

## 2 Results

In the following discussion, incidence rates and numbers of cases projected to 2011 are compared with equivalent figures in 2001, which is the most recent available national data in the NCSCH. All comparisons involving age-standardised rates refer to the rates for all ages standardised to the Australian Standard Population 2001.

There are a total of 60 projections for selected cancers and groups of cancers. For each projection there is both a table (Tables 7 to 66), showing the projected incidence rates and the expected number of cases from 2002 to 2011, and a corresponding set of graphs (Figures 7 to 66), showing past age distributions and the projected 2011 age distribution, as well as the past and projected trends in incidence rates and the number of new cases.

Projected age-standardised incidence rates for all cancers and for the NHPA cancers are shown in Figure 1 for women and in Figure 3 for men. The expected number of new cases are summarised in Table 2 and Figure 2 for women and in Table 4 and Figure 4 for men. The summary tables, Table 2 for women and Table 4 for men, also provide cross-references to the more detailed tables for each projection.

### 2.1 All cancers

For women, the projection for all cancers to 2011 shows the age-specific incidence rates continuing to rise for the older age groups (65 and over), although the rate of increase is projected to slow. The age-standardised incidence rate is projected to increase by 2% from 393.3 per 100,000 women in 2001 to 402.9 per 100,000 in 2011, with a 95% prediction interval from 380.5 to 428.6.

For men, the projection for all cancers from 2002 to 2011 shows almost no change in the age-specific incidence rates, except for a slight increase in the oldest age group (85 and over). The age-standardised rate is projected to decrease by 1% from 541.4 per 100,000 men in 2001 to 538.3 per 100,000 in 2011, with a 95% prediction interval from 495.0 to 588.0.

The Australian population is ageing. Under the AIHW preferred series of ABS population projections (series 8), the total population is expected to increase by 12% from 19,413,240 as at 30 June 2001 to 21,765,911 by 30 June 2011. In the same period, the population in the age range 65 and over is projected to increase by 30% from 2,435,534 to 3,169,188.

For most cancers, the highest incidence rates are in the older age groups, so that even with the relatively stable trends in the incidence rates, the projected increase in the Australian population (particularly the increased population in the older age groups) will lead to large increases in the total number of new cases of cancer.

For women, the number of new cases of cancer is projected to increase by 29% from 40,578 in 2001 to 52,356 in 2011, with a 95% prediction interval from 49,356 to 55,777. For men, the number of new cases is projected to increase by 32% from 47,820 in 2001 to 63,087 in 2011, with a 95% prediction interval from 58,122 to 68,752.

As shown in Figures 1 to 4, both the relatively stable trend in incidence rates and the projected increase in the number of new cases for all cancers are reflected in the trends for most of the NHPA cancers. A notable exception is cancer of the cervix, which is the only one of the 60 projections where the number of new cases of cancer is projected to decline between 2001 and 2011.

## 2.2 Common cancers by age

The trends in the numbers of new cases of cancer by broad age range are shown in Table 5 for women and Table 6 for men. In each age range the most common cancers in 2001 are indicated. The cancers listed were generally also the most common cancers in that age group in 1991 and are also projected to be the most common cancers in that age group in 2011.

A notable exception for women aged 15–44 years was cancer of the cervix, which was the third most common cancer in 1991 with 471 new cases and the fourth most common cancer in 2001 with 264 new cases, but is projected to be only the seventh most common with 170 new cases in 2011.

The most common cancers for women of all ages in 2001 were breast cancer (29% of all new cases of cancer for females), colorectal (14%), melanoma (10%) and lung (7%). The most common cancers for men of all ages in 2001 were prostate cancer (23% of all new cases of cancer for males), colorectal (15%), melanoma (11%) and lung (11%).

For men, it is projected that by 2011 melanoma (projected to be 11% of all new cases) will have overtaken lung cancer (10%) as the third most common cancer for all ages, although lung will still be the third most common cancer in the oldest age range, 65 years and over.

