

## 2 METHODS

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### DATA SOURCES

Deaths and cancer registrations registered between 1 January 1996 and 31 December 2001 were obtained from the NZHIS. Cancer site was classified according to the Tenth Revision of the International Classifications of Diseases, Australian Modification (ICD-10-AM) for the whole six-year period.<sup>3</sup> For the years 1996–1999, cause of death was coded according to the International Classifications of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) classification. Beginning with deaths in 2000, ICD-10-AM was used. We recoded all deaths into the ICD-10-AM classification groupings. ICD codes used are listed in Appendix One.

Analysis was restricted to invasive neoplasms (*in situ* tumours are not included).

Cancer registrations flagged as ‘multiple’ were excluded. Multiple registrations are defined as a second cancer record for the same person where the site and morphological type are the same. For the survival analysis (hazard ratios), where there was more than one registration for a person within a site or site group, the first was included and subsequent registrations were excluded.

Age-sex-ethnicity-specific population estimates for each year from 1996 to 2001 inclusive served as denominators for computing cancer incidence and mortality rates. They were obtained from Statistics New Zealand’s revised estimates of the mid-year resident Māori ethnic group population and total New Zealand population for 1991–2001. These estimates include adjustments for: missing responses to the ethnicity question; the estimated net undercount at the 2001 Census as measured by the 2001 Post-enumeration Survey; the estimated number of Māori residents temporarily overseas on census night; and estimated external migration, births and deaths. New ethnicity questions on birth registrations and death registrations were introduced in September 1995, resulting in significant increases in the number of births and deaths registered as Māori (around double those registered as Māori in 1994). The population estimates for the December quarter 1995 onwards are based on births and deaths compiled using the new questions (Statistics New Zealand technical notes on population estimates). Denominators for the non-Māori rates were constructed by subtracting the Māori population estimates from the total New Zealand population estimates for each year.

### ETHNICITY CLASSIFICATION – EVER MĀORI METHOD

Deaths and cancer registrations were classified as Māori if Māori was coded as one of the ethnic groups in any ethnicity field of the death event, the National Health Index (NHI), any other cancer registration, or any hospitalisation since 1996. Otherwise they were classified as non-Māori. This method of classifying ethnicity (the ‘ever Māori’ method) was used to minimise the known undercount of Māori cancer registrations and deaths. It increased the number of cancer registrations classified as Māori by 16.6% and deaths by 6%. This method appears to give reasonable estimates for both registrations and deaths during our period of analysis (see Appendix Two for further detail).

<sup>3</sup> The ICD-10-AM and the ICD-9-CMA-II are international schemes for classifying morbidity and mortality in a standardised way.

Appendix Three compares hazard ratios using the ‘ever Māori’ method, ‘ever Māori up to registration’ and ‘Māori on registrations’ only. On average, the ‘ever Māori’ method produces the lowest hazard ratios, and thus the most conservative estimates of survival disparities between Māori and non-Māori.

## INCIDENCE RATE

The cancer incidence rate is the number of newly diagnosed cancers of a specific site/type registered in a specified population during a year, usually expressed as the number of cancers (registrations) per 100,000 per year. That is,

$$\text{incidence rate} = (\text{new cancers/population}) \times 100,000.$$

The *numerator* of the incidence rate is the number of new cancers; the *denominator* of the incidence rate is the size of the population. The population used depends on the rate to be calculated. For example, for cancer sites that occur in only one sex (e.g. cervical cancer), the sex-specific population is used (i.e. females). The number of new cancers may include multiple primary cancers occurring in one patient.

## MORTALITY RATE

The cancer mortality rate is the number of deaths for which cancer is given as the underlying cause of death occurring in a specified population during a year, usually expressed as the number of deaths due to cancer per 100,000 per year. That is,

$$\text{mortality rate} = (\text{cancer deaths/population}) \times 100,000.$$

The *numerator* of the mortality rate is the number of deaths; the *denominator* of the mortality rate is the size of the population.

## AGE-STANDARDISED RATES

Differences in the age structure of the Māori population (relatively young) and the non-Māori population (relatively old) make it necessary to adjust for age when comparing health outcomes. Direct standardisation applies age-specific rates to a standard population structure. The age-standardised rate is the rate that would be expected for the group if it had the same age distribution as the standard population. It is a weighted average of the age-specific incidence or mortality rates, where the weights are the proportions of persons in the corresponding age groups of a standard population. The results are affected by the age distribution of events (e.g. deaths) in each population and the relative differences across age groups (the age-specific rate ratios). If these vary between the populations being compared, the selection of standard population can affect the magnitude of rates and ratios, relative ranking of causes, and trends in rates and ratios.

In the main body of this report, age-adjusted rates were standardised to the average Māori population for 1996–2000, because these rates are a close approximation of the crude overall rates for Māori and thus better reflect the experience of the Māori population. Rates standardised to Segi’s world population or the World Health Organization (WHO) population are generally higher (because these standard populations are older and place greater weight on events at older ages). In some instances the rate ratios also differ. (See Appendix Four for a comparison of the three standards.) Cancer incidence and mortality rates and ratios standardised to Segi’s and the WHO world standards are presented in Appendices Five and Six.

## STAGE OF DISEASE AT DIAGNOSIS

Cancer stage describes the extent of cancer spread from the site of origin at the time of initial diagnosis (Ries, Eisner et al 2003). The extent of disease information determines the stage at diagnosis.

### The Summary Staging Classification

The localised-regional-distant summary staging scheme is used in descriptive and statistical analyses of cancer registry data, and is defined as follows.

- ***In situ* cancer** is early cancer that is present only in the layer of cells in which it began.
- **Localised cancer** is cancer that is limited to the organ in which it began, without evidence of spread.
- **Regional cancer** is cancer that has spread beyond the original (primary) site to nearby lymph nodes or organs and tissues.
- **Distant cancer** is cancer that has spread from the primary site to distant organs or distant lymph nodes.
- **Unstaged cancer** is cancer for which there is not enough information to indicate a stage (SEER 2005).

Prior to 1999, the NZCR classified stage of cancer disease as:

- *in situ*
- localised
- regional or node involvement
- remote or diffuse metastases
- not stated
- not applicable (lymphomas/leukaemias).

For cancers registered from 1999 on, the ‘regional or node involvement’ stage was divided into two categories, and the classification changed to:

- *in situ*
- localised to organ of origin
- invasion of adjacent tissue or organ
- regional lymph nodes
- distant
- not known
- not applicable.

In this report, regional-stage disease includes any cancers classified with ‘regional or node involvement’, ‘invasion of adjacent tissue or organ’, or ‘regional lymph nodes’. Distant-stage disease includes cancers classified as ‘remote or diffuse metastases’ or ‘distant’. Data are presented on invasive neoplasms only. *In situ* tumours are not included. The staging classification is not applicable to lymphomas (Hodgkin’s disease and non-Hodgkin’s disease), myeloma or leukaemias.

The stage distribution of new cases (percentage of cases diagnosed at localised, regional, distant and stage unknown) was calculated for Māori and non-Māori. Logistic regression analysis was used to compare the odds of being registered with unknown stage at diagnosis for Māori compared with non-Māori, adjusted for age at diagnosis. The odds of being diagnosed at localised or distant stage among Māori and non-Māori staged cancers were compared, adjusted for age at diagnosis. Odds ratios were calculated using the logistic procedure of SAS version 9.1 (SAS Institute Inc, Cary, NC).

## CONFIDENCE INTERVALS AND P VALUES

A 95% confidence interval around an estimate, such as an incidence rate, is a range of values surrounding the rate that have a 95% probability of including the true population value (Beaglehole, Bonita et al 1993). Normally, if the 95% confidence intervals around two (or more) measures (e.g. rates) do not overlap, the difference between them is considered statistically significant. The difference may also be statistically significant when there is some overlap.

The p value is ‘the probability that chance alone would produce a difference between compared groups at least as big as the one observed’ (Ahlbom and Norell 1984). In most epidemiological research the difference is considered statistically significant if the p value is less than 0.05.

In this report, 95% confidence intervals for crude and age-standardised rates and rate ratios were calculated using the log-transformation method (Clayton and Hills 1993).

## SURVIVAL ANALYSES

There are several techniques for conducting survival analyses. Each can produce different results, and each has its own strengths and limitations (Platel and Semmens 2004). In this chartbook we include two types of survival analysis: first, survival curves were generated to show a graphical representation of the Māori and non-Māori patterns of cancer-specific survival over five years; secondly, hazard ratios were calculated to estimate the relative risk of cancer-specific death after diagnosis, for Māori compared with non-Māori, adjusted for age. To estimate the contribution of differential stage at diagnosis to differences in survival, hazard ratios were also calculated and adjusted for age and stage at diagnosis. The percentage change after adjusting for stage indicates potential reductions in disparities if both populations had the same distribution of disease spread at diagnosis.

Relative survival rates are an alternative method of survival analysis. They are a ratio of the observed survival among the group registered with cancer divided by the expected survival of the general population with the same age-sex-ethnic distribution. The expected survival rates are obtained from life tables. Māori and non-Māori-non-Pacific five-year relative survival rates have been reported elsewhere (Jeffreys, Stevanovic et al 2005) and are not presented in this chartbook, although the results were generally similar to those reported here. However, the estimated contribution of stage at diagnosis to the survival disparities differed substantially between the two methods (cause-specific hazard ratios and relative survival rate ratios).

## Survival curves

Cancer-specific (or corrected) survival curves were generated using Kaplan-Meier estimates. Also described as product limit estimates, the survival function is calculated each time a death from a given cancer occurs. The graphs are a series of horizontal lines with connecting vertical steps each time an event occurs. Points on the curve estimate the proportion of patients who survive at least a given period of time (Lee 1980). Mortality data from 1996–2001 were searched for matching encrypted Health Care User Identifiers of patients registered with cancer during the same period, and treated as a cancer-specific death if the death was coded to the same ICD grouping as the cancer registration.

Survival times were measured in days, and were censored (removed from the analysis at that point) at the date of death from causes other than the underlying cancer, or on 31 December 2001 (whichever occurred first). Patients dying of a different cancer or of ill-defined cancers were treated as dying of other causes under the assumption that deaths from the underlying cancer were independent of deaths from other causes.

Cause-specific analysis relies on accurate recording of the underlying cause of death, to differentiate cancer deaths from non-cancer deaths. This data analysis relied on the ‘underlying cause of death’ recorded on death registrations and was unable to be verified from other sources. Therefore, these survival curves should be interpreted with some caution. Active follow-up was not conducted and so we cannot account for any cancer patients who may have died outside of Aotearoa/New Zealand. However, we expect any impact of differential migration to be minor.

Survival curves were calculated using the LIFETEST procedure of SAS version 9.1 (SAS Institute Inc, Cary, NC). These curves display the cause-specific survival experience of Māori and non-Māori for all ages at diagnosis. No adjustment was made for age at diagnosis in these survival curves. Hazard ratios were calculated to provide age-adjusted measures of differences in survival (see below).

## Hazard ratios

The hazards function estimates the risk of death per unit time, following cancer diagnosis (Lee 1980). Proportional hazards regression was used to estimate hazard ratios – the *relative* risk of dying from the cancer once diagnosed, for Māori compared with non-Māori, adjusted for sex and age at diagnosis.

Cancers where the date of diagnosis was the date of death did not contribute to the hazard ratio. Those who died of causes other than the diagnosed cancer were considered censored as of the date of death. This was under the assumption that there was no differential misclassification of non-cancer-specific causes of death between Māori and non-Māori. Those with no death record were assumed alive and were censored at 31 December 2001. This allowed us to compare Māori and non-Māori survival without regard to competing causes of death.

Cancer-specific hazard ratios and confidence intervals were calculated using the proportional hazards procedure (PHREG) of SAS version 9.1. The proportional hazards model assumes the relative risk of death between Māori and non-Māori remains constant over time. The assumption of proportionality and linear relationship with age were checked using the graphical and numerical methods of Lin, Wei et al (1993).

Māori to non-Māori hazard ratios were calculated for selected sites, adjusted for sex and age at diagnosis (as a categorical variable). Because the assumption of linearity did not hold when age was treated as a continuous variable, age categories were used. They were constructed separately for each cancer by dividing the total number of registrations for that cancer site into quintiles with equal numbers of registrations. However, the method of age adjustment made very little difference to the resulting hazard ratios.

To estimate the contribution of stage at diagnosis to the disparities in survival outcomes between Māori and non-Māori, we calculated hazard ratios adjusted for stage at diagnosis. These were calculated in two ways: first, including registrations with unknown stage at diagnosis as a stage category, and secondly, restricted to staged cancers only. Finally, we calculated hazard ratios for Māori compared with non-Māori at each stage of cancer spread at diagnosis, including unknown stage. The estimates for each gender and each stage were estimated from models with interaction terms.

Hazard ratios reported in the main body of this report were calculated using the ‘ever Māori’ method of ethnicity classification. In Appendix Three we also present hazard ratios calculated using other methods: the ‘ever Māori up to registration’ (includes as Māori anyone classified as Māori on any hospital admission or cancer registration prior to and including the current cancer registration); and ‘Māori on registration’ (includes as Māori only those who were identified as Māori on their cancer registration). Hazard ratios calculated using the ‘ever Māori up to registration’ classification resulted in hazard ratios 4% higher on average than the ‘ever Māori’ method, and the ‘Māori on registration’ method produced hazard ratios 5% higher on average. Thus, the ‘ever Māori’ method generally produced the most conservative estimates of survival disparities between Māori and non-Māori.

## MODEL REPORTING

For some models there were few events for the number of variables in the model. This can result in poor estimates (Peduzzi, Concato et al 1995; Peduzzi, Concato et al 1996). Where there were fewer than 10 events per term in the model the estimates have been identified in the report, but we recommend that they be interpreted with caution. The results are not presented where there were fewer than five events per term in the model. Similar criteria were used for the number of observations for each value of categorical variables in the models; i.e. caution on less than 10 observations for each value, and where there were fewer than five observations for each value the estimates are not presented.

Separate estimates for hazard ratios by gender and stage groups are reported, although most of the interactions were not significant. This is likely to be in part due to relatively small numbers meaning that there was not enough power to detect differences. The estimates are included for completeness and to establish a baseline.

## 3 HOW TO READ THIS CHARTBOOK

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### STRUCTURE OF THE CHARTBOOK

This chartbook is divided into two main components plus appendices.

#### Part 1: Summary tables and figures

Part 1 provides an overview of patterns of cancer and disparities between Māori and non-Māori. It contains summary tables and figures of Māori and non-Māori incidence, mortality, stage at diagnosis, and hazard ratios for 1996–2001. Results are presented for all cancers combined (all sites) and by individual sites, for the total populations and by sex and age group.

#### Part 2: Site-specific tables and figures

Part 2 includes a series of site-specific tables and figures. Information for each site includes: a summary of key points; age-standardised incidence and mortality numbers, rates and rate ratios; age-specific incidence and mortality numbers, rates and rate ratios; distribution of stage at diagnosis (unadjusted and adjusted for age at diagnosis and sex) and odds ratios for being diagnosed at each stage; unadjusted cancer-specific survival curves for Māori and non-Māori; and cancer-specific mortality hazard ratios (adjusted for sex and age at diagnosis, and for stage) for each cancer site.

#### Part 3: Appendices

The appendices include information on the ICD codes used in the report (Appendix One), the ever-Māori method of ethnicity classification (Appendix Two), a comparison of hazard ratios using different methods of ethnicity classification (Appendix Three), standard populations (Appendix Four), and incidence and mortality tables age standardised to Segi's world population (Appendix Five) and to the WHO population (Appendix Six).

### HOW TO READ THE TABLES, FIGURES AND GRAPHS

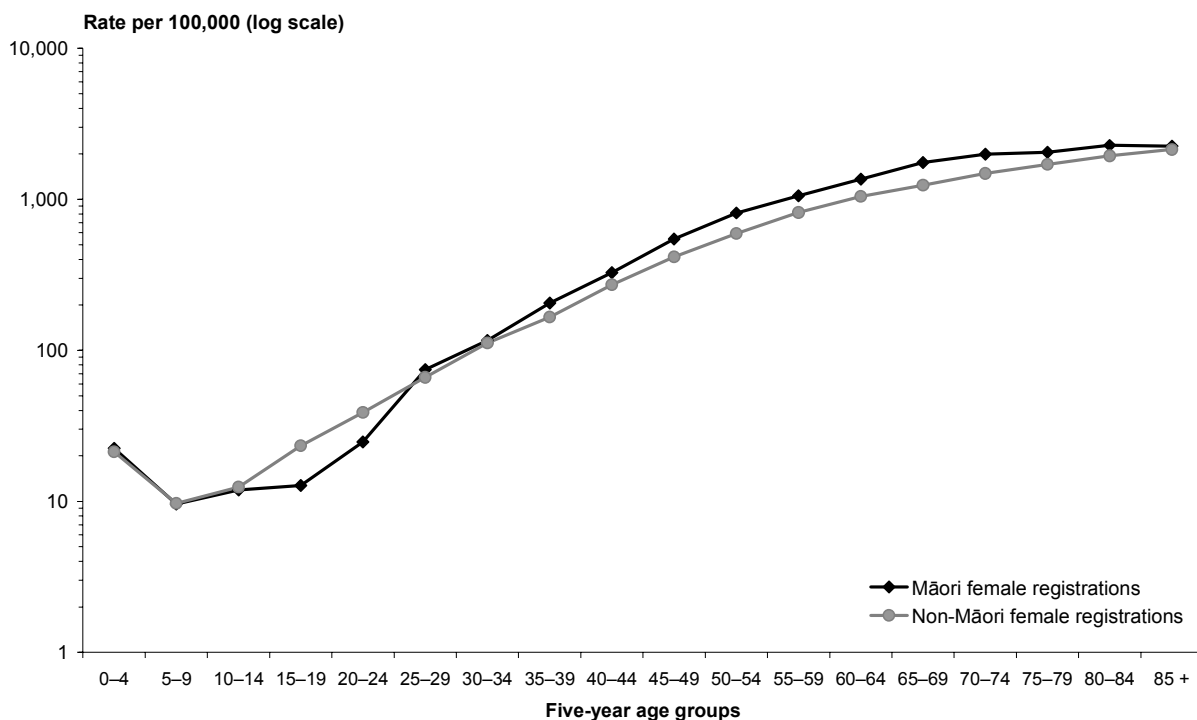
The methods of classification of ethnicity, calculation of rates, hazard ratios and survival curves, and classification of stage of disease at diagnosis are outlined in the methods section. The cancer sites are defined in the tables, figures and graphs according to the International Classification of Diseases (10th revision). For reasons of readability, category names are abbreviated in some tables, figures and graphs. The abbreviations and the ICD categories they correspond to are outlined in Appendix One.

Several different types of tables, figures and graphs are used in this report, some of which are discussed below. In addition, users of the chartbook should be aware that different axis scales (including log scales) are used.

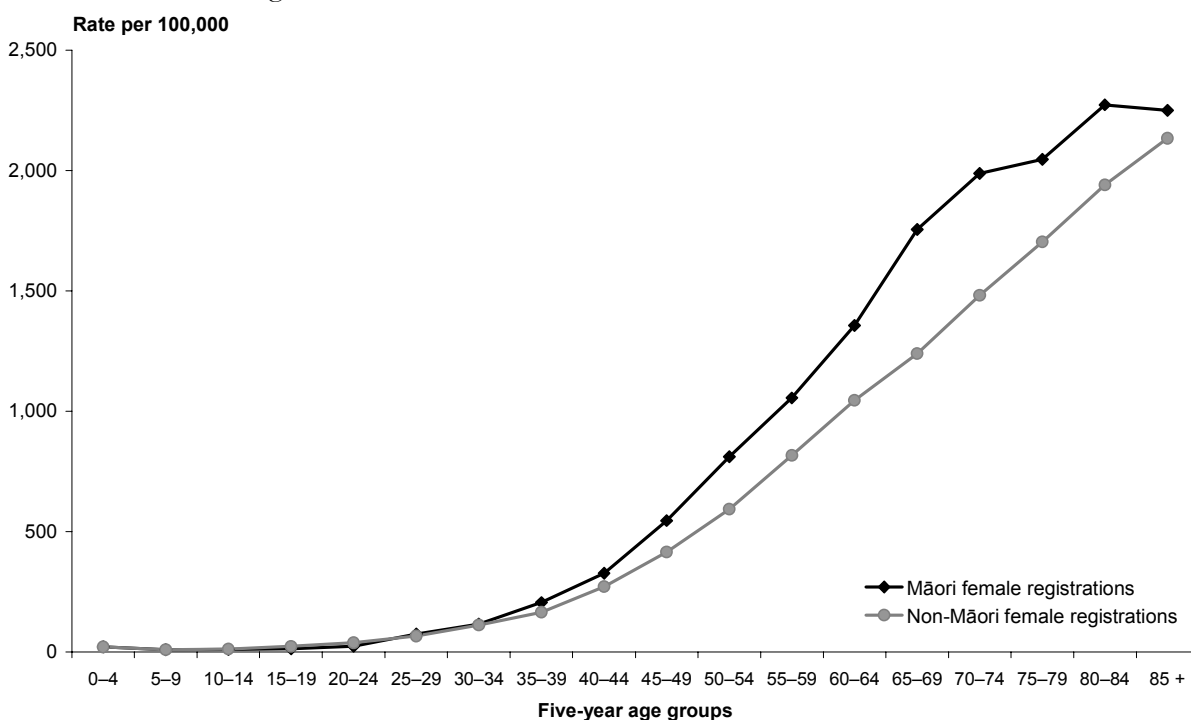
## Logarithmic (log) scales

Log scales are used at times in this chartbook because they provide a more informative comparison of small and large values. The relationships between Māori and non-Māori rates (e.g. rate ratios) are also more clearly visible across the age groups in the log scale graphs, because the proportionality is maintained. A logarithmic scale increases multiplicatively, as in the vertical (y) axis below, so the intervals on the axis represent increasingly large intervals on a normal interval scale.

Example: log scale



Same data not on a log scale





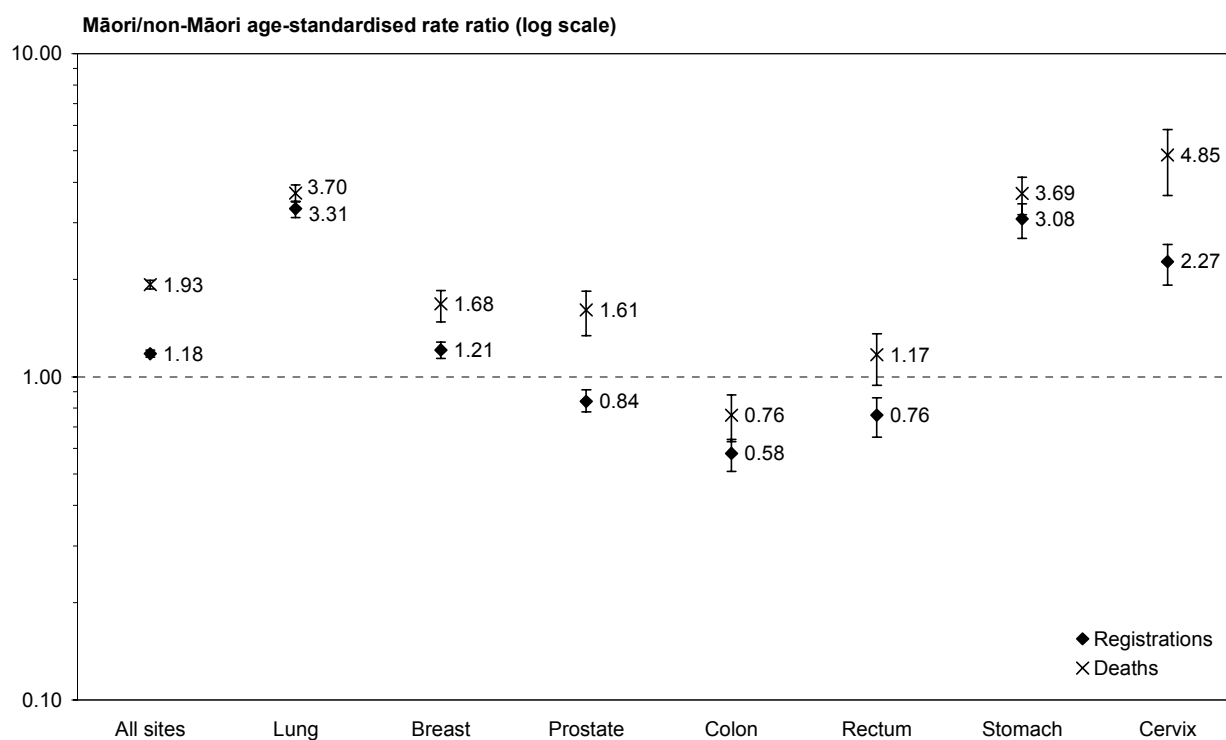
## Rate ratios

Rate ratios in this chartbook illustrate Māori risk relative to non-Māori risk. The ratio is calculated by dividing the Māori rate by the non-Māori rate. Any point above 1 indicates a higher rate (of cancer registrations or deaths) among Māori compared with non-Māori, while any point below 1 indicates Māori have a lower rate than non-Māori. In the example below, the registration rate ratio for prostate cancer was below 1, indicating the incidence of prostate cancer was lower among Māori than non-Māori men, while the mortality rate ratio was above 1, indicating Māori had a higher death rate than non-Māori from prostate cancer.

The bars extending out from each point represent 95% confidence limits on the ratios. The confidence interval (CI) is narrow on the ratios for 'all sites', because the rates were calculated from relatively large numbers. However, for cancer of the cervix, where deaths are relatively rare, the confidence intervals on the mortality ratio are wider.

This graph uses a log scale to maintain the proportionality of ratios below 1 and over 1.

