

Melanoma cancer registrations

HIGHLIGHTS:

- In 2015, there were 2423 registrations of melanoma in New Zealand, making melanoma the 4th most commonly registered cancer in 2015. The melanoma registration rate has decreased since 2008.
- In 2015, melanoma registration rates were higher in males, and in older age groups, especially 75+ years. Almost all melanoma registrations were in people of European/Other ethnicity (2259 out of 2423 registrations, 93%).
- Melanoma registration rates were lower in the most deprived areas (NZDep2013 quintile 5) than in other areas.
- Melanoma registration rates were higher in secondary urban areas and minor urban areas, than in main urban areas and rural areas. By DHB, melanoma registration rates were highest in Taranaki and West Coast DHBs.
- In 2015, of the 2253 melanoma with known thickness, 11% were thick melanoma (Breslow's thickness of 4.0mm or more), which can indicate a lower survival rate. The rate of thick melanoma has increased since 2001.



Relevance of melanoma to environmental health

Melanoma is a type of skin cancer, and most melanoma (80–96%) is caused by UV exposure (WHO 2006). Risk factors for melanoma include sun exposure, fair skin, and childhood sun exposure/sunburns. Skin cancer is one of the most common cancers in New Zealand. In 2012, New Zealand had the highest melanoma incidence rate in the world (IARC 2014).

Data for this indicator

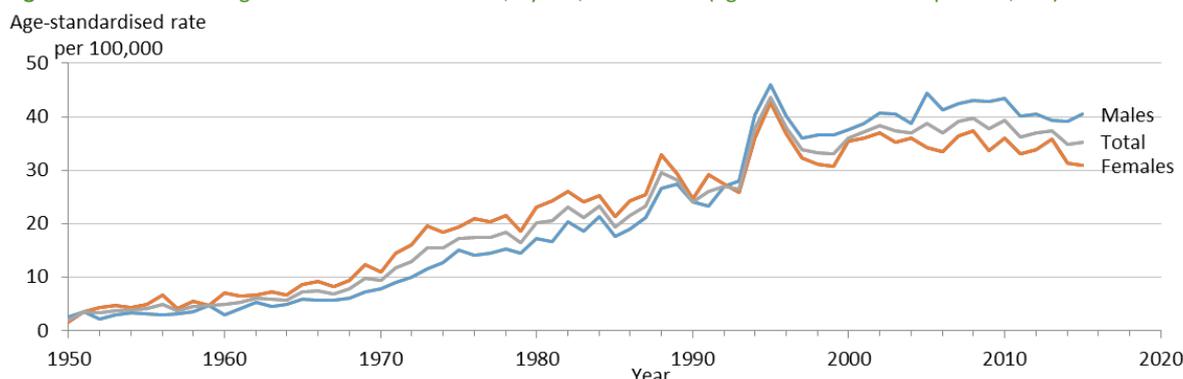
The New Zealand Cancer Registry collects registrations of all cancers (excluding non-melanoma skin cancer) in New Zealand. This indicator reports registrations of melanoma (ICD-10AM C43) from 2001 to 2015. Data have been pooled for some years to give sufficient numbers for analysis. Analyses have excluded overseas visitors.

Decrease in melanoma registration rate since 2008

In 2015, there were 2423 registrations of melanoma in New Zealand. Melanoma was the 4th most commonly registered cancer in New Zealand in 2015, behind breast cancer, prostate cancer and colon cancer. There has been a small drop in the melanoma registration age-standardised rate over the past 5–10 years, from 39.8 per 100,000 in 2008 (95% confidence interval 38.2–41.5), to 35.5 per 100,000 (34.1–37.0) in 2015 (Figure 1).

The melanoma registration rate has remained consistently higher for males than females over the past 20 years. In 2015, the age-standardised melanoma registration rate was 40.8 per 100,000 for males (38.6–43.1), compared with 31.1 per 100,000 (29.2–33.1) for females.

