

Melanoma Mortality

This factsheet presents information about the rates of melanoma mortality in New Zealand. New Zealand and Australia have some of the highest melanoma rates worldwide.

Key facts



In 2018, there were 296 deaths from melanoma in New Zealand, a 22% decrease since 2015 (378 deaths). This decrease coincides with the funding of new treatments for advanced melanoma (Opdivo and Keytruda) by PHARMAC in mid-2016.



The age-standardised melanoma mortality rate in 2018 (3.3 per 100,000) was a statistically significant decrease from 2015 (4.9 per 100,000).



In 2017–18, melanoma mortality rates increased with age and were at least twice as high for males aged 65+ years compared to females in the same age group.



In 2009–18, melanoma mortality rates were highest in the European/Other ethnic group (5.5 per 100,000), almost 5 times the rate seen for the next most affected group, Māori. Research shows that survival rates of people diagnosed with melanoma are worse for Māori than non-Māori.



In 2014–18, Hawke's Bay and Whanganui Districts (formerly district health boards) had high rates of melanoma mortality. While Counties Manukau District had statistically significantly lower rates than the national rate.



New drugs for melanoma.
Opdivo and Keytruda.

The decrease in deaths from melanoma since mid-2016 happened around the time of the introduction of new treatments.

Melanoma and environmental health

Research suggests that UV radiation exposure accounts for between 50% and over 90% of all cutaneous malignant melanoma cases, with risk varying between countries and regions (WHO, 2010). Risk factors for melanoma include:

- fair skin, and skin types prone to freckles
- history of heavy sun exposure and sunburn
- living in regions with high UV levels.

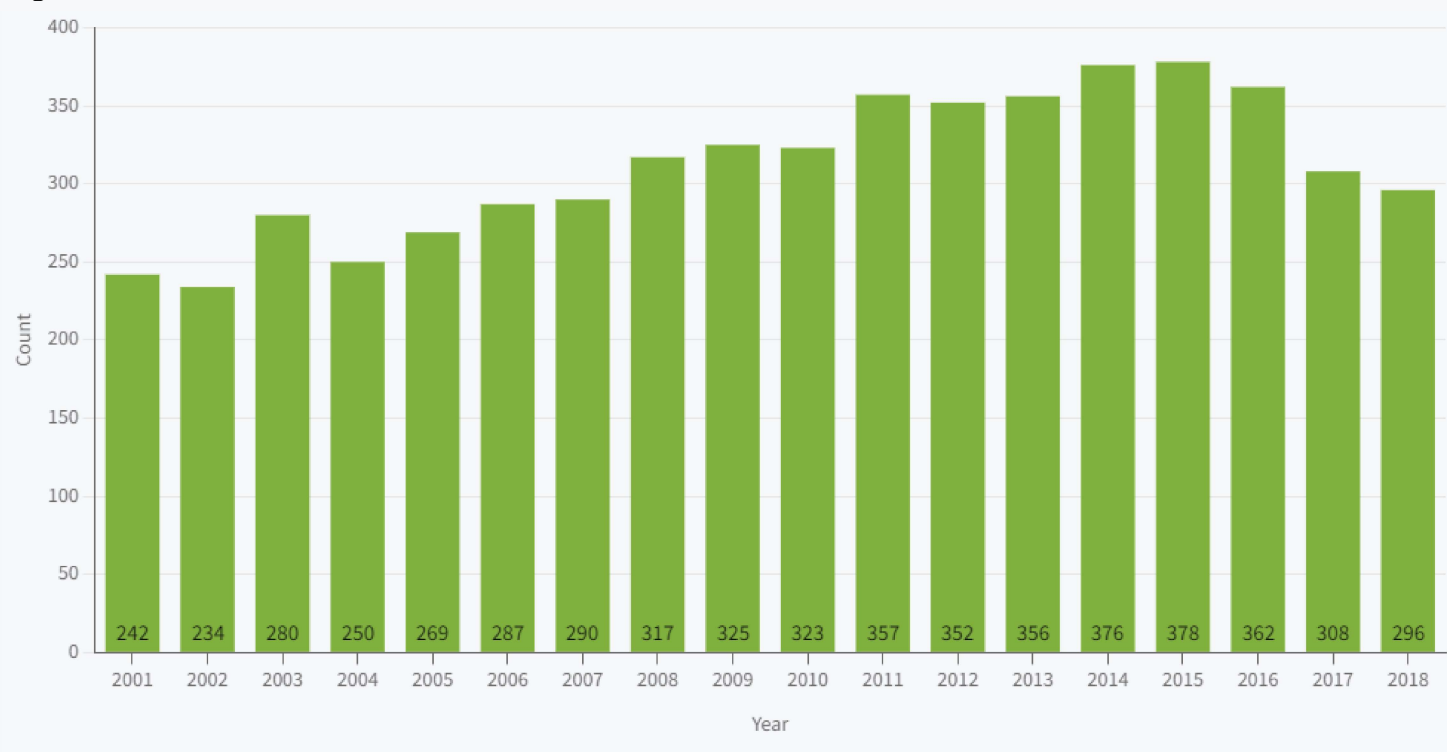
New Zealand and Australia have some of the highest rates of melanoma incidence and mortality in the world (Global Cancer Observatory 2020). These rates are believed to partly be due to high UV levels and a high proportion of New Zealanders being fair-skinned and therefore at greater risk of skin damage from high UV exposure (McKenzie 2016).

