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Environmental Health Intelligence New Zealand
Rapu Mātauranga Hauora mo te Taiao – Aotearoa

Related indicators

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Melanoma cancer registrations

This factsheet presents information about rates of melanoma registrations in New Zealand.

Melanoma registration rates decreased for both males and females in 2020 but then returned to 2019 levels in 2021.

In 2021, there were 2,859 registrations of melanoma in New Zealand.

Melanoma registration rates were highest in males, people of European/Other ethnicity and older adults, especially for people aged 75 + years and over.

Melanoma registration rates continue to be lower in the most deprived areas (NZDep2018 quintile 5) than in the least deprived areas.

Melanoma registration rates were higher for women in rural areas compared with women in the main urban areas but were not statistically different for males.

Taranaki, Bay of Plenty and Waitematā districts had high rates of melanoma registrations in 2021.

Overexposure to UV radiation is the main environmental risk factor for melanoma

Melanoma and environmental health

Melanoma is a serious form of skin cancer and, together with Australia, New Zealand has the highest rates in the world (Wild et al 2020). In 2021, there were 2,859 registrations of melanoma in New Zealand. Melanoma was the third most commonly registered cancer in 2019 for males (behind prostate cancer and colon cancer) and for females (behind breast and colon cancer).

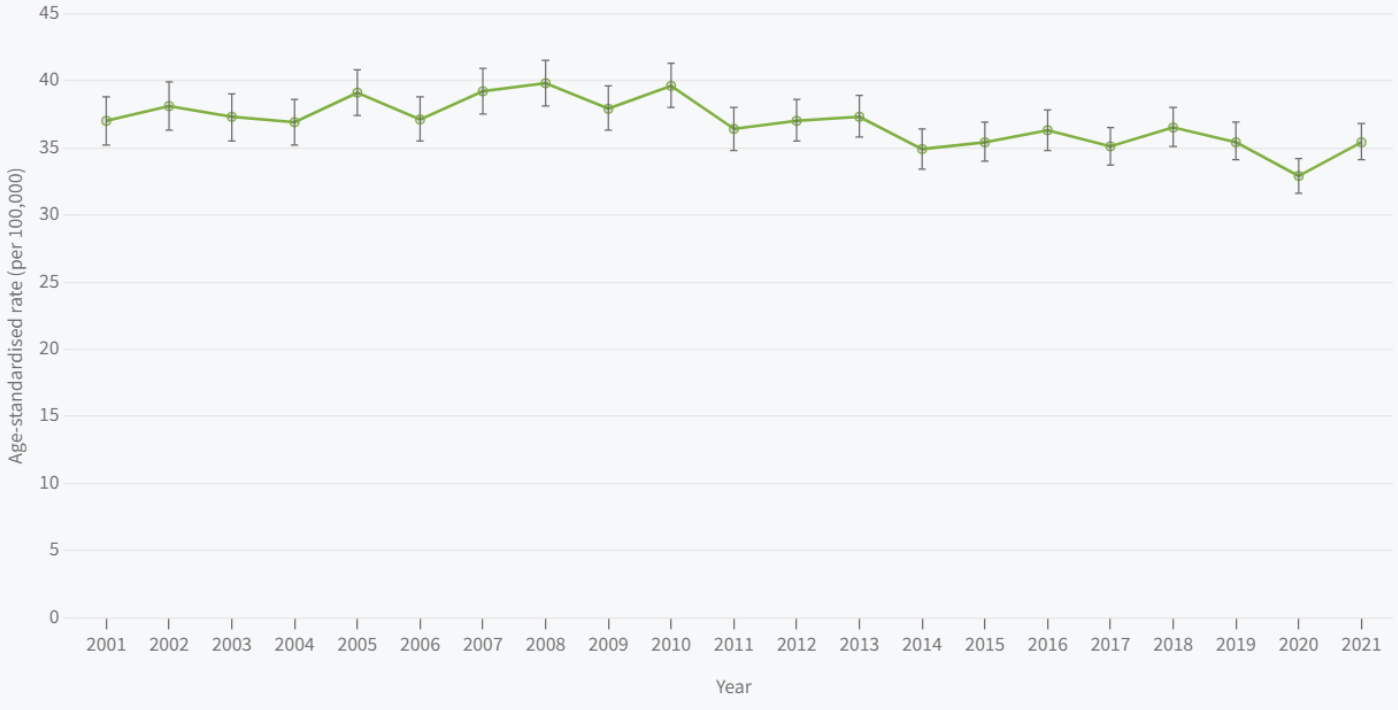
Overexposure to UV radiation from the sun is the main environmental risk factor for melanoma. It has been estimated that more than 90% of all melanoma cases in New Zealand can be attributed to UV radiation exposure (Arnold 2018). The following factors increase the risk of melanoma:

- Unprotected exposure to sunlight
- Sunburn at any age increases the risk of melanoma in later life (particularly risky for childhood sunburns)
- Family history of melanoma
- Fair skin and red, blonde or fair hair
- Use of sunbeds or sunlamps
- A skin type that burns or freckles easily
- Many moles or large moles (more than 50)
- Lowered immunity from some diseases or some medications.