Figure 1 : Melanoma registrations in New Zealand, by sex, 1948–2015 (age-standardised rate per 100,000)



Notes: Registration of cancers has only been mandatory in New Zealand since July 1994 (when the Cancer Registry Act 1993 came into effect), hence the increase in registrations in 1994. It has been estimated that the under-ascertainment rate for melanoma during the 1980s was 25–50 percent (Bulliard and Cox 1996, cited in Ministry of Health 1998).

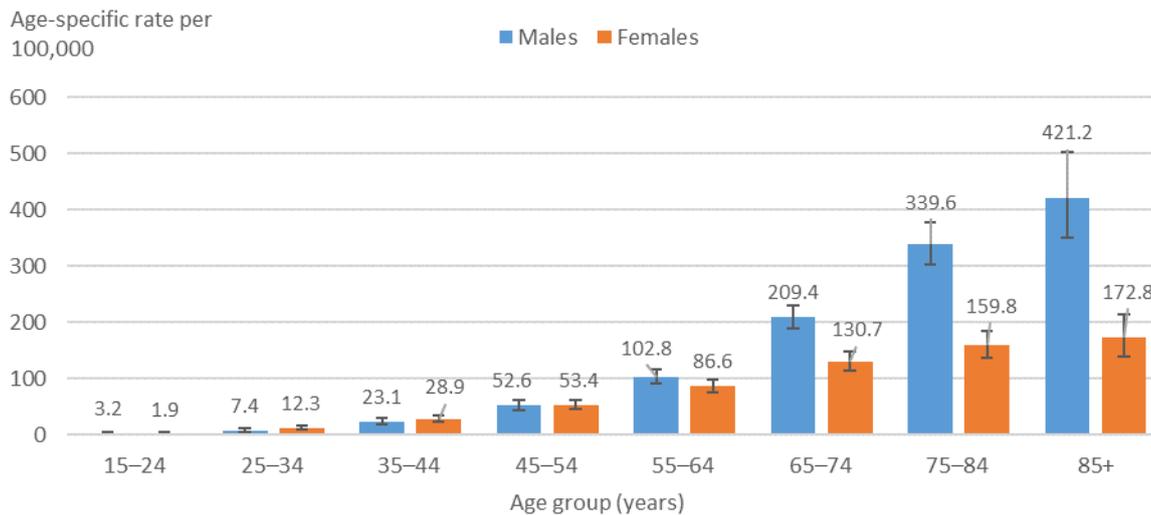
Source: Data published in the online tables 'Cancer: Historical Summary 1948–2013' (Ministry of Health, 2016). 2014 and 2015 are provisional data.

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Melanoma is more common in older age groups

Melanoma registrations were more common in older age groups, particularly among people aged 75 years and over (Figure 2). Males had a much higher rate of melanoma cancer registrations than females in the older age groups (65+ years).

Figure 2 : Melanoma registrations in New Zealand, by age group and sex, 2015 (age-specific rate per 100,000)