In mid-2016, PHARMAC started funding two new treatments for advanced melanoma in New Zealand: Opdivo (nivolumab) and Keytruda (pembrolizumab) (PHARMAC 2016). These treatments, along with public health programmes such as SunSmart, are aimed at reducing the health burden of melanoma in the future.

2018 melanoma mortality rates are the lowest in many years

In 2018, 296 people died from melanoma in New Zealand. This was a 22% decrease since 2015 (378 deaths), and the lowest yearly death toll since 2007 (Figure 1). In 2018, melanoma accounted for approximately 60% of all skin cancer deaths in New Zealand, with non-melanoma skin cancers accounting for a further 204 deaths.

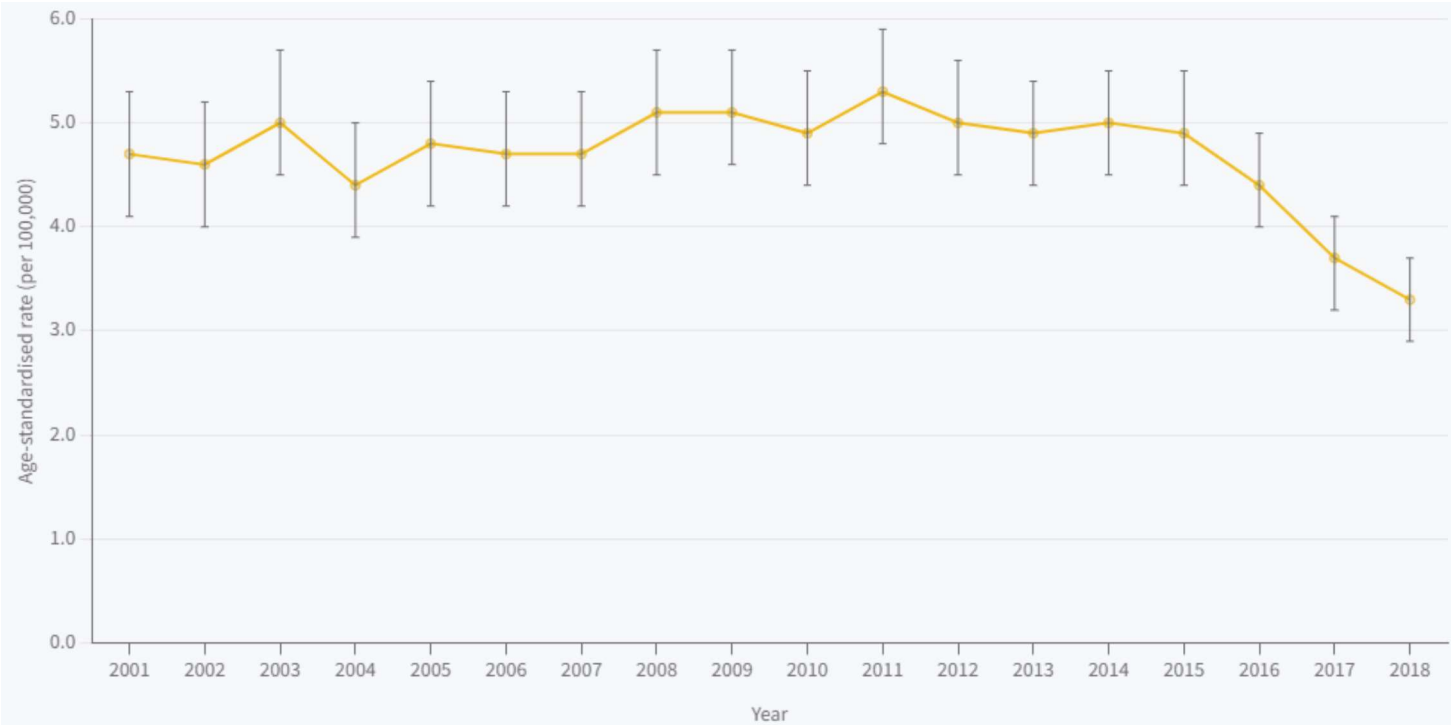
Figure 1 Melanoma deaths in New Zealand, 2001–18