Example:

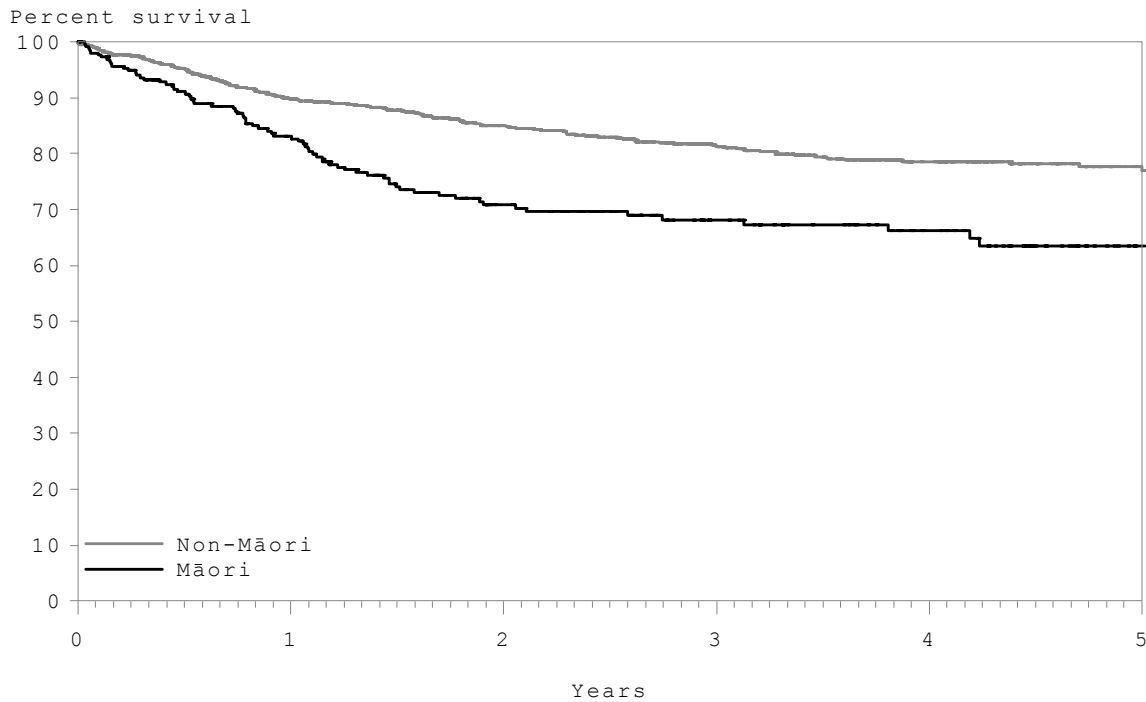


## Survival curves

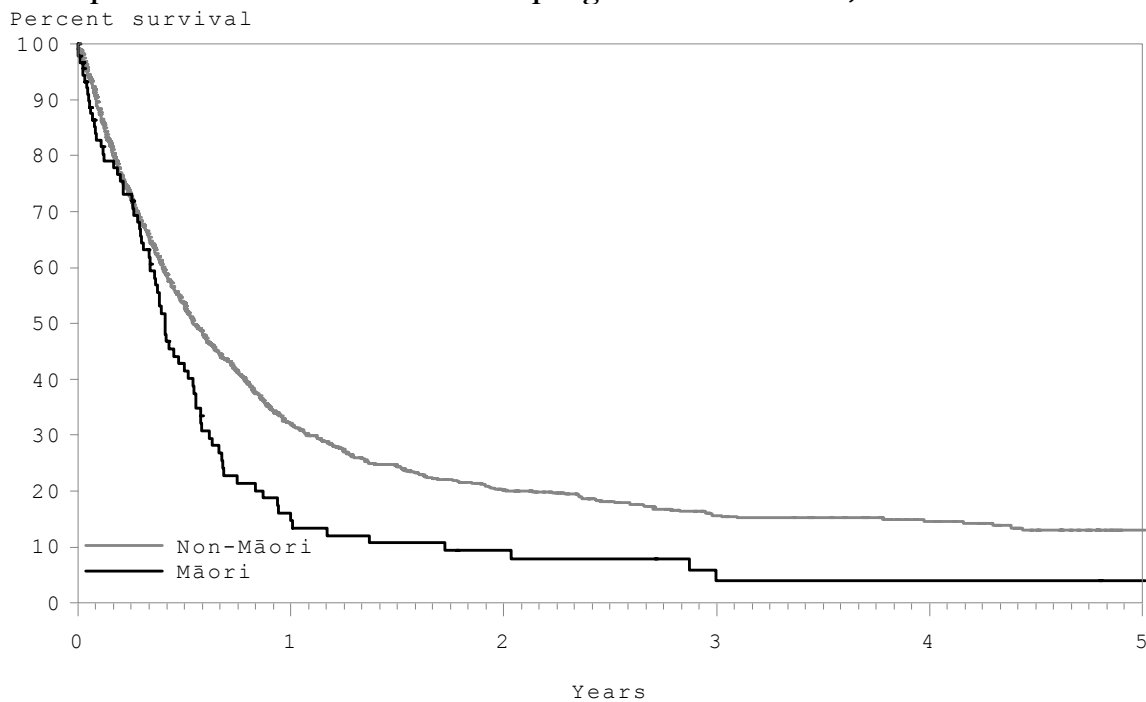
Survival curves depict an estimate of the proportion of people not dying from their cancer over time. The vertical axis ('percent survival') represents the proportion of people not dying from the cancer as a percentage, while the horizontal axis ('years') shows time from diagnosis. The flat sections of the curve represent periods with no cancer deaths (although there may be censored observations of people who died from other causes or who reached the end of the follow-up period). The survival curves in this chartbook are cancer-specific and cover a period of five years. They are not adjusted for age.

The first example below presents cancer-specific survival curves for non-Māori (the upper curve) and Māori (the lower curve) diagnosed with cervical cancer. The second example shows survival curves for oesophageal cancer. The curves for cervical cancer are relatively shallow, indicating a relatively high survival rate. The lower survival from oesophageal cancer is shown by the deeper curves. In the cervical cancer example the majority were still alive at the end of five years, but in the oesophageal example the median survival time (i.e. the point at which 50% are left surviving) for both Māori and non-Māori is less than one year. In both examples the curves for non-Māori are higher than those for Māori, indicating a higher proportion of non-Māori surviving at each point of time over the five years.

**Example 1: Māori and non-Māori cervical cancer survival, 1996–2001**



**Example 2: Māori and non-Māori oesophageal cancer survival, 1996–2001**



## INTERPRETATION ISSUES

- Readers should be aware that use of the Māori population standard as well as the ‘ever Māori’ method of classifying ethnicity mean that results presented in this chartbook may not be directly comparable with those reported elsewhere.
- Readers should be mindful that the site-specific groupings (such as brain cancer, bone cancer or thyroid cancer) in fact reflect groupings of diseases that can affect different age groups, and may have very different aetiologies and/or prognoses. They should therefore not be treated as one disease.
- Caution should be taken when interpreting rates and ratios that are in grey text, because they have been calculated from small numbers (see notes on modelling in the methods section).
- The hazard ratios presented in this report do not take account of confounding by type of cancer within each cancer site (e.g. small-cell lung cancer versus non-small-cell lung cancer). There may also be residual confounding within stage categories.
- In relation to the staging information included in this chartbook, the NZHIS notes that staging information was not adequate prior to 1997 (NZHIS 2004). Caution should therefore be taken when interpreting the staging data included in this chartbook. For some cancers there was a significant decreasing trend over time in the proportion of cancers with unknown stage or extent of disease.
- Our use of the terms ‘significant’ or ‘not significant’ refer to the statistical sense (i.e.  $p < 0.05$ ) rather than importance or clinical significance.



## **SECTION 2:**

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Māori and Non-Māori Summary Tables  
and Figures



## 4 CANCER REGISTRATIONS AND DEATHS: ALL SITES

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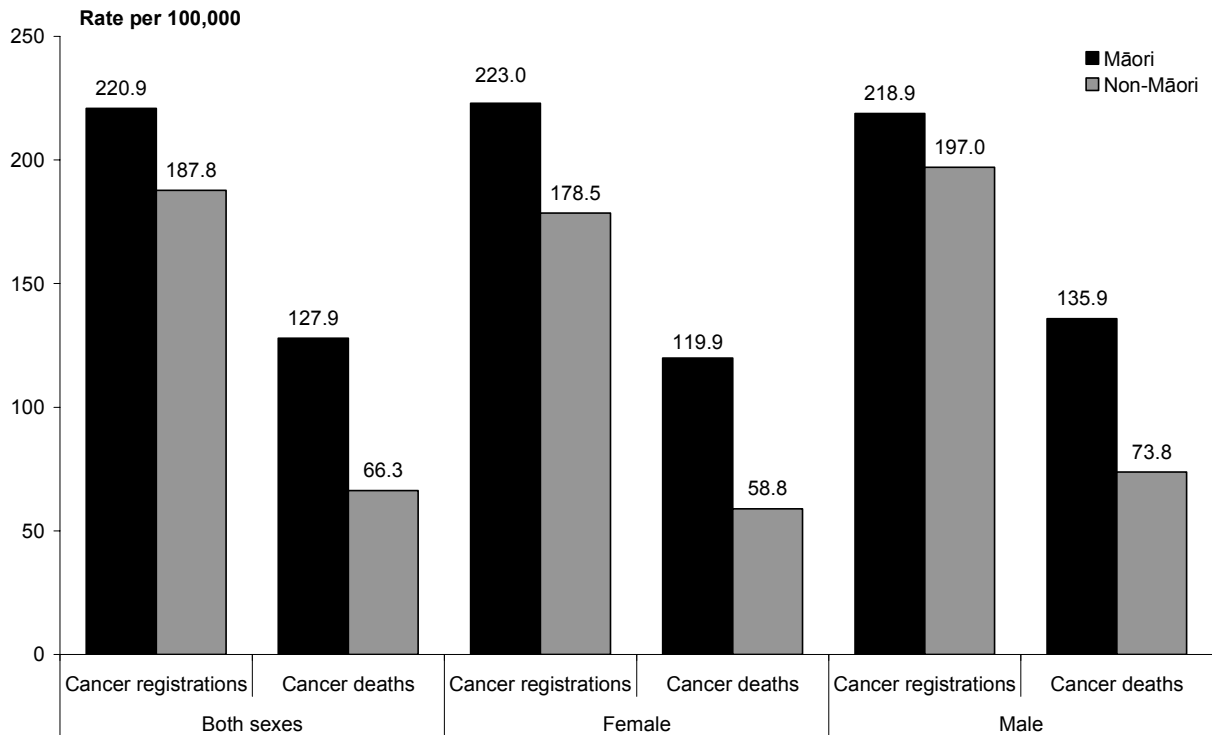
The following figures provide an overview of cancer incidence and mortality for all cancers combined (also referred to in this publication as *all sites*). Age-standardised rates are per 100,000 and age adjusted to the Māori population.

### KEY POINTS

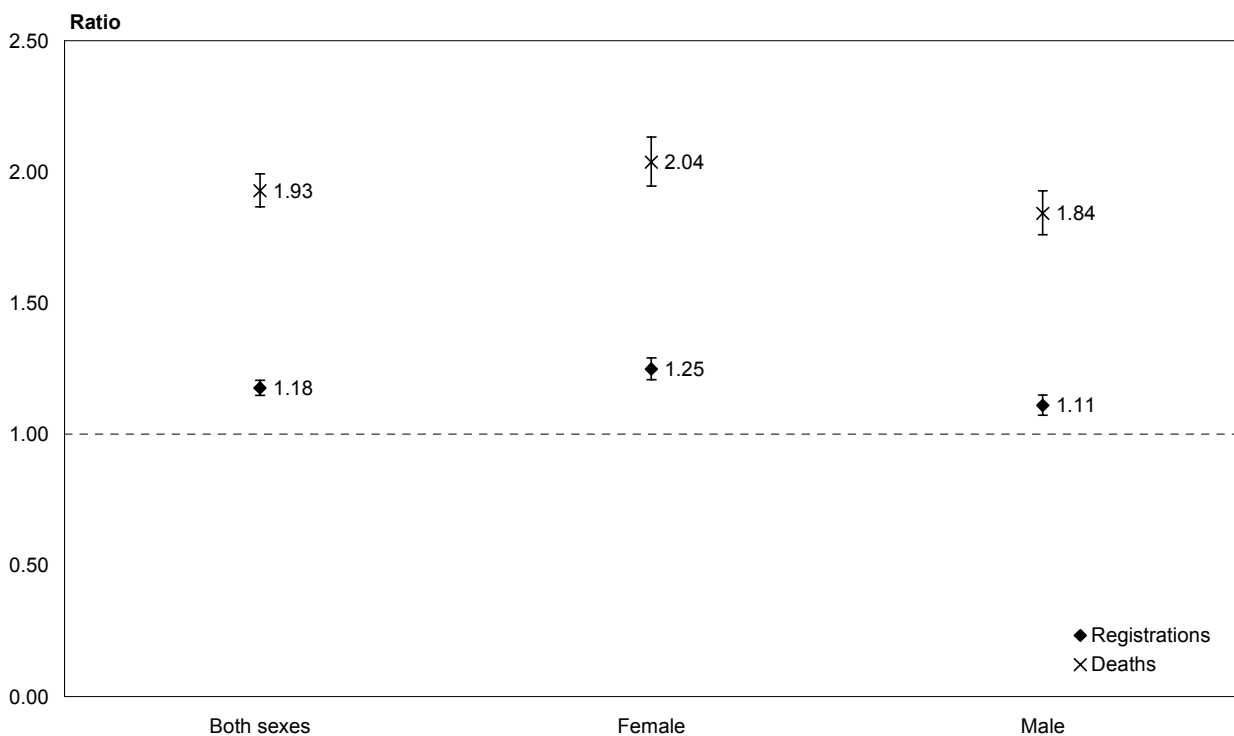
- There were 7,410 Māori and 94,284 non-Māori new cancer registrations during the period 1996–2001, giving an average of approximately 1,200 new Māori cancer registrations and 15,700 new non-Māori registrations per year.
- The age-sex-standardised incidence rate for all cancers combined was 220.9 per 100,000 for Māori, nearly a fifth higher than the non-Māori rate of 187.8 per 100,000, giving a risk difference of 33.1 per 100,000 (Figure 4.1).
- For the period 1996–2001, the age-standardised incidence rate for all cancers combined was 223.0 per 100,000 for Māori females, 25% higher than the incidence rate for non-Māori females (178.5 per 100,000). The age-standardised incidence rate for Māori males was 218.9, 11% higher than the non-Māori male rate of 197.0 (Figure 4.1).
- Among Māori, the rate of cancer registration was 2% higher among females than males. Among non-Māori, the female rate was 10% lower than the male rate (Figure 4.1).
- During the period 1996–2001, there were 4,285 Māori and 41,196 non-Māori cancer deaths, giving an average of approximately 714 Māori deaths and 6,866 non-Māori deaths per year.
- The age-sex-standardised cancer mortality rate overall was 127.9 per 100,000 for Māori, almost twice the non-Māori rate of 66.3 per 100,000 (relative risk 1.93; 95% CI 1.87–1.99), giving a risk difference of 61.6 deaths per 100,000 (Figures 4.1 and 4.2).
- The age-standardised mortality rate for Māori females was twice that of non-Māori females (119.9 compared with 58.8 respectively). The Māori male mortality rate was 135.9 per 100,000, 80% higher than the non-Māori mortality rate of 73.8 (Figures 4.1 and 4.2).
- The age-standardised cancer mortality rate was higher for males than females among both Māori and non-Māori (Figure 4.1).
- Overall, for all cancers combined, Māori had an 18% higher incidence rate and a 93% higher mortality rate than non-Māori (Figure 4.2).
- Cancer incidence and mortality rates for all cancers combined increased with age for males and females, for both Māori and non-Māori (Figures 4.3, 4.4 and 4.5).
- Māori incidence rates for all cancer sites appear to be higher in all age groups over 30 years, while Māori cancer mortality rates are consistently higher than non-Māori across all age groups (Figure 4.3).
- Female cancer incidence rates are higher than male rates in the middle age groups, while male rates are higher from 60 years on. This possibly reflects the age distribution of breast and prostate cancers (Figure 4.4).

- For all sites combined, Māori mortality rates tend to be higher in all age groups. In addition, particularly in the middle age groups, the ethnic gap is bigger than the gender gap (Figure 4.5).

**Figure 4.1: All-sites cancer incidence and mortality rates, age standardised, both sexes and by sex, 1996–2001**



**Figure 4.2: All-sites cancer incidence and mortality Māori:non-Māori ratios, both sexes and by sex, 1996–2001**

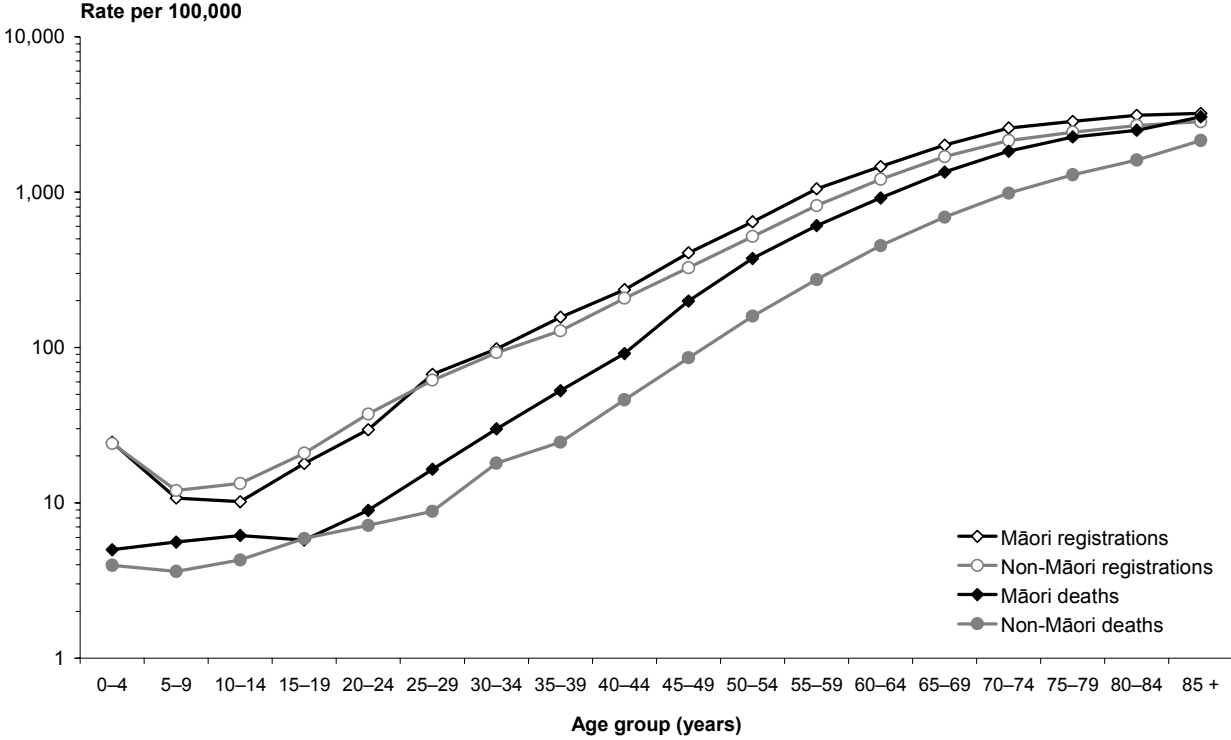




In general, incidence and mortality from cancer increases with age. The figures below outline the age distribution of cancer incidence and mortality by five-year age groups, for both sexes (Figure 4.3) and by sex (Figures 4.4 and 4.5).

**Figure 4.3: All-sites cancer incidence and mortality rates, by five-year age groups, 1996–2001**

**(a) Log scale**



**(b) Non-log scale**

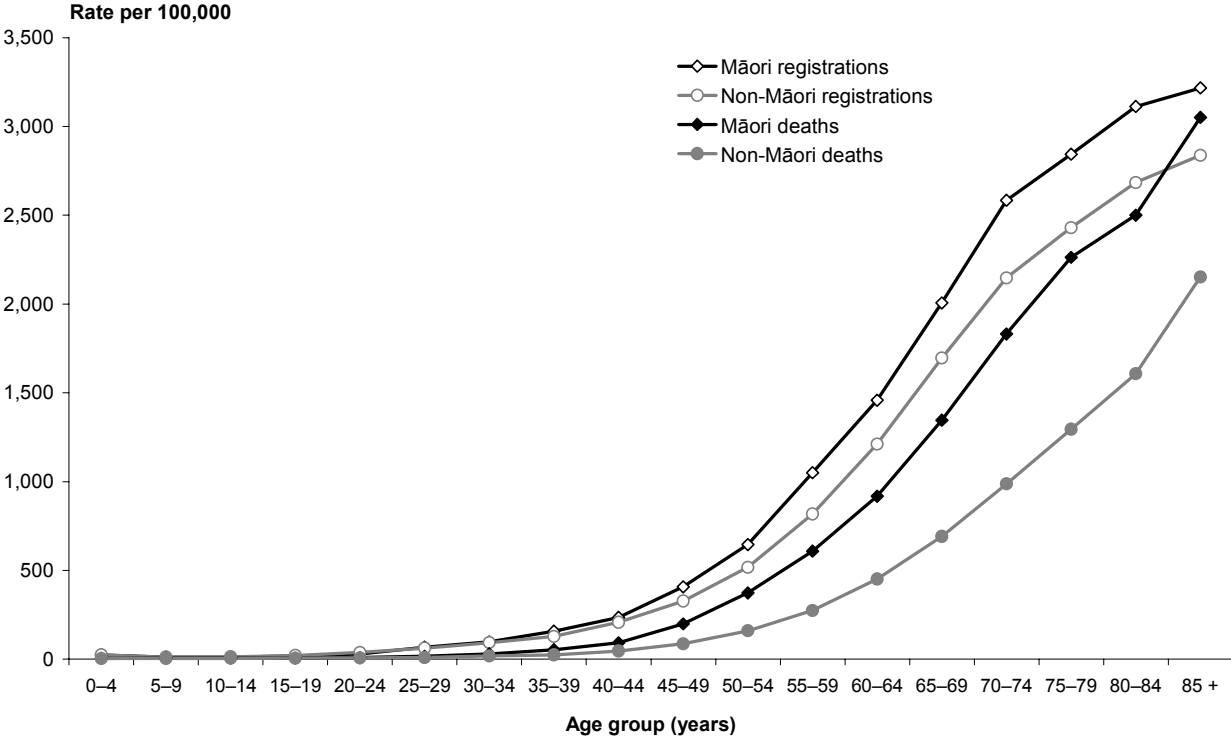


Figure 4.4: All-sites cancer registration rates, by five-year age groups and sex, 1996–2001

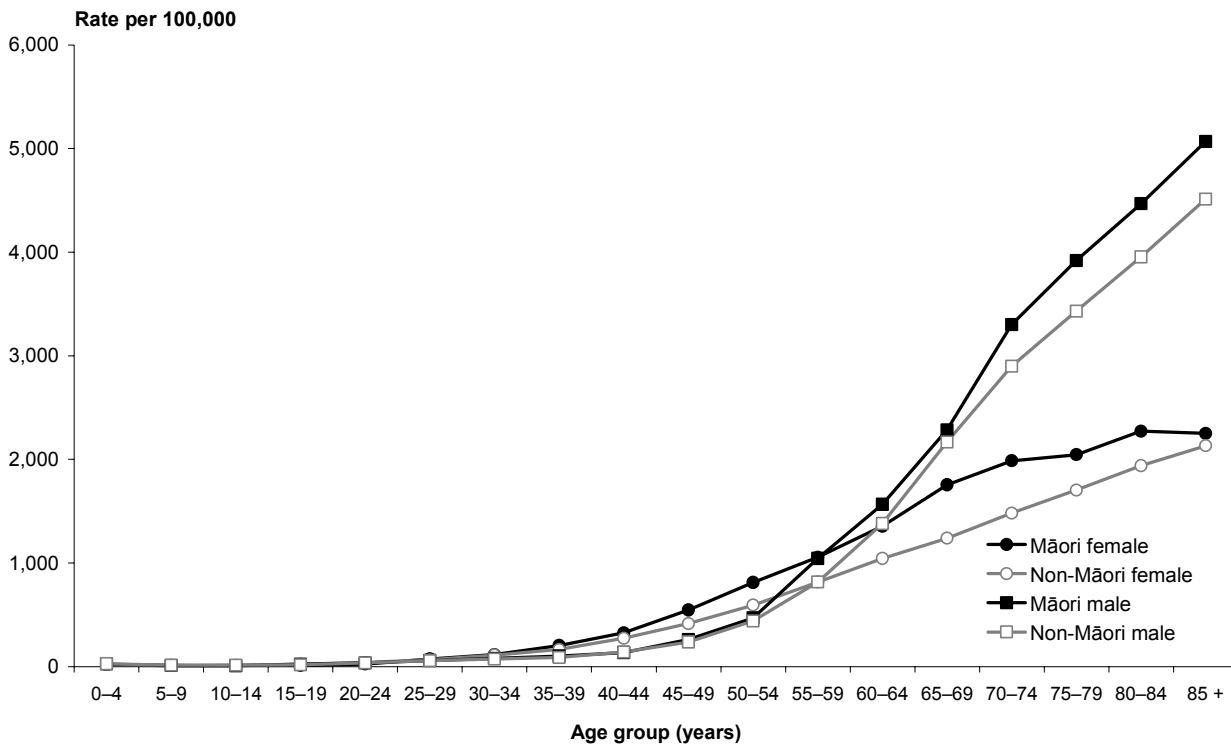
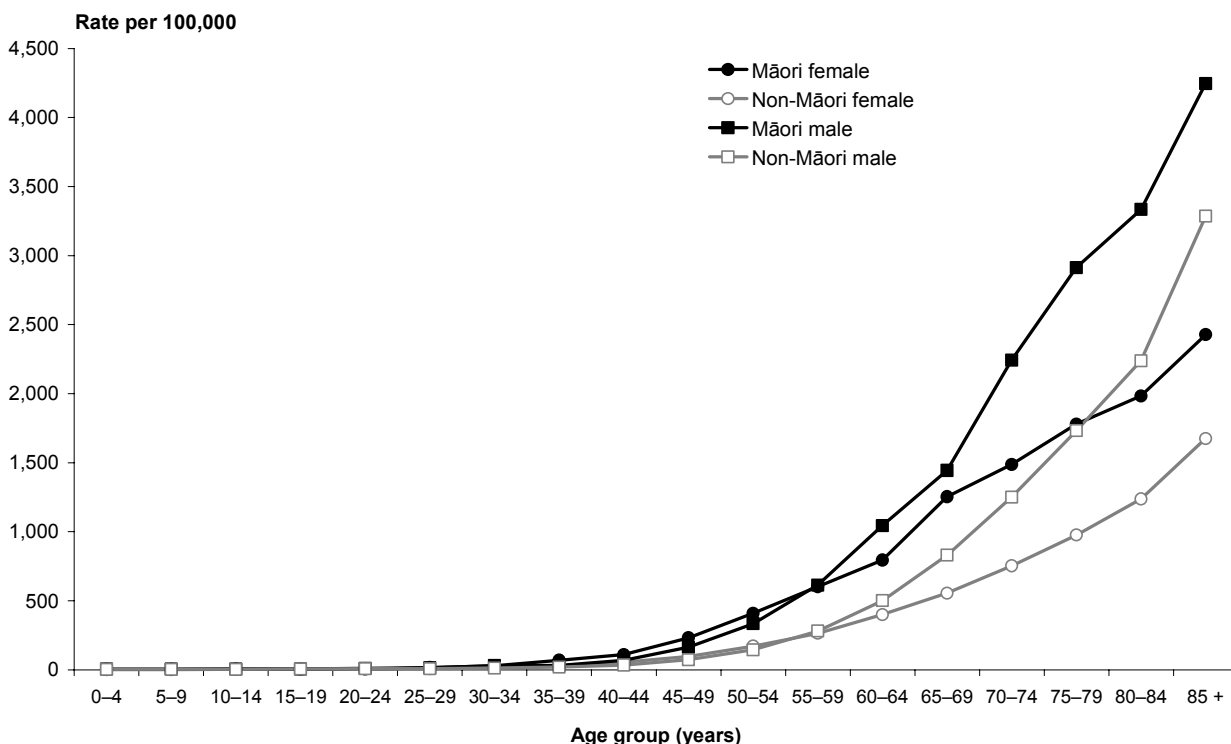


Figure 4.5: All-sites cancer mortality rates, by five-year age groups and sex, 1996–2001



## 5 CANCER REGISTRATIONS AND DEATHS: LEADING SITES

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The 10 most commonly occurring cancers and causes of cancer death are outlined below for Māori and non-Māori, by sex and for both sexes combined. Leading sites are ranked by number of new cases or deaths.

### KEY POINTS

- Leading cancer types differ for Māori and non-Māori for both registration and death, in terms of ranking and the percentage of new cases or deaths (Tables 5.1 and 5.2).
- The five leading cancer registration sites for Māori were lung, female breast, prostate, colorectal and stomach (55% of all new cases). Cancer of the cervix, testis and liver were also leading sites for Māori (Table 5.1).
- For non-Māori, the most commonly registered cancers were prostate, colorectal, female breast, melanoma and lung cancer, accounting for 62% of all non-Māori registrations. Cancer of the bladder was also a leading site (Table 5.1).
- Leading causes of cancer death for Māori were lung, female breast, colorectal, stomach and prostate cancer, with lung cancer accounting for nearly a third of all Māori cancer deaths. The cancers most commonly causing death for non-Māori were lung, colorectal, female breast, prostate cancer, and non-Hodgkin's lymphoma (Table 5.2).
- Cancers of the cervix and liver were among the 10 leading sites of cancer death for Māori but not for non-Māori. Melanoma was a leading cause of death for non-Māori only (Table 5.2).
- Among Māori females, cancers of the breast, lung and cervix made up over half the registrations. For non-Māori females, breast, colorectal cancer and melanoma constituted half the total cancers (Table 5.1).
- For Māori males, lung, prostate, colorectal and stomach cancers comprised half the total number of registrations. Prostate, colorectal cancer and melanoma formed a similar proportion of the non-Māori male registrations (Table 5.1).
- Lung, breast and colorectal cancers accounted for about half the cancer deaths among both Māori and non-Māori females (Table 5.2).
- Among Māori and non-Māori males, lung, prostate, stomach and colorectal cancers caused over half the cancer deaths (Table 5.2).