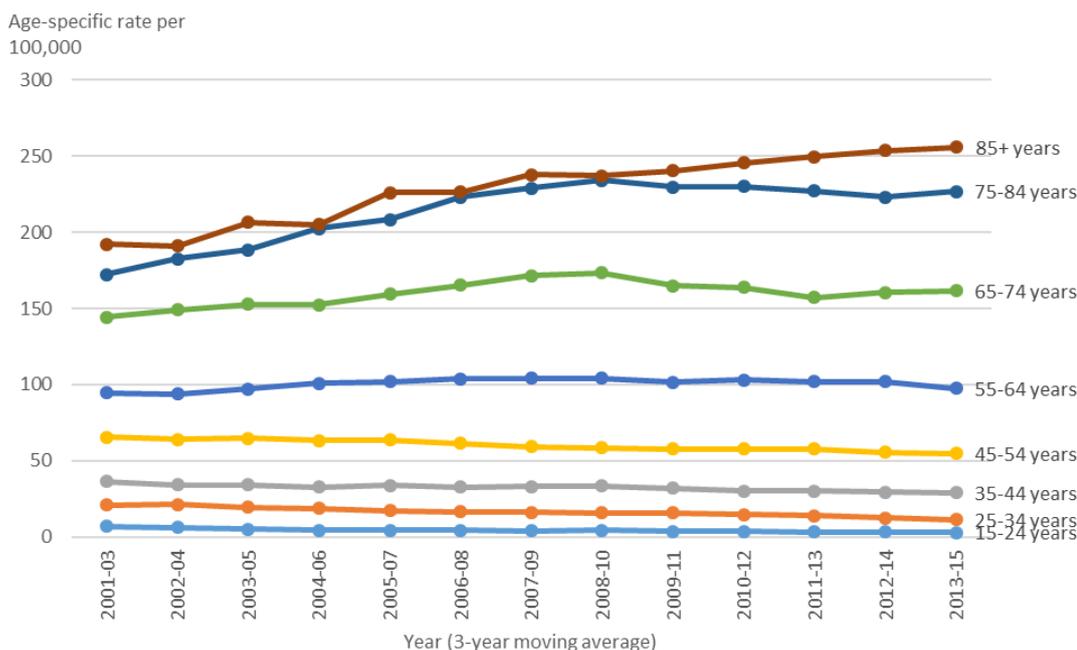


Source: New Zealand Cancer Registry

Increasing melanoma rates for older age groups, and decreasing rates for younger people

Melanoma registration rates have increased substantially since 2001-03 in the older age groups of 75-84 years and 85+ years (Figure 3). However, registration rates have significantly decreased from 2001-03 to 2013-15 in the younger age groups of 15-24 years, 25-34 years, 35-44 years, and 45-54 years.

Figure 3 : Melanoma registrations over time, by age group, 2001-2015, 3-year moving averages (age-specific rate per 100,000)



Notes: Three-year moving averages have been used.

Source: New Zealand Cancer Registry

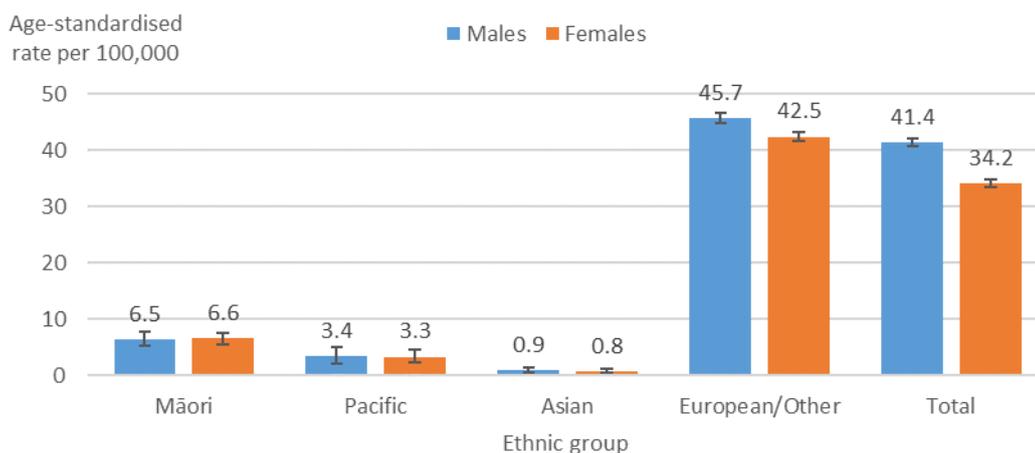
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Mostly people of European/Other ethnicity affected

In 2015, almost all melanoma cancer registrations were for people of European/Other ethnicity (2259 out of 2423 registrations, 93%). Only a small number of registrations were among Māori (39 registrations), Pacific peoples (6 registrations) and Asians (4 registrations).

Standardising for age, Māori, Pacific peoples and Asians had much lower registration rates of melanoma than people of European/Other ethnicity in the ten-year period 2006–15 (Figure 4). Males had a higher rate than females particularly in the European/Other ethnic group.

