Position Statement:
Primary Prevention of Skin Cancer

Although skin cancers are a largely preventable group of diseases, they are Aotearoa/New Zealand's most common type of cancer. Along with Australia, our age-standardised cutaneous malignant melanoma incidence rates are the highest in the world. Each year more than 2,000 New Zealanders are diagnosed with melanoma, a particularly serious form of skin cancer, and there are over 90,000 new cases of keratinocytic (non-melanoma) skin cancers [1-3]. Around 500 New Zealanders die from skin cancers annually [4]. Skin cancer rates are projected to rise, largely due to our ageing and growing population, and this presents growing public health and economic challenges [3, 5]. Along with the personal costs, substantial public healthcare resources are consumed in managing skin cancer. The total cost of treating skin cancers is estimated to be as much as $180 million annually, around 20 percent of the total cost of treating all cancers in New Zealand (NZ) [6, 7].

The cause of almost all skin cancers is excessive exposure to the Sun's ultraviolet radiation (UVR) [8]. Reducing harmful levels of UVR exposure among New Zealanders is therefore critical to reducing our high skin cancer burden. Unfortunately, investment in skin cancer preventive measures has been badly neglected in Aotearoa/NZ for many years. Prevention is by far the most effective and simplest way of reducing the number of skin cancer cases and deaths, as well as the on-going costs of treatment, provided interventions are comprehensively and equitably implemented [9]. The Cancer Society plays an important role in prevention through advocacy and the provision of the SunSmart Schools programme. However, there is much more that NZ should be doing in prevention across our education, workplace, and recreational sectors. The Cancer Society urges the introduction of the following measures to minimise the risk of New Zealanders developing skin cancer.

Recommendations

1. Provide resources for a comprehensive, coordinated Government-led SunSmart programme, in particular, for the education, occupation and recreation sectors.
2. Implement comprehensive SunSmart policy in local government, workplaces, schools and communities.

3. Establish centralised and regional funding sources for the provision of more (quality) shade in the places where we live, learn, work and play.
4. Provide investment in sustained national mass media campaigns to increase and maintain public awareness about skin cancer risk and sun-protective practices.
5. Re-classify sunscreens as a therapeutic good and enforce compliance with the AS/NZ 2604:2021 Standard.
6. Prioritise skin cancer prevention research to inform policy and practice specifically relevant to NZ communities.
7. Pass legislation to remove all commercial sunbeds in Aotearoa/ NZ.

1. Provide resources for a comprehensive, coordinated Government-led SunSmart programme

New Zealand needs a comprehensive SunSmart programme[1] that provides a strategic and coordinated response to skin cancer prevention across all sectors. There is a lack of government prioritisation and resource allocation for the primary prevention of skin cancer even though there is international evidence for the efficacy of such interventions in school, occupational and community settings [10].

Progress in skin cancer control has been slow and uncoordinated, largely due to the fragmented nature of the national response. Until the establishment of Te Aho o Te Kahu Cancer Control Agency, official responsibility for skin cancer control was delegated mainly to Te Hiringa Hauora/ The Health Promotion Agency, but with an extremely limited budget of around $400,000 per year, including staff salaries. The NZ Cancer Action Plan includes only two SunSmart actions to implement over the next ten years and the sector-led skin cancer prevention strategy does not identify either an action plan or government accountability [11, 12]. This is despite the high health and financial burden of skin cancer to NZ and the potentially very high preventability of the disease.

Even though skin cancer rates are similar, NZ compares poorly to Australia in primary prevention efforts. For example, contrary to NZ, in Australia there is a total ban on commercial sunbeds, sunscreen products are regulated and there is a

[1] A comprehensive programme involves community-wide interventions to a) raise public awareness b) implement and monitor prevention programmes and c) create environmental change for skin cancer prevention.

comprehensive, community wide SunSmart programme across educational facilities, workplaces, and sport and recreational areas. NZ has none of these things. Australians are now benefitting as a result of their investment, and melanoma skin cancer rates are declining among younger age groups who have benefitted from SunSmart initiatives throughout their lives. Given prevention initiatives are markedly less costly than treatment, this comprehensive programme not only saves lives, but also saves costs for the Australian Government [13]. The Cancer Society urges resourcing of a comprehensive, coordinated Government SunSmart programme.