### Childhood and youth cancers

The projection models are least reliable for the youngest age groups, as the numbers of cases involved are relatively small.

In the youngest age range 0–14 years, the most common cancers in 2011 are projected to be leukaemia (a total of 210 new cases for males and females), cancers of the brain and central nervous system (106 new cases), cancers of bone and connective tissue (68 new cases), non-Hodgkin lymphoma (42 new cases) and cancers of the urinary tract (37 new cases of mainly kidney cancer, ICD-10 code C64). These cancers were also the most common in this age range in 2001.

Incidence rates are projected to increase slightly for most of the above cancers. The population in the age range 0–14 years is actually projected to decrease by 3% from 3,987,000 in 2001 to 3,884,000 in 2011. The numbers of new cases of cancer in this age range is projected to increase by only 7% for females, from 279 new cases in 2001 to 299 in 2011, and by only 5% for males, from 324 new cases in 2001 to 339 in 2011.

For women aged 15–44 the most common cancers in 2011 are projected to be breast (1,625 new cases), melanoma (1,120), cancers of thyroid and other endocrine glands (610), colorectal cancer (270), ovarian cancer (198) and non-Hodgkin lymphoma (172).

Cancers of thyroid and other endocrine glands have become increasingly common for women aged 15–44. This group of cancers was only the fifth most common in this age range in 1991 with 200 new cases, after colorectal cancer with 236. In 2001 it was the third most common with 411 new cases and is projected to increase by 49% to 610 new cases in 2011.

For men aged 15–44 the most common cancers in 2011 are projected to be melanoma (1,035 new cases), cancers of other male genital organs (487), colorectal cancer (327) and non-Hodgkin lymphoma (279).

In the age range 15–44, the cancers of other male genital organs are mainly testicular cancer (ICD-10 code C62). Age-specific incidence rates for this group of cancers are projected to decrease slightly in this age range and the number of new cases is projected to decrease by 2% from 496 in 2001 to 487 in 2011.

## 2.3 Skin and lip cancers

Non-melanoma skin cancers (NMSC) have not been included in these projections for the reasons detailed in Appendix A. The remainder of this group of cancers is dominated by melanoma, an NHPA cancer, for which there are also separate projections.

For women, the number of new cases of skin and lip cancers (excluding NMSC) is projected to increase by 27% from 4,131 in 2001 to 5,266 in 2011, with a 95% prediction interval from 4,885 to 5,647. For men, the number of new cases is projected to increase by 32% from 5,770 in 2001 to 7,640 in 2011, with a 95% prediction interval from 5,996 to 9,815.

This group of cancers has an age distribution that reflects past exposure to ultraviolet radiation. Male rates for these cancers have historically been much higher, reflecting higher occupational exposure in traditionally male jobs. The projections for melanoma and for the group of skin and lip cancers show rising age-standardised rates for both sexes. However, the projected rise is slower than the historical rise, particularly for younger age groups, probably due to the effects of skin cancer prevention campaigns that began at different times in different states, starting around 1959 (Giles et al. 1996).

A recent study (Coory et al. 2005) of melanoma in Queensland, the state with the highest incidence rates of all states and territories, suggests that incidence rates should start to stabilise for age groups 35 and over, though primary prevention programs are unlikely to lead to a decrease in overall incidence rates for at least another 20 years. If incidence rates do start to decline in the middle age groups before 2011, then the projections in this report may overstate the expected increase in the number of cases.

## 2.4 Head and neck cancers

The projections for this group of cancers show slowly decreasing age-standardised rates for men and considerably lower, but stable age-standardised rates for women. The number of cases of these cancers is expected to continue rising for both males and females due to the expected ageing of the Australian population.

For women, the number of new cases of head and neck cancers is projected to increase by 28% from 636 in 2001 to 813 in 2011, with a 95% prediction interval from 714 to 974. For men, the number of new cases is projected to increase by 23% from 1,795 in 2001 to 2,204 in 2011, with a 95% prediction interval from 1,942 to 2,603.