Source: New Zealand Mortality Collection

The age-standardised mortality rate for melanoma in 2018 was 3.3 per 100,000, a statistically significant decrease since 2015 (Figure 2).

Figure 2 Melanoma mortality rates and counts in New Zealand, 2001–18



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ASR per 100,000	4.7	4.6	5	4.4	4.8	4.7	4.7	5.1	5.1	4.9	5.3	5	4.9	5	4.9	4.4	3.7	3.3
CR per 100,000	6.2	5.9	7	6.1	6.5	6.9	6.9	7.4	7.6	7.4	8.1	8	8	8.3	8.2	7.7	6.4	6
Count	242	234	280	250	269	287	290	317	325	323	357	352	356	376	378	362	308	296

Note: 95% confidence intervals have been presented as error bars. See [Metadata](#) for more information on how to interpret this graph.

Source: New Zealand Mortality Collection

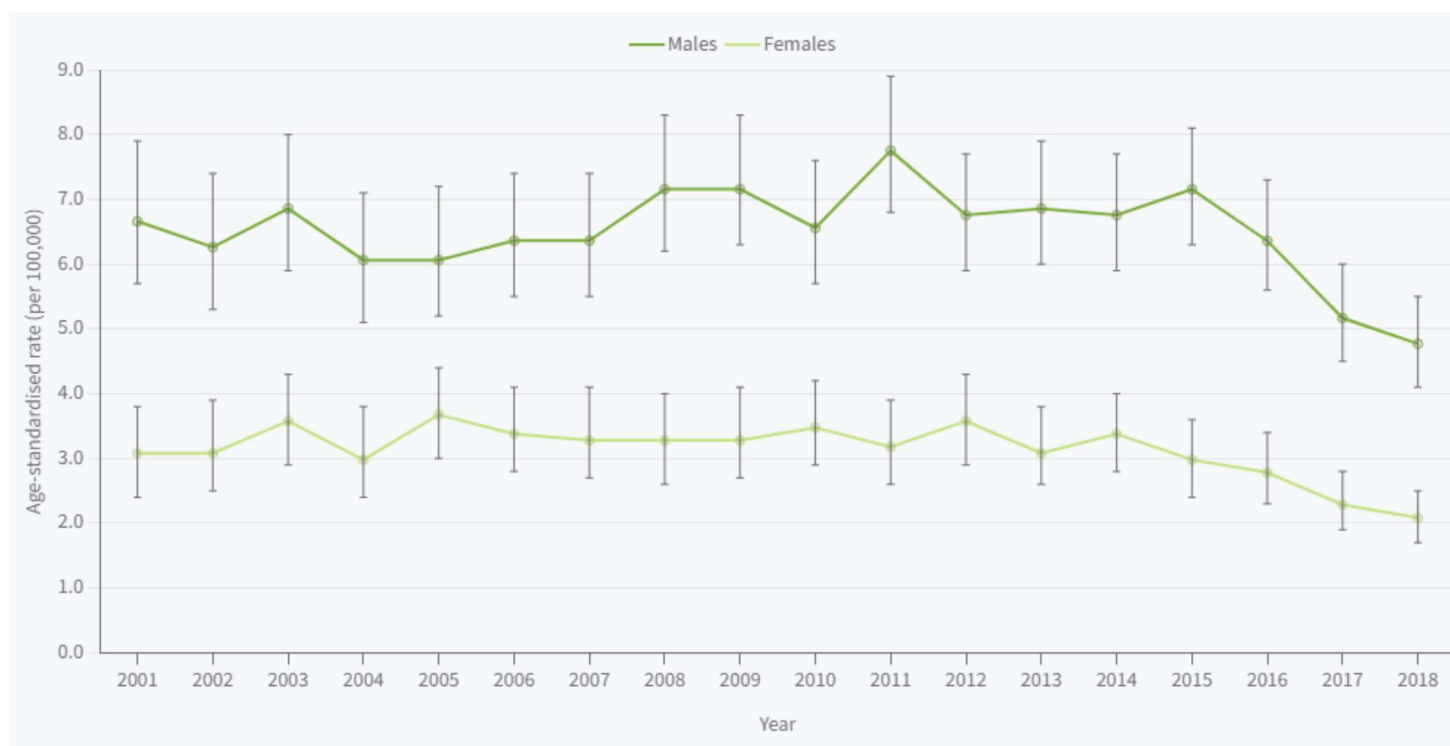
While the melanoma mortality rate has decreased since 2015, there have been no similar changes in melanoma registration rates, or in melanoma thickness at diagnosis, between 2001 and 2019 (Environmental Health Intelligence NZ 2021).