**Table 5.1: Cancer registrations: 10 leading sites, both sexes and by sex, 1996–2001**

Māori			Rank	Non-Māori		
Site	Number	% of new cases		Site	Number	% of new cases
<b>Both sexes</b>						
Trachea, bronchus and lung	1,437	19.4	1	Prostate	15,324	16.3
Female breast	1,147	15.9	2	Colorectal	14,410	15.3
Prostate	632	8.5	3	Female breast	11,762	12.5
Colorectal	514	6.9	4	Melanoma of skin	9,372	9.9
Stomach	329	4.4	5	Trachea, bronchus and lung	7,975	8.5
Leukaemias	276	3.7	6	Bladder	3,284	3.5
Cervix uteri	250	3.4	7	Non-Hodgkin's lymphoma	3,256	3.5
Non-Hodgkin's lymphoma	232	3.1	8	Leukaemias	3,133	3.3
Liver and intrahepatic bile ducts	183	2.5	9	Stomach	2,019	2.1
Pancreas	176	2.4	10	Kidney	1,835	1.9
<b>Female</b>						
Breast	1,147	29.0	1	Breast	11,762	26.9
Trachea, bronchus and lung	708	17.9	2	Colorectal	7,149	16.4
Cervix uteri	250	6.3	3	Melanoma of skin	4,637	10.6
Colorectal	221	5.6	4	Trachea, bronchus and lung	2,976	6.8
Uterus	175	4.4	5	Ovary	1,571	3.6
Ovary	163	4.1	6	Uterus	1,570	3.6
Stomach	147	3.7	7	Non-Hodgkin's lymphoma	1,545	3.5
Leukaemias	109	2.8	8	Leukaemias	1,318	3.0
Non-Hodgkin's lymphoma	107	2.7	9	Cervix uteri	985	2.3
Thyroid gland	97	2.5	10	Bladder	873	2.0
<b>Male</b>						
Trachea, bronchus and lung	729	21.1	1	Prostate	15,324	30.3
Prostate	632	18.3	2	Colorectal	7,261	14.4
Colorectal	293	8.5	3	Melanoma of skin	5,072	10.0
Stomach	182	5.3	4	Trachea, bronchus and lung	4,999	9.9
Testis	174	5.0	5	Bladder	2,411	4.8
Leukaemias	167	4.8	6	Leukaemias	1,815	3.6
Liver and intrahepatic bile ducts	149	4.3	7	Non-Hodgkin's lymphoma	1,711	3.4
Non-Hodgkin's lymphoma	125	3.6	8	Stomach	1,259	2.5
Kidney	90	2.6	9	Kidney	1,142	2.3
Pancreas	90	2.6	10	Lip, oral cavity and pharynx	1,025	2.0

**Table 5.2: Cancer deaths: 10 leading sites, both sexes and by sex, 1996–2001**

Māori			Rank	Non-Māori		
Site	Number	% of cancer deaths		Site	Number	% of cancer deaths
<b>Both sexes</b>						
Trachea, bronchus and lung	1,370	32.0	1	Trachea, bronchus and lung	7,107	17.3
Female breast	383	8.9	2	Colorectal	6,502	15.8
Colorectal	292	6.8	3	Female breast	3,435	8.3
Stomach	277	6.5	4	Prostate	3,111	7.6
Prostate	178	4.2	5	Non-Hodgkin's lymphoma	1,656	4.0
Pancreas	168	3.9	6	Pancreas	1,651	4.0
Liver and intrahepatic bile ducts	153	3.6	7	Stomach	1,537	3.7
Leukaemias	137	3.2	8	Leukaemias	1,392	3.4
Cervix	116	2.7	9	Melanoma of skin	1,352	3.3
Non-Hodgkin's lymphoma	111	2.6	10	Brain	1,174	2.9
<b>Female</b>						
Trachea, bronchus and lung	676	31.4	1	Breast	3,435	17.8
Breast	383	17.8	2	Colorectal	3,177	16.4
Colorectal	129	6.0	3	Trachea, bronchus and lung	2,588	13.4
Cervix uteri	116	5.4	4	Ovary	964	5.0
Stomach	110	5.1	5	Pancreas	847	4.4
Pancreas	83	3.9	6	Non-Hodgkin's lymphoma	774	4.0
Ovary	69	3.2	7	Stomach	602	3.1
Leukaemias	58	2.7	8	Leukaemias	594	3.1
Non-Hodgkin's lymphoma	52	2.4	9	Melanoma of skin	530	2.7
Uterus	49	2.3	10	Brain	496	2.6
<b>Male</b>						
Trachea, bronchus and lung	694	32.5	1	Trachea, bronchus and lung	4,519	20.7
Prostate	178	8.3	2	Colorectal	3,325	15.2
Stomach	167	7.8	3	Prostate	3,111	15.1
Colorectal	163	7.6	4	Stomach	935	4.3
Liver and intrahepatic bile ducts	124	5.8	5	Non-Hodgkin's lymphoma	882	4.0
Pancreas	85	4.0	6	Melanoma of skin	822	3.8
Leukaemias	79	3.7	7	Pancreas	804	3.7
Oesophagus	63	3.0	8	Leukaemias	798	3.7
Non-Hodgkin's lymphoma	59	2.8	9	Brain	678	3.1
Brain	54	2.5	10	Oesophagus	675	3.1

## 6 CANCER REGISTRATIONS AND DEATHS: SITE SPECIFIC

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The following tables outline numbers, age-standardised rates and rate ratios for site-specific cancer registrations and deaths, for both sexes combined and by sex. Rates in these summary tables are per 100,000 and age standardised to the Māori population (summary tables standardised to both the WHO and Segi populations can be found in Appendices Five and Six). The tables are organised according to ICD-10 groupings (Appendix One).

### KEY POINTS

- Registration rates were higher for Māori than non-Māori for a number of cancers. Those cancers with the largest rate differences between Māori and non-Māori were cancers of the lung (an extra 30 per 100,000 among Māori compared with non-Māori), female breast (11 per 100,000), cervix (8 per 100,000), stomach (7 per 100,000), testis (5 per 100,000) and liver (4 per 100,000). For non-Māori, the largest rate differences were for melanoma of the skin (an extra 21 per 100,000 compared with Māori), and colorectal cancer (9 per 100,000).
- Registration rates for cancers of the lung, stomach and liver were more than three times higher for Māori compared with non-Māori (Table 6.1).
- Other cancers with significantly higher registration rates for Māori were cancers of the cervix and gallbladder (over twice as high); cancers of the pancreas, testis, multiple myeloma and ill-defined sites (over 80% higher); cancers of the male oesophagus, male larynx and uterus (over 50% higher); cancers of the thyroid gland (40% higher); and cancers of the ovary, female breast and myeloid leukaemia (over 20% higher) (Table 6.1).
- Non-Māori had significantly higher registration rates than Māori for melanoma of the skin (over eight times higher), bladder (twice as high), colorectal cancer and Hodgkin's disease (over 50% higher), and prostate cancer (20% higher). Brain cancer was nearly 30% higher among non-Māori males compared to Māori males (Table 6.1).
- Death rates were significantly higher for Māori than non-Māori for many types of cancer. The largest risk differences were for deaths from lung cancer (30 deaths per 100,000), female breast cancer (9 per 100,000), stomach (6 per 100,000), cervix and prostate (5 per 100,00) and liver (4 per 100,00).
- The largest relative disparities were for cancers of the cervix (4.85 times higher for Māori); testis, liver (over four times higher); lung, stomach (over 3.5 times higher); and gallbladder, pancreas and uterus (Table 6.4).
- Deaths from cancers of the female breast, prostate, oesophagus, male kidney, and male oral cancers were over 50% higher for Māori than non-Māori, with leukaemia and mesothelial and soft tissue cancer deaths around 40% higher (Table 6.4).
- Thyroid cancer deaths were over three times higher among Māori females than non-Māori females (Table 6.5). Compared with non-Māori males, Māori males had higher rates of death from Hodgkin's disease (over three times higher) and multiple myeloma (over twice as high) (Table 6.6).

- Colon cancer and melanoma were the only sites with significantly lower mortality rates for Māori compared with non-Māori. No significant differences were observed for deaths from cancers of the ovary, brain, rectum and anus, bladder or non-Hodgkin's lymphoma (Table 6.4).
- Māori:non-Māori age-standardised mortality ratios were higher than incidence ratios for most types of cancer (Table 6.7; Figure 6.1). For example, the incidence of prostate cancer was significantly lower for Māori, but mortality was significantly higher compared with non-Māori. Cervical cancer incidence was twice as high, but mortality was well over four times higher among Māori women compared with non-Māori women.

**Table 6.1: Cancer registrations: numbers, age-sex-standardised rates, Māori:non-Māori rate ratios, 1996–2001**

Site	Number		Rate		Rate 95% CI ratio
	Māori	Non-Māori	Māori	Non-Māori	
<b>All sites</b>	7,410	94,284	220.9	187.8	1.18 (1.15–1.21)
<b>Lip, oral cavity and pharynx</b>	120	1,575	3.6	3.4	1.06 (0.87–1.27)
<b>Digestive organs</b>					
Oesophagus	91	1,126	2.8	1.7	1.64 (1.32–2.04)
Stomach	329	2,019	9.8	3.2	3.08 (2.73–3.48)
Colorectal	514	14,410	15.5	24.1	0.64 (0.59–0.70)
<i>Colon</i>	297	9,607	8.9	15.4	0.58 (0.52–0.65)
<i>Rectum, rectosigmoid junction and anus</i>	217	4,803	6.6	8.7	0.76 (0.66–0.87)
Liver and intrahepatic bile ducts	183	698	5.6	1.4	3.86 (3.25–4.59)
Gallbladder and other biliary tract	44	405	1.3	0.6	2.22 (1.61–3.05)
Pancreas	176	1,735	5.2	2.7	1.96 (1.67–2.30)
Other digestive organs	64	627	1.9	0.9	2.14 (1.64–2.78)
<b>Respiratory and intrathoracic organs</b>					
Larynx	42	432	1.3	0.8	1.58 (1.14–2.17)
Trachea, bronchus and lung	1,437	7,975	42.8	12.9	3.31 (3.13–3.51)
Other respiratory and intrathoracic organs	38	236	1.1	0.6	1.83 (1.28–2.61)
<b>Bone and articular cartilage</b>	29	203	0.9	0.9	1.01 (0.68–1.51)
<b>Skin</b>					
Melanoma of skin	100	9,372	2.9	23.9	0.12 (0.10–0.15)
Other malignant neoplasms of skin	18	380	0.5	0.6	0.85 (0.52–1.37)
<b>Mesothelial and soft tissue</b>	97	1,066	2.9	2.5	1.15 (0.93–1.42)
<b>Breast: female</b>	1,147	11,762	65.1	53.9	1.21 (1.14–1.28)
<b>Female genital organs</b>					
Cervix uteri	250	985	14.2	6.3	2.27 (1.97–2.62)
Uterus	175	1,570	9.9	6.1	1.61 (1.38–1.89)
Ovary	163	1,571	9.3	7.3	1.28 (1.08–1.51)
Other female genital organs	34	410	1.9	1.5	1.25 (0.87–1.79)
<b>Male genital organs</b>					
Prostate	632	15,324	41.2	49.3	0.84 (0.77–0.90)
Testis	174	618	10.9	5.9	1.84 (1.55–2.18)
Other male genital organs	3	84	0.2	0.4	0.55 (0.17–1.75)
<b>Urinary tract</b>					
Kidney	138	1,835	4.1	3.9	1.05 (0.88–1.25)
Bladder	85	3,284	2.6	5.2	0.51 (0.41–0.63)
Other urinary tract	6	238	0.2	0.4	0.46 (0.21–1.05)
<b>Eye and other parts of central nervous system</b>					
Brain	119	1,402	3.5	4.5	0.79 (0.65–0.95)
Other eye and central nervous system	26	388	0.8	1.2	0.66 (0.44–0.99)
<b>Thyroid and other endocrine glands</b>					
Thyroid gland	126	787	3.7	2.6	1.39 (1.15–1.68)
Other endocrine glands	21	93	0.6	0.5	1.26 (0.77–2.06)
<b>Ill-defined, secondary and unspecified sites</b>	348	3,440	10.4	5.5	1.90 (1.70–2.13)
<b>Lymphoma</b>					
Hodgkin's disease	36	393	1.1	1.7	0.61 (0.43–0.87)
Non-Hodgkin's lymphoma	232	3,256	6.9	6.8	1.02 (0.89–1.16)
<b>Multiple myeloma, immunoproliferative and plasma cell</b>	129	1,364	3.9	2.1	1.89 (1.57–2.28)
<b>Leukaemias</b>					
<i>Lymphoid leukaemia</i>	276	3,133	8.4	7.7	1.09 (0.96–1.24)
<i>Myeloid leukaemia</i>	142	1,814	4.3	4.7	0.91 (0.76–1.08)
<i>Other leukaemias</i>	117	1,187	3.5	2.7	1.31 (1.08–1.60)
<i>Other leukaemias</i>	17	132	0.5	0.3	2.03 (1.17–3.51)
<b>Other lymphoid, haematopoietic and related tissue</b>	4	11	0.1	0.0	3.88 (1.05–14.30)



**Table 6.2: Female cancer registrations: numbers, age-standardised rates, Māori:non-Māori rate ratios, 1996–2001**

Site	Number		Rate		Rate 95% CI ratio
	Māori	Non-Māori	Māori	Non-Māori	
<b>All sites</b>	3,953	43,688	223.0	178.5	1.25 (1.21–1.29)
<b>Lip, oral cavity and pharynx</b>	41	550	2.3	2.1	1.11 (0.80–1.53)
<b>Digestive organs</b>					
Oesophagus	24	399	1.3	0.9	1.41 (0.93–2.15)
Stomach	147	760	8.1	2.0	4.03 (3.35–4.85)
Colorectal	221	7,149	12.3	21.8	0.57 (0.49–0.65)
<i>Colon</i>	134	5,157	7.5	15.1	0.49 (0.42–0.59)
<i>Rectum, rectosigmoid junction and anus</i>	87	1,992	4.9	6.7	0.73 (0.59–0.90)
Liver and intrahepatic bile ducts	34	267	1.9	0.9	2.13 (1.47–3.10)
Gallbladder and other biliary tract	21	227	1.2	0.6	1.94 (1.23–3.07)
Pancreas	86	868	4.7	2.2	2.10 (1.67–2.64)
Other digestive organs	25	331	1.4	0.8	1.78 (1.17–2.71)
<b>Respiratory and intrathoracic organs</b>					
Larynx	8	61	0.4	0.2	2.02 (0.95–4.27)
Trachea, bronchus and lung	708	2,976	39.6	9.4	4.22 (3.87–4.59)
Other respiratory and intrathoracic organs	19	99	1.1	0.5	2.27 (1.36–3.80)
<b>Bone and articular cartilage</b>	10	85	0.6	0.8	0.75 (0.38–1.47)
<b>Skin</b>					
Melanoma of skin	66	4,637	3.7	24.3	0.15 (0.12–0.19)
Other malignant neoplasms of skin	12	161	0.7	0.5	1.38 (0.75–2.53)
<b>Mesothelial and soft tissue</b>	46	381	2.7	2.0	1.34 (0.97–1.83)
<b>Breast: female</b>	1,147	11,762	65.1	53.9	1.21 (1.14–1.28)
<b>Female genital organs</b>					
Cervix uteri	250	985	14.2	6.3	2.27 (1.97–2.62)
Uterus	175	1,570	9.9	6.1	1.61 (1.38–1.89)
Ovary	163	1,571	9.3	7.3	1.28 (1.08–1.51)
Other female genital organs	34	410	1.9	1.5	1.25 (0.87–1.79)
<b>Urinary tract</b>					
Kidney	48	693	2.7	3.0	0.92 (0.68–1.24)
Bladder	27	873	1.5	2.3	0.64 (0.43–0.94)
Other urinary tract	3	90	0.2	0.2	0.69 (0.22–2.21)
<b>Eye and other central nervous system</b>					
Brain	58	560	3.4	3.4	1.00 (0.75–1.32)
Other eye and central nervous system	14	185	0.8	1.1	0.74 (0.42–1.29)
<b>Thyroid and other endocrine glands</b>					
Thyroid gland	97	586	5.5	4.0	1.39 (1.12–1.73)
Other endocrine glands	7	41	0.4	0.5	0.93 (0.40–2.13)
<b>Ill-defined, secondary and unspecified sites</b>	179	1,755	10.0	5.0	2.01 (1.72–2.36)
<b>Lymphoma</b>					
Hodgkin's disease	17	186	1.0	1.6	0.59 (0.36–0.98)
Non-Hodgkin's lymphoma	107	1,545	6.0	5.8	1.04 (0.85–1.27)
<b>Multiple myeloma, immunoproliferative and plasma cell</b>	48	600	2.6	1.6	1.68 (1.24–2.26)
<b>Leukaemias</b>					
<i>Lymphoid leukaemia</i>	46	717	2.6	3.3	0.80 (0.58–1.09)
<i>Myeloid leukaemia</i>	57	539	3.3	2.4	1.38 (1.04–1.83)
<i>Other leukaemias</i>	6	62	0.3	0.2	1.25 (0.51–3.10)
<b>Other lymphoid, haematopoietic, and related tissue</b>	2	7	0.1	0.0	5.32 (1.04–27.19)

**Table 6.3: Male cancer registrations: numbers, age-standardised rates, Māori:non-Māori rate ratios, 1996–2001**

Site	Number		Rate		Rate 95% CI ratio
	Māori	Non-Māori	Māori	Non-Māori	
<b>All sites</b>	3,457	50,596	218.9	197.0	1.11 (1.07–1.15)
<b>Lip, oral cavity and pharynx</b>	79	1,025	4.9	4.7	1.03 (0.82–1.30)
<b>Digestive organs</b>					
Oesophagus	67	727	4.3	2.5	1.72 (1.34–2.22)
Stomach	182	1,259	11.5	4.3	2.64 (2.26–3.10)
Colorectal	293	7,261	18.7	26.4	0.71 (0.63–0.80)
<i>Colon</i>	163	4,450	10.4	15.7	0.66 (0.57–0.77)
<i>Rectum, rectosigmoid junction and anus</i>	130	2,811	8.3	10.7	0.77 (0.65–0.92)
Liver and intrahepatic bile ducts	149	431	9.2	2.0	4.65 (3.81–5.66)
Gallbladder and other biliary tract	23	178	1.5	0.6	2.50 (1.60–3.89)
Pancreas	90	867	5.7	3.1	1.86 (1.49–2.32)
Other digestive organs	39	296	2.4	1.0	2.40 (1.71–3.38)
<b>Respiratory and intrathoracic organs</b>					
Larynx	34	371	2.1	1.4	1.51 (1.06–2.14)
Trachea, bronchus and lung	729	4,999	45.9	16.4	2.80 (2.58–3.02)
Other respiratory and intrathoracic organs	19	137	1.2	0.8	1.55 (0.95–2.54)
<b>Bone and articular cartilage</b>	19	118	1.2	1.0	1.23 (0.75–2.02)
<b>Skin</b>					
Melanoma of skin	34	4,735	2.2	23.4	0.09 (0.07–0.13)
Other malignant neoplasms of skin	6	219	0.4	0.8	0.51 (0.22–1.15)
<b>Mesothelial and soft tissue</b>	51	685	3.2	3.1	1.02 (0.77–1.37)
<b>Breast: male</b>	4	77	0.2	0.3	0.89 (0.32–2.45)
<b>Male genital organs</b>					
Prostate	632	15,324	41.2	49.3	0.84 (0.77–0.90)
Testis	174	618	10.9	5.9	1.84 (1.55–2.18)
Other male genital organs	3	84	0.2	0.4	0.55 (0.17–1.75)
<b>Urinary tract</b>					
Kidney	90	1,142	5.5	4.9	1.13 (0.91–1.41)
Bladder	58	2,411	3.7	8.0	0.47 (0.36–0.61)
Other urinary tract	3	148	0.2	0.5	0.36 (0.11–1.13)
<b>Eye and other central nervous system</b>					
Brain	61	842	3.7	5.6	0.66 (0.51–0.86)
Other eye and other central nervous system	12	203	0.7	1.2	0.59 (0.32–1.07)
<b>Thyroid and other endocrine glands</b>					
Thyroid gland	29	201	1.8	1.3	1.39 (0.94–2.07)
Other endocrine glands	14	52	0.9	0.6	1.53 (0.83–2.83)
<b>Ill-defined, secondary and unspecified sites</b>	169	1,685	10.8	6.0	1.80 (1.54–2.12)
<b>Lymphoma</b>					
Hodgkin's disease	19	207	1.2	1.8	0.63 (0.39–1.02)
Non-Hodgkin's lymphoma	125	1,711	7.8	7.8	1.00 (0.83–1.21)
<b>Multiple myeloma, immunoproliferative and plasma cell</b>	81	764	5.2	2.6	2.03 (1.60–2.56)
<b>Leukaemias</b>					
<i>Lymphoid leukaemia</i>	96	1,097	6.0	6.2	0.96 (0.78–1.20)
<i>Myeloid leukaemia</i>	60	648	3.8	3.0	1.26 (0.96–1.66)
<i>Other leukaemias</i>	11	70	0.8	0.3	2.72 (1.39–5.33)
<b>Other lymphoid, haematopoietic, and related tissue</b>	2	4	0.1	0.0	3.05 (0.47–19.91)

**Table 6.4: Cancer deaths: numbers, age-sex-standardised rates, Māori:non-Māori rate ratios, 1996–2001**

Site	Number		Rate		Rate 95% CI ratio
	Māori	Non-Māori	Māori	Non-Māori	
<b>All sites</b>	4,285	41,184	127.9	66.3	1.93 (1.87–1.99)
<b>Lip, oral cavity and pharynx</b>	62	595	1.9	1.0	1.81 (1.39–2.37)
<b>Digestive organs</b>					
Oesophagus	86	1,039	2.6	1.5	1.78 (1.43–2.23)
Stomach	277	1,537	8.3	2.3	3.69 (3.23–4.21)
Colorectal	292	6,502	8.8	9.8	0.90 (0.80–1.02)
<i>Colon</i>	158	4,310	4.8	6.3	0.76 (0.64–0.89)
<i>Rectum, rectosigmoid junction and anus</i>	134	2,192	4.1	3.5	1.17 (0.98–1.40)
Liver and intrahepatic bile ducts	153	588	4.7	1.1	4.33 (3.59–5.22)
Gallbladder and other biliary tract	35	306	1.1	0.4	2.57 (1.79–3.68)
Pancreas	168	1,651	5.0	2.4	2.06 (1.75–2.42)
Other digestive organs	64	706	1.9	0.9	2.18 (1.67–2.83)
<b>Respiratory and intrathoracic organs</b>					
Larynx	14	162	0.4	0.3	1.67 (0.96–2.91)
Trachea, bronchus and lung	1,370	7,107	40.7	11.0	3.70 (3.48–3.92)
Other respiratory and intrathoracic organs	17	139	0.5	0.3	1.67 (0.99–2.81)
<b>Bone and articular cartilage</b>	16	104	0.5	0.4	1.18 (0.68–2.03)
<b>Skin</b>					
Melanoma of skin	15	1,352	0.4	2.8	0.15 (0.09–0.26)
Other malignant neoplasms of skin	10	423	0.3	0.5	0.66 (0.35–1.25)
<b>Mesothelial and soft tissue</b>	57	592	1.7	1.2	1.41 (1.07–1.86)
<b>Breast: female</b>	383	3,435	21.6	12.8	1.68 (1.51–1.88)
<b>Female genital organs</b>					
Cervix uteri	116	317	6.6	1.4	4.85 (3.87–6.06)
Uterus	49	410	2.7	1.2	2.28 (1.68–3.09)
Ovary	69	964	3.9	3.3	1.17 (0.91–1.50)
Other female genital organs	11	131	0.6	0.3	1.80 (0.95–3.39)
<b>Male genital organs</b>					
Prostate	178	3,111	12.1	7.5	1.61 (1.38–1.88)
Testis	14	27	0.9	0.2	4.25 (2.18–8.31)
Other male genital organs		16		0.0	
<b>Urinary tract</b>					
Kidney	73	801	2.2	1.3	1.64 (1.29–2.10)
Bladder	36	980	1.1	1.2	0.91 (0.65–1.28)
Other urinary tract	3	61	0.1	0.1	0.90 (0.28–2.91)
<b>Eye and other central nervous system</b>					
Brain	95	1,174	2.8	3.1	0.93 (0.75–1.15)
Other eye and central nervous system	4	92	0.1	0.2	0.62 (0.22–1.72)
<b>Thyroid and other endocrine glands</b>					
Thyroid gland	12	97	0.3	0.1	2.34 (1.26–4.34)
Other endocrine glands	9	49	0.3	0.3	1.10 (0.53–2.28)
<b>Ill-defined, secondary and unspecified sites</b>	260	2,739	7.8	3.9	2.00 (1.75–2.28)
<b>Lymphoma</b>					
Hodgkin's disease	11	72	0.3	0.2	1.87 (0.97–3.63)
Non-Hodgkin's lymphoma	111	1,656	3.3	2.8	1.18 (0.97–1.44)
<b>Multiple myeloma, immunoproliferative and plasma cell</b>	74	834	2.2	1.1	2.03 (1.59–2.58)
<b>Leukaemias</b>					
<i>Lymphoid leukaemia</i>	56	483	1.7	1.1	1.47 (1.10–1.97)
<i>Myeloid leukaemia</i>	68	806	2.0	1.5	1.35 (1.05–1.74)
<i>Other leukaemias</i>	13	103	0.4	0.1	2.61 (1.41–4.83)
<b>Other lymphoid, haematopoietic, and related tissue</b>	1	5	0.0	0.0	2.13 (0.19–23.65)

**Table 6.5: Female cancer deaths, numbers: age-standardised rates, Māori:non-Māori rate ratios, 1996–2001**

Site	Number		Rate		Rate ratio	95% CI
	Māori	Non-Māori	Māori	Non-Māori		
<b>All sites</b>	2,152	19,322	119.9	58.8	2.04	(1.95–2.14)
<b>Lip, oral cavity and pharynx</b>	12	194	0.7	0.5	1.25	(0.68–2.28)
<b>Digestive organs</b>						
Oesophagus	23	364	1.2	0.7	1.76	(1.14–2.70)
Stomach	110	602	6.0	1.4	4.20	(3.39–5.21)
Colorectal	129	3,177	7.2	8.4	0.86	(0.72–1.03)
<i>Colon</i>	73	2,263	4.1	5.9	0.69	(0.55–0.88)
<i>Rectum, rectosigmoid junction and anus</i>	56	914	3.1	2.5	1.25	(0.95–1.65)
Liver and intrahepatic bile ducts	29	215	1.6	0.6	2.67	(1.78–4.00)
Gallbladder and other biliary tract	16	182	0.9	0.4	2.05	(1.22–3.47)
Pancreas	83	847	4.5	2.1	2.16	(1.71–2.72)
Other digestive organs	29	382	1.6	0.7	2.14	(1.45–3.15)
<b>Respiratory and intrathoracic organs</b>						
Larynx	4	21	0.2	0.1	3.79	(1.23–11.64)
Trachea, bronchus and lung	676	2,588	37.6	7.6	4.93	(4.52–5.39)
Other respiratory and intrathoracic organs	8	50	0.5	0.2	2.14	(0.98–4.70)
<b>Bone and articular cartilage</b>	4	40	0.2	0.3	0.69	(0.24–1.97)
<b>Skin</b>						
Melanoma of skin	10	530	0.5	2.1	0.25	(0.13–0.47)
Other malignant neoplasms of skin	4	155	0.2	0.2	1.07	(0.39–2.90)
<b>Mesothelial and soft tissue</b>	26	183	1.5	0.8	1.81	(1.18–2.79)
<b>Breast: female</b>	383	3,435	21.6	12.8	1.68	(1.51–1.88)
<b>Female genital organs</b>						
Cervix uteri	116	317	6.6	1.4	4.85	(3.87–6.06)
Uterus	49	410	2.7	1.2	2.28	(1.68–3.09)
Ovary	69	964	3.9	3.3	1.17	(0.91–1.50)
Other female genital organs	11	131	0.6	0.3	1.80	(0.95–3.39)
<b>Urinary tract</b>						
Kidney	24	321	1.3	0.9	1.46	(0.95–2.24)
Bladder	18	331	0.9	0.6	1.56	(0.96–2.53)
Other urinary tract	3	21	0.2	0.0	3.83	(1.09–13.42)
<b>Eye and other central nervous system</b>						
Brain	41	496	2.4	2.3	1.02	(0.73–1.41)
Other eye and central nervous system	2	34	0.1	0.1	0.81	(0.19–3.55)
<b>Thyroid and other endocrine glands</b>						
Thyroid gland	9	61	0.5	0.2	3.26	(1.57–6.75)
Other endocrine glands	1	18	0.1	0.2	0.29	(0.04–2.19)
<b>Ill-defined, secondary and unspecified sites</b>	126	1,463	7.0	3.7	1.91	(1.58–2.30)
<b>Lymphoma</b>						
Hodgkin's disease	1	31	0.1	0.2	0.36	(0.05–2.67)
Non-Hodgkin's lymphoma	52	774	2.8	2.2	1.27	(0.96–1.70)
<b>Multiple myeloma, immunoproliferative and plasma cell</b>	25	387	1.3	0.9	1.48	(0.98–2.23)
<b>Leukaemias</b>						
<i>Lymphoid leukaemia</i>	17	193	1.0	0.8	1.16	(0.68–1.97)
<i>Myeloid leukaemia</i>	35	353	2.0	1.2	1.62	(1.13–2.32)
<i>Other leukaemias</i>	6	48	0.3	0.1	3.45	(1.42–8.38)
<b>Other lymphoid, haematopoietic, and related tissue</b>	1	3	0.1	0.0	15.38	(1.59–148.72)