## 2.5 Cancers of the upper digestive tract

The three cancers in this group have displayed different historical trends, with the age-standardised rates for stomach cancer decreasing whereas cancer of the small intestine has been increasing in incidence, similar to colorectal cancer. Separate projections were produced for cancer of the stomach and for cancer of the oesophagus.

Cancer of the oesophagus, similar to some head and neck cancers, is partly attributed to smoking and alcohol consumption (see Section 2.19). Incidence of this cancer was increasing in the 1980s, but appears to have peaked in the 1990s and is projected to decrease.

As a group, these cancers are dominated by the decline in cancer of the stomach, the most common of the three, with age-standardised rates projected to steadily decrease for both

sexes; however, population ageing will still lead to increases in the expected number of cases.

For women, the number of new cases of cancers of the upper digestive tract is projected to increase by 22% from 1,203 in 2001 to 1,469 in 2011, with a 95% prediction interval from 1,280 to 1,698. For men, the number of new cases is projected to increase by 27% from 2,072 in 2001 to 2,634 in 2011, with a 95% prediction interval from 2,439 to 2,853.

## 2.6 Colorectal (bowel) cancer

Colorectal cancer includes cancers of the bowel or large intestine (ICD-10 code C18) and cancers of the rectum and anus (ICD-10 codes C18 to C21). Colorectal cancer is the most frequently occurring cancer in Australia (excluding NMSC) with a total of 12,844 new cases in 2001, and it is the second leading cause of cancer death after lung cancer (AIHW & AACR 2004). For a profile of colorectal cancer, see *Cancer in Australia 2000* (AIHW & AACR 2003).

Historically, incidence of this cancer has been slowly increasing for women; however, the age-standardised rate for men has remained between 76 and 80 (per 100,000 men) since 1991. The age-standardised rate for men is projected to remain at 79, and for women the projections show a continuation of the slow historical increase from 55 in 2001 to 56 in 2011. For both sexes, the expected ageing of the population is projected to cause large increases in the number of cases.

For women, the number of new cases of colorectal cancer is projected to increase by 30% from 5,883 in 2001 to 7,673 in 2011, with a 95% prediction interval from 7,034 to 8,414. For men, the number of new cases is projected to increase by 33% from 6,961 in 2001 to 9,249 in 2011, with a 95% prediction interval from 7,627 to 12,710.

The Australian Government has announced that a national screening program for bowel cancer will commence in a limited way from the middle of 2006, with people turning 55 or 65 years old invited to participate (DoHA 2005). As with the other cancers affected by screening programs or diagnostic tests (female breast cancer, cancer of the cervix and prostate cancer) this screening program, if implemented, is likely to cause a shift in the age distribution of incidence, with more cancers detected between 2006 and 2011 in the 55–59 and 65–69 age groups.

Introduction of this bowel screening program may cause an initial rise in incidence because of previously undetected cancers, but may ultimately also cause declines in incidence because of the detection and treatment of precancerous conditions. The timing and size of the expected changes in the age distribution are difficult to quantify and have not been taken into account in the projections in this report.

## 2.7 Cancers of the liver, gallbladder and pancreas

The projections for this group of cancers show stable age-standardised rates for women and higher and slightly increasing age-standardised rates for men. For women, the number of new cases of cancers of the liver, gallbladder and pancreas is projected to increase by 27% from 1,469 in 2001 to 1,863 in 2011, with a 95% prediction interval from 1,426 to 2,489. For men, the number of new cases is projected to increase by 43% from 1,836 in 2001 to 2,624 in 2011, with a 95% prediction interval from 2,233 to 3,160.

Separate projections have been produced for cancer of the liver (which is partly attributed to alcohol consumption) and for cancer of the pancreas (which is partly attributed to smoking).

In contrast to the other cancers in this group, the age-standardised rates for liver cancer are projected to increase for both men and women. See Section 2.19 for further comments on cancers attributed to smoking and alcohol consumption.

