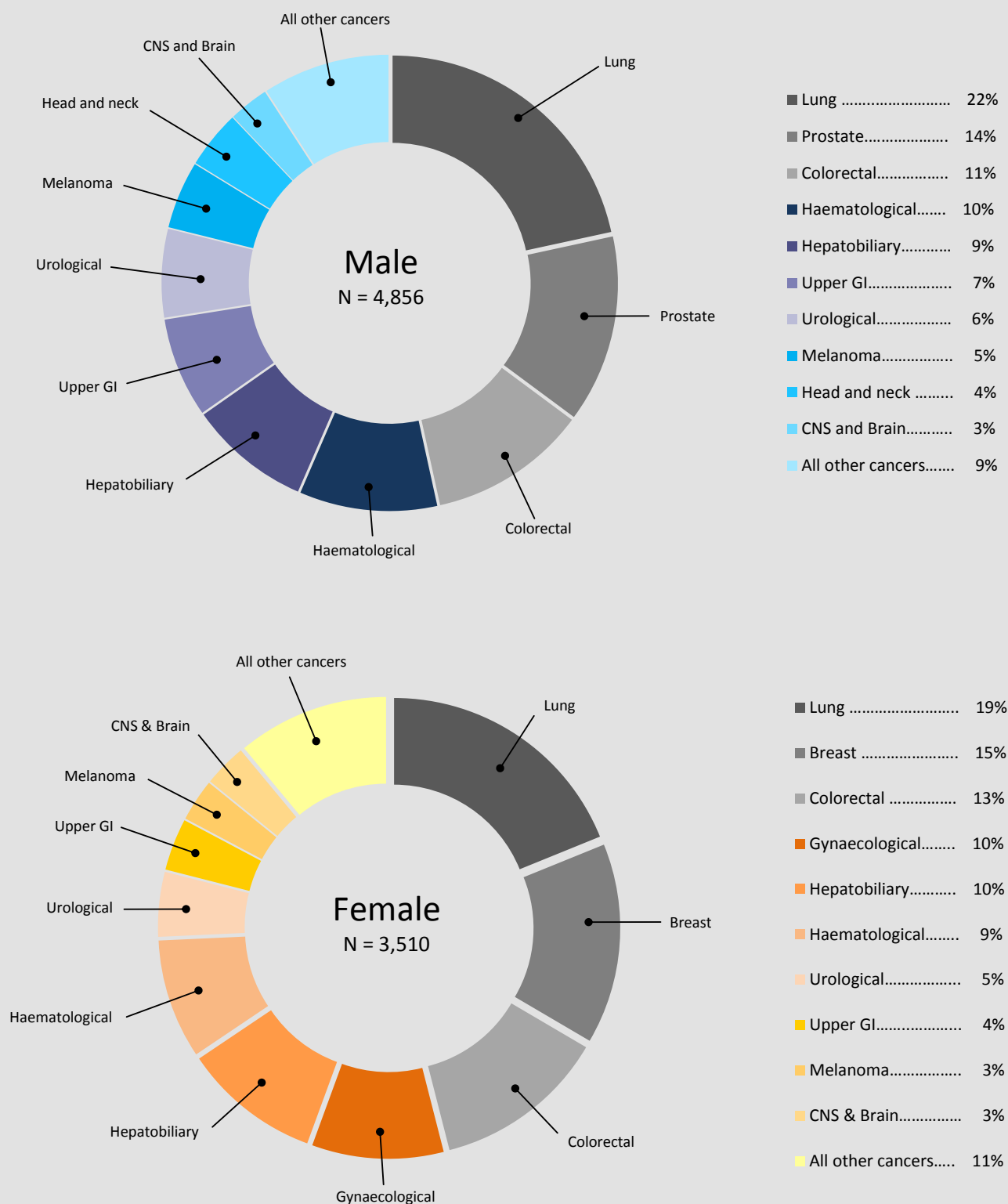
Lung cancer is the leading cause of cancer death in Queensland.

Figure 9: Most common cancer diagnoses, Queensland, 2012



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 10: Most common cancer deaths, Queensland, 2012



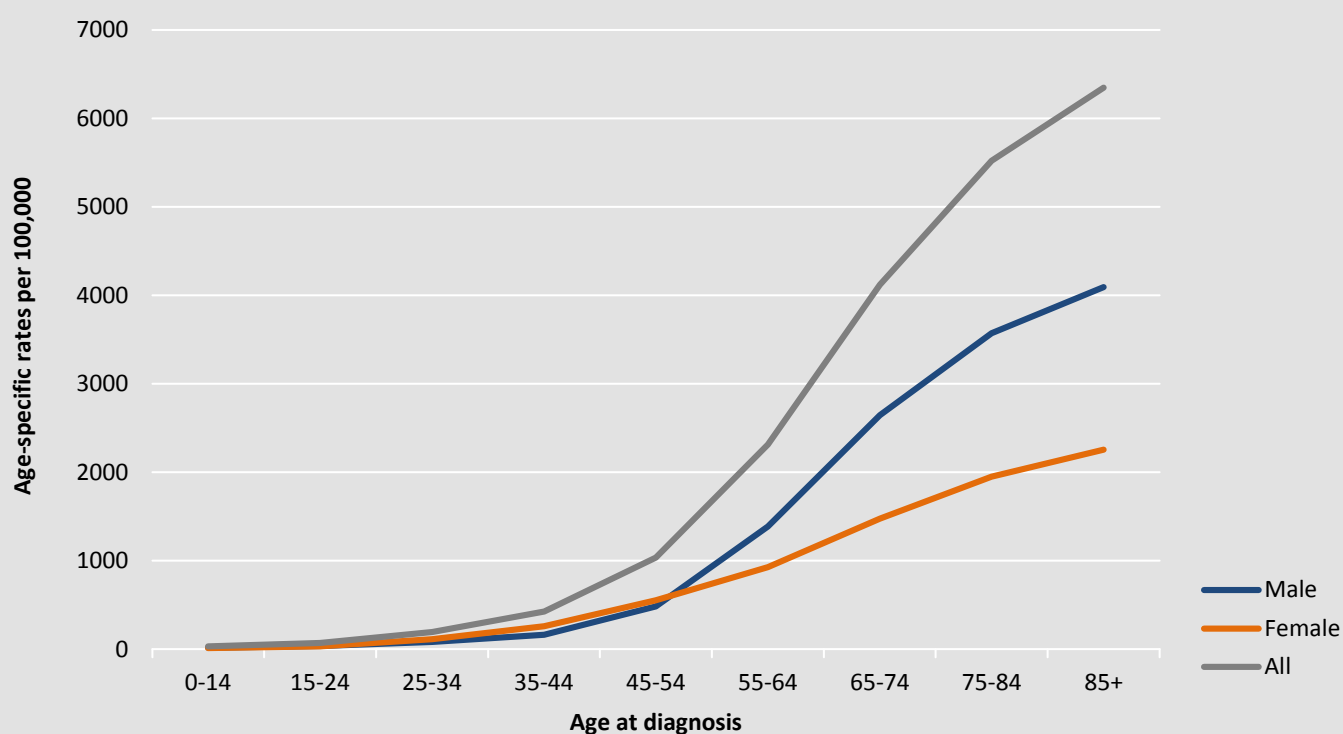
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

New cases and deaths by age

AGE-SPECIFIC INCIDENCE RATES

Cancer incidence rates increase with age in both sexes (Figure 11). After childhood, incidence rates are slightly lower for males than females until around the age of 50, beyond which incidence rates for males increase sharply. The higher rate for males over 55 reflects the higher rates for cancers common in older males, including prostate, colorectal and lung cancer. The slightly higher rate for females in the younger age groups reflects the contribution of breast cancer to the cancer burden in this cohort.

Figure 11: Incidence rates for all cancers, by age at diagnosis, Queensland, 2008-2012

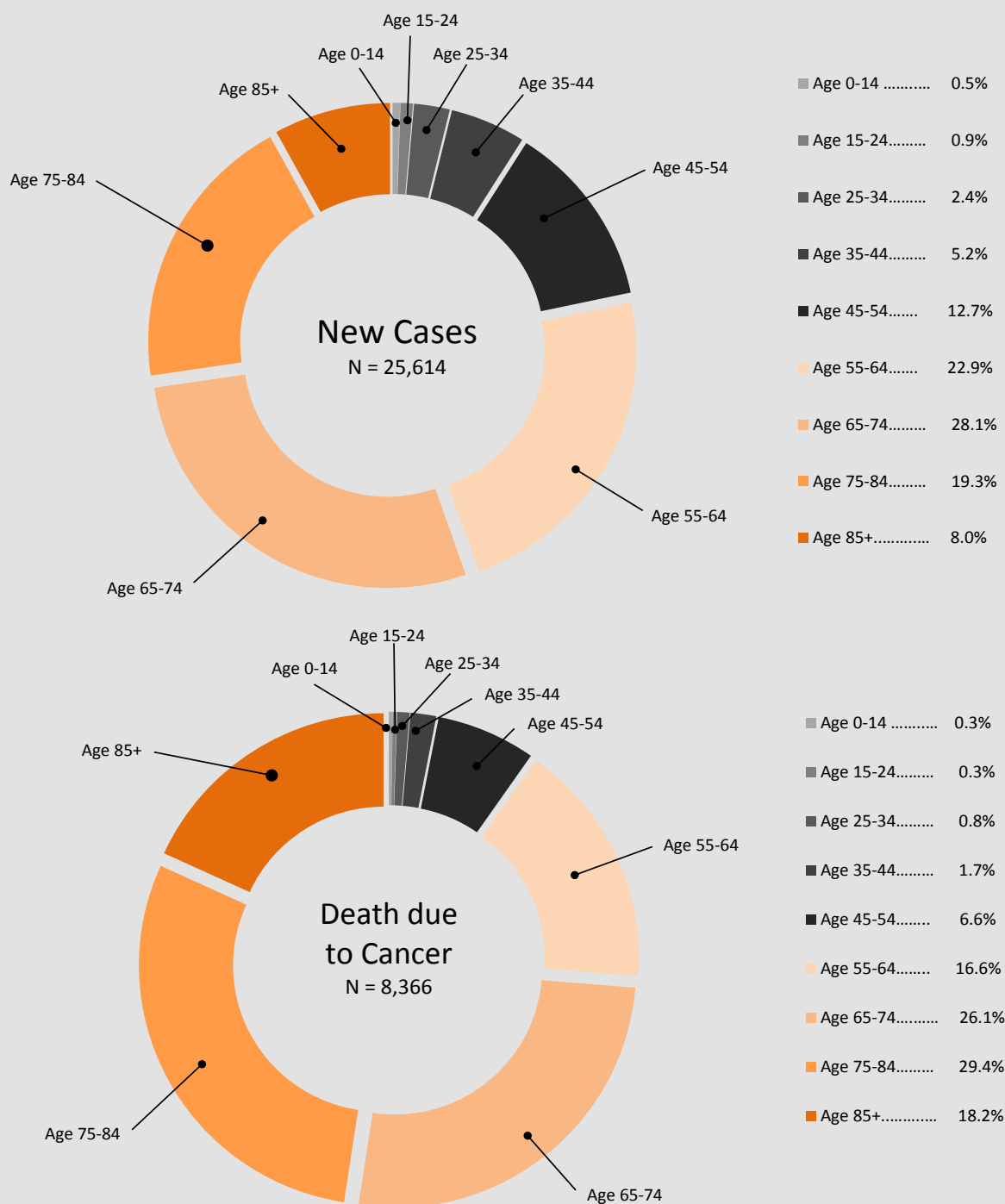


Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

CANCER BY AGE GROUP

Cancers in childhood (0-14 years) represent 0.5% of all newly diagnosed cancers; cancer in adolescents and young adults (aged 15-24 years) represent 0.9% of cancers and adults aged 25-34 years and 35-44 years represent 2.4% and 5.2% respectively (Figure 12). The incidence of new cancers is highest in adults aged 65-74 years (28.1%), followed by adults 55-64 years (22.9%) and adults aged 75-84 (19.3%).

Figure 12: Cancer by age group, Queensland, 2012



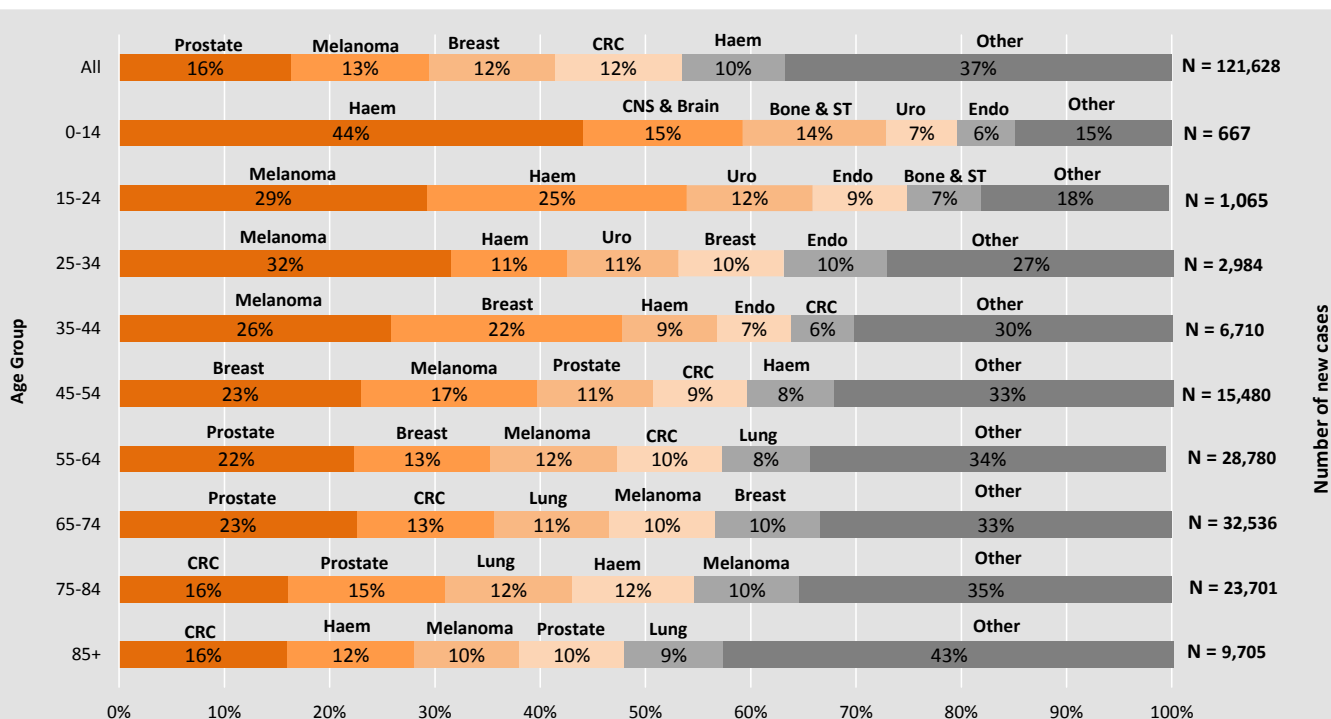
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Cancer deaths are much more common in adults aged 65 years and older compared to younger adults (aged 15-24 years). Cancer mortality rates were 1,014 and four per 100,000 in older (65+) and younger adults respectively. Deaths due to cancer are relatively uncommon in persons under 45 years of age, accounting for less than 5% of all cancer deaths.

MOST COMMON CANCERS BY AGE GROUP

Haematological cancersⁱ were the most common cancer diagnosis in childhood (44%), followed by cancers of the central nervous system (15%) and bone and soft tissue (14%)(Figure 13).

Figure 13: The top five most common cancer diagnoses by age group, Queensland, 2008-2012



Abbreviations: Bone & ST: Bone and soft tissue / CNS & brain: Central nervous system and brain / CRC: Colorectal / Endo: Endocrine / Gyn: Gynaecological / Haem: Haematological / Uro: Urological

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Among adolescents and young adults (15-24 years), melanoma was the most frequently diagnosed cancer (29%), followed by haematological cancers (25%) and urological cancers (12%). Melanoma, haematological and urological cancers were also the 3 most frequent cancers for the age group of 25-34 years. Melanoma and breast cancer were the most common cancers diagnosed at age 35-44 (26% and 22% respectively), with haematological and endocrine cancers accounting for 9% and 7% of new cases respectively. Prostate cancer was more commonly diagnosed in older Queenslanders, representing 22% of the total in the 55-64 age group and 23% in the 65-74 age group. Colorectal cancer was similarly more common in these age groups representing 10% in the 55-64 year olds and 13% in those aged 65-74. Colorectal cancer is the most commonly diagnosed cancer in the 75-84 age group and the 85+ age group.

i. The term 'haematological cancers' includes all haematological malignancies, for example, Hodgkin's lymphoma, non-Hodgkin lymphoma and the leukaemias.

Most cancers and cancer-related deaths occur in Queenslanders after the age of 55 years.

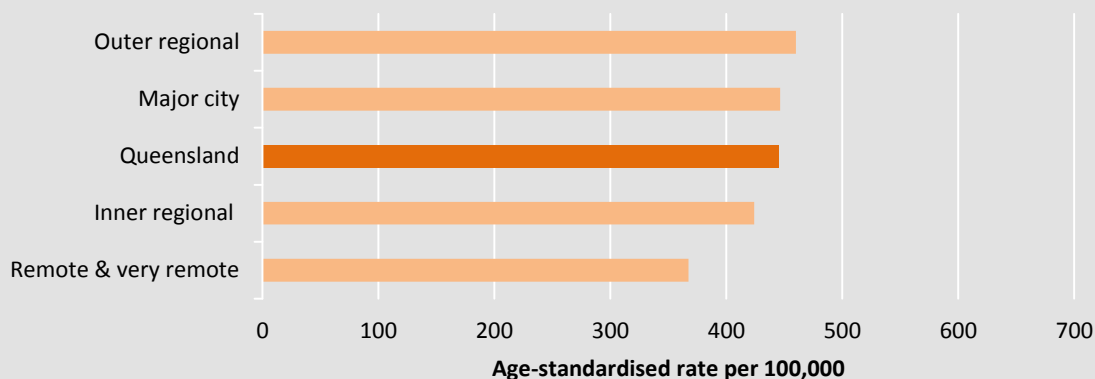
The pattern of cancers noted in childhood and adolescents is completely different to the patterns recognised in adult cohorts.

Regional, national and international variation in incidenceⁱⁱ

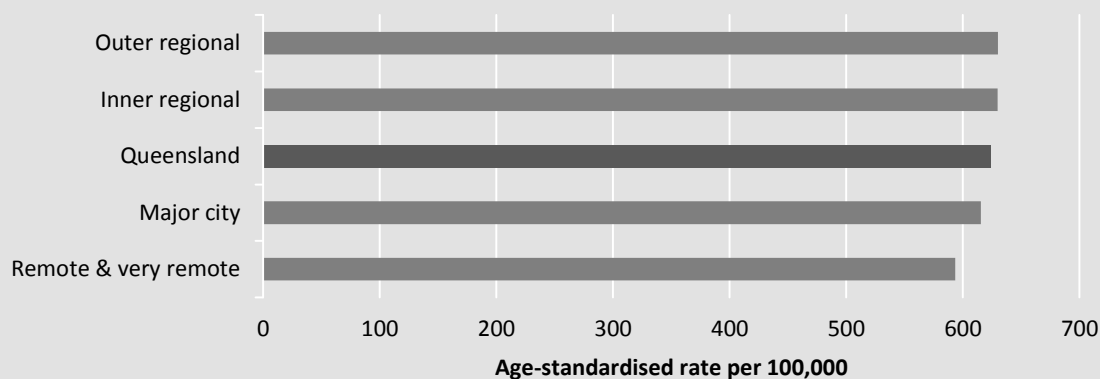
Incidence rates for all invasive cancers varied by remoteness for both males and females (Figure 14; see the Glossary for a definition of remoteness). Remote and very remote areas tended to have a lower incidence rate for all cancers compared to other regions.

Figure 14: Cancer incidence rates by remoteness of residence, Queensland, 2012

Females



Males

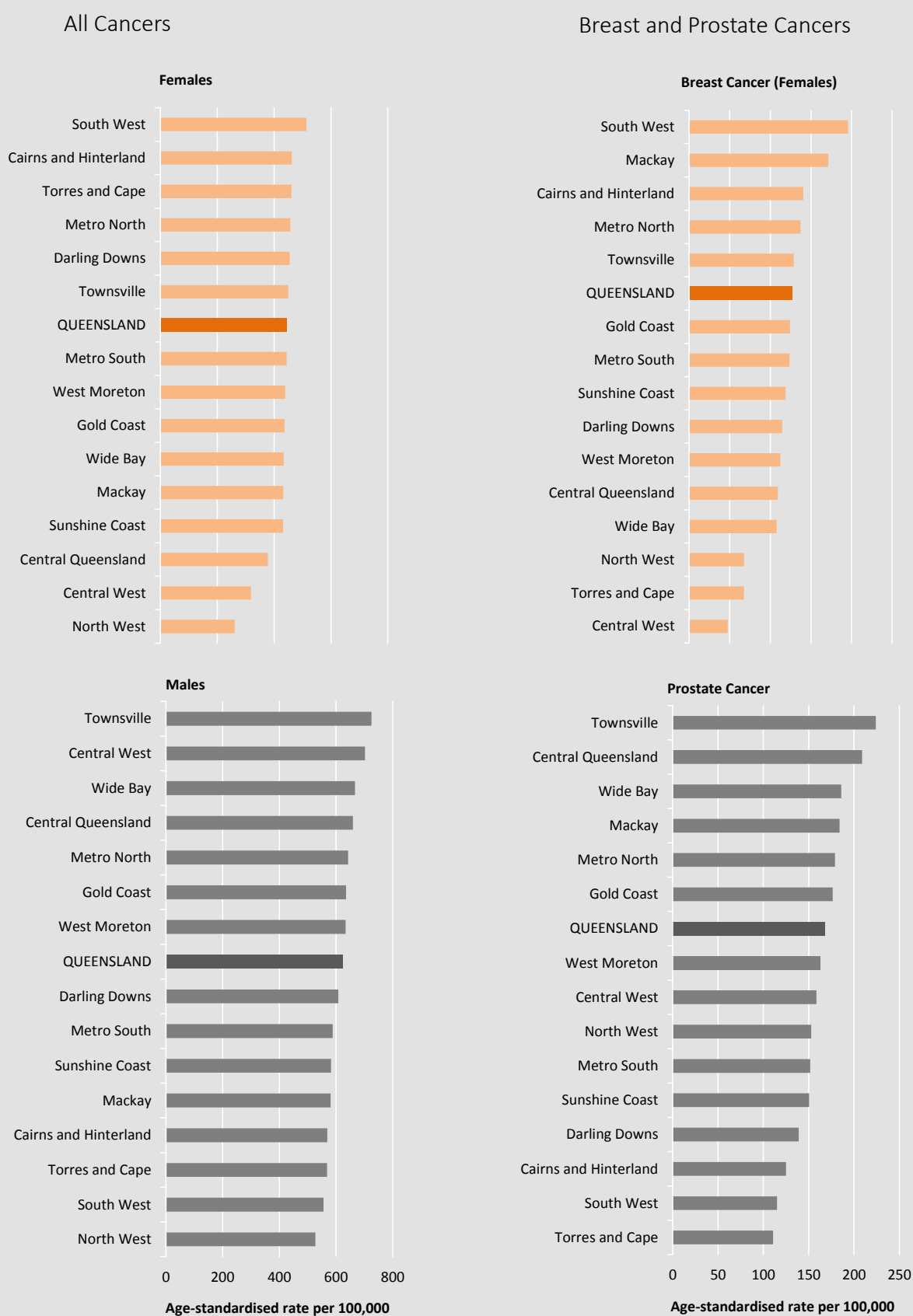


Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

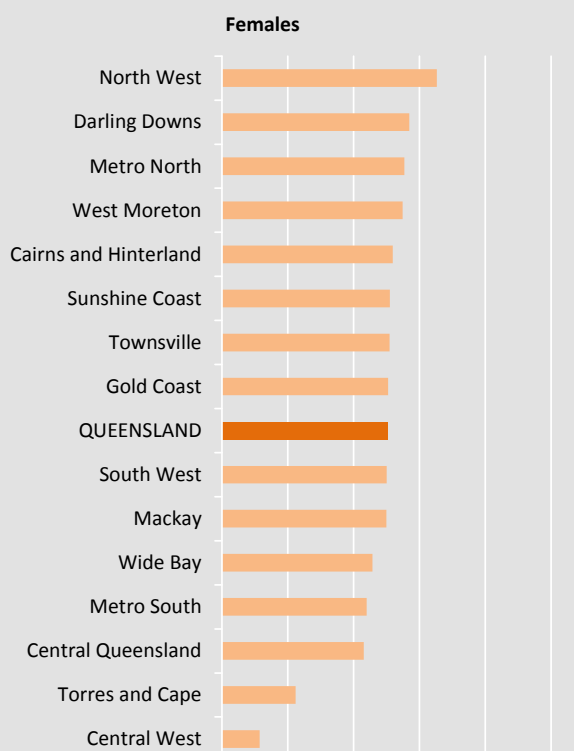
At the Hospital and Health Service (HHS) level, age-standardised incidence rates varied across the state for all invasive cancers considered collectively and for the most common cancers (Figure 15). Differences in regional variation in incidence rates were also evident for both sexes. Reasons for the variations are diverse and complex and include exposure to environmental factors, socioeconomic status, access to health services and chance.²

ii. In the interest of completeness, incidence and mortality rates have been included for all hospital and health services including those with fewer than 16 cases. Incidence and mortality rates based on small numbers of cases should be interpreted with caution due to the poor reliability of rate calculations based on small numbers. For example, the relative standard error (RSE) will be equal or greater than 25% when incidence rates are based on fewer than 16 cases. For more information, refer to the technical notes available at: http://www.cdc.gov/cancer/npcr/uscs/2007/technical_notes/stat_methods/suppression.htm

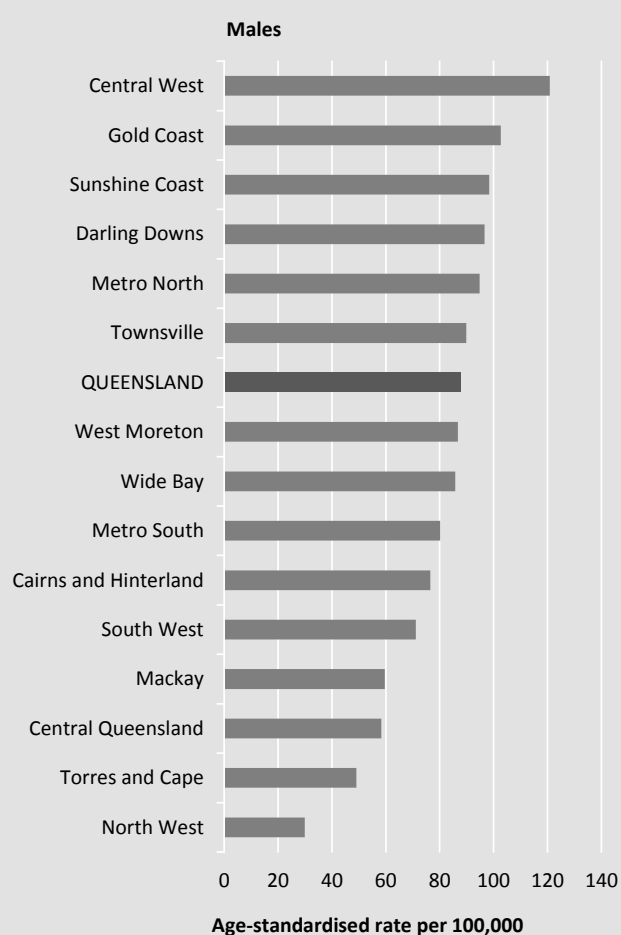
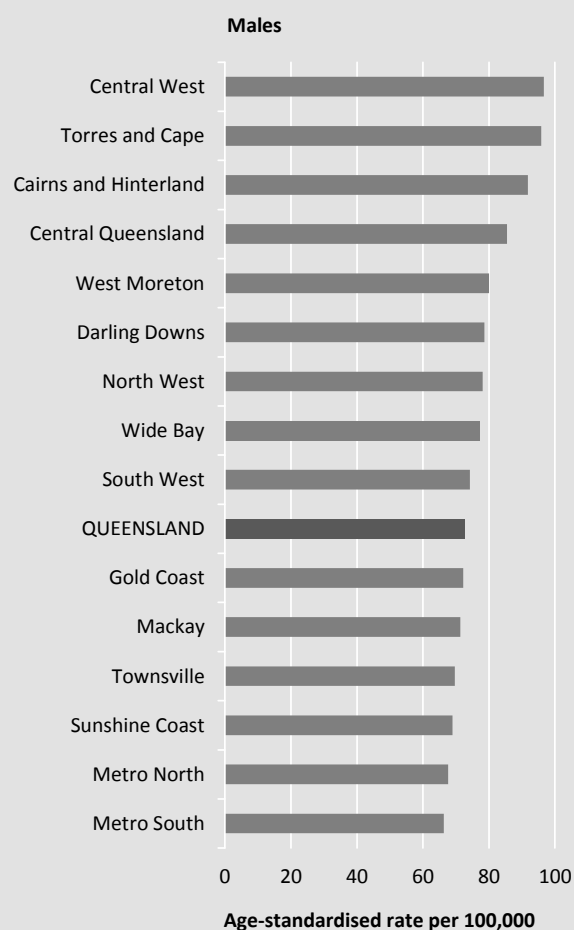
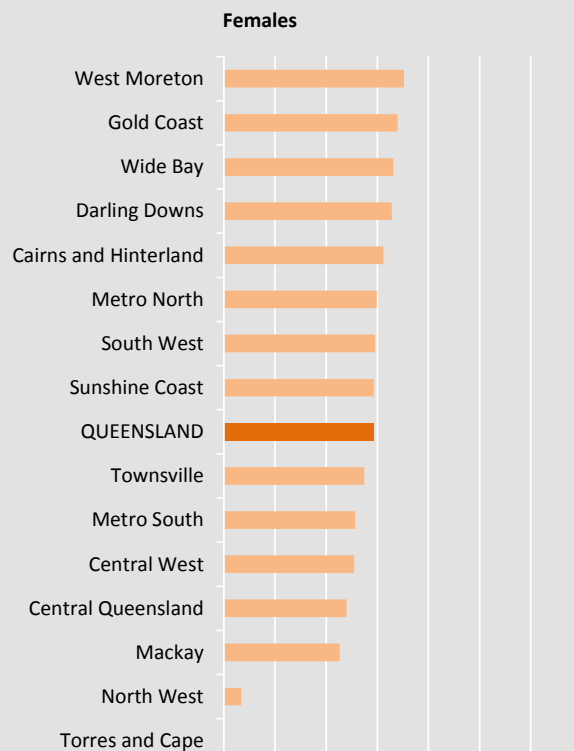
Figure 15: Cancer incidence rates by Hospital and Health Service, Queensland, 2012



Colorectal Cancer



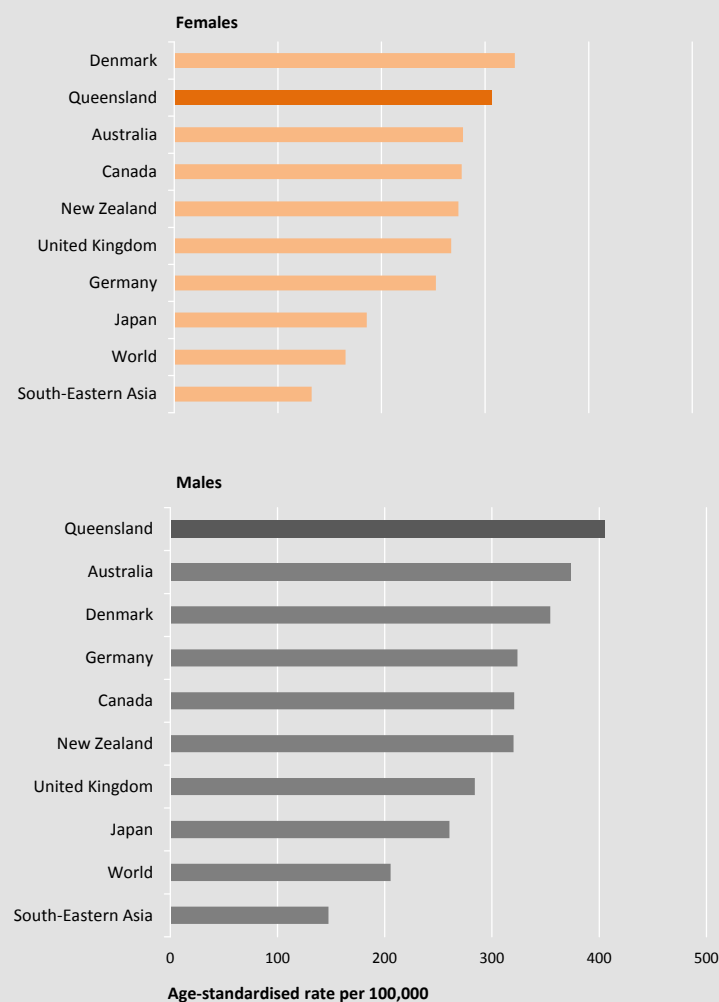
Melanoma



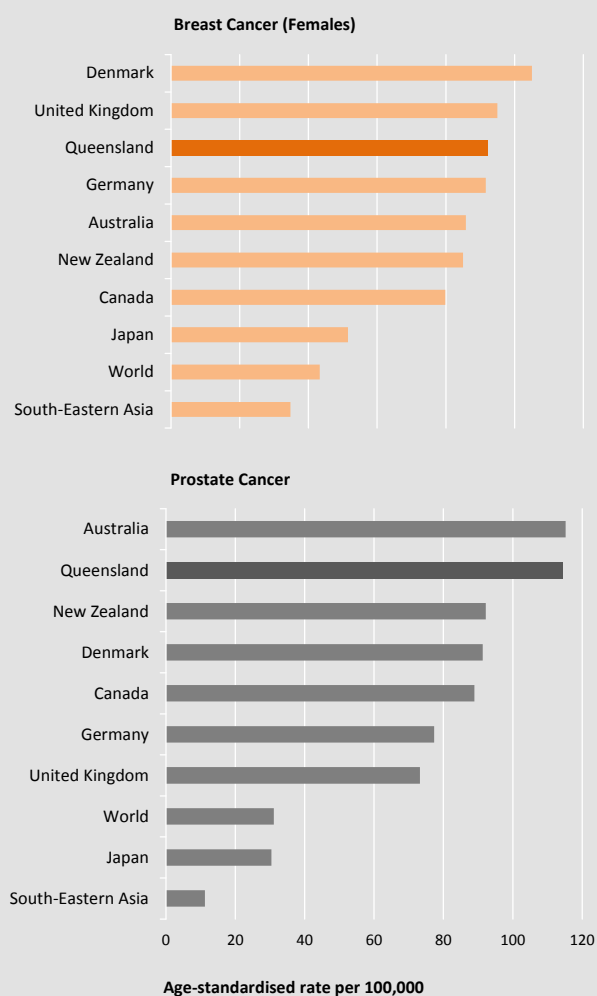
Cancer incidence rates in Queensland are among the highest in the world (Figure 16). Cancer rates are somewhat higher than most other developed parts of the world and substantially higher than the less developed regions.

