

Cancer incidence and mortality

Projections 2011 to 2021

May 2011

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Executive summary

In NSW, research and studies of cancer and how it impacts on the population have enabled us to make considerable inroads in recent years into providing better detection, treatment and care for people with cancer.

This has seen survival outcomes significantly improve across the population.

However the population of NSW is ageing and growing at an increasing rate. The reality of this is that the burden posed by cancer will continue to increase in future years.

The purpose of this report is to identify the pertinent trends in cancer as they relate to the new Local Health Network boundaries established in NSW and to map the impact the disease will have on the NSW community more broadly from now, until 2021.

It examines the most common cancers by clinical grouping and major cancer site in NSW and extrapolates trends by age group to project the number new cancers and cancer deaths in 2011, 2016 and 2021.

It will also includes a comparison to the actual number of cases and deaths for each geographical region and Local Health Network and compare it to the projected number of cases and deaths for 2011, 2016 and 2021.

Actual 2006 cancer cases and deaths by cancer site and local health network are provided to enable comparison of the proportional breakdown by five year time period.

Ultimately, if we are able to project the growing risk cancer poses to the population, we can use this information to help determine priorities, to better allocate health resources and to identify new and emerging issues that may not have been encountered in NSW previously.

It is important to note when examining the trends and statistics contained in this study that that the accuracy of the projections is impacted by a range of factors including:

- the accuracy of the health related population projections;
- variability in five year age specific rates over time by age, sex and cancer type or clinical grouping; and
- the cancer risk profile of the geographical area for each cancer type.

Please also note that the accuracy of projections decline in certainty over time i.e. projections for 2011 are likely to be more accurate than projections for 2021.

Key findings include:

Cancer incidence projections in NSW

- *New cases of cancer in NSW are increasing on average by 5,000 every five years.*

There were 35,342 new cases of cancer in 2006. By 2021, more than 51,000 people will be told 'you have cancer' in NSW. This is an increase of 44 per cent in 15 years.

- *The number of people being diagnosed with cancer directly correlates to the growing population in NSW.*

The total population of NSW is expected to increase by 17 per cent between 2006 and 2021. However, this percentage varies by age category, with a 52 per cent increase in people aged 65 years and older during the same timeframe, which is due to both increased life expectancy and ageing of the population.

- *The most common cancers in NSW (2006) are :*

Cancer type	Number of people diagnosed	Proportion of all cancer cases
Prostate	6,200	18%
Bowel	4,718	13%
Breast	4,192	12%
Melanoma	3,574	10%
Lung	3,183	9%

- *In 2021, the most common cancers in NSW will be:*

Cancer type	Number of people diagnosed	Proportion of all cancer cases
Prostate	9,862	19%
Bowel(1)	6,707	13%
Breast	5,402	11%
Melanoma	5,708	11%
Lung	4,088	8%

Bowel cancer refers to cancers of the large bowel; this is also referred to as colorectal cancer and is comprised of cancers of the colon, rectum and anus grouped together. Cancers of the colon and rectum including anus are also reported as separate cancers, to be consistent with other cancer registry reports

This percentage increase in cancer cases varies by Local Health Network. The greatest increase is expected in the Southern (70 per cent), Sydney South West (63 per cent), Mid North Coast (62 per cent), and Western Sydney (54 per cent) Local Health Networks.

Projections of cancer deaths in NSW

The majority of death rates are declining, particularly for high volume cancers.

- Cancer sites with declining death rates include: oesophagus, stomach, bowel, cervix, uterus, bladder, prostate, testes, brain (men only), multiple myeloma, leukaemia, unknown primary cancers and all cancers
- Cancer sites with increasing death rates include: liver cancer, pancreatic cancer (men only) and lung cancer (women only).

The rates of lung cancer deaths in women are projected to increase from 17 per cent of cancer deaths in 2006 to 18 per cent in 2011 and 23 per cent in 2021.

By contrast, we expect breast cancer death rates in women to decline from 16 per cent of deaths in 2008 to 13 per cent of total cancer deaths in women in 2021.

The number of deaths attributable to cancer is increasing. On average, there is expected to be a 13 per cent increase in the number of cancer deaths in NSW between 2006 and 2021.

This varies by Local Health Network with the number of projected deaths expected to increase by 33 per cent in the Southern NSW Local Health Network, 27 per cent in the Mid North Coast and 21 per cent in South West Sydney.

Variation in the number of cancer deaths is the result of higher deaths rates and increases in the projected population.

Projections by major cancer site and clinical grouping

This chapter examines the projected rates of cancer across the population and the numbers of cancers diagnosed in 2011, 2016 and 2021.

Specifically this chapter focuses on the most common cancers in NSW, cancers of the breast, bowel (cancers of the colon and rectum), lung, cervix, non-Hodgkin's lymphomas and melanomas.

Most common cancers in NSW

- *There were 35,342 new cases of cancer in 2006 (20,046 in men, 15,296 in women).*
- Prostate, bowel, breast cancer, melanoma and lung were responsible for 62 per cent of all cancers in men and women.
- Four sites accounted for 63 per cent of new cancers in males. These were cancers of the prostate (32 per cent), bowel (12 per cent), melanoma and lung cancers (10 per cent and 9 per cent respectively).
- *In 2021, the most common cancers overall are projected to be:*
 - Prostate cancer - 9,846 (19 per cent overall or 34 per cent in males),
 - Bowel cancer - 6,696 (13 per cent)
 - Breast cancer - 5,393 (11 per cent),
 - Melanoma of the skin - 5,699 (11 per cent) and
 - Lung cancer 4,081 (8 per cent).
- These cancers account for 62 per cent of all cancers in both sexes combined or 66 per cent in men and 57 per cent of total cases in women. (Table P1)

Table P1 New cases of cancer by type 2006 (actual), 2011, 2016 and 2021 projected

	2006	2011	2016	2021
Head and Neck	961	973	1,020	1,057
	3%	2%	2%	2%
Upper GI	2,552	2,882	3,246	3,649
	7%	7%	7%	7%
Bowel	4,718	5,278	5,965	6,765
	13%	13%	13%	13%
Lung	3,183	3,382	3,705	4,088
	9%	8%	8%	8%
Melanoma	3,574	4,158	4,874	5,708
	10%	10%	11%	11%
Breast	4,192	4,645	5,043	5,402
	12%	12%	11%	11%
Cervix	226	226	204	215
	1%	1%	0%	0%
Ovary	401	464	495	527
	1%	1%	1%	1%
Prostate	6,200	6,973	8,445	9,862
	18%	17%	19%	19%
Eye	99	93	99	107
	0%	0%	0%	0%
Brain	464	518	563	615
	1%	1%	1%	1%
Non Hodgkins Lymphoma	1,322	1,553	1,762	1,987
	4%	4%	4%	4%
Leukaemia	1,357	1,056	1,161	1,277
	4%	3%	3%	3%
Unknown primary	1,231	1,427	1,507	1,590
	3%	4%	3%	3%
Other	4,267	5,465	6,102	6,806
	12%	14%	13%	13%
Myelodysplasia	595	666	718	817
	2%	2%	2%	2%
Total	35,342	39,880	45,245	51,027
	100%	100%	100%	100%

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

The major cancer sites of prostate, bowel, breast, melanoma of the skin and lung accounted for 62 per cent of total cancers in 2006. We expect it to remain at 62 per cent of total cancers in 2021. Age-specific changes in these major cancer sites will make the most impact on the projected cases.

The proportional breakdown of major cancer sites varies by gender. Four cancers accounted for 63 per cent of new cancers in men in 2006. They were cancers of the prostate (32 per cent), bowel (12 per cent), melanoma (10 per cent) and lung (9 per cent).

The same cancers are expected to be responsible for 64 per cent in 2011, 65 per cent in 2016 and 66 per cent in 2021. Prostate cancer is the biggest driver, increasing to 34 per cent of new cases in men in 2021. Lung cancer, by contrast, is declining from 9 per cent of

cases in men to 7 per cent in 2021, reflecting the continued declining trend. Melanoma is increasing from 11 per cent of total cases in males to 12 per cent from 2016 onwards, reflecting the continued increase in incidence rate in men.

Similarly, in women four sites accounted for 58 per cent of new cancers in 2006. The most common were cancers of the breast (27 per cent), bowel (14 per cent), melanoma (9 per cent) and lung (8 per cent).

We expect these cancers to decline to 57 per cent of all new cases in 2021. Breast cancer is expected to decline as a proportion of total cancers in women to 24 per cent in 2021.

Lung cancer cases by contrast increase to 9 per cent of total cases in 2021. Bowel cancer remains at 14 per cent and melanoma cancer cases increase by 1 per cent from 2006 to 10 per cent of total cases in women in 2021.

Urogenital cancers comprising prostate, bladder and kidney cancers will be responsible for 24 per cent of all cases in 2021, increasing from 23 per cent of cases in 2006. The increase in cases as a proportion of the total is driven by increases in prostate cancer incidence.

Table P2 Number and percentage of new cases of cancer by clinical grouping 2006, 2011, 2016 and 2021 ranked in order of volume of cases

Clinical grouping	2006	2011	2016	2021
Skin	3,833	4,352	4,998	5,755
	11%	11%	11%	11%
Head and neck	961	973	1,020	1,057
	3%	2%	2%	2%
Upper GI	2,552	2,882	3,246	3,649
	7%	7%	7%	7%
Bowel	4,718	5,261	5,930	6,707
	13%	13%	13%	13%
Respiratory	3,429	3,671	4,049	4,502
	10%	9%	9%	9%
Bone and Connective tissue	223	247	265	285
	1%	1%	1%	1%
Breast	4,192	4,645	5,043	5,402
	12%	12%	11%	11%
Gynaecological	1,378	1,464	1,548	1,627
	4%	4%	3%	3%
Urogenital	8,120	9,112	10,733	12,307
	23%	23%	24%	24%
Eye	99	93	99	107
	0%	0%	0%	0%
Central Nervous system	484	550	598	652
	1%	1%	1%	1%
Thyroid and other endocrine	696	839	1,032	1,243
	2%	2%	2%	2%
Lymphohaematopoetic	2,831	3,349	3,784	4,288
	8%	8%	8%	8%
Unknown primary	1,231	1,427	1,507	1,590
	3%	4%	3%	3%
Myelodysplasia	595	666	718	817
	2%	2%	2%	2%
Total	35,342	39,880	45,245	51,027
	100%	100%	100%	100%

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

In 2011, the proportional breakdown of the most common cancers is similar to the actual proportional breakdown for cases in 2006 with cancer of the prostate the exception, with 6,200 (18 per cent) being 1 percent lower than 2006.

This is because prostate cancer incidence rates increased between 2004 and 2005 appeared to remain constant and then increased again in 2007 and 2008.

Lymphohaematopoetic cancers (multiple myeloma, non-Hodgkin's lymphoma, leukaemia) and myelodysplasia should be considered together. They are presented separately because myelodysplasia has only been considered an invasive cancer since the introduction of ICD-03 coding in 2003.

Projections for myelodysplasia are based on population increases based on average age specific rates for 2004 to 2007 applied to the Department of Planning population projections.

Overall, lymphohaematopoetic cancers and myelodysplasia were responsible for 10 percent of total cancer activity in 2006 and continue to be responsible for this proportion in 2021

Other key points:

- Bowel cancer with 4,718 (13 per cent) and breast cancer with 4192 (12 per cent) cases remains at the same proportion of total cancer as the actual data for 2006.
- However, breast cancer as a proportion of total cancer is stabilising and will start to decline over time. It is projected to be accountable for 11 per cent of cases in 2021.
- Melanoma of the skin with 3,574 (10 per cent) in 2011 remains at this level until 2016 and 2021 increasing to 11 percent of total cancers.
- Lung cancer with 3,382 (9 per cent) continues at this level and declines to 8 percent of total cancer in 2021.
- Lung cancer rates are increasing in females however, most cases are found in males and the rate of lung cancer in males has been declining since the mid 1980s.
- Urogenital cancers comprising prostate, bladder and kidney cancers will be responsible for 24 per cent of all cases in 2021, increasing from 23 per cent of cases in 2006. The increase in cases as a proportion of the total is driven by increases in prostate cancer incidence.

Table P3a Number and percentage of new cases of cancer actual (2006) and projected 2011, 2016 and 2021 by sex

Cancer site	2006	2011	2016	2021	2006	2011	2016	2021
	Males	Males	Males	Males	Females	Females	Females	Females
Head and Neck	709 4%	690 3%	706 3%	711 2%	252 2%	283 2%	314 2%	346 2%
Upper GI	1,514 8%	1,726 8%	1,957 8%	2,204 8%	1,038 7%	1,156 7%	1,290 7%	1,445 7%
Colon	1,548 8%	1,685 8%	1,888 7%	2,123 7%	1,487 10%	1,667 10%	1,897 10%	2,187 10%
Rectum	995 5%	1,189 5%	1,362 5%	1,553 5%	688 4%	737 4%	818 4%	902 4%
Lung	1,968 10%	1,956 9%	1,989 8%	2,023 7%	1,215 8%	1,426 8%	1,716 9%	2,065 9%
Melanoma	2,178 11%	2,493 11%	2,959 12%	3,508 12%	1,396 9%	1,665 10%	1,915 10%	2,201 10%
Breast	37 0%	42 0%	51 0%	61 0%	4,155 27%	4,603 26%	4,992 25%	5,341 24%
Cervix	- 0%	0% 0%	0% 0%	0% 0%	226 1%	226 1%	204 1%	215 1%
Ovarian	- 0%	0% 0%	0% 0%	0% 0%	401 3%	464 3%	495 3%	527 2%
Prostate	6,200 31%	6,973 31%	8,445 33%	9,862 34%	- 0%	- 0%	- 0%	- 0%
Brain	250 1%	303 1%	332 1%	365 1%	214 1%	214 1%	231 1%	250 1%
Thyroid and other endocrine	171 1%	205 1%	248 1%	294 1%	525 3%	634 4%	784 4%	949 4%
Non Hodgkins lymphoma	745 4%	856 4%	975 4%	1,118 4%	577 4%	697 4%	787 4%	869 4%
Leukaemia	755 4%	642 3%	718 3%	804 3%	602 4%	413 2%	443 2%	474 2%
Unknown primary	638 3%	708 3%	744 3%	773 3%	593 4%	718 4%	764 4%	817 4%
Myelodysplasia	316 2%	380 2%	434 2%	497 2%	279 2%	286 2%	285 1%	319 1%
Other	2,450	2,730	2,958	3,203	2,412	2,734	3,145	3,603
All cancer	20,046	22,362	25,511	28,806	15,296	17,518	19,734	22,221

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Comparison of actual and projected cancer cases for 2006 and projected cases for 2011 using the 2005 and revised 2009 populations

This study compared actual and projected numbers of cases for 2006 to gain an understanding of the accuracy of projections.