## 2.8 Lung cancer and other cancers of respiratory and thoracic organs

For women, the number of new cases of cancers of respiratory and thoracic organs is projected to increase by 41% from 3,017 in 2001 to 4,261 in 2011, with a 95% prediction interval from 4,002 to 4,521. For men, the number of new cases is projected to increase by 22% from 5,884 in 2001 to 7,163 in 2011, with a 95% prediction interval from 5,808 to 9,223.

### Lung cancer

This group of cancers is dominated by lung cancer, which includes cancers covered by ICD-10 codes C33 and C34 (cancers of the trachea, bronchus and lung). Lung cancer is the cancer that currently causes the most deaths in Australia and is attributed mainly to smoking (see Section 2.19).

In 1945, almost three-quarters of adult men and a quarter of adult women smoked (Woodward 1981). For men, the proportion of current smokers declined to less than a half by the 1970s and has since continued to decline. For women, the proportion of current smokers increased to almost a third by the mid-1970s, before starting to decline (Hill et al. 1988; White et al. 2003). In 2004, 22.5% of males and 18.8% of females aged over 14 years were current smokers (AIHW 2005a).

The incidence projections for lung cancer reflect the historical trends in smoking prevalence from the mid-1940s to the mid-1970s, with the age-standardised rates for men projected to continue decreasing, and the age-standardised rates for women projected to continue increasing but at a slower rate, with a possible peak in incidence towards the end of the projection period.

For women, the number of new cases of lung cancer is projected to increase by 38% from 2,891 in 2001 to 4,001 in 2011, with a 95% prediction interval from 3,762 to 4,241. For men, the number of new cases is projected to increase by 17% from 5,384 in 2001 to 6,301 in 2011, with a 95% prediction interval from 5,794 to 6,898.

An alternative model proposed by Clements et al. (2005) suggests that the age-standardised rates for female lung cancer have already reached a peak and will start to decrease early in the projection period.

### Mesothelioma

Separate projections have also been produced for mesothelioma, a usually fatal cancer that is typically associated with occupational exposure to asbestos that occurred around 20–30 years prior to diagnosis. For a profile of mesothelioma, see *Cancer in Australia 2001* (AIHW & AACR 2004).

Though still a relatively rare cancer, the incidence of mesothelioma has been increasing rapidly in both men and women since the first reported cases in the 1960s (NOHSC 2004), and the projections show a continuation of these trends.

For women, the number of new cases of mesothelioma is projected to increase by 98% from 107 in 2001 to 212 in 2011, with a 95% prediction interval from 141 to 286. For men, the

number of new cases is projected to increase by 69% from 460 in 2001 to 778 in 2011, with a 95% prediction interval from 435 to 1,454.

In Australia, asbestos was mined and asbestos products were produced, notably at Wittenoom in Western Australia until 1966 and in New South Wales until 1983. Phasing out of the use of some asbestos products began in 1967, but raw asbestos continued to be imported and consumption peaked in 1975. Use of asbestos products has been regulated since the late 1970s and early 1980s (NOHSC 2004).

Owing to these restrictions and the delay of 20–30 years between exposure and diagnosis, analysis by Leigh and Driscoll (2003) suggests that the number of new cases of mesothelioma is expected to peak around 2010; however, this is not reflected in the projections in this report, which are based on extrapolation of current trends.

## **2.9 Cancers of bone and connective tissue**

The projections for this group of cancers show increasing incidence rates for women, especially in the older age groups, and stable incidence rates for men.

For women, the number of new cases of cancers of bone and connective tissue is projected to increase by 50% from 427 in 2001 to 639 in 2011, with a 95% prediction interval from 512 to 767. For men, the number of new cases is projected to increase by 32% from 401 in 2001 to 529 in 2011, with a 95% prediction interval from 420 to 670.

## **2.10 Breast cancer**

In the 1980s, there was a rapid increase in the incidence of female breast cancer, and mammography screening programs were introduced in each state and territory from 1989 in Western Australia and South Australia to 1994 in the Northern Territory. Publicly funded mammography screening has been coordinated as a national program since 1991, now called BreastScreen Australia (AIHW 1998, 2005b).