Figure 16: Cancer incidence rates for selected international regions and Queensland, 2012

All Cancers

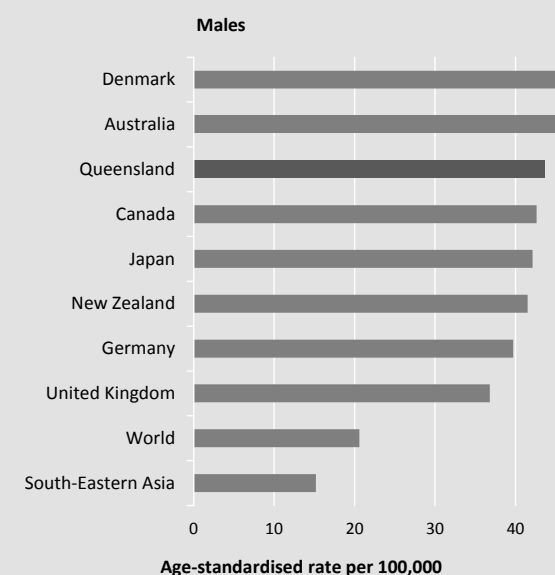
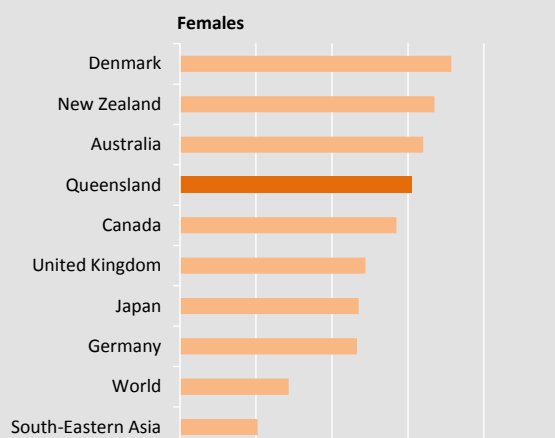


Breast and Prostate Cancers

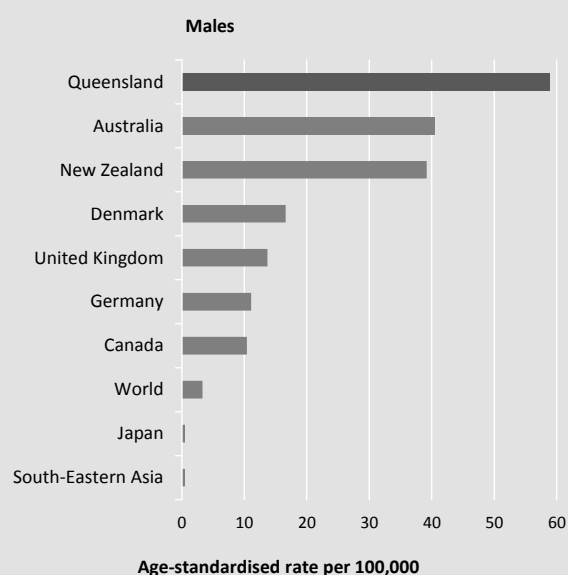
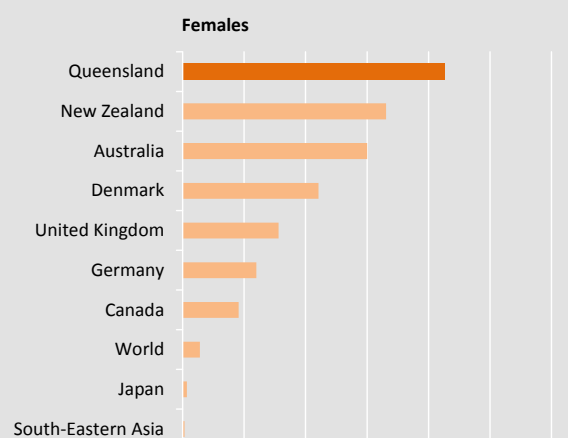


Note: Cancer incidence estimated by the International Agency for Research on Cancer (IARC) for 2012 (GLOBOCAN 2012)³ except for Queensland which is based on Queensland Oncology Repository data for 2012. All rates are standardised to World Standard Population.
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Colorectal Cancer



Melanoma



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

*Cancer incidence rates in Queensland are among the highest in the world.
Geographic variation is a feature of cancer in Queensland.*

Regional, national and international variation in mortality

Mortality rates for all invasive cancers varied only slightly by remoteness for both males and females (Figure 17). For both males and females remote and very remote areas had slightly lower cancer mortality rates than other areas.

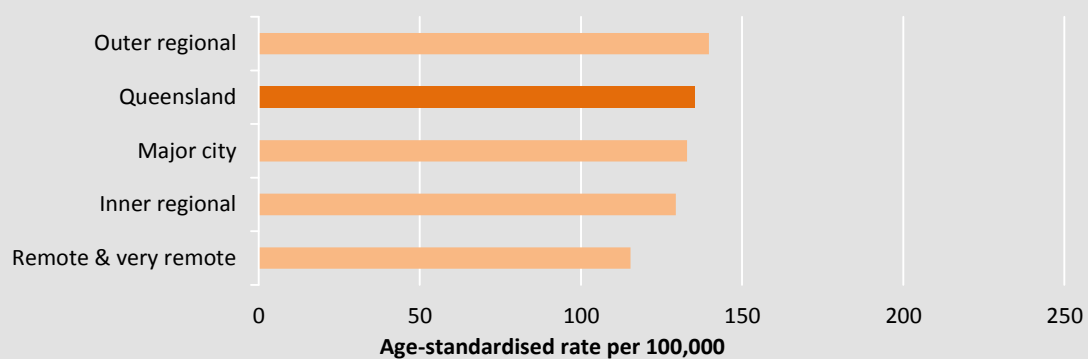
At the Hospital and Health Service (HHS) level, age-standardised mortality rates varied across the state for all invasive cancers considered collectively as well as for the most common cancers (Figure 18). Reasons for the variations are diverse and complex and include exposure to environmental factors, socioeconomic status, access to health services and chance. It should be noted that remote HHS have small populations and estimates of mortality rates based on such small numbers may not be as accurate as those areas with larger populations.

While cancer incidence rates in Queensland are among the highest in the world (Figure 16), mortality rates overall compare favourably with other regions (Figure 19). Cancer mortality rates vary widely according to the cancer site and by sex. Mortality rates attributable to breast cancer are lower than most of the selected international regions, while rates due to prostate cancer are somewhat higher. Lung cancer mortality rates are average in females but the lowest on average in males.

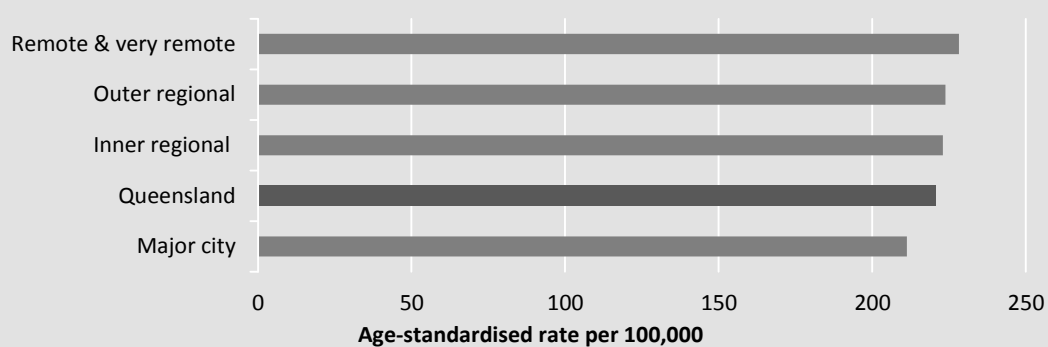


Figure 17: Cancer mortality rates by remoteness of residence, Queensland, 2012

Females



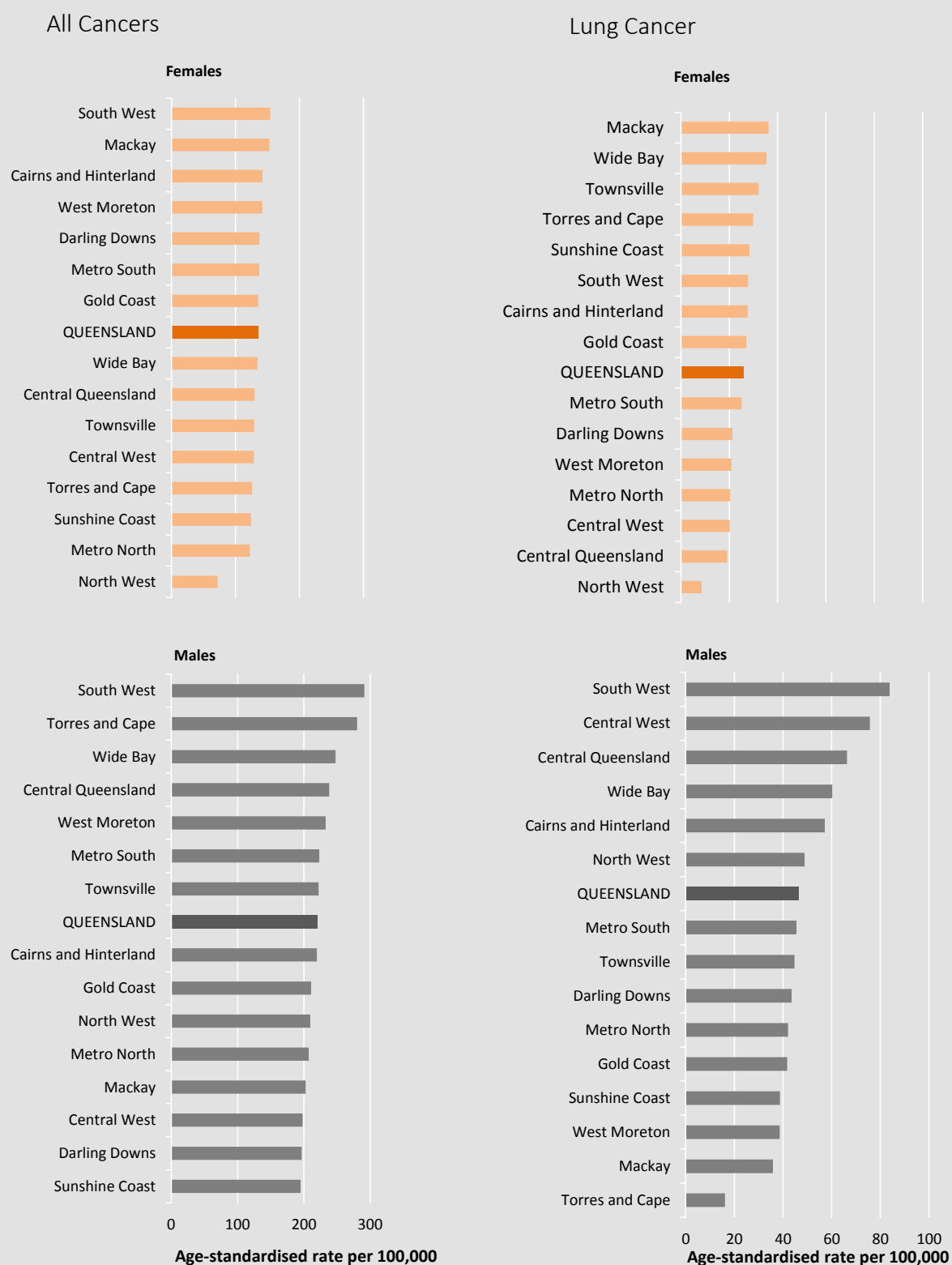
Males



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Cancer mortality rates in remote areas of Queensland are similar to major cities.

Figure 18: Cancer mortality rates by Hospital and Health Service, Queensland, 2012



Note: Where no cases were reported during 2012, the graph is intentionally left blank
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Breast and Prostate Cancers

Colorectal Cancer

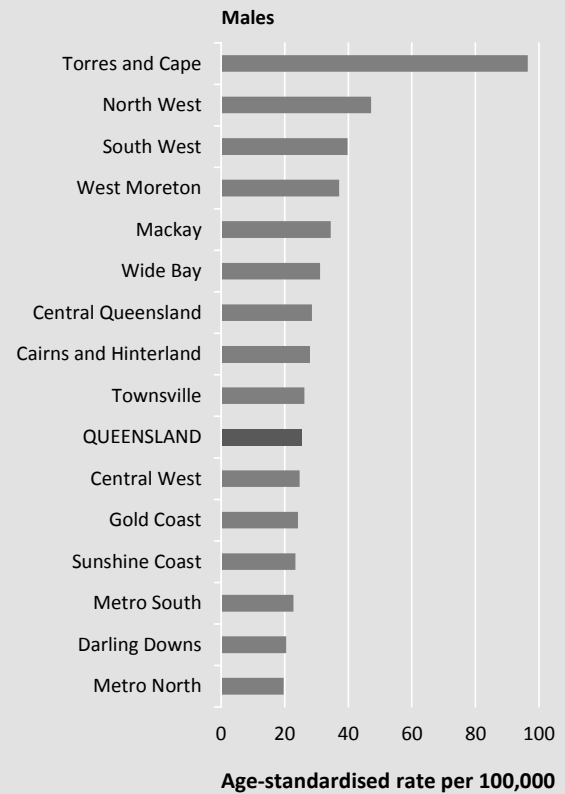
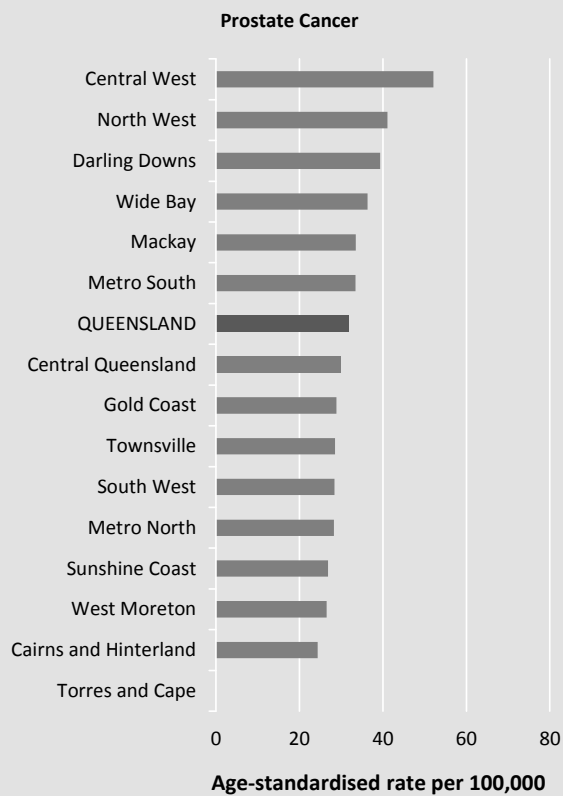
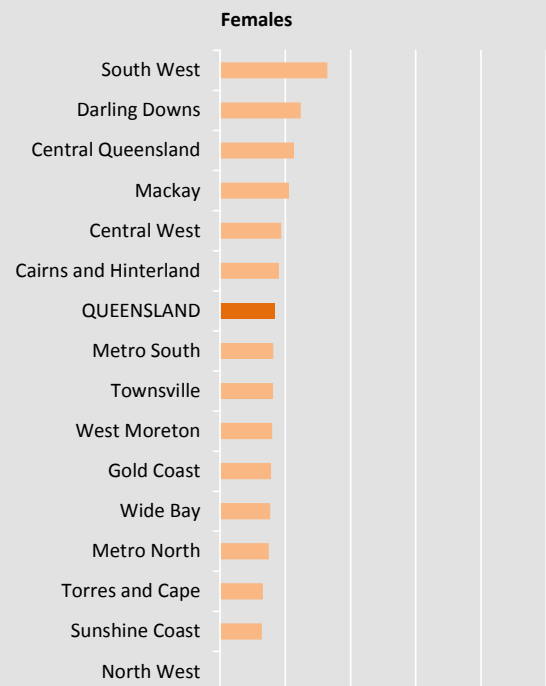
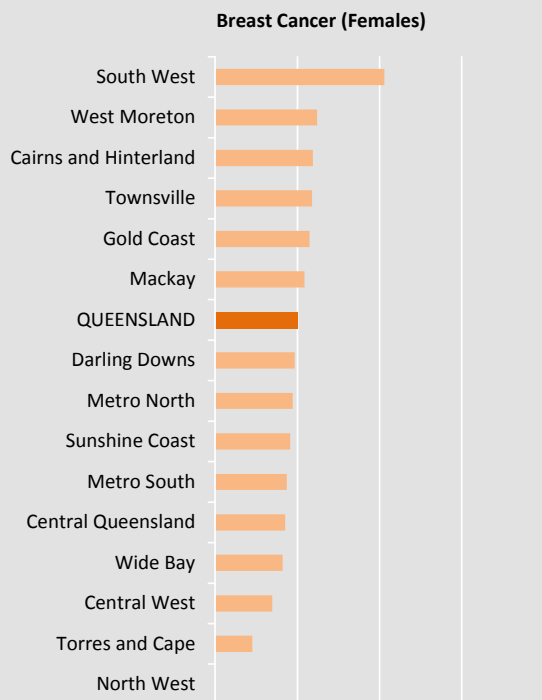
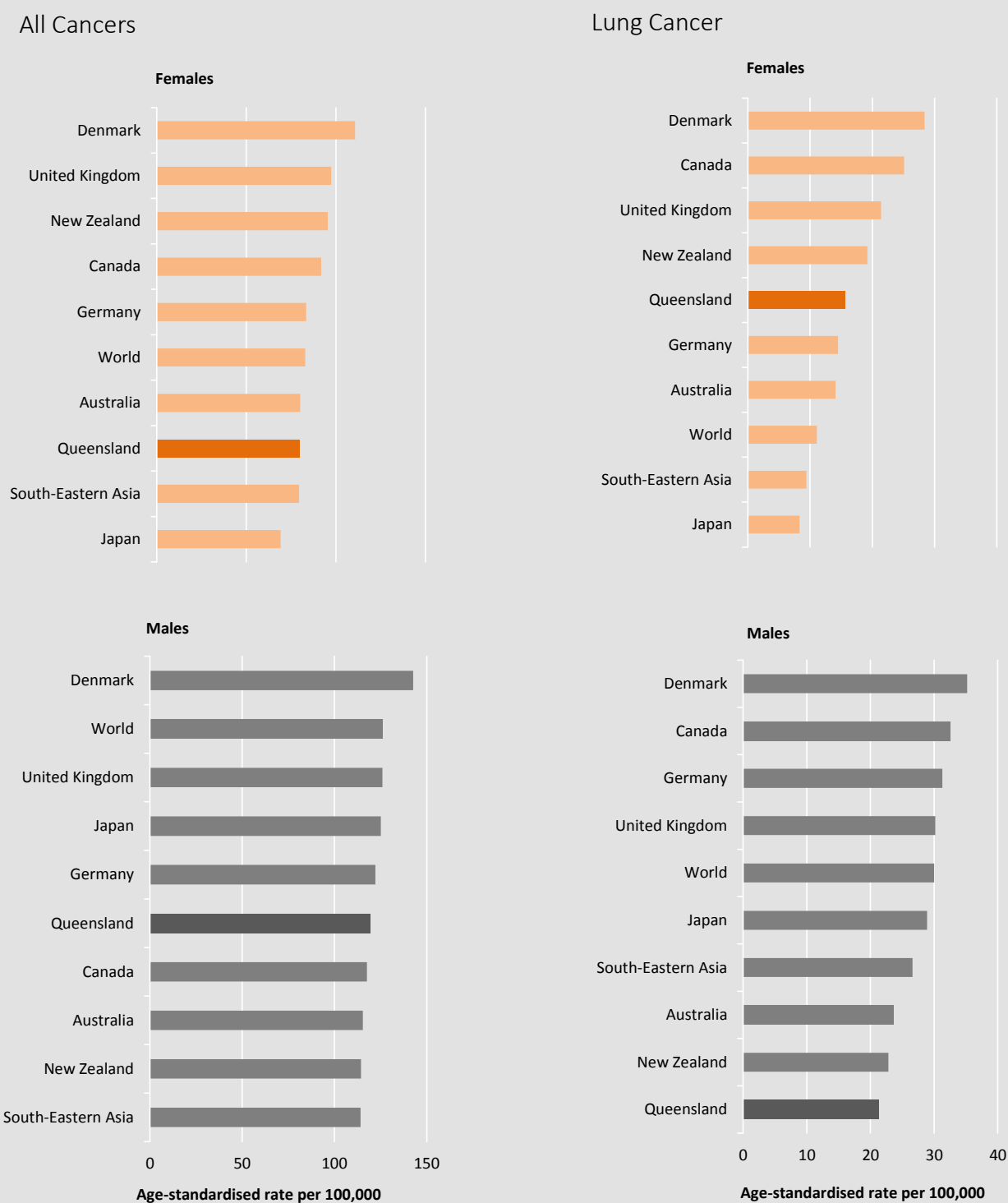
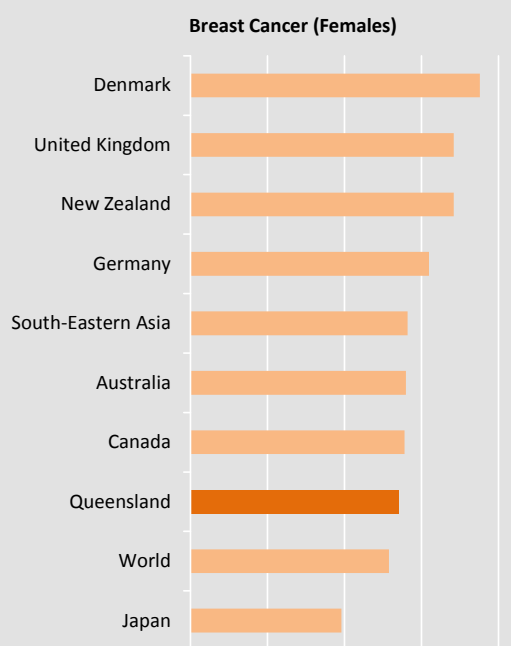


Figure 19: Cancer mortality rates for selected international regions and Queensland, 2012

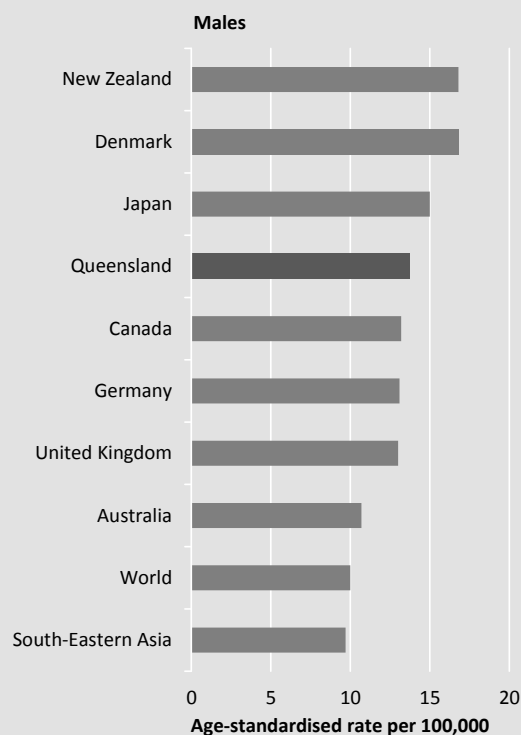
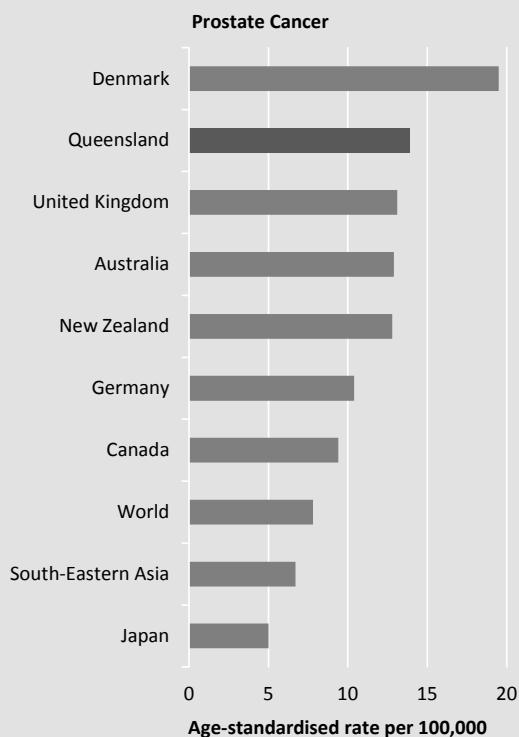
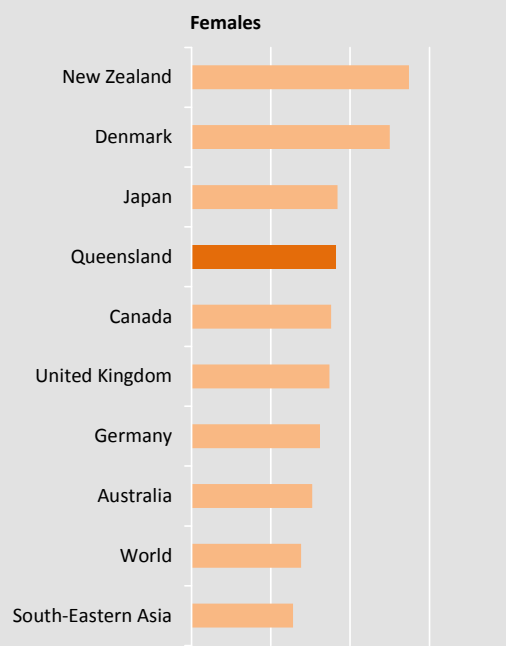


Source: Cancer mortality estimated by the International Agency for Research on Cancer (IARC) for 2012 (GLOBOCAN 2012)³ except for Queensland which is based on Queensland Oncology Repository data for 2012. All rates are standardised to World Standard Population.
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Breast and Prostate Cancers



Colorectal Cancer



Overall Queensland cancer mortality rates compare favourably with the rest of Australia and other countries.

Prevalence

Prevalence represents the number of people living with a chronic condition such as cancer and is a measure of the burden of the disease for the individual, families and society. The prevalence of cancer is increasing in Queensland as more people are diagnosed with the disease and survival improves. By the end of 2012, more than 85,000 people were living with a diagnosis of cancer in the previous five years, representing nearly 2% of all Queenslanders. Cancer prevalence is summarised in Table 1.

Table 1: Five-year prevalence, most common cancers, Queensland, 31 December 2012

	Both sexes		Male		Female	
	Count	Percent*	Count	Percent*	Count	Percent*
All cancers	87,879	1.92	49,088	1.07	38,791	0.85
Prostate	17,845	0.39	17,845	0.39		
Melanoma	14,452	0.32	8,345	0.18	6,107	0.13
Breast	13,433	0.29	90	0.00	13,343	0.29
Colorectal	10,342	0.23	5,751	0.13	4,591	0.10
Lymphoma	3,713	0.08	2,092	0.05	1,621	0.04

*Percent of Queensland population as at 30 December 2012 (4.56 million) (Australian Bureau of Statistics)

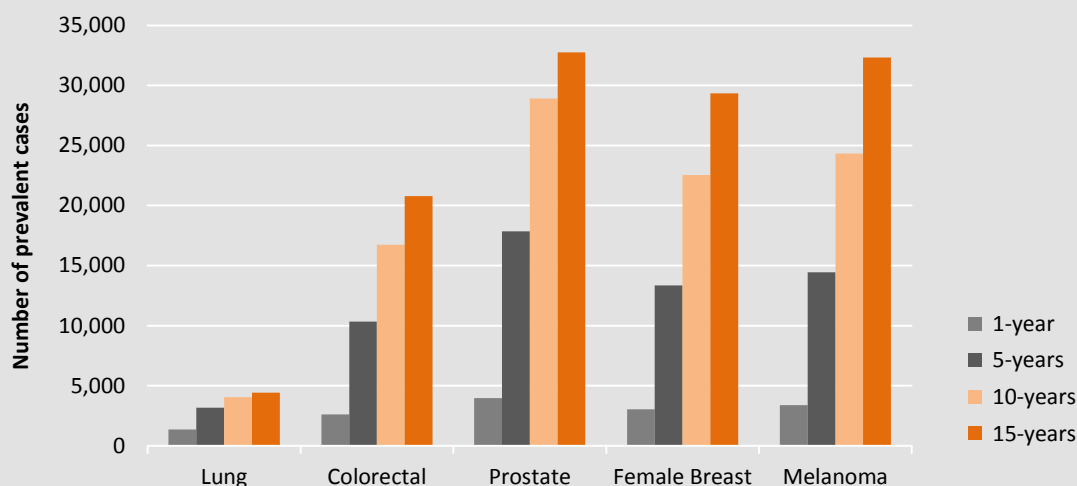
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Prostate cancer had the highest prevalence, due to high incidence and good survival, followed by melanoma and breast cancer. These three cancers accounted for more than half (52%) of all cancers prevalent in Queenslanders. It is worth noting that lung cancer, representing 9% of all new cancers, has a relatively low prevalence (3,158 cases or 3.6% of all cancers) due to relatively poor survival.ⁱⁱⁱ

The prevalence of common cancers by time since diagnosis is shown in Figure 20. For cancers with relatively long survival times such as melanoma and breast cancer, increasing time since diagnosis is associated with increasing prevalence; for cancers with short survival times such as lung cancer, increasing time since diagnosis is associated with smaller proportional increase in prevalence. It has been pointed out that the time periods used for prevalence approximate different periods of the patient journey, from post-diagnosis and primary treatment (<1 year), through to follow-up (1 to 5 years) and long-term survivorship (>5 years).⁵

Figure 20: Prevalence for the most common cancers, by time since diagnosis, Queensland, 31 Dec 2012

iii. Note: Prevalence data is for International Classification of Diseases for Oncology, 3rd edition (ICD-03) site C33, C34: Trachea, bronchus and lung.



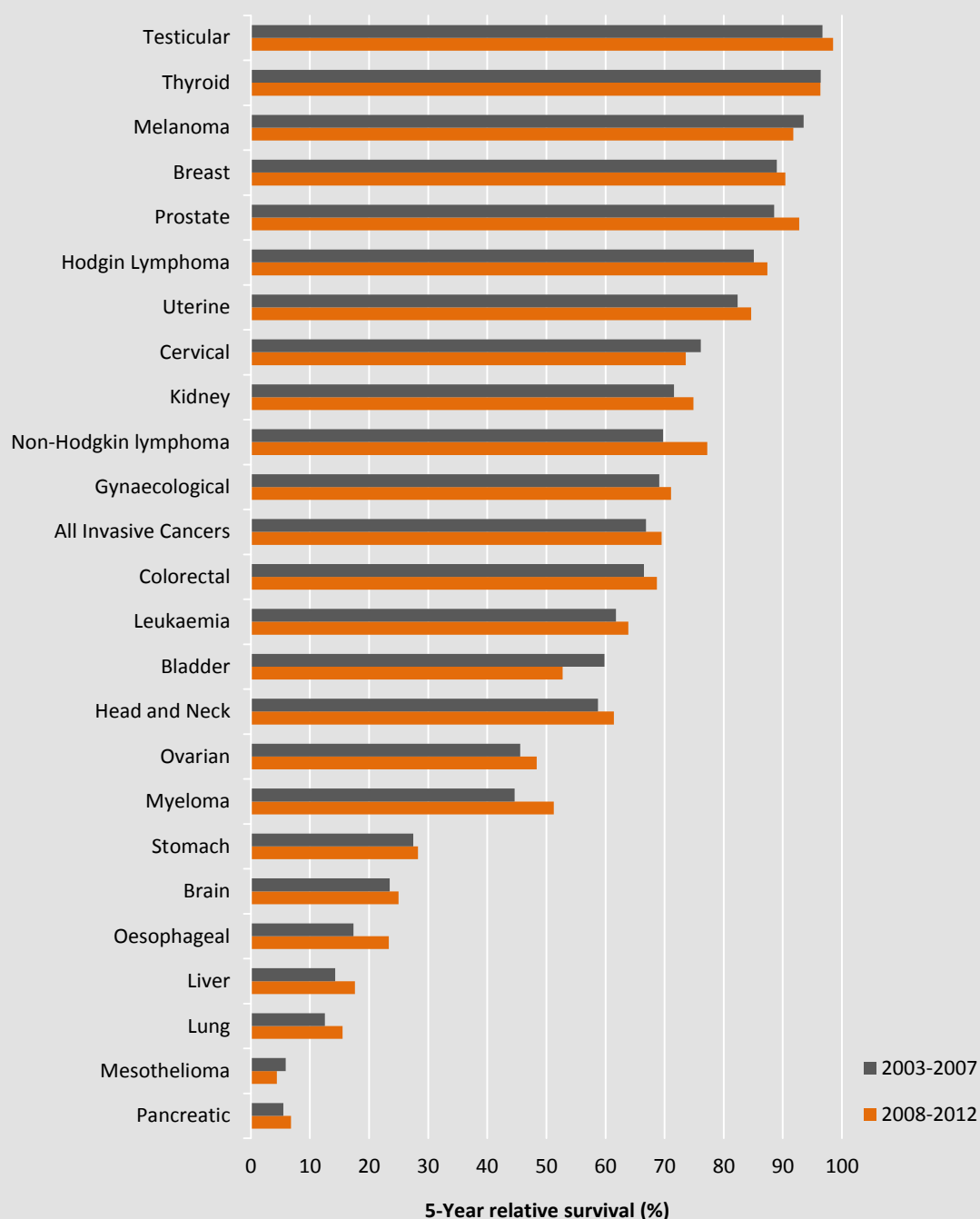
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Survival

Relative survival is a measure of the survival of a group of persons with a condition, such as cancer, relative to a comparable group from the general population without the condition. For cancer, five-year relative survival represents the proportion of patients alive five years after diagnosis, taking into account age, gender and year of diagnosis.