2. Implement comprehensive SunSmart policy in local government, workplaces, schools, and communities.

Comprehensive SunSmart policy provides guidance on effective strategies to ensure people are not getting too much UV radiation, including scheduling of outdoor activities; appropriate shaded areas and sun-protective clothing; skin examination guidance; and the correct use of sunscreen. The adoption of sun protection policy and practice remains inadequate in many schools, councils and organisations in NZ despite the health hazards people face from being outside all or part of the day [14, 15]. Although many NZ primary schools have implemented SunSmart policy and practices, it is not necessarily comprehensive nor always followed. Few councils, workplaces or sports organisations have implemented policy, even though these are vitally important settings to promote sun protection [16, 17]. It is critical that SunSmart practices are embedded in everyday activities as these can have a major positive impact on health and well-being [14, 18, 19]. The Cancer Society calls for more sectors to have comprehensive SunSmart policy and practices in place.

3. Establish centralised and regional funding sources for the broader provision of shade.

Well designed and positioned shade can physically reduce UVR by as much as 90 percent. A combination of natural and built shade offers the best protection [20]. Despite the benefits, shade planning and design is often overlooked or is inadequate in many NZ schools, worksites and recreational areas, and much less tree and built shade are provided in neighbourhoods and playgrounds in high deprivation areas [21-23]. A 2017 nationwide audit of 559 playgrounds in NZ found only 44% had at least one source of shade covering playground activity areas, and economically deprived neighbourhoods were 43% less likely to have shade than wealthier areas [21]. National

and local governments have a responsibility for creating conditions for the wellbeing and safety of people in these settings, and the provision of shade in public areas has high public support [16]. The Cancer Society urges central and local government to provide targeted funding to ensure that schools and public spaces are designed, built and refurbished to incorporate appropriate and effective shade.

4. Provide and sustain central Government investment in mass media campaigns to increase public awareness about skin cancer risk and sun protection.

The primary prevention of skin cancers has not been as effective in Aotearoa/NZ as it has been in Australia. Improved SunSmart behaviours in Australia is attributed in large part to decades of sustained investment in sun protection awareness campaigns. In NSW, campaigns running over eight years are estimated to have averted over 13,000 cases of skin cancers [24, 25]. In contrast, the NZ government has not conducted a mass media awareness campaign in almost a decade and Te Hiringa Hauora/HPA, the agency responsible for public awareness campaigns, has had its small SunSmart budget halved over the past 15 years [26]. Such underinvestment is short-sighted given that skin cancer awareness campaigns have been shown repeatedly to be effective in improving sun protection attitudes and practices and are likely to result in cost savings for the government in the longer term [13]. To reduce the health burden from skin cancer will require ongoing, sustained investment in national skin cancer awareness campaigns by the government.

5. Class sunscreens as a therapeutic product and enforce compliance with the AS/NZ Standard

Sunscreens in NZ are categorised as cosmetic products even though they clearly meet the therapeutic purpose of preventing skin damage and skin cancers [27]. The Cancer Society is calling for sunscreen to be regulated under the Therapeutic Products Scheme to ensure products meet all of the regulatory requirements specified for labelling, efficacy, safety and quality. At present, sunscreen companies are only encouraged to market sunscreens that comply with the AS/NZ Standard, resulting in the availability of a range of sunscreen products that do not meet advertising and labelling claims [28]. The AS/NZ Sunscreen Products Standard (AS/NZS 2604:2021) should be used by the regulatory body to approve the labelling of sunscreen properties in each sunscreen product, including broad-spectrum (UVB and

UVA) protection and water resistance. Only products that comply with this Standard should be available for sale in NZ. Therapeutic regulation will make it much easier for consumers to select a suitable sunscreen that protects themselves and their whānau. We strongly encourage the regulation of primary sunscreens[2] as a therapeutic product, as outlined in the NZ Cancer Action Plan 2019 – 2029 [11].

The Cancer Society recommends the use of sunscreen that is at least SPF30 or higher, broad-spectrum and water-resistant, in combination with seeking shade, wearing clothing that covers as much skin as possible, a broad brim hat and sunglasses that meet NZ Standards.

6. Prioritise skin cancer prevention research to inform policy and practice.

Skin cancer prevention research is not prioritised in Aotearoa, and this hampers our ability to identify and implement effective evidence-based practices for whānau, schools, workplaces and communities. Over the past decade, no major research funding body in NZ, including the Government's Health Research Council (HRC) has allocated significant funding for skin cancer primary prevention research, despite the toll this preventable disease takes on our lives and our country's productivity [38, 39]. Evidence-based interventions can significantly reduce the risk of skin cancer and, in the longer term, enable scarce health care resources to be directed towards the Government's priority of reducing cancer inequities [9]. The Cancer Society urges the Government to prioritise skin cancer prevention and research at the national level.