**Table 6.6: Male cancer deaths: numbers, age-standardised rates, Māori:non-Māori rate ratios, 1996–2001**

Site	Number		Rate		Rate 95% CI ratio
	Māori	Non-Māori	Māori	Non-Māori	
<b>All sites</b>	2,133	21,862	135.9	73.7	1.84 (1.76–1.93)
<b>Lip, oral cavity and pharynx</b>	50	401	3.1	1.6	2.00 (1.49–2.70)
<b>Digestive organs</b>					
Oesophagus	63	675	4.0	2.2	1.79 (1.38–2.33)
Stomach	167	935	10.6	3.1	3.44 (2.91–4.08)
Colorectal	163	3,325	10.5	11.2	0.94 (0.80–1.10)
<i>Colon</i>	85	2,047	5.5	6.7	0.81 (0.65–1.01)
<i>Rectum, rectosigmoid junction and anus</i>	78	1,278	5.0	4.5	1.12 (0.89–1.42)
Liver and intrahepatic bile ducts	124	373	7.7	1.5	4.99 (4.04–6.18)
Gallbladder and other biliary tract	19	124	1.2	0.4	3.12 (1.91–5.12)
Pancreas	85	804	5.4	2.7	1.98 (1.58–2.49)
Other digestive organs	35	324	2.3	1.0	2.21 (1.55–3.15)
<b>Respiratory and intrathoracic organs</b>					
Larynx	10	141	0.6	0.5	1.41 (0.74–2.69)
Trachea, bronchus and lung	694	4,519	43.8	14.4	3.04 (2.80–3.30)
Other respiratory and intrathoracic organs	9	89	0.6	0.4	1.42 (0.70–2.87)
<b>Bone and articular cartilage</b>	12	64	0.7	0.5	1.53 (0.81–2.89)
<b>Skin</b>					
Melanoma of skin	5	822	0.3	3.5	0.09 (0.04–0.23)
Other malignant neoplasms of skin	6	268	0.4	0.7	0.55 (0.24–1.24)
<b>Mesothelial and soft tissue</b>	31	409	1.9	1.6	1.20 (0.83–1.74)
<b>Breast: male</b>	3	17	0.2	0.1	3.27 (0.94–11.37)
<b>Male genital organs</b>					
Prostate	178	3,111	12.1	7.5	1.61 (1.38–1.88)
Testis	14	27	0.9	0.2	4.25 (2.18–8.31)
Other male genital organs		16		0.0	
<b>Urinary tract</b>					
Kidney	49	480	3.0	1.7	1.74 (1.29–2.34)
Bladder	18	649	1.2	1.7	0.69 (0.43–1.11)
Other urinary tract		40		0.1	
<b>Eye and other central nervous system</b>					
Brain	54	678	3.3	3.8	0.88 (0.66–1.16)
Other eye and central nervous system	2	58	0.1	0.3	0.51 (0.12–2.12)
<b>Thyroid and other endocrine glands</b>					
Thyroid gland	3	36	0.2	0.1	1.33 (0.40–4.40)
Other endocrine glands	8	31	0.5	0.3	1.64 (0.73–3.69)
<b>Ill-defined, secondary and unspecified sites</b>	134	1,276	8.6	4.1	2.08 (1.74–2.50)
<b>Lymphoma</b>					
Hodgkin's disease	10	41	0.6	0.2	3.08 (1.49–6.35)
Non-Hodgkin's lymphoma	59	882	3.7	3.3	1.12 (0.86–1.46)
<b>Multiple myeloma, immunoproliferative and plasma cell</b>	49	447	3.2	1.3	2.40 (1.78–3.24)
<b>Leukaemias</b>					
<i>Lymphoid leukaemia</i>	39	290	2.4	1.5	1.65 (1.16–2.34)
<i>Myeloid leukaemia</i>	33	453	2.1	1.8	1.17 (0.81–1.68)
<i>Other leukaemias</i>	7	55	0.4	0.2	2.23 (0.97–5.11)
<b>Other lymphoid, haematopoietic, and related tissue</b>		2		0.0	

Table 6.7 combines numbers, age-standardised rates and rate ratios for cancer registrations and deaths into one table, ranked by Māori cancer incidence rates. This allows for easier comparison of registrations and deaths, as well as providing an indication of the relative incidence at different sites.

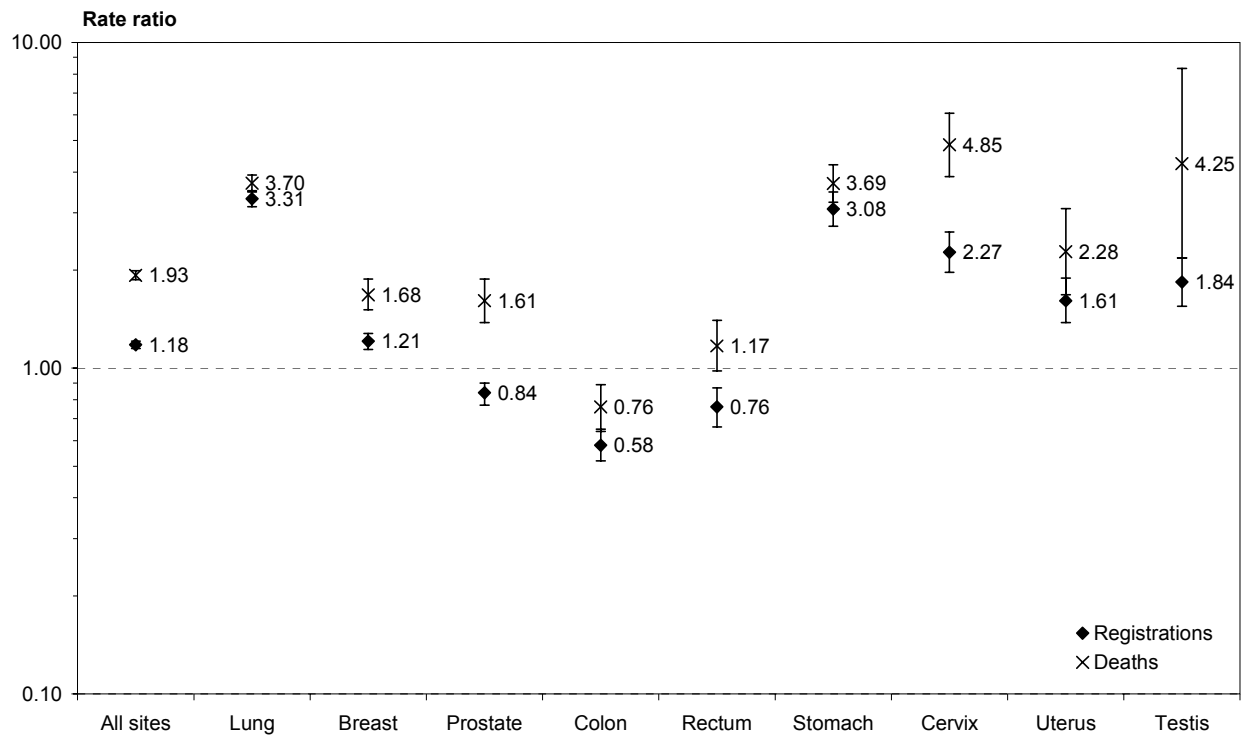
**Table 6.7: Cancer registrations and deaths: numbers, age-sex-standardised rates and Māori:non-Māori rate ratios, 1996–2001 (ranked by Māori incidence)**

	Registrations					Deaths				
	Number		Rate		Ratio	Number		Rate		Ratio
	Māori	Non-Māori	Māori	Non-Māori		Māori	Non-Māori	Māori	Non-Māori	
<b>All sites</b>	7,410	94,284	220.9	187.8	1.18	4,285	41,184	127.9	66.3	1.93
Female breast*	1,147	11,762	65.1	53.9	1.21	383	3,435	21.6	12.8	1.68
Lung	1,437	7,975	42.8	12.9	3.31	1,370	7,107	40.7	11.0	3.70
Prostate*	632	15,324	41.2	49.3	0.84	178	3,111	12.1	7.5	1.61
Colorectal	514	14,410	15.5	24.1	0.64	292	6,502	8.8	9.8	0.90
<i>Colon</i>	297	9,607	8.9	15.4	0.58	158	4,310	4.8	6.3	0.76
<i>Rectum and anus</i>	217	4,803	6.6	8.7	0.76	134	2,192	4.2	3.5	1.17
Cervix uteri*	250	985	14.2	6.3	2.27	116	317	6.6	1.4	4.85
Testis*	174	618	10.9	5.9	1.84	14	27	0.9	0.2	4.25
Ill-defined and unspecified	348	3,440	10.4	5.5	1.90	260	2,739	7.8	3.9	2.00
Uterus*	175	1,570	9.9	6.1	1.61	49	410	2.7	1.2	2.28
Stomach	329	2,019	9.8	3.2	3.08	277	1,537	8.3	2.3	3.69
Ovary*	163	1,571	9.3	7.3	1.28	69	964	3.9	3.3	1.17
Leukaemias	276	3,133	8.4	7.7	1.09	137	1,392	4.1	2.8	1.46
Non-Hodgkin's lymphoma	232	3,256	6.9	6.8	1.02	111	1,656	3.3	2.8	1.18
Liver	183	698	5.6	1.4	3.86	153	588	4.7	1.1	4.33
Pancreas	176	1,735	5.2	2.7	1.96	168	1,651	5.0	2.4	2.06
Kidney	138	1,835	4.1	3.9	1.05	73	801	2.2	1.3	1.64
Multiple myeloma	129	1,364	3.9	2.1	1.89	74	834	2.2	1.1	2.03
Thyroid gland	126	787	3.7	2.6	1.39	12	97	0.3	0.1	2.34
Oral cancers	120	1,575	3.6	3.4	1.06	62	595	1.9	1.0	1.81
Brain	119	1,402	3.5	4.5	0.79	95	1,174	2.8	3.1	0.93
Melanoma of skin	100	9,372	2.9	23.9	0.12	15	1,352	0.4	2.8	0.15
Mesothelial and soft tissue	97	1,066	2.9	2.5	1.15	57	592	1.7	1.2	1.41
Oesophagus	91	1,126	2.8	1.7	1.64	86	1,039	2.6	1.5	1.78
Bladder	85	3,284	2.6	5.2	0.51	36	980	1.1	1.2	0.91
Gallbladder	44	405	1.3	0.6	2.22	35	306	1.1	0.4	2.57
Hodgkin's disease	36	393	1.1	1.7	0.61	11	72	0.3	0.2	1.87
Bone and joints	29	203	0.9	0.9	1.01	16	104	0.5	0.4	1.18

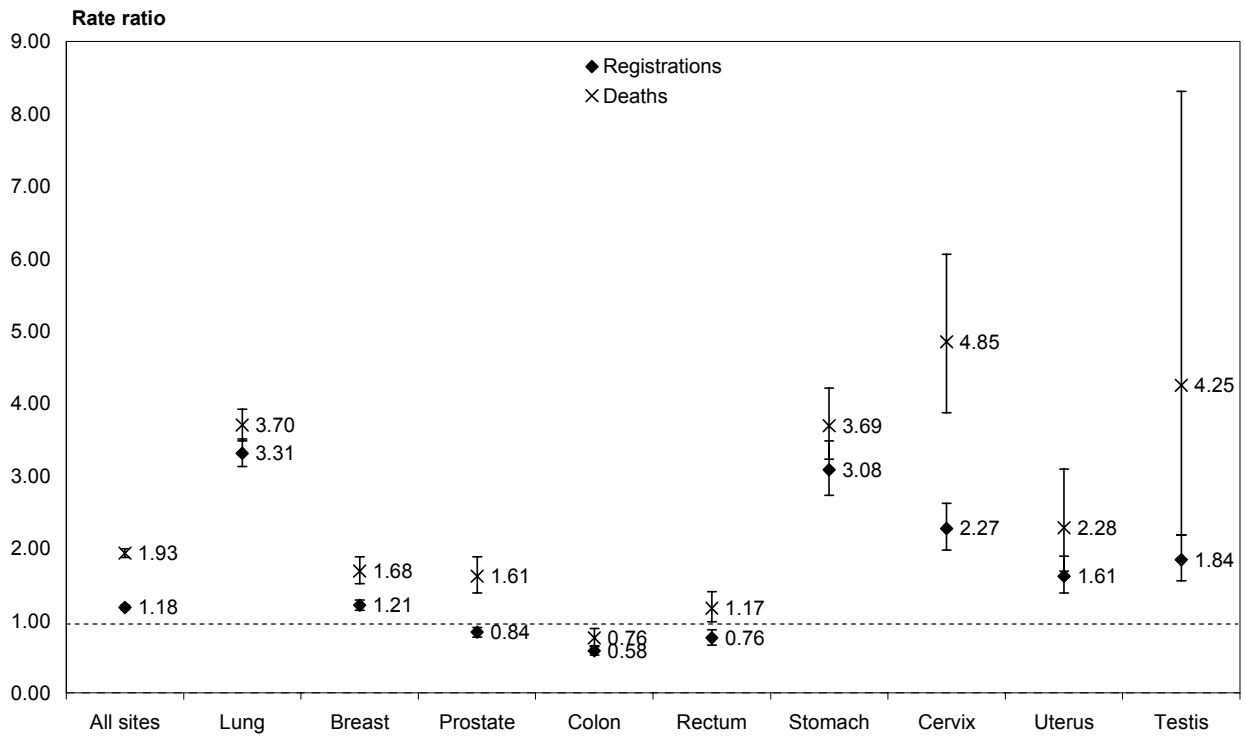
\* Sex-specific rates.

Figure 6.1: Māori:non-Māori age-standardised cancer incidence and mortality ratios for selected sites, 1996–2001

(a) Log scale



(b) Non-log scale



## 7 STAGE AT DIAGNOSIS

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‘Stage at diagnosis’ refers to the extent of spread of disease and is classified as:

- localised
- regional (spread to adjacent tissue or organ and/or involves regional lymph nodes)
- distant (spread to distant organs, tissues or to distant lymph nodes)
- unknown.

The classification is not applicable to leukaemias or lymphomas, and these are therefore excluded from the stage tables. Table 7.1 presents numbers and distribution of new cancer registrations, unadjusted for age or sex. Tables 7.2 and 7.3 are adjusted for age and sex, because of the association between age and stage at diagnosis.

### KEY POINTS

- Cancers more likely to be diagnosed at a localised stage for both Māori and non-Māori included melanoma and cancers of the uterus, testis, brain and thyroid (Table 7.1).
- Colorectal cancer was most likely to be diagnosed at the regional stage for both Māori and non-Māori (Table 7.1).
- There were several cancers for which stage at diagnosis was unknown for the majority of registrations (oesophagus, liver, larynx, lung, mesothelial and soft tissue, prostate and bladder) (Table 7.1).
- Cancers of the colon, melanoma of the skin, ovary and testis had less than 10% unknown for both Māori and non-Māori (Table 7.1).
- Māori were significantly less likely to have stage recorded than non-Māori for oesophageal, stomach, colorectal, lung, breast, cervical, uterine, testicular and brain cancer, taking age and sex into account (Table 7.2).
- Non-Māori were significantly less likely than Māori to have stage recorded for bladder cancer (Table 7.2).
- Among those for whom stage information was recorded, Māori had lower odds of being diagnosed at a localised stage for cancers of the lip, oral cavity and pharynx, rectum, lung, melanoma, female breast, cervix, prostate, testis and kidney, after adjusting for sex and age at diagnosis (Table 7.3).
- Māori had higher odds than non-Māori of being diagnosed at a localised stage for stomach cancer (Table 7.3).
- Māori were significantly more likely than non-Māori to be diagnosed at a distant stage for cancers of the colon, rectum, lung, melanoma, breast, cervix and prostate, among those staged, taking age and sex into account (Table 7.3).



**Table 7.1: Distribution of stage at diagnosis, cancer registrations (unadjusted), 1996–2001**

		Total number	Localised		Regional		Distant		Unknown	
			Number	%	Number	%	Number	%	Number	%
Lip, oral cavity and pharynx	Māori	120	19	15.8	50	41.7	7	5.8	44	36.7
	Non-Māori	1,575	413	26.2	470	29.8	80	5.1	612	38.9
Oesophagus	Māori	91	1	1.1	10	11.0	18	19.8	62	68.1
	Non-Māori	1,126	56	5.0	145	12.9	199	17.7	726	64.5
Stomach	Māori	329	45	13.7	83	25.2	90	27.4	111	33.7
	Non-Māori	2,019	204	10.1	594	29.4	493	24.4	728	36.1
Colorectal	Māori	514	86	16.7	218	42.4	130	25.3	80	15.6
	Non-Māori	14,410	3,684	25.6	6,698	46.5	2,583	17.9	1,445	10.0
<i>Colon</i>	Māori	297	52	17.5	134	45.1	85	28.6	26	8.8
	Non-Māori	9,607	2,227	23.2	4,771	49.7	1,861	19.4	748	7.8
<i>Rectum</i>	Māori	217	34	15.7	84	38.7	45	20.7	54	24.9
	Non-Māori	4,803	1,457	30.3	1,927	40.1	722	15.0	697	14.5
Liver and intrahepatic bile ducts	Māori	183	17	9.3	4	2.2	30	16.4	132	72.1
	Non-Māori	698	51	7.3	23	3.3	148	21.2	476	68.2
Gallbladder and other biliary tract	Māori	44	6	13.6	9	20.5	12	27.3	17	38.6
	Non-Māori	405	47	11.6	89	22.0	99	24.4	170	42.0
Pancreas	Māori	176	6	3.4	14	8.0	78	44.3	78	44.3
	Non-Māori	1,735	54	3.1	169	9.7	698	40.2	814	46.9
Larynx	Māori	42	6	14.3	13	31.0	1	2.4	22	52.4
	Non-Māori	432	56	13.0	87	20.1	17	3.9	272	63.0
Trachea, bronchus and lung	Māori	1,437	53	3.7	132	9.2	484	33.7	768	53.4
	Non-Māori	7,975	486	6.1	899	11.3	2,469	31.0	4,121	51.7
Bone and joints	Māori	29	5	17.2	3	10.3	9	31.0	12	41.4
	Non-Māori	203	38	18.7	30	14.8	30	14.8	105	51.7
Melanoma of skin	Māori	100	82	82.0	7	7.0	7	7.0	4	4.0
	Non-Māori	9,372	8,321	88.8	508	5.4	237	2.5	306	3.3
Mesothelial and soft tissue	Māori	97	16	16.5	7	7.2	18	18.6	56	57.7
	Non-Māori	1,066	169	15.9	68	6.4	149	14.0	680	63.8
Breast: female	Māori	1,147	441	38.4	454	39.6	66	5.8	186	16.2
	Non-Māori	11,762	5,356	45.5	3,813	32.4	480	4.1	2,113	18.0
Cervix uteri	Māori	250	106	42.4	31	12.4	24	9.6	89	35.6
	Non-Māori	985	488	49.5	121	12.3	55	5.6	321	32.6
Uterus	Māori	175	110	62.9	18	10.3	16	9.1	31	17.7
	Non-Māori	1,570	949	60.4	266	16.9	161	10.3	194	12.4
Ovary	Māori	163	73	44.8	8	4.9	71	43.6	11	6.7
	Non-Māori	1,571	455	29.0	113	7.2	873	55.6	130	8.3
Prostate	Māori	632	42	6.6	16	2.5	86	13.6	488	77.2
	Non-Māori	15,324	1,411	9.2	650	4.2	914	6.0	12,349	80.6
Testis	Māori	174	108	62.1	33	19.0	16	9.2	17	9.8
	Non-Māori	618	464	75.1	75	12.1	46	7.4	33	5.3
Kidney	Māori	138	57	41.3	30	21.7	34	24.6	17	12.3
	Non-Māori	1,835	830	45.2	282	15.4	429	23.4	294	16.0
Bladder	Māori	85	4	4.7	8	9.4	7	8.2	66	77.6
	Non-Māori	3,284	118	3.6	174	5.3	111	3.4	2,881	87.7
Brain	Māori	119	101	84.9	2	1.7	2	1.7	14	11.8
	Non-Māori	1,402	1,247	88.9	4	0.3	11	0.8	140	10.0
Thyroid	Māori	126	78	61.9	31	24.6	7	5.6	10	7.9
	Non-Māori	787	437	55.5	204	25.9	53	6.7	93	11.8

**Table 7.2: Māori:non-Māori odds ratios for unknown stage at diagnosis, cancer registrations, adjusted for age and sex, 1996–2001**

Site	Age-sex adjusted	
	OR (95% CI)	p value*
Lip, oral cavity and pharynx	1.04 (0.70–1.54)	0.85
Oesophagus	1.79 (1.10–2.91)	<b>0.02</b>
Stomach	1.63 (1.24–2.14)	<b>&lt; 0.001</b>
Colorectal	2.19 (1.70–2.81)	<b>&lt; 0.001</b>
<i>Colon</i>	1.71 (1.12–2.60)	<b>0.01</b>
<i>Rectum, rectosigmoid junction and anus</i>	2.36 (1.70–3.26)	<b>&lt; 0.001</b>
Liver and intrahepatic bile ducts	1.29 (0.88–1.87)	0.19
Gallbladder and other biliary tract	1.68 (0.81–3.46)	0.16
Pancreas	1.31 (0.94–1.82)	0.11
Larynx	0.67 (0.35–1.28)	0.23
Trachea, bronchus and lung	1.41 (1.25–1.58)	<b>&lt; 0.001</b>
Bone and articular cartilage	0.77 (0.34–1.75)	0.54
Melanoma of skin	1.30 (0.47–3.55)	0.61
Mesothelial and soft tissue	0.91 (0.59–1.42)	0.69
Breast: female	1.29 (1.09–1.53)	<b>0.004</b>
Cervix uteri	1.86 (1.34–2.57)	<b>&lt; 0.001</b>
Uterus	2.13 (1.37–3.29)	<b>&lt; 0.001</b>
Ovary	1.01 (0.52–1.94)	0.98
Prostate	0.90 (0.74–1.09)	0.30
Testis	1.98 (1.06–3.72)	0.03**
Kidney	1.40 (0.81–2.44)	0.23
Bladder	0.52 (0.30–0.87)	<b>0.014</b>
Brain	1.90 (1.03–3.51)	<b>0.041</b>
Thyroid gland	0.73 (0.37–1.46)	0.38

\* Bolding of p value denotes statistical significance at  $p < 0.05$ .

\*\* There were fewer than 10 events per term in the model for this estimate.

**Table 7.3: Māori:non-Māori odds ratios for localised or distant stage at diagnosis, cancer registrations, adjusted for age and sex (staged cancers only), 1996–2001**

Site	Localised		Distant	
	OR (95% CI)	p value*	OR (95% CI)	p value*
Lip, oral cavity and pharynx	0.44 (0.25–0.75)	<b>0.003</b>	1.15 (0.51–2.62)	0.74
Oesophagus	0.22 (0.03–1.66)	0.14**	1.76 (0.80–3.85)	0.16
Stomach	1.55 (1.05–2.27)	<b>0.026</b>	1.15 (0.85–1.57)	0.36
Colorectal	0.63 (0.50–0.81)	<b>&lt; 0.001</b>	1.66 (1.34–2.05)	<b>&lt; 0.0001</b>
<i>Colon</i>	0.74 (0.54–1.00)	0.053	1.59 (1.22–2.07)	<b>&lt; 0.001</b>
<i>Rectum and anus</i>	0.49 (0.33–0.72)	<b>&lt; 0.001</b>	1.80 (1.26–2.57)	<b>0.001</b>
Liver and intrahepatic bile ducts	1.57 (0.79–3.09)	0.20	0.83 (0.43–1.57)	0.56
Pancreas	0.75 (0.30–1.84)	0.53	1.69 (0.99–2.89)	0.055
Trachea, bronchus and lung	0.54 (0.40–0.73)	<b>&lt; 0.0001</b>	1.63 (1.35–1.96)	<b>&lt; 0.0001</b>
Melanoma of skin	0.44 (0.24–0.78)	<b>0.005</b>	3.40 (1.55–7.46)	<b>0.002</b>
Mesothelial and soft tissue	0.64 (0.32–1.31)	0.22	1.31 (0.65–2.63)	0.45
Breast: female	0.71 (0.62–0.81)	<b>&lt; 0.0001</b>	1.89 (1.44–2.49)	<b>&lt; 0.0001</b>
Cervix uteri	0.58 (0.40–0.86)	<b>0.006</b>	2.65 (1.52–4.62)	<b>&lt; 0.001</b>
Uterus	1.37 (0.91–2.06)	0.13	0.99 (0.57–1.73)	0.97
Ovary	1.29 (0.90–1.85)	0.16	0.87 (0.61–1.24)	0.43
Prostate	0.38 (0.26–0.56)	<b>&lt; 0.0001</b>	5.89 (3.98–8.72)	<b>&lt; 0.0001</b>
Testis	0.57 (0.38–0.86)	<b>0.007</b>	1.36 (0.74–2.51)	0.33
Kidney	0.66 (0.45–0.97)	<b>0.033</b>	1.20 (0.78–1.82)	0.41
Bladder	0.56 (0.18–1.74)	0.31	1.95 (0.72–5.28)	0.19
Brain	0.54 (0.17–1.77)	0.31		
Thyroid gland	1.14 (0.75–1.74)	0.54	0.96 (0.41–2.20)	0.91

\* Bolding of p value denotes statistical significance at  $p < 0.05$ .

\*\* There were fewer than 10 events per term in the model for this estimate.

## 8 HAZARD RATIOS

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The following tables summarise the cancer-specific hazard ratios, adjusted for age, for age and sex, and for age, sex and stage. The hazard ratios indicate the relative risk of dying from cancer after being diagnosed, for Māori compared with non-Māori. A hazard ratio greater than 1 indicates a higher risk for Māori of dying from the cancer after diagnosis.