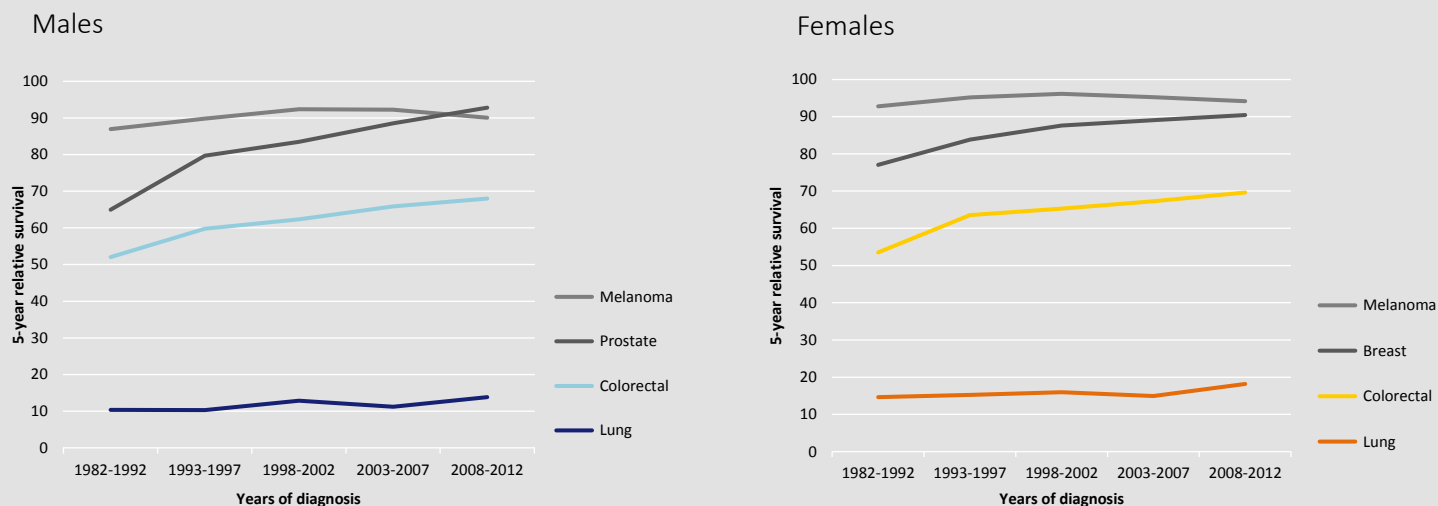
Survival varies widely and depends on the type of cancer. Thus, five-year survival ratios vary from over 98% for testicular cancer to under 7% for pancreatic cancer (Figure 21). Considered collectively, the average survival ratio for all invasive cancer from 2008-2012 is 69.5%.

Figure 21: Five year relative survival for the most common cancers diagnosed in Queensland, 2003-2007 vs 2008-2012



The relative survival ratios for many common cancers appear to be improving, with greatest gains between 2003-2007 and 2008-2012 observed for non-Hodgkin lymphoma, myeloma and oesophageal cancer (Figure 21). Smaller increases in survival are also noted for lung, prostate and liver cancers. Improvements in survival may be related to earlier detection and improved treatments. The declines in survival ratios for mesothelioma, bladder, melanoma and cervical cancer are more difficult to explain, but may include changes in patient characteristics, treatment practices and chance.

Figure 22: Five-year relative survival for the most common cancers, Queensland, 1982-1992 to 2008-2012



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Cancer survival rates in Queensland have improved, with the greatest gains observed for breast and prostate cancer.

Incidence and mortality trends: Most common cancers

Trends in incidence or mortality can be characterised by the rate of change and summarised by the annual percentage change (APC) and may be positive (rates increasing) or negative (rates decreasing). Cancer incidence and mortality trends for the most common cancers are summarised in Table 2 and Figures 23 to 26. Rates of change which are statistically significant are highlighted in Table 2.

Table 2: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Queensland, 1982-2012

Cancer	Incidence				Mortality			
	Males		Females		Males		Females	
	Period	APC	Period	APC	Period	APC	Period	APC
All cancers	1982-1986	-0.4	1982-1998	1.4*	1982-1994	0.5*	1982-1996	0.4*
	1986-1994	2.6*	1998-2012	0.1	1994-2012	-1.3*	1996-2012	-1.0*
	1994-2001	-0.7						
	2001-2008	1.1*						
	2008-2012	-1.1						
Prostate	1982-1988	0.0			1982-1993	3.4*		
	1988-1994	11.0*			1993-2012	-1.8*		
	1994-1997	-12.1						
	1997-2008	4.4*						
	2008-2012	-3.3						
Female Breast			1982-1999	2.1*			1982-1993	0.6
			1999-2012	0.1			1993-2012	-2.2*
Colorectal	1982-2000	1.1*	1982-1990	-0.7	1982-1994	1.0*	1982-2012	-1.4*
	2000-2012	-1.1*	1990-1993	3.6	1994-2012	-2.1*		
			1993-2010	-0.2				
			2010-2012	-5.6				
Melanoma	1982-1997	3.2*	1982-1986	6.6*	1982-2012	1.5*	1982-2012	0.5*
	1997-2012	0.6	1986-1993	-1.5				
			1993-1996	5.7				
			1996-2012	0.2				
Haematological	1982-2000	2.6*	1982-2000	2.6*	1982-1998	1.3*	1982-1997	1.5*
	2000-2012	0.1	2000-2012	-0.3	1998-2012	-1.6*	1997-2012	-2.2*
Hepatobiliary	1982-1984	-11.1	1982-2012	0.8*	1982-2012	1*	1982-2012	0.7*
	1984-2000	1.9*						
	2000-2004	-2.7						
	2004-2007	8.0						
	2007-2012	-1.2						
Gynaecological			1982-2008	-0.8*			1982-2012	-1.1*
			2008-2012	2.4				
Lung	1982-2012	-1.4*	1982-2009	2.6*	1982-2012	-1.5*	1982-2002	3.0*
			2009-2012	-3.6			2002-2012	0.9
Urological	1982-1997	0.7*	1982-1994	1.8*	1982-2012	-0.5*	1982-1991	3.2*
	1997-2012	-1.5	1994-2012	-1.1*			1991-2012	-1.4*
Head and neck	1982-2012	-0.7*	1982-1993	1.8*	1982-2012	-0.9*	1982-2012	-0.5
			1993-2001	-2.3				
			2001-2012	1.2				
Endocrine	1982-2012	4.3*	1982-2012	5.7*	1982-2012	-0.3	1982-2012	0.7
Upper GI	1982-2012	-0.8*	1982-2012	-1.0*	1982-2012	-1.5*	1982-2012	-2.0*
CNS	1982-2012	0.5*	1982-2012	0.0	1982-2012	0.4	1982-1988	4.6
							1988-2012	-0.7*

* Indicates a significant increase or decrease in annual percentage change (APC).

Abbreviations: APS: annual percentage change; GI: gastrointestinal; CNS: Central nervous system (including brain).

Most common cancers

PROSTATE CANCER

Prostate cancer is the most common cancer in males (Figure 9). Incidence rates increased significantly between 1988-1994 (Table 2), coinciding with the increased use of prostate-specific antigen (PSA) testing. The incidence rate declined between 1994 and 1997, probably due to the identification of most prevalent cases by the new diagnostic procedures, before increasing significantly again between 1997 and 2008. For the most recent 5 years incidence rates have been decreasing at an annual rate of 3.3%. Mortality rates from prostate cancer peaked in Queensland in 1993 and thereafter have declined at an annual rate of 1.8% (Table 2; Figure 25). The decline in mortality rates is not clearly understood. Increased PSA testing may be a contributing factor, although this is controversial.^{6, 7, 8, 9} It is also suggested that improved treatment of early-stage disease with surgery or radiotherapy, or better treatment of advanced cancers with anti-androgenic therapies may be contributing to the lower rates of mortality.¹⁰

FEMALE BREAST CANCER

Breast cancer is the most common cancer in females (Figure 9). Incidence rates increased significantly between 1982 and 1999 (Table 2), in large part a reflection of increased breast cancer screening during this period. Incidence rates since 1999 have remained fairly constant (slight increase 0.1% per year). Mortality rates peaked in the 1990s and rates have declined by 2.2% per year since 1993 (Figure 25). The decrease, which is significant and has been observed in other countries, is likely due to more effective anticancer treatments¹¹ along with increased participation in breast screening.¹² Between January 2011 and December 2012, 436,216 women were screened by BreastScreen Queensland; of these 292,571 (67.1%) were in the 50-69 year-old target group.¹³

MELANOMA

Australia has the highest incidence rate of melanoma of any country and Queensland has the highest rate of any Australian state or territory.¹⁰ Melanoma is the second most common cancer in Queensland (Figure 7). Incidence rates for melanoma have continued to rise in both males and females (Table 2), particularly in the 1980s and 1990s. Mortality rates have also risen significantly in both males and females (APC 1.5%, 0.5% respectively; Table 2). Incidence rates for melanoma are susceptible to fluctuations in public awareness.

COLORECTAL CANCER

Colorectal cancer is the fourth most common cancer in Queensland (Figure 7). While the incidence rate of colorectal cancer in females varied insignificantly over the period 1982 to 2012, incidence rates in males increased significantly between 1982 and 2000 (APC 1.1%) before declining significantly thereafter at a rate of 1.1% per year (Table 2). Mortality rates for males decreased significantly after 1994 (APC -2.1%); rates for females on the other hand have decreased steadily and significantly over the entire period (APC -1.4%).



HAEMATOLOGICAL MALIGNANCIES

The incidence of haematological malignancies increased significantly in both males and females, reaching a peak in the year 2000 and declining slightly or remaining fairly steady thereafter (Table 2, Figure 24). Mortality rates also increased, peaking a few years earlier (1998 for males, 1997 for females) before decreasing significantly thereafter (APC -1.6% for males; -2.2% for females). The decreases in mortality (most likely) reflect the slight decline in incidence combined with improved chemotherapy treatments, particularly for young patients.¹⁴

LUNG CANCER

Lung cancer incidence rates declined significantly between 1982 and 2012 for males (APC -1.4%). For females rates increased significantly between 1982 and 2009 (APC 2.6%) and only recent years have decreased but not significantly (Table 2). Mortality rates followed similar trends for males with again a significant decrease (APC -1.5%) whereas female mortality rates have continued to increase (significantly between years 1982 and 2002, APC 3.0%; Figure 26). The differences in incidence and mortality rates between males and females have been attributed to past patterns of smoking prevalence.¹⁰ Lung cancer is the leading cause of cancer deaths in females, exceeding those due to breast cancer (Figure 10).

ENDOCRINE CANCERS

Endocrine cancers are increasing in incidence, particularly in females (Figure 24). The annual percentage change (APC) over the period 1982 to 2012 was 4.3% in males, and 5.7% in females, making these cancers among the most rapidly changing cancers in Queensland (Table 2). Mortality rates, however, have remained relatively stable over this period. The increase in incidence is largely due to increases in the incidence of thyroid cancer in females, with three out of four thyroid cancer occurring in females (74%) and thyroid cancer representing 94% of all new endocrine cancers in 2012.

UPPER GASTROINTESTINAL TRACT CANCERS

The incidence of cancers of the upper gastrointestinal tract (stomach, oesophagus and small intestine) declined by around 1% per year since 1982 (Table 2); these changes are significant. Mortality rates also decreased significantly since 1982 (APC -1.5% in males, -2.0% in females) (Table 2; Figure 26), mirroring trends in other countries.¹⁵

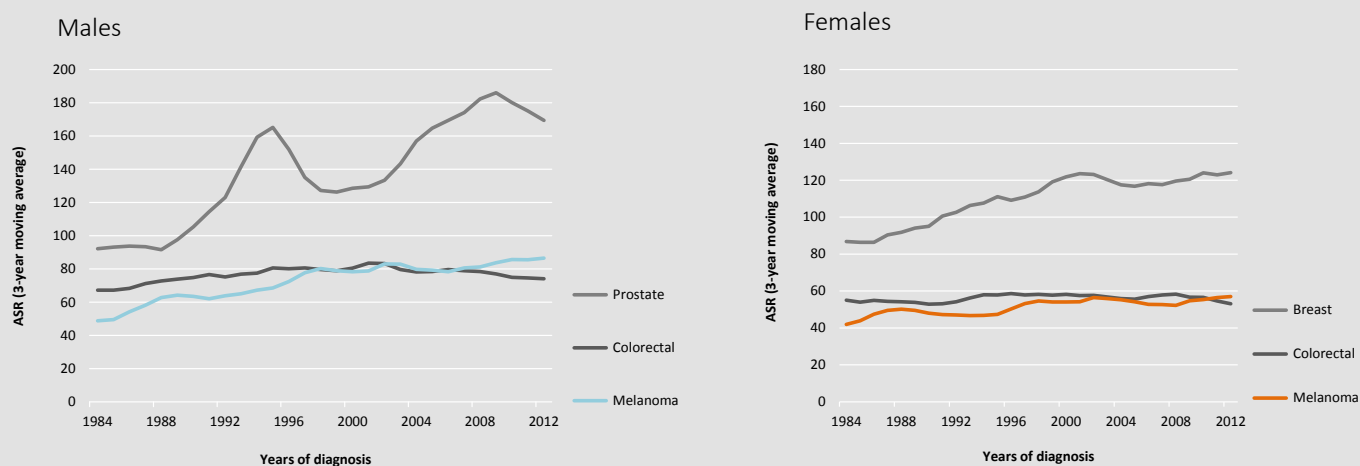
HEPATOBIILIARY CANCERS

Incidence rates for hepatobiliary cancers varied in males during the period 1982 to 2012 while incidence rates for females increased significantly (APC 0.8%; Table 2; Figure 24). Mortality rates for both sexes have increased by 1.0% in males and 0.7% per year in females (both significant).

Endocrine cancers are amongst the most rapidly changing cancers due to a significant increase in thyroid cancer in females.

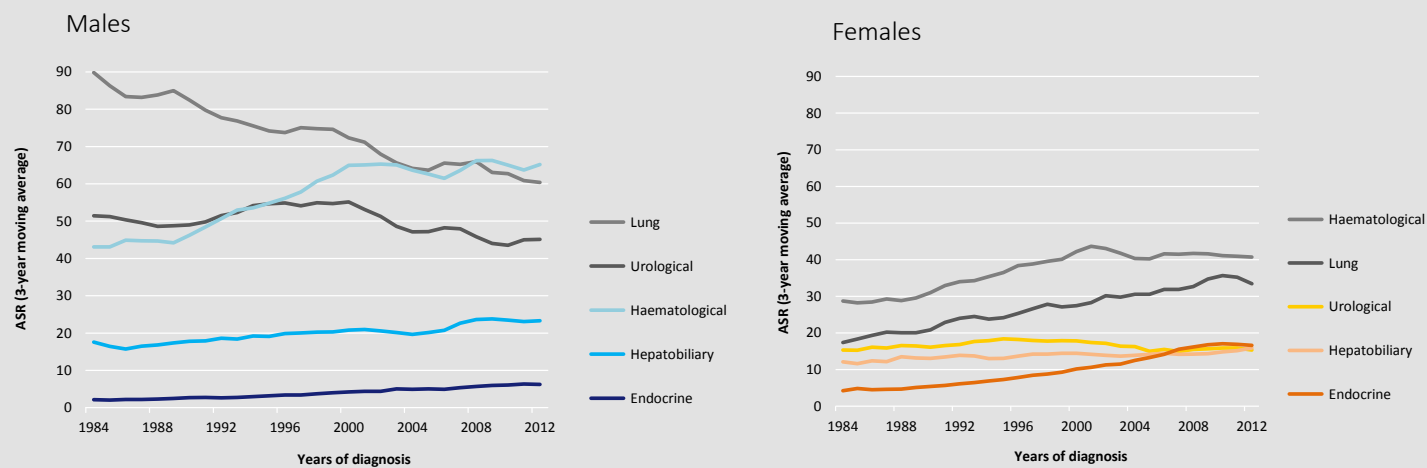
Melanoma incidence rates in Queensland - the highest in the world - have not changed significantly over the past decade.

Figure 23: Incidence trends for the most common cancers, Queensland, 1982-2012



Abbreviation: ASR: Age-standardised rate per 100,000.

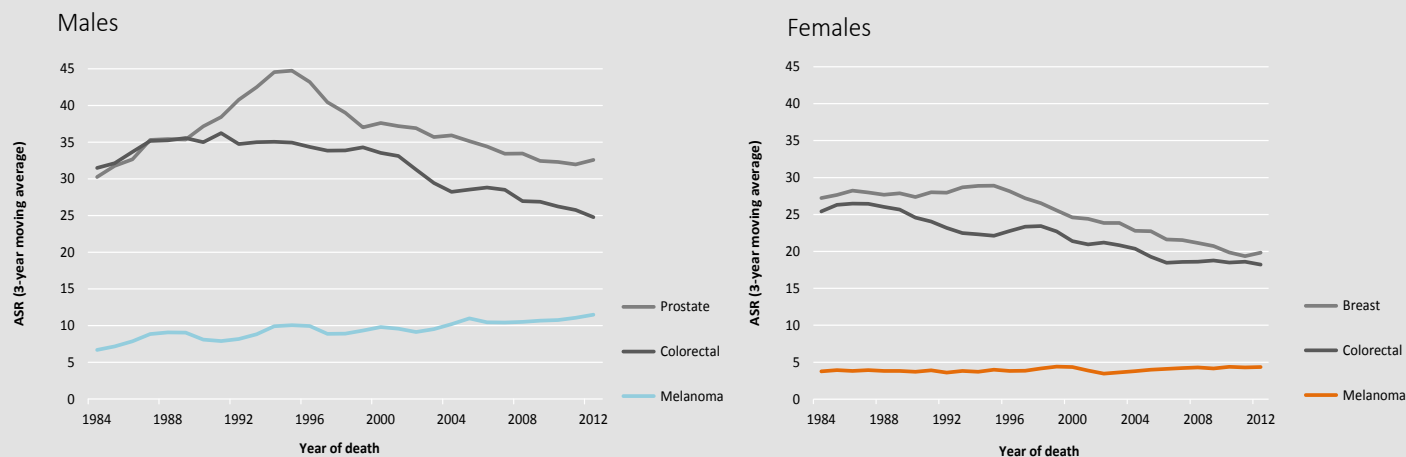
Figure 24: Incidence trends for the most rapidly changing cancers, Queensland, 1982-2012



Abbreviation: ASR: Age-standardised rate per 100,000.

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

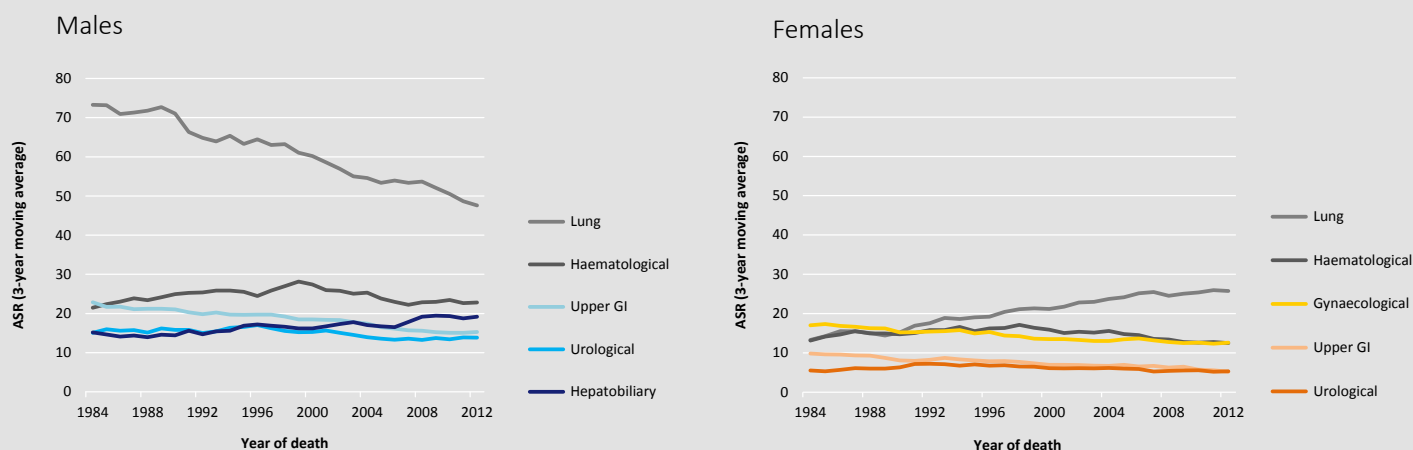
Figure 25: Mortality trends for the most common cancers, Queensland, 1982-2012



Abbreviation: ASR: Age-standardised rate per 100,000.

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 26: Mortality trends for the most rapidly changing cancers, Queensland, 1982-2012



Abbreviation: ASR: Age-standardised rate per 100,000.

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Incidence and mortality trends by age group

Table 3: Annual percentage change (APC) in age-specific incidence rates, most common cancers, by age group, Queensland, 1982-2012

Age group	Cancer [†]	Males				Females			
		2008-2012		Trend §		2008-2012		Trend §	
		New cases	Average rate [‡]	Period	APC	New cases	Average rate [‡]	Period	APC
0-14	All cancers	360	15.9	1982-2012	0.0	307	14.3	1982-2012	1.0*
	Haematological	162	7.1	1982-2012	0.1	132	6.2	1982-2012	1.5*
	CNS	60	2.7	1982-2012	0.4	41	1.9	1982-2012	3.2
	Bone and soft tissue	48	2.1	1982-2012	0.1	43	2.0	1982-2012	3.5*
	Urological	21	0.9	1982-2012	5.5	24	1.1	1982-2012	-4.2
	Endocrine	20	0.9	1982-2012	0.6	17	0.8	1982-2012	-2.0
15-24	All cancers	560	35.6	1996-2012	-1.6*	505	33.4	1996-2012	-1.9*
	Melanoma	142	9.1	1994-2012	-4.5*	170	11.2	1995-2012	-5.3*
	Haematological	143	9.1	1982-2012	1.5*	119	7.8	1982-2012	2.1*
	Urological	126	8.0	1982-2012	1.9*	5	0.3	1982-2012	9.8
	Endocrine	21	1.3	1982-2012	7.1	79	5.2	1982-2012	4.4*
	Bone & soft tissue	50	3.2	1982-2012	1.3	20	1.3	1982-2012	13.6
25-34	All cancers	1,257	81.4	1996-2012	-0.9*	1,727	112.8	1982-2012	0.1
	Melanoma	304	19.7	2001-2012	-0.8	19	1.3	1982-2012	-0.6*
	Haematological	417	27.0	1991-2012	-0.4	525	34.3	1982-2012	1.1*
	Urological	304	19.7	1982-2012	1.8*	19	1.3	1982-2012	11.2
	Female Breast					294	19.2	1982-2012	0.5
	Endocrine	54	3.5	1982-2012	13.6*	240	15.7	1982-2012	4.2*
35-44	All cancers	2,580	165.0	1982-2012	0.5*	4,130	259.9	1982-2012	0.4*
	Melanoma	829	53.0	1987-2012	-0.4	903	56.8	1982-2012	-0.1
	Female Breast					1,491	93.9	1982-2012	1.1*
	Haematological	328	21.0	1982-2012	0.7*	254	16.0	1982-2012	1.5*
	Endocrine	91	5.8	1982-2012	4.4*	366	23.0	1982-2012	6.1*
	Colorectal	202	12.9	1982-2012	0.2	216	13.6	1982-2012	-0.3
45-54	All cancers	7,122	481.7	1982-2012	0.8*	8,358	553.3	1982-2012	0.6*
	Female Breast					3,483	230.6	1993-2012	0.3
	Melanoma	1,359	91.9	1998-2012	-1.1	1,229	81.4	1982-2012	0.8*
	Prostate	1,637	110.8	2009-2012	-6.4				
	Colorectal	762	51.5	1982-2012	-0.9*	622	41.2	1988-2012	-0.9*
	Haematological	747	50.6	1982-2012	1.4*	522	34.6	1982-2012	1.7*
55-64	All cancers	17,317	1,387.3	2008-2012	-0.6	11,463	925.8	1998-2012	-0.2
	Prostate	6,414	514.1	2007-2012	-2.0				
	Female Breast					3,811	308.0	2001-2012	-1.2
	Melanoma	2,190	175.3	1987-2012	1.5*	1,321	106.6	1982-2012	1.4*
	Colorectal	1,759	141.0	1995-2012	-2.5*	1,143	92.5	1995-2012	-2.5*
	Lung	1,380	110.7	1982-2012	-2.6*	1,019	82.4	1982-2012	1.3*
65-74	All cancers	20,923	2,644.6	1993-2012	0.1	11,613	1,475.9	1999-2012	0.1
	Prostate	7,351	928.8	2007-2012	-0.9				
	Colorectal	2,596	329.4	2001-2012	-1.8*	1,704	218.5	2008-2012	-9.1*
	Lung	2,229	281.8	1982-2012	-1.5*	1,227	156.5	1982-2012	2.8*
	Melanoma	2,247	282.7	1998-2012	1.3*	1,168	147.9	1982-2012	2.0*
	Female Breast					3,122	395.9	1982-2012	1.8*

		Males				Females			
		2008-2012		Trend §		2008-2012		Trend §	
		New cases	Average rate [‡]	Period	APC	New cases	Average rate [‡]	Period	APC
Age group	Cancer ⁺								
75-84	All cancers	14,312	3,572.7	1993-2012	-0.3*	9,389	1,949.5	1998-2012	0.2
	Colorectal	1,987	495.5	1982-2012	0.6*	1,787	371.2	1982-2012	0.8*
	Prostate	3,448	862.7	2008-2012	-5.9				
	Lung	1,879	469.1	1982-2012	-0.1	1,024	212.8	1982-2012	4.3*
	Haematological	1,590	396.9	2002-2012	-0.3	1,170	242.9	2001-2012	-0.2
	Melanoma	1,630	406.6	1993-2012	2.3*	803	166.5	1984-2012	2.0*
85+	All cancers	4,788	4,091.5	1989-2012	-0.3*	4,917	2,255.1	1982-2012	0.8*
	Colorectal	623	529.0	1988-2012	0.2	917	420.5	1982-2012	0.1
	Haematological	612	396.9	1992-2012	0.8	587	269.6	1998-2012	-0.6
	Melanoma	544	464.3	1982-2012	3.8*	413	147.9	1982-2012	3.1*
	Prostate	934	802.9	1992-2012	-3.3*				
	Lung	546	466.7	1982-2012	0.0	368	168.9	1982-2012	4.7*

+ The five most common cancers in each age group are listed.

‡ Average annual age-specific incidence rate per 100,000 for the period 2008-2012. Rates for fewer than 16 cases are presented for completeness but should be treated with caution.

§ Trends were analysed for 1982-2012. If the slope of the trend was not constant over the entire time period, the annual percentage change (APC) in the most recent time period is shown.

* Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

Abbreviations: APC: annual percentage change; CNS: Central nervous system (including brain).

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Tables 3 and 4 and Figure 27 show incidence and mortality rate trends for the period 1982-2012 for the most common cancers according to age.

CHILDHOOD CANCERS

In children aged 0-14 years, cancer incidence and mortality rates were higher in boys than girls (Figure 27). Cancer incidence rates for boys were relatively stable over the period 1982-2012, both for all cancers combined and the common cancers of childhood with the exception of urological cancer which demonstrates an increase over this period, although was not statistically significant. In contrast, incidence rates for all combined increased significantly for girls between 1982 and 2012 (APC 1.0%). The incidence of haematological cancers and cancers of bone and soft tissue in girls increased by 1.5% and 3.5% per year respectively during this period (Table 3).

Considering all cancers together, cancer mortality rates declined significantly in both boys and girls during this period. The decreases in mortality are likely due to improvements in treatment, particularly for the haematological cancers which are the most common cancers in childhood (Table 4).

Table 4: Annual percentage change (APC) in age-specific mortality rates, most common cancers, by age group, Queensland, 1982-2012

Males					Females				
Age group	Cancer ⁺	2008-2012		Trend §		2008-2012		Trend §	
		New cases	Average rate [‡]	Period	APC	New cases	Average rate [‡]	Period	APC
0-14	All cancers	55	2.4	1982-2012	-3.6*	47	2.2	1982-2012	-2.0*
15-24	All cancers	52	3.3	1982-2012	-1.9*	53	3.5	1982-2012	-0.3
25-34	All cancers	121	7.8	1982-2012	-2.0*	131	8.5	1982-2012	-1.6*
35-44	All cancers	382	24.5	1982-2012	-1.5*	479	30.1	1982-2012	-2*
	Melanoma	45	2.9	1982-2012	-1.5*	51	3.2	1982-2012	-1
	Female Breast					127	8.0	1982-2012	-2.5*
	Haematological	41	2.6	1995-2012	-6.6*	32	2.0	1982-2012	-3.3*
	Endocrine	4	0.3	1982-2012	3.8	2	0.1	1982-2012	6
	Colorectal	35	2.2	1982-2012	-2.0*	52	3.3	1982-2012	-2
45-54	All cancers	1,392	94.2	1982-2012	-1.9*	1,351	89.5	1982-2012	-1.9*
	Female Breast					369	24.4	1997-2012	-3.9*
	Melanoma	114	7.7	1982-2012	0.3	63	4.2	1982-2012	-0.7
	Prostate	22	1.5	1984-2012	11.4				
	Colorectal	150	10.1	1982-2012	-3.3*	154	10.2	1999-2012	-0.5
	Haematological	93	6.3	1982-2012	-3.7*	60	4.0	2010-2012	-36.3
55-64	All cancers	3,875	310.5	1988-2012	-2.3*	2,761	222.9	1993-2012	-1.9*
	Prostate	195	15.6	1991-2012	-3.2*				
	Female Breast					549	44.3	1993-2012	-2.2*
	Melanoma	198	15.9	1982-2012	0.1	89	7.2	1982-2012	1.3*
	Colorectal	459	36.8	1994-2012	-4.6*	281	22.7	1982-2012	-3.2*
	Lung	999	80.2	1982-2012	-2.8*	656	52.9	1982-2012	1.1*
65-74	All cancers	6,492	821.9	1996-2012	-2.1*	3,835	488.2	2001-2012	-1.9*
	Prostate	676	85.4	1994-2012	-2.9*				
	Colorectal	753	95.9	2000-2012	-4.2*	453	58.0	2003-2012	-5.5*
	Lung	1,728	218.8	1996-2012	-2.5*	923	117.4	2000-2012	0.1
	Melanoma	292	37.0	1982-2012	1.6*	91	11.7	1982-2012	0.4
	Female Breast					538	68.2	1982-2012	-0.7*
75-84	All cancers	7,189	1,794.3	1994-2012	-0.5*	4,551	945.0	1996-2012	-0.1
	Colorectal	856	213.8	1982-2012	-0.5*	692	143.8	1982-2012	-0.4
	Prostate	1,317	329.0	1993-2012	-1.5*				
	Lung	1,551	387.3	1982-2012	-0.6*	829	172.1	1982-2012	4.4*
	Haematological	801	200.2	1982-2012	1.3*	522	108.4	1993-2012	-0.9
	Melanoma	323	80.6	1985-2012	2.7*	99	20.6	1988-2012	0.5
85+	All cancers	3,567	3,040.3	1989-2012	0.2	3,339	1,532.2	1982-2012	0.7*
	Colorectal	363	307.8	1982-2012	-0.2	599	274.9	1982-2012	-0.6*
	Haematological	469	400.6	1984-2012	1.4*	416	191.2	1998-2012	-0.9
	Melanoma	161	134.9	1982-2012	3.7*	104	47.5	1982-2012	2.4*
	Prostate	880	748.0	1993-2012	-1.1				
	Lung	540	463.3	1982-2012	0.2	375	171.3	1982-2012	4.3*

⁺ The five most common cancers in each age group are listed.

[‡] Average annual age-specific mortality rate per 100,000 for the period 2008-2012.

[§] Trends were analysed for 1982-2012. If the slope of the trend was not constant over the entire time period, the annual percentage change (APC) in the most recent time period is shown.

* Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

Abbreviations: APC: annual percentage change; CNS: Central nervous system (including brain).

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

CANCERS IN ADOLESCENTS AND YOUNG ADULTS

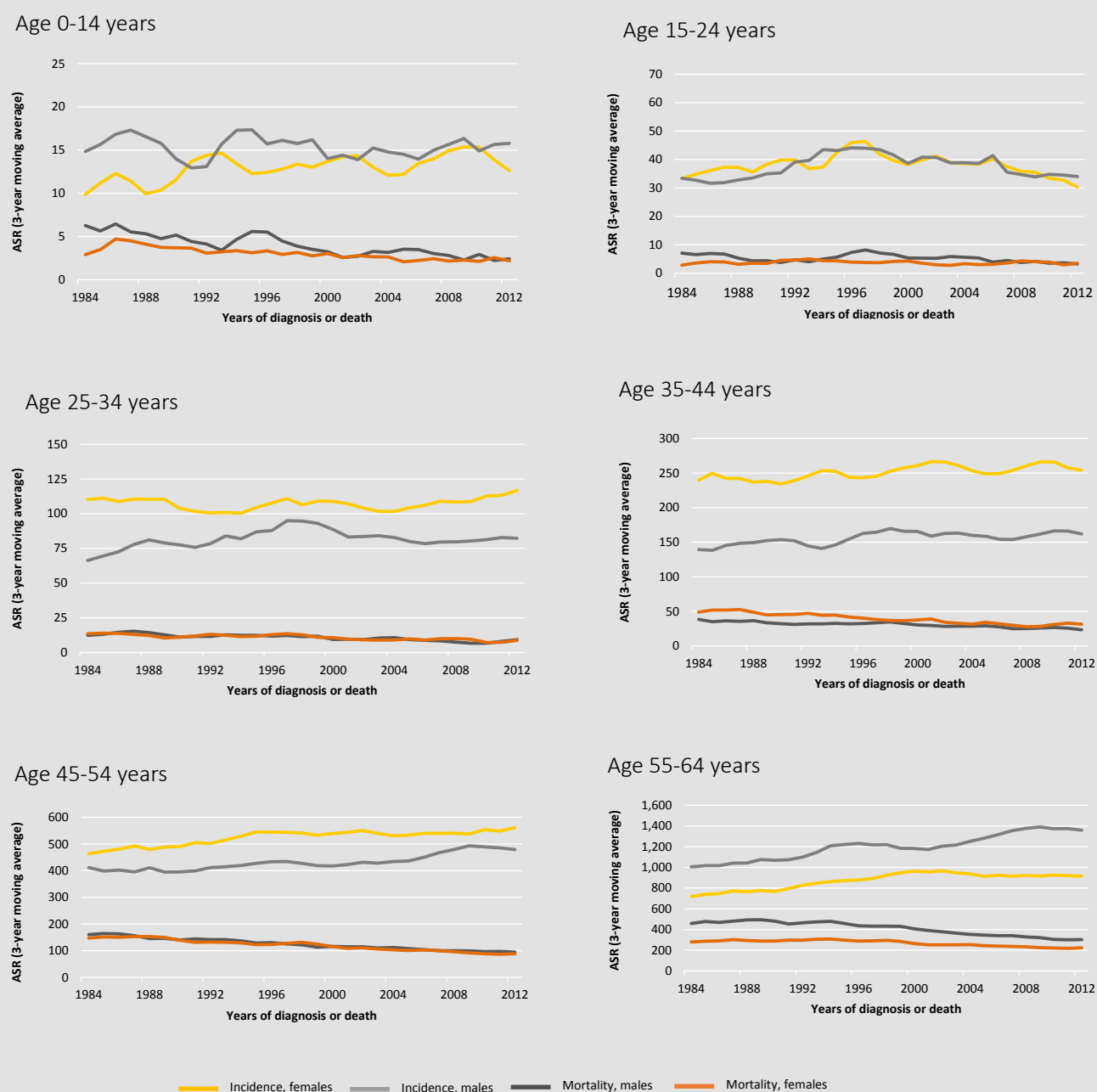
In males aged 15-24, the incidence rate for all cancers decreased significantly between 1996 and 2012, largely due to a decrease in the incidence of the most common cancer, melanoma (APC -4.5%). The incidence rates of haematological and urological cancers on the other hand increased between 1982 and 2012 (APC 1.5% and 1.9% respectively). In females aged 15-24, the incidence rate for all cancers combined also decreased significantly between 1996 and 2012. The incidence rate for endocrine cancers (mostly thyroid cancer) and haematological cancer increased significantly (APC 4.4% and 2.1% respectively). Incidence rates for melanoma decreased significantly (APC -5.3%). Mortality rates for males decreased significantly (APC -1.9%) while female mortality overall did not change between 1982 and 2012 (Tables 3 and 4).