Overall melanoma registration rates have stayed stable since 2001

In 2021, the age-standardised melanoma registration rate was 35.4 per 100,000 (95% confidence interval 34.1–36.8). The melanoma registration rate has been largely stable since 2001 (Figure 1). The registration rate dropped from 35.4 in 2019 (95% confidence interval 34.1–36.9) to 32.9 (95% confidence interval 31.6–34.2) in 2020 but returned to 2019 levels in 2021. The drop in 2020 may have been associated with the COVID-19 pandemic, such as lockdowns and changes in access to the healthcare system. While overall cancer registrations rebounded following lockdowns in 2020 the rebound varied by cancer type and appeared to be lower for melanoma and non-melanoma skin cancer (Gurney et al. 2021).

Figure 1 Melanoma registrations, 2001–2021 (age-standardised rate per 100,000)

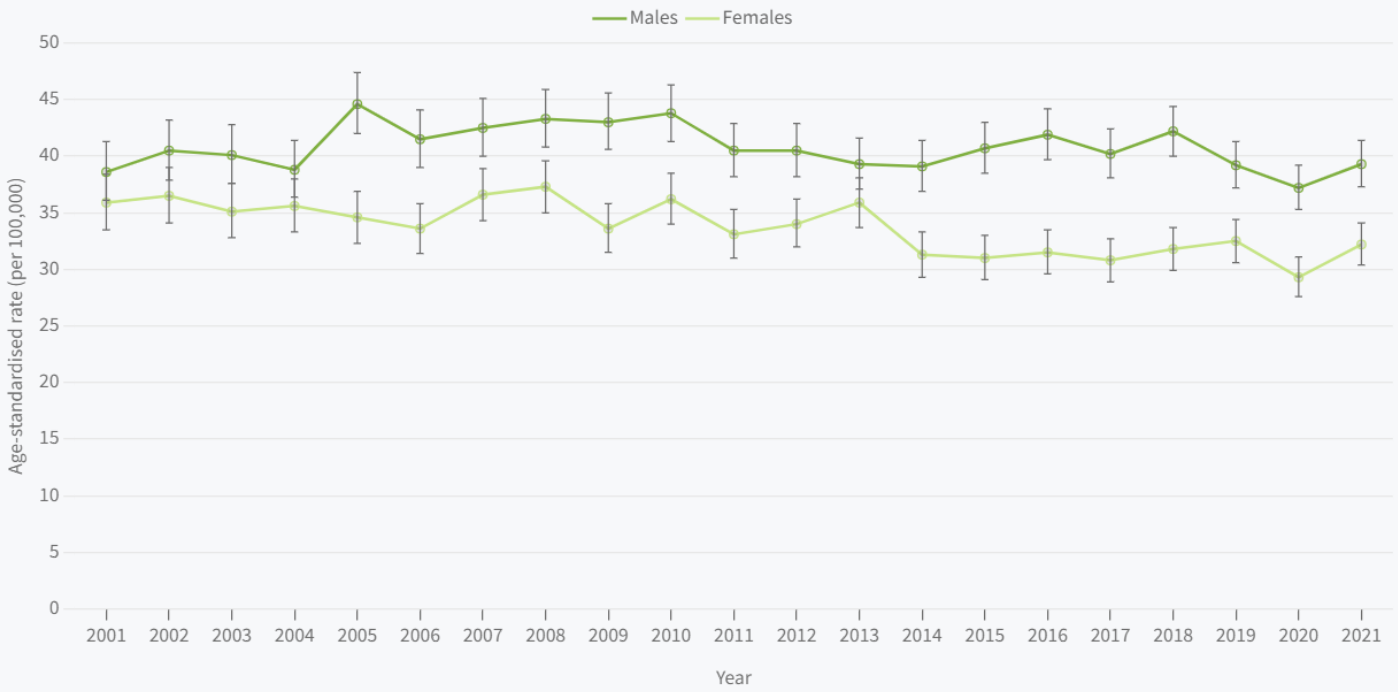


Note: 95% confidence intervals have been presented as error bars.

Source: New Zealand Cancer Registry 2022

The melanoma registration rate has remained statistically significantly higher for males than females over the past 20 years (Figure 2). In 2021, the age-standardised melanoma registration rate was 39.3 per 100,000 (95% confidence interval 37.3–41.4) per 100,000 for males, which was 20% higher than the rate for females of 32.2 per 100,000 (30.4–34.1).

Figure 2 Melanoma registrations, by sex, 2001–2021 (age-standardised rate per 100,000)



Note: 95% confidence intervals have been presented as error bars.