Figure 4: Melanoma registrations in New Zealand, by sex and ethnic group, 2006–15 (age-standardised rate per 100,000)



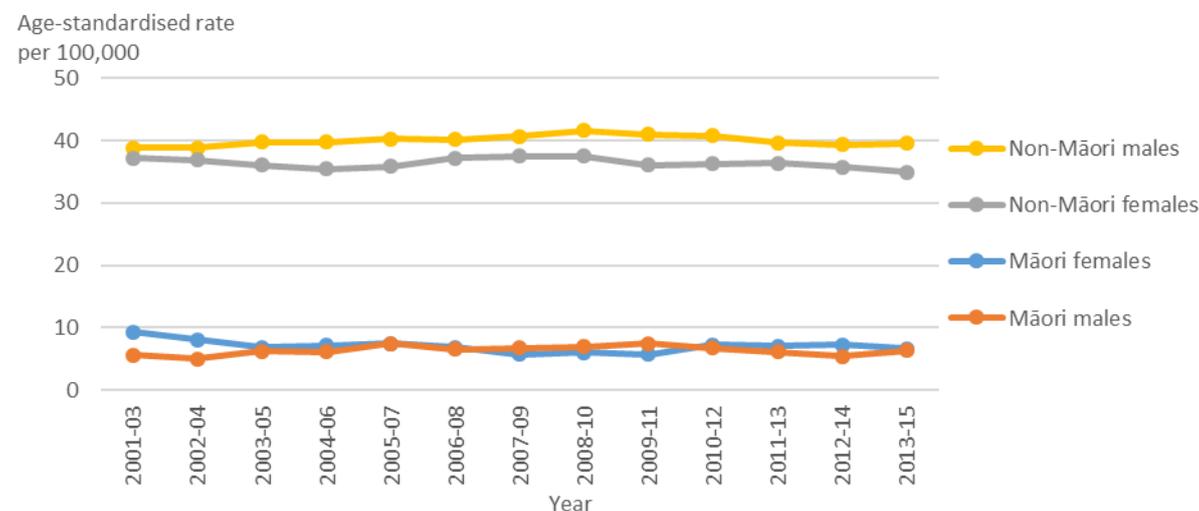
Notes: Prioritised ethnicity has been used, whereby people reporting multiple ethnicities were prioritised to an ethnic group in the following order: Māori, Pacific, Asian, European/Other. The 'total' columns include cancer registrations that were missing ethnicity data.

Source: New Zealand Cancer Registry

Relatively stable rates of melanoma registrations for Māori and non-Māori

The age-standardised rates of melanoma cancer registrations for Māori and non-Māori have remained relatively consistent since 2001 (Figure 5). The rates for non-Māori have stayed much higher than the rates for Māori, for both genders.

Figure 5: Melanoma registrations in New Zealand, by sex and Māori/non-Māori, 2001–2015 (age-standardised rate per 100,000)



Notes: Three-year moving averages have been used.