CANCERS IN ADULTS

Incidence and mortality rates for all cancers were higher in females aged 35-44 years than males, but the situation was reversed for persons over 55 years (Figure 27). In the latter age groups, incidence and mortality rates for individual cancers were generally higher in males than females (Tables 3 and 4).

- **Melanoma** incidence rates decreased in adult males in the 35-44 and 45-54 age groups from 1982, but increased significantly in those 55 years and over. For females rates remained stable for 35-45 year olds and then increased significantly for those aged 45 and older. Although mortality rates decreased in males and females aged 35-44 years, mortality rates have increased in older age groups (males and females over 55 years).
- **Female breast cancer** incidence rates increased significantly in females aged 35-44 and 65-74 years from 1982 (APC 1.1% and 1.8% respectively), but mortality rates for females – including those at high risk for breast cancer (aged 55-64 years) – have decreased significantly from the early 1990s.
- **Prostate cancer** incidence rates have decreased in males over 45 years in the last decade, in particular males aged 85+ in which rates have decreased significantly at a rate of 3.3% per year since 1992. In the past 15-20 years, mortality rates from prostate cancer have decreased significantly with the exception of 85+ where there was an insignificant decrease and those aged 45– 54 where an increase of 11.4% which was also insignificant.
- **Colorectal cancer** incidence rates have decreased significantly in the 45-54, 55-64 and 65-74 year old age groups in males and females since the early 1990s and 2000s but increased significantly in the 75-84 age group for males and females. Mortality rates have decreased significantly in all age groups in the past 30 years including the largest significant decrease among the common cancers for females (APC -5.5% aged 65-74 years).
- **Lung cancer** incidence rates show a clear gender difference. The incidence rate for males 55-64 and 65-74 years decreased significantly while the rate for females increased. Mortality rates reflect these trends with mortality significantly decreasing for males over 55 years and females with a significant increase in those over 55 with the exception of the 65-74 which remained stable.
- **Haematological cancers** increased in most adult age groups, with the exception of males and females 75-84 years and females aged 85+ years. Apart from males aged 75 years and older, mortality rates from haematological cancers have consistently decreased – the decreases are the largest significant decrease noted among the common cancers for males (APC -6.6% in males aged 35-44 years).

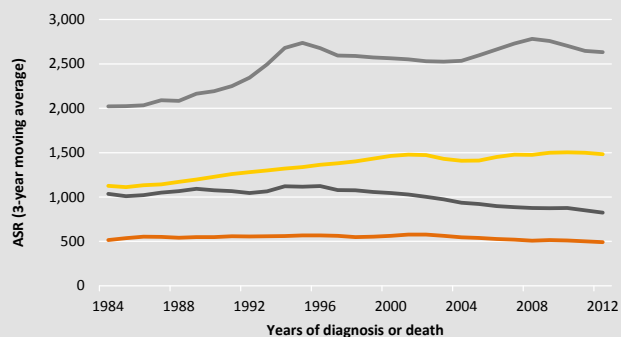
Figure 27: Incidence and mortality trends for all cancers by age group, Queensland, 1982-2012



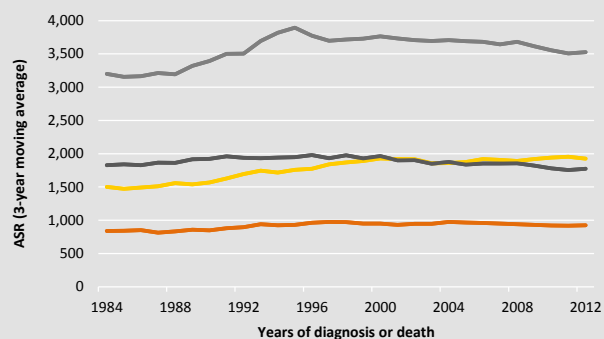
Abbreviation: ASR: Age-standardised rate per 100,000.

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

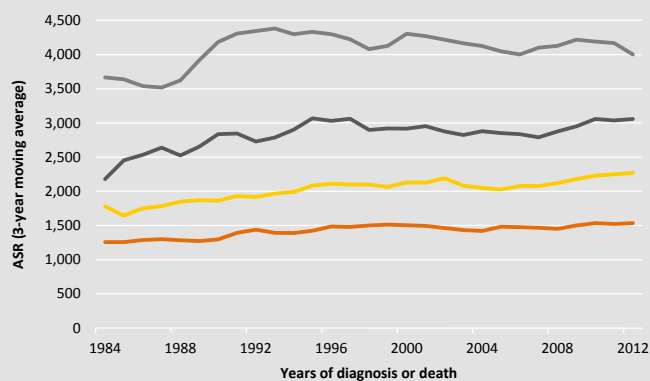
Age 65-74 years



Age 75-84 years



Age 85+



Incidence, females Incidence, males Mortality, males Mortality, females

Abbreviation: ASR: Age-standardised rate per 100,000.

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

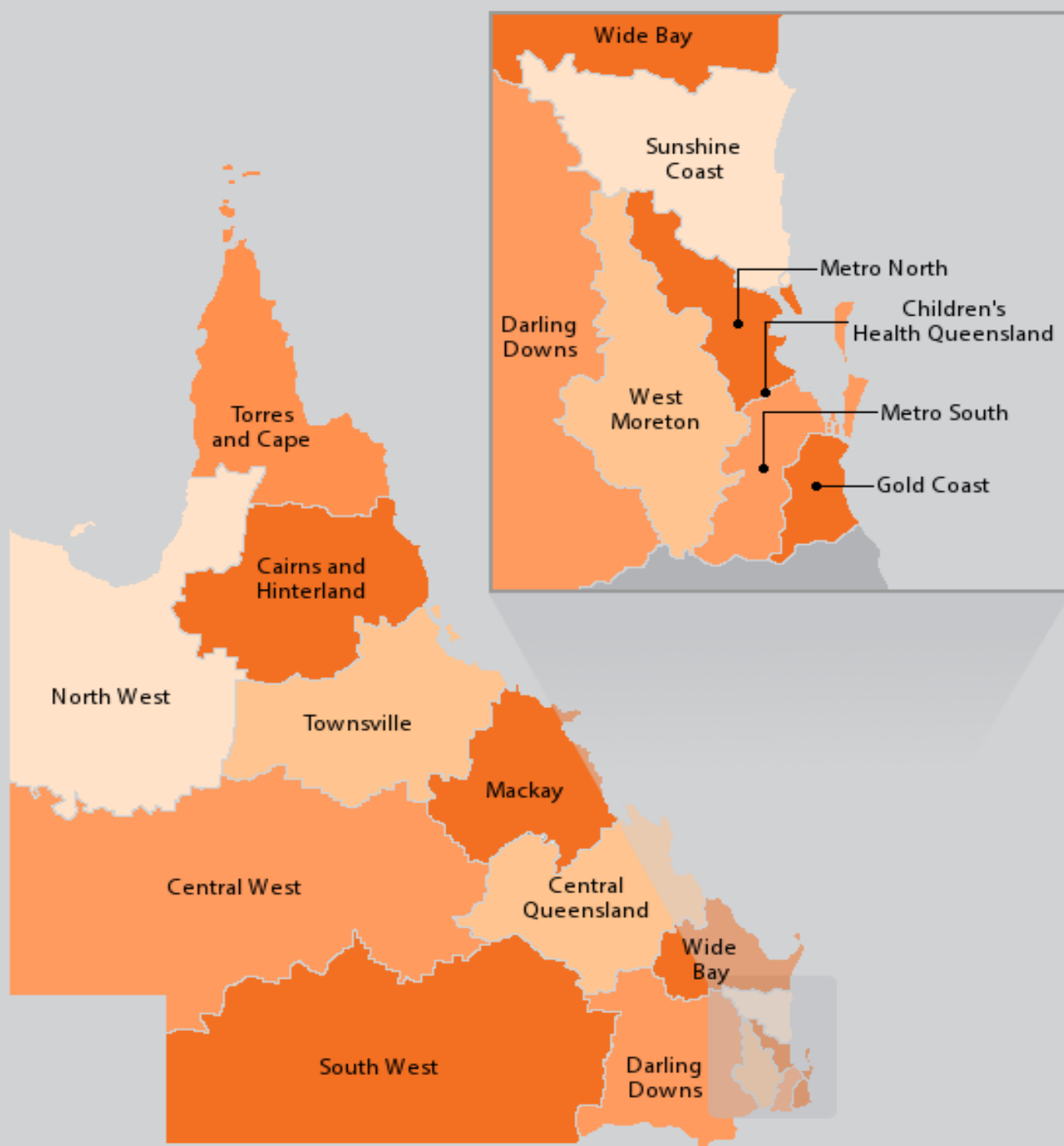
Hospital and Health Services



Cancer overview by Hospital and Health Service (HHS)

In this section, an overview of cancer incidence and mortality are presented for the fifteen Hospital and Health Services (HHS)^{iv} in Queensland.

Figure 28: Map of Hospital and Health Services, Queensland

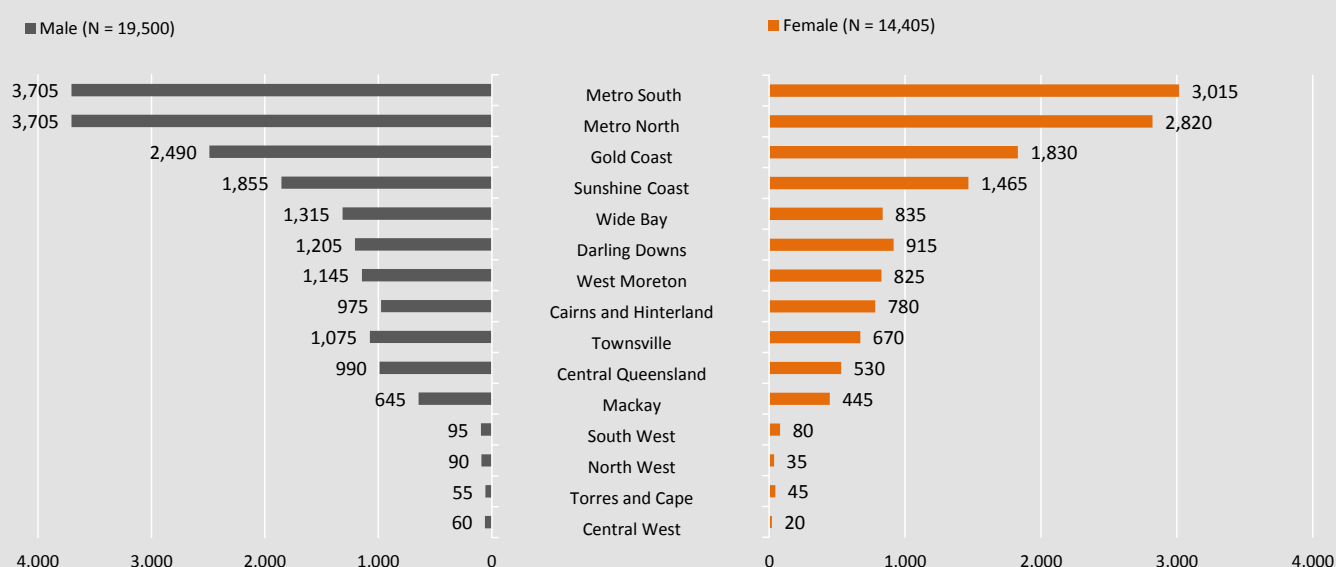


^{iv} While the Children's Hospital Health Service is a recognised HHS in Queensland, children, adolescents and young adults are counted according to their usual place of residence and not by their place of specialist treatment. Consequently, the Children's HHS is not included as a geographical hospital HHS in this report.
Source: Statistical Output, Health Statistics Branch, 07 January 2015— Hospital and Health Services as at 01 July 2014.

Hospital and Health Service projections, 2021

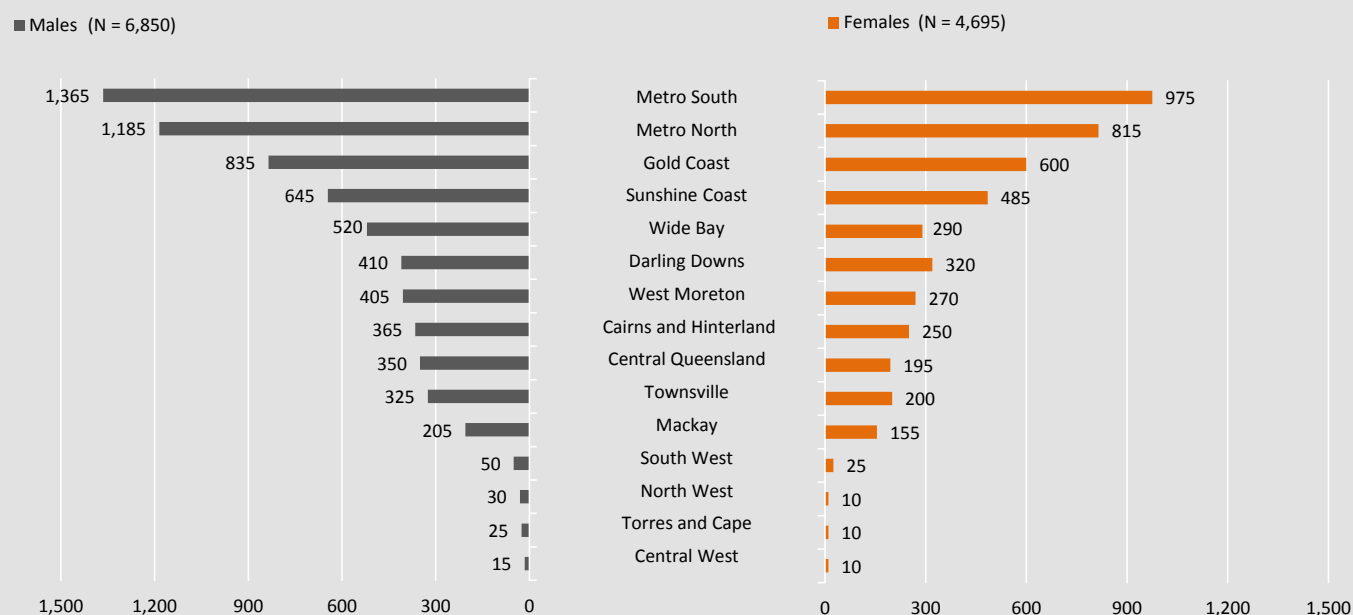
In 2021, the Metro South Hospital and Health Service is estimated to have the most new cases of invasive cancers diagnosed among Queensland residents with 6,720 (Figure 29) and the highest number of deaths due to cancer in which an estimated 2,340 Queenslanders will die of the disease (Figure 30).

Figure 29: Expected cancer incidence, HHS overview, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team. The figures, which have been rounded to the nearest five cases, are provided as a guide and should be used with care. Projections are calculated by applying the most recent estimates of cancer rates (2012), stratified by age and sex, to the expected Queensland population in 2021.

Figure 30: Expected cancer mortality, HHS overview, Queensland, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team. The figures, which have been rounded to the nearest five cases, are provided as a guide and should be used with care. Projections are calculated by applying the most recent estimates of cancer rates (2012), stratified by age and sex, to the expected Queensland population in 2021.

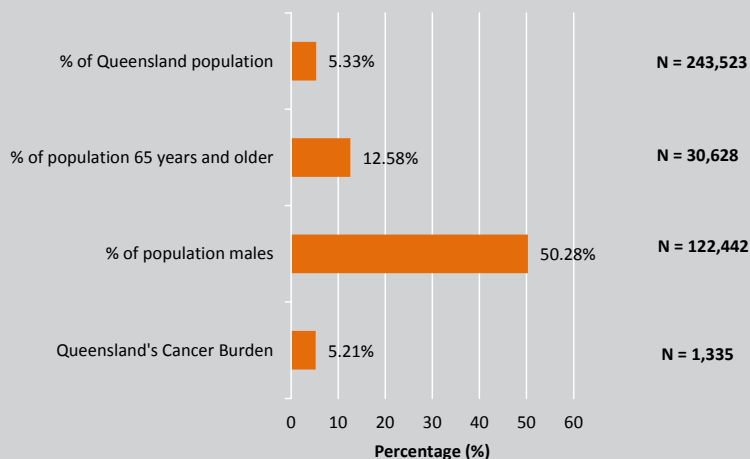
In 2021, it is estimated that 34,000 Queenslanders will be diagnosed with cancer and more than 11,000 will die from the disease.

Cairns and Hinterland

Figure 31: Cairns and Hinterland HHS overview

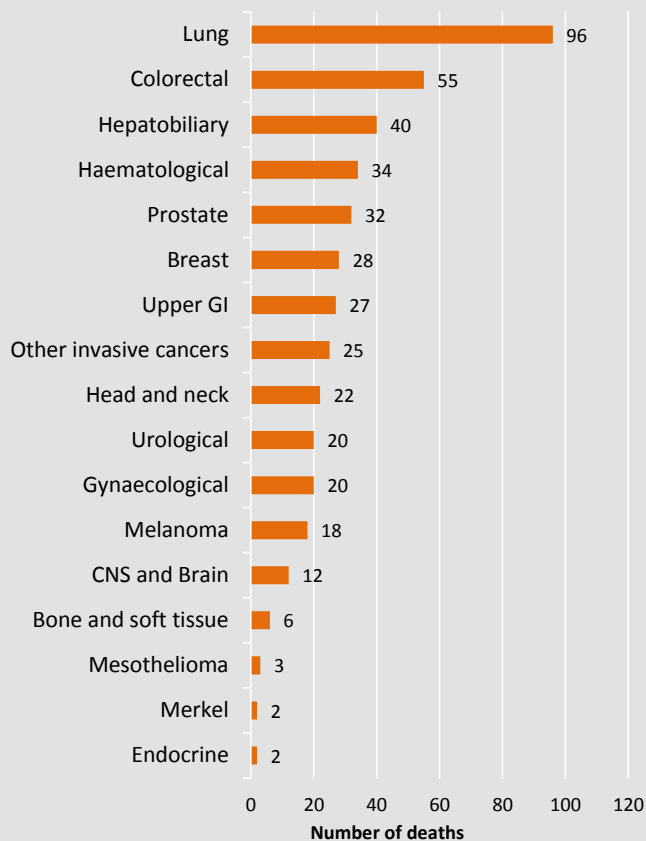


Quick statistics (2012)



Most common cancer deaths:

Cairns and Hinterland HHS, annual average, 2010-2012

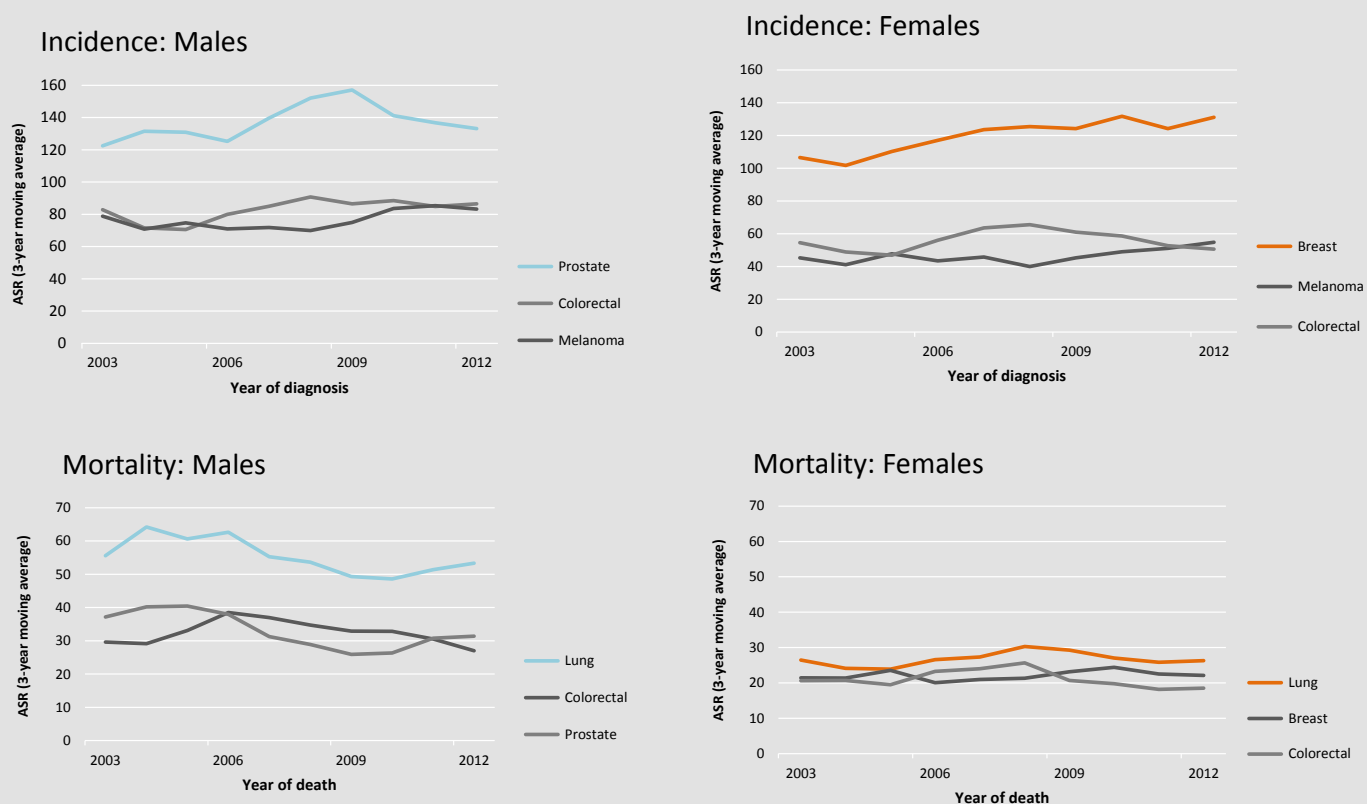


Most common cancer diagnoses:

Cairns and Hinterland HHS, annual average, 2010-2012

Cancer site	Male	Female	Total
Prostate	173		173
Melanoma	103	67	170
Breast	1	168	169
Colorectal	105	60	166
Lung	79	40	118
Haematological	72	46	118
Gynaecological		68	68
Urological	44	17	61
Other invasive cancers		23	54
Head and neck	42	11	53
Hepatobiliary	25	20	45
Upper GI	27	9	36
Endocrine	7	15	22
CNS and Brain	10	6	17
Bone and soft tissue	5	5	10
Merkel	4	2	5
Ophthalmic	2	2	4
Mesothelioma	3		3
All invasive cancers	732	558	1291

Figure 32: Trends for the most common cancers, Cairns and Hinterland HHS, 2003-2012



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Table 5: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Cairns and Hinterland HHS, 2001-2012

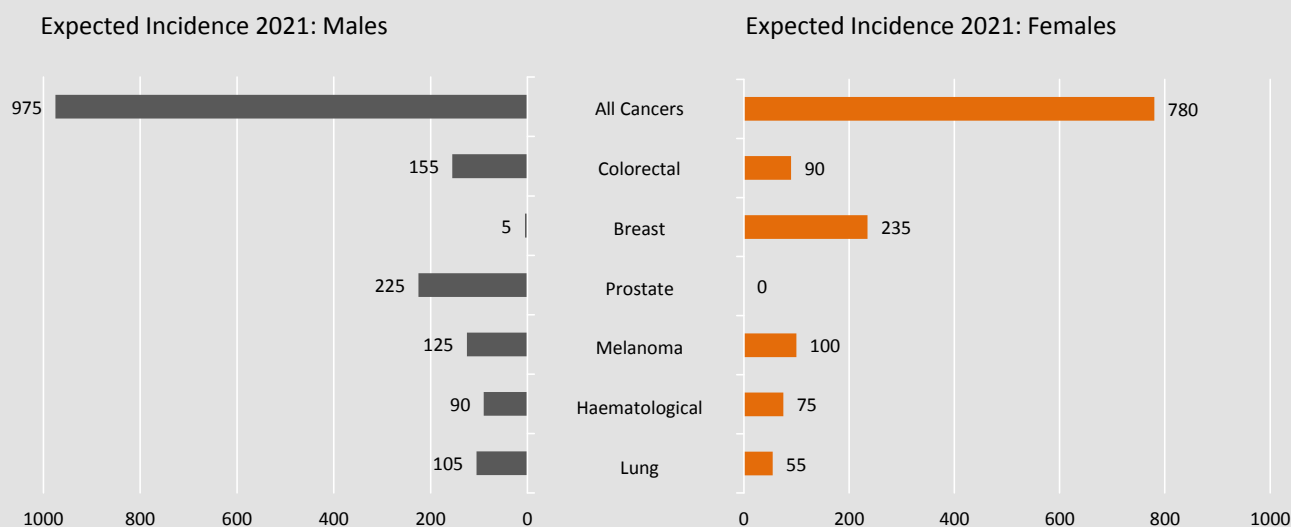
	Incidence				Mortality			
	Males		Females		Males		Females	
Cancer ⁺	Period	APC	Period	APC	Period	APC	Period	APC
Prostate	2001-2012	1.4			2001-2012	-3.5		
Melanoma	2001-2012	0.7	2001-2012	1.9				
Colorectal	2001-2012	0.9	2001-2012	0.0	2001-2012	-1.1	2001-2012	-1.3
Female Breast			2001-2012	2.5*			2001-2012	1.6
Lung					2001-2012	-1.1	2001-2012	0.2

⁺ Most common cancers for males and females are listed.

* Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

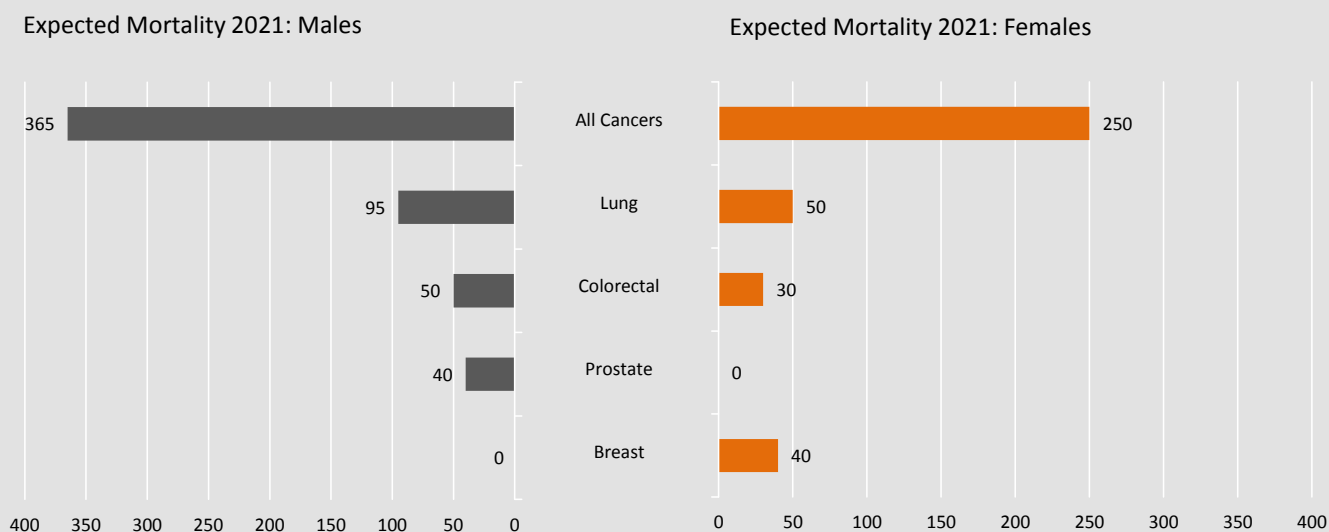
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 33: Expected cancer incidence for the most common cancers, Cairns and Hinterland HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 34: Expected cancer mortality for the most common cancers, Cairns and Hinterland HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 1,755 new cases of cancers in 2021 in the Cairns and Hinterland HHS which is a 31% increase from 2012. Over 55% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

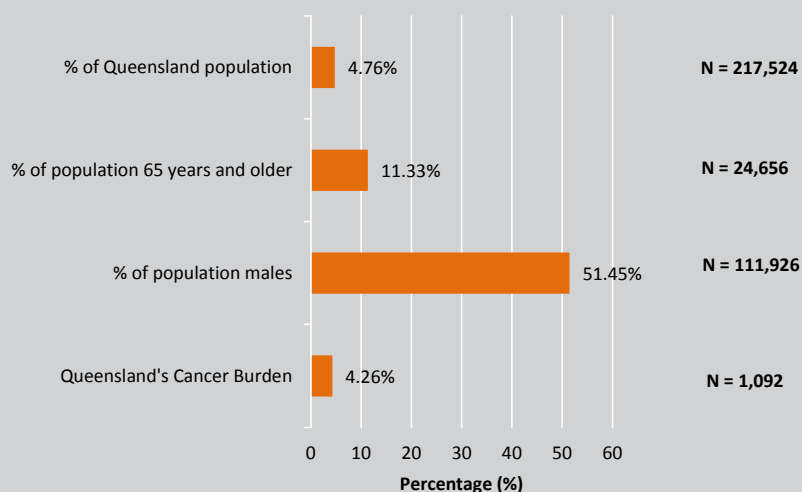
In 2021, an estimated 615 cancer deaths are expected in the Cairns and Hinterland HHS which is a 36% increase from 2012. About 60% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death in both sexes.

Central Queensland

Figure 35: Central Queensland HHS overview

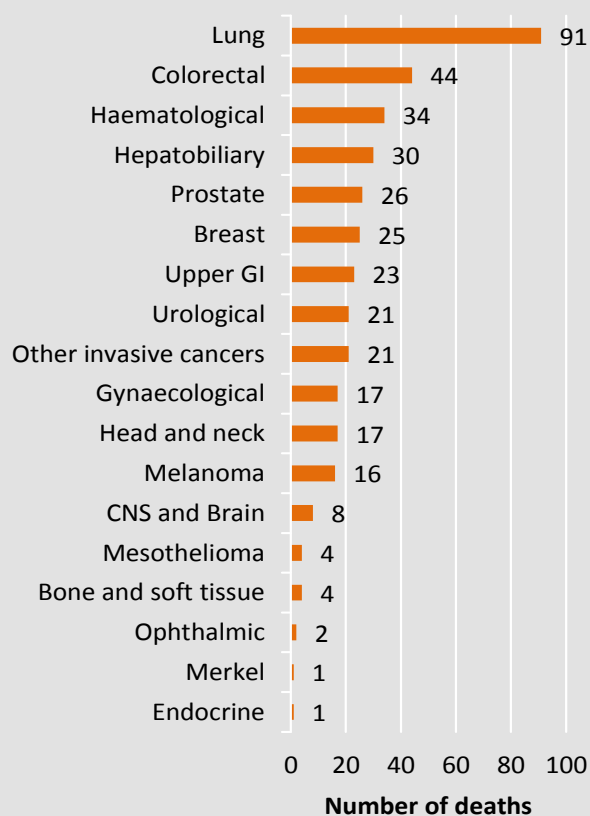


Quick statistics (2012)



Most common cancer deaths:

Central Queensland HHS, annual average, 2010-2012

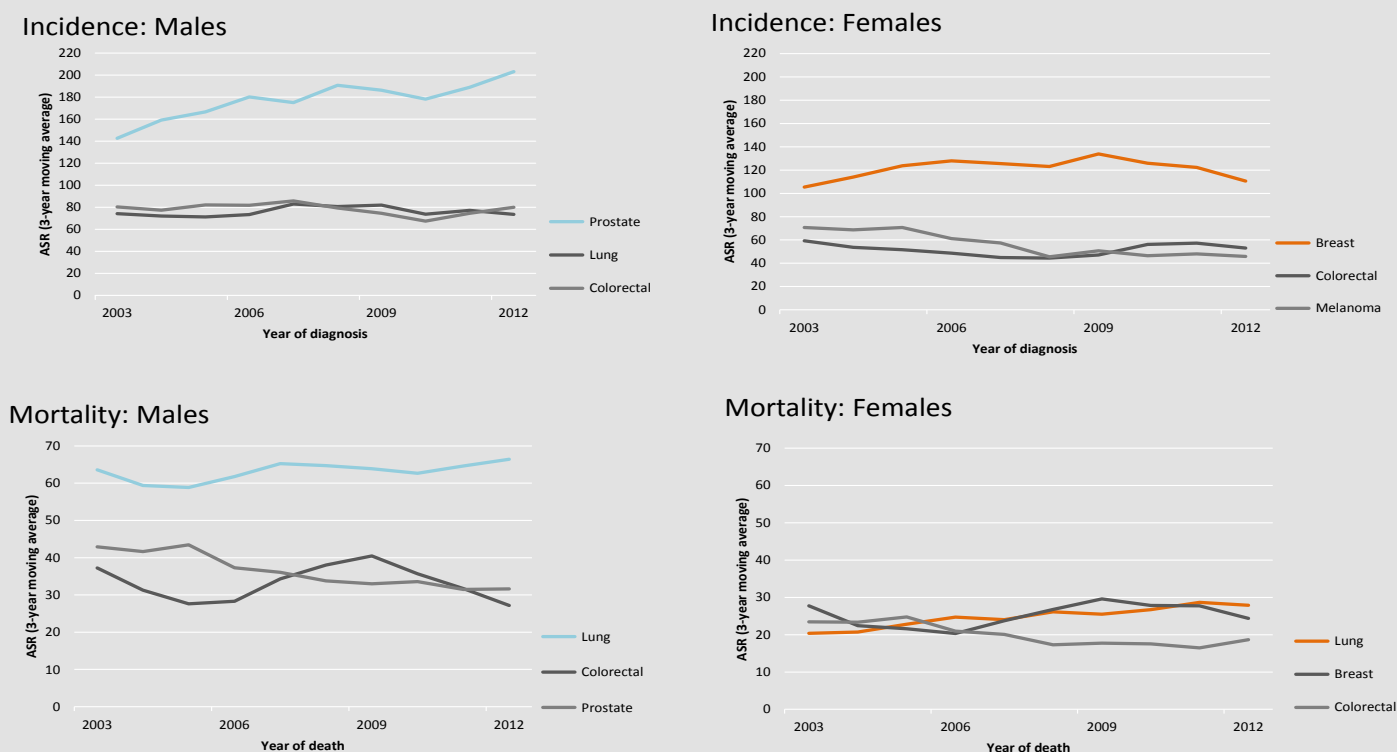


Most common cancer diagnoses:

Central Queensland HHS, annual average, 2010-2012

Cancer site	Male	Female	Total
Prostate	209		209
Colorectal	77	54	131
Breast	1	114	115
Melanoma	62	46	108
Lung	70	34	104
Haematological	60	35	94
Urological	50	21	72
Other invasive cancers	28	16	44
Hepatobiliary		17	39
Gynaecological		37	37
Head and neck	26	6	32
Upper GI	24	7	31
Endocrine	5	13	17
CNS and Brain	7	4	11
Bone and soft tissue	4	4	8
Mesothelioma	5	1	6
Merkel	2	2	4
Ophthalmic	3		3
All invasive cancers	654	411	1065

Figure 36: Trends for the most common cancers, Central Queensland HHS, 2003-2012



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Table 6: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Central Queensland HHS, 2001-2012

Cancer ⁺	Incidence				Mortality			
	Males		Females		Males		Females	
	Period	APC	Period	APC	Period §	APC	Period	APC
Prostate	2001-2012	3.3*			2001-2012	-3.4*		
Colorectal	2001-2012	-0.2	2001-2012	-1.2	2001-2004	-18.3	2001-2012	-2.8
					2004-2007	20.2		
					2007-2012	-9		
Female Breast			2001-2012	0.5			2001-2012	-1.0
Melanoma			2001-2012	-5.0*				
Lung	2001-2012	0.0			2001-2012	0.3	2001-2012	2.1

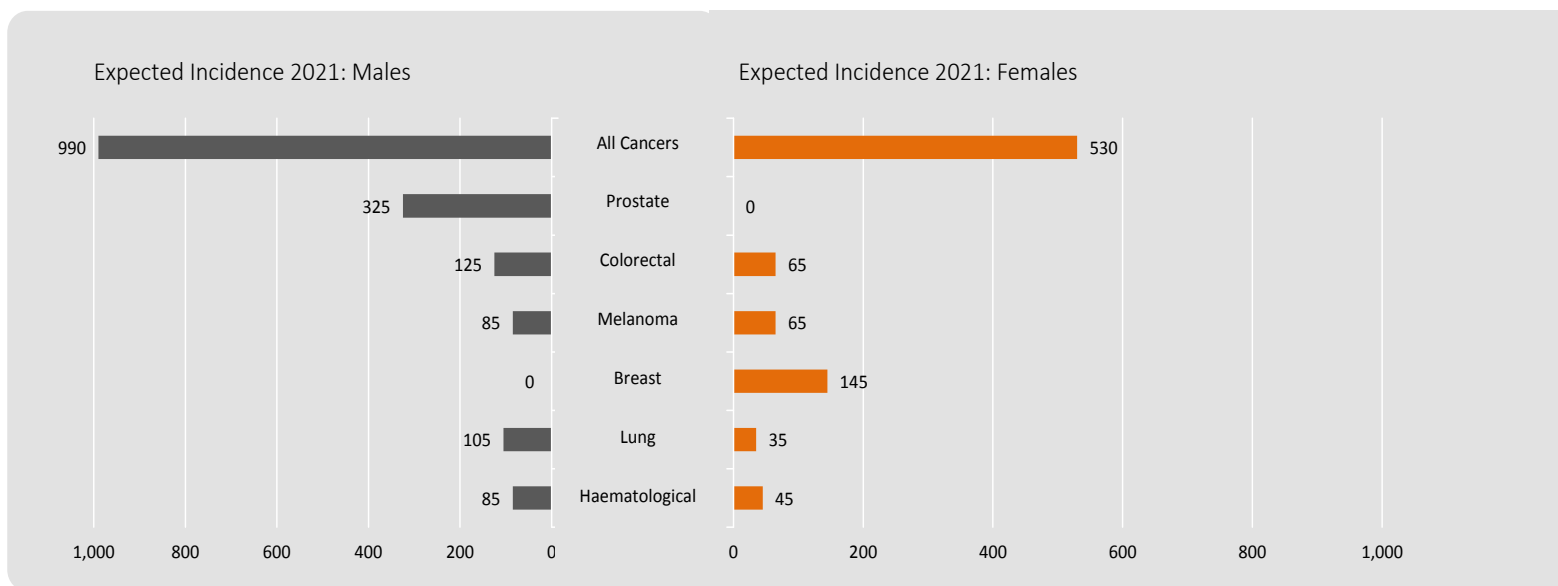
⁺ Most common cancers for males and females are listed.