Given this, the decrease in melanoma deaths from 2015 to 2018 may be linked to the availability of two new treatments for advanced melanoma - Opdivo and Keytruda. These treatments began receiving public funding by PHARMAC in July 2016 and September 2016 respectively. The decrease in melanoma deaths is likely due to these new treatments, as (i) it is in line with what would be expected from the addition of these PD-L1 treatments, based on clinical studies, and (ii) there are no other major factors that explain this large decrease (Mason et al 2022).

Males have higher melanoma mortality rates than females

From 2001–18, melanoma mortality rates were about twice as high in males compared to females (Figure 3). This is consistent with global data, which shows males having greater rates (Global Cancer Observatory 2020). Research into these sex differences suggests that males are less likely to engage in preventative behaviours and to self-detect melanoma growths, which could partially explain these differences (Bellenghi et al 2020).

Figure 3 Melanoma mortality rates in New Zealand, by sex, 2001–18



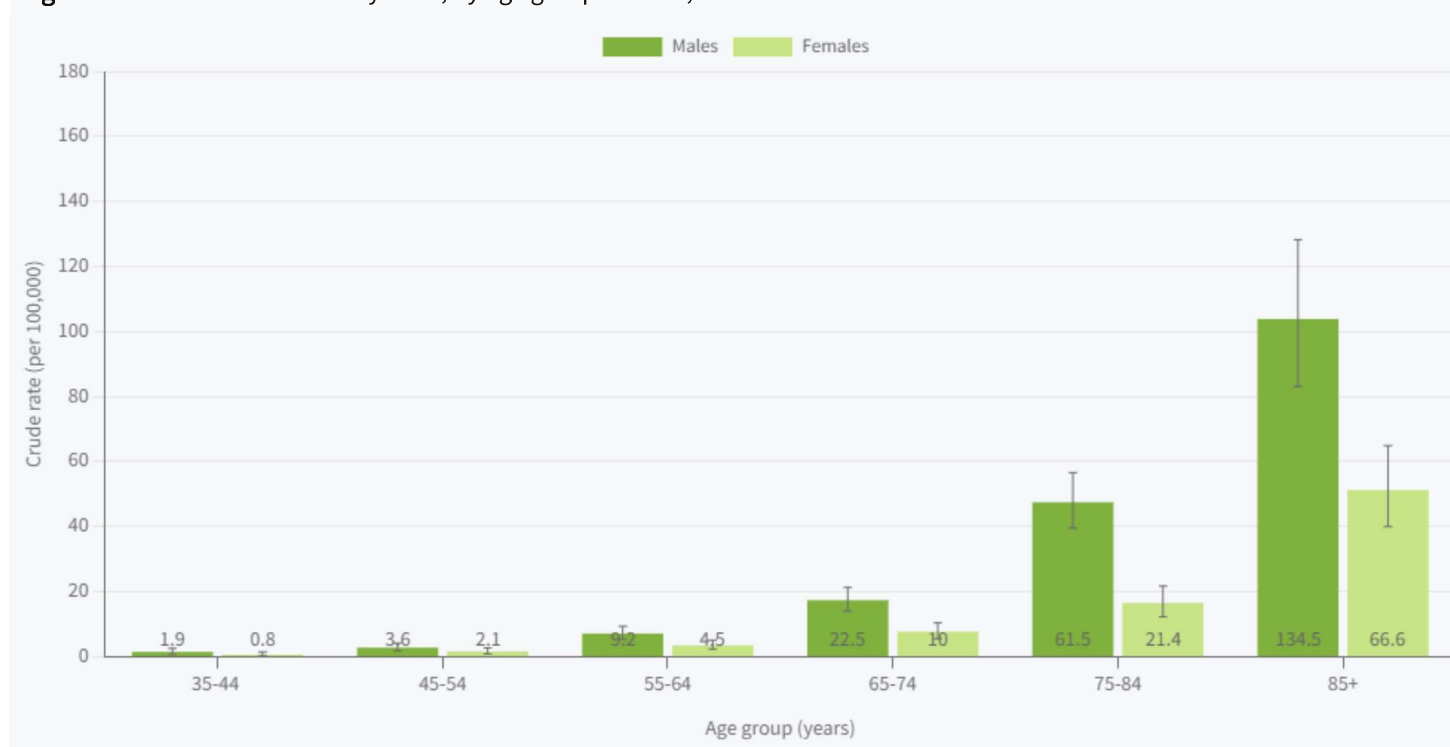
Note: 95% confidence intervals have been presented as error bars. See [Metadata](#) for more information on how to interpret this graph.

Source: New Zealand Mortality Collection

Melanoma mortality rates increase with age

In 2017–18, melanoma mortality rates were highest in the 85+ years age group for both males (134.5 deaths per 100,000) and females (66.6 deaths per 100,000) (Figure 4). In age groups 65+ years, mortality rates for males were at least double the rates seen for females in the same age group.

Figure 4 Melanoma mortality rates, by age group and sex, 2017–18



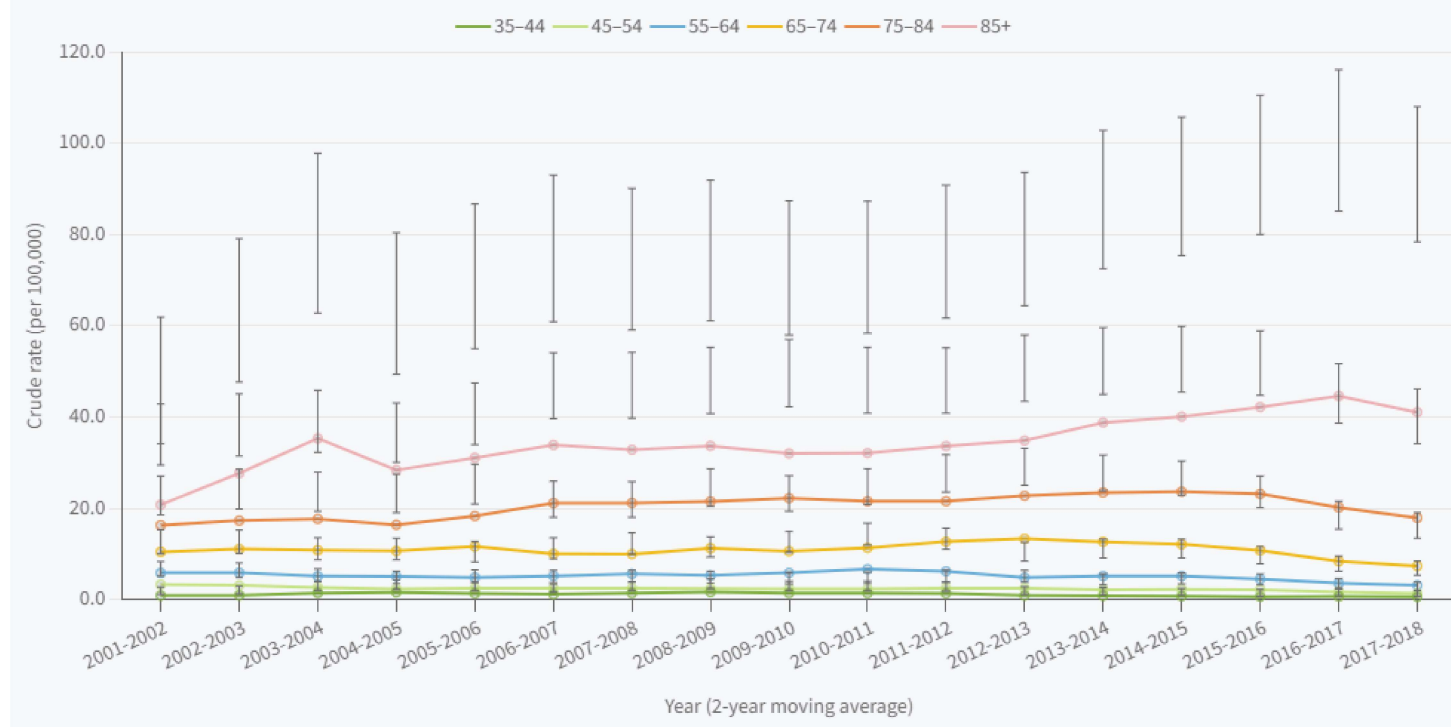
Note: 95% confidence intervals have been presented as error bars. See [Metadata](#) for more information on how to interpret this graph.