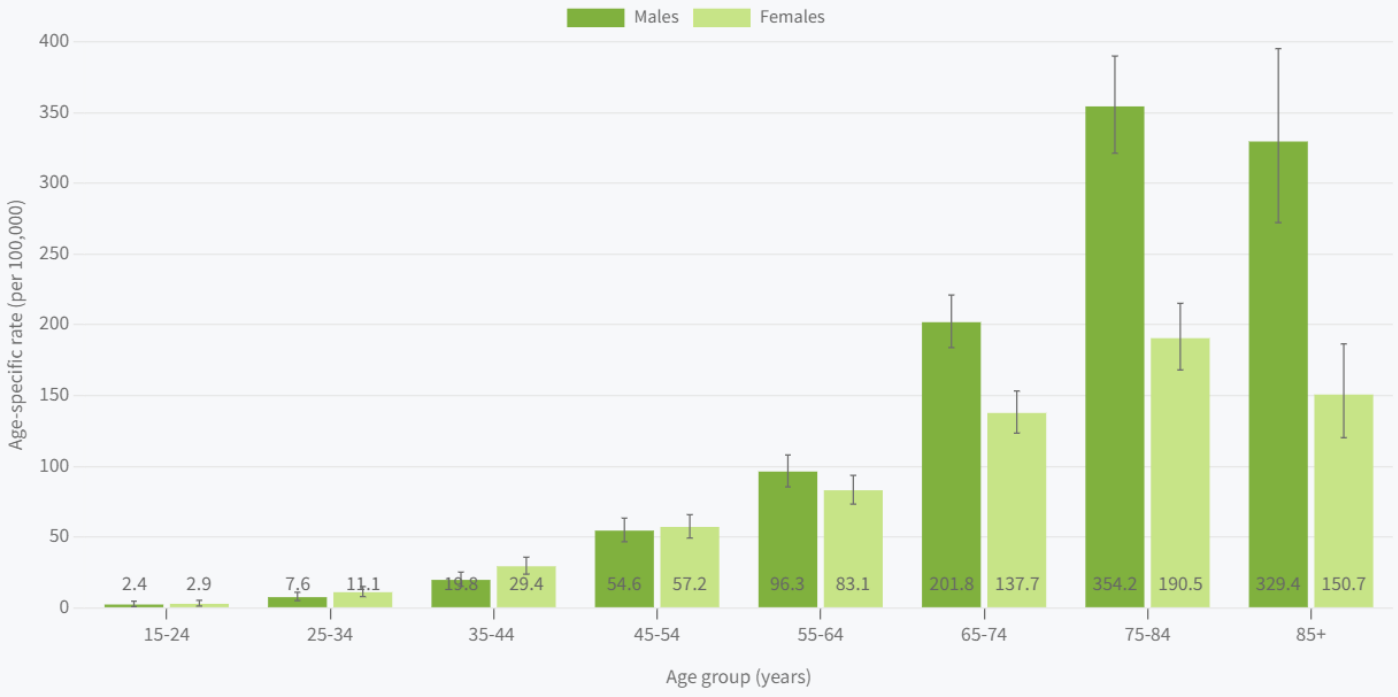
Source: New Zealand Cancer Registry 2022

Males and older adults were most affected by melanoma

Melanoma is a type of skin cancer that predominately affects older people. In keeping with this, melanoma registration rates are higher in the older age groups (Figure 3).

In 2021, age-specific rates for men and women were similar up to the 45-54 years age group. For the 65-74 years and 85+ years age groups males were more likely than females to be diagnosed with melanoma. By age 85+ years, males were 2.2 times as likely as females in that age group to be diagnosed with melanoma. The sex differences are likely due to a combination of behavioural and biological factors (BPAC 2020).

Figure 3 Melanoma registrations, by age group and sex, 2021 (age-specific rate per 100,000)



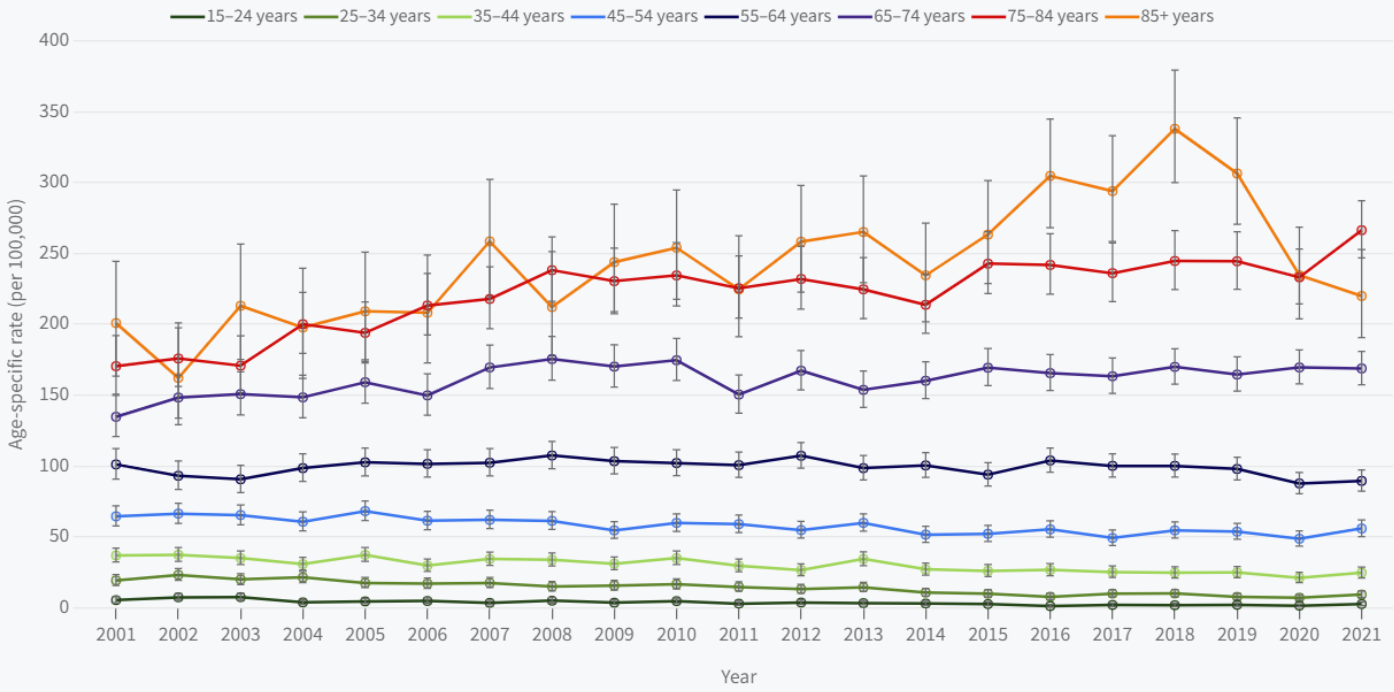
Note: 95% confidence intervals have been presented as error bars.