### KEY POINTS

- Māori had a significantly higher age-adjusted risk than non-Māori of death (cancer-specific) after diagnosis for most types of cancer (Table 8.1).
- The biggest differences in risk, where risk of death was at least twice as high for Māori, were for cancers of the lip, oral cavity and pharynx, rectum, cervix, prostate, testis, and bladder (Table 8.1).
- The likelihood of dying from their cancer, once detected, was 50–80% higher for Māori than for non-Māori diagnosed with cancers of the oesophagus, stomach, colon, mesothelial and soft tissue, female breast, uterus, kidney and multiple myeloma (Table 8.1).
- Relative risk of death after diagnosis was also significantly higher for Māori for cancers of the lung and liver (around 30% higher), non-Hodgkin's lymphoma and leukaemias (around 40%) (Table 8.1).
- Relative risk of cancer-specific death after diagnosis was similar for Māori and non-Māori for pancreatic, ovarian, brain and thyroid cancers, and melanoma of the skin (Table 8.1).
- After adjusting for age, sex and stage at diagnosis, Māori remained at significantly higher risk of cancer-specific death compared with non-Māori for many cancers (oral cancers, oesophageal, stomach, colorectal, liver, lung, mesothelial and soft tissue, female breast, cervix, uterine, prostate, testicular, kidney and bladder) (Table 8.2).
- Among those cancers where the hazard ratios were significantly higher for Māori, the biggest reductions after adjusting for stage were for colorectal and prostate cancers (around 50%), bladder, kidney, oral, female breast (around 30%), and cervical cancers (20%) (Table 8.2).
- Adjusting for stage at diagnosis increased the hazard ratios for stomach, liver and uterine cancers (Table 8.2).
- Findings were similar when analysis was restricted to registrations that included stage at diagnosis information, although reductions or increases were generally larger than those when unknown stage was included as a category (Table 8.3).

**Table 8.1: Cancer-specific Māori:non-Māori hazard ratios, adjusted for age at diagnosis, 1996–2001**

Site	Both sexes Adjusted for age and sex			Female Adjusted for age		Male Adjusted for age	
	HR (95% CI)	p value*	HR (95% CI)	p value*	HR (95% CI)	p value*	
Lip, oral cavity and pharynx	2.07 (1.50–2.84)	<b>&lt; 0.0001</b>	1.41 (0.68–2.95)	0.36	2.41 (1.69–3.43)	<b>&lt; 0.0001</b>	
Oesophagus	1.74 (1.37–2.22)	<b>&lt; 0.0001</b>	1.42 (0.87–2.30)	0.16	1.86 (1.41–2.47)	<b>&lt; 0.0001</b>	
Stomach	1.57 (1.35–1.83)	<b>&lt; 0.0001</b>	1.45 (1.14–1.83)	<b>0.002</b>	1.70 (1.40–2.07)	<b>&lt; 0.0001</b>	
Colorectal	1.67 (1.45–1.93)	<b>&lt; 0.0001</b>	1.70 (1.37–2.11)	<b>&lt; 0.0001</b>	1.64 (1.36–1.97)	<b>&lt; 0.0001</b>	
<i>Colon</i>	1.5 (1.24–1.82)	<b>&lt; 0.0001</b>	1.41 (1.05–1.90)	<b>0.023</b>	1.56 (1.21–2.00)	<b>0.0005</b>	
<i>Rectum and anus</i>	2.04 (1.65–2.53)	<b>&lt; 0.0001</b>	2.40 (1.73–3.33)	<b>&lt; 0.0001</b>	1.89 (1.43–2.51)	<b>&lt; 0.0001</b>	
Liver and intrahepatic bile ducts	1.39 (1.13–1.70)	<b>0.002</b>	1.25 (0.78–2.02)	0.35	1.37 (1.09–1.72)	<b>0.007</b>	
Gallbladder	1.27 (0.86–1.86)	0.23	1.34 (0.75–2.39)	0.32	1.20 (0.71–2.03)	0.49	
Pancreas	1.15 (0.97–1.36)	0.12	1.16 (0.91–1.48)	0.23	1.13 (0.89–1.45)	0.31	
Larynx	1.32 (0.68–2.58)	0.41	3.02 (0.75–12.20)	0.12	1.11 (0.50–2.44)	0.80	
Trachea, bronchus and lung	1.34 (1.26–1.43)	<b>&lt; 0.0001</b>	1.38 (1.26–1.52)	<b>&lt; 0.0001</b>	1.31 (1.19–1.43)	<b>&lt; 0.0001</b>	
Bone and articular cartilage	1.35 (0.66–2.80)	0.41	0.89 (0.20–3.92)	0.88	1.74 (0.74–4.09)	0.20	
Melanoma of skin	1.19 (0.53–2.67)	0.67	1.51 (0.56–4.07)	0.41	0.78 (0.20–3.15)	0.73	
Mesothelial and soft tissue	1.66 (1.19–2.32)	<b>0.003</b>	1.72 (1.04–2.85)	<b>0.034</b>	1.50 (0.96–2.35)	0.076	
Breast: female	1.69 (1.44–1.99)	<b>&lt; 0.0001</b>	1.69 (1.44–1.99)	<b>&lt; 0.0001</b>			
Cervix	2.68 (2.00–3.58)	<b>&lt; 0.0001</b>	2.68 (2.00–3.58)	<b>&lt; 0.0001</b>			
Uterus	1.65 (1.15–2.37)	<b>0.007</b>	1.65 (1.15–2.37)	<b>0.007</b>			
Ovary	1.02 (0.76–1.36)	0.92	1.02 (0.76–1.36)	0.92			
Prostate	2.33 (1.94–2.79)	<b>&lt; 0.0001</b>			2.33 (1.94–2.79)	<b>&lt; 0.0001</b>	
Testis**	3.07 (1.36–6.95)	0.007			3.07 (1.36–6.95)	0.007	
Kidney	1.52 (1.13–2.05)	<b>0.006</b>	1.60 (0.93–2.73)	0.087	1.44 (1.00–2.07)	0.050	
Bladder	2.37 (1.59–3.52)	<b>&lt; 0.0001</b>	3.58 (2.01–6.38)	<b>&lt; 0.0001</b>	1.82 (1.04–3.18)	<b>0.035</b>	
Brain	1.16 (0.90–1.49)	0.25	0.92 (0.62–1.35)	0.66	1.45 (1.04–2.02)	<b>0.026</b>	
Thyroid gland	1.18 (0.56–2.47)	0.67	1.51 (0.59–3.87)	0.39	0.94 (0.28–3.15)	0.92	
Hodgkin's disease**	2.69 (1.03–7.05)	0.044	0.95 (0.12–7.39)	0.96	6.57 (1.88–22.88)	0.003	
Non-Hodgkin's lymphoma	1.42 (1.13–1.78)	<b>0.002</b>	1.66 (1.21–2.28)	<b>0.002</b>	1.19 (0.86–1.65)	0.29	
Multiple myeloma	1.60 (1.21–2.12)	<b>0.001</b>	1.17 (0.73–1.90)	0.51	1.84 (1.30–2.61)	<b>0.0006</b>	
Leukaemias	1.43 (1.16–1.77)	<b>0.0009</b>	1.44 (1.02–2.02)	<b>0.037</b>	1.39 (1.06–1.83)	<b>0.018</b>	
<i>Lymphoid leukaemia</i>	1.45 (0.95–2.20)	0.081	1.15 (0.50–2.65)	0.74	1.70 (1.05–2.75)	<b>0.031</b>	
<i>Myeloid leukaemia</i>	1.13 (0.85–1.50)	0.39	1.27 (0.86–1.89)	0.94	1.05 (0.70–1.56)	0.83	

\* Bolding of p value denotes statistical significance at  $p < 0.05$ .

\*\* Should be interpreted with caution due to small number of deaths.

**Table 8.2: Māori:non-Māori hazard ratios adjusted for age at diagnosis and sex, and for stage (including unstaged), 1996–2001**

Site	Adjusted for age and sex			Adjusted for age, sex and stage			% reduction**
	HR	95% CI	p value*	HR	95% CI	p value*	
Lip, oral cavity and pharynx	2.07	(1.50–2.84)	< 0.0001	1.78	(1.30–2.45)	0.0004	27%
Oesophagus	1.74	(1.37–2.22)	< 0.0001	1.67	(1.31–2.13)	< 0.0001	9%
Stomach	1.57	(1.35–1.83)	< 0.0001	1.73	(1.49–2.01)	< 0.0001	-28%
Colorectal	1.67	(1.45–1.93)	< 0.0001	1.34	(1.16–1.54)	< 0.0001	50%
<i>Colon</i>	1.50	(1.24–1.82)	< 0.0001	1.24	(1.03–1.51)	0.025	52%
<i>Rectum and anus</i>	2.04	(1.65–2.53)	< 0.0001	1.58	(1.28–1.96)	< 0.0001	44%
Liver and intrahepatic bile ducts	1.39	(1.13–1.70)	0.002	1.43	(1.16–1.76)	0.0007	-12%
Gallbladder	1.27	(0.86–1.86)	0.23	1.15	(0.78–1.69)	0.48	44%
Pancreas	1.15	(0.97–1.36)	0.12	1.14	(0.96–1.36)	0.12	3%
Larynx	1.32	(0.68–2.58)	0.41	1.32	(0.67–2.58)	0.42	2%
Trachea, bronchus and lung	1.34	(1.26–1.43)	< 0.0001	1.28	(1.20–1.37)	< 0.0001	17%
Bone and articular cartilage	1.35	(0.66–2.80)	0.41	1.05	(0.50–2.21)	0.89	85%
Melanoma	1.19	(0.53–2.67)	0.67	0.86	(0.38–1.93)	0.72	171%
Mesothelial and soft tissue	1.66	(1.19–2.32)	0.003	1.68	(1.20–2.36)	0.003	-3%
Breast: female	1.69	(1.44–1.99)	< 0.0001	1.48	(1.26–1.73)	< 0.0001	31%
Cervix	2.68	(2.00–3.58)	< 0.0001	2.34	(1.74–3.15)	< 0.0001	20%
Uterus	1.65	(1.15–2.37)	0.007	1.85	(1.28–2.67)	0.001	-31%
Ovary	1.02	(0.76–1.36)	0.92	1.18	(0.88–1.59)	0.26	-1073%
Prostate	2.33	(1.94–2.79)	< 0.0001	1.70	(1.41–2.01)	< 0.0001	47%
Testis***	3.07	(1.36–6.95)	0.007				
Kidney	1.52	(1.13–2.05)	0.006	1.36	(1.01–1.84)	0.046	31%
Bladder	2.37	(1.59–3.52)	< 0.0001	1.95	(1.31–2.90)	0.001	30%
Brain	1.16	(0.90–1.49)	0.25	1.14	(0.89–1.46)***	0.31	13%
Thyroid gland	1.18	(0.56–2.47)	0.67	1.07	(0.51–2.26)***	0.86	60%

\* Bolding of p value denotes statistical significance at  $p < 0.05$ .

\*\* Reduction was calculated as follows:  $(\text{age-adjusted HR} - \text{age and stage-adjusted HR}) / (\text{age-adjusted HR} - 1)$ . Negative values indicate that adjusting for stage increased the hazard ratio.

\*\*\* Should be interpreted with caution due to small number of deaths.

**Table 8.3: Māori:non-Māori hazard ratios adjusted for age at diagnosis and sex, and for stage (staged cancers only), 1996–2001**

Site	Adjusted for age and sex			Adjusted for age, sex and stage			% reduction**
	HR	95% CI	p value*	HR	95% CI	p value*	
Lip, oral cavity and pharynx	2.37	(1.62–3.46)	< 0.0001	1.95	(1.33–2.85)	0.0006	31%
Oesophagus	2.88	(1.94–4.28)	< 0.0001	2.22	(1.49–3.30)	< 0.0001	35%
Stomach	1.49	(1.24–1.80)	< 0.0001	1.8	(1.49–2.18)	< 0.0001	-63%
Colorectal	1.61	(1.37–1.88)	< 0.0001	1.27	(1.08–1.48)	0.003	56%
<i>Colon</i>	1.48	(1.21–1.82)	0.0002	1.21	(0.99–1.49)	0.066	56%
<i>Rectum and anus</i>	1.98	(1.54–2.55)	< 0.0001	1.48	(1.15–1.90)	0.002	51%
Liver and intrahepatic bile ducts	1.52	(1.03–2.26)	0.037	1.73	(1.15–2.60)	0.009	-40%
Gallbladder	1.26	(0.76–2.08)	0.38	1.13	(0.68–1.87)	0.63	49%
Pancreas	1.32	(1.04–1.66)	0.020	1.27	(1.01–1.61)	0.04	13%
Larynx***	1.18	(0.49–2.85)	0.71	1.09	(0.43–2.75)	0.85	50%
Trachea, bronchus and lung	1.48	(1.34–1.62)	< 0.0001	1.28	(1.17–1.41)	< 0.0001	41%
Bone and articular cartilage***	1.45	(0.58–3.65)	0.43	1.16	(0.44–3.02)	0.77	65%
Melanoma	1.07	(0.44–2.58)	0.88	0.76	(0.32–1.85)	0.55	447%
Mesothelial and soft tissue	1.71	(1.04–2.83)	0.036	1.69	(1.00–2.87)	0.051	3%
Breast: female	1.61	(1.34–1.92)	< 0.0001	1.37	(1.15–1.64)	0.0006	39%
Cervix	2.90	(1.85–4.54)	< 0.0001	3.1	(1.93–4.99)	< 0.0001	-11%
Uterus	1.52	(1.00–2.31)	0.051	1.96	(1.28–2.99)	0.002	-85%
Ovary	1.05	(0.78–1.42)	0.73	1.28	(0.95–1.72)	0.11	-408%
Prostate	2.25	(1.74–2.92)	< 0.0001	1.33	(1.02–1.73)	0.034	74%
Kidney	1.37	(0.99–1.92)	0.061	1.23	(0.88–1.73)	0.22	37%
Bladder	1.97	(1.07–3.65)	0.031	1.64	(0.88–3.04)	0.12	34%
Brain	1.11	(0.84–1.46)	0.45	1.1	(0.83–1.45)***	0.51	13%
Thyroid gland***	1.33	(0.63–2.82)	0.46	1.18	(0.55–2.53)	0.67	44%

\* Bolding of p value denotes statistical significance at  $p < 0.05$ .

\*\* Reduction was calculated as follows: (age-adjusted HR – age and stage-adjusted HR)/(age-adjusted HR–1). Negative values indicate that adjusting for stage increased the hazard ratio.

\*\*\* Should be interpreted with caution due to small number of deaths.

## 9 CANCER REGISTRATIONS AND DEATHS, BY AGE GROUP

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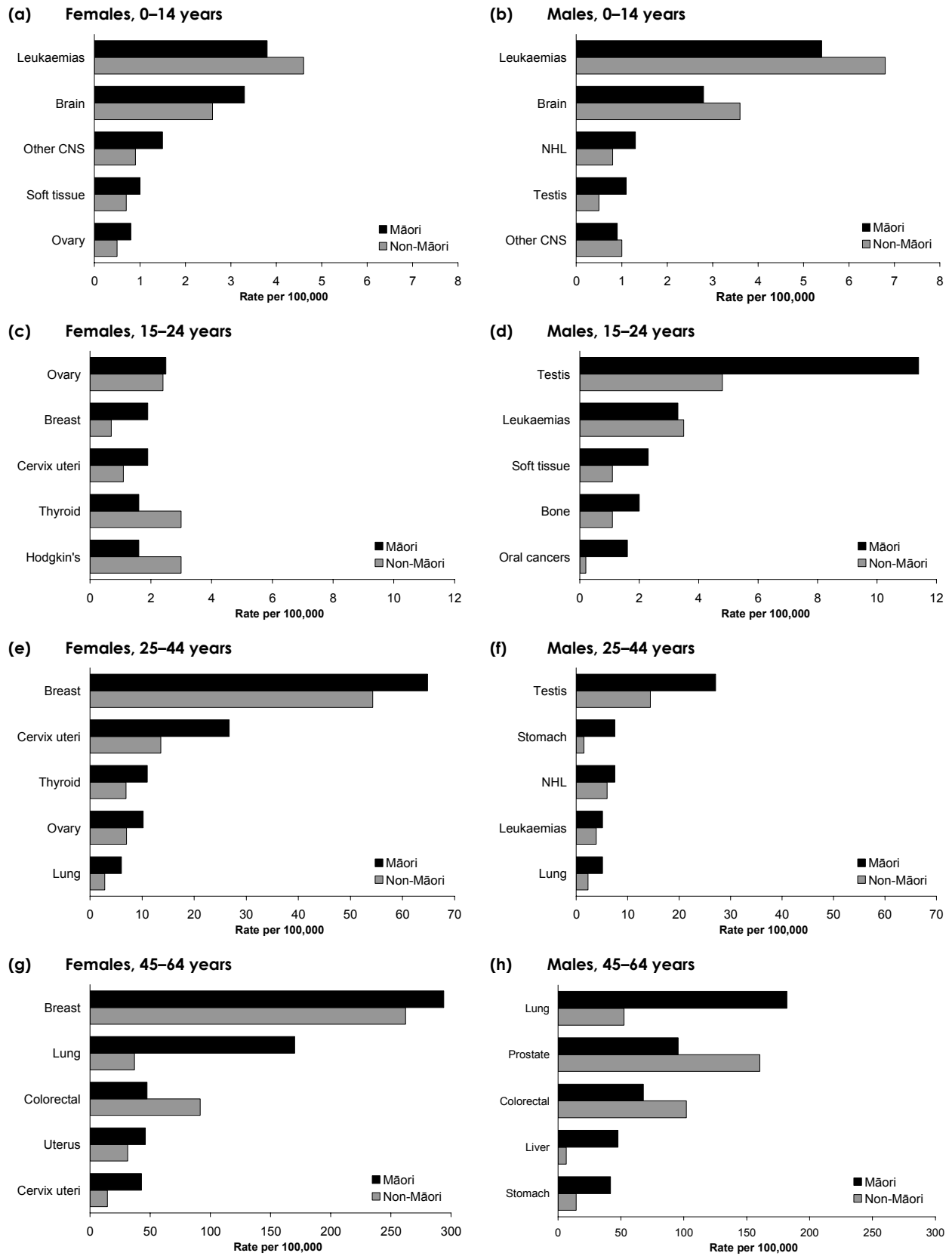
Leading cancer sites differ by age group. Figures 9.1 and 9.2 below present the five most commonly occurring cancers for Māori by age group and sex, ranked by Māori incidence or mortality rate. The non-Māori rates are included for comparison, but the graphs do not necessarily reflect the five most common cancers for non-Māori (e.g. the most commonly occurring cancer for non-Māori in the 15–24 years age group is melanoma). This information is included in the tables of cancer registrations and deaths by age group (Tables 9.1–9.20), which present numbers, crude rates and rate ratios by age groups and sex for Māori and non-Māori. Each table is ordered by the number of Māori registrations.

### KEY POINTS

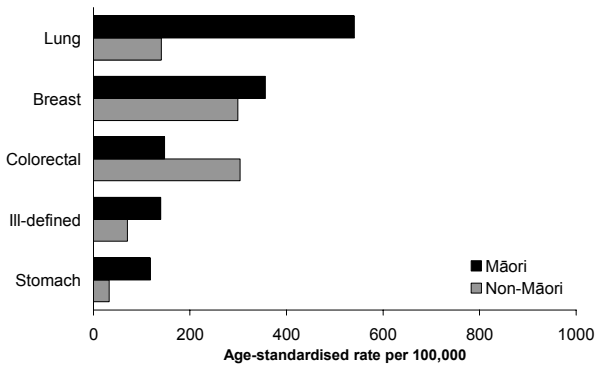
- In both Māori females and males aged less than 15 years, the most commonly occurring cancers were leukaemias and brain cancers (Figures 9.1a and 9.1b, Tables 9.1 and 9.2).
- In Māori females aged 15–24, cancers of the ovary, breast and cervix were the most frequently occurring cancers. Testicular cancer was the most commonly occurring cancer among Māori males in this age group, followed by leukaemias (Figures 9.1c and 9.1d, Tables 9.3 and 9.4).
- Breast and cervical cancers were the most commonly occurring cancers for Māori females aged 25–44 years, while testicular cancer was the most common cancer for Māori males (Figures 9.1e and 9.1f, Tables 9.5 and 9.6).
- Among Māori females aged 45–64, breast and lung cancer were the most common cancers. For Māori males in this age group, the most common cancers were lung and prostate (Figures 9.1g and 9.1h, Tables 9.7 and 9.8).
- Lung cancer was the leading cancer site for Māori females aged over 65 years, followed by breast cancer. Prostate cancer was the leading site for Māori males in this age group, followed by lung cancer (Figures 9.1i and 9.1j, Tables 9.9 and 9.10).
- Leukaemias and brain cancer were the most common causes of cancer deaths in Māori under the age of 15 years (Figures 9.2a and 9.2b, Tables 9.11 and 9.12).
- Among Māori aged 15–24 years, the most common causes of cancer death were soft tissue cancers, brain cancers, and leukaemias (although the rates differ for males and females) (Figures 9.2c and 9.2d, Tables 9.13 and 9.14).
- Breast cancer was the most common cause of cancer death for Māori females aged 25–44 followed by cervical cancer, while stomach and lung cancer were the most common for Māori males (Figures 9.2e and 9.2f, Tables 9.15 and 9.16).
- Lung cancer was the leading cause of cancer death among Māori females and males for both the 45–64 and the 65 and over age groups (Figures 9.2g, 9.2h, 9.2i and 9.2j, Tables 9.17–9.20).



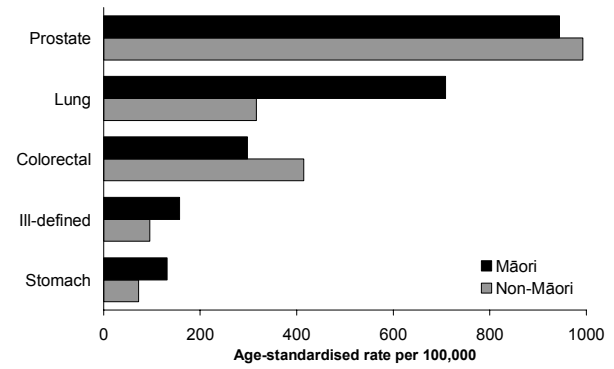
Figure 9.1: Age-specific leading cancer incidence rates per 100,000, by sex, 1996–2001



(i) Females, 65 years and over\*



(j) Males, 65 years and over\*



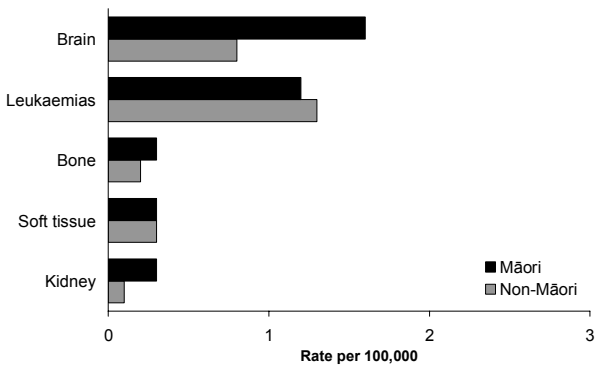
\* Rates for the 65+ age group are age-standardised to the Māori population.

CNS = central nervous system.

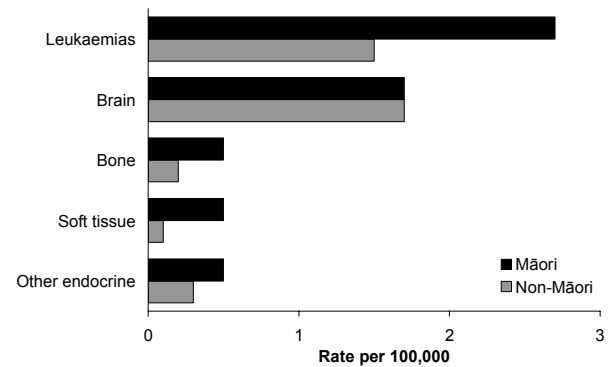
NHL = non-Hodgkin's lymphoma.

Figure 9.2: Age-specific leading cancer mortality rates per 100,000, by sex, 1996–2001

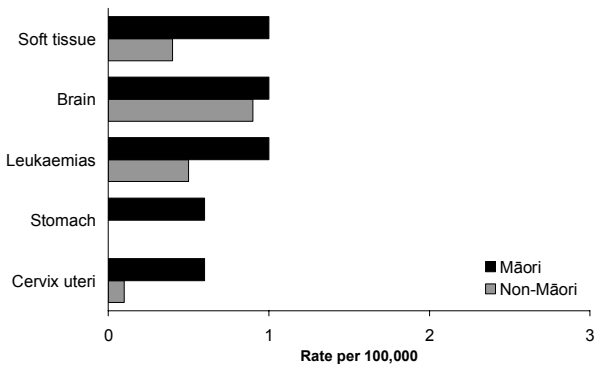
(a) Females, 0–14 years



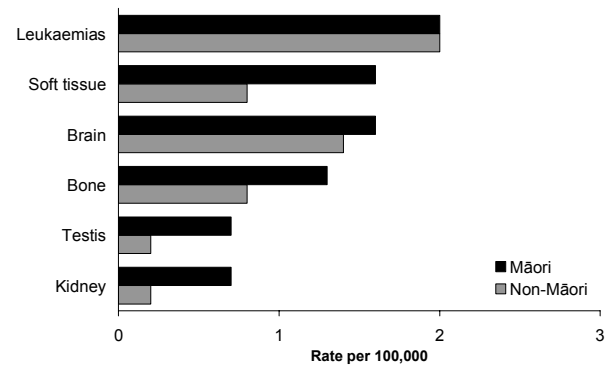
(b) Males, 0–14 years



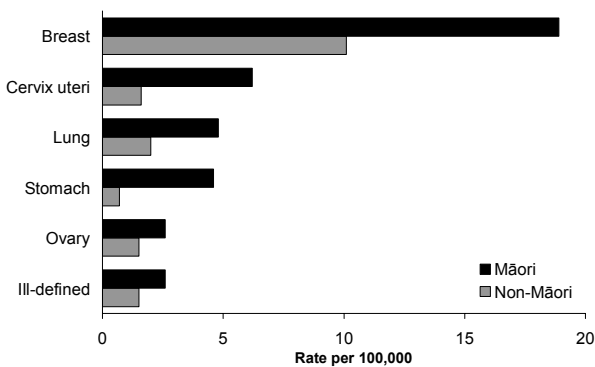
(c) Females, 15–24 years



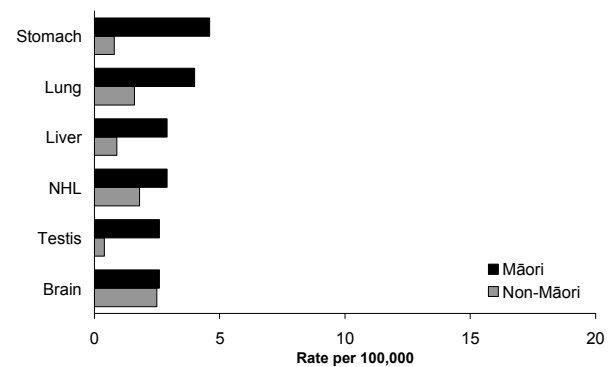
(d) Males, 15–24 years



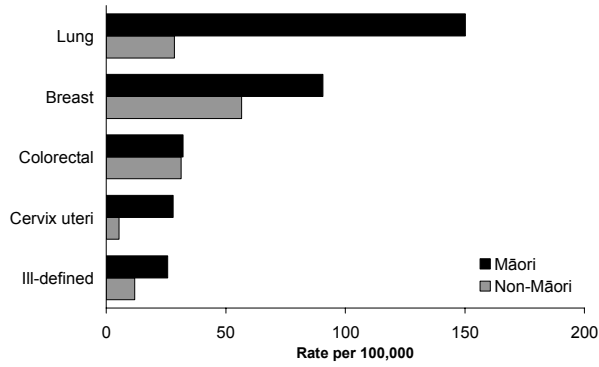
(e) Females, 25–44 years



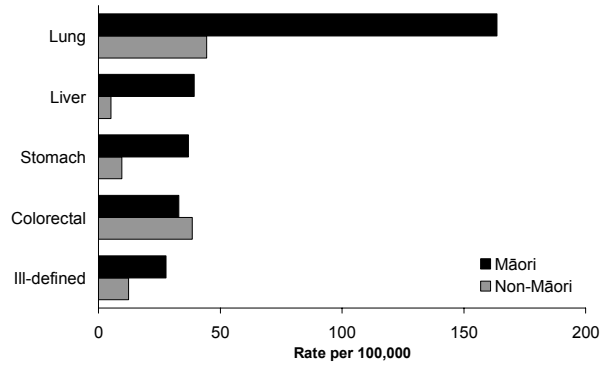
(f) Males, 25–44 years



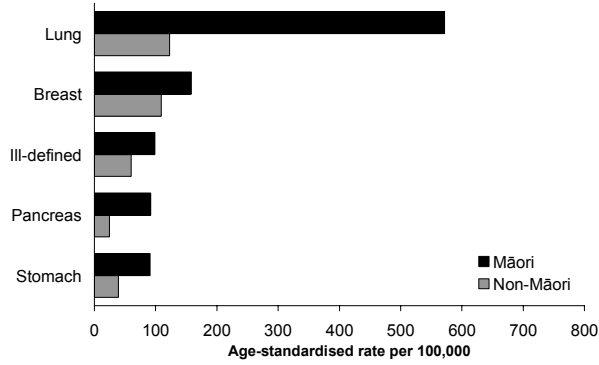
**(g) Females, 45–64 years**



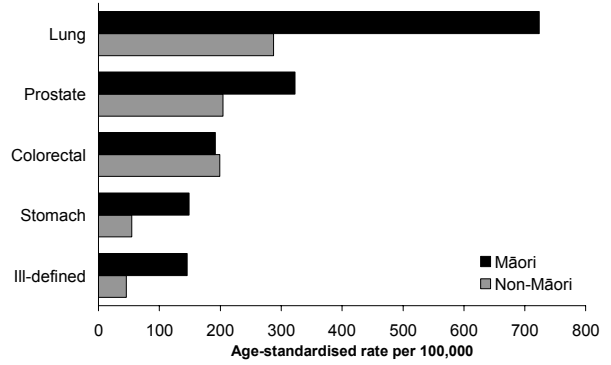
**(h) Males, 45–64 years**



**(i) Females, 65 years and over\***



**(j) Males, 65 years and over\***



\* Rates for the 65+ age group are age-standardised to the Māori population.