Overall there was a net difference of 34 between actual cases and projected cases in 2006. However, there was considerable variability in four cancer sites. There were 1,200 more cases of prostate cancer than projected and 340 less cases of breast cancer. There was slightly less bowel cancer than projected (122 cases less) and more lung cancer than projected (173 cases). There were also 844 less cancers of unknown site. Some of these cases of unknown site are now grouped under myelodysplasia. This cancer type was recognised as an invasive cancer with the introduction of ICD-0-3 coding in 2003 and subsequently grouped as a separate cancer group.

We also compared the old 2005 and new 2009 population projections for 2011.

The population aged 65 years and older has declined by 1.5 percent in the latest 2009 population projections compared to the 2005 projections for the age group.

Table P3b Comparison of old and new cancer projections using the 2005 and 2009 population projections

Cancer Site	2006 projections			2006 Actual			2006 Actual compared to projected			Comment
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	
Melanoma	2,135	1,443	3,578	2171	1388	3,559	36	-	55	19
Head and Neck	656	269	925	703	248	951	47	-	21	26
Upper GI	1,474	1,062	2,536	1,504	1,024	2,528	30	-	38	8
Colorectal	2,629	2,203	4,832	2,535	2,175	4,710	94	-	28	122 less bowel than projected
Lung	1,861	1,103	2,964	1,946	1,188	3,137	85	85		173 more lung than projected
Breast	43	4,470	4,513	43	4,136	4,173	0	-	334	340 less breast than projected
Prostate	4,918		4,918	6,158		6,158	1,240	-		1,240 more prostate than projected
Cervix		203	203	222		222		-	203	19
Non-Hodgkins lymphoma	760	636	1,396	748	572	1,320	12	-	64	76
Unknown primary	1,136	1,069	2,205	713	648	1,361	423	-	421	844 less unknown primary than projected
Other	3,569	3,553	7,122	3,208	3,829	6,649	361	-	276	473 less other
All cancers	19,179	16,014	35,193	19,951	15,208	35,159	772	-	806	34

Cancer Site	2011 - projections using 2005 DIPNR populations			2011 - projections using 2009 DIPNR populations			2011 using the 2005 and 2009 projected populations			Comment
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	
Melanoma	2,541	1,643	4,184	2,493	1,664	4,157	48	-	21	27
Head and Neck	663	295	958	691	283	975	28	-	12	17
Upper GI	1,641	1,191	2,832	1,730	1,156	2,886	88	-	35	53
Colorectal	2,973	2,501	5,473	2,864	2,397	5,261	109	-	103	212 less colorectal
Lung	1,835	1,269	3,104	1,958	1,423	3,381	123	154		277 more lung
Breast	53	5,039	5,092	42	4,599	4,641	11	-	440	451 less breast than projected
Prostate	5,944		5,944	6,969		6,969	1,025	-		1,025 more prostate cancer than earlier projections
Cervix		164	164		227	227		-	63	63
Non-Hodgkins lymphoma	877	726	1,603	857	696	1,553	20	-	30	50
Unknown primary	1,458	1,355	2,813	709	716	1,425	749	-	639	1,388 less unknown primary cancers expected
Other	3,935	4,014	7,948	4,055	4,344	8,399	120	-	330	450
All cancers	21,965	18,196	40,161	22,367	17,505	39,872	402	-	691	290 less female cancer overall due to less breast

Tracey E, Projections of NSW Cancer cases. NSW 2007 Central Cancer Registry data. NSW Health Population Projection Series 1.2009. August 2009

Number of actual and projected new cases of cancer by new and old Health Area and year of diagnosis, 2006–2021

The actual 2006 and projected (2011, 2016 and 2021) numbers of new cancers and percentages of cancers by 2010 Local Health Networks are presented in Table P4.

The number of new cancer cases is expected to increase by 44 per cent in NSW between 2006 and 2021.

This percentage varies by Local Health Network. The greatest increase is expected in the Southern (70 per cent), Sydney South West (63 per cent), Mid North Coast (62 per cent), and Western Sydney (54 per cent) Local Health Networks.

Increases in the numbers of new cases of cancer are due to a combination of factors that have been considered in these population projections.

These are:

- increases in the incidence of cancer of a particular type reflected in increasing age specific rates
- increase in the population, in particular for those age 65 years and older
- the risk profile of the Local Government Area by cancer type and how this compared to the NSW average.

The increase in cancer cases is largely explained by increases in the population.

Overall, there is a projected increase of 17 per cent in the total population of NSW between 2006 and 2021. However, this percentage varies by age category, with the largest increases occurring in those aged 65 years and older.

There is projected to be a 52 per cent increase in the population between 2006 and 2021 in people aged 65 years and older, reflecting both increased life expectancy and ageing of the population (Appendix 2).

The largest projected increases in population aged 65 years and older is expected in South Western Sydney (72 per cent), Southern (75 per cent), Nepean Blue Mountains (73 per cent) and Albury (68 per cent) Mid-North Coast (69 per cent) and Western Sydney (71 per cent), Local Health Networks (Appendix 2).

The lowest projected increases in population aged 65 years and older is expected in South Eastern Sydney (35 per cent), Northern Sydney (37 per cent), Western NSW (45 per cent) and Central Coast (37 per cent (Appendix 2).

Overall, the proportion of the total breakdown of new cancer cases by Local Health Network remains similar for actual and projected years or varies slightly by 1 per cent.

For example Western Sydney is responsible for 9 per cent of total cases in 2006 and 9 percent in 2021 (Table P4).

This trend is observed within each Local Health Network.

Table P4 Number of actual and projected new cases of cancer by Local Health Network and year of diagnosis, 2006-2021

Local Health Network	Actual 2006	Projected 2011	Projected 2016	Projected 2021	Average annual percentage increase 2006-2011	Average annual percentage increase 2011-2016	Average annual percentage increase 2016-2021	Total percentage increase in cases between 2006-2021
Albury	267	284	329	379	2%	3%	3%	42%
	1%	1%	1%	1%				
Central Coast	2,042	2,216	2,449	2,775	2%	2%	3%	36%
	6%	5%	5%	5%				
Far West	177	203	212	218	4%	1%	1%	23%
	1%	0%	0%	0%				
Hunter New England	4,946	5730	6505	7319	4%	3%	3%	48%
	14%	14%	14%	14%				
Illawarra Shoalhaven	2,093	2,454	2,810	3,179	4%	3%	3%	52%
	6%	6%	6%	6%				
Mid North Coast	1,366	1,632	1,918	2,219	5%	4%	3%	62%
	4%	4%	4%	4%				
Murrumbidgee	1,370	1,526	1,702	1,884	3%	2%	2%	38%
	4%	4%	4%	4%				
Nepean Blue Mountains	1,405	1,639	1,889	2,146	4%	3%	3%	53%
	4%	4%	4%	4%				
Northern	2,011	2,210	2,551	2,905	2%	3%	3%	44%
	6%	6%	6%	6%				
Northern Sydney	4,287	4,624	5,067	5,544	2%	2%	2%	29%
	12%	11%	11%	11%				
South Eastern Sydney	4,213	4,590	5,005	5,423	2%	2%	2%	29%
	12%	11%	11%	11%				
South Western Sydney	3,251	3,810	4,477	5,298	4%	4%	4%	63%
	9%	10%	10%	10%				
Southern	1,027	1,280	1,506	1,746	6%	4%	3%	70%
	3%	3%	3%	3%				
Sydney	2,351	2,585	2,912	3,244	2%	3%	2%	38%
	7%	6%	6%	6%				
Western	1,454	1,632	1,818	2,003	3%	2%	2%	38%
	4%	4%	4%	4%				
Western Sydney	3,082	3,466	4,095	4,745	3%	4%	3%	54%
	9%	9%	9%	9%				
Total	35,342	39,880	45,245	51,027	3%	3%	3%	44%
	100%	100%	100%	100%				

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

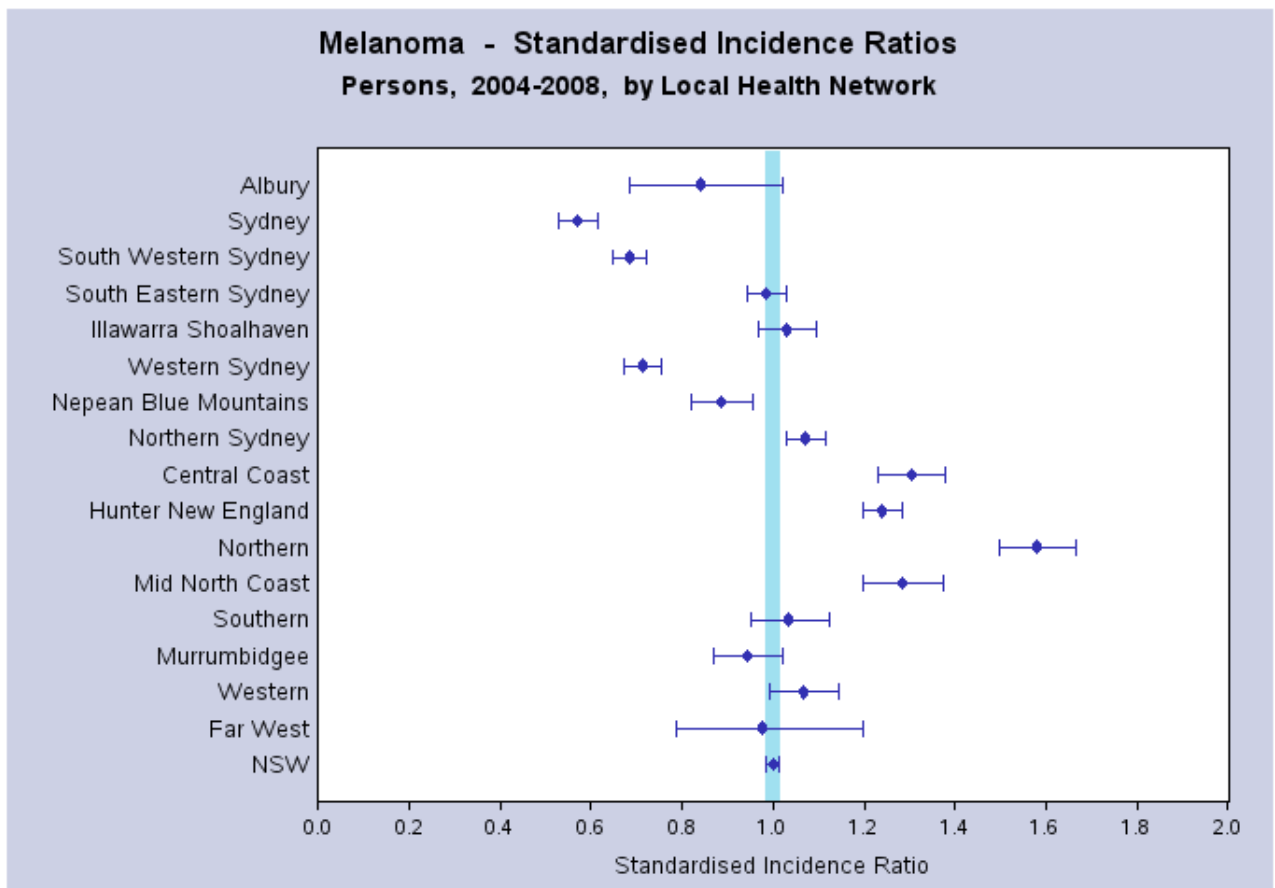
Number of actual and projected new cases of cancer by new and old Health Area, year of diagnosis and cancer site and clinical grouping, 2003–2021

The following tables show a breakdown of the number and percentage of projected new cancers by site for 2011, 2016 and 2021. Cancers have also been categorised in clinical groupings and Local Health Network (Tables P5, P6 and P7).

Overall, melanoma is projected to account for 10 per cent of all new cases of cancer in NSW in 2011. However, melanoma incidence rates vary by Local Health Network (Figure 1).

Risk adjustment using the method outlined in Appendix I correctly takes account of geographical differences in cancer incidence and mortality. Melanoma is now 15 per cent of total new cases in Northern NSW Local Health Network and 8 per cent of total cases in 2011 in South West Sydney Local Health Network residents (Figure 1, Table P5).

Figure 1 Age standardised incidence rates by AHS 2004-2008



Cancer incidence projections by local government areas 2006, 2011, 2016, 2021

The following tables have actual and projected cancer incidence cases by NSW local government areas (LGA). The average annual proportion of total incidence cases for each LGA is compared with the projected proportion of the total for each LGA (Appendix 4).

The average annual percentage of actual (2006) and projected cases as a proportion of total cancer in NSW for 2011, 2016 and 2021 is very consistent for each LGA. In addition, the actual and projected numbers compare reasonably well for each LGA.

NSW LGAs have changed in number from 174 in 2001 to 152 in 2006. All groupings of Local Health Networks are based on 2006 groupings of Local Government Areas.