Source: New Zealand Cancer Registry 2022

Melanoma rates increased among most older age groups but decreased in other age groups

Melanoma registration rates have increased among older age groups over time, particularly in the 75-84 and 85+ years age groups (Figure 4). A recent exception to this trend is the decrease for people aged 85+ years from 306.3 registrations per 100,000 (95% confidence interval 270.5–345.5) in 2019 (before the COVID-19 pandemic) to 234.5 per 100,000 (95% confidence interval 203.8–268.5) in 2020. Lower utilisation of non-urgent health care during the COVID-19 pandemic has been reported in many jurisdictions (WHO 2022). This is a possible factor but does not explain why the drop only occurred for those 85 years and over.

Figure 4 Melanoma registrations by age group, 2001-2021 (age-specific rate per 100,000)



Note: 95% confidence intervals have been presented as error bars.

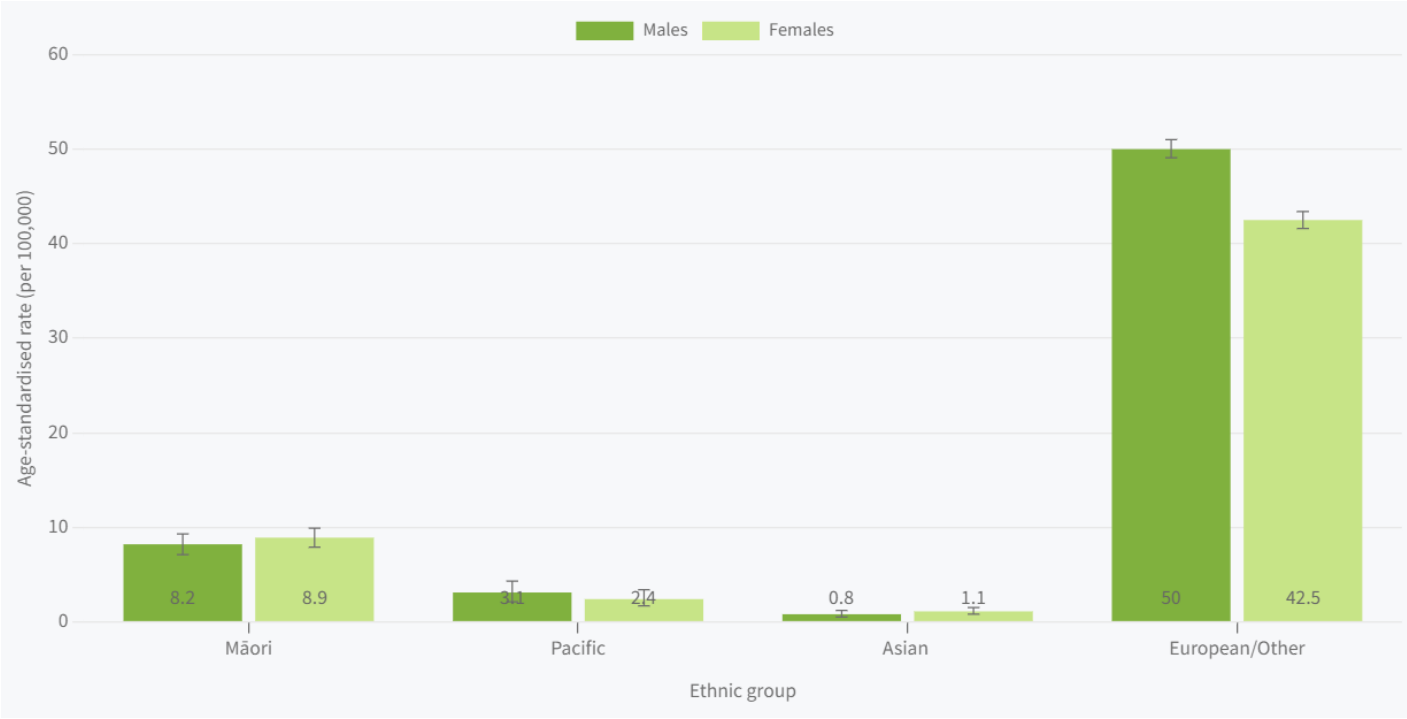
Source: New Zealand Cancer Registry 2022

Melanoma rate among European/Other ethnic group is five times the rate among Māori

In 2021, almost all melanoma cancer registrations were for people of European/Other ethnicity (2726 out of 2859 registrations, or 95%). Only a small number of registrations were among Māori (81 registrations), Pacific people (9 registrations) and Asian (12 registrations) ethnic groups.

After standardising for age, the rate for European/Other ethnicity was 50.0 per 100,000 (95% confidence interval 49.1–51.0) for males and 42.5 per 100,000 (95% confidence interval 41.6–43.4) for females. These rates are many times higher than those of other ethnic groups (Figure 5).