^{*} Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

[§] Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire time period, the annual percentage change (APC) for the respective time periods are shown.

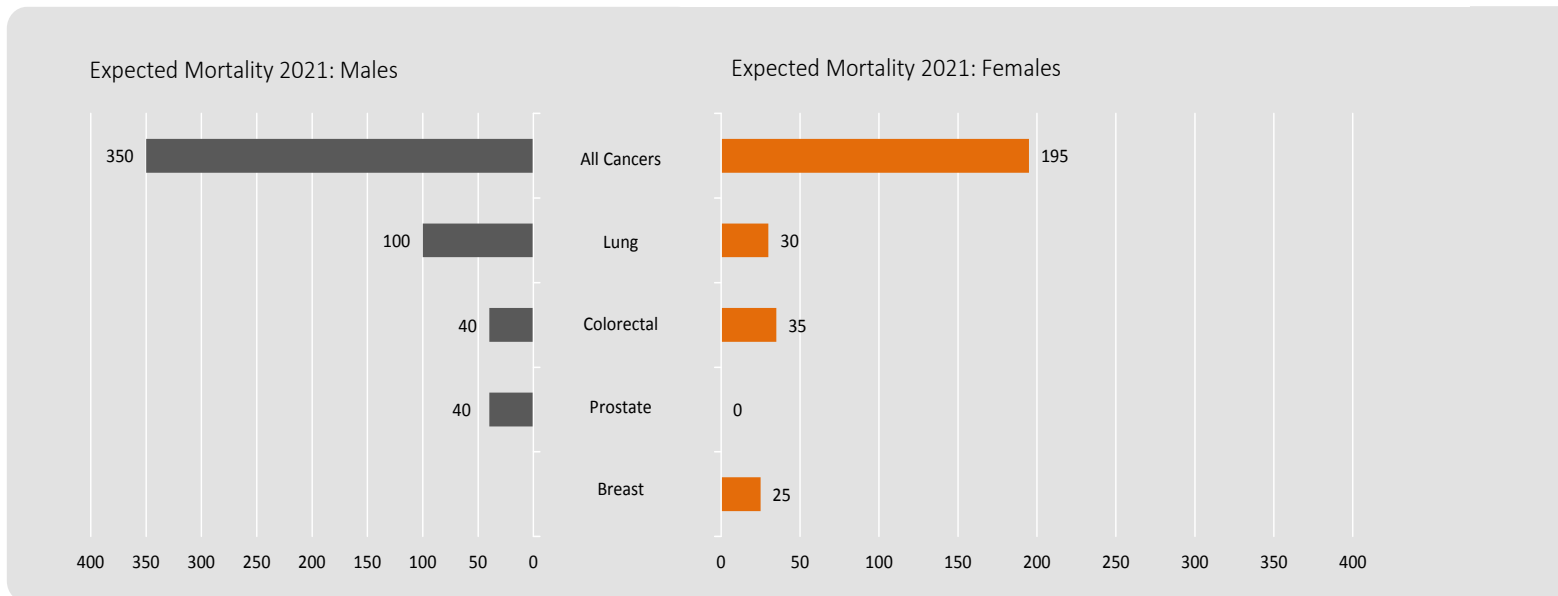
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 37: Expected cancer incidence for the most common cancers, Central Queensland HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 38: Expected cancer mortality for the most common cancers, Central Queensland HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 1,520 new cases of cancers in 2021 in the Central Queensland HHS which is a 39% increase from 2012. Over 65% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

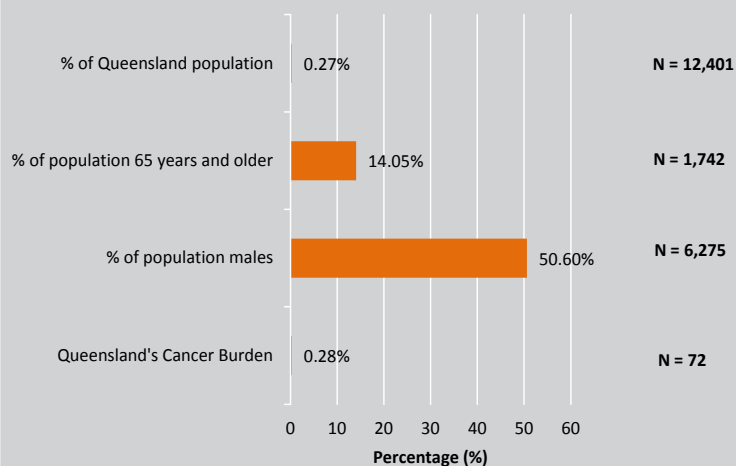
In 2021, an estimated 545 cancer deaths are expected in the Central Queensland HHS which is a 48% increase from 2012. Over 64% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death for males. For females the leading cause of death in 2021 changes to colorectal cancer with lung being the second highest cause of death.

Central West

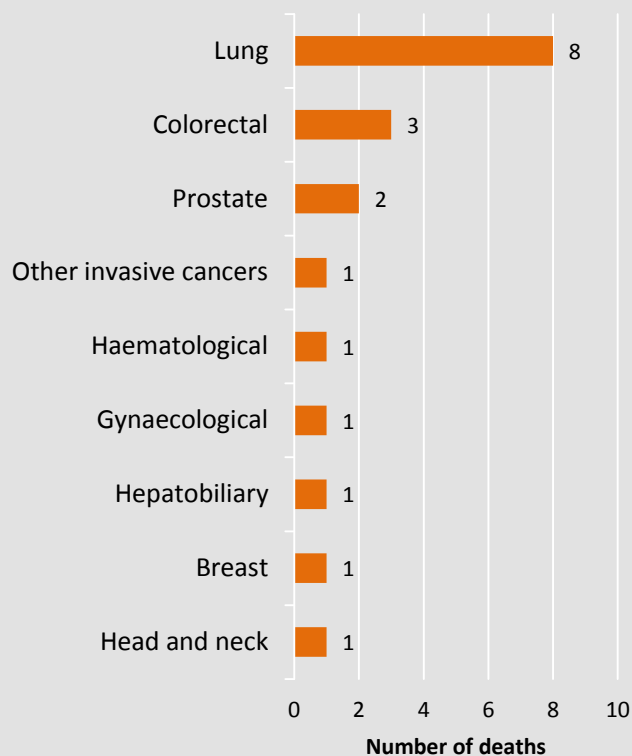
Figure 39: Central West HHS overview



Quick statistics (2012)



Most common cancer deaths: Central West HHS, annual average, 2010-2012



Most common cancer diagnoses: Central West HHS, annual average, 2010-2012

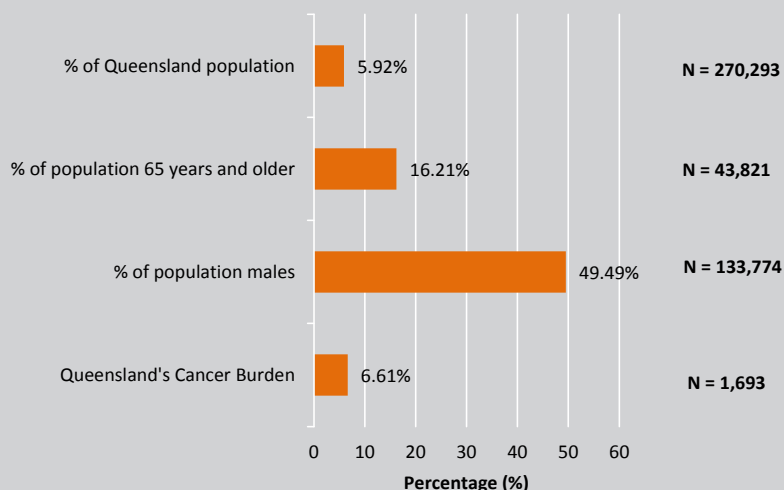
Cancer site	Male	Female	Total
Prostate	12		12
Lung	8		10
Breast		10	10
Colorectal	6	2	8
Melanoma	4	2	6
Haematological	3	3	6
Urological	3	1	4
Other invasive cancers		2	3
Gynaecological		2	2
CNS and Brain		1	1
Upper GI		1	1
Endocrine	1		1
Hepatobiliary	1		1
Head and neck	1		1
All invasive cancers	40	26	66

Darling Downs

Figure 40: Darling Downs HHS overview

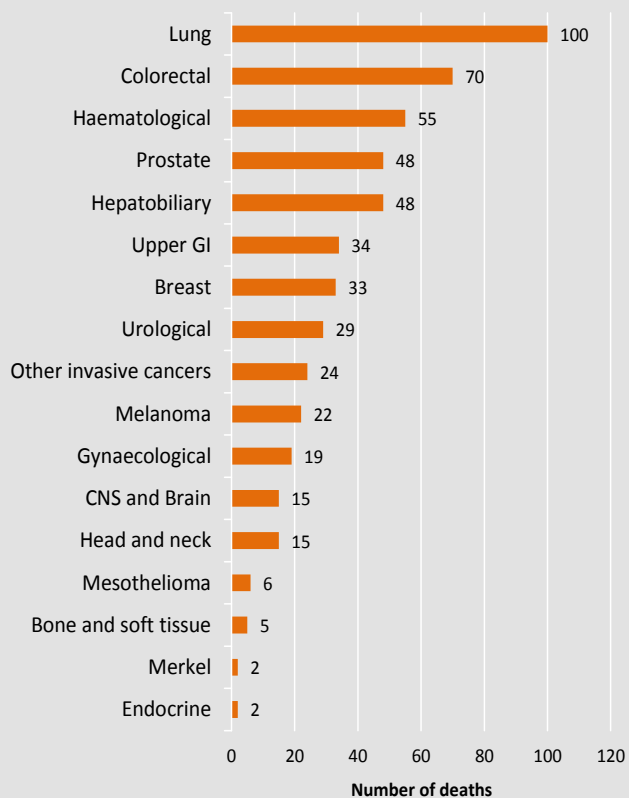


Quick statistics (2012)



Most common cancer deaths:

Darling Downs HHS, annual average, 2010-2012

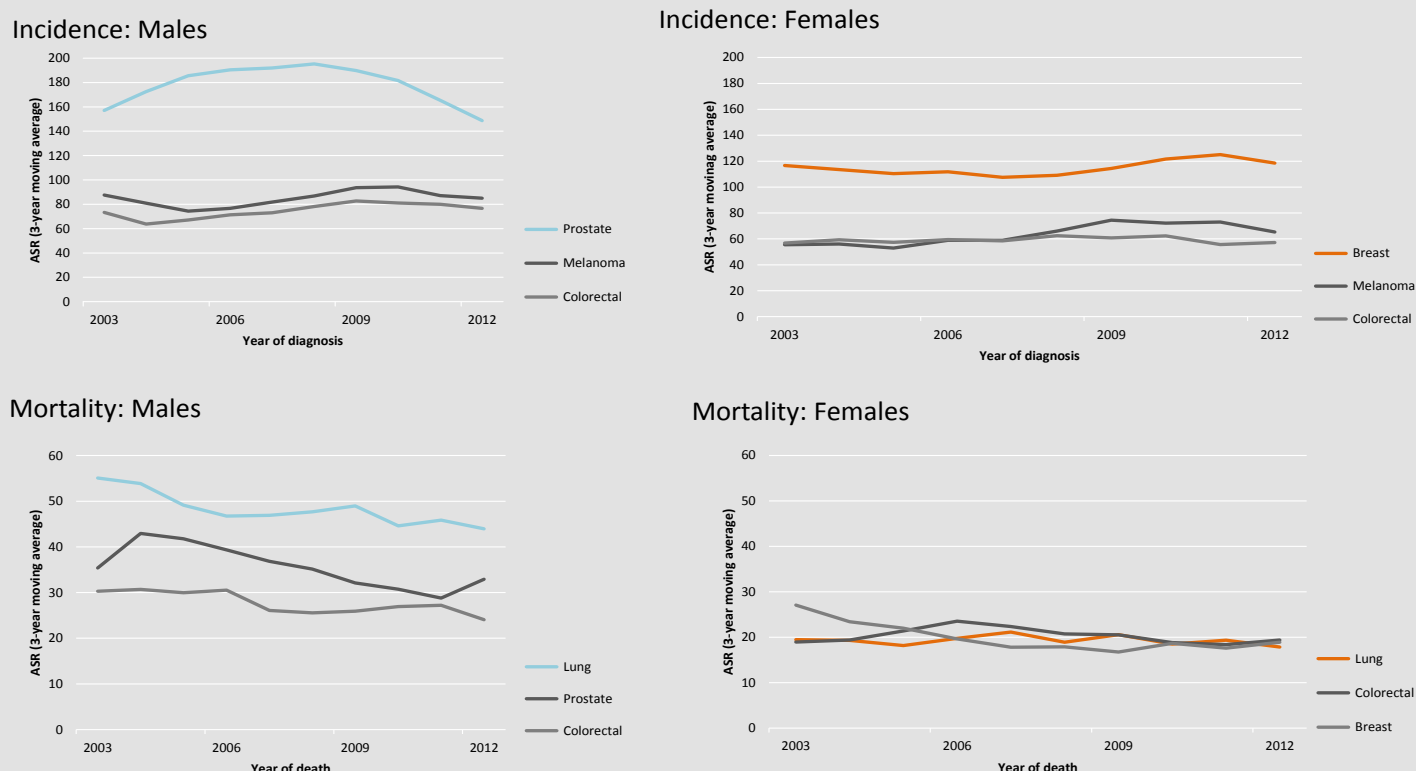


Most common cancer diagnoses:

Darling Downs HHS, annual average, 2010-2012

Cancer site	Male	Female	Total
Prostate	236		236
Melanoma	122	96	219
Colorectal	117	97	214
Breast	2	187	189
Haematological	102	71	173
Lung	81	47	127
Urological	63	24	87
Other invasive cancers	47	29	76
Hepatobiliary	32	29	61
Gynaecological		58	58
Upper GI	38	12	50
Endocrine	10	34	45
Head and neck	23	14	38
CNS and Brain	10	12	22
Bone and soft tissue	6	8	14
Merkel	5	2	7
Mesothelioma	5	2	7
Ophthalmic	3	3	6
All invasive cancers	904	724	1629

Figure 41: Trends for the most common cancers, Darling Downs HHS, 2003-2012



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Table 7: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Darling Downs HHS, 2001-2012

	Incidence				Mortality			
	Males		Females		Males		Females	
Cancer ⁺	Period §	APC	Period	APC	Period	APC	Period	APC
Prostate	2001-2006	8.5*			2001-2012	-0.7		
	2006-2012	-6.4*						
Melanoma	2001-2012	0.8	2001-2012	2.4	2001-2012	-3.0*		
Colorectal	2001-2012	1.1	2001-2012	-0.4			2001-2012	-0.2
Female Breast			2001-2012	0.3	2001-2012	-2.0*	2001-2012	-4.0*
Lung							2001-2012	-0.2

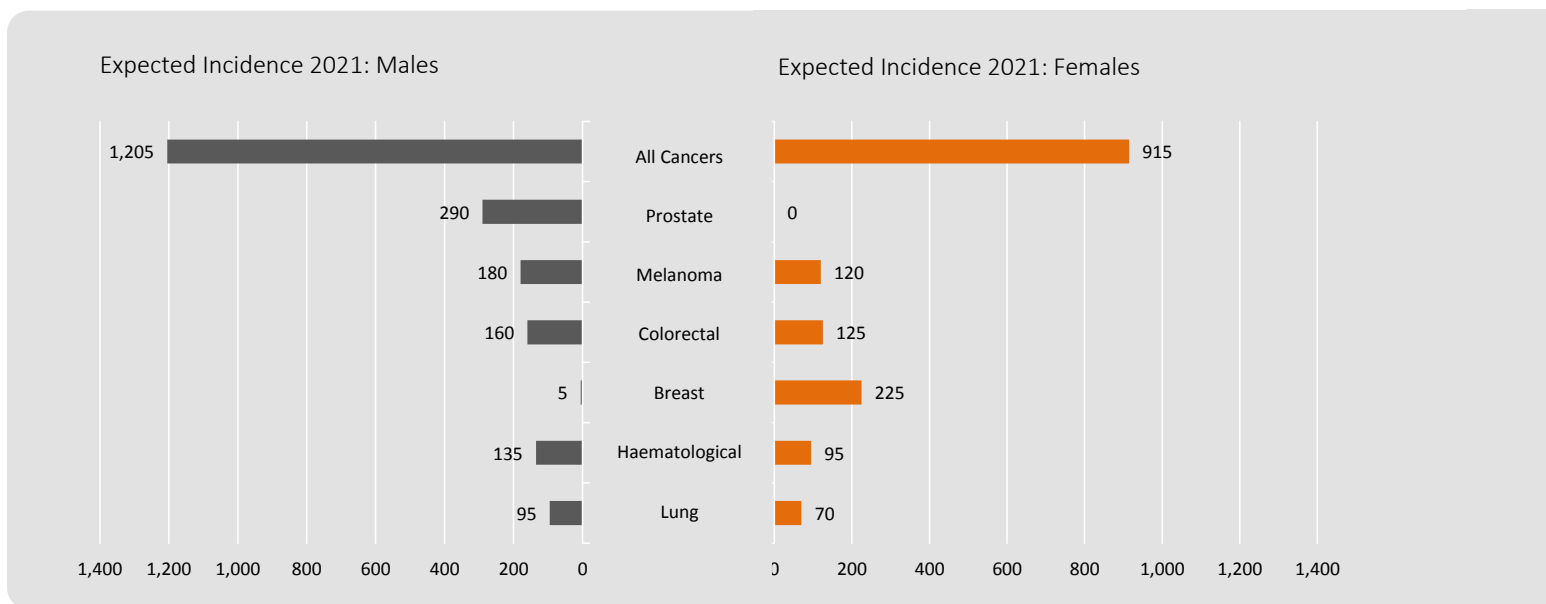
+ Most common cancers for males and females are listed.

* Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

§ Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire time period, the annual percentage change (APC) for the respective time periods are shown.

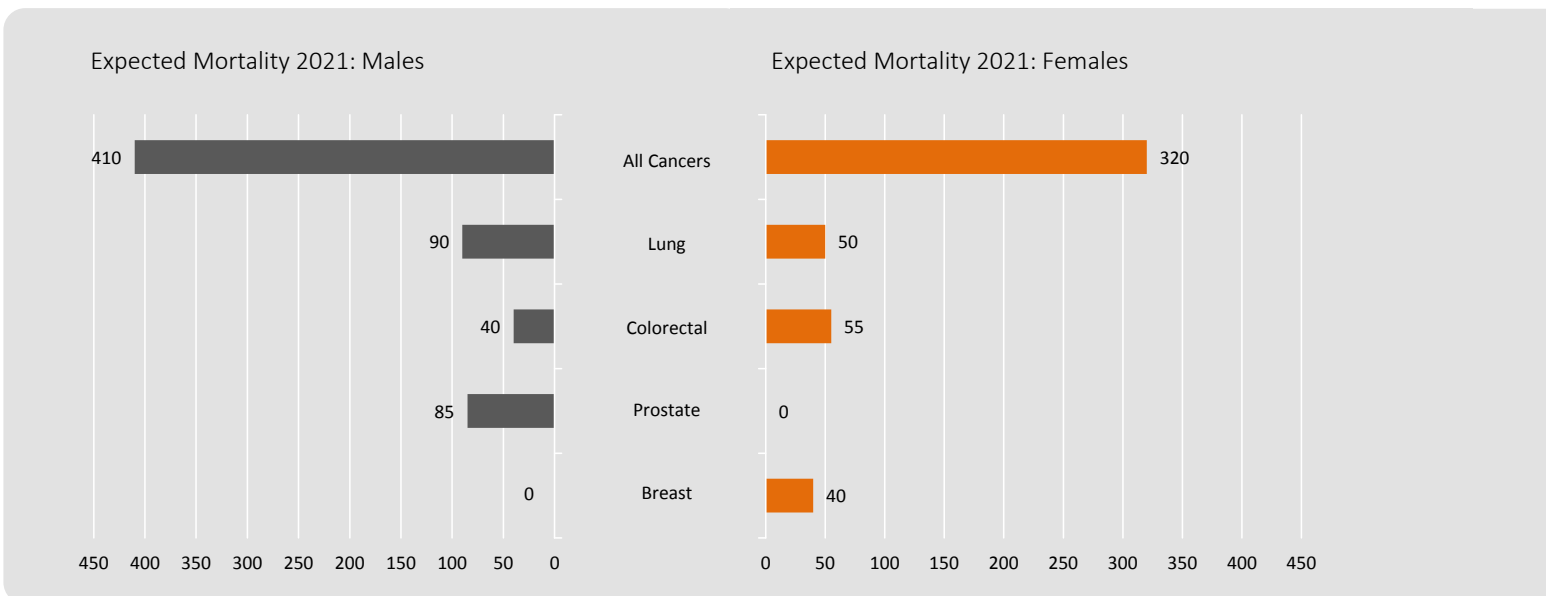
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 42: Expected cancer incidence for the most common cancers, Darling Downs HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 43: Expected cancer mortality for the most common cancers, Darling Downs HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 2,120 new cases of cancers in 2021 in the Darling Downs HHS which is a 25% increase from 2012. Over 56% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

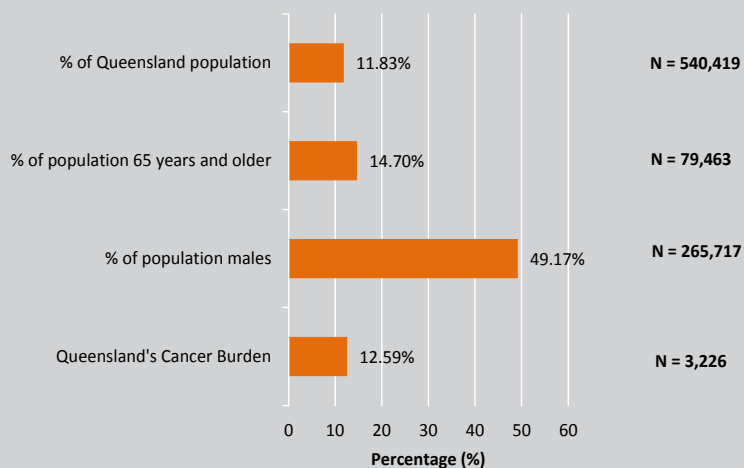
In 2021, an estimated 730 cancer deaths are expected in the Darling Downs HHS which is a 33% increase from 2012. Over 56% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death for males. For females the leading cause of death in 2021 changes to colorectal cancer with lung being the second highest cause of death.

Gold Coast

Figure 44: Gold Coast HHS overview

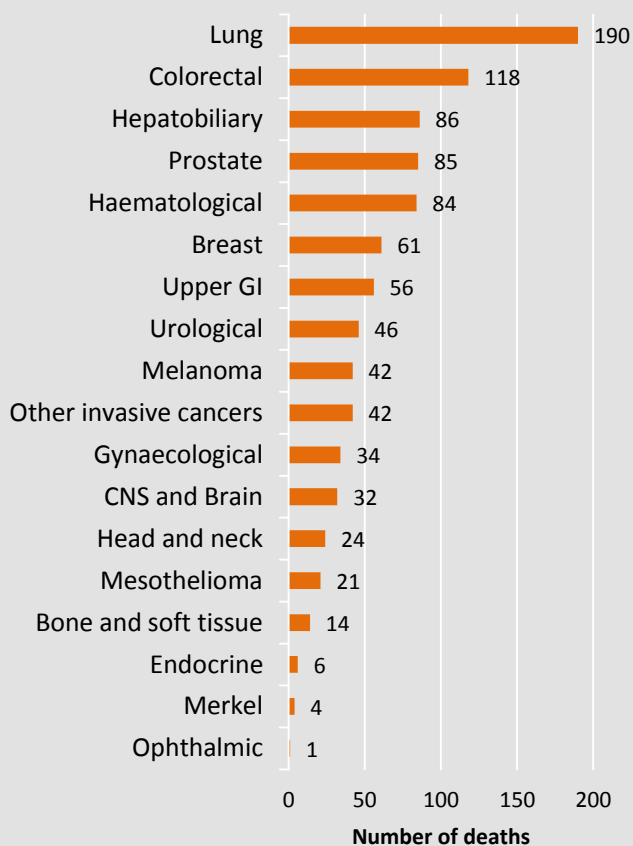


Quick statistics (2012)



Most common cancer deaths:

Gold Coast HHS, annual average, 2010-2012



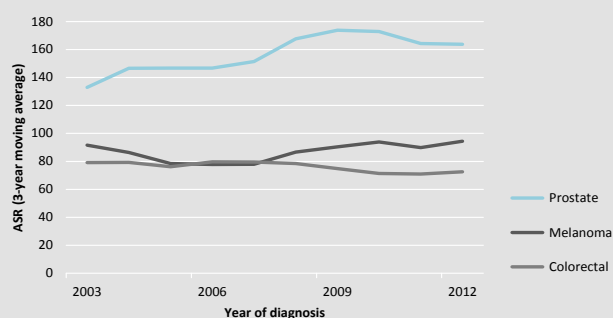
Most common cancer diagnoses:

Gold Coast HHS, annual average, 2010-2012

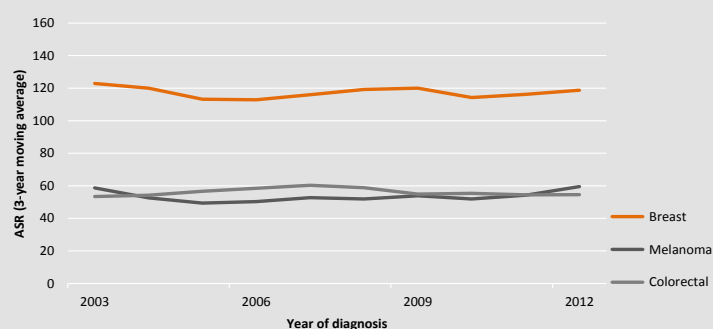
Cancer site	Male	Female	Total
Prostate	481		481
Melanoma	263	177	440
Colorectal	204	174	378
Breast		362	362
Haematological	176	113	289
Lung	148	106	254
Urological	117	43	160
Gynaecological		116	116
Hepatobiliary	69	46	115
Other invasive cancers	63	35	98
Upper GI	63	28	91
Head and neck	67	21	88
Endocrine	11	37	48
CNS and Brain	21	18	39
Bone and soft tissue	18	13	31
Mesothelioma	19	4	23
Merkel	7	3	11
Ophthalmic	3	3	6
All invasive cancers	1731	1298	3030

Figure 45: Trends for the most common cancers, Gold Coast HHS, 2003-2012

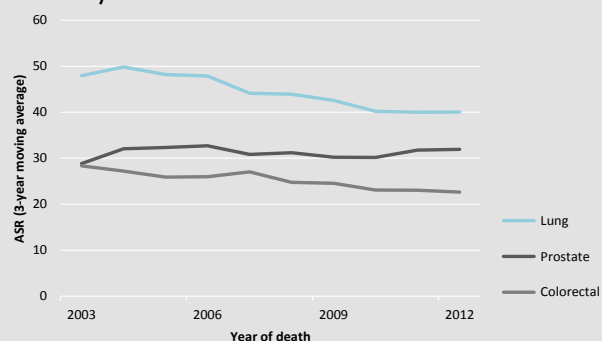
Incidence: Males



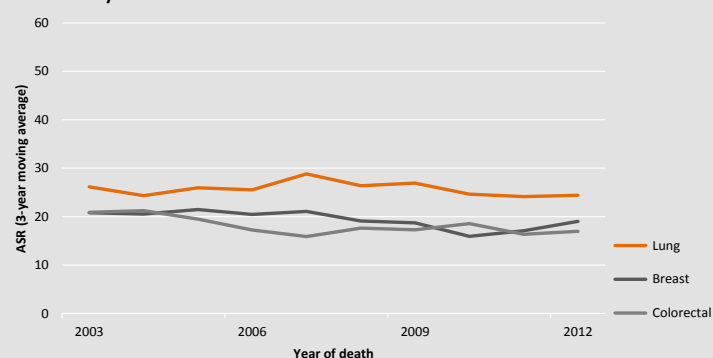
Incidence: Females



Mortality: Males



Mortality: Females



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Table 8: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Gold Coast HHS, 2001-2012

Cancer ⁺	Incidence				Mortality			
	Males		Females		Males		Females	
	Period §	APC	Period §	APC	Period	APC	Period	APC
Prostate	2001-2012	3.1*			2001-2012	0.6		
Melanoma	2001-2005	-6.0	2001-2003	-19.1				
	2005-2012	4.0*	2003-2012	2.9				
Colorectal	2001-2012	-1.3	2001-2012	0.0	2001-2012	-2.3*	2001-2012	-2.4
Female Breast			2001-2012	-0.2			2001-2012	-1.3
Lung					2001-2012	-2.2*	2001-2012	-0.4

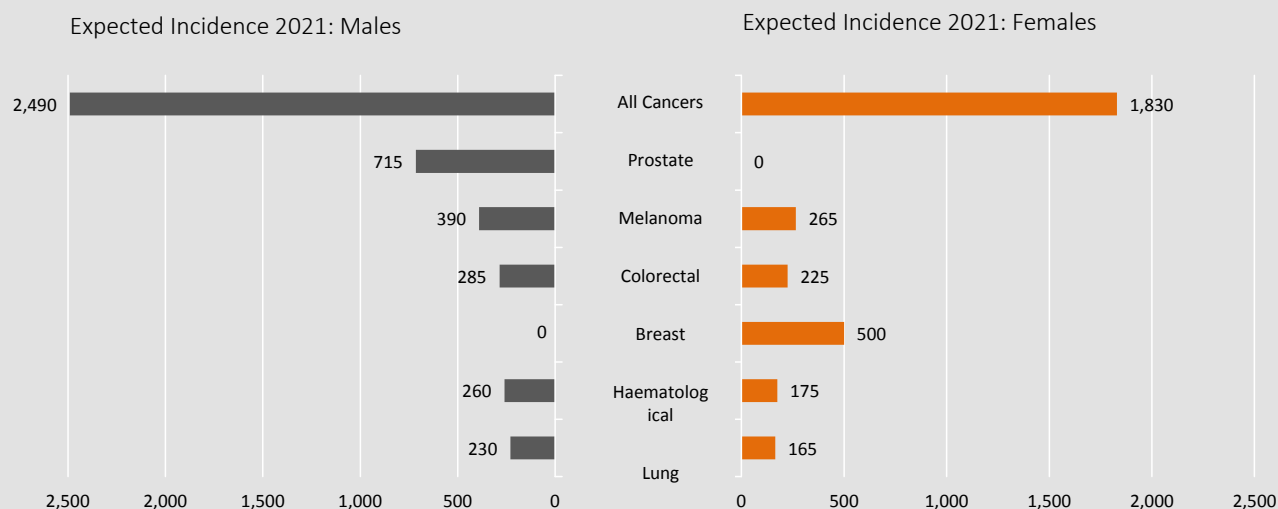
⁺ Most common cancers for males and females are listed.

^{*} Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

[§] Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire period, the annual percentage change (APC) for the respective time periods are shown.