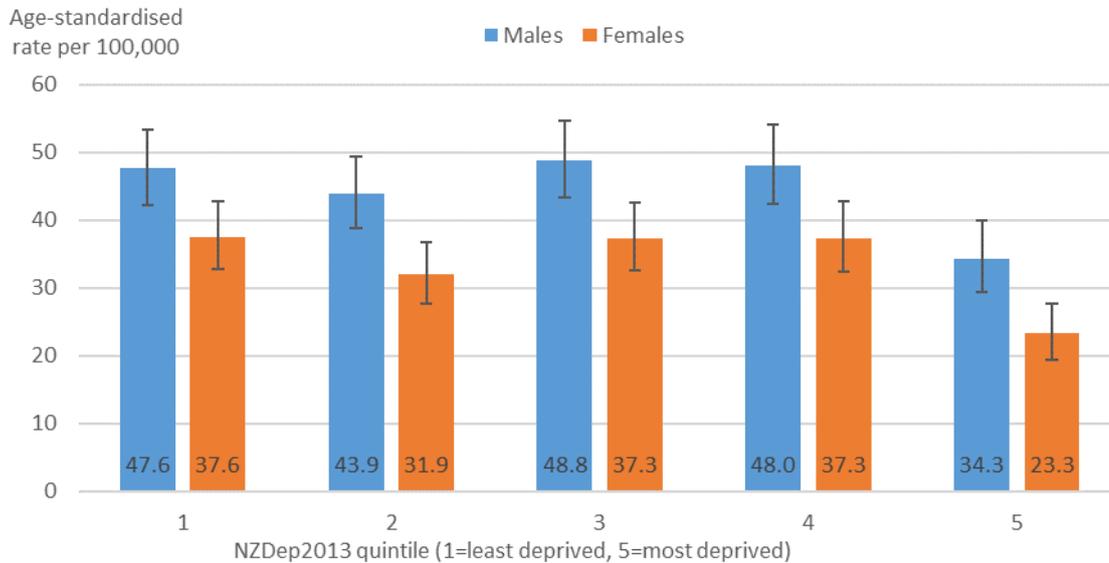
Source: New Zealand Cancer Registry

Melanoma cancer registrations

Melanoma registration rates lower in the most deprived areas

The melanoma registration rates were lower in the most deprived areas (NZDep2013 quintile 5) than in other NZDep2013 quintiles in 2015, for both males and females (Figure 6).

Figure 6: Melanoma registrations, by sex and NZ Index of Deprivation 2013 quintiles, 2015 (age-standardised rate per 100,000)

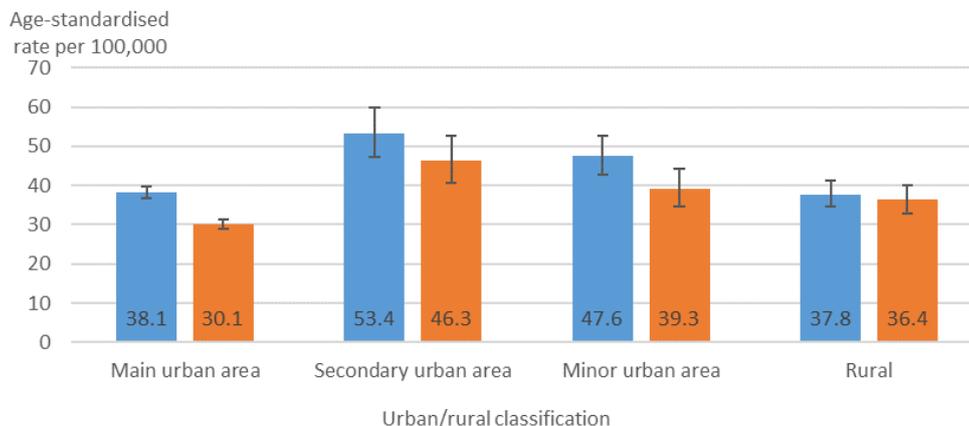


Source: New Zealand Cancer Registry

Higher melanoma registration rates in secondary urban areas

For males, the melanoma registration rate was higher in secondary urban areas and minor urban areas, than in main urban areas and rural areas, in 2013–15 (Figure 7). For females, the melanoma registration rate was also higher in secondary and minor urban areas than in main urban areas.

Figure 7: Melanoma registrations, by sex and urban/rural classification, 2013–15 (age-standardised rate per 100,000)



Notes: The Statistics New Zealand urban-rural classification for 2013 has been used. Main urban areas refer to 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.