Table P5 Number of new cases of cancer by new Local Health Network at diagnosis and by cancer site

Year	Topotab	Hunter New		Western			Northern Far			South		Western		Southern		Illawarra		Murrumbidgee		Central		Mid North		Nepean		South		Northern		Grand Total					
		Albury	England	Sydney	Sydney	NSW	West	Sydney	NSW	NSW	Shoalhaven	dgee	Coast	Coast	Mountains	Eastern	Sydney	Total																	
2011	Head and Neck	6	137	79	84	52	7	102	41	29	58	35	59	41	38	107	99	973	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%					
2011	Upper GI	19	365	223	267	143	11	324	109	88	187	105	154	111	119	337	321	2882	7%	6%	9%	8%	6%	5%	7%	7%	7%	7%	7%						
2011	Colon	24	498	218	265	197	17	304	142	115	217	127	203	147	125	353	400	3352	8%	9%	8%	8%	9%	9%	9%	8%	8%	9%	8%						
2011	Rectum	18	279	117	167	99	10	178	86	69	128	80	112	86	83	206	206	1925	6%	5%	5%	5%	5%	5%	5%	4%	4%	5%							
2011	Lung	22	466	245	302	186	24	369	143	107	222	137	210	158	136	357	298	3382	8%	8%	9%	9%	8%	9%	10%	8%	8%	6%	8%						
2011	Melanoma	24	690	176	285	326	21	301	177	136	258	144	271	203	154	464	528	4158	8%	12%	7%	8%	15%	10%	9%	10%	11%	10%							
2011	Breast	35	619	321	437	241	22	458	187	145	260	161	238	160	202	541	618	4645	12%	11%	12%	13%	11%	11%	11%	10%	12%	13%	12%						
2011	Cervix	1	30	17	23	10	1	26	9	5	14	6	10	6	9	34	23	226	1%	13%	8%	10%	4%	2%	3%	4%	15%	10%	100%						
2011	Ovarian	5	57	41	38	27	2	42	16	13	29	17	25	16	18	55	63	464	2%	1%	2%	1%	1%	1%	1%	1%	1%	1%							
2011	Prostate	66	1102	369	613	384	27	577	300	226	412	325	337	284	298	803	852	6973	23%	19%	14%	18%	17%	18%	17%	18%	17%	18%							
2011	Brain	3	70	37	45	26	3	54	19	15	31	18	29	20	23	63	61	518	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%							
2011	Thyroid and other endocrine	3	62	81	114	29	2	112	24	12	35	15	38	25	39	133	114	839	1%	1%	3%	3%	1%	1%	3%	3%	2%	3%	2%						
2011	Non Hodgkins lymphoma	7	203	110	144	83	6	152	54	53	95	50	87	53	62	185	207	1553	3%	4%	4%	4%	3%	4%	3%	4%	4%	4%							
2011	Leukaemia	7	142	81	74	50	8	99	59	47	57	68	51	41	39	114	118	1056	2%	2%	3%	2%	4%	2%	2%	2%	2%	3%	3%						
2011	Unknown primary	11	224	87	118	84	12	143	66	48	87	56	75	57	58	170	131	1427	4%	4%	3%	3%	4%	3%	4%	4%	4%	3%	4%						
2011	Myelodysplasia	3	103	47	38	36	4	52	26	30	31	29	44	27	30	96	70	666	1%	2%	2%	1%	2%	2%	2%	2%	2%	2%							
2011	Other	33	728	390	535	262	29	603	206	153	345	177	289	209	236	660	611	5465	12%	13%	15%	15%	12%	14%	13%	14%	13%	14%							
2011	All cancer	284	5730	2585	3466	2210	203	3810	1632	1280	2454	1526	2216	1632	1639	4590	4624	39880	288	5775	2640	3550	2237	207	3896	1666	1293	2467	1550	2233	1647	1670	4678	4722	40506
		1%	14%	6%	9%	6%	1%	10%	4%	3%	6%	4%	6%	4%	4%	12%	12%	100%																	

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Table P6 Number of new cases of cancer by new Local Health Network at diagnosis and by cancer site

Year	Topotab	Hunter New		Western Sydney	Northern NSW	Far West	South		Western NSW	Southern NSW	Illawarra Shoalhaven	Murrumbidgee	Central Coast	Mid North Coast	Nepean Blue Mountains		Southern Eastern	Northern Sydney	Grand Total
		Albury	England				Sydney	Sydney							Western Sydney	Eastern Sydney			
2011	Head and Neck	6	137	79	84	52	7	102	41	29	58	35	59	41	38	107	99	973	
2011	Upper GI	19	365	223	267	143	11	324	109	88	187	105	154	111	119	337	321	2882	
2011	Colon	24	498	218	265	197	17	304	142	115	217	127	203	147	125	353	400	3352	
2011	Rectum	18	279	117	167	99	10	178	86	69	128	80	112	86	83	206	206	1925	
2011	Lung	22	466	245	302	186	24	369	143	107	222	137	210	158	136	357	298	3382	
2011	Melanoma	24	690	176	285	326	21	301	177	136	258	144	271	203	154	464	528	4158	
2011	Breast	35	619	321	437	241	22	458	187	145	260	161	238	160	202	541	618	4645	
2011	Cervix	1	30	17	23	10	1	26	9	5	14	6	10	6	9	34	23	226	
2011	Ovarian	5	57	41	38	27	2	42	16	13	29	17	25	16	18	55	63	464	
2011	Prostate	66	1102	369	613	384	27	577	300	226	412	325	337	284	298	803	852	6973	
2011	Brain	3	70	37	45	26	3	54	19	15	31	18	29	20	23	63	61	518	
2011	Thyroid and other endocrine	3	62	81	114	29	2	112	24	12	35	15	38	25	39	133	114	839	
2011	Non Hodgkins lymphoma	7	203	110	144	83	6	152	54	53	95	50	87	53	62	185	207	1553	
2011	Leukaemia	7	142	81	74	50	8	99	59	47	57	68	51	41	39	114	118	1056	
2011	Unknown primary	11	224	87	118	84	12	143	66	48	87	56	75	57	58	170	131	1427	
2011	Myelodysplasia	3	103	47	38	36	4	52	26	30	31	29	44	27	30	96	70	666	
2011	Other	33	728	390	535	262	29	603	206	153	345	177	289	209	236	660	611	5465	
2011	All cancer	284	5730	2585	3466	2210	203	3810	1632	1280	2454	1526	2216	1632	1639	4590	4624	39880	
		287	5774	2639	3550	2236	207	3895	1665	1292	2466	1549	2232	1646	1669	4677	4721	40505	
		1%	14%	6%	9%	6%	1%	10%	4%	3%	6%	4%	6%	4%	4%	12%	12%	100%	
2016	Head and Neck	6	143	84	92	55	7	110	42	32	60	35	60	45	40	109	102	1020	
2016	Upper GI	22	412	249	314	164	11	373	121	102	213	117	168	129	136	365	349	3246	
2016	Colon	28	564	242	312	228	17	354	157	136	248	141	222	172	145	380	438	3785	
2016	Rectum	20	318	132	197	114	10	207	95	81	146	89	123	101	96	225	224	2180	
2016	Lung	25	507	261	345	206	24	416	152	121	243	146	224	181	153	379	321	3705	
2016	Melanoma	28	809	206	349	385	23	368	205	164	306	166	313	247	179	524	603	4874	
2016	Breast	39	669	348	493	269	23	516	200	162	285	172	252	180	218	567	648	5043	
2016	Cervix	1	26	16	21	9	1	25	8	5	12	5	9	6	8	31	21	204	
2016	Ovarian	5	61	42	42	30	2	46	17	15	32	18	26	18	19	56	66	495	
2016	Prostate	83	1332	441	776	475	30	736	356	284	504	385	395	354	374	927	993	8445	
2016	Brain	4	75	41	51	29	3	61	20	17	34	20	31	22	25	65	65	563	
2016	Thyroid and other endocrine	4	75	99	146	37	3	139	28	15	43	18	47	32	48	160	137	1032	
2016	Non Hodgkins lymphoma	9	231	124	170	96	6	179	61	63	109	56	97	63	72	202	227	1762	
2016	Leukaemia	8	154	89	86	56	8	114	64	53	62	75	55	47	44	121	126	1161	
2016	Unknown primary	12	236	91	129	89	12	157	68	52	94	58	77	63	62	173	134	1507	
2016	Myelodysplasia	3	110	50	44	39	4	58	29	35	35	31	45	30	33	100	73	718	
2016	Other	37	810	433	624	295	29	696	224	177	388	191	313	240	267	711	665	6102	
2016	All cancer	329	6505	2912	4095	2551	212	4477	1818	1506	2810	1702	2449	1918	1889	5005	5067	45245	
		334	6532	2949	4190	2576	213	4556	1848	1513	2815	1721	2457	1930	1920	5096	5193	45843	
		1%	14%	6%	9%	6%	0%	10%	4%	3%	6%	4%	5%	4%	4%	11%	11%	100%	
2021	Head and Neck	7	146	87	98	57	7	119	42	34	61	34	62	48	42	108	104	1057	
2021	Upper GI	25	463	276	361	186	12	437	133	117	240	129	189	148	156	394	382	3649	
2021	Colon	33	643	268	364	265	17	422	174	159	283	158	253	204	168	413	485	4310	
2021	Rectum	24	357	147	229	129	11	243	104	95	165	98	140	117	110	242	244	2455	
2021	Lung	28	554	279	390	230	23	477	162	137	266	157	248	206	173	406	351	4088	
2021	Melanoma	33	948	237	420	454	24	455	236	198	361	189	369	297	209	590	688	5708	
2021	Breast	41	713	370	544	293	23	582	209	178	307	180	271	197	233	587	672	5402	
2021	Cervix	1	27	17	23	9	1	28	8	5	13	5	10	6	9	32	22	215	
2021	Ovarian	6	65	44	45	32	2	51	18	17	34	19	27	19	20	58	70	527	
2021	Prostate	100	1548	511	938	559	32	914	406	339	593	441	461	421	439	1037	1123	9862	
2021	Brain	4	81	44	56	33	3	70	22	19	38	21	33	25	29	69	69	615	
2021	Thyroid and other endocrine	6	90	119	180	45	3	175	32	19	52	21	58	39	58	186	162	1243	
2021	Non Hodgkins lymphoma	10	261	135	198	108	6	213	68	73	123	62	110	73	81	217	248	1987	
2021	Leukaemia	9	168	96	96	62	8	132	69	60	68	81	62	53	49	129	135	1277	
2021	Unknown primary	13	248	94	141	93	11	175	70	56	100	59	80	70	66	175	139	1590	
2021	Myelodysplasia	4	125	57	52	44	4	68	32	40	40	35	51	35	38	110	80	817	
2021	Other	42	899	478	715	332	29	814	243	202	433	207	351	273	300	763	725	6806	
2021	All cancer	379	7319	3244	4745	2905	218	5298	2003	1746	3179	1884	2775	2219	2146	5423	5544	51027	
		386	7334	3262	4850	2934	216	5374	2030	1747	3177	1898	2777	2229	2179	5516	5700	51609	
		1%	14%	6%	9%	6%	0%	10%	4%	3%	6%	4%	5%	4%	4%	11%	11%	100%	

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Table P7 Number of new cases of cancer by Local Health Network of residence at diagnosis and by clinical grouping 2011 to 2021

Year	Topotab	Hunter New England		Western Sydney	Northern NSW	South Western NSW			Southern NSW	Illawarra Shoalhav		Murrumbidgee	Central Coast	Mid North Coast	Nepean Blue Mountains	South Eastern	Northern Sydney	Gra Tot
		Albury	England	Sydney	Sydney	NSW	Far West	Western	NSW	NSW	Shoalhav	dgee	Coast	Coast	Blue Mountains	Eastern	Sydney	Tot
2011	Head and Neck	6	137	79	84	52	7	102	41	29	58	35	59	41	38	107	99	
2011	Upper GI	19	365	223	267	143	11	324	109	88	187	105	154	111	119	337	321	
2011	Bowel	41	775	335	432	296	27	480	227	184	345	206	314	232	207	557	603	
2011	Respiratory	23	504	263	331	202	24	391	151	116	247	147	230	172	151	388	332	
2011	Bone and connective tissue	2	32	17	26	12	2	28	10	9	12	8	13	9	10	30	28	
2011	Skin	27	727	188	296	332	25	321	201	144	274	152	279	208	160	480	538	
2011	Breast	35	619	321	437	241	22	458	187	145	260	161	238	160	202	541	618	
2011	Gynaecological	10	197	106	135	75	7	155	57	43	90	50	73	52	60	171	183	
2011	Urogenital	80	1404	517	811	493	38	812	369	288	559	403	455	373	389	1054	1065	
2011	Eye		16	7	6	4	1	9	5	3	6	3	5	4	3	10	10	
2011	Brain and CNS	3	74	40	49	28	3	59	19	16	32	19	30	22	25	66	65	
2011	Thyroid and other endocrine	3	62	81	114	29	2	112	24	12	35	15	38	25	39	133	114	
2011	Lymphohaematopoetic	18	436	243	297	165	14	330	124	116	210	122	190	124	135	408	418	
2011	Unknown primary	11	224	87	118	84	12	143	66	48	87	56	75	57	58	170	131	
2011	Myelodysplasia	3	103	47	38	36	4	52	26	30	31	29	44	27	30	96	70	
2011	All cancer	284	5730	2585	3466	2210	203	3810	1632	1280	2454	1526	2216	1632	1639	4590	4624	
		281	5674	2553	3441	2193	200	3776	1618	1270	2433	1509	2197	1618	1625	4549	4594	
		1%	14%	6%	9%	6%	1%	10%	4%	3%	6%	4%	6%	4%	4%	12%	12%	
2016	Head and Neck	6	143	84	92	55	7	110	42	32	60	35	60	45	40	109	102	
2016	Upper GI	22	412	249	314	164	11	373	121	102	213	117	168	129	136	365	349	
2016	Bowel	47	877	373	508	341	28	559	250	216	392	228	343	272	240	600	656	
2016	Respiratory	26	553	282	380	225	24	444	162	132	273	158	246	198	170	416	359	
2016	Bone and connective tissue	2	34	18	30	13	2	32	10	10	12	8	14	10	10	31	29	
2016	Skin	31	836	214	355	385	27	386	228	170	319	171	316	248	183	530	601	
2016	Breast	39	669	348	493	269	23	516	200	162	285	172	252	180	218	567	648	
2016	Gynaecological	11	208	111	147	81	7	170	60	48	95	52	76	57	63	173	190	
2016	Urogenital	98	1651	602	1000	593	40	1000	427	352	664	465	519	454	472	1186	1210	
2016	Eye		17	7	7	4	1	10	6	4	7	3	5	5	3	11	10	
2016	Brain and CNS	4	80	44	55	31	3	66	21	17	36	20	32	24	27	68	69	
2016	Thyroid and other endocrine	4	75	99	146	37	3	139	28	15	43	18	47	32	48	160	137	
2016	Lymphohaematopoetic	20	490	273	350	189	15	386	138	136	239	137	210	146	156	443	457	
2016	Unknown primary	12	236	91	129	89	12	157	68	52	94	58	77	63	62	173	134	
2016	Myelodysplasia	3	110	50	44	39	4	58	29	35	35	31	45	30	33	100	73	
2016	All cancer	329	6505	2912	4095	2551	212	4477	1818	1506	2810	1702	2449	1918	1889	5005	5067	
		326	6391	2847	4049	2514	206	4406	1790	1482	2768	1672	2409	1891	1862	4932	5024	
		1%	14%	6%	9%	6%	0%	10%	4%	3%	6%	4%	5%	4%	4%	11%	11%	
2021	Head and Neck	7	146	87	98	57	7	119	42	34	61	34	62	48	42	108	104	
2021	Upper GI	25	463	276	361	186	12	437	133	117	240	129	189	148	156	394	382	
2021	Bowel	55	991	414	589	393	28	660	275	252	445	253	390	318	276	648	719	
2021	Respiratory	30	609	304	432	252	24	514	175	151	301	172	275	226	194	447	395	
2021	Bone and connective tissue	2	37	19	33	14	2	36	10	11	13	9	15	11	12	33	31	
2021	Skin	36	962	242	422	446	27	470	259	202	370	191	366	294	209	585	674	
2021	Breast	41	713	370	544	293	23	582	209	178	307	180	271	197	233	587	672	
2021	Gynaecological	12	218	115	158	86	6	188	61	52	100	54	80	62	65	174	196	
2021	Urogenital	115	1883	685	1186	686	43	1211	479	412	764	524	595	530	544	1303	1346	
2021	Eye		19	8	8	4	1	11	6	5	7	4	6	5	3	11	10	
2021	Brain and CNS	4	86	48	61	35	3	76	23	18	39	22	35	26	31	71	73	
2021	Thyroid and other endocrine	6	90	119	180	45	3	175	32	19	52	21	58	39	58	186	162	
2021	Lymphohaematopoetic	23	555	302	407	214	15	459	155	158	272	153	239	170	179	482	504	
2021	Unknown primary	13	248	94	141	93	11	175	70	56	100	59	80	70	66	175	139	
2021	Myelodysplasia	4	125	57	52	44	4	68	32	40	40	35	51	35	38	110	80	
2021	All cancer	379	7319	3244	4745	2905	218	5298	2003	1746	3179	1884	2775	2219	2146	5423	5544	
		374	7145	3142	4672	2849	209	5181	1961	1706	3113	1839	2713	2178	2105	5315	5487	
		1%	14%	6%	9%	6%	0%	10%	4%	3%	6%	4%	5%	4%	4%	11%	11%	

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Cancer deaths in NSW actual and projected 2006 2011, 2016 and 2021

The number of cancer deaths reflects the trends in death rates and the population projections.