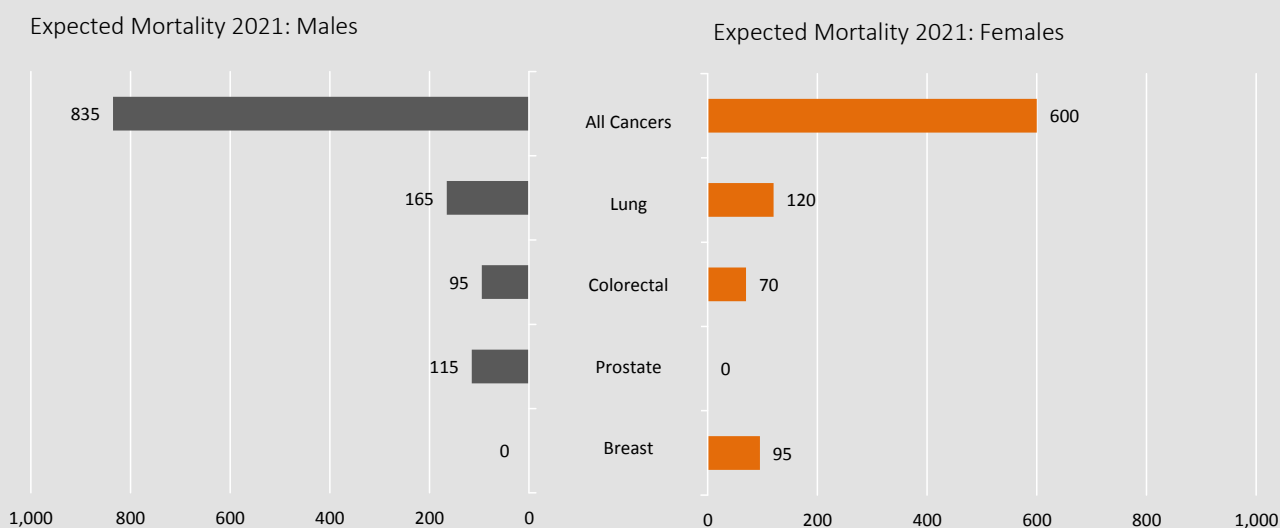
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 46: Expected cancer incidence for the most common cancers, Gold Coast HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 47: Expected cancer mortality for the most common cancers, Gold Coast HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 4,320 new cases of cancers in 2021 in the Gold Coast HHS which is a 34% increase from 2012. Over 57% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

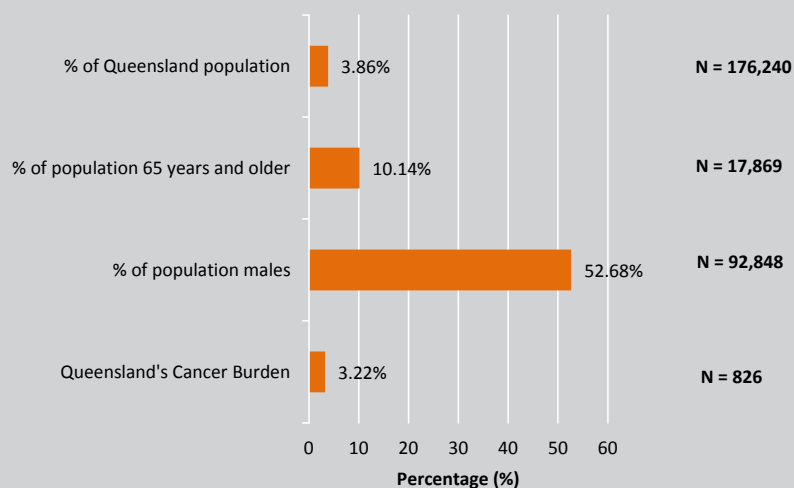
In 2021, an estimated 1,435 cancer deaths are expected in the Gold Coast HHS which is a 39% increase from 2012. About 58% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death in both sexes.

Mackay

Figure 48: Mackay HHS overview

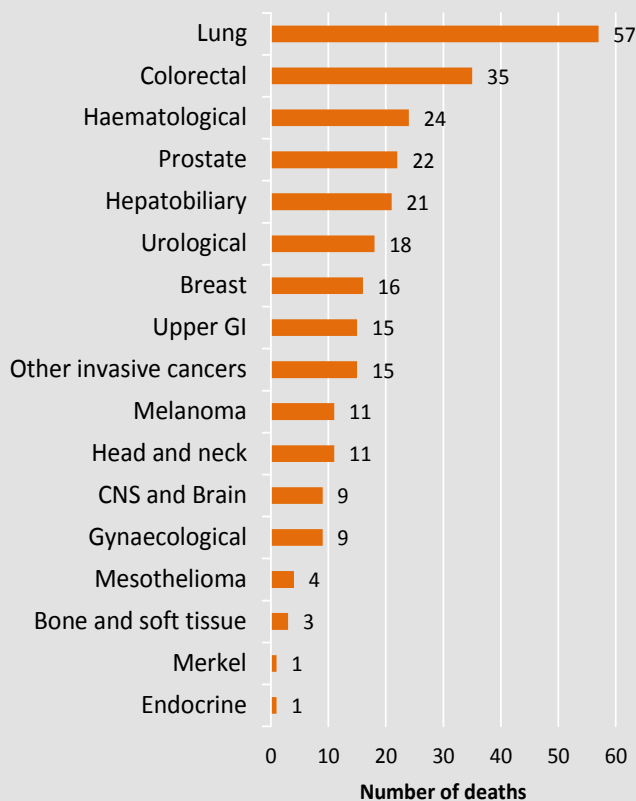


Quick statistics (2012)



Most common cancer deaths:

Mackay HHS, annual average, 2010-2012



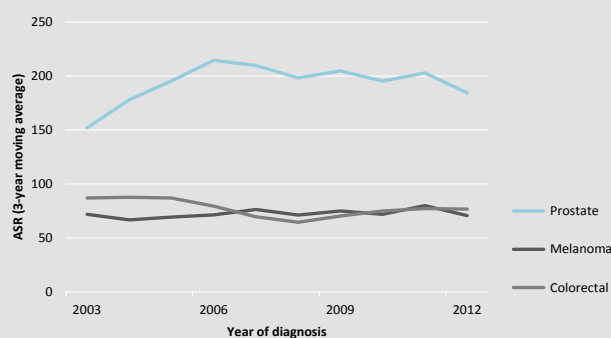
Most common cancer diagnoses:

Mackay HHS, annual average, 2010-2012

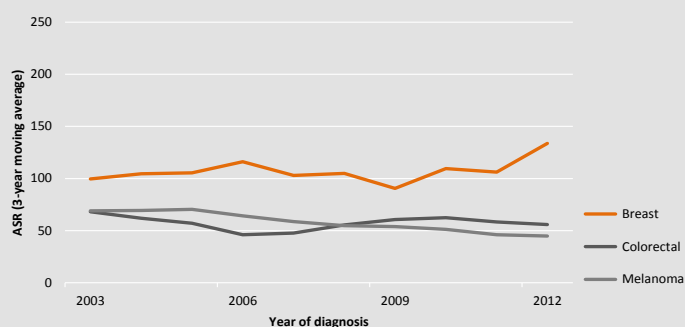
Cancer site	Male	Female	Total
Prostate	151		151
Breast	1	106	107
Colorectal	58	41	100
Melanoma	57	35	92
Haematological	46	25	71
Lung	39	23	62
Urological	35	10	45
Gynaecological		35	35
Head and neck		6	30
Other invasive cancers	19	11	30
Hepatobiliary	14	8	22
Upper GI	15	6	21
Endocrine	6	11	17
CNS and Brain	7	4	11
Bone and soft tissue	4	3	6
Mesothelioma	4	1	5
Merkel	3	1	4
Ophthalmic	2		3
All invasive cancers	486	326	812

Figure 49: Trends for the most common cancers, Mackay HHS, 2003-2012

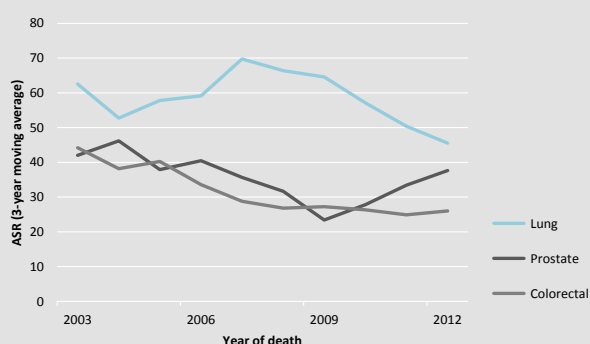
Incidence: Males



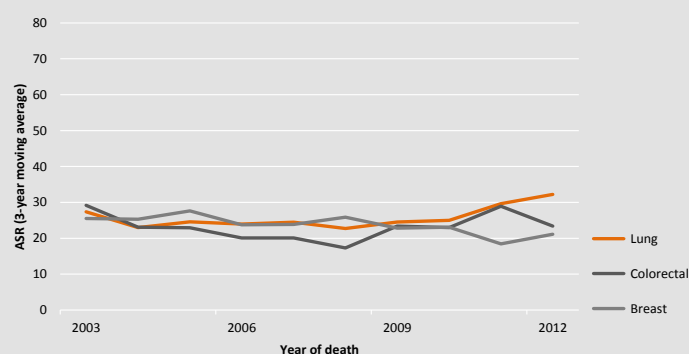
Incidence: Females



Mortality: Males



Mortality: Females



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

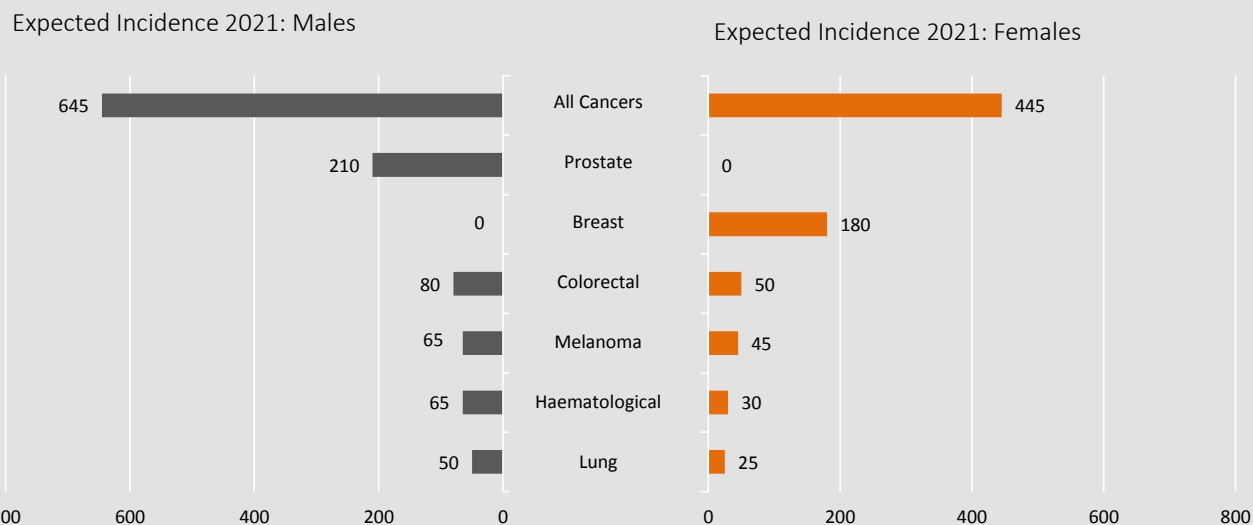
Table 9: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Mackay HHS, 2001-2012

Cancer ⁺	Incidence				Mortality			
	Males		Females		Males		Females	
	Period §	APC	Period	APC	Period	APC	Period	APC
Prostate	2001-2004	16.4			2001-2012	-3.2		
	2004-2012	-1.4						
Colorectal	2001-2012	-1.9	2001-2012	-1.2	2001-2012	-5.0*	2001-2012	-1.5
Melanoma	2001-2012	-0.1	2001-2012	-4.7*				
Female Breast			2001-2012	2.5			2001-2012	-2.1
Lung					2001-2012	-3.6	2001-2012	1.8

⁺ Most common cancers for males and females are listed.^{*} Bold figures with asterisk indicate a significant change (increase or decrease) in APC.[§] Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire period, the annual percentage change (APC) for the respective time periods are shown.

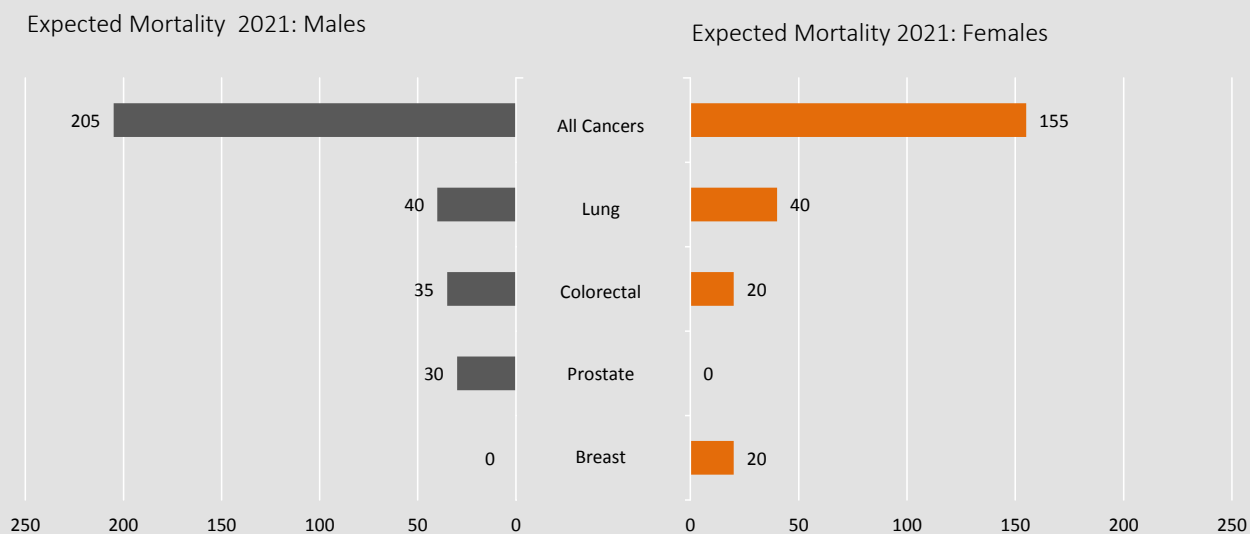
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 50: Expected cancer incidence for the most common cancers, Mackay HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 51: Expected cancer mortality for the most common cancers, Mackay HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 1,090 new cases of cancers in 2021 in the Mackay HHS which is a 32% increase from 2012. About 60% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

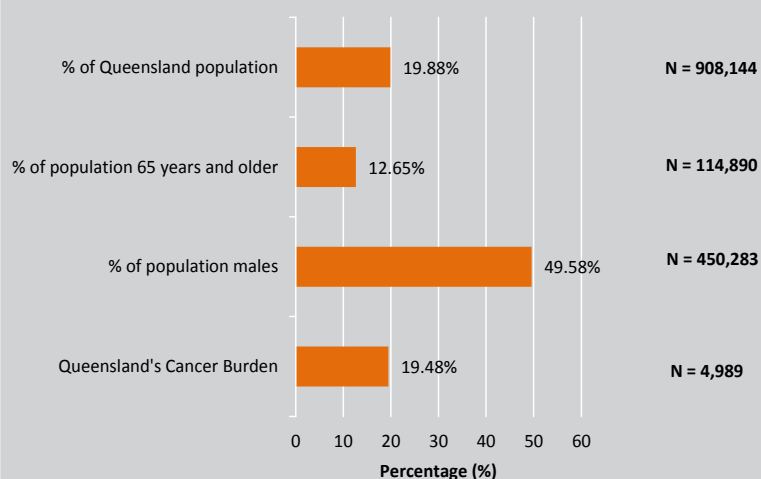
In 2021, an estimated 360 cancer deaths are expected in the Mackay HHS which is a 38% increase from 2012. Over 56% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death for both sexes.

Metro North

Figure 52: Metro North HHS overview

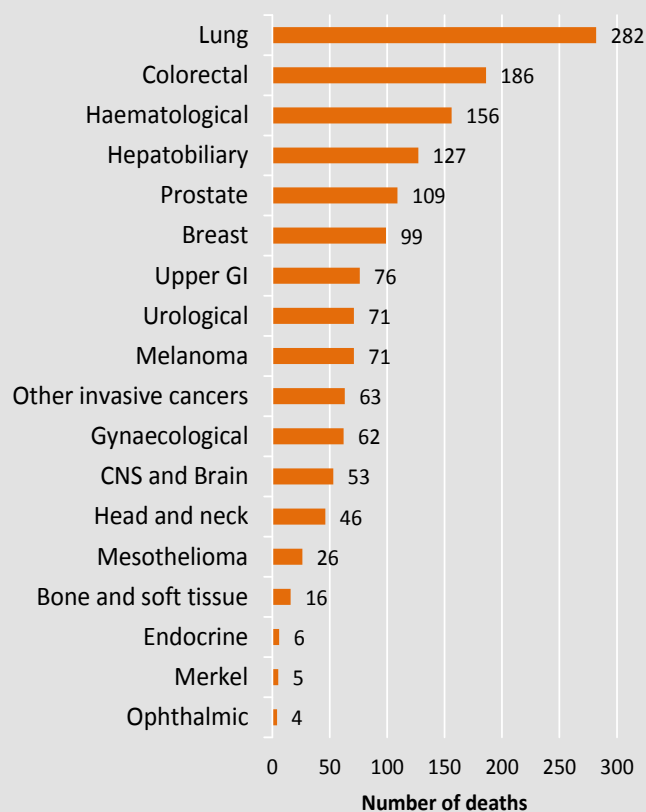


Quick statistics (2012)



Most common cancer deaths:

Metro North HHS, annual average, 2010-2012



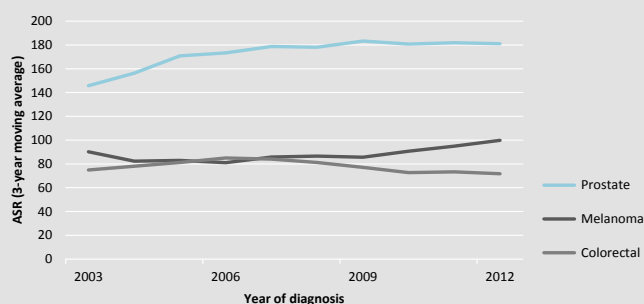
Most common cancer diagnoses:

Metro North HHS, annual average, 2010-2012

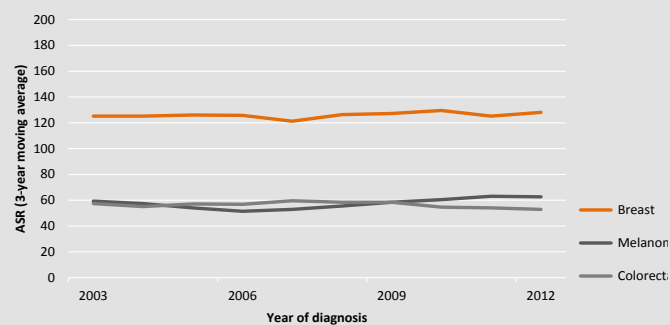
Cancer site	Male	Female	Total
Prostate	782		782
Melanoma	421	295	716
Breast	7	600	606
Colorectal	290	258	548
Haematological	276	202	478
Lung	234	154	388
Urological	185	81	266
Gynaecological		195	195
Other invasive cancers	104	66	170
Hepatobiliary	95	66	160
Upper GI	91	42	132
Head and neck	94	33	127
Endocrine	31	83	114
CNS and Brain	38	31	69
Bone and soft tissue	24	15	39
Mesothelioma	25	6	30
Merkel	11	7	18
Ophthalmic	6	4	10
All invasive cancers	2713	2136	4849

Figure 53: Trends for the most common cancers, Metro North HHS, 2003-2012

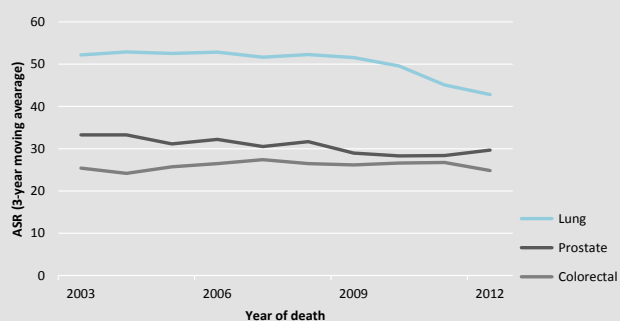
Incidence: Males



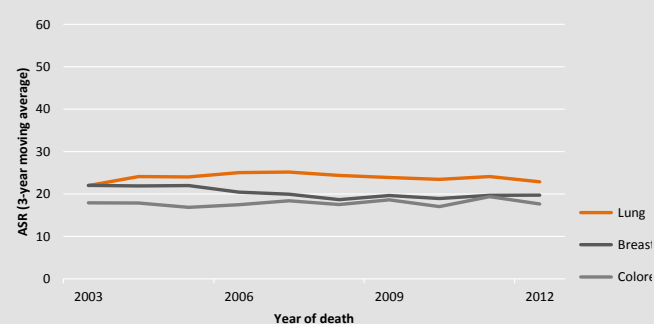
Incidence: Females



Mortality: Males



Mortality: Females



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

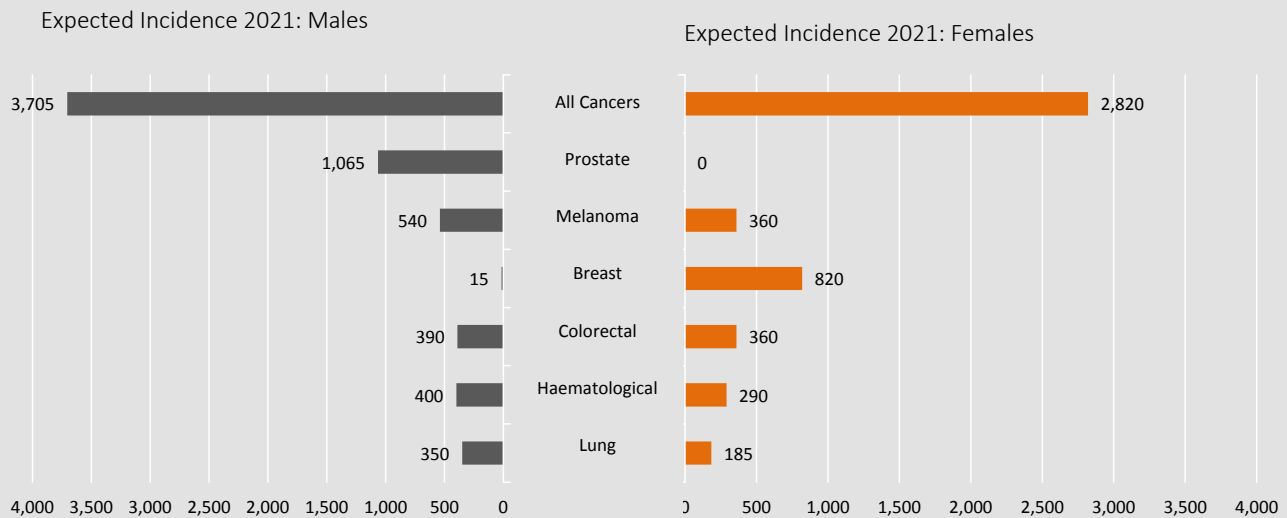
Table 10: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Metro North HHS, 2001-2012

Cancer ⁺	Incidence				Mortality			
	Males		Females		Males		Females	
	Period §	APC	Period	APC	Period §	APC	Period	APC
Prostate	2001-2005	6.9*			2001-2012			
	2005-2012	0.2						
Melanoma	2001-2012	1.1	2001-2012	1.1				
Female Breast			2001-2012	0.3			2001-2012	-1.5
Colorectal	2001-2012	-1.0	2001-2012	-0.5	2001-2012	-0.9	2001-2012	-0.3
Lung					2001-2008	-0.1	2001-2012	0.1
					2008-2012	-6.2*		

⁺ Most common cancers for males and females are listed.^{*} Bold figures with asterisk indicate a significant change (increase or decrease) in APC.[§] Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire time period, the annual percentage change (APC) for the respective time periods are shown.

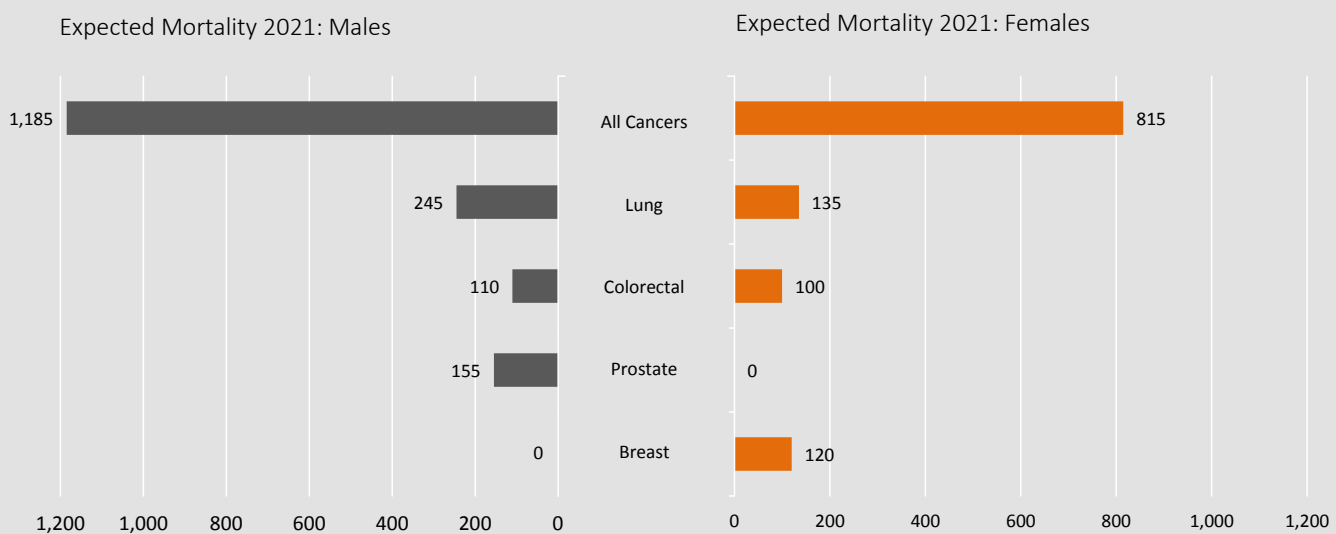
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 54: Expected cancer incidence for the most common cancers, Metro North HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 55: Expected cancer mortality for the most common cancers, Metro North HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 6,525 new cases of cancers in 2021 in the Metro North HHS which is a 30% increase from 2012. Over 56% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

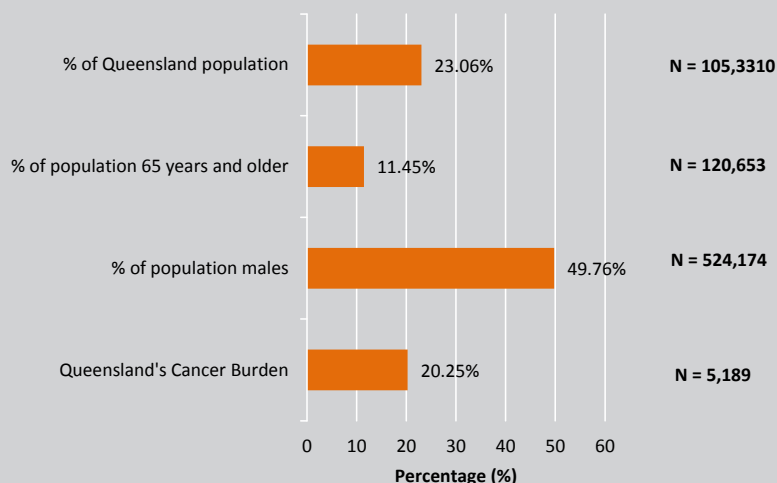
In 2021, an estimated 2,000 cancer deaths are expected in the Metro North HHS which is a 35% increase from 2012. About 60% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death in both sexes.

Metro South

Figure 56: Metro South HHS overview

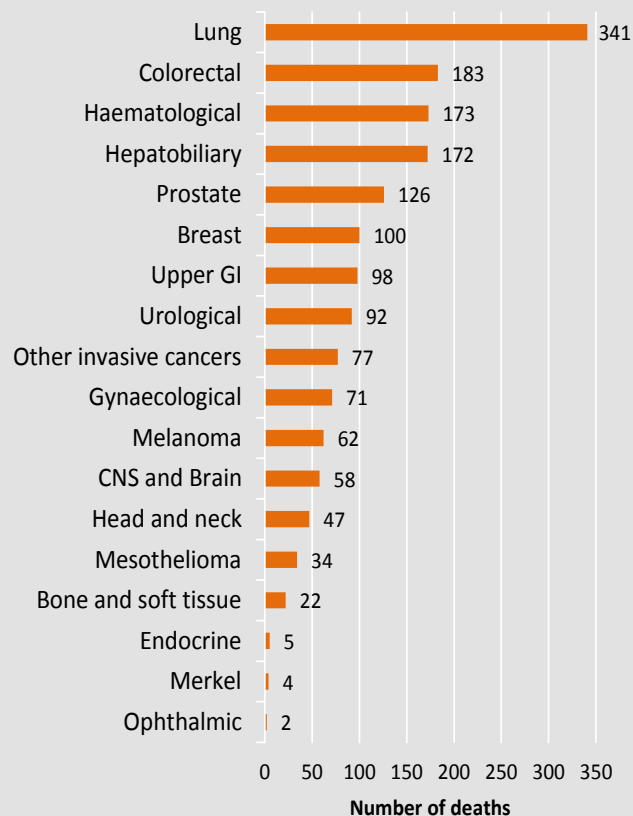


Quick statistics (2012)



Most common cancer deaths:

Metro South HHS, annual average, 2010-2012



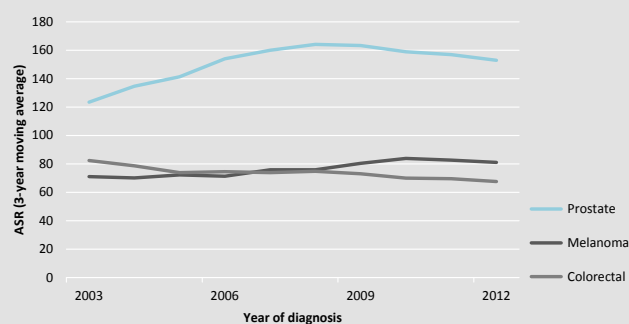
Most common cancer diagnoses:

Metro South HHS, annual average, 2010-2012

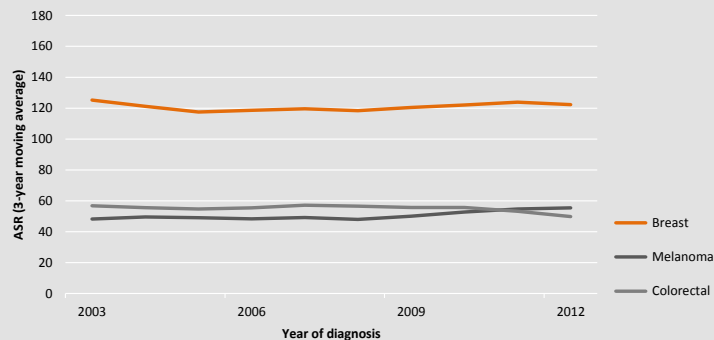
Cancer site	Male	Female	Total
Prostate	725		725
Melanoma	382	293	675
Breast	3	639	643
Colorectal	302	259	561
Haematological	300	213	513
Lung	267	177	444
Urological	214	82	296
Gynaecological		238	238
Hepatobiliary	112	95	207
Other invasive cancers	102	72	174
Upper GI	104	63	168
Head and neck	98	35	133
Endocrine	36	94	130
CNS and Brain	45	30	75
Bone and soft tissue	24	24	48
Mesothelioma	32	7	39
Merkel	8	6	14
Ophthalmic	6	1	7
All invasive cancers	2761	2328	5089

Figure 57: Trends for the most common cancers, Metro South HHS, 2003-2012

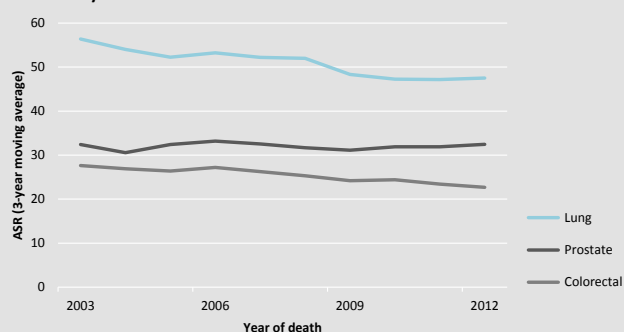
Incidence: Males



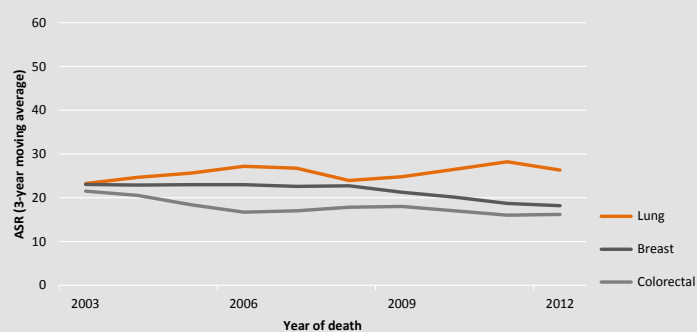
Incidence: Females



Mortality: Males



Mortality: Females



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Table 11: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Metro South HHS, 2001-2012

	Incidence				Mortality			
	Males		Females		Males		Females	
Cancer ⁺	Period §	APC	Period §	APC	Period	APC	Period	APC
Prostate	2001-2006	7.5*			2001-2012	-0.3		
	2006-2012	-1.4						
Melanoma	2001-2012	2.0*	2001-2012	1.4				
Female Breast			2001-2012	0.0			2001-2012	-2.5*
Colorectal	2001-2012	-2.1*	2001-2010	-0.2	2001-2012	-2.0*	2001-2012	-2.8*
			2010-2012	-11.8*				
Lung					2001-2012	-2.2*	2001-2012	1.3

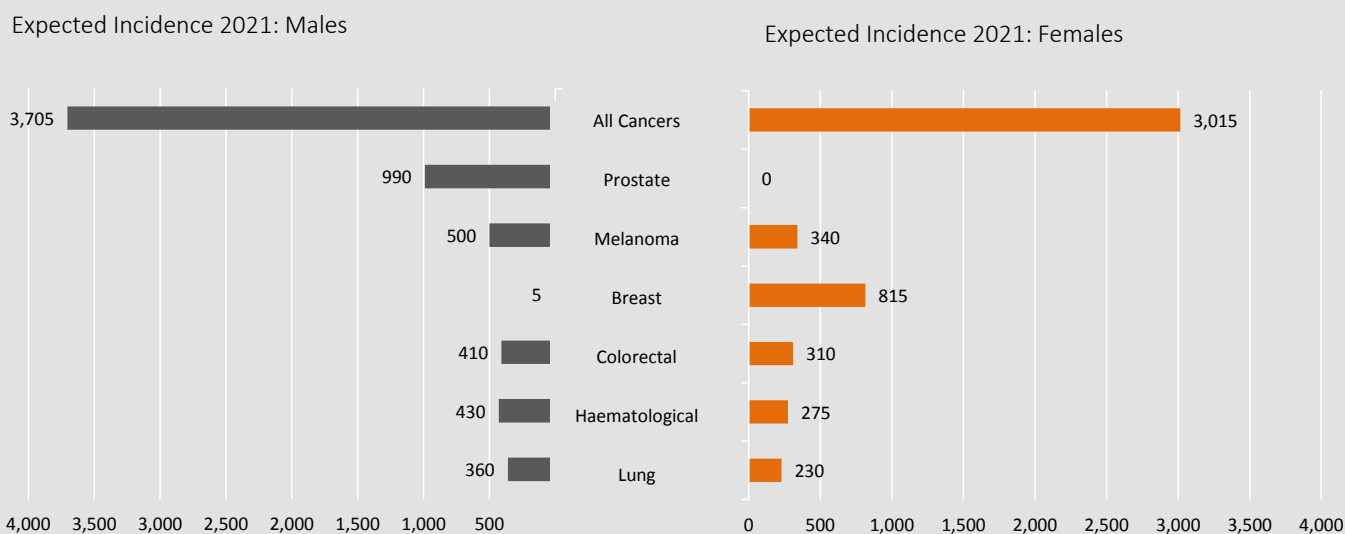
⁺ Most common cancers for males and females are listed.