Figure 5 Melanoma registrations, by sex and ethnic group (prioritised), 10 years grouped 2012–2021 (age-standardised rate per 100,000)

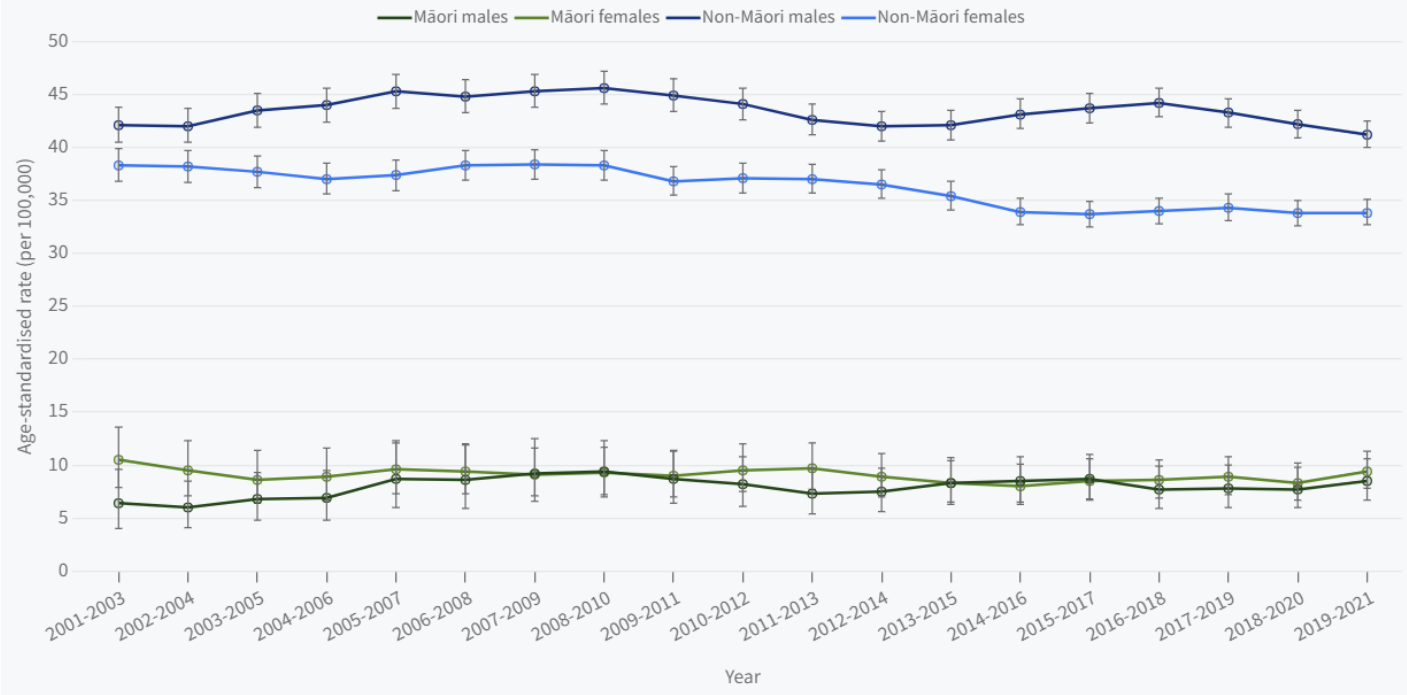


Note: 95% confidence intervals have been presented as error bars. Prioritised ethnic groups have been used.

Source: New Zealand Cancer Registry 2022

Non-Māori have consistently had higher rates of melanoma than Māori. Non-Māori males have also consistently had higher rates of melanoma than non-Māori females (Figure 6). In 2021, the non-Māori rate was nearly five times higher than the Māori rate for males (standardised rate ratio 4.9, 95% confidence interval 3.9–6.1) and more than 3 times higher for females (standardised rate ratio 3.6, 3.0–4.3).

Figure 6 Melanoma registrations, by sex and Māori/non-Māori, 2001–2021, 3-year moving averages (age-standardised rate per 100,000)