The effect of the introduction of mammography screening programs appears to have been an increase in the incidence of female breast cancer in the target age range of 50–69 years, and the incidence in the oldest age groups has declined.

This changed age distribution appears to have been relatively stable from 1994 onwards, so the projection for female breast cancer is based only on data from 1994. The age-standardised rates for female breast cancer are projected to remain stable from 2002 to 2011. As breast cancer is the most common cancer for women and particularly affects older women, the ageing of the population will still lead to large increases in the expected number of new cases.

Men are not included in the target group for the BreastScreen Australia program, so male breast cancer, a rare cancer, has not been directly affected by screening. Male breast cancer incidence is projected to remain stable at low rates.

For women, the number of new cases of breast cancer is projected to increase by 26% from 11,791 in 2001 to 14,818 in 2011, with a 95% prediction interval from 13,939 to 15,829. For men, the number of new cases is projected to increase by 28% from 95 in 2001 to 122 in 2011, with a 95% prediction interval from 59 to 261.

## 2.11 Gynaecological cancers

For the purposes of these projections, cancers of the female genital organs have been divided into four subgroups: cancer of the cervix (ICD-10 code C53); cancers of other parts of the uterus (C53 and C54); cancers of the vulva, vagina and placenta (C51, C52 and C58 respectively) and ovarian cancer (cancers of the ovaries and other female genital organs – C56 and C57).

Separate projections are presented for all four subgroups as well as the overall total. The projection for ovarian cancer may be affected by coding changes in cancer registration (see Appendix A for details).

Incidence for three of the four subgroups is projected to remain stable; however, incidence of cancer of the cervix has been steadily decreasing and this decrease is projected to continue.

Incidence for gynaecological cancers as a group is projected to slowly decrease as a result of the decrease in incidence of cancer of the cervix. With the expected ageing of the population, the overall number of new cases of cancer of gynaecological cancers is projected to increase by 15% from 3,886 in 2001 to 4,488 in 2011, with a 95% prediction interval from 4,048 to 5,191.

### Cancer of the cervix

Pap smear testing for cancer of the cervix has been available on an opportunistic basis since well before 1982, the starting point for data in the NCSCH. An organised program for screening for cervical cancer was introduced in Australia in the early 1990s, covering a wide range of ages from 20 to 69 years (AIHW 1998).

The age distribution of incidence has been stable since the early 1990s, though the age-specific rates at each age have continued to fall because of the early detection and treatment of precancerous abnormalities (AIHW 2004). The projection for cancer of the cervix is based on data from 1991 onwards.

Cancer of the cervix is the only cancer for which the expected number of new cases is projected to decrease even with the expected ageing of the population. The number of new cases reported in 2001 was 735, which is projected to decrease by 37% to 461 by 2011, with a 95% prediction interval from 264 to 820 cases.

Human papilloma virus (HPV) is strongly linked to incidence of cervical cancer. In the longer term, the likely introduction of a vaccine for HPV (Frazer 2004) may greatly further reduce incidence, but there will probably be little impact on incidence numbers before 2011.

## 2.12 Prostate cancer and other cancers of male genital organs

Cancers of the male genital organs are dominated by prostate cancer, which is the most commonly occurring cancer in men, accounting for 23% of all new cases of cancer (excluding NMSC) diagnosed in men in 2001. Separate projections are presented for prostate cancer and for cancers of other male genital organs (which include cancers of the penis and testis), as well as an overall projection for the group.

Prostate cancer incidence rates were relatively stable in the 1980s, but between 1990 and 1994 there was a sharp rise in the number of new cases. This upward trend has been attributed to increased availability of prostate-specific antigen (PSA) testing, which first became available

in 1987 and which has been included in the Medical Benefits Schedule since 1989 (Coory & Armstrong 1998).