NHL = non-Hodgkin's lymphoma.

**Table 9.1: Females aged 0–14 years: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	90	14.8 (12.0–18.2)	278	14.3 (12.7–16.1)	1.03 (0.82–1.31)
Leukaemias	23	3.8 (2.5–5.7)	89	4.6 (3.7–5.6)	0.83 (0.52–1.31)
<i>Lymphoid leukaemia</i>	13	2.1 (1.2–3.7)	70	3.6 (2.9–4.6)	0.59 (0.33–1.07)
<i>Myeloid leukaemia</i>	10	1.6 (0.9–3.1)	15	0.8 (0.5–1.3)	2.13 (0.96–4.74)
<i>Other leukaemias</i>			4	0.2 (0.1–0.5)	
Brain	20	3.3 (2.1–5.1)	51	2.6 (2.0–3.5)	1.25 (0.75–2.10)
Other eye and central nervous system	9	1.5 (0.8–2.8)	18	0.9 (0.6–1.5)	11.60 (0.72–3.55)
Soft tissue	6	1.0 (0.4–2.2)	14	0.7 (0.4–1.2)	1.37 (0.53–3.56)
Ovary	5	0.8 (0.3–2.0)	9	0.5 (0.2–0.9)	1.77 (0.59–5.29)
Endocrine glands (not thyroid)	5	0.8 (0.3–2.0)	15	0.8 (0.5–1.3)	1.06 (0.39–2.93)
Non-Hodgkin's lymphoma	4	0.7 (0.2–1.8)	14	0.7 (0.4–1.2)	0.91 (0.30–2.77)
Bone and articular cartilage	4	0.7 (0.2–1.8)	14	0.7 (0.4–1.2)	0.91 (0.30–2.77)
Respiratory and intrathoracic organs (not lung)	3	0.5 (0.2–1.5)	3	0.2 (0.0–0.5)	3.19 (0.64–15.82)
Kidney	3	0.5 (0.2–1.5)	22	1.1 (0.7–1.7)	0.44 (0.13–1.45)
Trachea, bronchus and lung	2	0.3 (0.1–1.3)			
Female genital organs	1	0.2 (0.0–1.2)	1	0.1 (0.0–0.4)	3.19 (0.20–51.05)
Liver and intrahepatic bile ducts	1	0.2 (0.0–1.2)	3	0.2 (0.0–0.5)	1.06 (0.11–10.23)
Hodgkin's disease	1	0.2 (0.0–1.2)	6	0.3 (0.1–0.7)	0.53 (0.06–4.42)
Lip, oral cavity and pharynx	1	0.2 (0.0–1.2)	3	0.2 (0.0–0.5)	1.06 (0.11–10.23)
Colon	1	0.2 (0.0–1.2)			
Other lymphoid, haematopoietic and related tissue	1	0.2 (0.0–1.2)			
Melanoma of skin			7	0.4 (0.2–0.8)	
Other malignant skin cancers			2	0.1 (0.0–0.4)	
Ill-defined, secondary and unspecified sites			4	0.2 (0.1–0.5)	
Thyroid gland			1	0.1 (0.0–0.4)	
Pancreas			1	0.1 (0.0–0.4)	
Bladder			1	0.1 (0.0–0.4)	

**Table 9.2: Males aged 0–14 years: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)	
	Number	Rate (95% CI)	Number	Rate (95% CI)		
All sites	102	16.1 (13.2–19.5)	375	18.2 (16.5–20.2)	0.88	(0.71–1.31)
Leukaemias	34	5.4 (3.8–7.5)	140	6.8 (5.8–8.0)	0.79	(0.54–1.14)
<i>Lymphoid leukaemia</i>	26	4.1 (2.8–6.0)	120	5.8 (4.9–7.0)	0.70	(0.46–1.07)
<i>Myeloid leukaemia</i>	5	0.8 (0.3–1.9)	19	0.9 (0.6–1.4)	0.85	(0.32–2.28)
<i>Other leukaemias</i>	3	0.5 (0.2–1.5)	1	0.0 (0.0–0.3)	9.72	(1.01–93.41)
Brain	18	2.8 (1.8–4.5)	74	3.6 (2.9–4.5)	0.79	(0.47–1.32)
Non-Hodgkin's lymphoma	8	1.3 (0.6–2.5)	16	0.8 (0.5–1.3)	1.62	(0.69–3.78)
Testis	7	1.1 (0.5–2.3)	10	0.5 (0.3–0.9)	2.27	(0.86–5.96)
Other eye and central nervous system	6	0.9 (0.4–2.1)	20	1.0 (0.6–1.5)	0.97	(0.39–2.42)
Kidney	5	0.8 (0.3–1.9)	22	1.1 (0.7–1.6)	0.74	(0.28–1.94)
Endocrine glands (not thyroid)	5	0.8 (0.3–1.9)	19	0.9 (0.6–1.4)	0.85	(0.32–2.28)
Bone and articular cartilage	4	0.6 (0.2–1.7)	15	0.7 (0.4–1.2)	0.86	(0.29–2.60)
Soft tissue	4	0.6 (0.2–1.7)	13	0.6 (0.4–1.1)	1.00	(0.32–3.06)
Respiratory and intrathoracic (not lung)	2	0.3 (0.1–1.3)	4	0.2 (0.1–0.5)	1.62	(0.30–8.84)
Ill-defined, secondary and unspecified sites	2	0.3 (0.1–1.3)	3	0.1 (0.0–0.5)	2.16	(0.36–12.92)
Hodgkin's disease	2	0.3 (0.1–1.3)	14	0.7 (0.4–1.1)	0.46	(0.11–2.04)
Other lymphoid, haematopoietic and related tissue	1	0.2 (0.0–1.1)	1	0.0 (0.0–0.3)	3.24	(0.20–51.78)
Colon	1	0.2 (0.0–1.1)				
Pancreas	1	0.2 (0.0–1.1)				
Stomach	1	0.2 (0.0–1.1)				
Liver and intrahepatic bile ducts			10	0.5 (0.3–0.9)		
Lip, oral cavity and pharynx			7	0.3 (0.2–0.7)		
Other digestive organs			1	0.0 (0.0–0.3)		

**Table 9.3: Females aged 15–24 years: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	58	18.5 (12.0–18.2)	398	31.0 (28.2–34.3)	0.59 (0.45–1.31)
Ovary	8	2.5 (1.3–5.1)	31	2.4 (1.7–3.4)	1.05 (0.48–2.29)
Breast	6	1.9 (0.9–4.3)	9	0.7 (0.4–1.4)	2.72 (0.97–7.64)
Cervix uteri	6	1.9 (0.9–4.3)	14	1.1 (0.6–1.8)	1.75 (0.67–4.55)
Thyroid gland	5	1.6 (0.7–3.8)	38	3.0 (2.2–4.1)	0.54 (0.21–1.36)
Hodgkin's disease	5	1.6 (0.7–3.8)	38	3.0 (2.2–4.1)	0.54 (0.21–1.36)
Soft tissue	4	1.3 (0.5–3.4)	14	1.1 (0.6–1.8)	1.17 (0.38–3.54)
Non-Hodgkin's lymphoma	4	1.3 (0.5–3.4)	15	1.2 (0.7–1.9)	1.09 (0.36–3.28)
Colorectal	3	1.0 (0.3–3.0)	5	0.4 (0.2–0.9)	2.45 (0.59–10.24)
<i>Colon</i>	3	1.0 (0.3–3.0)	4	0.3 (0.1–0.8)	3.06 (0.68–13.67)
<i>Rectum, rectosigmoid junction and anus</i>			1	0.1 (0.0–0.6)	
Leukaemias	3	1.0 (0.3–3.0)	29	2.3 (1.6–3.3)	0.42 (0.13–1.39)
<i>Lymphoid leukaemia</i>	1	0.3 (0.0–2.3)	6	0.5 (0.2–1.0)	0.68 (0.08–5.65)
<i>Myeloid leukaemia</i>	2	0.6 (0.2–2.5)	21	1.6 (1.1–2.5)	0.39 (0.09–1.66)
<i>Other leukaemias</i>			2	0.2 (0.0–0.6)	
Stomach	2	0.6 (0.2–2.5)			
Melanoma of skin	2	0.6 (0.2–2.5)	135	10.5 (8.9–12.5)	0.06 (0.01–0.24)
Other malignant skin cancers	2	0.6 (0.2–2.5)	1	0.1 (0.0–0.6)	8.16 (0.74–90.00)
Brain	2	0.6 (0.2–2.5)	20	1.6 (1.0–2.4)	0.41 (0.10–1.75)
Lip, oral cavity and pharynx	1	0.3 (0.0–2.3)	8	0.6 (0.3–1.2)	0.51 (0.06–4.08)
Kidney	1	0.3 (0.0–2.3)	3	0.2 (0.1–0.7)	1.36 (0.14–13.08)
Female genital organs	1	0.3 (0.0–2.3)	3	0.2 (0.1–0.7)	1.36 (0.14–13.08)
Respiratory and intrathoracic (not lung)	1	0.3 (0.0–2.3)	2	0.2 (0.0–0.6)	2.04 (0.18–22.50)
Bone and articular cartilage	1	0.3 (0.0–2.3)	16	1.2 (0.8–2.0)	0.26 (0.03–1.92)
Other digestive organs	1	0.3 (0.0–2.3)			
Trachea, bronchus and lung			4	0.3 (0.1–0.8)	
Ill-defined, secondary and unspecified sites			4	0.3 (0.1–0.8)	
Endocrine glands (not thyroid)			3	0.2 (0.1–0.7)	
Other eye and central nervous system			2	0.2 (0.0–0.6)	
Bladder			2	0.2 (0.0–0.6)	
Liver and intrahepatic bile ducts			2	0.2 (0.0–0.6)	
Pancreas			1	0.1 (0.0–0.6)	

**Table 9.4: Males aged 15–24 years: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	87	28.4 (23.0–35.0)	359	27.2 (24.5–30.1)	1.04 (0.83–1.32)
Testis	35	11.4 (8.2–15.9)	63	4.8 (3.7–6.1)	2.39 (1.58–3.62)
Leukaemias	10	3.3 (1.8–6.1)	46	3.5 (2.6–4.6)	0.94 (0.47–1.86)
<i>Lymphoid leukaemia</i>	3	1.0 (0.3–3.0)	31	2.3 (1.6–3.3)	0.42 (0.13–1.36)
<i>Myeloid leukaemia</i>	7	2.3 (1.1–4.8)	13	1.0 (0.6–1.7)	2.32 (0.93–5.81)
<i>Other leukaemias</i>			2	0.2 (0.0–0.6)	
Soft tissue	7	2.3 (1.1–4.8)	14	1.1 (0.6–1.8)	2.15 (0.87–5.34)
Bone and articular cartilage	6	2.0 (0.9–4.4)	14	1.1 (0.6–1.8)	1.85 (0.71–4.80)
Lip, oral cavity and pharynx	5	1.6 (0.7–3.9)	3	0.2 (0.1–0.7)	7.18 (1.72–30.05)
Brain	5	1.6 (0.7–3.9)	26	2.0 (1.3–2.9)	0.83 (0.32–2.16)
Hodgkin's disease	5	1.6 (0.7–3.9)	34	2.6 (1.8–3.6)	0.63 (0.25–1.62)
Endocrine glands (not thyroid)	3	1.0 (0.3–3.0)	6	0.5 (0.2–1.0)	2.15 (0.54–8.61)
Melanoma of skin	2	0.7 (0.2–2.6)	79	6.0 (4.8–7.5)	0.11 (0.03–0.44)
Kidney	2	0.7 (0.2–2.6)	2	0.2 (0.0–0.6)	4.31 (0.61–30.58)
Ill-defined, secondary and unspecified sites	2	0.7 (0.2–2.6)	4	0.3 (0.1–0.8)	2.15 (0.39–11.76)
Non-Hodgkin's lymphoma	2	0.7 (0.2–2.6)	23	1.7 (1.2–2.6)	0.37 (0.09–1.59)
Stomach	1	0.3 (0.0–2.3)	2	0.2 (0.0–0.6)	2.15 (0.20–23.76)
Liver and intrahepatic bile ducts	1	0.3 (0.0–2.3)	4	0.3 (0.1–0.8)	1.08 (0.12–9.64)
Thyroid gland			14	1.1 (0.6–1.8)	
Colorectal			9	0.7 (0.4–1.3)	
<i>Colon</i>			3	0.2 (0.1–0.7)	
<i>Rectum, rectosigmoid junction and anus</i>			6	0.5 (0.2–0.5)	
Other malignant neoplasms of skin			3	0.2 (0.1–0.7)	
Other eye and central nervous system			3	0.2 (0.1–0.7)	
Other male genital organs			2	0.2 (0.0–0.6)	
Bladder			2	0.2 (0.0–0.6)	
Prostate			1	0.1 (0.0–0.5)	
Other lymphoid, haematopoietic and related tissue			1	0.1 (0.0–0.5)	
Multiple myeloma			1	0.1 (0.0–0.5)	

**Table 9.5: Females aged 25–44 years: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	849	169.2 (158.2–181.0)	4,767	155.3 (151.0–159.8)	1.09 (1.01–1.17)
Breast	325	64.8 (58.1–72.2)	1,667	54.3 (51.8–57.0)	1.19 (1.06–1.34)
Cervix uteri	134	26.7 (22.6–31.6)	418	13.6 (12.4–15.0)	1.96 (1.61–2.38)
Thyroid gland	55	11.0 (8.4–14.3)	213	6.9 (6.1–7.9)	1.58 (1.17–2.13)
Ovary	51	10.2 (7.7–13.4)	216	7.0 (6.2–8.0)	1.44 (1.06–1.96)
Trachea, bronchus and lung	30	6.0 (4.2–8.6)	85	2.8 (2.2–3.4)	2.16 (1.42–3.27)
Colorectal	29	5.8 (4.0–8.3)	221	7.2 (6.3–8.2)	0.80 (0.55–1.18)
<i>Colon</i>	18	3.6 (2.3–5.7)	143	4.7 (4.0–5.5)	0.77 (0.47–1.26)
<i>Rectum, rectosigmoid junction and anus</i>	11	2.2 (1.2–4.0)	78	2.5 (2.0–3.2)	0.86 (0.46–1.62)
Uterus	29	5.8 (4.0–8.3)	91	3.0 (2.4–3.6)	1.95 (1.28–2.96)
Stomach	28	5.6 (3.9–8.1)	27	0.9 (0.6–1.3)	6.34 (3.74–10.77)
Melanoma of skin	21	4.2 (2.7–6.4)	1,094	35.6 (33.6–37.8)	0.12 (0.08–0.18)
Leukaemias	20	4.0 (2.6–6.2)	85	2.8 (2.2–3.4)	1.44 (0.88–2.34)
<i>Lymphoid leukaemia</i>	2	0.4 (0.1–1.6)	22	0.7 (0.5–1.1)	0.56 (0.13–2.37)
<i>Myeloid leukaemia</i>	18	3.6 (2.3–5.7)	58	1.9 (1.5–2.4)	1.90 (1.12–3.22)
<i>Other leukaemias</i>			5	0.2 (0.1–0.4)	
Non-Hodgkin's lymphoma	20	4.0 (2.6–6.2)	129	4.2 (3.5–5.0)	0.95 (0.59–1.52)
Ill-defined, secondary and unspecified sites	18	3.6 (2.3–5.7)	72	2.3 (1.9–3.0)	1.53 (0.91–2.56)
Mesothelial and soft tissue	15	3.0 (1.8–5.0)	55	1.8 (1.4–2.3)	1.67 (0.94–2.95)
Brain	12	2.4 (1.4–4.2)	75	2.4 (1.9–3.1)	0.98 (0.53–1.80)
Lip, oral cavity and pharynx	10	2.0 (1.1–3.7)	51	1.7 (1.3–2.2)	1.20 (0.61–2.36)
Hodgkin's disease	9	1.8 (0.9–3.4)	71	2.3 (1.8–2.9)	0.78 (0.39–1.55)
Other female genital organs	6	1.2 (0.5–2.7)	46	1.5 (1.1–2.0)	0.80 (0.34–1.87)
Kidney	6	1.2 (0.5–2.7)	57	1.9 (1.4–2.4)	0.64 (0.28–1.49)
Pancreas	6	1.2 (0.5–2.7)	11	0.4 (0.2–0.6)	3.34 (1.23–9.02)
Multiple myeloma	5	1.0 (0.4–2.4)	10	0.3 (0.2–0.6)	3.06 (1.05–8.95)
Liver and intrahepatic bile ducts	4	0.8 (0.3–2.1)	13	0.4 (0.2–0.7)	1.88 (0.61–5.77)
Bladder	4	0.8 (0.3–2.1)	28	0.9 (0.6–1.3)	0.87 (0.31–2.49)
Other digestive organs	3	0.6 (0.2–1.9)	11	0.4 (0.2–0.6)	1.67 (0.47–5.98)
Larynx	2	0.4 (0.1–1.6)	2	0.1 (0.0–0.3)	6.12 (0.86–43.44)
Other respiratory and intrathoracic organs	2	0.4 (0.1–1.6)	10	0.3 (0.2–0.6)	1.22 (0.27–5.58)
Bone and articular cartilage	2	0.4 (0.1–1.6)	16	0.5 (0.3–0.9)	0.76 (0.18–3.33)
Other malignant neoplasms of skin	2	0.4 (0.1–1.6)	11	0.4 (0.2–0.6)	1.11 (0.25–5.02)
Oesophagus	2	0.4 (0.1–1.6)	6	0.2 (0.1–0.4)	2.04 (0.41–10.10)
Gallbladder and other biliary tract	1	0.2 (0.0–1.4)	5	0.2 (0.1–0.4)	1.22 (0.14–10.47)
Other eye and central nervous system	1	0.2 (0.0–1.4)	27	0.9 (0.6–1.3)	0.23 (0.03–1.67)
Other endocrine glands			3	0.1 (0.0–0.3)	
Other urinary tract			1	0.0 (0.0–0.2)	



**Table 9.6: Males aged 25–44 years: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)	
	Number	Rate (95% CI)	Number	Rate (95% CI)		
All sites	412	90.8 (82.5–100.0)	2,650	90.1 (86.7–93.6)	1.01	(0.91–1.12)
Testis	123	27.1 (22.7–32.4)	423	14.4 (13.1–15.8)	1.89	(1.54–2.31)
Stomach	34	7.5 (5.4–10.5)	45	1.5 (1.1–2.0)	4.90	(3.14–7.65)
Non-Hodgkin's lymphoma	34	7.5 (5.4–10.5)	177	6.0 (5.2–7.0)	1.25	(0.86–1.80)
Leukaemias	23	5.1 (3.4–7.6)	116	3.9 (3.3–4.7)	1.29	(0.82–2.01)
<i>Lymphoid leukaemia</i>	6	1.3 (0.6–2.9)	42	1.4 (1.1–1.9)	0.93	(0.39–2.18)
<i>Myeloid leukaemia</i>	16	3.5 (2.2–5.8)	68	2.3 (1.8–2.9)	1.53	(0.89–2.63)
<i>Other leukaemias</i>	1	0.2 (0.0–1.6)	6	0.2 (0.1–0.5)	1.08	(0.13–8.98)
Trachea, bronchus and lung	23	5.1 (3.4–7.6)	68	2.3 (1.8–2.9)	2.19	(1.37–3.52)
Kidney	17	3.7 (2.3–6.0)	64	2.2 (1.7–2.8)	1.72	(1.01–2.94)
Liver and intrahepatic bile ducts	17	3.7 (2.3–6.0)	36	1.2 (0.9–1.7)	3.06	(1.72–5.45)
Lip, oral cavity and pharynx	16	3.5 (2.2–5.8)	116	3.9 (3.3–4.7)	0.89	(0.53–1.51)
Colorectal	16	3.5 (2.2–5.8)	204	6.9 (6.0–8.0)	0.51	(0.31–0.85)
<i>Colon</i>	13	2.9 (1.7–4.9)	121	4.1 (3.4–4.9)	0.70	(0.39–1.23)
<i>Rectum, rectosigmoid junction and anus</i>	3	0.7 (0.2–2.1)	83	2.8 (2.3–3.5)	0.23	(0.07–0.74)
Ill-defined, secondary and unspecified sites	13	2.9 (1.7–4.9)	58	2.0 (1.5–2.5)	1.45	(0.80–2.65)
Mesothelial and soft tissue	13	2.9 (1.7–4.9)	53	1.8 (1.4–2.4)	1.59	(0.87–2.92)
Thyroid gland	10	2.2 (1.2–4.1)	50	1.7 (1.3–2.2)	1.30	(0.66–2.56)
Brain	9	2.0 (1.0–3.8)	155	5.3 (4.5–6.2)	0.38	(0.19–0.74)
Multiple myeloma	9	2.0 (1.0–3.8)	19	0.6 (0.4–1.0)	3.07	(1.39–6.79)
Pancreas	8	1.8 (0.9–3.5)	36	1.2 (0.9–1.7)	1.44	(0.67–3.10)
Hodgkin's disease	7	1.5 (0.7–3.2)	70	2.4 (1.9–3.0)	0.65	(0.30–1.41)
Melanoma of skin	7	1.5 (0.7–3.2)	765	26.0 (24.2–27.9)	0.06	(0.03–0.12)
Bladder	7	1.5 (0.7–3.2)	69	2.3 (1.9–3.0)	0.66	(0.30–1.43)
Bone and articular cartilage	6	1.3 (0.6–2.9)	22	0.7 (0.5–1.1)	1.77	(0.72–4.36)
Oesophagus	3	0.7 (0.2–2.1)	14	0.5 (0.3–0.8)	1.39	(0.40–4.84)
Other endocrine glands	3	0.7 (0.2–2.1)	6	0.2 (0.1–0.5)	3.24	(0.81–12.97)
Other respiratory and intrathoracic organs	3	0.7 (0.2–2.1)	23	0.8 (0.5–1.2)	0.85	(0.25–2.82)
Breast	2	0.4 (0.1–1.8)	4	0.1 (0.1–0.4)	3.24	(0.59–17.71)
Prostate	2	0.4 (0.1–1.8)	26	0.9 (0.6–1.3)	0.50	(0.12–2.10)
Other eye and central nervous system	2	0.4 (0.1–1.8)	21	0.7 (0.5–1.1)	0.62	(0.14–2.63)
Gallbladder and other biliary tract	2	0.4 (0.1–1.8)	4	0.1 (0.1–0.4)	3.24	(0.59–17.71)
Other digestive organs	2	0.4 (0.1–1.8)	7	0.2 (0.1–0.5)	1.85	(0.39–8.92)
Larynx	1	0.2 (0.0–1.6)	6	0.2 (0.1–0.5)	1.08	(0.13–8.98)
Other malignant skin cancers	1	0.2 (0.0–1.6)	16	0.5 (0.3–0.9)	0.41	(0.05–3.06)
Other male genital organs	1	0.2 (0.0–1.6)	6	0.2 (0.1–0.5)	1.08	(0.13–8.98)
Other urinary tract			4	0.1 (0.1–0.4)		

**Table 9.7: Females aged 45–64 years: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	1,843	856.7 (818.4–896.7)	14,778	671.9 (661.1–682.8)	1.28 (1.21–1.34)
Breast	632	293.8 (271.7–317.6)	5,765	262.1 (255.4–269.0)	1.12 (1.03–1.22)
Trachea, bronchus and lung	366	170.1 (153.6–188.5)	809	36.8 (34.3–39.4)	4.63 (4.09–5.23)
Colorectal	102	47.4 (39.0–57.6)	2,013	91.5 (87.6–95.6)	0.52 (0.42–0.63)
Colon	64	29.7 (23.3–38.0)	1,343	61.1 (57.9–64.4)	0.49 (0.38–0.63)
Rectum, rectosigmoid junction and anus	38	17.7 (12.9–24.3)	670	30.5 (28.2–32.9)	0.58 (0.42–0.80)
Uterus	99	46.0 (37.8–56.0)	688	31.3 (29.0–33.7)	1.47 (1.19–1.82)
Cervix uteri	92	42.8 (34.9–52.5)	318	14.5 (13.0–16.1)	2.96 (2.35–3.73)
Ill-defined, secondary and unspecified sites	81	37.6 (30.3–46.8)	382	17.4 (15.7–19.2)	2.17 (1.71–2.76)
Ovary	78	36.3 (29.0–45.3)	610	27.7 (25.6–30.0)	1.31 (1.03–1.65)
Stomach	48	22.3 (16.8–29.6)	141	6.4 (5.4–7.6)	3.48 (2.51–4.83)
Non-Hodgkin's lymphoma	43	20.0 (14.8–26.9)	430	19.5 (17.8–21.5)	1.02 (0.75–1.40)
Leukaemias	36	16.7 (12.1–23.2)	276	12.5 (11.2–14.1)	1.33 (0.94–1.89)
Lymphoid leukaemia	18	8.4 (5.3–13.3)	144	6.5 (5.6–7.7)	1.28 (0.78–2.09)
Myeloid leukaemia	17	7.9 (4.9–12.7)	125	5.7 (4.8–6.8)	1.39 (0.84–2.31)
Other leukaemias	1	0.5 (0.1–3.3)	7	0.3 (0.2–0.7)	1.46 (0.18–11.87)
Pancreas	31	14.4 (10.1–20.5)	171	7.8 (6.7–9.0)	1.85 (1.26–2.72)
Thyroid gland	27	12.5 (8.6–18.3)	213	9.7 (8.5–11.1)	1.30 (0.87–1.93)
Melanoma of skin	26	12.1 (8.2–17.7)	1,749	79.5 (75.9–83.3)	0.15 (0.10–0.22)
Kidney	22	10.2 (6.7–15.5)	215	9.8 (8.6–11.2)	1.05 (0.67–1.62)
Liver and intrahepatic bile ducts	20	9.3 (6.0–14.4)	68	3.1 (2.4–3.9)	3.01 (1.83–4.95)
Lip, oral cavity and pharynx	19	8.8 (5.6–13.8)	157	7.1 (6.1–8.3)	1.24 (0.77–1.99)
Other female genital organs	19	8.8 (5.6–13.8)	113	5.1 (4.3–6.2)	1.72 (1.06–2.79)
Multiple myeloma	17	7.9 (4.9–12.7)	134	6.1 (5.1–7.2)	1.30 (0.78–2.15)
Brain	16	7.4 (4.6–12.1)	162	7.4 (6.3–8.6)	1.01 (0.60–1.69)
Mesothelial and soft tissue	16	7.4 (4.6–12.1)	121	5.5 (4.6–6.6)	1.35 (0.80–2.28)
Bladder	13	6.0 (3.5–10.4)	174	7.9 (6.8–9.2)	0.76 (0.43–1.34)
Gallbladder and other biliary tract	12	5.6 (3.2–9.8)	50	2.3 (1.7–3.0)	2.45 (1.31–4.61)
Oesophagus	10	4.6 (2.5–8.6)	59	2.7 (2.1–3.5)	1.73 (0.89–3.39)
Other digestive organs	10	4.6 (2.5–8.6)	49	2.2 (1.7–2.9)	2.09 (1.06–4.12)
Other respiratory and intrathoracic	8	3.7 (1.9–7.4)	39	1.8 (1.3–2.4)	2.10 (0.98–4.49)
Other malignant neoplasms of skin	4	1.9 (0.7–5.0)	32	1.5 (1.0–2.1)	1.28 (0.45–3.61)
Bone and articular cartilage	3	1.4 (0.4–4.3)	14	0.6 (0.4–1.1)	2.19 (0.63–7.62)
Larynx	2	0.9 (0.2–3.7)	20	0.9 (0.6–1.4)	1.02 (0.24–4.37)
Other urinary tract	2	0.9 (0.2–3.7)	19	0.9 (0.6–1.4)	1.08 (0.25–4.62)
Other eye and central nervous system	2	0.9 (0.2–3.7)	59	2.7 (2.1–3.5)	0.35 (0.08–1.42)
Other endocrine glands	2	0.9 (0.2–3.7)	11	0.5 (0.3–0.9)	1.86 (0.41–8.39)
Other lymphoid, haematopoietic and related tissue	1	0.5 (0.1–3.3)	3	0.1 (0.0–0.4)	3.41 (0.35–32.76)
Hodgkin's disease			35	1.6 (1.1–2.2)	