Unlike incidence rates, most death rates across NSW are declining, particularly for high volume cancers.

Cancer sites with statistically significantly declining death rates include: oesophagus, stomach, bowel, cervix, uterus, bladder, prostate, testes, brain (men only), multiple myeloma, leukaemia, unknown primary cancers and all cancers

Cancer sites with statistically significantly increasing death rates include:

- liver cancer, pancreatic cancer (men only) and lung cancer (women only).

Liver and pancreatic cancer rates are grouped in upper gastrointestinal cancers.

The number of projected cancer deaths by Local Health Network of residence actual and projected 2006, 2011, 2016, 2021

On average, we expect there to be a 13 per cent increase in the number of cancer deaths between 2006 and 2021.

The proportional breakdown for actual and projected cancer deaths by site and clinical groupings is similar over time with on average a 1 per cent change between the total proportion of a given cancer site in 2006 and the total proportion of that same cancer site in 2021 (Tables P8,P9).

This varies by Local Health Network with the number of projected deaths expected to increase by 33 per cent in the Southern NSW Local Health Network, 27 per cent in the Mid North Coast and 21 per cent in South West Sydney.

The variations are due to:

- age-specific death rates by cancer site,
- the proportion of the population of the Local Health Network that is over 65 years of age, and
- the expected increase in the projected population, particularly in people aged 65 years and over (Table P10, P11).

Table P8 Number of actual 2006 and projected cancer deaths by cause of death 2011 to 2021

	2006 actual deaths	2011 projected deaths	2016 projected deaths	2021 projected deaths
Head and neck	344 3%	334 2%	311 2%	282 2%
Upper GI	2,010 15%	2,135 16%	2,364 16%	2,616 17%
Colon	1,110 8%	1,088 8%	1,092 8%	1,089 7%
Rectum	607 5%	591 4%	578 4%	558 4%
Lung	2,524 19%	2,601 19%	2,758 19%	2,951 19%
Melanoma	461 3%	520 4%	600 4%	693 5%
Breast	965 7%	923 7%	916 6%	907 6%
Ovarian	266 2%	290 2%	314 2%	343 2%
Prostate	1,018 8%	1,006 7%	1,010 7%	977 6%
Brain	324 2%	368 3%	385 3%	401 3%
Thyroid and other endocrine	52 0%	53 0%	59 0%	67 0%
Non Hodgkins Lymphoma	528 4%	503 4%	480 3%	457 3%
Leukaemia	708 5%	479 3%	484 3%	492 3%
Unknown Primary site	970 7%	963 7%	910 6%	833 5%
Myelodysplasia	208 2%	327 2%	504 3%	729 5%
Other	1,214 9%	1,652 12%	1,760 12%	1,883 12%
Total cancer deaths	13,365	13,766	14,438	15,167

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Table P9 Number of actual 2006 and projected cancer deaths by clinical grouping 2011 to 2021

	2006 actual deaths	2011 projected deaths	2016 projected deaths	2021 projected deaths
Head and neck	344 3%	334 2%	311 2%	282 2%
Upper GI	2,010 15%	2,135 16%	2,364 16%	2,616 17%
Bowel	1,717 13%	1,680 12%	1,670 12%	1,648 11%
Respiratory	2,706 20%	2,843 21%	3,047 21%	3,300 22%
Bone and Connective tissue	89 1%	78 1%	77 1%	77 1%
Skin	475 4%	534 4%	624 4%	726 5%
Breast	965 7%	923 7%	916 6%	907 6%
Gynaecological	508 4%	522 4%	543 4%	567 4%
Urological	1,704 13%	1,709 12%	1,749 12%	1,745 12%
Eye	23 0%	17 0%	16 0%	14 0%
Brain and CNS	336 3%	374 3%	391 3%	405 3%
Thyroid and other endocrine	52 0%	53 0%	59 0%	67 0%
Lymphohaematopoetic	1,258 9%	1,294 9%	1,305 9%	1,331 9%
Unknown Primary site	970 7%	963 7%	910 6%	833 5%
Myelodysplasia	208 2%	327 2%	504 3%	729 5%
Total cancer	13,365	13,766	14,438	15,167

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Table P10 Number of actual and projected cancer deaths by cancer type year of death and sex, NSW, 2006 (actual) 2011, 2016, 2021

Cause of death by clinical grouping	2006	2011	2016	2021	2006	2011	2016	2021
	Male	Male	Male	Male	Female	Female	Female	Female
Head and neck	257 3%	250 3%	233 3%	211 3%	87 1%	84 1%	78 1%	71 1%
Upper GI	1,158 15%	1,248 16%	1,386 17%	1,533 19%	852 14%	888 14%	978 15%	1,084 16%
Bowel	946 13%	924 12%	925 12%	921 11%	771 13%	756 12%	745 11%	727 10%
Respiratory	1,729 23%	1,722 23%	1,719 22%	1,715 21%	977 17%	1,120 18%	1,328 20%	1,586 23%
Bone and connective tissue	55 1%	45 1%	43 1%	41 0%	34 1%	33 1%	34 1%	36 1%
Skin	319 4%	363 5%	418 5%	485 6%	156 3%	171 3%	206 3%	241 3%
Breast	5	7	7	7	960 16%	916 15%	909 14%	900 13%
Gynaecological					508 9%	522 9%	543 8%	567 8%
Urological	1,467 20%	1,459 19%	1,487 19%	1,469 18%	237 4%	250 4%	262 4%	276 4%
Eye	13 0%	7 0%	6 0%	4 0%	10 0%	10 0%	11 0%	11 0%
Brain and CNS	201 3%	224 3%	234 3%	245 3%	135 2%	151 2%	156 2%	160 2%
Thyroid and other endocrine	24 0%	20 0%	20 0%	20 0%	28 0%	33 1%	39 1%	47 1%
Lymphohaematopoetic	705 9%	737 10%	758 10%	787 10%	553 9%	557 9%	548 8%	544 8%
Unknown primary	486 7%	457 6%	420 5%	364 4%	484 8%	507 8%	490 8%	470 7%
Myelodysplasia	109 1%	189 2%	298 4%	440 5%	99 2%	138 2%	206 3%	289 4%
Total	7,474 100%	7,642 100%	7,934 100%	8,207 100%	5,891 100%	6,124 100%	6,504 100%	6,960 100%

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Table P11 Number of actual and projected cancer deaths by Local Health Network and year of death, 2006-2021

	Actual 2006	Projected 2011	Projected 2016	Projected 2021	Average annual percentage increase 2006-2011	Average annual percentage increase 2011-2016	Average annual percentage increase 2016-2021	Total percentage increase 2006-2021
Albury	89 1%	94 1%	101 1%	109 1%	1%	2%	1%	22%
Central Coast	789 6%	796 6%	809 6%	848 6%	0%	0%	1%	7%
Far West	93 1%	84 1%	82 1%	78 1%	-2%	-1%	-1%	-16%
Hunter New England	1,984 15%	2,028 15%	2,129 15%	2,240 15%	1%	1%	1%	13%
Illawarra	845 6%	908 7%	966 7%	1,020 7%	2%	1%	1%	21%
Mid North Coast	538 4%	580 4%	632 4%	685 5%	2%	2%	2%	27%
Murrumbidgee	575 4%	546 4%	568 4%	586 4%	-1%	1%	1%	2%
Nepean Blue Mountains	524 4%	541 4%	575 4%	616 4%	1%	1%	1%	18%
Northern NSW	709 5%	703 5%	749 5%	794 5%	0%	1%	1%	12%
Northern Sydney	1,513 11%	1,513 11%	1,545 11%	1,588 10%	0%	0%	1%	5%
South Eastern Sydney	1,497 11%	1,531 11%	1,547 11%	1,563 10%	1%	0%	0%	4%
South West Sydney	1,296 10%	1,338 10%	1,441 10%	1,573 10%	1%	2%	2%	21%
Southern NSW	395 3%	442 3%	482 3%	525 3%	3%	2%	2%	33%
Sydney	945 7%	938 7%	969 7%	991 7%	0%	1%	0%	5%
Western NSW	534 4%	568 4%	582 4%	597 4%	2%	1%	0%	12%
Western Sydney	1,039 8%	1,157 8%	1,260 9%	1,354 9%	3%	2%	1%	30%
Grand Total	13,365	13,766	14,438	15,167	1%	1%	1%	13%

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Table P12 Number of cancer deaths by Local Health Network of residence at diagnosis and by cause of cancer death 2011 to 2021

Year	Cause of death	Central Coast	Western NSW	Far West	Hunter New England	Illawarra	Mid North Coast	Murrumbidgee	Nepean Blue Mountains	Network with Vic	Northern NSW	Northern Sydney	South Eastern Sydney	South West Sydney	Southern NSW	Sydney	Western Sydney	Grand Total
2011	Head and neck	17	14	3	51	21	15	13	11	2	17	34	36	33	10	28	28	334
2011	Upper GI	120	84	12	275	143	84	82	88	15	99	236	240	233	68	162	193	2,135
2011	Colon	69	50	7	170	69	42	44	40	9	60	129	113	95	40	71	80	1,088
2011	Rectum	36	26	4	90	43	24	25	24	4	26	56	61	57	25	39	52	591
2011	Lung	166	109	19	373	183	122	108	100	18	134	236	264	276	78	188	227	2,601
2011	Melanoma	34	19	3	78	33	21	19	22	4	36	67	64	40	14	30	36	520
2011	Breast	43	45	4	133	55	31	36	41	5	41	130	106	85	26	57	86	923
2011	Ovarian	14	10	1	39	18	11	12	11	2	18	40	35	26	9	20	25	290
2011	Prostate	59	45	6	177	59	54	42	35	5	63	114	110	75	31	61	70	1,006
2011	Eye	1	1		3	1	0	1	0		1	2	2	1	0	2	2	17
2011	Brain and CNS	21	14	3	49	25	12	11	18	3	19	48	44	39	11	27	30	374
2011	Thyroid and other endocrine	4	2	0	7	4	2	1	1	0	2	6	6	7	2	4	5	53
2011	Non Hodgkins Lymphoma	27	19	1	72	29	16	14	20	3	24	62	66	51	17	34	47	503
2011	Leukaemia	24	29	5	64	28	22	32	20	2	22	51	48	41	19	34	39	479
2011	Unknown primary	50	46	8	148	58	40	37	35	9	52	97	115	98	32	62	77	963
2011	Myelodysplasia	20	13	1	50	23	14	15	11	2	16	32	46	25	13	24	21	327
2011	Other	92	52	9	256	121	76	62	64	10	82	178	188	159	52	106	145	1,652
2011	All cancer	796	568	84	2,028	908	580	546	541	94	703	1,513	1,531	1,338	442	938	1,157	13,766
		797	577	87	2,035	913	586	555	540	95	712	1,519	1,543	1,342	447	948	1,163	13,859
		6%	4%	1%	15%	7%	4%	4%	4%	1%	5%	11%	11%	10%	3%	7%	8%	100%
2016	Head and neck	16	12	3	47	20	13	12	10	2	16	32	32	32	10	26	28	311
2016	Upper GI	128	91	12	306	160	95	90	99	17	112	254	255	265	78	177	222	2,364
2016	Colon	68	50	6	170	70	44	44	40	10	61	126	110	98	42	70	83	1,092
2016	Rectum	34	25	4	87	43	25	24	23	4	27	52	57	57	25	38	54	578
2016	Lung	171	112	19	393	195	135	113	109	19	142	249	271	300	87	193	251	2,758
2016	Melanoma	38	22	3	91	37	25	22	25	5	42	76	71	47	16	35	44	600
2016	Breast	41	44	4	132	56	33	37	40	5	42	125	101	86	27	56	87	916
2016	Ovarian	15	10	1	43	19	12	13	11	2	21	43	36	30	10	20	26	314
2016	Prostate	57	44	5	178	61	55	41	36	5	62	112	108	78	32	60	75	1,010
2016	Brain	21	14	3	51	26	13	11	19	3	20	47	44	40	12	29	33	385
2016	Thyroid and other endocrine	4	3	0	7	5	3	1	2	0	2	6	6	8	2	5	4	59
2016	Non Hodgkins Lymphoma	25	18	1	67	28	16	14	19	3	23	58	60	50	17	33	47	480
2016	Leukaemia	24	30	5	66	28	23	32	21	2	23	50	45	41	20	34	40	484
2016	Unknown primary	46	42	7	138	58	40	34	33	9	49	89	105	96	31	57	77	910
2016	Myelodysplasia	30	20	1	76	38	23	22	18	3	25	48	68	41	20	37	34	504
2016	Other	96	54	9	273	131	84	65	67	11	88	186	193	175	58	110	160	1,760
2016	All cancer	809	582	82	2,129	966	632	568	575	101	749	1,545	1,547	1,441	482	969	1,260	14,438
		815	591	84	2,125	975	639	575	572	101	757	1,552	1,562	1,444	489	980	1,265	14,526
		6%	4%	1%	15%	7%	4%	4%	4%	1%	5%	11%	11%	10%	3%	7%	9%	100%
2021	Head and neck	14	10	3	43	18	12	10	9	2	15	29	28	30	9	23	26	282
2021	Upper GI	142	98	12	339	178	108	97	112	19	126	275	271	306	89	192	252	2,616
2021	Colon	69	49	6	169	71	46	43	42	10	62	121	105	101	44	67	84	1,089
2021	Rectum	34	24	3	84	41	26	22	23	4	27	48	52	57	25	36	54	558
2021	Lung	182	115	19	416	208	148	117	119	21	153	268	280	332	97	199	277	2,951
2021	Melanoma	44	25	3	106	43	30	25	29	5	50	87	79	55	19	41	52	693
2021	Breast	40	44	4	131	56	35	37	40	5	43	119	95	87	28	55	88	907
2021	Ovarian	16	11	1	49	21	14	14	12	2	24	47	38	34	11	20	28	343
2021	Prostate	54	42	5	172	59	53	39	36	6	59	107	101	78	32	57	77	977
2021	Brain	22	15	2	53	27	13	11	21	3	22	47	44	42	12	30	35	401
2021	Thyroid and other endocrine	5	3	1	7	5	4	1	2	0	3	7	7	10	3	6	4	67
2021	Non Hodgkins Lymphoma	24	17	1	62	28	17	13	18	3	21	56	55	50	17	30	46	457
2021	Leukaemia	24	31	4	68	29	25	32	21	2	24	49	43	43	22	33	40	492
2021	Unknown primary	42	37	6	126	54	39	30	29	8	43	81	92	92	29	51	73	833
2021	Myelodysplasia	42	29	1	110	54	34	32	26	4	37	66	95	64	31	52	51	729
2021	Other	103	57	9	292	142	93	69	72	12	94	194	198	195	65	113	173	1,883
2021	All cancer	848	597	78	2,240	1,029	685	586	616	109	794	1,588	1,563	1,573	525	991	1,354	15,167
		858	606	78	2,226	1,035	695	594	610	108	804	1,601	1,585	1,577	533	1,007	1,360	15,277
		6%	4%	1%	15%	7%	5%	4%	4%	1%	5%	10%	10%	10%	3%	7%	9%	