PSA tests are designed to identify cancers before the onset of clinical symptoms and the increased availability of the tests led to the early detection of prevalent cancers that would not otherwise have been detected. Incidence rates started to decline after 1994, leaving a noticeable 'hump' in the incidence rates from 1992 to 1996. This 'hump' is also obvious in the overall incidence rates for all cancers for men.

Attempts to project prostate cancer incidence using data before 1997 are noticeably affected by the 'hump' in incidence rates from 1992 to 1996. From 1997 onwards, the age distribution of prostate cancer has been stable, so projections using data from 1997 onwards have very narrow prediction intervals, even though they are based on only 5 years of data. The projection for prostate cancer is based on data from 1997, though the prediction intervals should be interpreted with caution.

Both the incidence of prostate cancer and cancers of other male genital organs are projected to remain stable. Cancers of other male genital organs often occur in younger age groups, particularly testicular cancer, so this projection is not strongly affected by the expected ageing of the population, and the number of new cases is projected to increase by only 10% from 701 in 2001 to 770 in 2011, with a 95% prediction interval from 540 to 1,129.

Prostate cancer is predominantly a cancer of older age groups, so the expected number of new cases is projected to increase by 36% from 11,191 in 2001 to 15,202 in 2011 with a 95% prediction interval from 14,542 to 15,999. This large expected increase is reflected in both the group projection and in the projection for all cancers for males. Overall, the number of new cases of cancers of male genital organs is expected to increase by 34% from 11,892 in 2001 to 15,972 in 2011 with a 95% prediction interval from 15,082 to 17,128.

## **2.13 Cancers of the urinary tract**

The incidence of this group of cancers is projected to remain stable at around current rates for both women and men. The projection for this group may be affected by coding changes in cancer registration involving cancer of the bladder (see appendix A for details).

For women, the number of new cases of cancers of the urinary tract is projected to increase by 31% from 1,640 in 2001 to 2,141 in 2011, with a 95% prediction interval from 1,785 to 2,587. For men, the number of new cases is projected to increase by 37% from 3,772 in 2001 to 5,186 in 2011, with a 95% prediction interval from 4,953 to 5,444.

## **2.14 Eye cancer**

The incidence of this relatively rare cancer is projected to remain stable at around current rates for both women and men.

For women, the number of new cases of eye cancer is projected to increase by 36% from 96 in 2001 to 131 in 2011, with a 95% prediction interval from 89 to 195. For men, the number of new cases is projected to increase by 39% from 137 in 2001 to 190 in 2011, with a 95% prediction interval from 133 to 279.

## **2.15 Cancers of the brain and central nervous system**

The incidence of this group of cancers is projected to remain stable at around current rates for both women and men. Some brain cancers affect children and are the second most common cancer in children after leukaemia. However, the cancers in this group also affect people in the oldest age groups and so the number of new cases is projected to increase with the ageing of the population.

For women, the number of new cases of cancers of the brain and central nervous system is projected to increase by 26% from 599 in 2001 to 754 in 2011, with a 95% prediction interval from 589 to 1,002. For men, the number of new cases is projected to increase by 25% from 822 in 2001 to 1,027 in 2011, with a 95% prediction interval from 883 to 1,206.

## **2.16 Cancers of thyroid and other endocrine glands**

This group of cancers is unusual as, historically, incidence has been considerably higher for women than for men. Incidence of these cancers is projected to increase for both sexes.

For women, the number of new cases of cancers of the thyroid and other endocrine glands is projected to increase by 58% from 916 in 2001 to 1,451 in 2011, with a 95% prediction interval from 1,017 to 1,886. For men, the number of new cases is projected to increase by 42% from 350 in 2001 to 498 in 2011, with a 95% prediction interval from 405 to 591.

## **2.17 Cancers of unknown primary site**

This diverse and relatively common group of cancers reflects the projections for all cancers, with the incidence projected to increase in the oldest age groups for women and to decrease slightly overall for men. Future numbers of new cases of these cancers may be affected by improvements in diagnostic testing and coding.