**Table 9.8: Males aged 45–64 years: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	1,430	694.0 (658.9–730.9)	13,816	633.1 (622.6–643.7)	1.10 (1.04–1.16)
Trachea, bronchus and lung	375	182.0 (164.5–201.4)	1,149	52.6 (49.7–55.8)	3.46 (3.08–3.88)
Prostate	197	95.6 (83.1–109.9)	3,501	160.4 (155.2–165.8)	0.60 (0.52–0.690)
Colorectal	140	67.9 (57.6–80.2)	2,227	102.0 (97.9–106.4)	0.67 (0.56–0.79)
<i>Colon</i>	72	34.9 (27.7–44.0)	1,253	57.4 (54.3–60.7)	0.61 (0.48–0.77)
<i>Rectum, rectosigmoid junction and anus</i>	68	33.0 (26.0–41.9)	974	44.6 (41.9–47.5)	0.74 (0.58–0.95)
Liver and intrahepatic bile ducts	98	47.6 (39.0–58.0)	142	6.5 (5.5–7.7)	7.31 (5.65–9.45)
Stomach	86	41.7 (33.8–51.6)	316	14.5 (13.0–16.2)	2.88 (2.27–3.66)
Ill-defined, secondary and unspecified sites	80	38.8 (31.2–48.3)	445	20.4 (18.6–22.4)	1.90 (1.50–2.42)
Leukaemias	52	25.2 (19.2–33.1)	444	20.3 (18.5–22.3)	1.24 (0.93–1.65)
<i>Lymphoid leukaemia</i>	31	15.0 (10.6–21.4)	285	13.1 (11.6–14.7)	1.15 (0.80–1.67)
<i>Myeloid leukaemia</i>	20	9.7 (6.3–15.0)	150	6.9 (5.9–8.1)	1.41 (0.89–2.25)
<i>Other leukaemias</i>	1	0.5 (0.1–3.4)	9	0.4 (0.2–0.8)	1.18 (0.15–9.29)
Kidney	46	22.3 (16.7–29.8)	397	18.2 (16.5–20.1)	1.23 (0.90–1.67)
Non-Hodgkin's lymphoma	45	21.8 (16.3–29.2)	598	27.4 (25.3–29.7)	0.80 (0.59–1.08)
Pancreas	41	19.9 (14.7–27.0)	233	10.7 (9.4–12.1)	1.86 (1.34–2.60)
Lip, oral cavity and pharynx	41	19.9 (14.7–27.0)	400	18.3 (16.6–20.2)	1.09 (0.79–1.50)
Multiple myeloma	32	15.5 (11.0–22.0)	198	9.1 (7.9–10.4)	1.71 (1.18–2.49)
Oesophagus	29	14.1 (9.8–20.3)	194	8.9 (7.7–10.2)	1.58 (1.07–2.34)
Other digestive organs	23	11.2 (7.4–16.80)	82	3.8 (3.0–4.7)	2.97 (1.87–4.72)
Bladder	21	10.2 (6.6–15.6)	538	24.7 (22.7–26.8)	0.41 (0.27–0.64)
Brain	20	9.7 (6.3–15.0)	309	14.2 (12.7–15.8)	0.69 (0.44–1.08)
Larynx	20	9.7 (6.3–15.0)	137	6.3 (5.3–7.4)	1.55 (0.97–2.47)
Mesothelial and soft tissue	14	6.8 (4.0–11.5)	215	9.9 (8.6–11.3)	0.69 (0.40–1.18)
Thyroid gland	12	5.8 (3.3–10.3)	82	3.8 (3.0–4.7)	1.55 (0.85–2.84)
Melanoma of skin	11	5.3 (3.0–9.6)	1,864	85.4 (81.6–89.4)	0.06 (0.03–0.11)
Gallbladder and other biliary tract	10	4.9 (2.6–9.0)	43	2.0 (1.5–2.7)	2.46 (1.24–4.90)
Other respiratory and intrathoracic organs	10	4.9 (2.6–9.0)	45	2.1 (1.5–2.8)	2.35 (1.19–4.67)
Testis	9	4.4 (2.3–8.4)	120	5.5 (4.6–6.6)	0.79 (0.40–1.56)
Hodgkin's disease	5	2.4 (1.0–5.8)	59	2.7 (2.1–3.5)	0.90 (0.36–2.24)
Other malignant skin cancers	4	1.9 (0.7–5.2)	43	2.0 (1.5–2.7)	0.99 (0.35–2.74)
Bone and articular cartilage	2	1.0 (0.2–3.9)	35	1.6 (1.2–2.2)	0.61 (0.15–2.52)
Other urinary tract	2	1.0 (0.2–3.9)	41	1.9 (1.4–2.6)	0.52 (0.12–2.14)
Other eye and central nervous system	2	1.0 (0.2–3.9)	69	3.2 (2.5–4.0)	0.31 (0.08–1.25)
Other male genital organs	1	0.5 (0.1–3.4)	25	1.1 (0.8–1.7)	0.42 (0.06–3.13)
Breast	1	0.5 (0.1–3.4)	23	1.1 (0.7–1.6)	0.46 (0.06–3.41)
Other lymphoid, haematopoietic and related tissue	1	0.5 (0.1–3.4)			
Other endocrine glands			7	0.3 (0.2–0.7)	

**Table 9.9: Females aged 65 years and over: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori			Non-Māori			Ratio (95% CI)	
	Number	Rate* (95% CI)		Number	Rate* (95% CI)			
All sites	1,113	1,922.1 (1,812.2–2,038.7)		23,467	1,464.8 (1,443.5–1,486.3)		1.31	(1.24–1.39)
Trachea, bronchus and lung	310	540.4 (483.4–604.1)		2,080	141.0 (134.4–147.9)		3.83	(3.40–4.33)
Breast	205	356.2 (310.6–408.6)		4,522	299.4 (289.6–309.5)		1.19	(1.03–1.37)
Colorectal	86	147.2 (119.1–182.0)		4,957	304.2 (294.7–314.0)		0.48	(0.39–0.60)
<i>Colon</i>	48	81.5 (61.4–108.2)		3,703	224.6 (216.5–233.0)		0.36	(0.27–0.48)
<i>Rectum, rectosigmoid junction and anus</i>	38	65.7 (47.8–90.4)		1,254	79.6 (74.7–84.8)		0.83	(0.60–1.14)
Ill-defined, secondary and unspecified sites	80	139.1 (111.7–173.3)		1,296	70.3 (66.0–74.9)		1.98	(1.57–2.49)
Stomach	69	118.0 (93.2–149.5)		592	32.7 (29.8–35.9)		3.61	(2.80–4.65)
Pancreas	49	83.7 (63.2–110.8)		684	39.5 (36.2–43.1)		2.12	(1.58–2.84)
Uterus	46	79.8 (59.8–106.7)		797	55.3 (51.2–59.8)		1.44	(1.07–1.95)
Non-Hodgkin's lymphoma	35	59.4 (42.6–82.8)		960	59.7 (55.6–64.2)		0.99	(0.71–1.40)
Multiple myeloma	26	44.8 (30.5–65.9)		457	25.3 (22.8–28.2)		1.77	(1.19–2.64)
Leukaemias	26	43.4 (29.5–63.8)		838	47.9 (44.3–51.7)		0.91	(0.61–1.34)
<i>Lymphoid leukaemia</i>	12	20.0 (11.4–35.3)		474	27.2 (24.6–30.2)		0.74	(0.41–1.31)
<i>Myeloid leukaemia</i>	9	15.3 (7.9–29.4)		319	18.6 (16.4–21.1)		0.82	(0.42–1.60)
<i>Other leukaemias</i>	5	8.1 (3.3–19.5)		45	2.0 (1.4–2.8)		3.99	(1.55–10.26)
Ovary	21	35.9 (23.4–55.1)		708	46.6 (42.9–50.7)		0.77	(0.50–1.19)
Cervix uteri	18	31.4 (19.8–49.9)		237	17.0 (14.7–19.6)		1.85	(1.14–3.01)
Kidney	16	28.0 (17.1–45.7)		398	26.4 (23.7–29.5)		1.06	(0.64–1.75)
Melanoma of skin	16	27.2 (16.6–44.4)		1764	114.0 (108.1–120.2)		0.24	(0.15–0.39)
Oesophagus	13	20.9 (12.1–36.1)		334	17.2 (15.2–19.5)		1.21	(0.69–2.13)
Thyroid gland	11	19.0 (10.5–34.4)		121	8.2 (6.7–10.0)		2.32	(1.24–4.33)
Other digestive organs	11	18.7 (10.3–33.8)		271	13.4 (11.7–15.5)		1.39	(0.76–2.56)
Bladder	11	18.3 (10.1–33.1)		668	36.7 (33.6–40.0)		0.50	(0.27–0.91)
Lip, oral cavity and pharynx	10	17.4 (9.4–32.4)		331	19.6 (17.4–22.2)		0.89	(0.47–1.67)
Liver and intrahepatic bile ducts	9	15.4 (8.0–29.6)		181	10.8 (9.2–12.8)		1.42	(0.72–2.79)
Gallbladder and other biliary tract	8	13.8 (6.9–27.7)		173	9.8 (8.2–11.6)		1.41	(0.69–2.89)
Brain	8	13.6 (6.8–27.2)		252	17.0 (14.9–19.5)		0.80	(0.39–1.62)
Other female genital organs	6	10.0 (4.5–22.3)		247	13.9 (12.0–16.0)		0.72	(0.32–1.63)
Mesothelial and soft tissue	5	8.9 (3.7–21.4)		177	11.5 (9.8–13.7)		0.77	(0.32–1.88)
Other respiratory and intrathoracic organs	5	8.8 (3.7–21.2)		45	2.8 (2.0–3.9)		3.14	(1.23–8.02)
Larynx	4	7.2 (2.7–19.1)		39	3.1 (2.2–4.4)		2.28	(0.81–6.44)
Other malignant skin cancers	4	7.0 (2.6–18.8)		115	5.7 (4.6–7.0)		1.24	(0.46–3.40)
Other eye and central nervous system	2	3.7 (0.9–14.6)		79	5.5 (4.3–7.0)		0.67	(0.16–2.72)
Hodgkin's disease	2	3.3 (0.8–13.2)		36	2.8 (1.9–4.0)		1.18	(0.28–4.98)
Other urinary tract	1	1.6 (0.2–11.7)		70	4.4 (3.4–5.8)		0.37	(0.05–2.68)
Bone and articular cartilage				25	1.9 (1.3–2.9)			
Other endocrine glands				9	0.7 (0.3–1.3)			
Other lymphoid, haematopoietic and related tissue				4	0.2 (0.1–0.6)			

\* Rates age standardised to Māori population.

**Table 9.10: Males aged 65 years and over: cancer registrations, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori			Non-Māori			Ratio (95% CI)	
	Number	Rate* (95% CI)		Number	Rate* (95% CI)			
All sites	1,426	3,087.4 (2,930.6–3,252.6)		33,396	2,788.8 (2,757.7–2,820.3)		1.11	(1.05–1.17)
Prostate	433	944.3 (859.0–1038.0)		11,795	992.5 (973.9–1011.4)		0.95	(0.86–1.05)
Trachea, bronchus and lung	332	708.0 (635.6–788.7)		3,787	316.0 (305.6–326.6)		2.24	(2.00–2.51)
Colorectal	137	297.9 (251.8–352.5)		4,862	414.3 (402.3–426.6)		0.72	(0.61–0.85)
<i>Colon</i>	78	168.5 (134.8–210.5)		3,109	260.8 (251.4–270.6)		0.65	(0.52–0.81)
<i>Rectum, rectosigmoid junction and anus</i>	59	129.5 (100.2–167.3)		1,753	153.4 (146.1–161.1)		0.84	(0.65–1.10)
Ill-defined, secondary and unspecified sites	72	157.3 (124.7–198.4)		1,178	95.6 (90.0–101.5)		1.65	(1.29–2.09)
Stomach	60	131.3 (101.8–169.3)		896	72.0 (67.3–77.1)		1.82	(1.40–2.37)
Leukaemias	47	105.5 (79.1–140.6)		1,070	86.0 (80.8–91.6)		1.23	(0.91–1.65)
<i>Lymphoid leukaemia</i>	29	63.6 (44.1–91.6)		620	50.5 (46.5–54.9)		1.26	(0.86–1.83)
<i>Myeloid leukaemia</i>	12	27.2 (15.4–48.1)		398	31.7 (28.6–35.1)		0.86	(0.48–1.53)
<i>Other leukaemias</i>	6	14.7 (6.6–32.8)		52	3.8 (2.9–5.1)		3.84	(1.64–8.99)
Multiple myeloma	40	88.0 (64.5–120.1)		546	42.8 (39.2–46.7)		2.06	(1.49–2.84)
Pancreas	39	84.4 (61.6–115.6)		597	48.6 (44.7–52.9)		1.73	(1.25–2.40)
Non-Hodgkin's lymphoma	37	79.6 (57.6–109.9)		900	75.3 (70.3–80.6)		1.06	(0.76–1.47)
Oesophagus	35	75.0 (53.8–104.6)		520	42.6 (38.9–46.6)		1.76	(1.25–2.49)
Liver and intrahepatic bile ducts	32	68.0 (48.0–96.2)		238	20.5 (17.9–23.4)		3.32	(2.29–4.82)
Bladder	30	65.7 (45.8–94.1)		1,803	144.7 (137.9–151.9)		0.45	(0.32–0.65)
Kidney	20	41.8 (27.0–64.9)		658	56.0 (51.7–60.6)		0.75	(0.48–1.17)
Lip, oral cavity and pharynx	17	35.6 (22.1–57.2)		499	43.3 (39.5–47.4)		0.82	(0.51–1.33)
Melanoma of skin	15	32.3 (19.5–53.7)		2,152	181.8 (173.9–190.0)		0.18	(0.11–0.30)
Other digestive organs	14	30.1 (17.8–50.9)		206	16.0 (13.9–18.5)		1.88	(1.09–3.24)
Mesothelial and soft tissue	13	27.6 (16.0–47.6)		389	31.8 (28.6–35.2)		0.87	(0.50–1.51)
Larynx	12	25.0 (14.2–44.1)		229	20.2 (17.6–23.1)		1.24	(0.69–2.22)
Gallbladder and other biliary tract	11	24.8 (13.7–44.9)		132	10.7 (8.9–12.8)		2.32	(1.25–4.32)
Brain	9	19.3 (10.0–37.3)		279	24.5 (21.7–27.7)		0.79	(0.40–1.54)
Thyroid gland	6	12.8 (5.7–28.6)		55	5.0 (3.8–6.6)		2.56	(1.10–5.99)
Other endocrine glands	3	6.5 (2.1–20.3)		14	1.3 (0.8–2.3)		4.96	(1.42–17.40)
Other respiratory and intrathoracic organs	3	6.4 (2.1–19.9)		62	5.3 (4.1–6.9)		1.21	(0.38–3.87)
Other malignant neoplasms of skin	2	4.8 (1.2–19.3)		161	12.1 (10.3–14.2)		0.39	(0.10–1.61)
Other eye and central nervous system	2	4.2 (1.1–17.0)		90	7.3 (5.9–9.1)		0.58	(0.14–2.36)
Testis	1	2.7 (0.4–19.5)		9	0.9 (0.5–1.8)		3.00	(0.38–23.84)
Bone and articular cartilage	1	2.2 (0.3–15.8)		32	2.5 (1.7–3.6)		0.90	(0.12–6.59)
Other male genital organs	1	2.2 (0.3–15.8)		51	4.3 (3.2–5.7)		0.52	(0.07–3.79)
Other urinary tract	1	2.1 (0.3–14.9)		104	8.5 (7.0–10.4)		0.25	(0.03–1.77)
Breast	1	2.0 (0.3–14.3)		50	3.9 (2.9–5.2)		0.51	(0.07–3.73)
Hodgkin's disease				30	2.6 (1.8–3.8)			
Other lymphoid, haematopoietic and related tissue				2	0.1 (0.0–0.5)			

\* Rates age standardised to Māori population.

**Table 9.11: Females aged 0–14 years: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori			Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)		Number	Rate (95% CI)	
All sites	28	4.6 (3.2–6.7)		70	3.6 (2.9–4.6)	1.28 (0.82–1.98)
Brain	10	1.6 (0.9–3.1)		15	0.8 (0.5–1.3)	2.13 (0.96–4.74)
Leukaemias	7	1.2 (0.5–2.4)		26	1.3 (0.9–2.0)	0.86 (0.37–1.98)
<i>Lymphoid leukaemia</i>	4	0.7 (0.2–1.8)		20	1.0 (0.7–1.6)	0.64 (0.22–1.87)
<i>Myeloid leukaemia</i>	3	0.5 (0.2–1.5)		6	0.3 (0.1–0.7)	1.60 (0.40–6.38)
Bone and articular cartilage	2	0.3 (0.1–1.3)		4	0.2 (0.1–0.5)	1.60 (0.29–8.72)
Soft tissue	2	0.3 (0.1–1.3)		5	0.3 (0.1–0.6)	1.28 (0.25–6.58)
Kidney	2	0.3 (0.1–1.3)		2	0.1 (0.0–0.4)	3.19 (0.45–22.67)
Colon	1	0.2 (0.0–1.2)				
Other eye and central nervous system	1	0.2 (0.0–1.2)		2	0.1 (0.0–0.4)	1.60 (0.14–17.61)
Ill-defined, secondary and unspecified sites	1	0.2 (0.0–1.2)		2	0.1 (0.0–0.4)	1.60 (0.14–17.61)
Non-Hodgkin's lymphoma	1	0.2 (0.0–1.2)		2	0.1 (0.0–0.4)	1.60 (0.14–17.61)
Other lymphoid, haematopoietic and related tissue	1	0.2 (0.0–1.2)				
Endocrine glands (not thyroid)				5	0.3 (0.1–0.6)	
Melanoma of skin				3	0.2 (0.0–0.5)	
Lip, oral cavity and pharynx				2	0.1 (0.0–0.4)	
Respiratory and intrathoracic organs (not lung)				1	0.1 (0.0–0.4)	
Ovary				1	0.1 (0.0–0.4)	

**Table 9.12: Males aged 0–14 years: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori			Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)		Number	Rate (95% CI)	
All sites	41	6.5 (4.8–8.8)		88	4.3 (3.5–5.3)	1.51 (1.04–2.19)
Leukaemias	17	2.7 (1.7–4.3)		31	1.5 (1.1–2.1)	1.78 (0.98–3.21)
<i>Lymphoid leukaemia</i>	11	1.7 (1.0–3.1)		21	1.0 (0.7–1.6)	1.70 (0.82–3.52)
<i>Myeloid leukaemia</i>	3	0.5 (0.2–1.5)		9	0.4 (0.2–0.8)	1.08 (0.29–3.99)
<i>Other leukaemias</i>	3	0.5 (0.2–1.5)		1	0.0 (0.0–0.3)	9.72 (1.01–93.41)
Brain	11	1.7 (1.0–3.1)		34	1.7 (1.2–2.3)	1.05 (0.53–2.07)
Bone and articular cartilage	3	0.5 (0.2–1.5)		4	0.2 (0.1–0.5)	2.43 (0.54–10.85)
Soft tissue	3	0.5 (0.2–1.5)		2	0.1 (0.0–0.4)	4.86 (0.81–29.07)
Other endocrine glands	3	0.5 (0.2–1.5)		6	0.3 (0.1–0.6)	1.62 (0.40–6.47)
Stomach	1	0.2 (0.0–1.1)				
Respiratory and intrathoracic (not lung)	1	0.2 (0.0–1.1)		1	0.0 (0.0–0.3)	3.24 (0.20–51.78)
Malignant skin (not melanoma)	1	0.2 (0.0–1.1)				
Hodgkin's disease	1	0.2 (0.0–1.1)		1	0.0 (0.0–0.3)	3.24 (0.20–51.78)
Ill-defined, secondary and unspecified sites				5	0.2 (0.1–0.6)	
Liver and intrahepatic bile ducts				1	0.0 (0.0–0.3)	
Melanoma of skin				1	0.0 (0.0–0.3)	
Other eye and central nervous system				1	0.0 (0.0–0.3)	
Other lymphoid, haematopoietic and related tissue				1	0.0 (0.0–0.3)	

**Table 9.13: Females aged 15–24 years: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori			Non-Māori			Ratio (95% CI)	
	Number	Rate	(95% CI)	Number	Rate	(95% CI)		
All sites	16	5.1	(3.1–8.3)	67	5.2	(4.1–6.6)	0.97	(0.56–1.68)
Soft tissue	3	1.0	(0.3–3.0)	5	0.4	(0.2–0.9)	2.45	(0.59–10.24)
Brain	3	1.0	(0.3–3.0)	11	0.9	(0.5–1.6)	1.11	(0.31–3.99)
Leukaemias	3	1.0	(0.3–3.0)	6	0.5	(0.2–1.0)	2.04	(0.51–8.16)
<i>Lymphoid leukaemia</i>	1	0.3	(0.0–2.3)	4	0.3	(0.1–0.8)	1.02	(0.11–9.13)
<i>Myeloid leukaemia</i>	2	0.6	(0.2–2.5)	2	0.2	(0.0–0.6)	4.08	(0.57–28.97)
Stomach	2	0.6	(0.2–2.5)					
Cervix uteri	2	0.6	(0.2–2.5)	1	0.1	(0.0–0.6)	8.16	(0.74–90.00)
Breast	1	0.3	(0.0–2.3)	2	0.2	(0.0–0.6)	2.04	(0.18–22.50)
Ovary	1	0.3	(0.0–2.3)	3	0.2	(0.1–0.7)	1.36	(0.14–13.08)
Non-Hodgkin's lymphoma	1	0.3	(0.0–2.3)	7	0.5	(0.3–1.1)	0.58	(0.07–4.74)
Bone and articular cartilage				9	0.7	(0.4–1.4)		
Melanoma of skin				7	0.5	(0.3–1.1)		
Colon				4	0.3	(0.1–0.8)		
Endocrine glands (not thyroid)				3	0.2	(0.1–0.7)		
Liver and intrahepatic bile ducts				2	0.2	(0.0–0.6)		
Trachea, bronchus and lung				2	0.2	(0.0–0.6)		
Kidney				1	0.1	(0.0–0.6)		

**Table 9.14: Males aged 15–24 years: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori			Non-Māori			Ratio (95% CI)	
	Number	Rate	(95% CI)	Number	Rate	(95% CI)		
All sites	29	9.5	(6.6–13.6)	101	7.6	(6.3–9.3)	1.24	(0.82–1.87)
Leukaemias	6	2.0	(0.9–4.4)	27	2.0	(1.4–3.0)	0.96	(0.40–2.32)
<i>Lymphoid leukaemia</i>	3	1.0	(0.3–3.0)	20	1.5	(1.0–2.3)	0.65	(0.19–2.17)
<i>Myeloid leukaemia</i>	3	1.0	(0.3–3.0)	6	0.5	(0.2–1.0)	2.15	(0.54–8.61)
<i>Other leukaemias</i>				1	0.1	(0.0–0.5)		
Soft tissue	5	1.6	(0.7–3.9)	10	0.8	(0.4–1.4)	2.15	(0.74–6.30)
Brain	5	1.6	(0.7–3.9)	18	1.4	(0.9–2.2)	1.20	(0.44–3.22)
Bone and articular cartilage	4	1.3	(0.5–3.5)	10	0.8	(0.4–1.4)	1.72	(0.54–5.49)
Testis	2	0.7	(0.2–2.6)	3	0.2	(0.1–0.7)	2.87	(0.48–17.19)
Kidney	2	0.7	(0.2–2.6)	2	0.2	(0.0–0.6)	4.31	(0.61–30.58)
Lip, oral cavity and pharynx	1	0.3	(0.0–2.3)	2	0.2	(0.0–0.6)	2.15	(0.20–23.76)
Stomach	1	0.3	(0.0–2.3)	2	0.2	(0.0–0.6)	2.15	(0.20–23.76)
Colorectal	1	0.3	(0.0–2.3)	4	0.3	(0.1–0.8)	1.08	(0.12–9.64)
<i>Colon</i>	1	0.3	(0.0–2.3)	1	0.1	(0.0–0.5)	4.31	(0.27–68.88)
<i>Rectum, rectosigmoid junction and anus</i>				3	0.2	(0.1–0.7)		
Other digestive organs	1	0.3	(0.0–2.3)					
Hodgkin's disease	1	0.3	(0.0–2.3)					
Non-Hodgkin's lymphoma				6	0.5	(0.2–1.0)		
Other endocrine glands				5	0.4	(0.2–0.9)		
Liver and intrahepatic bile ducts				4	0.3	(0.1–0.8)		
Melanoma of skin				3	0.2	(0.1–0.7)		
Other eye and central nervous system				2	0.2	(0.0–0.6)		
Prostate				1	0.1	(0.0–0.5)		
Other urinary tract				1	0.1	(0.0–0.5)		
Ill-defined, secondary and unspecified sites				1	0.1	(0.0–0.5)		