Source: New Zealand Mortality Collection

Melanoma mortality rates decrease in 55–84-year age groups

From 2001–15, melanoma mortality rates were relatively stable in all age groups under 85 years (Figure 5). However, since 2014–15 rates have decreased in the 55–84-year age groups. In multiple other nations, mortality rates appear to be increasing in those 55 years and older (Podlipnik et al 2020, Wu et al 2020).

Figure 5 Melanoma mortality rates over time, by age group, 2001–18, 2-year moving averages



Note: 95% confidence intervals have been presented as error bars. See [Metadata](#) for more information on how to interpret this graph.

Source: New Zealand Mortality Collection

European/Other ethnic group have the highest melanoma mortality rate

Age-standardised rates in the European/Other ethnic group (5.5 per 100,000) are almost 5 times greater than the next most affected ethnic group, Māori (Table 1).

Table 1 Melanoma mortality, by prioritised ethnic groups, 2009–18

Ethnic group	Number of deaths	Crude rate (per 100,000)	Age-standardised rate (per 100,000)
European/Other	3338	11.3 (10.9–11.7)	5.5 (5.3–5.7)
Māori	61	0.8 (0.6–1.1)	1.2 (0.9–1.5)
Pacific	16	0.5 (0.3–0.9)	*
Asian	18	0.3 (0.2–0.5)	*
Total	3433	7.6 (7.3–7.8)	4.6 (4.5–4.8)