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Table P13 Number of cancer deaths by new Local Health Network of residence at diagnosis and by clinical grouping 2011 to 2021

Year	Causetab	Central Coast		Western NSW		Hunter New England		Mid North Coast		Murrumbidgee		Nepean Blue Mountains		Network with Vic		Northern NSW		Northern Sydney		South Eastern Sydney		South West Sydney		Southern NSW		Western Sydney		Grand Total	
2011	Head and neck	17	14	3	51	21	15	13	11	2	17	34	36	33	10	28	28	28	28	28	28	28	28	28	28	28	28	334	
2011	Upper GI	120	84	12	275	143	84	82	88	15	99	236	240	233	68	162	193	193	193	193	193	193	193	193	193	193	193	2,135	
2011	Bowel	105	76	11	260	112	66	69	63	13	85	186	173	153	65	109	133	133	133	133	133	133	133	133	133	133	133	1,680	
2011	Respiratory	181	116	19	406	204	133	115	115	19	146	262	290	296	86	203	251	251	251	251	251	251	251	251	251	251	251	2,843	
2011	Bone and connective tissue	5	3	0	12	6	3	3	3	1	5	7	9	9	2	5	6	6	6	6	6	6	6	6	6	6	6	78	
2011	Skin	34	19	3	83	33	22	21	22	4	38	68	64	41	14	30	37	37	37	37	37	37	37	37	37	37	37	534	
2011	Breast	43	45	4	133	55	31	36	41	5	41	130	106	85	26	57	86	86	86	86	86	86	86	86	86	86	86	923	
2011	Gynaecological	26	17	3	74	33	21	19	19	3	29	65	61	53	16	39	44	44	44	44	44	44	44	44	44	44	44	522	
2011	Urological	99	67	11	290	112	88	70	58	10	99	191	190	140	55	102	128	128	128	128	128	128	128	128	128	128	128	1,709	
2011	Eye	1	1		3	1	0	1	0		1	2	2	1	0	2	2	2	2	2	2	2	2	2	2	2	2	17	
2011	Brain and CNS	21	14	3	49	25	12	11	18	3	19	48	44	39	11	27	30	30	30	30	30	30	30	30	30	30	30	374	
2011	Thyroid and other endocrine	4	2	0	7	4	2	1	1	0	2	6	6	7	2	4	5	5	5	5	5	5	5	5	5	5	5	53	
2011	Lymphohaematopoetic	74	52	6	183	79	50	51	56	7	57	155	153	125	44	85	118	118	118	118	118	118	118	118	118	118	118	1,294	
2011	Unknown primary	50	46	8	148	58	40	37	35	9	52	97	115	98	32	62	77	77	77	77	77	77	77	77	77	77	77	963	
2011	Myelodysplasia	20	13	1	50	23	14	15	11	2	16	32	46	25	13	24	21	21	21	21	21	21	21	21	21	21	21	327	
2011	All cancer	796	568	84	2,028	908	580	546	541	94	703	1,513	1,531	1,338	442	938	1,157	1,157	1,157	1,157	1,157	1,157	1,157	1,157	1,157	1,157	1,157	13,787	
		6%	4%	1%	15%	7%	4%	4%	4%	1%	5%	11%	11%	10%	3%	7%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	100%	
2016	Head and neck	16	12	3	47	20	13	12	10	2	16	32	32	32	10	26	28	28	28	28	28	28	28	28	28	28	28	311	
2016	Upper GI	128	91	12	306	160	95	90	99	17	112	254	255	265	78	177	222	222	222	222	222	222	222	222	222	222	222	2,364	
2016	Bowel	102	75	10	258	114	69	68	63	14	87	178	165	156	66	107	138	138	138	138	138	138	138	138	138	138	138	1,671	
2016	Respiratory	188	121	20	432	220	148	121	126	21	158	278	301	325	96	211	281	281	281	281	281	281	281	281	281	281	281	3,047	
2016	Bone and connective tissue	5	2	0	12	6	3	3	3	1	5	6	8	10	2	4	6	6	6	6	6	6	6	6	6	6	6	77	
2016	Skin	39	21	4	100	37	26	25	25	4	47	79	70	50	16	36	44	44	44	44	44	44	44	44	44	44	44	624	
2016	Breast	41	44	4	132	56	33	37	40	5	42	125	101	86	27	56	87	87	87	87	87	87	87	87	87	87	87	916	
2016	Gynaecological	26	18	3	77	34	23	20	19	3	31	66	61	57	17	41	47	47	47	47	47	47	47	47	47	47	47	543	
2016	Urological	98	66	10	296	116	91	71	60	11	101	191	190	148	57	104	139	139	139	139	139	139	139	139	139	139	139	1,749	
2016	Eye	1	1		3	2	1	1	1		1	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	16	
2016	Brain and CNS	21	14	3	52	26	13	11	19	3	21	48	44	41	12	29	33	33	33	33	33	33	33	33	33	33	33	391	
2016	Thyroid and other endocrine	4	3	0	7	5	3	1	2	0	2	6	6	8	2	5	4	4	4	4	4	4	4	4	4	4	4	59	
2016	Lymphohaematopoetic	72	53	5	186	81	53	51	57	8	59	153	148	127	47	84	122	122	122	122	122	122	122	122	122	122	122	1,305	
2016	Unknown primary	46	42	7	138	58	40	34	33	9	49	89	105	96	31	57	77	77	77	77	77	77	77	77	77	77	77	910	
2016	Myelodysplasia	30	20	1	76	38	23	22	18	3	25	48	68	41	20	37	34	34	34	34	34	34	34	34	34	34	34	504	
2016	All cancer	809	582	82	2,129	966	632	568	575	101	749	1,545	1,547	1,441	482	969	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	14,438	
		6%	4%	1%	15%	7%	4%	4%	4%	1%	5%	11%	11%	10%	3%	7%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	100%	
2021	Head and neck	14	10	3	43	18	12	10	9	2	15	29	28	30	9	23	26	26	26	26	26	26	26	26	26	26	26	282	
2021	Upper GI	142	98	12	339	178	108	97	112	19	126	275	271	306	89	192	252	252	252	252	252	252	252	252	252	252	252	2,616	
2021	Bowel	102	74	9	254	113	72	65	64	14	87	168	155	160	68	103	140	140	140	140	140	140	140	140	140	140	140	1,648	
2021	Respiratory	204	127	19	464	237	165	128	139	22	171	301	316	365	108	221	313	313	313	313	313	313	313	313	313	313	313	3,300	
2021	Bone and connective tissue	5	2	0	12	6	4	3	4	1	5	5	7	11	2	4	6	6	6	6	6	6	6	6	6	6	6	77	
2021	Skin	45	24	4	119	42	31	30	28	4	57	91	77	61	19	42	52	52	52	52	52	52	52	52	52	52	52	726	
2021	Breast	40	44	4	131	56	35	37	40	5	43	119	95	87	28	55	88	88	88	88	88	88	88	88	88	88	88	907	
2021	Gynaecological	27	18	3	82	35	25	20	20	4	33	69	61	62	19	41	49	49	49	49	49	49	49	49	49	49	49	567	
2021	Urological	97	64	9	294	117	93	69	61	11	100	187	185	153	59	101	144	144	144	144	144	144	144	144	144	144	144	1,745	
2021	Eye	1	0		2	2	1	1	1		0	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	14	
2021	Brain and CNS	22	14	3	54	27	14	11	21	3	22	48	44	44	13	30	35	35	35	35	35	35	35	35	35	35	35	405	
2021	Thyroid and other endocrine	5	3	1	7	5	4	1	2	0	3	7	7	10	3	6	4	4	4	4	4	4	4	4	4	4	4	67	
2021	Lymphohaematopoetic	73	53	5	193	83	57	52	59	8	61	153	144	133	50	81	125	125	125	125	125	125	125	125	125	125	125	1,331	
2021	Unknown primary	42	37	6	126	54	39	30	29	8	43	81	92	92	29	51	73	73	73	73	73	73	73	73	73	73	73	833	
2021	Myelodysplasia	42	29	1	110	54	34	32	26	4	37	66	95	64	31	52	51	51	51	51	51	51	51	51	51	51	51	729	
2021	All cancer	848	597	78	2,240	1,020	685	586	616	109	794	1,588	1,563	1,573	525	991	1,354	1,354	1,354	1,354	1,354	1,354	1,354	1,354	1,354	1,354	1,354	15,167	
		6%	4%	1%	15%	7%	5%	4%	4%	1%	5%	10%	10%	10%	3%	7%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	100%	

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Method

Projections of cancer incidence in this study were undertaken using linear regression applied to annual age specific cancer rates by five year age groups from 1993 to 2007.

Linear regression of these cancer age specific rates were undertaken to obtain 2011, 2016 and 2021 projected age specific cancer rates by sex. These projected age specific cancer rates were then applied to the 2009 health specific population projections from the Department of Planning, New South Wales that have been recently updated with Local Health Network populations to project numbers of new cases of cancer.

Projections are provided by local government area and the 2010 Local Health Networks. In addition, they are available by 2005 and 1995 Area Health Services. A worked example is provided of the modifications made by local government areas for each cancer site to take into account the different risk profile for each cancer site within each LGA.

To minimise the impact of screening and changes in cancer trends, selected time periods were used for prostate and breast and lung cancer in females. In males, annual age specific rates were selected from 1998 to 2007 for prostate cancers. In females, annual age specific rates were selected from 1995 to 2007 for lung and breast.

It is desirable when projecting trends to use consistent time periods for all sites however, the present adaptations were introduced to gain more realistic projections. Because different time periods were used to obtain projected numbers for selected sites, all cancers in males and females have been presented as the sum of all sites as well as the total number for all cancer as a group.

Cancer death projections used the same methodology as incidence with exception. Unlike incidence the annual age specific death rates were for the entire time period of 1993 to 2007. Therefore, the projected numbers of deaths by cause of cancer death summed together more closely approximate all deaths combined.

Risk adjustment

The proportion of cancers in Local Health Network for a particular site will vary depending on the risk profiles of the LGAs within that LHN. The best way of illustrating why is to consider the standardised incidence ratios for melanoma by Local Health Network for the latest time period 2004 to 2008.

Of note, Hunter New England has 50 percent more cases than the state average and Sydney South West had 0.5 or 50 per cent less than the state average. As can be seen in the worked example in appendix 1, the projected age specific rates calculated for each LGA and cancer site within each LGA is adjusted by calculating the ratio of the LGA rate divided by the state rate and the number of cases is summed. This ensures that the different risk profiles by cancer site are reflected in the number of cases by cancer site for each LGA.

Differences in the sum of individual sites versus all sites

There are slight differences when the individual sites are added and the total number of cases is used. However, when looking at the total numbers for a small geographical area, all cancer incidence (all types combined except non-melanoma skin cancers) are more stable estimates than the sum of many small individual types. Comparison is made with actual data for the most recent five year period. This comparison provides a good internal check as does the range of cases between the sum of individual sites and total number of

cases. In addition, the proportion breakdown by type is compared for actual and projected cases.

A worked example is seen in Appendix 1. The projected age specific rate per 100,000 for all cancer is divided by 100,000 and expressed as a proportion. This proportion by five year age group was then multiplied by the population for each LGA. In this case, the male projected population in the Albury LGA in 2011 was used. This analysis is repeated for 2016 and 2021.

In this example the projected number of cases of cancer (all types) is expected to be 155 new cases of cancer in males in 2011 assuming that the risk of cancer is the same in Albury as it is for NSW.

The cancer risk profile of Albury men compared to NSW men is taken into account by calculating age specific rates for the latest available time period, 2003 to 2007, for Albury and for NSW males. A ratio of the Albury age specific rate for each five year age group is divided by same age specific rate for males in NSW.

For example, the age specific incidence rate for the period 2003 to 2007 in Albury men is 0.0023, or 2.3 per 100,000, and the age specific rate for NSW is 0.0016, or 1.6 per 100,000, resulting in the ratio 2.3/1.6 or 1.42.

Therefore, to obtain the adjusted number of cases in Albury in 2011 in men aged 40-44 years, the ratio of 1.42 is then multiplied by 2.7 resulting in 4 cases in men aged 40-44 years instead of 2.7.

The final adjusted number of new cases of cancer in Albury males in 2011 is obtained by summing each of the adjusted cases across all age groups. The end result is that the adjusted number of cases of cancer in Albury men in 2011 is 169 cases of cancer instead of 155 cases which would have been the result if the risk in Albury was exactly the same as NSW.