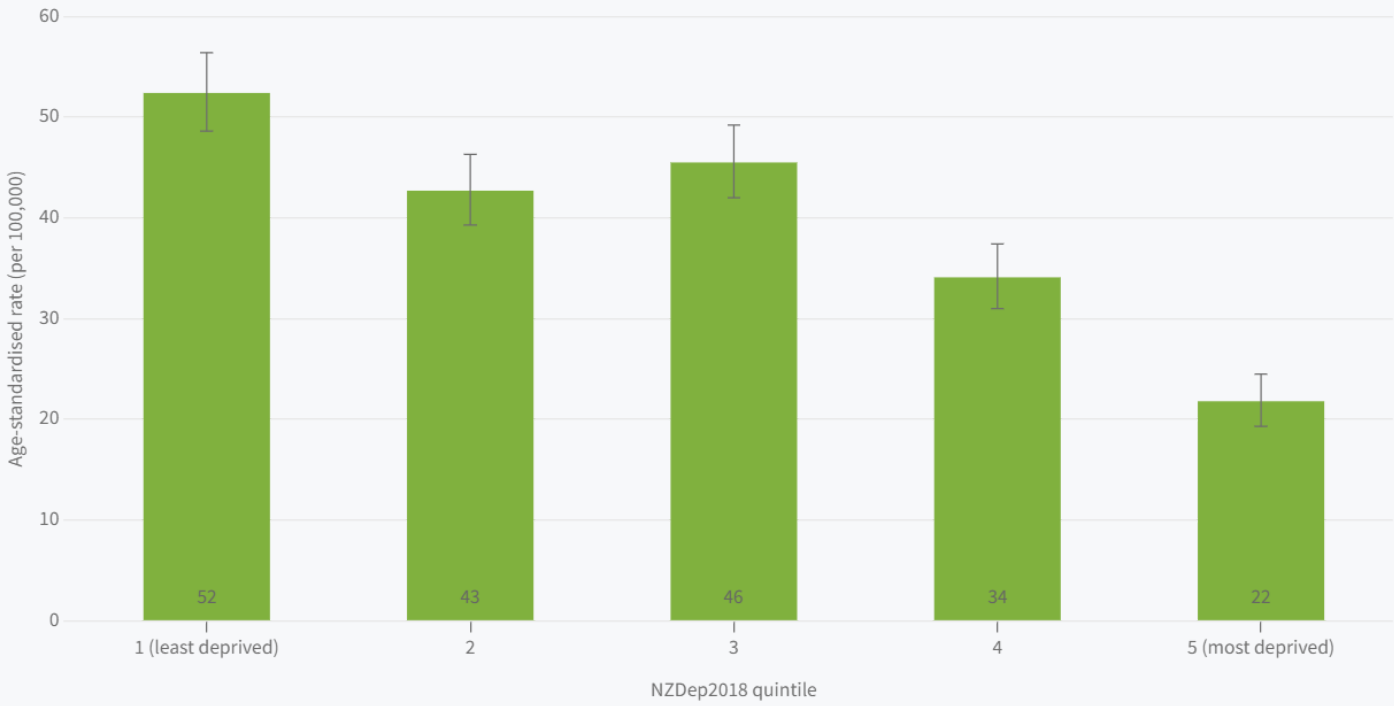
Note: 95% confidence intervals have been presented as error bars. Three-year moving averages have been used.

Source: New Zealand Cancer Registry 2022

Lower melanoma registration rates in the most deprived areas

In 2021, the melanoma registration rate was lower in the most deprived NZDep2018 quintile (quintile 5) than in other quintiles (Figure 7). This trend has been consistent since 2001. After standardising for age, people in the least deprived areas (quintile 1) were more than twice as likely to have been diagnosed with melanoma as those in the most deprived areas (quintile 5) (standardised rate ratio 2.4, 95% confidence interval 2.1–2.8).

Figure 7 Melanoma registrations, by area deprivation quintiles (NZDep2018), 2021 (age-standardised rate per 100,000)



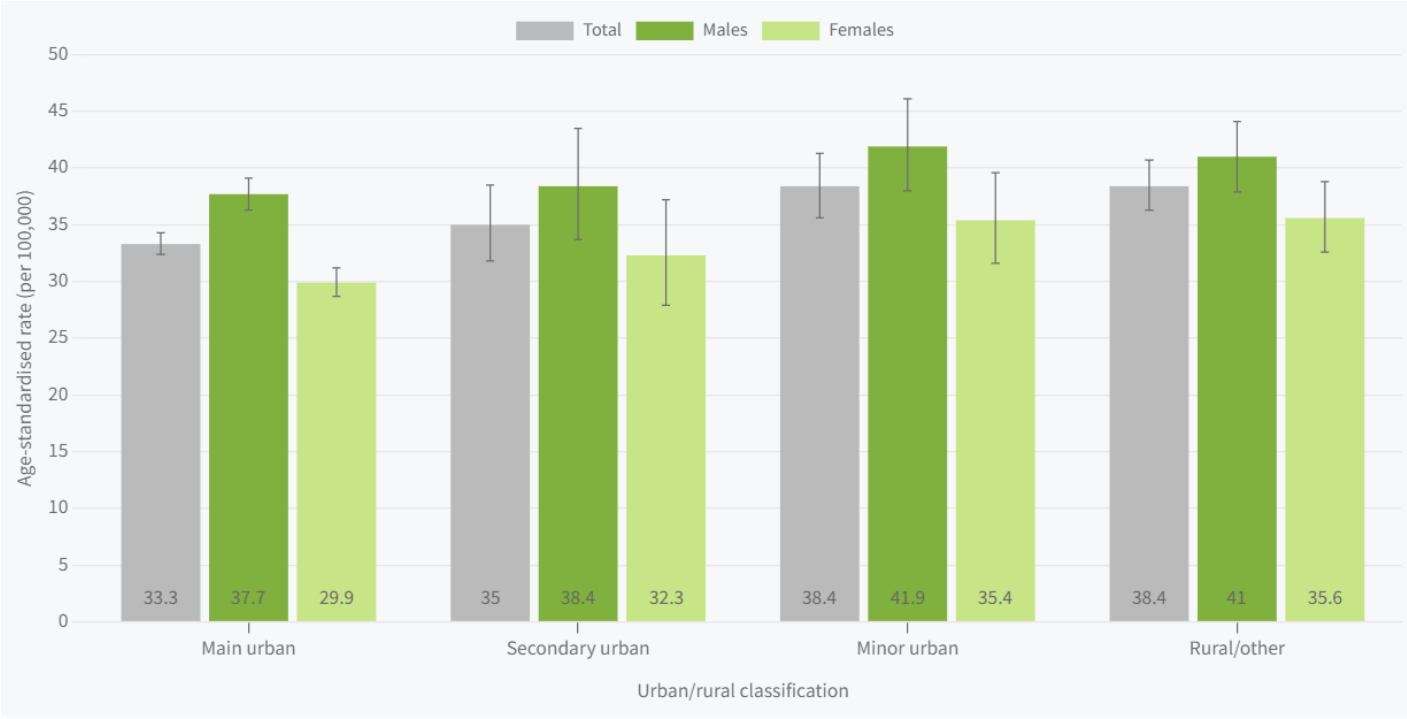
Note: 95% confidence intervals have been presented as error bars.