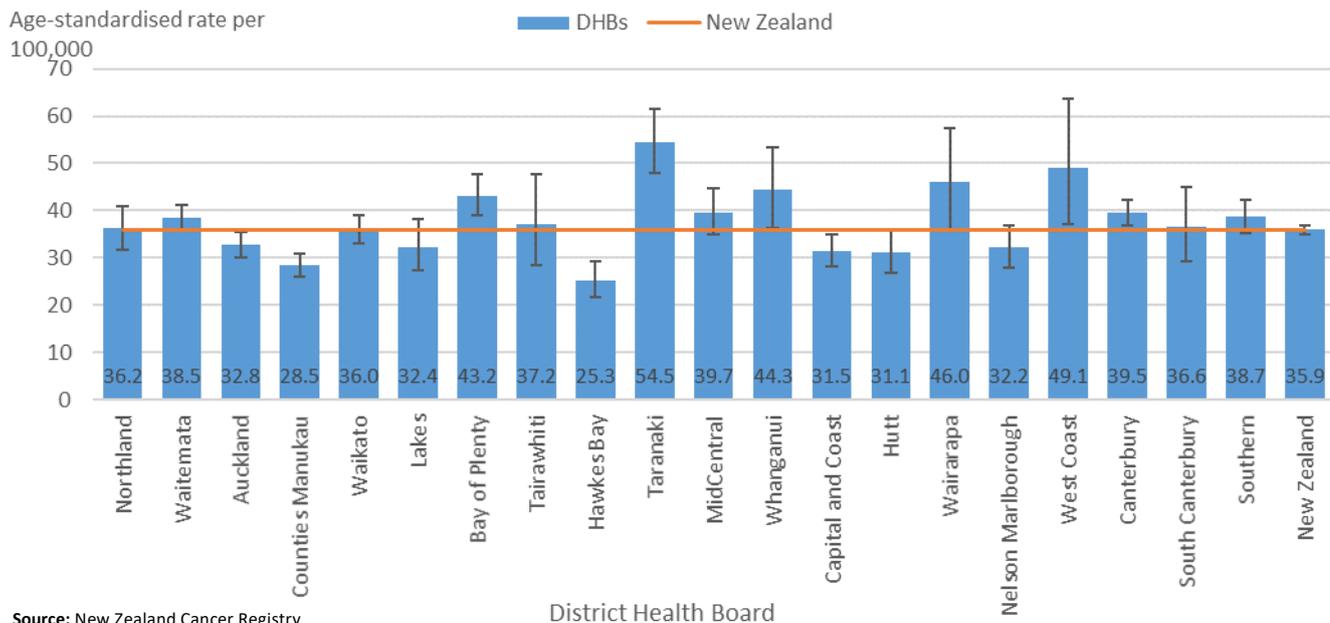
Source: New Zealand Cancer Registry

Melanoma cancer registrations

Highest melanoma registration rates in Taranaki and West Coast DHBs

There were substantial regional differences in the melanoma registration rate by District Health Board (DHB) in 2013–15 (Figure 8). The highest melanoma registration rates were in Taranaki, West Coast, Wairarapa, Whanganui and Bay of Plenty DHBs. The lowest melanoma registration rates were in Hawke’s Bay and Counties Manukau DHBs.

Figure 8: Melanoma registrations, by District Health Board, 2013–15 (age-standardised rate per 100,000)



Source: New Zealand Cancer Registry

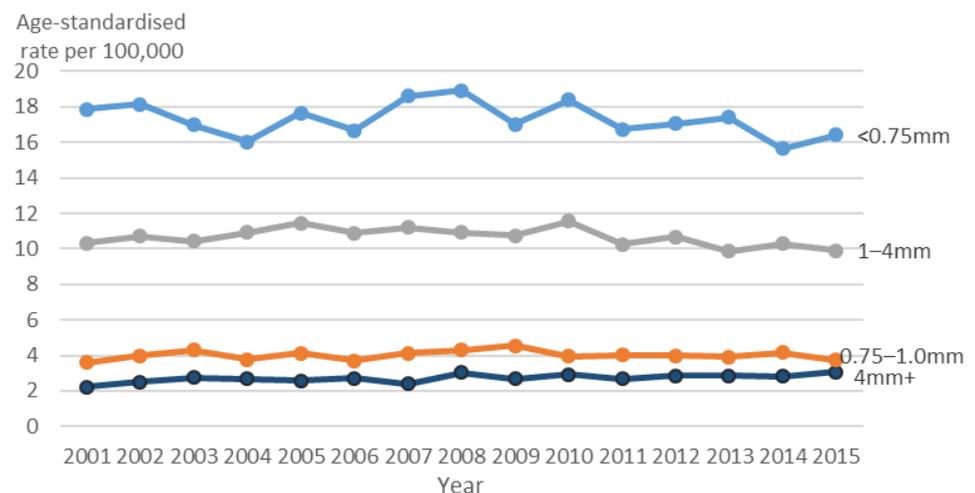
Males have a higher rate of higher-risk thick melanoma than females

The thickness of melanoma at diagnosis ('Breslow's thickness') is a key measure of prognosis. The thinner the melanoma, the better the chance of survival.