The analysis in the worked example is repeated for each cancer type, by sex within each LGA and the added up (Appendix 4) A similar breakdown is provided for deaths (Appendix 5).

There will, however, be rounding errors and differences due to the level of precision of the age specific rates. This difference is greatest for projections in 2021.

Projections by broad clinical grouping are more variable than individual cancer sites. The most consistent projections are those individual priority cancers summed compared to the results of trends in age specific rates of cancer overall (all types grouped except non melanoma skin cancer).

Appendix 1 worked example – The number of cases of cancer (all types) projected in Albury males in 2011 adjusted by the ratio of cancer in Albury compared to NSW for the time period 2003 to 2007

A	B	C	D	E	F	G	I	H	J	K	L	M
Age group	All cancer projected rate NSW 2011 age specific rate per 100,000	2011 projected population for Albury	Expected number of cases in Albury B/100000* C	Actual number of Albury cases 2003/2007 number	Albury Actual ABS ESR pop 2003_2007 population	2003-2007 Albury age specific rate expressed as a proportion E/F	Actual number of NSW cases 2003-2007 NSW number	NSW Actual ABS ESR population NSW 2003-2007 population	age specific rates NSW 2003-2007 per 100000 I/H*100000	2003-2007 NSW age specific rates expressed as a proportion J/100000	Ratio of Albury age specific rates/NSW age specific rates E/G G/L	Albury 2011 adjusted number of cases D*L
0-4	22.5	1,644	0.4	0	7,781	0.0000	259	1,110,896	23.3	0.0002	0.0000	0
5-9	9.3	1,532	0.1	1	8,316	0.0001	119	1,132,544	10.5	0.0001	1.1444	0
10-14	14.7	1,630	0.2	1	8,997	0.0001	153	1,172,285	13.1	0.0001	0.8516	0
15-19	26.4	1,959	0.5	2	9,270	0.0002	304	1,167,113	26.0	0.0003	0.8283	0
20-24	42.6	1,807	0.8	3	8,857	0.0003	459	1,176,924	39.0	0.0004	0.8685	1
25-29	56.0	1,696	1.0	5	7,841	0.0006	687	1,161,795	59.1	0.0006	1.0784	1
30-34	75.4	1,594	1.2	7	7,843	0.0009	974	1,248,583	78.0	0.0008	1.1441	1
35-39	106.5	1,592	1.7	12	7,865	0.0015	1,335	1,218,179	109.6	0.0011	1.3922	2
40-44	160.4	1,681	2.7	19	8,300	0.0023	2,027	1,262,053	160.6	0.0016	1.4253	4
45-49	286.5	1,647	4.7	22	8,401	0.0026	3,256	1,195,815	272.3	0.0027	0.9618	5
50-54	534.4	1,710	9.1	37	7,832	0.0047	5,666	1,093,459	518.2	0.0052	0.9117	8
55-59	1017.9	1,596	16.2	68	7,026	0.0097	9,765	1,009,155	967.6	0.0097	1.0002	16
60-64	1594.0	1,411	22.5	98	5,118	0.0191	12,295	794,321	1547.9	0.0155	1.2371	28
65-69	2311.0	1,029	23.8	111	4,144	0.0268	14,556	631,691	2304.3	0.0230	1.1624	28
70-74	2685.3	812	21.8	96	3,373	0.0285	14,520	519,448	2795.3	0.0280	1.0182	22
75-79	3169.1	582	18.5	91	2,967	0.0307	14,244	428,228	3326.3	0.0333	0.9221	17
80-84	3581.3	479	17.2	84	1,864	0.0451	10,352	276,794	3740.0	0.0374	1.2049	21
85+	3804.9	337	12.8	52	1,184	0.0439	6,727	170,209	3952.2	0.0395	1.1113	14
All ages		24,739	155.2	709	116,979		97,698	16,769,492				169

Tracey E, Projections of NSW Cancer cases. NSW 2007 Central Cancer Registry data. NSW Health Population Projection Series 1.2009. August 2009

Appendix 2 NSW Population projections series 1 2009 and the percentage change by age group between 2006 and 2021

	Age group	2006	2011	2016	2021	Percentage change in the population between 2006 and 2011	Percentage change in the population between 2011 and 2016	Percentage change in the population between 2016 and 2021	Percentage change in the population between 2006 and 2021
Central Coast	0-14	61,681	61,627	63,185	67,758	0%	3%	7%	10%
	15-64	188,772	198,745	204,249	213,300	1%	3%	4%	13%
	65+	54,291	57,997	64,870	74,343	1%	12%	15%	37%
	Total	304,744	318,369	332,304	355,402	1%	4%	7%	17%
Far West	0-14	6,532	5,826	5,307	4,903	-2%	-9%	-8%	-25%
	15-64	20,635	19,785	18,434	16,988	-1%	-7%	-8%	-18%
	65+	5,367	5,552	6,041	6,438	1%	9%	7%	20%
	Total	32,534	31,163	29,783	28,329	-1%	-4%	-5%	-13%
Hunter New England	0-14	168,780	167,249	169,901	174,759	0%	2%	3%	4%
	15-64	543,398	562,931	569,987	573,580	1%	1%	1%	6%
	65+	132,032	150,076	175,497	201,716	3%	17%	15%	53%
	Total	844,209	880,257	915,385	950,056	1%	4%	4%	13%
Illawarra Shoalhaven	0-14	72,795	71,621	73,310	76,510	0%	2%	4%	5%
	15-64	237,486	248,440	253,806	256,771	1%	2%	1%	8%
	65+	60,049	68,363	79,757	91,855	3%	17%	15%	53%
	Total	370,330	388,424	406,873	425,136	1%	5%	4%	15%
Mid North Coast	0-14	38,672	38,469	39,681	41,644	0%	3%	5%	8%
	15-64	122,369	130,251	134,080	135,969	1%	3%	1%	11%
	65+	38,351	45,089	54,531	64,783	4%	21%	19%	69%
	Total	199,392	213,810	228,291	242,397	1%	7%	6%	22%
Murrumbidgee	0-14	51,582	48,883	47,817	47,746	-1%	-2%	0%	-7%
	15-64	149,545	151,695	149,732	146,373	0%	-1%	-2%	-2%
	65+	36,956	40,939	47,011	53,125	2%	15%	13%	44%
	Total	238,083	241,517	244,560	247,244	0%	1%	1%	4%
Nepean Blue Mountains	0-14	73,652	73,064	76,298	80,690	0%	4%	6%	10%
	15-64	229,272	233,719	239,693	245,641	0%	3%	2%	7%
	65+	33,015	38,844	48,210	57,049	4%	24%	18%	73%
	Total	335,939	345,628	364,200	383,381	1%	5%	5%	14%
Albury (Network with Victoria)	0-14	9,897	9,461	9,409	9,512	-1%	-1%	1%	-4%
	15-64	32,187	33,710	33,966	33,725	1%	1%	-1%	5%
	65+	6,461	7,446	9,055	10,883	3%	22%	20%	68%
	Total	48,545	50,617	52,430	54,120	1%	4%	3%	11%
Northern NSW	0-14	54,476	54,232	56,001	58,735	0%	3%	5%	8%
	15-64	176,150	186,756	191,097	193,165	1%	2%	1%	10%
	65+	50,081	56,904	67,860	79,940	3%	19%	18%	60%
	Total	280,708	297,892	314,958	331,839	1%	6%	5%	18%
Northern Sydney	0-14	142,457	150,073	154,880	160,075	1%	3%	3%	12%
	15-64	545,235	565,302	576,711	590,205	1%	2%	2%	8%
	65+	112,188	124,324	139,522	153,365	2%	12%	10%	37%
	Total	799,880	839,699	871,113	903,644	1%	4%	4%	13%
South Eastern Sydney	0-14	125,162	136,295	142,371	146,404	2%	4%	3%	17%
	15-64	564,363	585,262	591,017	598,701	1%	1%	1%	6%
	65+	105,420	116,859	130,577	142,184	2%	12%	9%	35%
	Total	794,945	838,416	863,966	887,289	1%	3%	3%	12%
South Western Sydney	0-14	186,372	195,727	212,306	236,048	1%	8%	11%	27%
	15-64	548,178	585,859	625,948	676,652	1%	7%	8%	23%
	65+	84,460	98,089	120,144	145,538	3%	22%	21%	72%
	Total	819,010	879,674	958,397	1,058,238	1%	9%	10%	29%
Southern NSW	0-14	37,481	38,088	39,870	42,144	0%	5%	6%	12%
	15-64	122,711	130,270	135,194	139,200	1%	4%	3%	13%
	65+	28,617	34,290	41,932	49,942	4%	22%	19%	75%
	Total	188,809	202,648	216,995	231,286	1%	7%	7%	22%
Sydney	0-14	80,061	90,916	98,545	103,439	3%	8%	5%	29%
	15-64	389,712	418,775	435,986	450,428	1%	4%	3%	16%
	65+	61,851	68,470	78,383	88,142	2%	14%	12%	43%
	Total	531,624	578,162	612,914	642,009	2%	6%	5%	21%
Western NSW	0-14	58,709	55,306	53,586	53,066	-1%	-3%	-1%	-10%
	15-64	168,612	169,859	167,232	163,022	0%	-2%	-3%	-3%
	65+	38,814	43,435	50,004	56,373	2%	15%	13%	45%
	Total	266,135	268,600	270,822	272,461	0%	1%	1%	2%
Western Sydney	0-14	164,890	179,878	198,772	215,416	2%	11%	8%	31%
	15-64	523,651	566,592	615,972	655,977	2%	9%	6%	25%
	65+	72,659	86,296	105,766	124,075	4%	23%	17%	71%
	Total	761,200	832,766	920,510	995,468	2%	11%	8%	31%
Total NSW	0-14	1,333,199	1,376,717	1,441,239	1,518,850	1%	5%	5%	14%
	15-64	4,562,276	4,787,952	4,943,103	5,089,698	1%	3%	3%	12%
	65+	920,612	1,042,973	1,219,160	1,399,751	3%	17%	15%	52%
	Total	6,816,087	7,207,641	7,603,502	8,008,299	1%	5%	5%	17%

NSW Health Population Projection Series 1.2009, Department of Planning & Statewide Services Development Branch, NSW Health, March 2009

LHN boundaries are based on ASGC 2007.

Please note virtual SLA codes, SLA labels, LGA codes and LGA labels have been created to account for the splits mentioned above.

Appendix 3 Clinical Groupings used in this report.

Clinical groupings are cancers that have been categorised based on treatment categories.

For example a urologist would commonly treat cancers of the prostate, testis, bladder, kidney and other male genital organs. Similarly a gynaecologist would normally treat cancers of the cervix, uterus, ovary, placenta and other female genital organs.

These groupings were developed with advice from Professor Jim Bishop and presented by the author for discussion and endorsement at the Annual Association of Cancer Registers Annual General Meeting in December 2004.

Minor modifications of these groupings were requested with the outcome that the AACR have adopted these groupings for clinical and planning purposes and where appropriate as normal inclusions in state and national incidence and mortality reports.

Table Appendix 3 Topography codes classified into clinical grouping categories

Clinical Group	Report Code (topotab)	ICD-10
Skin	C00 C43,C46	Lip (ICD-O-3 C00),Melanoma of skin (ICD-O-3 C44 and M872-M879), Kaposi's sarcoma (M914)
Head and Neck	C01,C02,C03-C06 C07,C08,C09, C10 C11, C14,C12, C13 C30,C31,C32	<i>Tongue (ICD-O-3 C01,C02), Mouth (ICD-O-3 C03-C06)</i> <i>Salivary glands (ICD-O-3 C07,C08), Oropharynx (ICD-O-3 C09,C10)</i> <i>Nasopharynx (ICD-O-3 C11),Hypopharynx (ICD-O-3 C12,C13) Other oral cavity & pharynx (ICD-O-3 C14),Nose, sinuses, etc (ICD-O-3 C30, C31), Larynx (ICD-O-3 C32)</i>
Upper Gastrointestinal	C15, C16, C17, C22,C23, C24, C25.	Oesophagus (ICD-O-3 C15) ,Stomach (ICD-O-3 C16) Small intestine (ICD-O-3 C17) ,Liver (ICD-O-3 C22) Gallbladder(ICD-O-3 C23,C24) , Pancreas (ICD-O-3 C25)
Colorectal	C18, C19, C20, C21	Colon (ICD-O-3 C18) Rectum, rectosigmoid, anus (ICD-O-3 C19-C21)
Respiratory	C33,34,C37, C38, C45	Lung (ICD-O-3 C33,C34) ,Other thoracic organs (ICD-O-3 C37,C38) Mesothelioma (M905)
Bone and other connective tissue	C40, C41, C47, C49	Bone (ICD-O-3 C40,C41), Connective tissue, peripheral nerves (ICD-O-3 C47,C49)
Breast	C50	Breast (ICD-O-3 C50)
Urogenital	C60, C61, C62, C63, C64, C66, C67,C68	Prostate(ICD-O-3 C61) ,Testis (ICD-O-3 C62) Other male genital organs (ICD-O-3 C60,C63) Kidney (ICD-O-3 C64-C66,C68) ,Bladder (ICD-O-3 C67)
Gynecological	C53, C54, C55, C56, C57, C58, C59	Cervix (ICD-O-3 C53) Uterus, Body & NOS (ICD-O-3 C54,C55) ,Ovary (ICD-O-3 C56,C57.0-7) ,Placenta (ICD-O-3 C58) Other female genital organs (ICD-O-3 C51,C52,C57.8-9)
Eye	C69	(ICD-O-3 C69)
Neurological	C70, C71, C72	C71 Brain (ICD-O-3 C71), C72 Central nervous system (ICD-O-3 C70,C72)
Thyroid and other endocrine	C73, C74, C75	Thyroid (ICD-O-3 C73) Other endocrine glands (ICD-O-3 C74,C75)
Lymphohaemato poeitic	C81, C82, C88, C90, C91, C92, C95	Hodgkin's disease (M965-M966) Non-Hodgkin's lymphoma (M959,M967-M972,M974) Multiple myeloma (M973,M976) Acute lymphoblastic leukaemia (M9821) Other lymphoid leukaemias (M9820,M9822-M9827,M994) Acute myeloid leukaemia (M9861) Other myeloid leukaemia (M9860,M9862-8,M987-M988,M9930,M9987) Other specified leukaemias (M984,M985,M989-M993) Unspecified leukaemias (M980) Myeloproliferative disorders, Myelodysplasia (this has been grouped separately but should be included in this category in the future)
Ill-defined and unknown primary sites	C26, C39, C48, C76, C80	Other and ill defined digestive organs (ICD-O-3 C26) Other and ill defined respiratory (ICD-O-3 C39) Retroperitoneum and peritoneum (ICD-O-3 C48) Other and ill defined sites (ICD-O-3 C76) Unknown primary site (ICD-O-3 C80)