For women, the number of new cases of cancers of unknown primary site is projected to increase by 31% from 1,568 in 2001 to 2,052 in 2011, with a 95% prediction interval from 1,849 to 2,306. For men, the number of new cases is projected to increase by 29% from 1,736 in 2001 to 2,238 in 2011, with a 95% prediction interval from 1,992 to 2,539.

## **2.18 Non-Hodgkin lymphoma, leukaemia and other cancers of lymphoid and haematopoietic tissue**

Projections are presented for the overall group as well as separate projections for non-Hodgkin lymphoma (an NHPA cancer) and for leukaemia, which is the most commonly occurring cancer among children.

For non-Hodgkin lymphoma and for the overall group incidence is projected to remain stable for men, but to continue increasing for women. For leukaemia, incidence is projected to remain stable for both sexes. The projection for leukaemia may be affected by coding changes in cancer registration (see Appendix A for details) and may be overstated by up to 5%.

For women, the number of new cases of cancers of lymphoid and haematopoietic tissue is projected to increase by 37% from 3,316 in 2001 to 4,536 in 2011, with a 95% prediction interval from 4,156 to 4,916. For men, the number of new cases is projected to increase by 35% from 4,297 in 2001 to 5,811 in 2011, with a 95% prediction interval from 5,459 to 6,192.

## 2.19 Cancers attributed to smoking and alcohol consumption

The cancers partly attributed to smoking include some cancers of the oral cavity and pharynx (ICD-10 codes C01–C06, C09–C10 and C12–C14), cancer of the oesophagus (C15), stomach cancer (C16), cancer of the anus (C21.0 and C21.1), cancer of the pancreas (C25), cancer of the larynx (C32), lung cancer (C33–C34), cancer of the vulva (C51.9), cancer of the penis (C60), kidney cancer (C64), cancer of the renal pelvis (C65) and cancer of the bladder (C67).

The cancers attributable to excessive alcohol consumption include some cancers of the oral cavity and pharynx (ICD-10 codes C01–C06, C09–C10 and C12–C14), cancer of the oesophagus (C15), cancer of the liver (C22), cancer of the larynx (C32) and breast cancer (C50, females only).

Separate projections were produced for cancers attributable to smoking and to alcohol consumption. Attributable fractions based on cancer prevalence in 1998 (AIHW: Ridolfo & Stevenson 2001) were applied to the relevant cancers to find the number of cases and age-specific incidence rates. The rates were then projected using the same methods as for other cancers and the results were constrained to equal the total of the projections for the individual cancers.

For women, incidence of alcohol-related cancers is projected to remain stable for all ages. The number of new cases is projected to increase by 27% from 1,618 in 2001 to 2,058 in 2011, with a 95% prediction interval from 1,925 to 2,202.

For men, the incidence of alcohol-related cancers is projected to increase slightly for the oldest age groups (70 and over), but decrease or remain stable at younger ages. The number of new cases is projected to increase by 42% from 350 in 2001 to 498 in 2011, with a 95% prediction interval from 405 to 591.

The incidence of smoking-related cancers is projected to decrease for men. For women incidence of smoking-related cancers is projected to increase, but at a rate that becomes slower towards the end of the projection period, similar to the projections for lung cancer (see Section 2.8).

The age-standardised rates for women are projected to increase by 6% from 28.9 (per 100,000 women) in 2001 to 30.7 in 2011, with a 95% projection interval from 26.4 to 35.9. The age-standardised rates for men are projected to decrease by 8% from 86.1 in 2001 to 78.9 in 2011, with a 95% prediction interval from 72.1 to 87.1.

For women, the number of new cases of smoking-related cancers is projected to increase by 36% from 3,042 in 2001 to 4,126 in 2011, with a 95% prediction interval from 3,550 to 4,819. For men, the number of new cases is projected to increase by 23% from 7,550 in 2001 to 9,304 in 2011, with a 95% prediction interval from 8,436 to 10,338.