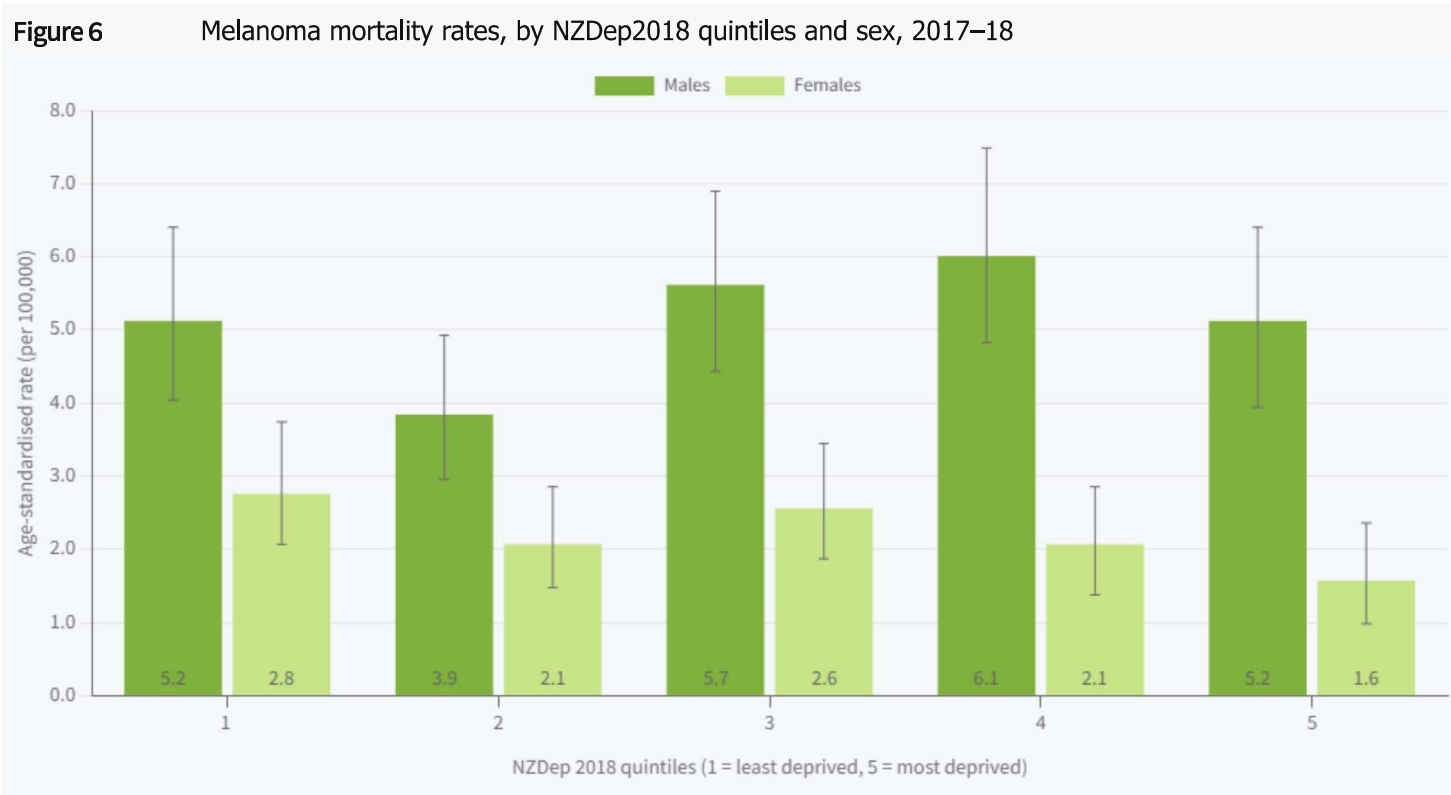
Note: * The rate is suppressed due to an unreliable estimate with small numbers. Prioritised ethnic groups have been used. Rates for the Pacific and Asian groups are based on a low number of deaths and caution should be taken when interpreting these results. See [Metadata](#) for more information on how to interpret this graph.

Source: New Zealand Mortality Collection

While melanoma mortality rates were lower among Māori, there are substantial gaps in survival rates between Māori and non-Māori (Te Aho o Te Kahu 2021). Among those diagnosed with melanoma, Māori were 2.6 times more likely to die than non-Māori (age- and sex-adjusted) (Gurney et al 2020). This is the largest disparity of any cancer between Māori and non-Māori.

Melanoma mortality rates similar across socioeconomic quintiles

In 2017–18, mortality rates were relatively stable across socioeconomic deprivation quintiles based on sex, with males having consistently higher rates in each quintile (Figure 6). However, inequity between males and females is highest in the most deprived areas, quintile 5, with the male rate more than three times that for females.