Source: New Zealand Cancer Registry 2022

Small gender difference in melanoma registration rates by urban/rural category

Melanoma registration rates for 2019–21 were lower in the main urban areas (33.3 per 100,000) than for rural/other (38.4 per 100,000) (Figure 8). Rates were similar for males across all urban and rural areas. For females however, the rate for main urban areas (29.9 per 100,000) was lower than the rates for minor urban areas (35.4 per 100,000) and rural/other (35.6 per 100,000).

Figure 8 Melanoma registrations, by sex and urban/rural classification, 3 years grouped 2019–2021 (age-standardised rate per 100,000)



Notes: 95% confidence intervals have been presented as error bars. The Statistics New Zealand urban-rural classification for 2013 has been used. Main urban areas are major towns and cities with a population of 30,000 or more. Secondary urban areas are smaller towns with a population of 10,000–29,999 people. Minor urban areas are towns with a population of 1,000–9,999. Rural areas include rural centres, and rural areas outside of these.

Source: New Zealand Cancer Registry 2022

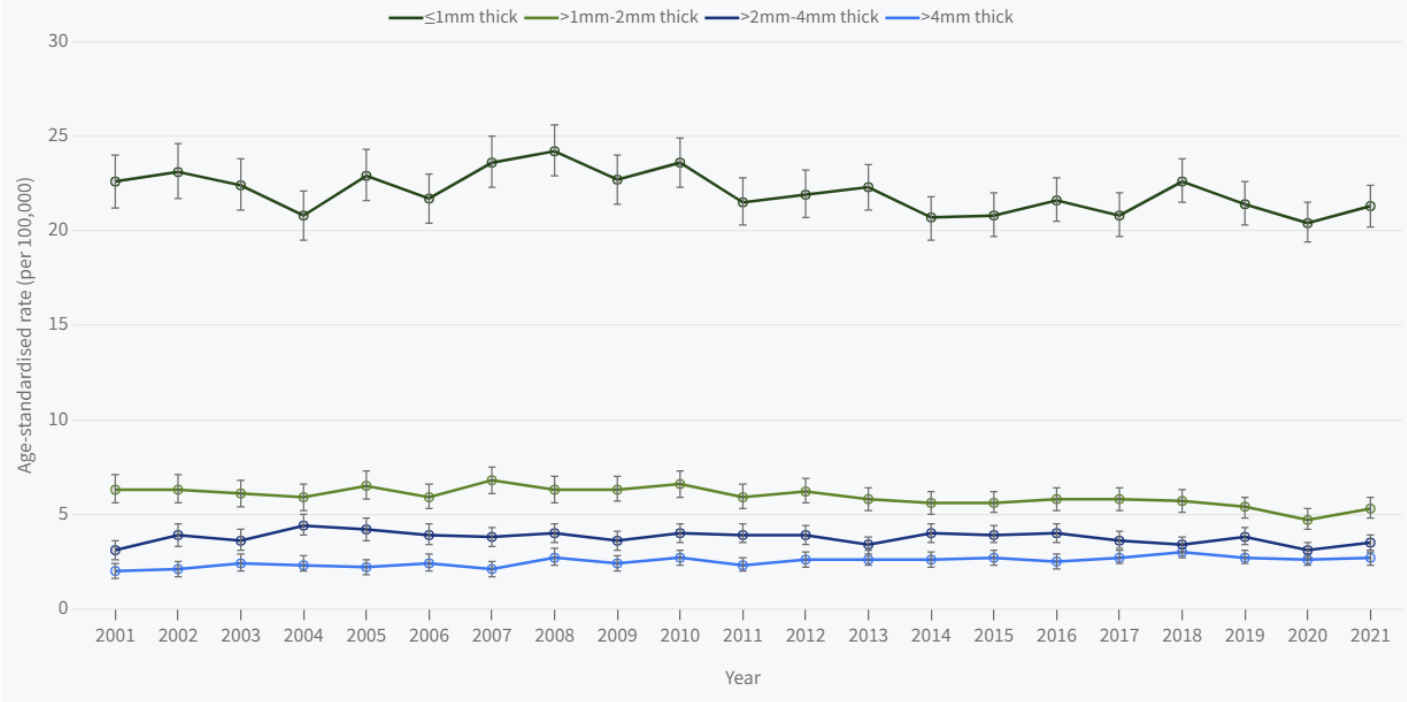
No change in melanoma thickness since 2001

Melanoma lesion thickness is the strongest predictor of prognosis. In general, the thinner the lesion, the better the outcome for the patient (BPAC 2020).