In 2015, of the 2253 melanoma with known thickness, 48% (1078) were less than 0.75mm (thin melanoma), 11% (243) were 0.75–1.0mm, 31% (691) were 1.0–4.0mm, and 11% (241) were 4.0mm or more (thick melanoma).

The rate of thick melanoma has increased since 2001. The age-standardised rate of thick melanoma increased from 2.2 per 100,000 (95% confidence interval 1.8–2.7) in 2001, to 3.1 per 100,000 (2.7–3.5) in 2015 (Figure 9).

Figure 9: Melanoma registrations by melanoma thickness, 2001–2015 (age-standardised rate per 100,000)



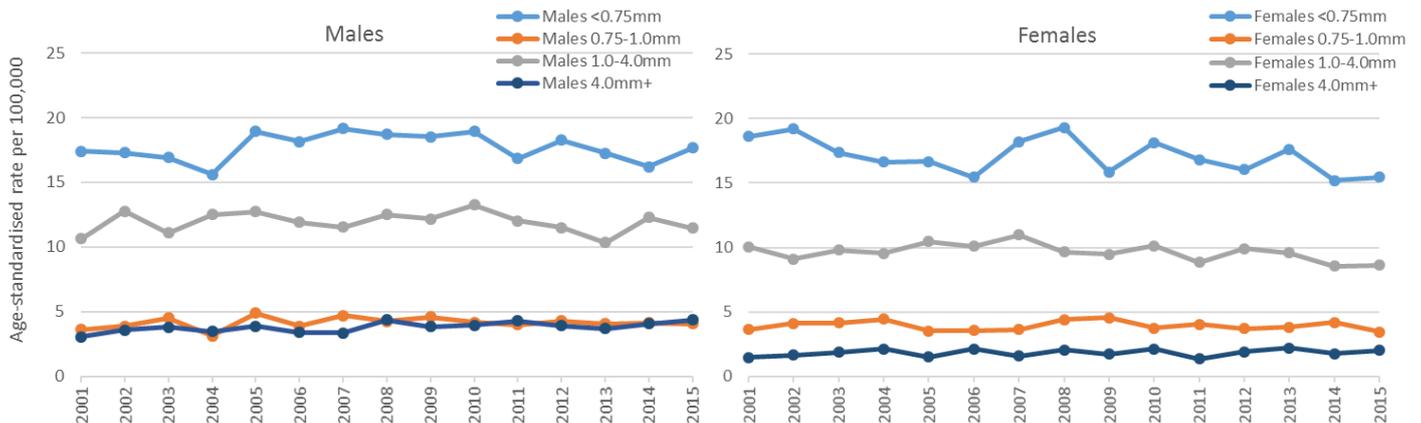
Note: Thickness is measured using Breslow's thickness. Categories were <0.75; 0.75 ≤ X < 1.0mm; 1.0 ≤ X < 4.0mm; 4.0mm+.
Source: New Zealand Cancer Registry

Melanoma cancer registrations

Men have higher rates of thick melanoma

Men had a higher percentage of thick melanoma (4.0mm+) than females (13% vs 8%). The age-standardised rate of thick melanoma was over twice as high for males (4.4 per 100,000) as for females (2.0 per 100,000) in 2015 (Figure 10).

Figure 10: Melanoma registrations by melanoma thickness and sex, 2001–2015 (age-standardised rate per 100,000)



Note: Thickness is measured using Breslow’s thickness. Categories were <0.75; 0.75 ≤ X < 1.0mm; 1.0 ≤ X < 4.0mm; 4.0mm+.

Source: New Zealand Cancer Registry

DATA SOURCES AND ANALYSIS

Data come from the New Zealand Cancer Registry, from the Ministry of Health. Except for Figure 1 (which used published information for a longer time series), analyses excluded overseas visitors. Age-standardised rates have been presented, to account for differences in age structure of population groups. 95% confidence intervals have been presented as error bars on graphs. Three-year moving averages have been presented where necessary, due to small numbers. In these cases, the rates are given per 100,000 person-years.

RELATED INDICATORS

Related environmental health indicators for UV exposure, available from the EHINZ website (www.ehinz.ac.nz), include:

- Melanoma deaths
- Non-melanoma skin cancer deaths.

REFERENCES

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