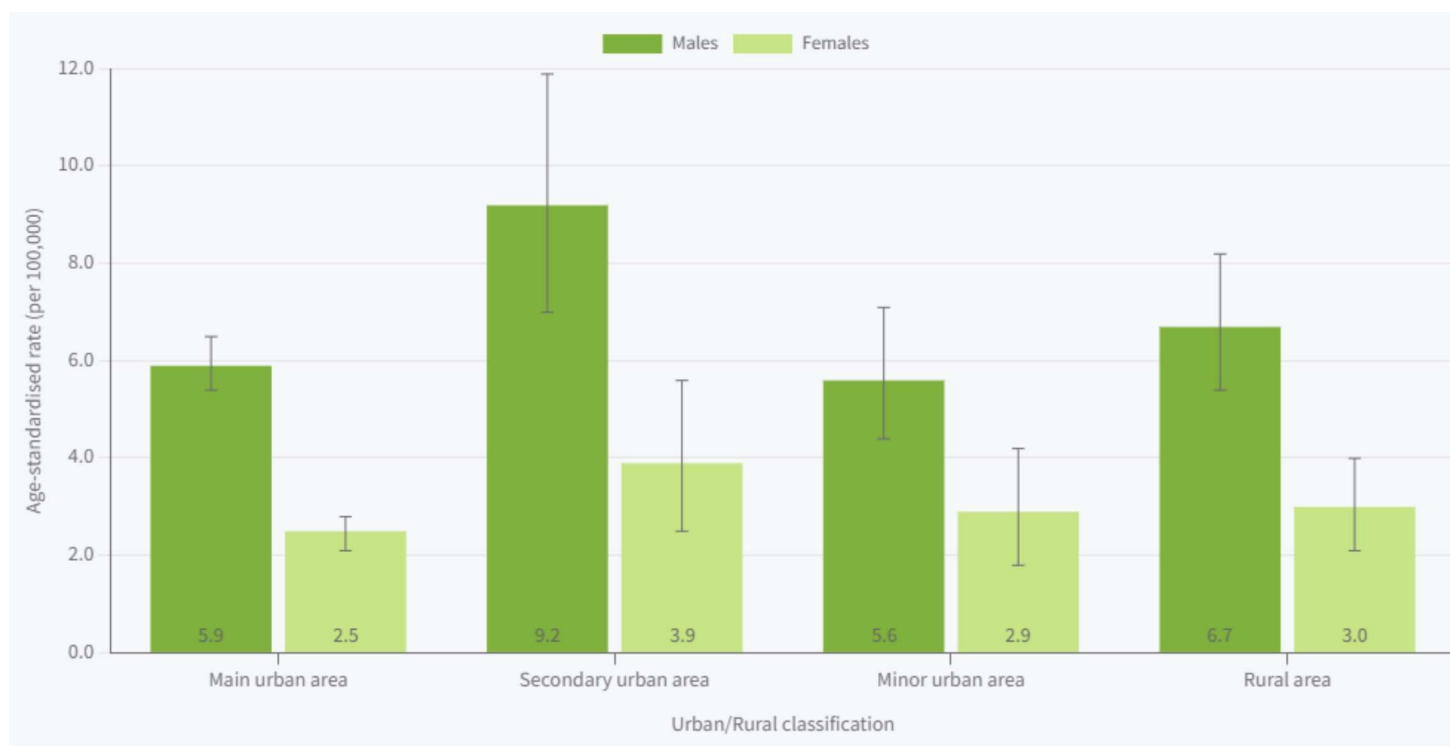
Note: 95% confidence intervals have been presented as error bars. See Metadata for more information on how to interpret this graph.

Source: New Zealand Mortality Collection

Melanoma mortality rates highest for males living in secondary urban areas

In 2015–17, males in secondary urban areas had the highest rate of melanoma mortality (Figure 7). Males in all urban-rural area types had melanoma mortality rates roughly twice as high as the female rate in the same area type.

Figure 7 Melanoma mortality rates, by sex and urban-rural classification, 2015–17



Note: 95% confidence intervals have been presented as error bars. The Statistics New Zealand urban-rural classification for 2013 has been used. See [Metadata](#) for more information on how to interpret this graph.

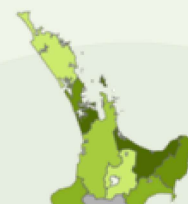
Source: New Zealand Mortality Collection



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Data for this indicator

This indicator includes the most recent data available from the New Zealand Mortality Collection, provided to EHINZ by the Ministry of Health in August, 2021.

The crude rates presented in this factsheet do not take into account varying age distributions when comparing between populations.

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

For additional information, see the metadata link below.

References

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