In 2021, of the 2,634 melanomas with known thickness, 62.6% (1650) were less than or equal to 1mm thick, 16.2% (426) were 1–2mm thick, 11.5% (302) were 2–4mm thick, and 9.7% (256) were greater than 4mm thick.

While registration rates for melanomas less than or equal to 1mm thick have fluctuated since 2001, rates for the other thickness categories have remained stable (Figure 9).

Figure 9 Melanoma registrations, by melanoma thickness, 2001–2021 (age-standardised rate per 100,000)



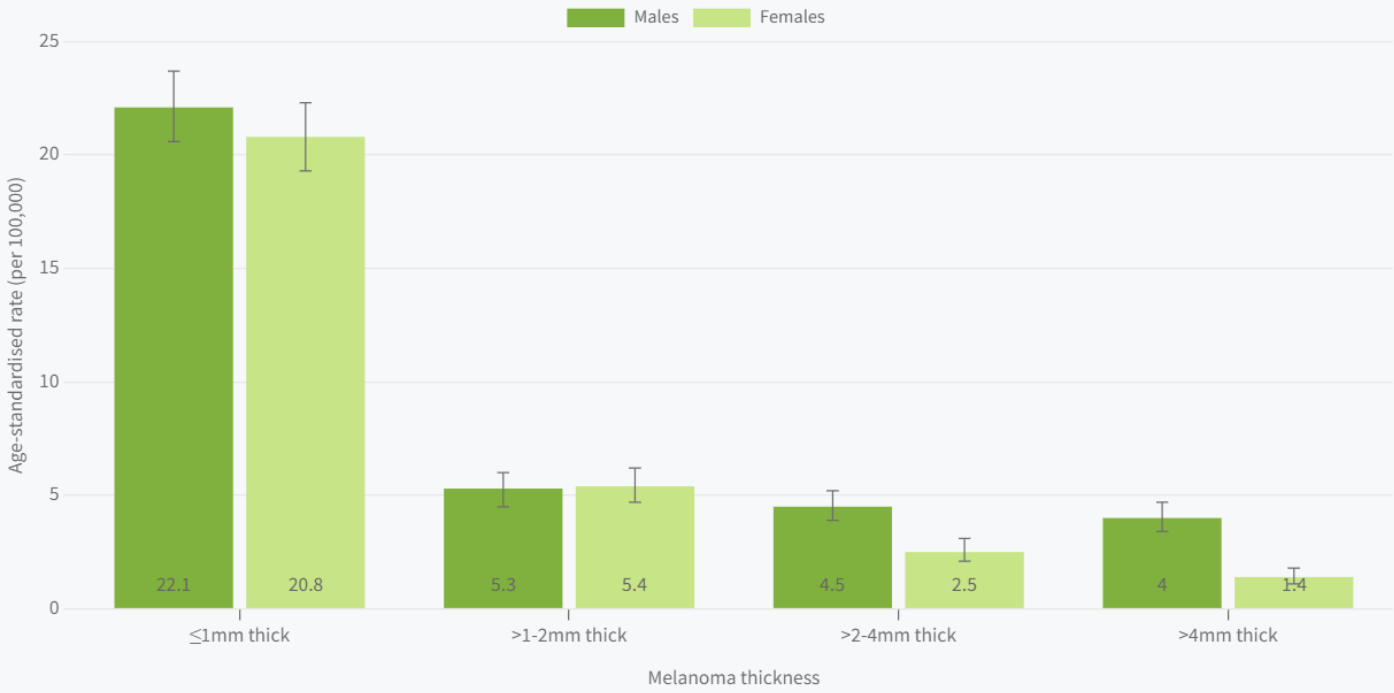
Note: 95% confidence intervals have been presented as error bars.

Source: New Zealand Cancer Registry 2022

Males have higher rates of thick melanoma

In 2021, of the 2634 melanomas with known thickness, 256 (9.7%) were thicker than 4mm. The rate of thick melanoma was more than twice as high for males (4.03 per 100,000) than females (1.44 per 100,000) (Figure 10), a consistent disparity since 2001.

Figure 10 Melanoma registrations, by melanoma thickness and sex, 2021 (age-standardised rate per 100,000)



Note: 95% confidence intervals have been presented as error bars.

Source: New Zealand Cancer Registry 2022

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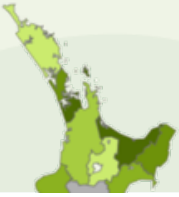

Data for this indicator

This indicator reports registrations of melanoma (ICD-10AM C43) from 2001–2021.

This indicator is an analysis of the most recent data available from the New Zealand Cancer Registry, provided to EHINZ by the Ministry of Health in July & 2022.

Crude (age-specific) rates presented in this factsheet do not take into account varying age distributions when comparing between populations.

Age-standardised rates presented in this factsheet take into account varying age distributions when comparing between populations.

All 95% confidence intervals have been presented as error bars on graphs.

Standardised rate ratios are a type of desciptive analysis that illustrates differences between groups. They compare the rates of two groups by dividing the rate for the group of primary interest by the rate for the comparison group. A rate ratio above 1.0 means that whatever is being measured (e.g. melanoma rates) is higher in the group of primary interest.

For additional information, see the metadata link below.

References

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Previous factsheet(s):

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Further information

For descriptive information about the data Metadata Sheet

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