Appendix 4 NSW Population projections for cancer by local government area and year of diagnosis,NSW, 2011,2016 and 2021

Local Government Area	2006	2011	2016	2021	Grand Total	2006	2011	2016	2021
Albury	267	284	329	379	992	0.8%	0.7%	0.7%	0.7%
Armidale Dumaresq	108	125	138	151	414	0.3%	0.3%	0.3%	0.3%
Ashfield	202	212	235	254	701	0.6%	0.5%	0.5%	0.5%
Auburn	231	258	325	379	961	0.7%	0.6%	0.7%	0.7%
Ballina	285	332	380	432	1,144	0.8%	0.8%	0.8%	0.8%
Balranald	12	12	14	14	41	0.0%	0.0%	0.0%	0.0%
Bankstown	827	895	956	1,034	2,885	2.3%	2.2%	2.1%	2.0%
Bathurst Regional	158	202	234	267	702	0.4%	0.5%	0.5%	0.5%
Baulkham Hills	701	828	999	1,171	2,998	2.0%	2.1%	2.2%	2.3%
Bega Valley	220	266	317	370	953	0.6%	0.7%	0.7%	0.7%
Bellingen	89	109	123	135	367	0.3%	0.3%	0.3%	0.3%
Berrigan	54	66	75	83	224	0.2%	0.2%	0.2%	0.2%
Blacktown	1,043	1,173	1,399	1,676	4,248	3.0%	2.9%	3.1%	3.3%
Bland	40	40	42	44	126	0.1%	0.1%	0.1%	0.1%
Blayney	39	45	50	56	151	0.1%	0.1%	0.1%	0.1%
Blue Mountains	380	419	459	511	1,389	1.1%	1.1%	1.0%	1.0%
Bogan	24	22	23	22	67	0.1%	0.1%	0.1%	0.0%
Bombala	13	18	19	19	56	0.0%	0.0%	0.0%	0.0%
Boorowa	13	15	16	17	48	0.0%	0.0%	0.0%	0.0%
Botany Bay	190	214	233	257	704	0.5%	0.5%	0.5%	0.5%
Bourke	15	17	17	18	52	0.0%	0.0%	0.0%	0.0%
Brewarrina	10	9	10	11	31	0.0%	0.0%	0.0%	0.0%
Broken Hill	122	128	132	134	393	0.3%	0.3%	0.3%	0.3%
Burwood	157	158	183	220	562	0.4%	0.4%	0.4%	0.4%
Byron	172	184	216	252	652	0.5%	0.5%	0.5%	0.5%
Cabonne	69	88	98	108	294	0.2%	0.2%	0.2%	0.2%
Camden	168	258	407	591	1,256	0.5%	0.6%	0.9%	1.2%
Campbelltown	520	622	759	919	2,299	1.5%	1.6%	1.7%	1.8%
Canada Bay	349	409	473	518	1,400	1.0%	1.0%	1.0%	1.0%
Canterbury	618	661	718	771	2,151	1.7%	1.7%	1.6%	1.5%
Carrathool	15	16	17	18	51	0.0%	0.0%	0.0%	0.0%
Central Darling	6	10	10	10	30	0.0%	0.0%	0.0%	0.0%
Cessnock	254	294	340	397	1,030	0.7%	0.7%	0.8%	0.8%
Clarence Valley	358	427	493	554	1,474	1.0%	1.1%	1.1%	1.1%
Cobar	24	26	28	30	84	0.1%	0.1%	0.1%	0.1%
Coffs Harbour	389	515	621	733	1,868	1.1%	1.3%	1.4%	1.4%
Conargo	-	5	4	4	13	0.0%	0.0%	0.0%	0.0%
Coolamon	33	35	38	41	114	0.1%	0.1%	0.1%	0.1%
Cooma-Monaro	52	64	71	78	213	0.1%	0.2%	0.2%	0.2%
Coonamble	28	28	28	28	84	0.1%	0.1%	0.1%	0.1%
Cootamundra	53	52	56	60	168	0.1%	0.1%	0.1%	0.1%
Corowa Shire	87	99	112	128	339	0.2%	0.2%	0.2%	0.2%
Cowra	97	96	108	119	323	0.3%	0.2%	0.2%	0.2%
Deniliquin	52	68	75	84	227	0.1%	0.2%	0.2%	0.2%
Dubbo	209	231	268	308	806	0.6%	0.6%	0.6%	0.6%
Dungog	49	55	61	68	184	0.1%	0.1%	0.1%	0.1%
Eurobodalla	270	331	390	452	1,172	0.8%	0.8%	0.9%	0.9%
Fairfield	715	797	889	988	2,673	2.0%	2.0%	2.0%	1.9%
Forbes	45	53	56	58	166	0.1%	0.1%	0.1%	0.1%
Gilgandra	31	32	35	36	103	0.1%	0.1%	0.1%	0.1%
Glen Innes Severn	62	66	71	76	213	0.2%	0.2%	0.2%	0.1%
Gloucester	37	44	48	52	145	0.1%	0.1%	0.1%	0.1%
Gosford	1,051	1,154	1,259	1,389	3,803	3.0%	2.9%	2.8%	2.7%
Goulburn Mulwaree	152	178	199	220	598	0.4%	0.4%	0.4%	0.4%
Greater Taree	340	382	436	488	1,306	1.0%	1.0%	1.0%	1.0%
Greater Hume Shire	67	70	76	80	226	0.2%	0.2%	0.2%	0.2%
Great Lakes	313	369	427	490	1,286	0.9%	0.9%	0.9%	1.0%
Griffith	118	143	166	192	501	0.3%	0.4%	0.4%	0.4%
Gundagai	25	27	29	32	88	0.1%	0.1%	0.1%	0.1%
Gunnedah	78	87	94	100	281	0.2%	0.2%	0.2%	0.2%
Guyra	26	28	30	33	91	0.1%	0.1%	0.1%	0.1%
Gwydir	38	44	45	45	133	0.1%	0.1%	0.1%	0.1%
Harden	26	31	31	32	94	0.1%	0.1%	0.1%	0.1%
Hastings	536	627	741	865	2,233	1.5%	1.6%	1.6%	1.7%
Hawkesbury	247	310	358	418	1,087	0.7%	0.8%	0.8%	0.8%
Hay	17	21	22	22	65	0.0%	0.1%	0.0%	0.0%
Holroyd	426	469	538	595	1,602	1.2%	1.2%	1.2%	1.2%
Hornsby	737	841	930	1,024	2,794	2.1%	2.1%	2.1%	2.0%
Hunters Hill	85	88	98	110	296	0.2%	0.2%	0.2%	0.2%
Hurstville	442	447	483	517	1,448	1.3%	1.1%	1.1%	1.0%
Inverell	102	120	132	143	395	0.3%	0.3%	0.3%	0.3%

Appendix 4 NSW Population projections for cancer by local government area and year of diagnosis,NSW, 2011,2016 and 2021

Local Government Area	2006	2011	2016	2021	Grand Total	2006	2011	2016	2021
Jerilderie	7	11	11	12	34	0.0%	0.0%	0.0%	0.0%
June	38	38	41	45	123	0.1%	0.1%	0.1%	0.1%
Kempsey	203	217	250	282	749	0.6%	0.5%	0.6%	0.6%
Kiama	137	142	161	184	487	0.4%	0.4%	0.4%	0.4%
Kogarah	271	310	333	354	997	0.8%	0.8%	0.7%	0.7%
Ku-ring-gai	644	668	752	823	2,243	1.8%	1.7%	1.7%	1.6%
Kyogle	72	60	65	68	192	0.2%	0.2%	0.1%	0.1%
Lachlan	26	37	39	42	117	0.1%	0.1%	0.1%	0.1%
Lake Cargellico	12	13	14	14	41	0.0%	0.0%	0.0%	0.0%
Lake Macquarie	1,122	1,313	1,471	1,650	4,434	3.2%	3.3%	3.3%	3.2%
Lane Cove	177	170	181	197	548	0.5%	0.4%	0.4%	0.4%
Leeton	64	64	71	79	214	0.2%	0.2%	0.2%	0.2%
Leichhardt	222	245	263	280	788	0.6%	0.6%	0.6%	0.5%
Lismore	248	255	285	316	856	0.7%	0.6%	0.6%	0.6%
Lithgow	110	137	154	171	462	0.3%	0.3%	0.3%	0.3%
Liverpool	542	670	794	981	2,445	1.5%	1.7%	1.8%	1.9%
Liverpool Plains	52	62	67	72	202	0.1%	0.2%	0.1%	0.1%
Lockhart	21	22	23	24	69	0.1%	0.1%	0.1%	0.0%
Maitland	306	387	478	577	1,442	0.9%	1.0%	1.1%	1.1%
Manly	218	235	254	275	764	0.6%	0.6%	0.6%	0.5%
Marrickville	340	334	361	386	1,081	1.0%	0.8%	0.8%	0.8%
Mid-Western Regional	127								
		148	166	185	500	0.4%	0.4%	0.4%	0.4%
Moree Plains	87	76	82	87	245	0.2%	0.2%	0.2%	0.2%
Mosman	166	176	191	206	573	0.5%	0.4%	0.4%	0.4%
Murray	40	47	56	66	169	0.1%	0.1%	0.1%	0.1%
Murrumbidgee	13	19	22	25	66	0.0%	0.0%	0.0%	0.0%
Muswellbrook	76	89	101	113	303	0.2%	0.2%	0.2%	0.2%
Nambucca	149	164	184	204	552	0.4%	0.4%	0.4%	0.4%
Narrabri	80	93	101	106	300	0.2%	0.2%	0.2%	0.2%
Narrandera	49	54	56	59	168	0.1%	0.1%	0.1%	0.1%
Narromine	36	42	46	49	137	0.1%	0.1%	0.1%	0.1%
Newcastle	832	916	1,013	1,112	3,041	2.4%	2.3%	2.2%	2.2%
North Sydney	293	337	379	418	1,134	0.8%	0.8%	0.8%	0.8%
Oberon	33	30	36	41	108	0.1%	0.1%	0.1%	0.1%
Orange	200	222	254	288	763	0.6%	0.6%	0.6%	0.6%
Palerang	65	70	84	100	254	0.2%	0.2%	0.2%	0.2%
Parkes	83	95	103	109	307	0.2%	0.2%	0.2%	0.2%
Parramatta	681	739	834	923	2,497	1.9%	1.9%	1.8%	1.8%
Penrith	668	773	917	1,046	2,736	1.9%	1.9%	2.0%	2.0%
Pittwater	336	370	413	454	1,236	1.0%	0.9%	0.9%	0.9%
Port Stephens	404	504	605	703	1,812	1.1%	1.3%	1.3%	1.4%
Queanbeyan	133	184	226	275	685	0.4%	0.5%	0.5%	0.5%
Randwick	672	702	765	819	2,286	1.9%	1.8%	1.7%	1.6%
Richmond Valley	156	168	190	210	568	0.4%	0.4%	0.4%	0.4%
Rockdale	499	545	589	629	1,762	1.4%	1.4%	1.3%	1.2%
Ryde	495	562	621	696	1,880	1.4%	1.4%	1.4%	1.4%
Shellharbour	287	347	406	462	1,215	0.8%	0.9%	0.9%	0.9%
Shoalhaven	643	805	940	1,080	2,825	1.8%	2.0%	2.1%	2.1%
Singleton	94	104	122	142	368	0.3%	0.3%	0.3%	0.3%
Snowy River	30	35	44	53	132	0.1%	0.1%	0.1%	0.1%
Strathfield	135	143	163	186	492	0.4%	0.4%	0.4%	0.4%
Sutherland Shire	1,196	1,294	1,407	1,519	4,220	3.4%	3.2%	3.1%	3.0%
SE LHN	304	374	446	528	1,348	0.9%	0.9%	1.0%	1.0%
Sydney	328	422	516	628	1,566	0.9%	1.1%	1.1%	1.2%
Tamworth Regional	293	371	422	477	1,270	0.8%	0.9%	0.9%	0.9%
Temora	32	46	51	56	153	0.1%	0.1%	0.1%	0.1%
Tenterfield	51	54	59	64	177	0.1%	0.1%	0.1%	0.1%
Urbenville	3	2	2	2	6	0.0%	0.0%	0.0%	0.0%
Tumbarumba	15	24	26	28	78	0.0%	0.1%	0.1%	0.1%
Tumut Shire	73	74	81	88	243	0.2%	0.2%	0.2%	0.2%
Tweed	717	783	921	1,071	2,775	2.0%	2.0%	2.0%	2.1%
Upper Hunter Shire	84	80	86	91	257	0.2%	0.2%	0.2%	0.2%
Upper Lachlan	51	60	66	71	197	0.1%	0.2%	0.1%	0.1%
Uralla	38	35	40	43	118	0.1%	0.1%	0.1%	0.1%
Urana	10	10	10	10	29	0.0%	0.0%	0.0%	0.0%
Wagga Wagga	281	306	353	404	1,064	0.8%	0.8%	0.8%	0.8%
Wakool	30	27	29	31	86	0.1%	0.1%	0.1%	0.1%
Walcha	20	33	36	37	106	0.1%	0.1%	0.1%	0.1%
Walgett	34	37	40	42	119	0.1%	0.1%	0.1%	0.1%
Warren	15	19	20	19	58	0.0%	0.0%	0.0%	0.0%

Appendix 4 NSW Population projections for cancer by local government area and year of diagnosis,NSW, 2011,2016 and 2021