**Table 9.15: Females aged 25–44 years: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	264	52.6 (46.6–59.4)	886	28.9 (27.0–30.8)	1.82 (1.59–2.09)
Breast: female	95	18.9 (15.5–23.2)	309	10.1 (9.0–11.3)	1.88 (1.49–2.37)
Cervix uteri	31	6.2 (4.3–8.8)	48	1.6 (1.2–2.1)	3.95 (2.52–6.21)
Trachea, bronchus and lung	24	4.8 (3.2–7.1)	61	2.0 (1.5–2.6)	2.41 (1.50–3.86)
Stomach	23	4.6 (3.0–6.9)	20	0.7 (0.4–1.0)	7.04 (3.86–12.81)
Ovary	13	2.6 (1.5–4.5)	45	1.5 (1.1–2.0)	1.77 (0.95–3.28)
Ill-defined, secondary and unspecified sites	13	2.6 (1.5–4.5)	46	1.5 (1.1–2.0)	1.73 (0.93–3.20)
Colorectal	7	1.4 (0.7–2.9)	58	1.9 (1.5–2.4)	0.74 (0.34–1.62)
<i>Colon</i>	4	0.8 (0.3–2.1)	42	1.4 (1.0–1.9)	0.58 (0.21–1.63)
<i>Rectum, rectosigmoid junction and anus</i>	3	0.6 (0.2–1.9)	16	0.5 (0.3–0.9)	1.15 (0.33–3.94)
Mesothelial and soft tissue	7	1.4 (0.7–2.9)	20	0.7 (0.4–1.0)	2.14 (0.91–5.06)
Brain	7	1.4 (0.7–2.9)	53	1.7 (1.3–2.3)	0.81 (0.37–1.78)
Leukaemias	7	1.4 (0.7–2.9)	41	1.3 (1.0–1.8)	1.04 (0.47–2.33)
<i>Lymphoid leukaemia</i>			11	0.4 (0.2–0.6)	
<i>Myeloid leukaemia</i>	6	1.2 (0.5–2.7)	30	1.0 (0.7–1.4)	1.22 (0.51–2.94)
<i>Other leukaemias</i>	1	0.2 (0.0–1.4)			
Non-Hodgkin's lymphoma	5	1.0 (0.4–2.4)	28	0.9 (0.6–1.3)	1.09 (0.42–2.83)
Liver and intrahepatic bile ducts	4	0.8 (0.3–2.1)	7	0.2 (0.1–0.5)	3.50 (1.02–11.94)
Pancreas	3	0.6 (0.2–1.9)	10	0.3 (0.2–0.6)	1.84 (0.51–6.67)
Uterus	3	0.6 (0.2–1.9)	13	0.4 (0.2–0.7)	1.41 (0.40–4.95)
Kidney	3	0.6 (0.2–1.9)	8	0.3 (0.1–0.5)	2.29 (0.61–8.65)
Lip, oral cavity and pharynx	2	0.4 (0.1–1.6)	4	0.1 (0.0–0.3)	3.06 (0.56–16.70)
Oesophagus	2	0.4 (0.1–1.6)	2	0.1 (0.0–0.3)	6.12 (0.86–43.44)
Other digestive organs	2	0.4 (0.1–1.6)	5	0.2 (0.1–0.4)	2.45 (0.47–12.61)
Other respiratory and intrathoracic organs	2	0.4 (0.1–1.6)	8	0.3 (0.1–0.5)	1.53 (0.32–7.20)
Bone and articular cartilage	2	0.4 (0.1–1.6)	9	0.3 (0.2–0.6)	1.36 (0.29–6.29)
Other female genital organs	2	0.4 (0.1–1.6)	6	0.2 (0.1–0.4)	2.04 (0.41–10.10)
Gallbladder and other biliary tract	1	0.2 (0.0–1.4)	3	0.1 (0.0–0.3)	2.04 (0.21–19.61)
Larynx	1	0.2 (0.0–1.4)	1	0.0 (0.0–0.2)	6.12 (0.38–97.82)
Melanoma of skin	1	0.2 (0.0–1.4)	63	2.1 (1.6–2.6)	0.10 (0.01–0.70)
Other malignant neoplasms of skin	1	0.2 (0.0–1.4)			
Bladder	1	0.2 (0.0–1.4)	5	0.2 (0.1–0.4)	1.22 (0.14–10.47)
Other urinary tract	1	0.2 (0.0–1.4)			
Multiple myeloma	1	0.2 (0.0–1.4)	2	0.1 (0.0–0.3)	3.06 (0.28–33.74)
Hodgkin's disease			4	0.1 (0.0–0.3)	
Other endocrine glands			3	0.1 (0.0–0.3)	
Other eye and central nervous system			2	0.1 (0.0–0.3)	
Thyroid gland			2	0.1 (0.0–0.3)	



**Table 9.16: Males aged 25–44 years: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	160	35.3 (30.2–41.2)	591	20.0 (18.5–21.8)	1.76 (1.47–2.09)
Stomach	21	4.6 (3.0–7.1)	25	0.8 (0.6–1.3)	5.45 (3.05–9.73)
Trachea, bronchus and lung	18	4.0 (2.5–6.3)	46	1.6 (1.2–2.1)	2.54 (1.47–4.38)
Liver and intrahepatic bile ducts	13	2.9 (1.7–4.9)	27	0.9 (0.6–1.3)	3.12 (1.61–6.05)
Non-Hodgkin's lymphoma	13	2.9 (1.7–4.9)	53	1.8 (1.4–2.4)	1.59 (0.87–2.92)
Testis	12	2.6 (1.5–4.7)	13	0.4 (0.3–0.8)	5.99 (2.73–13.12)
Brain	12	2.6 (1.5–4.7)	75	2.5 (2.0–3.2)	1.04 (0.56–1.91)
Ill-defined, secondary and unspecified sites	11	2.4 (1.3–4.4)	24	0.8 (0.5–1.2)	2.97 (1.46–6.07)
Kidney	9	2.0 (1.0–3.8)	21	0.7 (0.5–1.1)	2.78 (1.27–6.07)
Leukaemias	8	1.8 (0.9–3.5)	46	1.6 (1.2–2.1)	1.13 (0.53–2.39)
<i>Lymphoid leukaemia</i>	4	0.9 (0.3–2.3)	11	0.4 (0.2–0.7)	2.36 (0.75–7.41)
<i>Myeloid leukaemia</i>	4	0.9 (0.3–2.3)	31	1.1 (0.7–1.5)	0.84 (0.30–2.37)
<i>Other leukaemias</i>			4	0.1 (0.1–0.4)	
Colorectal	7	1.5 (0.7–3.2)	59	2.0 (1.6–2.6)	0.77 (0.35–1.68)
<i>Colon</i>	5	1.1 (0.5–2.6)	33	1.1 (0.8–1.6)	0.98 (0.38–2.52)
<i>Rectum, rectosigmoid junction and anus</i>	2	0.4 (0.1–1.8)	26	0.9 (0.6–1.3)	0.50 (0.12–2.10)
Pancreas	6	1.3 (0.6–2.9)	24	0.8 (0.5–1.2)	1.62 (0.66–3.97)
Lip, oral cavity and pharynx	4	0.9 (0.3–2.3)	14	0.5 (0.3–0.8)	1.85 (0.61–5.63)
Mesothelial and soft tissue	4	0.9 (0.3–2.3)	13	0.4 (0.3–0.8)	2.00 (0.65–6.12)
Oesophagus	3	0.7 (0.2–2.1)	11	0.4 (0.2–0.7)	1.77 (0.49–6.34)
Bone and articular cartilage	3	0.7 (0.2–2.1)	14	0.5 (0.3–0.8)	1.39 (0.40–4.84)
Other endocrine glands	3	0.7 (0.2–2.1)	6	0.2 (0.1–0.5)	3.24 (0.81–12.97)
Hodgkin's disease	3	0.7 (0.2–2.1)	5	0.2 (0.1–0.4)	3.89 (0.93–16.29)
Multiple myeloma	3	0.7 (0.2–2.1)	4	0.1 (0.1–0.4)	4.87 (1.09–21.74)
Other digestive organs	1	0.2 (0.0–1.6)	5	0.2 (0.1–0.4)	1.30 (0.15–11.10)
Melanoma of skin	1	0.2 (0.0–1.6)	79	2.7 (2.2–3.3)	0.08 (0.01–0.59)
Prostate	1	0.2 (0.0–1.6)	3	0.1 (0.0–0.3)	2.16 (0.22–20.79)
Other eye and central nervous system	1	0.2 (0.0–1.6)	1	0.0 (0.0–0.2)	6.49 (0.41–103.71)
Thyroid gland	1	0.2 (0.0–1.6)	3	0.1 (0.0–0.3)	2.16 (0.22–20.79)
Other malignant skin cancers	1	0.2 (0.0–1.6)			
Breast	1	0.2 (0.0–1.6)			
Other respiratory and intrathoracic organs			10	0.3 (0.2–0.6)	
Bladder			5	0.2 (0.1–0.4)	
Gallbladder and other biliary tract			3	0.1 (0.0–0.3)	
Larynx			2	0.1 (0.0–0.3)	

**Table 9.17: Females aged 45–64 years: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
All sites	969	450.4 (422.9–479.7)	4,673	212.5 (206.4–218.6)	2.12 (1.98–2.27)
Trachea, bronchus and lung	323	150.1 (134.6–167.4)	626	28.5 (26.3–30.8)	5.28 (4.61–6.03)
Breast	195	90.6 (78.8–104.3)	1,246	56.6 (53.6–59.9)	1.60 (1.38–1.86)
Colorectal	69	32.1 (25.3–40.6)	688	31.3 (29.0–33.7)	1.03 (0.80–1.31)
Colon	42	19.5 (14.4–26.4)	477	21.7 (19.8–23.7)	0.90 (0.66–1.23)
Rectum, rectosigmoid junction and anus	27	12.5 (8.6–18.3)	211	9.6 (8.4–11.0)	1.31 (0.88–1.95)
Cervix uteri	60	27.9 (21.7–35.9)	117	5.3 (4.4–6.4)	5.24 (3.84–7.16)
Ill-defined, secondary and unspecified sites	55	25.6 (19.6–33.3)	261	11.9 (10.5–13.4)	2.15 (1.61–2.88)
Ovary	32	14.9 (10.5–21.0)	317	14.4 (12.9–16.1)	1.03 (0.72–1.48)
Stomach	31	14.4 (10.1–20.5)	94	4.3 (3.5–5.2)	3.37 (2.25–5.06)
Pancreas	26	12.1 (8.2–17.7)	154	7.0 (6.0–8.2)	1.73 (1.14–2.62)
Uterus	21	9.8 (6.4–15.0)	99	4.5 (3.7–5.5)	2.17 (1.35–3.47)
Non-Hodgkin's lymphoma	20	9.3 (6.0–14.4)	157	7.1 (6.1–8.3)	1.30 (0.82–2.07)
Liver and intrahepatic bile ducts	19	8.8 (5.6–13.8)	50	2.3 (1.7–3.0)	3.89 (2.29–6.59)
Leukaemias	19	8.8 (5.6–13.8)	97	4.4 (3.6–5.4)	2.00 (1.22–3.27)
Lymphoid leukaemia	5	2.3 (1.0–5.6)	20	0.9 (0.6–1.4)	2.56 (0.96–6.81)
Myeloid leukaemia	13	6.0 (3.5–10.4)	70	3.2 (2.5–4.0)	1.90 (1.05–3.43)
Other leukaemias	1	0.5 (0.1–3.3)	7	0.3 (0.2–0.7)	1.46 (0.18–11.87)
Brain	12	5.6 (3.2–9.8)	153	7.0 (5.9–8.2)	0.80 (0.45–1.44)
Other digestive organs	11	5.1 (2.8–9.2)	46	2.1 (1.6–2.8)	2.44 (1.27–4.72)
Mesothelial and soft tissue	11	5.1 (2.8–9.2)	54	2.5 (1.9–3.2)	2.08 (1.09–3.98)
Kidney	10	4.6 (2.5–8.6)	69	3.1 (2.5–4.0)	1.48 (0.76–2.88)
Oesophagus	9	4.2 (2.2–8.0)	37	1.7 (1.2–2.3)	2.49 (1.20–5.15)
Gallbladder and other biliary tract	9	4.2 (2.2–8.0)	30	1.4 (1.0–2.0)	3.07 (1.46–6.46)
Other female genital organs	7	3.3 (1.6–6.8)	23	1.0 (0.7–1.6)	3.11 (1.34–7.25)
Thyroid gland	6	2.8 (1.3–6.2)	14	0.6 (0.4–1.1)	4.38 (1.68–11.40)
Bladder	5	2.3 (1.0–5.6)	28	1.3 (0.9–1.8)	1.83 (0.70–4.73)
Multiple myeloma	5	2.3 (1.0–5.6)	64	2.9 (2.3–3.7)	0.80 (0.32–1.98)
Lip, oral cavity and pharynx	4	1.9 (0.7–5.0)	35	1.6 (1.1–2.2)	1.17 (0.42–3.29)
Other respiratory and intrathoracic organs	4	1.9 (0.7–5.0)	13	0.6 (0.3–1.0)	3.15 (1.03–9.65)
Melanoma of skin	2	0.9 (0.2–3.7)	165	7.5 (6.4–8.7)	0.12 (0.03–0.50)
Other eye and central nervous system	1	0.5 (0.1–3.3)	9	0.4 (0.2–0.8)	1.14 (0.14–8.97)
Other malignant skin cancers	1	0.5 (0.1–3.3)	7	0.3 (0.2–0.7)	1.46 (0.18–11.87)
Other endocrine glands	1	0.5 (0.1–3.3)	4	0.2 (0.1–0.5)	2.56 (0.29–22.87)
Other urinary tract	1	0.5 (0.1–3.3)	3	0.1 (0.0–0.4)	3.41 (0.35–32.76)
Hodgkin's disease			6	0.3 (0.1–0.6)	
Bone and articular cartilage			4	0.2 (0.1–0.5)	
Larynx			3	0.1 (0.0–0.4)	

**Table 9.18: Males aged 45–64 years: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori			Non-Māori			Ratio (95% CI)
	Number	Rate (95% CI)		Number	Rate (95% CI)		
All sites	921	447.0 (419.0–476.8)		4,780	219.0 (212.9–225.3)		2.04 (1.90–2.19)
Trachea, bronchus and lung	337	163.5 (147.0–182.0)		970	44.4 (41.7–47.3)		3.68 (3.25–4.17)
Liver and intrahepatic bile ducts	81	39.3 (31.6–48.9)		113	5.2 (4.3–6.2)		7.59 (5.71–10.10)
Stomach	76	36.9 (29.5–46.2)		210	9.6 (8.4–11.0)		3.83 (2.95–4.98)
Colorectal	68	33.0 (26.0–41.9)		840	38.5 (36.0–41.2)		0.86 (0.67–1.10)
<i>Colon</i>	34	16.5 (11.8–23.1)		480	22.0 (20.1–24.1)		0.75 (0.53–1.06)
<i>Rectum, rectosigmoid junction and anus</i>	34	16.5 (11.8–23.1)		360	16.5 (14.9–18.3)		1.00 (0.70–1.42)
Ill-defined, secondary and unspecified sites	57	27.7 (21.3–35.9)		270	12.4 (11.0–13.9)		2.24 (1.68–2.98)
Pancreas	37	18.0 (13.0–24.8)		211	9.7 (8.4–11.1)		1.86 (1.31–2.63)
Prostate	35	17.0 (12.2–23.7)		225	10.3 (9.0–11.7)		1.65 (1.15–2.35)
Oesophagus	29	14.1 (9.8–20.3)		159	7.3 (6.2–8.5)		1.93 (1.30–2.87)
Lip, oral cavity and pharynx	28	13.6 (9.4–19.7)		140	6.4 (5.4–7.6)		2.12 (1.41–3.18)
Non-Hodgkin's lymphoma	27	13.1 (9.0–19.1)		239	11.0 (9.6–12.4)		1.20 (0.80–1.78)
Kidney	26	12.6 (8.6–18.5)		135	6.2 (5.2–7.3)		2.04 (1.34–3.10)
Leukaemias	26	12.6 (8.6–18.5)		144	6.6 (5.6–7.8)		1.91 (1.26–2.90)
<i>Lymphoid leukaemia</i>	12	5.8 (3.3–10.3)		49	2.2 (1.7–3.0)		2.59 (1.38–4.88)
<i>Myeloid leukaemia</i>	12	5.8 (3.3–10.3)		89	4.1 (3.3–5.0)		1.43 (0.78–2.61)
<i>Other leukaemias</i>	2	1.0 (0.2–3.9)		6	0.3 (0.1–0.6)		3.53 (0.71–17.49)
Brain	17	8.3 (5.1–13.3)		264	12.1 (10.7–13.6)		0.68 (0.42–1.11)
Multiple myeloma	16	7.8 (4.8–12.7)		85	3.9 (3.1–4.8)		1.99 (1.17–3.40)
Other digestive organs	13	6.3 (3.7–10.9)		77	3.5 (2.8–4.4)		1.79 (0.99–3.22)
Gallbladder and other biliary tract	10	4.9 (2.6–9.0)		22	1.0 (0.7–1.5)		4.81 (2.28–10.17)
Mesothelial and soft tissue	9	4.4 (2.3–8.4)		114	5.2 (4.3–6.3)		0.84 (0.42–1.65)
Bladder	6	2.9 (1.3–6.5)		84	3.8 (3.1–4.8)		0.76 (0.33–1.73)
Larynx	5	2.4 (1.0–5.8)		34	1.6 (1.1–2.2)		1.56 (0.61–3.98)
Other respiratory and intrathoracic organs	5	2.4 (1.0–5.8)		31	1.4 (1.0–2.0)		1.71 (0.66–4.39)
Hodgkin's disease	4	1.9 (0.7–5.2)		14	0.6 (0.4–1.1)		3.03 (1.00–9.19)
Melanoma of skin	3	1.5 (0.5–4.5)		272	12.5 (11.1–14.0)		0.12 (0.04–0.36)
Breast	2	1.0 (0.2–3.9)		5	0.2 (0.1–0.6)		4.24 (0.82–21.84)
Other malignant neoplasms of skin	1	0.5 (0.1–3.4)		44	2.0 (1.5–2.7)		0.24 (0.03–1.75)
Bone and articular cartilage	1	0.5 (0.1–3.4)		15	0.7 (0.4–1.1)		0.71 (0.09–5.35)
Thyroid gland	1	0.5 (0.1–3.4)		13	0.6 (0.3–1.0)		0.81 (0.11–6.23)
Other endocrine glands	1	0.5 (0.1–3.4)		5	0.2 (0.1–0.6)		2.12 (0.25–18.13)
Other eye and central nervous system				22	1.0 (0.7–1.5)		
Other urinary tract				13	0.6 (0.3–1.0)		
Testis				6	0.3 (0.1–0.6)		
Other male genital organs				3	0.1 (0.0–0.4)		
Other lymphoid, haematopoietic and related tissue				1	0.0 (0.0–0.3)		

**Table 9.19: Females aged 65 years and over: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate* (95% CI)	Number	Rate* (95% CI)	
All sites	875	1,499.4 (1,403.0–1,602.3)	13,626	769.8 (755.0–784.9)	1.95 (1.82–2.09)
Trachea, bronchus and lung	329	571.3 (512.7–636.6)	1,899	122.9 (116.8–129.2)	4.65 (4.13–5.24)
Breast	92	158.4 (129.1–194.4)	1,878	109.3 (103.8–115.2)	1.45 (1.17–1.79)
Ill-defined, secondary and unspecified sites	57	98.9 (76.2–128.2)	1,154	60.1 (56.2–64.2)	1.65 (1.26–2.15)
Pancreas	54	92.0 (70.4–120.2)	683	39.0 (35.7–42.5)	2.36 (1.78–3.13)
Stomach	54	91.2 (69.8–119.1)	488	24.4 (22.0–27.1)	3.74 (2.80–4.98)
Colorectal	52	88.3 (67.2–116.0)	2,427	134.4 (128.3–140.8)	0.66 (0.50–0.87)
Colon	26	43.7 (29.7–64.2)	1,740	95.5 (90.4–100.9)	0.46 (0.31–0.68)
Rectum, rectosigmoid junction and anus	26	44.6 (30.4–65.6)	687	38.9 (35.7–42.5)	1.15 (0.77–1.70)
Uterus	25	42.0 (28.4–62.3)	298	17.7 (15.5–20.2)	2.38 (1.57–3.60)
Non-Hodgkin's lymphoma	25	41.7 (28.1–61.8)	580	32.6 (29.7–35.9)	1.28 (0.85–1.91)
Cervix uteri	23	39.9 (26.5–60.1)	151	9.1 (7.6–10.9)	4.37 (2.79–6.84)
Ovary	23	39.1 (25.9–58.9)	598	37.7 (34.4–41.3)	1.04 (0.68–1.58)
Leukaemias	22	37.3 (24.5–56.7)	424	22.5 (20.1–25.1)	1.66 (1.08–2.56)
Myeloid leukaemia	11	18.8 (10.4–34.0)	245	14.3 (12.4–16.5)	1.31 (0.71–2.41)
Lymphoid leukaemia	7	12.2 (5.8–25.7)	138	6.4 (5.3–7.9)	1.90 (0.88–4.11)
Other leukaemias	4	6.3 (2.3–16.7)	41	1.7 (1.2–2.4)	3.70 (1.30–10.53)
Multiple myeloma	19	32.0 (20.4–50.3)	321	17.8 (15.6–20.2)	1.80 (1.13–2.88)
Other digestive organs	16	26.3 (16.1–42.9)	331	14.5 (12.7–16.4)	1.82 (1.09–3.02)
Oesophagus	12	19.7 (11.1–34.7)	325	15.9 (14.0–18.1)	1.23 (0.69–2.21)
Bladder	12	19.5 (11.1–34.5)	298	13.7 (12.0–15.6)	1.43 (0.80–2.56)
Eye and other central nervous system	9	15.3 (8.0–29.5)	285	19.1 (16.7–21.7)	0.80 (0.41–1.57)
Brain	9	15.3 (8.0–29.5)	264	17.8 (15.6–20.4)	0.86 (0.44–1.68)
Kidney	9	15.3 (7.9–29.4)	241	13.9 (12.0–16.0)	1.10 (0.56–2.15)
Melanoma of skin	7	11.6 (5.5–24.4)	292	16.2 (14.2–18.5)	0.72 (0.34–1.53)
Liver and intrahepatic bile ducts	6	10.4 (4.7–23.3)	156	8.4 (7.0–10.1)	1.25 (0.55–2.84)
Gallbladder and other biliary tract	6	10.3 (4.6–22.9)	149	7.9 (6.5–9.5)	1.30 (0.57–2.96)
Lip, oral cavity and pharynx	6	9.9 (4.4–22.2)	153	8.4 (7.0–10.1)	1.18 (0.52–2.69)
Mesothelial and soft tissue	3	5.3 (1.7–16.5)	99	6.0 (4.8–7.5)	0.89 (0.28–2.83)
Larynx	3	5.2 (1.7–16.3)	17	1.0 (0.6–1.8)	5.09 (1.45–17.85)
Thyroid gland	3	4.9 (1.6–15.3)	45	2.1 (1.5–2.9)	2.34 (0.71–7.66)
Other malignant neoplasms of skin	2	3.6 (0.9–14.3)	148	5.6 (4.7–6.8)	0.63 (0.16–2.57)
Other respiratory and intrathoracic organs	2	3.4 (0.8–13.6)	28	1.6 (1.0–2.4)	2.18 (0.51–9.33)
Other female genital organs	2	3.0 (0.7–12.0)	102	5.2 (4.1–6.5)	0.58 (0.14–2.36)
Other urinary tract	1	1.6 (0.2–11.7)	18	0.9 (0.5–1.5)	1.84 (0.24–14.02)
Hodgkin's disease	1	1.8 (0.3–13.0)	17	0.8 (0.5–1.5)	2.16 (0.28–16.46)
Other eye and central nervous system			21	1.3 (0.8–2.1)	
Bone and articular cartilage			14	0.9 (0.5–1.6)	
Other endocrine glands			3	0.2 (0.1–0.8)	
Other lymphoid, haematopoietic and related tissue			3	0.1 (0.0–0.4)	

\* Rates age-standardised to Māori population.

**Table 9.20: Males aged 65 years and over: cancer deaths, number, rate, Māori:non-Māori rate ratio, 1996–2001**

Site	Māori		Non-Māori		Ratio (95% CI)
	Number	Rate* (95% CI)	Number	Rate* (95% CI)	
All sites	982	2,140.6 (2,010.2–2,279.4)	16,302	1,286.3 (1,265.7–1,307.2)	1.66 (1.56–1.78)
Trachea, bronchus and lung	339	723.6 (650.3–805.2)	3,503	287.4 (277.7–297.6)	2.52 (2.25–2.82)
Prostate	142	322.7 (273.5–380.8)	2,882	204.4 (196.7–212.3)	1.58 (1.33–1.87)
Colorectal	87	191.7 (155.2–236.7)	2,422	199.1 (190.9–207.6)	0.96 (0.78–1.19)
Colon	45	99.4 (74.1–133.3)	1,533	125.4 (119.0–132.2)	0.79 (0.59–1.07)
Rectum, rectosigmoid junction and anus	42	92.3 (68.1–125.1)	889	73.7 (68.8–78.9)	1.25 (0.92–1.71)
Stomach	68	148.6 (117.1–188.7)	698	54.9 (50.8–59.4)	2.71 (2.10–3.48)
Ill-defined, secondary and unspecified sites	66	145.3 (114.0–185.1)	976	76.7 (71.8–81.9)	1.89 (1.47–2.43)
Pancreas	42	91.8 (67.8–124.4)	569	45.7 (41.9–49.8)	2.01 (1.47–2.76)
Oesophagus	31	65.9 (46.3–93.8)	505	41.4 (37.8–45.3)	1.59 (1.11–2.29)
Multiple myeloma	30	65.2 (45.5–93.4)	358	26.8 (24.1–29.9)	2.43 (1.67–3.54)
Liver and intrahepatic bile ducts	30	64.0 (44.7–91.7)	228	19.2 (16.8–22.0)	3.33 (2.27–4.89)
Leukaemias	22	49.1 (32.3–74.7)	550	42.1 (38.6–45.9)	1.17 (0.76–1.79)
Lymphoid leukaemia	9	19.6 (10.2–37.7)	189	14.0 (12.1–16.3)	1.40 (0.71–2.74)
Myeloid leukaemia	11	24.8 (13.7–44.8)	318	25.1 (22.3–28.1)	0.99 (0.54–1.81)
Other leukaemias	2	4.7 (1.2–19.0)	43	3.0 (2.2–4.1)	1.57 (0.38–6.52)
Other digestive organs	20	43.6 (28.1–67.8)	242	18.3 (16.0–20.9)	2.38 (1.50–3.77)
Non-Hodgkin's lymphoma	19	41.5 (26.4–65.2)	584	47.3 (43.4–51.5)	0.88 (0.55–1.39)
Lip, oral cavity and pharynx	17	36.4 (22.6–58.5)	245	21.4 (18.8–24.4)	1.70 (1.04–2.78)
Bladder	12	27.4 (15.5–48.5)	560	41.0 (37.6–44.7)	0.67 (0.38–1.19)
Kidney	12	24.9 (14.2–43.9)	322	26.0 (23.2–29.2)	0.96 (0.54–1.71)
Mesothelial and soft tissue	10	21.1 (11.3–39.3)	270	22.7 (20.0–25.7)	0.93 (0.49–1.76)
Gallbladder and other biliary tract	9	20.6 (10.7–39.9)	99	8.2 (6.6–10.1)	2.52 (1.27–5.03)
Brain	9	19.1 (9.9–36.8)	287	25.2 (22.3–28.4)	0.76 (0.39–1.48)
Larynx	5	11.0 (4.5–26.4)	105	8.4 (6.9–10.3)	1.30 (0.53–3.20)
Other malignant neoplasms of skin	3	6.9 (2.2–21.5)	224	15.8 (13.8–18.1)	0.43 (0.14–1.37)
Other respiratory and intrathoracic organs	3	6.8 (2.2–21.3)	47	3.9 (2.9–5.3)	1.73 (0.53–5.66)
Melanoma of skin	1	2.5 (0.4–17.9)	467	38.2 (34.7–42.0)	0.07 (0.01–0.47)
Other eye and central nervous system	1	2.2 (0.3–15.8)	32	2.5 (1.8–3.6)	0.88 (0.12–6.44)
Bone and articular cartilage	1	2.2 (0.3–15.8)	21	1.5 (1.0–2.3)	1.49 (0.20–11.14)
Hodgkin's disease	1	2.1 (0.3–14.9)	21	1.6 (1.0–2.5)	1.32 (0.18–9.83)
Thyroid gland	1	2.0 (0.3–14.3)	20	1.4 (0.9–2.1)	1.48 (0.20–11.09)
Other endocrine glands	1	2.2 (0.3–15.8)	9	0.9 (0.5–1.8)	2.41 (0.30–19.14)
Other urinary tract			26	1.9 (1.3–2.9)	
Other male genital organs			13	1.0 (0.6–1.8)	
Breast			12	1.0 (0.5–1.7)	
Testis			5	0.3 (0.1–0.8)	

\* Rates age-standardised to Māori population.