^{*} Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

§ Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire period, the annual percentage change (APC) for the respective time periods are shown.

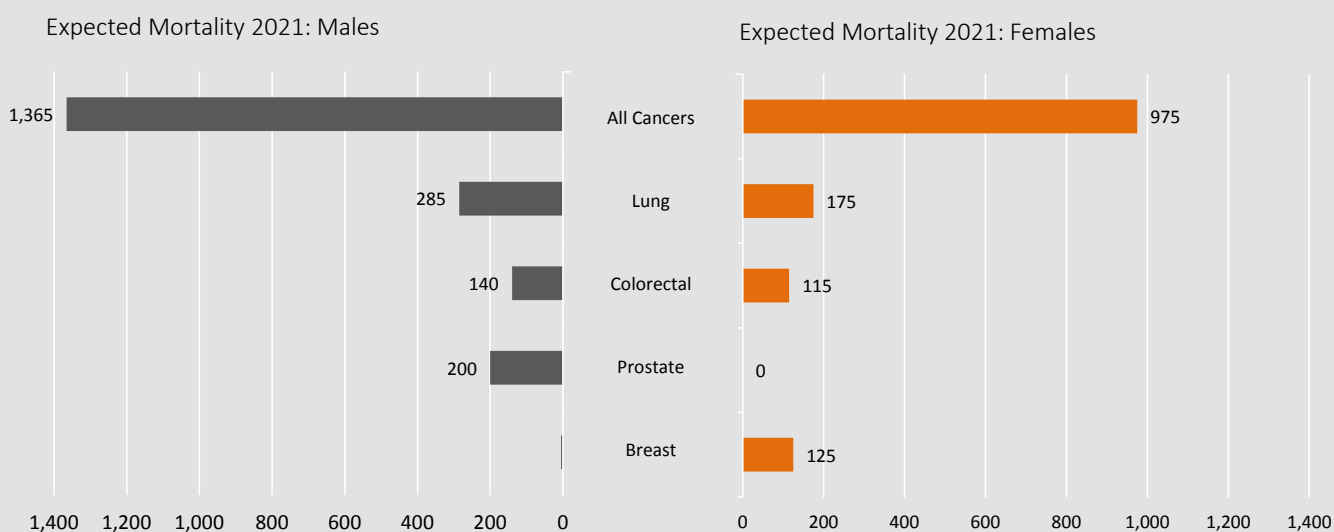
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 58: Expected cancer incidence for the most common cancers, Metro South HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 59: Expected cancer mortality for the most common cancers, Metro South HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 6,720 new cases of cancers in 2021 in the Metro South HHS which is a 30% increase from 2012. Over 55% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

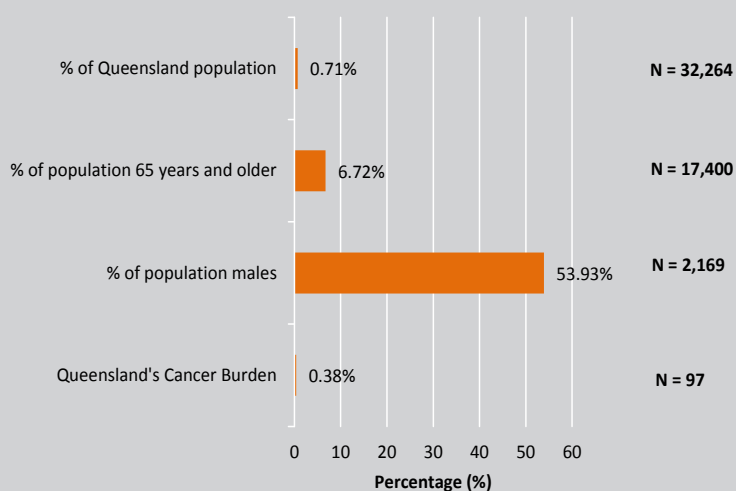
In 2021, an estimated 2,340 cancer deaths are expected in the Metro South HHS which is a 35% increase from 2012. Over 58% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death for both sexes.

North West

Figure 60: North West HHS overview

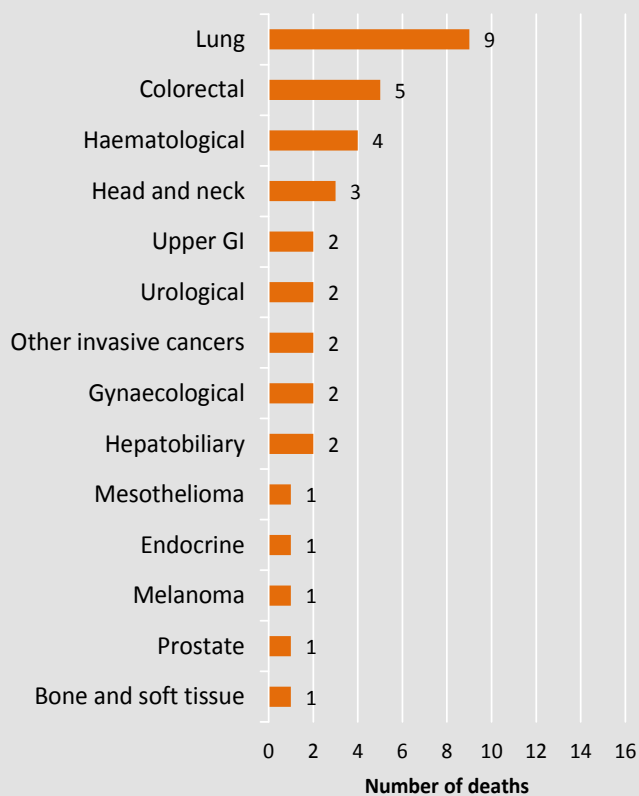


Quick statistics (2012)



Most common cancer deaths:

North West HHS, annual average, 2010-2012



Most common cancer diagnoses:

North West HHS, annual average, 2010-2012

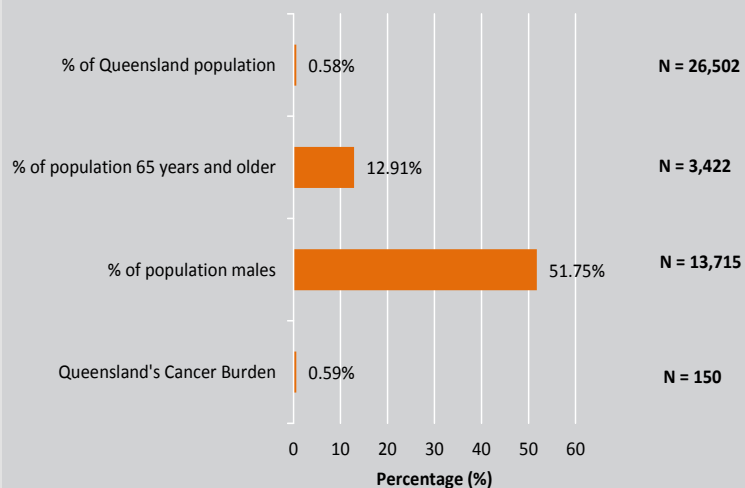
Cancer site	Male	Female	Total
Prostate	17		17
Colorectal	10	5	15
Lung	7	4	11
Breast		10	10
Haematological		2	8
Melanoma	5	2	7
Gynaecological		6	6
Urological	3	2	5
Head and neck	4		5
Hepatobiliary	3	1	4
Other invasive cancers	3	2	4
Upper GI	3	1	3
Endocrine	1	2	2
CNS and Brain			1
Mesothelioma	1		1
Bone and soft tissue	1	1	1
All invasive cancers	62	39	101

South West

Figure 61: South West HHS overview

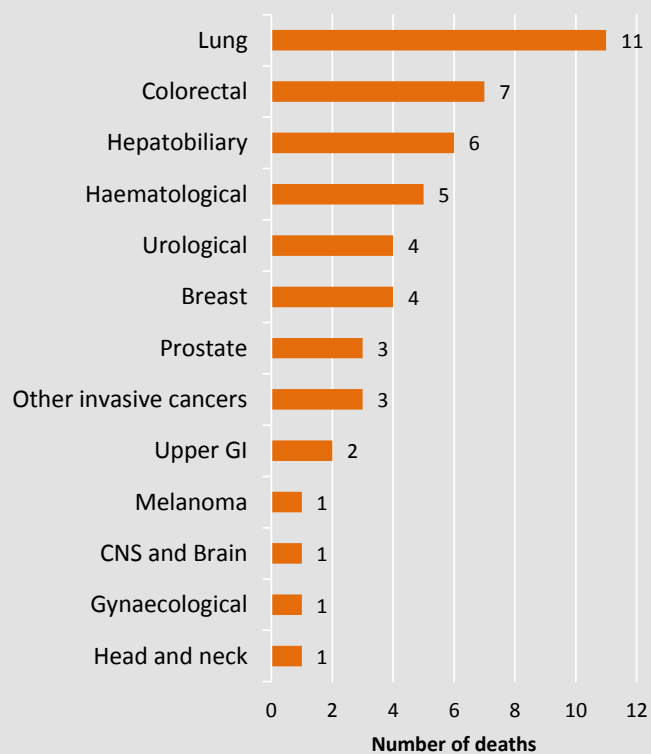


Quick statistics (2012)



Most common cancer deaths:

South West HHS, annual average, 2010-2012



Most common cancer diagnoses:

South West HHS, annual average, 2010-2012

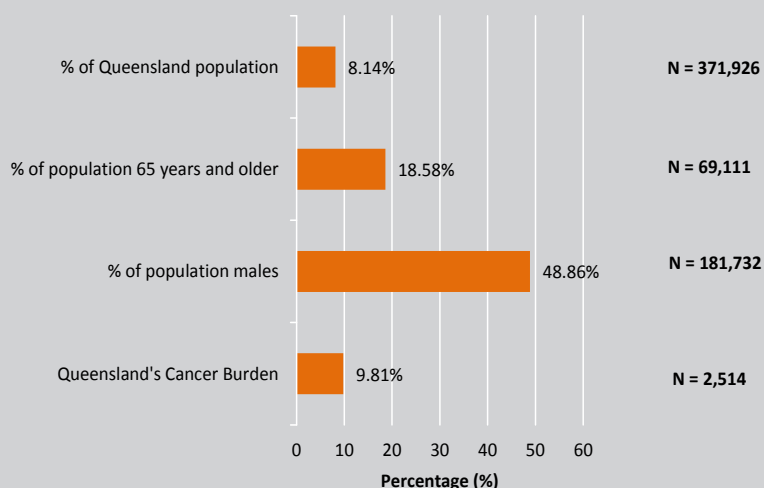
Cancer site	Male	Female	Total
Prostate	22		22
Colorectal	10	8	18
Breast		17	17
Lung	11	5	16
Melanoma	8	7	15
Haematological	6	5	11
Urological	5	4	9
Other invasive cancers	6	3	8
Gynaecological		7	7
Hepatobiliary	4	1	5
Endocrine	1	2	3
Upper GI	2	1	3
Head and neck	3		3
CNS and Brain	2		2
Bone and soft tissue		1	1
Merkel	1		1
All invasive cancers	81	59	141

Sunshine Coast

Figure 62: Sunshine Coast HHS overview

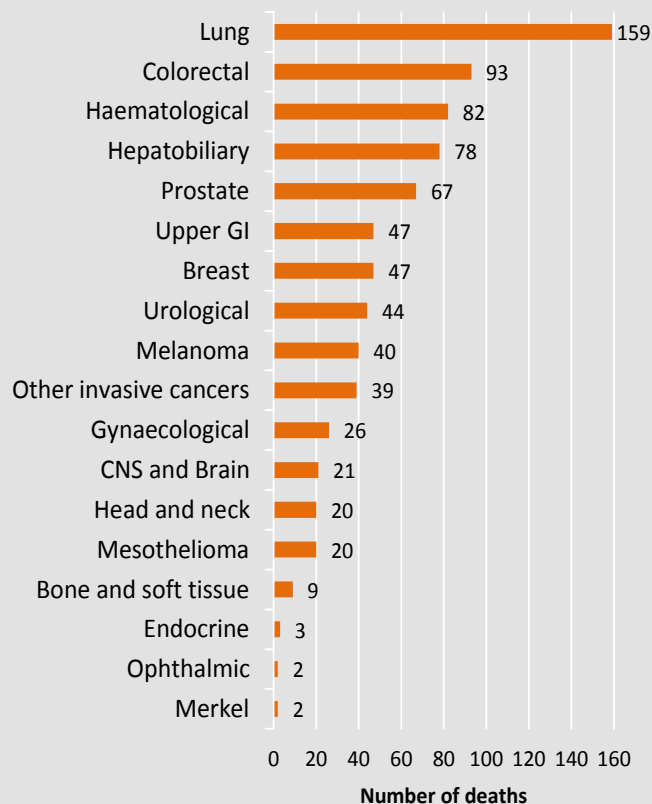


Quick statistics (2012)



Most common cancer deaths:

Sunshine Coast HHS, annual average, 2010-2012



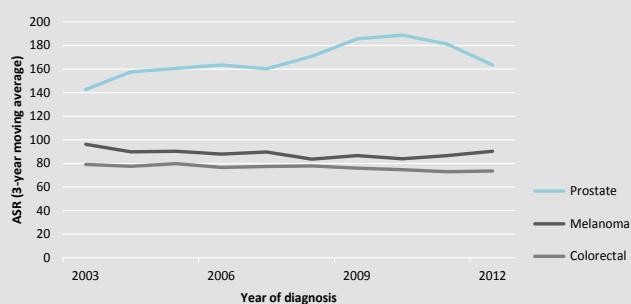
Most common cancer diagnoses:

Sunshine Coast HHS, annual average, 2010-2012

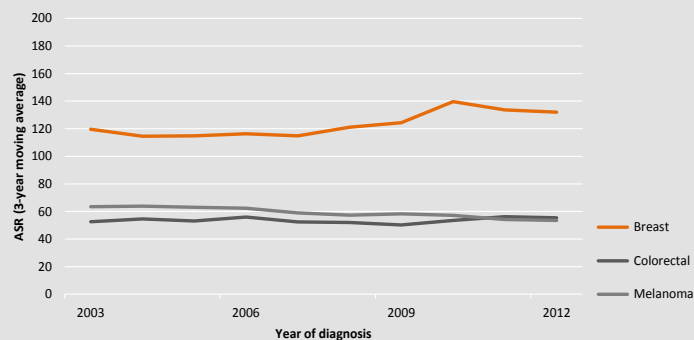
Cancer site	Male	Female	Total
Prostate	408		408
Melanoma	200	125	325
Breast	2	315	317
Colorectal	173	142	315
Haematological	148	109	257
Lung	120	86	207
Urological	94	37	132
Gynaecological		89	89
Hepatobiliary	48	41	89
Other invasive cancers		32	88
Upper GI	54	24	78
Head and neck	46	19	65
Endocrine	11	33	44
CNS and Brain	16	13	29
Bone and soft tissue	10	10	21
Mesothelioma	17	3	20
Merkel	9	3	11
Ophthalmic	2	3	5
All invasive cancers	1415	1085	2501

Figure 63: Trends for the most common cancers, Sunshine Coast HHS, 2003-2012

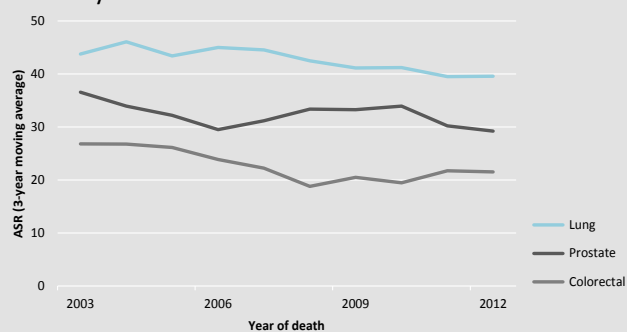
Incidence: Males



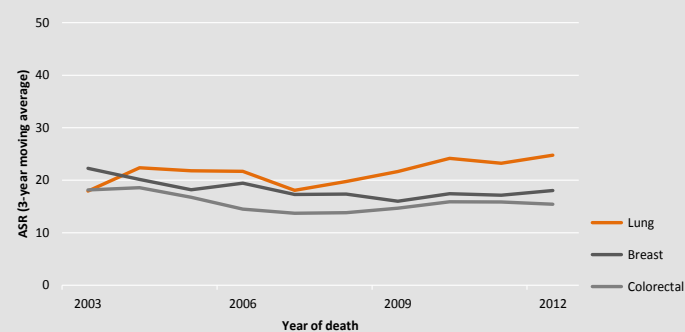
Incidence: Females



Mortality: Males



Mortality: Females



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Table 12: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Sunshine Coast HHS, 2001-2012

Cancer ⁺	Incidence				Mortality			
	Males		Females		Males		Females	
	Period §	APC	Period	APC	Period	APC	Period	APC
Prostate	2001-2009	4.4*			2001-2012	-1.8		
	2009-2012	-7.8						
Female Breast			2001-2012	0.8			2001-2012	-2.6
Melanoma	2001-2012	-0.7	2001-2012	-1.7*				
Colorectal	2001-2012	-0.9	2001-2012	0.4	2001-2012	-2.8	2001-2012	-2.0
Lung					2001-2012	-0.9	2001-2012	3.4*

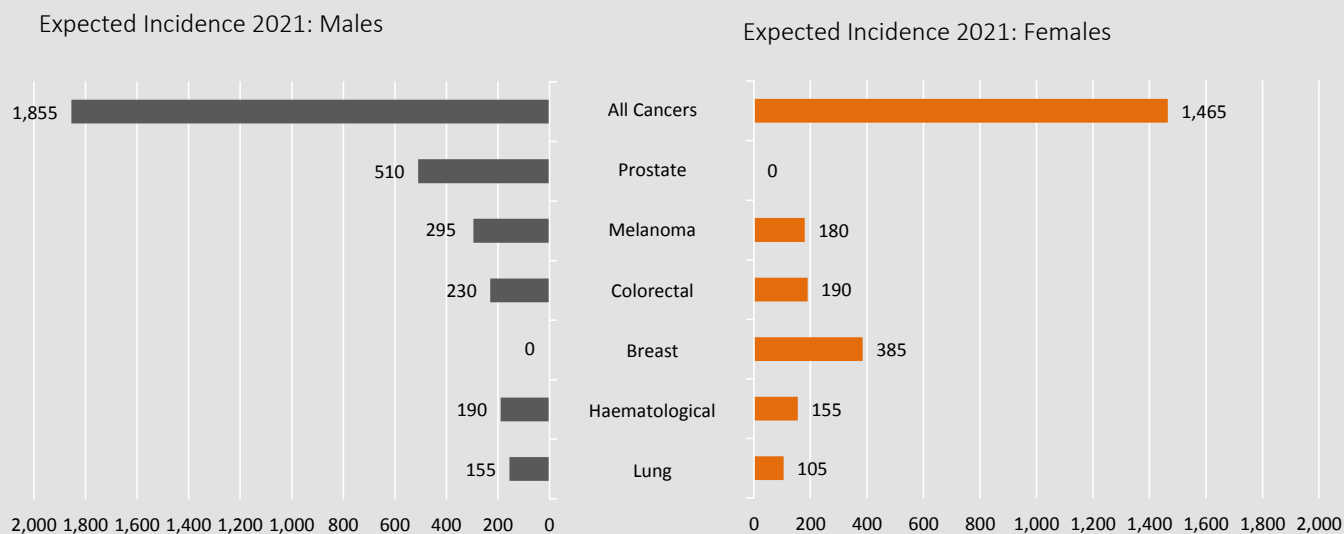
⁺ Most common cancers for males and females are listed.

^{*} Bold figure with asterisk indicate a significant change (increase or decrease) in APC.

[§] Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire period, the annual percentage change (APC) for the respective time periods are shown.

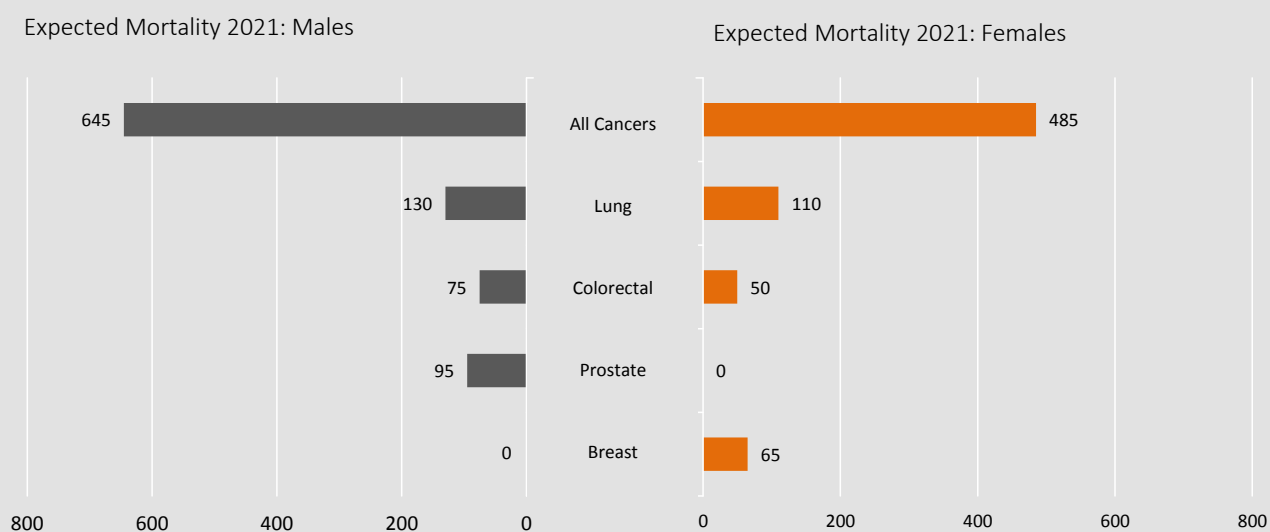
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 64: Expected cancer incidence for the most common cancers, Sunshine Coast HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 65 Expected cancer mortality for the most common cancers, Sunshine Coast HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 3,320 new cases of cancers in 2021 in the Sunshine Coast HHS which is a 32% increase from 2012. Over 55% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

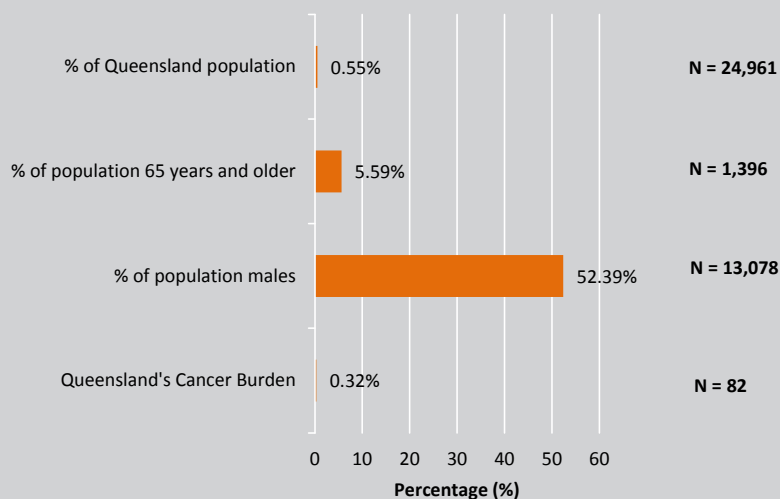
In 2021, an estimated 1,130 cancer deaths are expected in the Sunshine Coast HHS which is a 39% increase from 2012. About 57% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death in both sexes.

Torres and Cape

Figure 66: Torres and Cape HHS overview

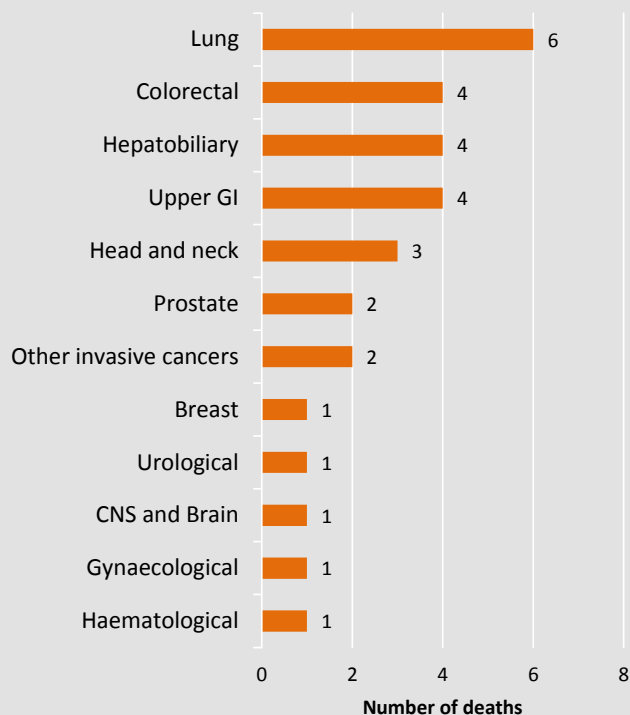


Quick statistics (2012)



Most common cancer deaths:

Torres and Cape HHS, annual average, 2010-2012



Most common cancer diagnoses:

Torres and Cape HHS, annual average, 2010-2012

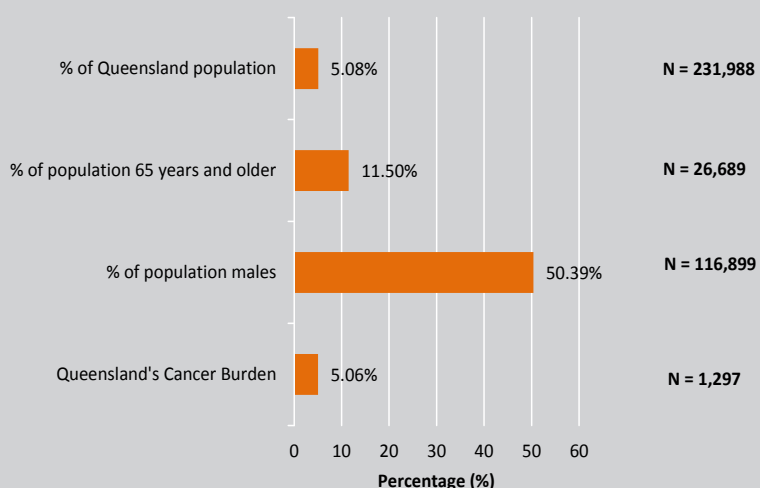
	Male	Female	Total
Lung	7	6	13
Gynaecological		12	12
Haematological		4	10
Breast		8	8
Melanoma	4	1	5
Prostate	5	0	5
Hepatobiliary	3	2	5
Colorectal	4	1	5
Upper GI	2	1	4
Urological	3		4
Head and neck	3	1	4
Other invasive cancers	3		3
Bone and soft tissue		1	1
CNS and Brain		1	1
Endocrine			
All invasive cancers	41	37	78

Townsville

Figure 67: Townsville HHS overview

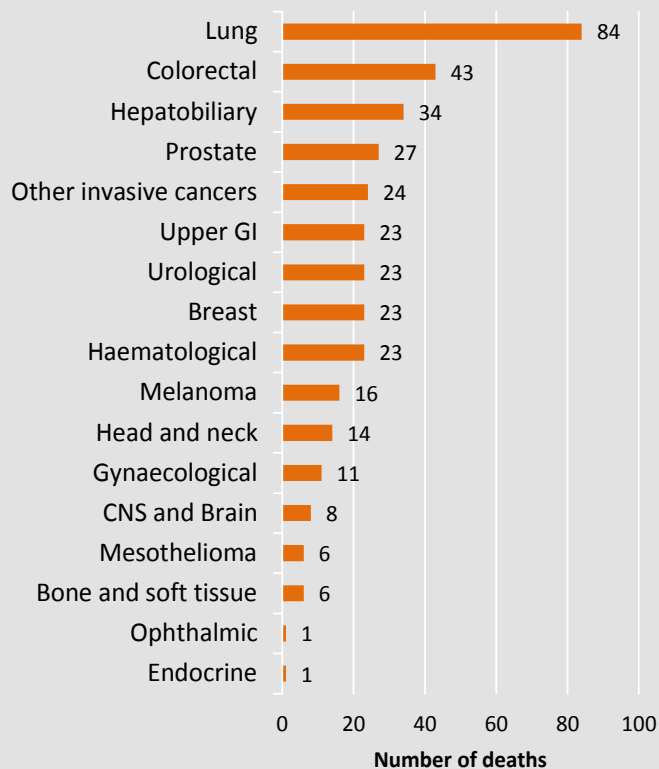


Quick statistics (2012)



Most common cancer deaths:

Townsville HHS, annual average, 2010-2012



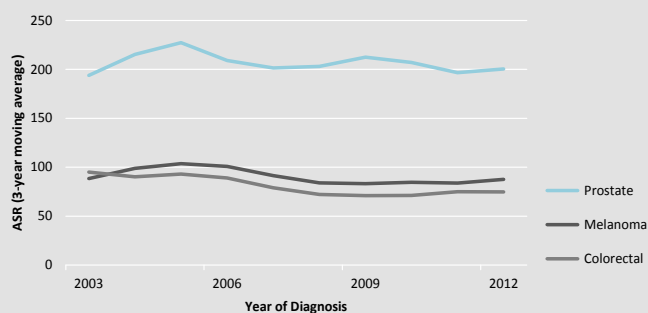
Most common cancer diagnoses:

Townsville HHS, annual average, 2010-2012

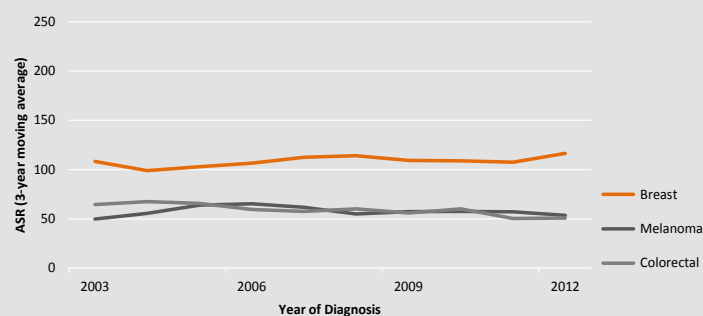
Cancer site	Male	Female	Total
Prostate	216		216
Melanoma	93	60	152
Colorectal	77	56	133
Breast	2	130	132
Haematological	67	44	110
Lung	72	34	106
Urological	53	15	68
Other invasive cancers	34	16	50
Head and neck	31	13	44
Hepatobiliary		16	44
Gynaecological		42	42
Upper GI	27	13	40
Endocrine	5	16	21
CNS and Brain	7	7	14
Bone and soft tissue	8	3	11
Mesothelioma	4		4
Merkel	3	1	4
Ophthalmic	2	1	3
All invasive cancers	727	467	1193

Figure 68: Trends for the most common cancers, Townsville HHS, 2003-2012

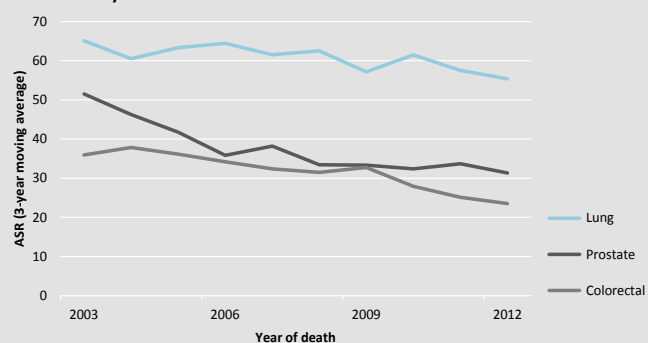
Incidence: Males



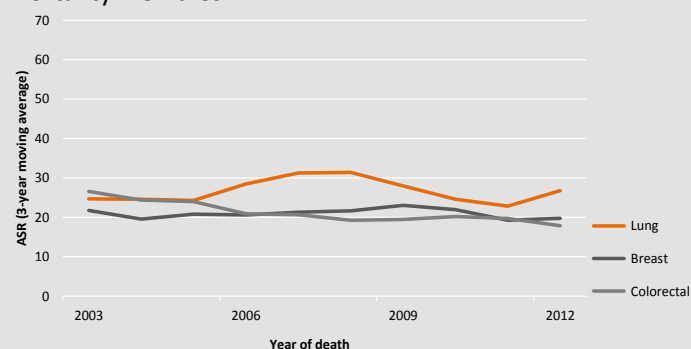
Incidence: Females



Mortality: Males



Mortality: Females



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Table 13: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Townsville HHS, 2001-2012

Cancer ⁺	Incidence				Mortality			
	Males		Females		Males		Females	
	Period	APC	Period	APC	Period	APC	Period	APC
Prostate	2001-2012	0.7			2001-2012	-4.8*		
Melanoma	2001-2012	-0.8	2001-2012	0.4				
Colorectal	2001-2012	-3.2*	2001-2012	-2.7	2001-2012	-4.3*	2001-2012	-4.3*
Female Breast			2001-2012	1.0			2001-2012	-0.7
Lung					2001-2012	-2.3	2001-2012	0.2

⁺ Most common cancers for males and females are listed.

* Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 69: Expected cancer incidence for the most common cancers, Townsville HHS, 2021

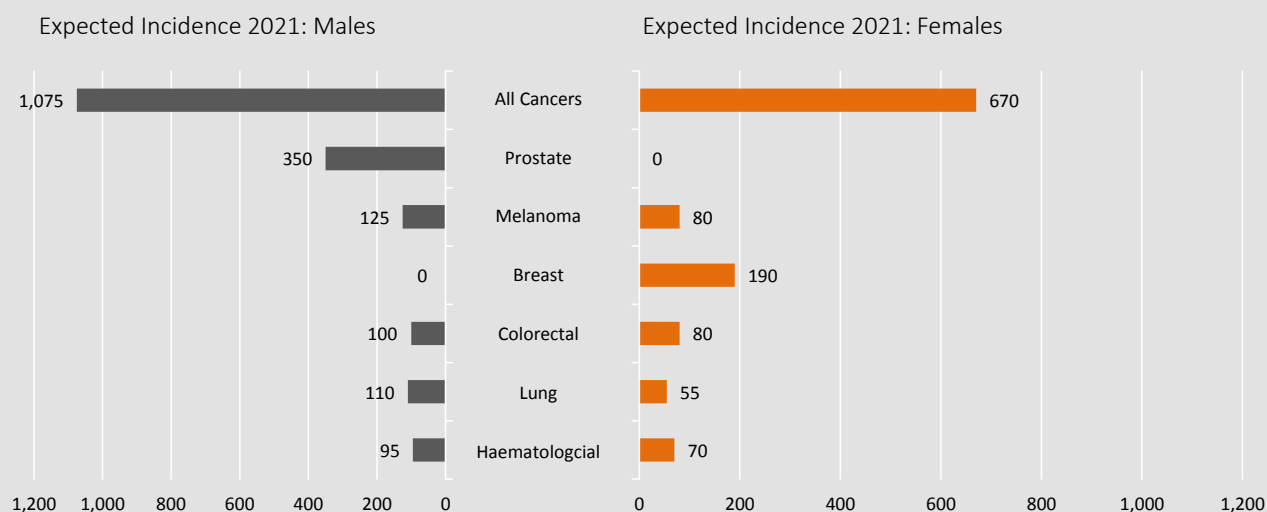
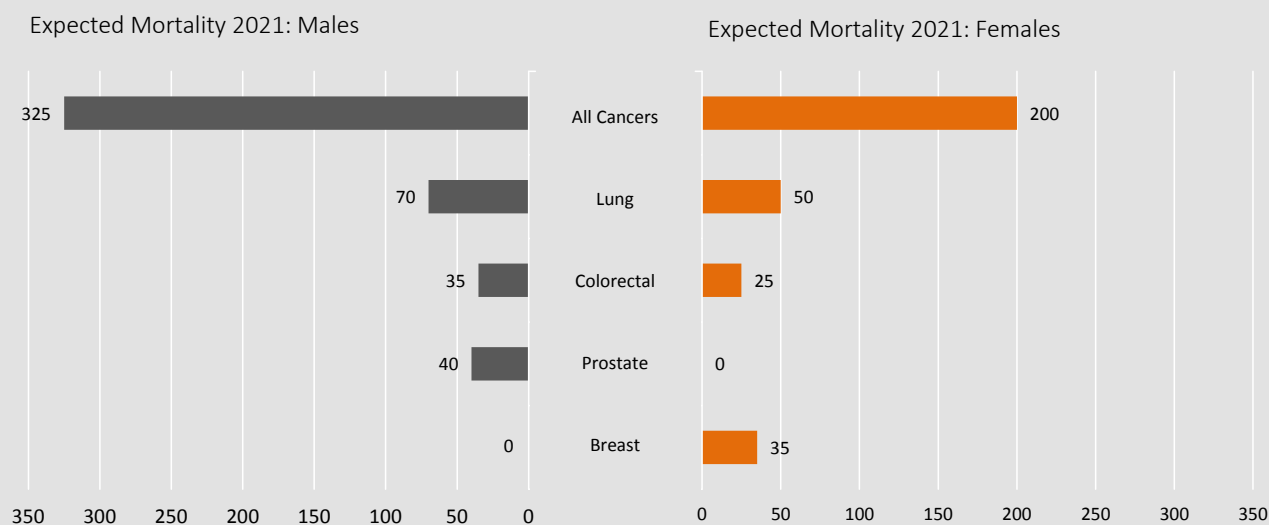


Figure 70: Expected cancer mortality for the most common cancers, Townsville HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 1,745 new cases of cancers in 2021 in the Townsville HHS which is a 35% increase from 2012. Over 61% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

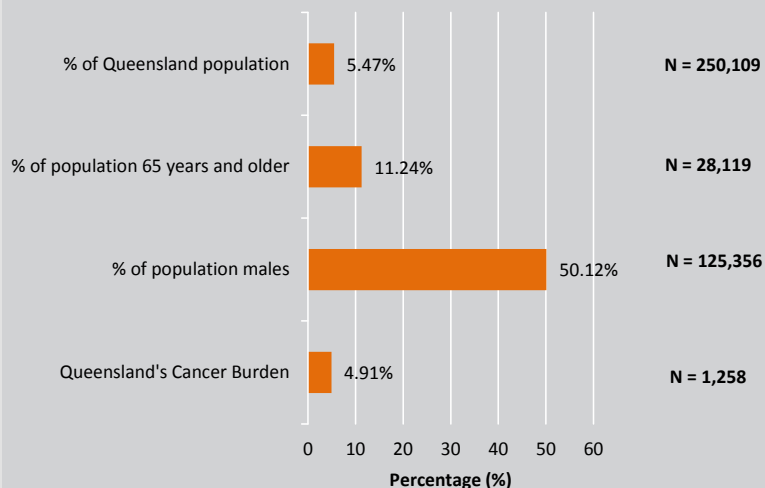
In 2021, an estimated 525 cancer deaths are expected in the Townsville HHS which is a 42% increase from 2012. About 61% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death in both sexes.

West Moreton

Figure 71: West Moreton HHS overview

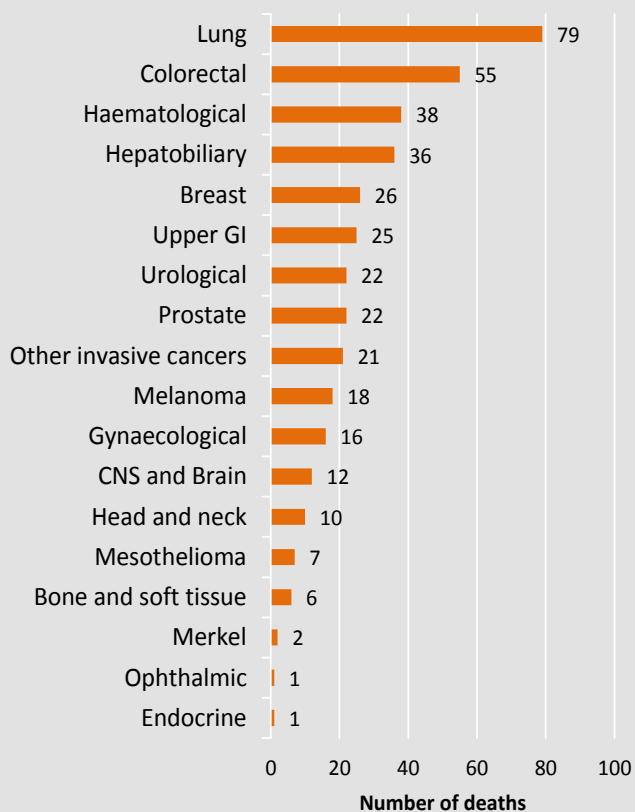


Quick statistics (2012)



Most common cancer deaths:

West Moreton HHS, annual average, 2010-2012

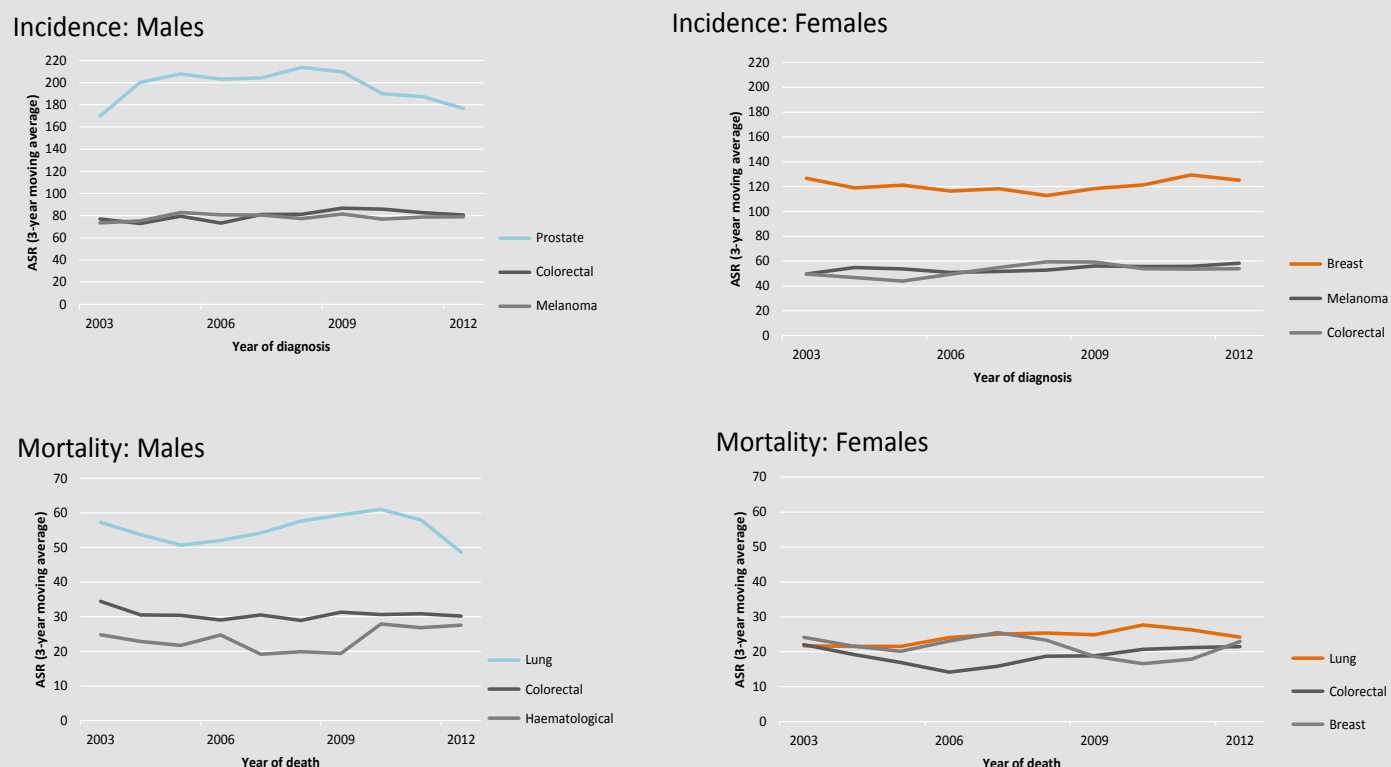


Most common cancer diagnoses:

West Moreton HHS, annual average, 2010-2012

Cancer site	Male	Female	Total
Prostate	201		201
Melanoma	87	68	155
Breast		148	148
Colorectal	85	62	147
Haematological	74	49	123
Lung	63	35	98
Urological	44	19	63
Hepatobiliary	26	22	48
Other invasive cancers		17	47
Gynaecological		46	46
Upper GI	27	13	40
Head and neck	29	10	39
Endocrine	7	19	26
CNS and Brain	6	7	13
Bone and soft tissue	8	4	12
Merkel	4	2	6
Mesothelioma	5	2	6
Ophthalmic	1	1	3
All invasive cancers	698	523	1221

Figure 72: Trends for the most common cancers, West Moreton HHS, 2003-2012



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

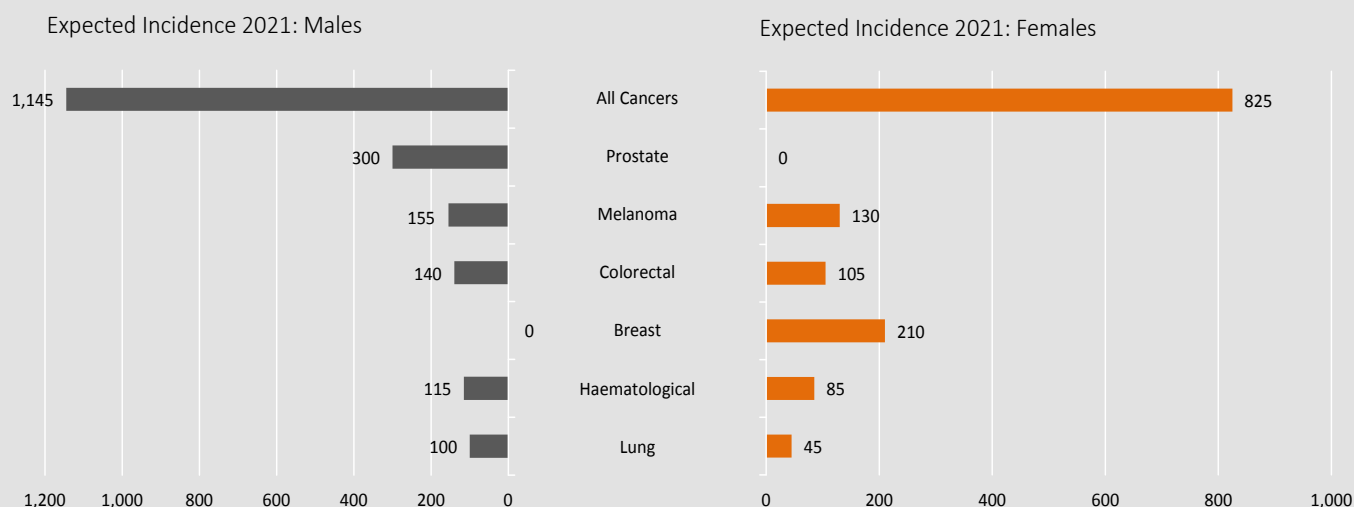
Table 14: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, West Moreton HHS, 2001-2012

Cancer ⁺	Incidence				Mortality			
	Males		Females		Males		Females	
	Period §	APC	Period §	APC	Period §	APC	Period	APC
Prostate	2001-2003	29.9						
	2003-2012	-2.3						
Female Breast			2001-2012	-0.3			2001-2012	-2.0
Melanoma	2001-2012	1.0	2001-2012	3.1				
Colorectal	2001-2012	1.3	2001-2012	1.3	2001-2012	0.0	2001-2012	0.1
Haematological					2001-2012	0.2		
Lung					2001-2010	1.2	2001-2012	1.2
					2010-2012	-18.6		

⁺ Most common cancers for males and females are listed.^{*} Bold figures with asterisk indicate a significant change (increase or decrease) in APC.[§] Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire period, the annual percentage change (APC) for the respective time periods are shown.

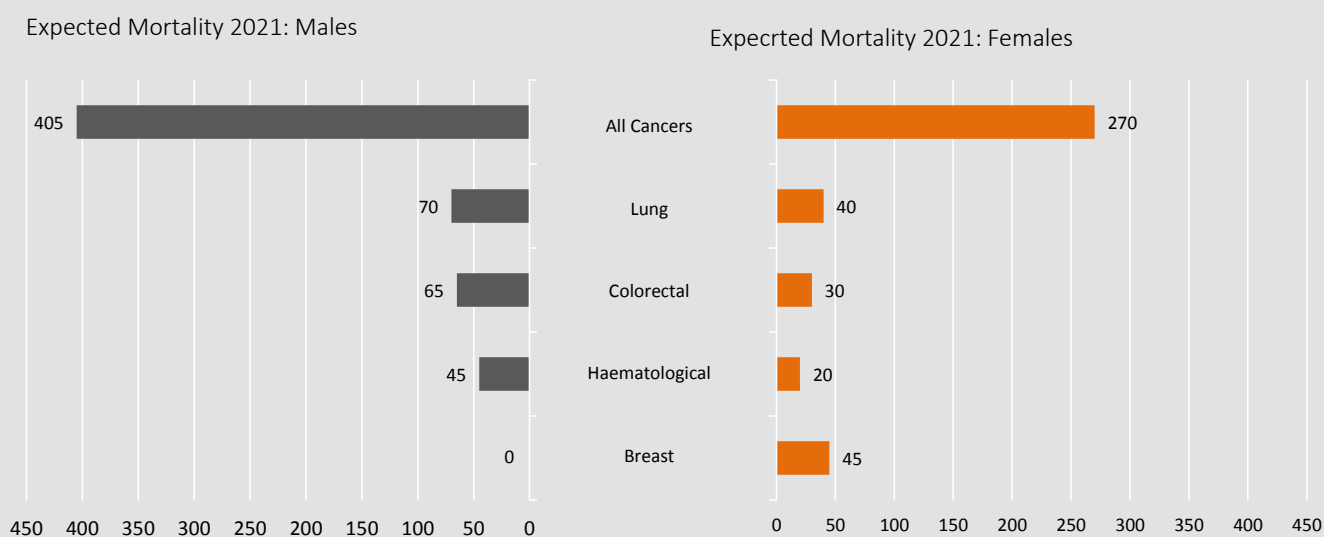
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 73: Expected cancer incidence for the most common cancers, West Moreton HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 74: Expected cancer mortality for the most common cancers, West Moreton HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 1,970 new cases of cancers in 2021 in the West Moreton HHS which is a 57% increase from 2012. Over 58% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

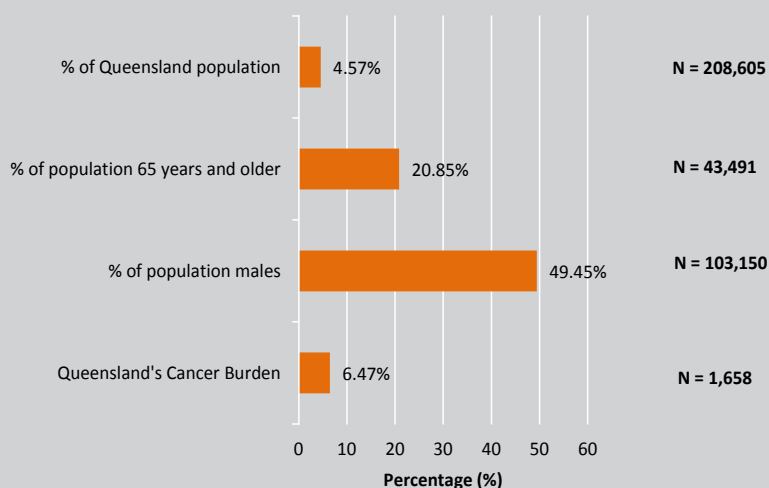
In 2021, an estimated 675 cancer deaths are expected in the West Moreton HHS which is a 62% increase from 2012. 60% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death for males. For females the leading cause of death in 2021 changes to breast cancer with lung being the second highest cause of death.

Wide Bay

Figure 75: Wide Bay HHS overview

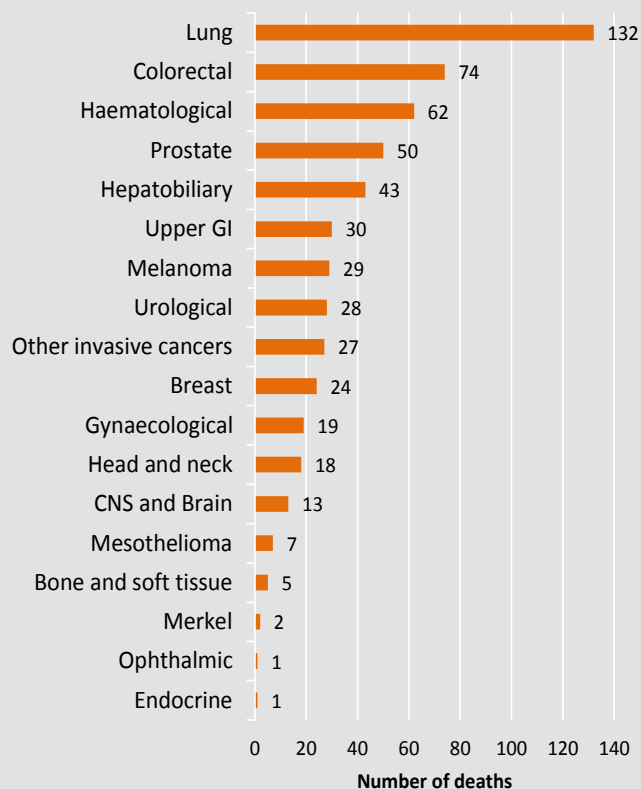


Quick statistics (2012)



Most common cancer deaths:

Wide Bay HHS, annual average, 2010-2012



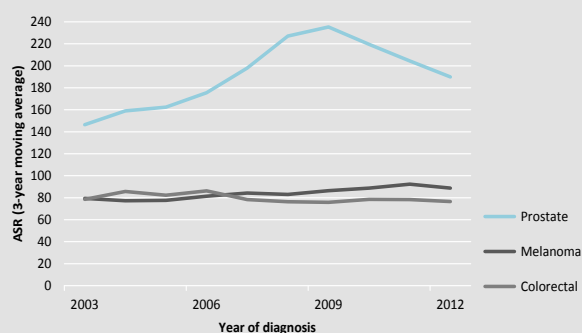
Most common cancer diagnoses:

Wide Bay HHS, annual average, 2010-2012

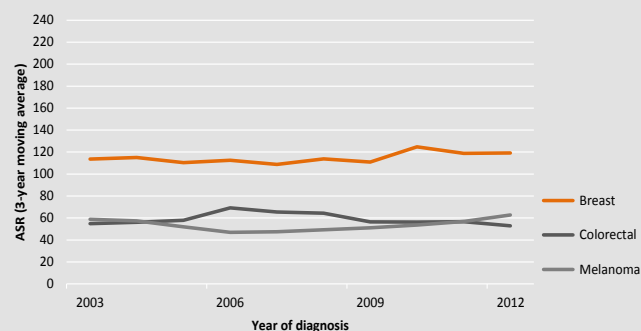
Cancer site	Male	Female	Total
Prostate	305		305
Melanoma	121	80	201
Colorectal	115	81	195
Lung	105	68	173
Breast	2	165	168
Haematological	90	58	148
Urological	63	22	85
Gynaecological		65	65
Other invasive cancers	33	23	56
Hepatobiliary	29	26	55
Upper GI	37	12	48
Head and neck	36	9	45
Endocrine	9	19	28
CNS and Brain	8	8	16
Bone and soft tissue	7	4	11
Mesothelioma	7	1	8
Merkel	5	3	8
Ophthalmic	2	3	5
All invasive cancers	974	647	1621

Figure 76: Trends for the most common cancers, Wide Bay HHS, 2003-2012

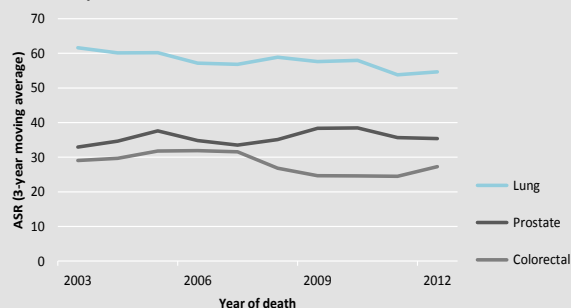
Incidence: Males



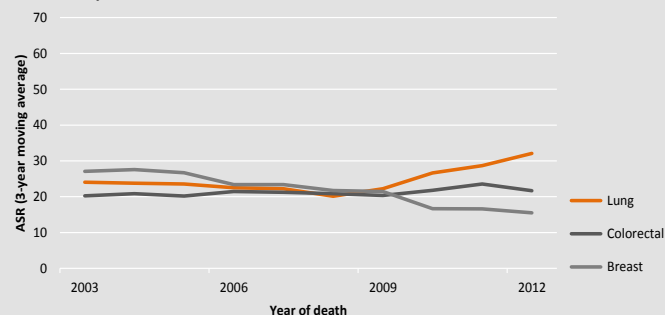
Incidence: Females



Mortality: Males



Mortality: Females



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Table 15: Annual percentage change (APC) in age-standardised incidence and mortality rates, most common cancers, Wide Bay HHS, 2001-2012

Cancer ⁺	Incidence				Mortality			
	Males		Females		Males		Females	
	Period §	APC	Period §	APC	Period	APC	Period	APC
Prostate	2001-2008	9.2*			2001-2012	0.8		
	2008-2012	-6.7						
Colorectal	2001-2012	-0.6	2001-2012	-1.2	2001-2012	-1.6	2001-2012	-0.1
Melanoma	2001-2012	1.3*	2001-2006	-5.9*				
			2006-2012	6.3*				
Female Breast			2001-2012	0.1			2001-2012	-5.5*
Lung					2001-2012	-0.7	2001-2012	2.8

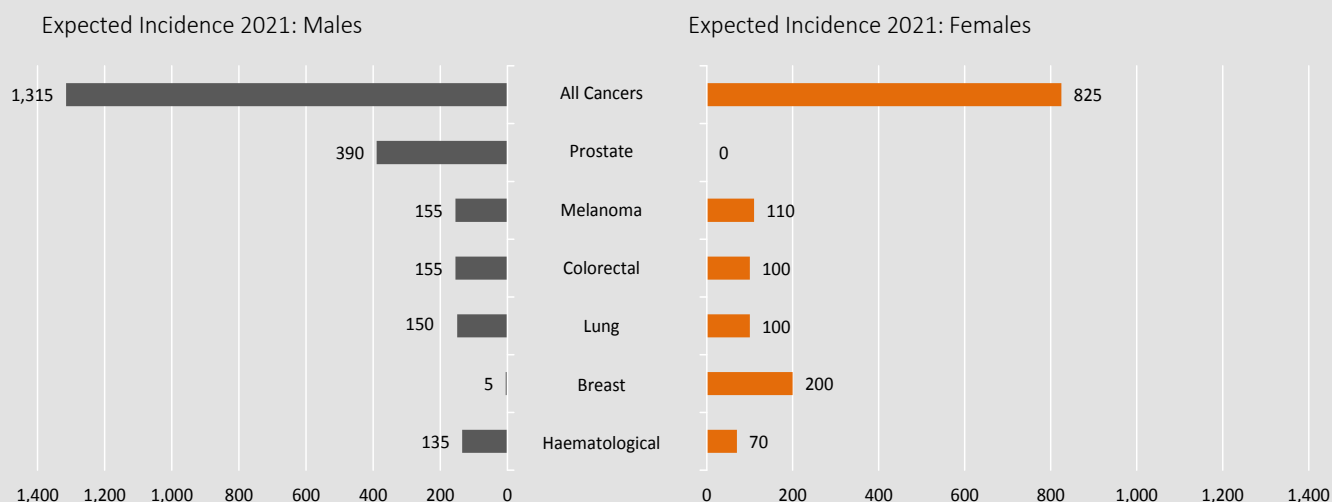
+ Most common cancers for males and females are listed.

* Bold figures with asterisk indicate a significant change (increase or decrease) in APC.

§ Trends were analysed for 2001-2012. If the slope of the trend was not constant over the entire time period, the annual percentage change (APC) for the respective time periods are shown.

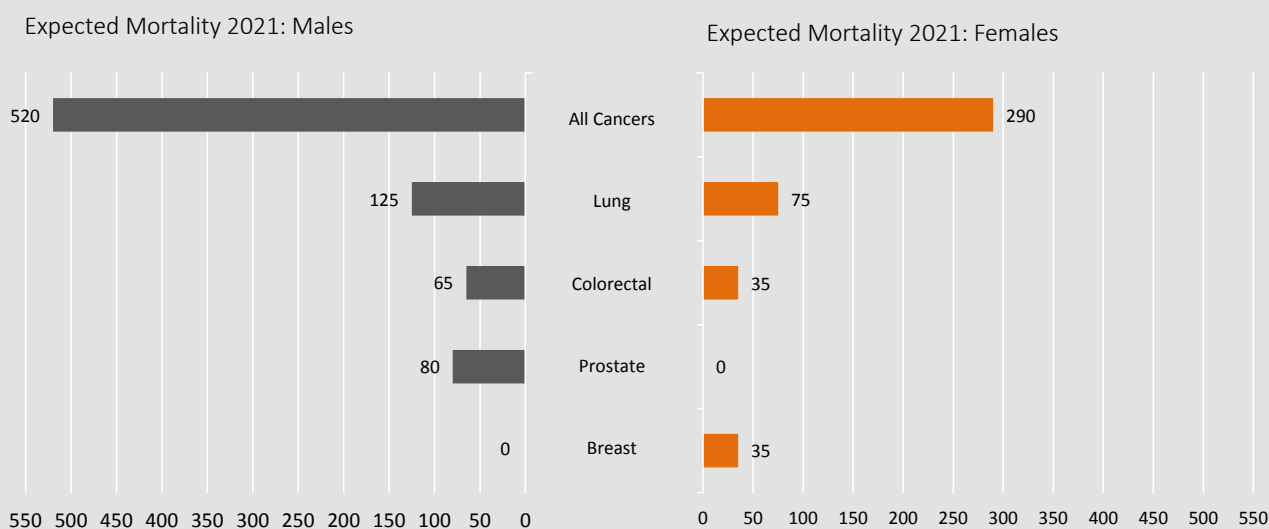
Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 77: Expected cancer incidence for the most common cancers, Wide Bay HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

Figure 78: Expected cancer mortality for the most common cancers, Wide Bay HHS, 2021



Source: Oncology Analysis System, Queensland Cancer Control Analysis Team.

There is expected to be 2,140 new cases of cancers in 2021 in the Wide Bay HHS which is a 29% increase from 2012. Over 61% of new cancers will be among males and prostate and breast cancers are expected to remain the most commonly diagnosed cancer in males and females respectively.

In 2021, an estimated 810 cancer deaths are expected in the Wide Bay HHS which is a 37% increase from 2012. About 64% of cancer deaths will be among males and lung cancer will continue to be the leading cause of cancer death in both sexes.



Data for today:

Our aim is to provide data which can inform our decision making as we move through the process of health reform. The challenge now faced by us all is to incorporate this knowledge into our day to day decision making.

Appendix



Glossary and common abbreviations

Age-specific incidence/mortality rate

The number of new cases/deaths attributed to a cancer in a defined age group during a year divided by the number of persons in the age group during the year, expressed as a rate per 100,000 persons in that year.

Age-standardised incidence/mortality (ASR)

The number of new cases or deaths per 100,000 that would have occurred in a given population if the age distribution of that population was the same as that of the Australian population in 2001 and if the age-specific rates observed in the population of interest had prevailed. In international comparisons, the World Standard Population was used as the reference population. Age-standardised rates are independent of the age-structure of the population of interest and are therefore useful in making comparisons between different populations and time periods.

Annual percentage change (APC)

The annual rate of increase or decrease in cancer incidence or mortality. The APC is calculated by fitting a linear model to the annual rates after logarithmic transformation; the slope represents the APC for the time period. The APCs were calculated using Joinpoint Software Version 3.5.2 from the Surveillance Research Program, National Cancer Institute (US). The software identifies significant changes in rates over time and estimates the periods characterised by different rates.¹⁶

HHS

See Queensland Hospital and Health Service.

Incidence (new cases)

The number of new cases of cancer diagnosed in a defined population during a specified time period. For example, 2012 incidence is the number of cancers which were first diagnosed between 1 January 2012 and 31 December 2012.

Mortality (deaths)

The number of deaths attributed to cancer in a defined population during a specified time period regardless of when the diagnosis of cancer was made.

Prevalence

The number of Queenslanders with a diagnosis of cancer who were alive on 31 December 2012.

Queensland Hospital and Health Service (HHS)

For residence considerations, the Hospital and Health Service is a geographic area defined by a collection of Statistical Local Areas (SLA). For public hospitals and health service facilities, the term Hospital and Health Service is synonymous with a group of Queensland Health facilities and staff responsible for providing and delivering health resources and services to an area which may consist of one or more residential areas.

Relative survival

The rate of survival of persons diagnosed with cancer relative to the expected survival rate of the general population. Five-year relative survival represents the proportion of patients alive five years after diagnosis, taking into account age, gender and year of diagnosis.

Remoteness

The relative remoteness of residence at time of diagnosis, based on the Australian Standard Geographical Classification (ASGC)¹⁷. In this report, remoteness is classified into four groups: Major City, Inner Regional, Outer Regional, and Remote & Very Remote.

Projections

Projections are calculated using the most recent age-specific incidence and mortality rates (2012) and applying these to the population projections produced by the Australian Bureau of Statistics (ABS).

For more details on the calculations and the definitions of terms, go to OASys on <https://qccat.health.qld.gov.au/OASys/> and open the Help file.

Methods

The incidence and mortality data in this report are based on cancer registrations for 2012 and for 1982-2012 for trend analysis. Rates for common cancer are aggregated over five years (2008-2012). Incidence and mortality counts for common cancers by Hospital and Health Service are averaged over three years (2010-2012). Unless otherwise stated, information presented in this report is sourced from the database of the Queensland Oncology Repository as of 31 December 2012. Except where noted, incidence and mortality rates are standardised to the Australian age-specific population in 2001.

Data Sources

QUEENSLAND ONCOLOGY REPOSITORY

The Queensland Oncology Repository (QOR) is a cancer patient database developed and maintained by the Queensland Cancer Control Analysis Team (QCCAT; Queensland Health) to support Queensland's cancer control, safety, and quality assurance initiatives. QOR consolidates cancer patient information for the state and contains data on cancer diagnoses and deaths, surgery, chemotherapy, and radiotherapy. QOR also includes data collected by clinicians at multidisciplinary team (MDT) meetings across the state. For more information, visit <https://qccat.health.qld.gov.au/QueenslandOncologyRepository>.

QUEENSLAND CANCER REGISTRY

The Queensland Cancer Registry (QCR) operates under the Public Health Act 2005 to receive information on cancer in Queensland. The QCR is a population-based registry and maintains a register of all cases of cancer diagnosed in Queensland since 1982 (excluding basal and squamous cell carcinomas). The QCR codes the site and the histology of the cancers to the International Classification of Diseases for Oncology, 3rd edition (ICD-O-3). Prior to July 2004, the primary site of cancer was coded to the International Classification of Diseases for Oncology, 2nd edition (ICD-O-2).

Notification of cancer is a statutory requirement for all public and private hospitals, nursing homes and pathology services. Notifications are received for all persons with cancer separated from public and private hospitals and nursing homes. Cancer-related pathology reports are received from Queensland pathology laboratories. Mortality data with cancer identified as the underlying cause of death as well as cancer-related deaths are abstracted from the mortality files of the Registry of Births, Deaths and Marriages.

Oncology Analysis System (OASys)

Oncology Analysis System (OASys) is a web based state-wide cancer analysis system with diagnostic, treatment and outcome data on registry-notifiable invasive cancers diagnosed among Queensland residents of all ages (including children) from 1982 to 2012.

The data collection, linking and reporting of OASys data is performed under the auspices of Queensland Cancer Control Safety and Quality Partnership, a Quality Assurance Committee gazetted under Section 31, The Health Services Act 1991.

More on the QCCAT website

For more details on our program of work, go to <https://qccat.health.qld.gov.au>

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Notes

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FOR MORE INFORMATION

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