Local Government Area	2006	2011	2016	2021	Grand Total	2006	2011	2016	2021
Warringah	775	829	865	924	2,617	2.2%	2.1%	1.9%	1.8%
Warrumbungle Shire	70	64	68	70	202	0.2%	0.2%	0.2%	0.1%
Waverley	324	339	361	381	1,081	0.9%	0.8%	0.8%	0.7%
Weddin	29	32	33	34	100	0.1%	0.1%	0.1%	0.1%
Wellington	52	56	59	62	177	0.1%	0.1%	0.1%	0.1%
Wentworth	33	41	44	48	133	0.1%	0.1%	0.1%	0.1%
Willoughby	361	347	383	418	1,148	1.0%	0.9%	0.8%	0.8%
Wingecarribee	296	364	432	502	1,298	0.8%	0.9%	1.0%	1.0%
Wollondilly	183	205	240	284	729	0.5%	0.5%	0.5%	0.6%
Wollongong	1,026	1,160	1,303	1,453	3,916	2.9%	2.9%	2.9%	2.8%
Woollahra	315	364	388	420	1,173	0.9%	0.9%	0.9%	0.8%
Wyong	991	1,062	1,190	1,386	3,637	2.8%	2.7%	2.6%	2.7%
Yass Valley	41	75	90	107	273	0.1%	0.2%	0.2%	0.2%
Young	85	86	96	108	290	0.2%	0.2%	0.2%	0.2%
Unincorporated NSW	4	11	12	11	35	0.0%	0.0%	0.0%	0.0%
Total	35,342	39,880	45,245	51,027	136,152	100%	100%	100%	100%
		908	1073	1156					

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011

Appendix 5 NSW Population projections by cause of cancer death by local government area and year of diagnosis, NSW, 2011, 2016 and 2021

LGA	2006	2011	2016	2021	2006	2011	2016	2021
Albury	89	94	101	109	0.7%	0.7%	0.7%	0.7%
Armidale Dumaresq	49	43	45	47	0.4%	0.3%	0.3%	0.3%
Ashfield	81	79	80	80	0.6%	0.6%	0.6%	0.5%
Auburn	91	102	116	124	0.7%	0.7%	0.8%	0.8%
Ballina	98	102	108	114	0.7%	0.7%	0.7%	0.8%
Balranald	10	6	6	6	0.1%	0.0%	0.0%	0.0%
Bankstown	381	357	351	346	2.9%	2.6%	2.4%	2.3%
Bathurst Regional	64	70	74	78	0.5%	0.5%	0.5%	0.5%
Baukham Hills	200	225	257	287	1.5%	1.6%	1.8%	1.9%
Bega Valley	77	89	99	109	0.6%	0.6%	0.7%	0.7%
Bellingen	38	39	40	41	0.3%	0.3%	0.3%	0.3%
Berrigan	27	23	25	27	0.2%	0.2%	0.2%	0.2%
Blacktown	347	408	445	490	2.6%	3.0%	3.1%	3.2%
Bland	15	17	17	16	0.1%	0.1%	0.1%	0.1%
Blayney	16	17	17	17	0.1%	0.1%	0.1%	0.1%
Blue Mountains	139	140	141	148	1.0%	1.0%	1.0%	1.0%
Boğan	12	9	9	8	0.1%	0.1%	0.1%	0.1%
Bombala	6	8	8	8	0.0%	0.1%	0.1%	0.1%
Boorowa	7	4	4	4	0.1%	0.0%	0.0%	0.0%
Botany Bay	75	82	83	86	0.6%	0.6%	0.6%	0.6%
Bourke	7	6	6	5	0.1%	0.0%	0.0%	0.0%
Brewarrina	2	3	3	3	0.0%	0.0%	0.0%	0.0%
Broken Hill	56	54	51	48	0.4%	0.4%	0.4%	0.3%
Burwood	65	60	65	73	0.5%	0.4%	0.4%	0.5%
Byron	61	58	61	66	0.5%	0.4%	0.4%	0.4%
Cabonne	21	31	32	34	0.2%	0.2%	0.2%	0.2%
Camden	57	78	114	155	0.4%	0.6%	0.8%	1.0%
Campbelltown	202	202	227	257	1.5%	1.5%	1.6%	1.7%
Canada Bay	142	141	151	154	1.1%	1.0%	1.0%	1.0%
Canterbury	270	263	264	262	2.0%	1.9%	1.8%	1.7%
Carrathool	2	6	6	6	0.0%	0.0%	0.0%	0.0%
Central Darling	3	3	3	3	0.0%	0.0%	0.0%	0.0%
Cessnock	117	114	122	134	0.9%	0.8%	0.8%	0.9%
Clarence Valley	136	150	162	172	1.0%	1.1%	1.1%	1.1%
Cobar	6	10	10	10	0.0%	0.1%	0.1%	0.1%
Coffs Harbour	157	173	192	212	1.2%	1.3%	1.3%	1.4%
Conargo	2	2	1	1	0.0%	0.0%	0.0%	0.0%
Coolamon	17	14	14	14	0.1%	0.1%	0.1%	0.1%
Cooma-Monaro	21	20	21	22	0.2%	0.1%	0.1%	0.1%
Coonamble	6	9	8	7	0.0%	0.1%	0.1%	0.0%
Cootamundra	18	20	20	20	0.1%	0.1%	0.1%	0.1%
Corowa Shire	42	36	38	41	0.3%	0.3%	0.3%	0.3%
Cowra	30	34	36	37	0.2%	0.3%	0.2%	0.2%
Deniliquin	25	27	29	31	0.2%	0.2%	0.2%	0.2%
Dubbo	70	73	77	82	0.5%	0.5%	0.5%	0.5%
Dunqoo	28	21	22	23	0.2%	0.2%	0.2%	0.1%
Eurobodalla	107	124	136	148	0.8%	0.9%	0.9%	1.0%
Fairfield	310	308	318	330	2.3%	2.2%	2.2%	2.2%
Forbes	21	23	22	22	0.2%	0.2%	0.2%	0.1%
Gilgandra	15	11	11	10	0.1%	0.1%	0.1%	0.1%
Glen Innes Severn	25	25	25	25	0.2%	0.2%	0.2%	0.2%
Gloucester	20	14	15	15	0.1%	0.1%	0.1%	0.1%
Gosford	408	411	414	424	3.1%	3.0%	2.9%	2.8%
Goulburn Mulwaree	72	66	69	71	0.5%	0.5%	0.5%	0.5%
Great Lakes	122	130	141	152	0.9%	0.9%	1.0%	1.0%
Greater Hume Shire	30	24	23	23	0.2%	0.2%	0.2%	0.1%
Greater Taree	123	126	134	141	0.9%	0.9%	0.9%	0.9%
Griffith	43	45	50	54	0.3%	0.3%	0.3%	0.4%
Gundagai	10	8	8	8	0.1%	0.1%	0.1%	0.1%
Gunnedah	35	32	32	33	0.3%	0.2%	0.2%	0.2%
Guyra	11	11	11	11	0.1%	0.1%	0.1%	0.1%
Gwydir	18	15	14	13	0.1%	0.1%	0.1%	0.1%
Harden	11	11	11	10	0.1%	0.1%	0.1%	0.1%
Hastings	214	232	258	284	1.6%	1.7%	1.8%	1.9%
Hawkesbury	99	102	111	123	0.7%	0.7%	0.8%	0.8%
Hay	9	8	8	7	0.1%	0.1%	0.1%	0.0%
Holroyd	166	170	180	184	1.2%	1.2%	1.2%	1.2%
Hornsby	252	251	260	271	1.9%	1.8%	1.8%	1.8%
Hunter's Hill	34	33	34	37	0.3%	0.2%	0.2%	0.2%
Hurstville	159	154	155	154	1.2%	1.1%	1.1%	1.0%
Inverell	48	38	39	41	0.4%	0.3%	0.3%	0.3%
Jerilderie	6	3	3	3	0.0%	0.0%	0.0%	0.0%
Juneë	10	14	14	14	0.1%	0.1%	0.1%	0.1%
Kempsey	84	77	81	85	0.6%	0.6%	0.6%	0.6%
Kiama	39	46	49	52	0.3%	0.3%	0.3%	0.3%
Kogarah	108	106	104	102	0.8%	0.8%	0.7%	0.7%
Ku-ring-gai	208	218	230	237	1.6%	1.6%	1.6%	1.6%
Kyogle	23	19	19	19	0.2%	0.1%	0.1%	0.1%
Lachlan	8	13	13	13	0.1%	0.1%	0.1%	0.1%
Lake Cargelliqo	8	6	6	5	0.1%	0.0%	0.0%	0.0%
Lake Macquarie	446	473	491	516	3.3%	3.4%	3.4%	3.4%

Appendix 5 NSW Population projections by cause of cancer death by local government area and year of diagnosis, NSW, 2011, 2016 and 2021

LGA	2006	2011	2016	2021	2006	2011	2016	2021
Lane Cove	62	63	62	63	0.5%	0.5%	0.4%	0.4%
Leeton	25	25	26	27	0.2%	0.2%	0.2%	0.2%
Leichhardt	73	81	79	76	0.5%	0.6%	0.5%	0.5%
Lismore	88	76	78	80	0.7%	0.6%	0.5%	0.5%
Lithgow	40	48	51	54	0.3%	0.3%	0.4%	0.4%
Liverpool	197	225	247	282	1.5%	1.6%	1.7%	1.9%
Liverpool Plains	26	22	22	23	0.2%	0.2%	0.2%	0.2%
Lockhart	5	6	6	6	0.0%	0.0%	0.0%	0.0%
Maitland	111	138	158	178	0.8%	1.0%	1.1%	1.2%
Manly	91	79	79	78	0.7%	0.6%	0.5%	0.5%
Marrickville	131	131	129	125	1.0%	1.0%	0.9%	0.8%
Mid-Western Regional	41	51	54	57	0.3%	0.4%	0.4%	0.4%
Moree Plains	30	27	27	26	0.2%	0.2%	0.2%	0.2%
Mosman	62	55	56	58	0.5%	0.4%	0.4%	0.4%
Murray	25	18	20	22	0.2%	0.1%	0.1%	0.1%
Murrumbidgee	3	4	4	5	0.0%	0.0%	0.0%	0.0%
Muswellbrook	35	31	33	34	0.3%	0.2%	0.2%	0.2%
Nambucca	45	59	61	63	0.3%	0.4%	0.4%	0.4%
Narrabri	36	32	32	32	0.3%	0.2%	0.2%	0.2%
Narrandera	24	19	19	18	0.2%	0.1%	0.1%	0.1%
Narromine	20	16	16	16	0.1%	0.1%	0.1%	0.1%
Newcastle	353	349	349	353	2.6%	2.5%	2.4%	2.3%
North Sydney	100	108	114	119	0.7%	0.8%	0.8%	0.8%
Oberon	15	12	13	14	0.1%	0.1%	0.1%	0.1%
Orange	66	80	85	90	0.5%	0.6%	0.6%	0.6%
Palerang	9	17	18	20	0.1%	0.1%	0.1%	0.1%
Parkes	32	32	32	31	0.2%	0.2%	0.2%	0.2%
Parramatta	235	253	262	269	1.8%	1.8%	1.8%	1.8%
Penrith	246	250	273	291	1.8%	1.8%	1.9%	1.9%
Pittwater	114	114	119	124	0.9%	0.8%	0.8%	0.8%
Port Stephens	144	165	185	202	1.1%	1.2%	1.3%	1.3%
Queanbeyan	52	62	71	80	0.4%	0.5%	0.5%	0.5%
Randwick	233	243	244	242	1.7%	1.8%	1.7%	1.6%
Richmond Valley	50	56	57	58	0.4%	0.4%	0.4%	0.4%
Rockdale	197	195	193	190	1.5%	1.4%	1.3%	1.3%
Ryde	191	203	209	218	1.4%	1.5%	1.4%	1.4%
Shellharbour	108	124	135	144	0.8%	0.9%	0.9%	0.9%
Shoalhaven	267	290	314	337	2.0%	2.1%	2.2%	2.2%
Singleton	38	33	35	37	0.3%	0.2%	0.2%	0.2%
Snowy River	4	9	10	11	0.0%	0.1%	0.1%	0.1%
Strathfield	64	51	53	56	0.5%	0.4%	0.4%	0.4%
Sutherland Shire	390	393	399	404	2.9%	2.9%	2.8%	2.7%
Sydney, SE Sydney LHN	119	122	137	154	0.9%	0.9%	0.9%	1.0%
Sydney, Sydney LHN	119	133	148	165	0.9%	1.0%	1.0%	1.1%
Tamworth Regional	113	125	131	139	0.8%	0.9%	0.9%	0.9%
Temora	17	17	17	18	0.1%	0.1%	0.1%	0.1%
Tenterfield	13	14	14	14	0.1%	0.1%	0.1%	0.1%
Tumbarumba	8	8	8	8	0.1%	0.1%	0.1%	0.1%
Tumut Shire	24	28	28	28	0.2%	0.2%	0.2%	0.2%
Tweed	252	242	263	285	1.9%	1.8%	1.8%	1.9%
Unincorporated NSW	2	5	6	5	0.0%	0.0%	0.0%	0.0%
Upper Hunter Shire	26	29	29	29	0.2%	0.2%	0.2%	0.2%
Upper Lachlan	22	20	20	21	0.2%	0.1%	0.1%	0.1%
Uralla	9	12	13	14	0.1%	0.1%	0.1%	0.1%
Urana	5	3	3	3	0.0%	0.0%	0.0%	0.0%
Urbenville	1	1	1	1	0.0%	0.0%	0.0%	0.0%
Wagga Wagga	121	112	119	127	0.9%	0.8%	0.8%	0.8%
Wakool	9	10	10	10	0.1%	0.1%	0.1%	0.1%
Walcha	8	9	10	10	0.1%	0.1%	0.1%	0.1%
Walgett	16	14	14	13	0.1%	0.1%	0.1%	0.1%
Warren	11	7	6	6	0.1%	0.0%	0.0%	0.0%
Warringah	290	279	271	270	2.2%	2.0%	1.9%	1.8%
Warrumbungle Shire	22	18	17	16	0.2%	0.1%	0.1%	0.1%
Waverley	110	117	114	111	0.8%	0.9%	0.8%	0.7%
Weddin	14	12	11	11	0.1%	0.1%	0.1%	0.1%
Wellington	19	18	17	17	0.1%	0.1%	0.1%	0.1%
Wentworth	22	15	16	16	0.2%	0.1%	0.1%	0.1%
Willoughby	109	109	111	113	0.8%	0.8%	0.8%	0.7%
Wingecarribee	98	105	118	133	0.7%	0.8%	0.8%	0.9%
Wollondilly	51	61	65	71	0.4%	0.4%	0.5%	0.5%
Wollongong	431	447	468	487	3.2%	3.2%	3.2%	3.2%
Woollahra	106	118	117	120	0.8%	0.9%	0.8%	0.8%
Wyong	381	385	396	423	2.9%	2.8%	2.7%	2.8%
Yass Valley	25	26	30	34	0.2%	0.2%	0.2%	0.2%
Young	27	29	30	32	0.2%	0.2%	0.2%	0.2%
Grand Total	13365	13766	14438	15167	100%	100%	100%	100%

Tracey E, Central Cancer Registry 2008 data, 2009 version 2 Health Related Population projections, March 2011