7. Ban commercial sunbeds in Aotearoa.

Artificial indoor UVR tanning devices (sunbeds, solariums, tanning lamps) emit high and extreme levels of UVR, in some instances as much as three times as strong as the midday summer sun [8]. Sunbeds cause skin and eye cancers, cataracts, premature aging of the skin and may suppress the immune system [29-31]. Annually, they were likely responsible for around 5.4% of new melanoma cases in Europe [32], and over 3.5% melanoma deaths in Australia, prior to a ban on their use [33]. The risk of

[2] Primary sunscreens are products used primarily for protection from UV radiation. Secondary sunscreens are those with a primary purpose other than sun protection but also containing sunscreen agents.

melanoma significantly increases with the number of sunbed sessions and initial usage under 35 years of age [32, 34]. In 2017, the NZ Government introduced a partial ban that restricted the use of sunbeds to those aged over 18 years [35]. Given that sunbeds are not safe to use at any age and partial bans have only had limited success, NZ needs to follow the lead of Australia and Brazil by imposing a comprehensive ban on all commercial tanning devices [32, 36]. Australia's decision to act decisively in 2015 is expected to avert over 31,000 melanomas and 468,249 non-melanoma cancers in young Australians over their lifetime [37]. The ban is also expected to save over AU$64 million in health care costs and produce over AU$516 million in productivity gains [37]. The Cancer Society of NZ, Cancer Council Australia and the Australasian College of Dermatologists do not recommend the use of artificial UVR radiation tanning devices (sunbeds) for cosmetic purposes in any circumstances. We call for the banning of the provision of commercial sunbeds for cosmetic purposes in Aotearoa/NZ.

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Disclaimer: expert reviewers are not responsible for the final content of position statements. Views may vary.

References

1. Sneyd, M.J. and A. Gray, *Expected non melanoma skin (Keratinocytic) cancer incidence in New Zealand for 2018*.2018, Wellington: Health Promotion Agency: Wellington.
2. Ministry of Health Manatū Hauora. *New cancer registrations 2018*. 2020; Available from: https://www.health.govt.nz/publication/new-cancer-registrations-2018.
3. IARC/WHO. *Estimated number of new cases from 2020 to 2040, Both sexes, age [0-85+] Melanoma and non-Melanoma of skin*. Cancer Tomorrow 2020 [cited 2020; Available from: https://gco.iarc.fr/tomorrow/en.
4. Ministry of Health Manatū Hauora. *Mortality by causes of death and demographics, 2014–2018*. 2021; Available from: https://minhealthnz.shinyapps.io/mortality_webtool/.
5. Whiteman, D.C., A.C. Green, and C.M. Olsen, *The Growing burden of invasive melanoma: projections of Incidence Rates and Numbers of New Cases in Six Susceptible Populations through 2031*. Journal of Investigative Dermatology, 2016. **136**(6): p. 1161-1171.

6. Blakely, T., et al., *Patterns of cancer care costs in a country with detailed individual data.* Medical care, 2015.**53**(4): p. 302.
7. McNoe, M., *Estimated costs of skin cancer in NZ*. 2021.
8. International Agency for Research on Cancer. *Solar and ultraviolet radiation*. 2012 [cited 100D; Available from: https://monographs.iarc.who.int/wp-content/uploads/2018/06/mono100D-6.pdf.
9. Signal, L.N., et al., *The state of cancer prevention in Aotearoa New Zealand: Slow progress requires political leadership and investment for health and equity.* Journal of Cancer Policy, 2020. **23**: p. 100212.
10. Tripp, M.K., et al., *State of the science on prevention and screening to reduce melanoma incidence and mortality: The time is now.* CA: A Cancer Journal for Clinicians, 2016. **66**(6): p. 460-480.
11. Ministry of Health Manatū Hauora, *New Zealand Cancer Action Plan 2019–2029*. 2019, Ministry of Health: Wellington.
12. Health Promotion Agency and Melanoma Network of New Zealand (MelNet). *New Zealand Skin Cancer Primary Prevention and Early Detection Strategy 2017 to 2022*. Available from: https://www.sunsmart.org.nz//sites/default/files/documents/FINAL-Strategy-2017-to-2022.PDF.
13. Doran, C.M., et al., *Benefit cost analysis of three skin cancer public education mass-media campaigns implemented in New South Wales, Australia.* PloS one, 2016. **11**(1): p. e0147665-e0147665.
14. Reeder, A.I., J.A. Jopson, and A. Gray, *Sun protection policies and practices in New Zealand primary schools.* NZ Medical Journal, 2012. **125**(1349): p. 70-82.
15. McNoe, B.M. and A.I. Reeder, *Sun protection policies and practices in New Zealand primary schools.* NZ Medical Journal, 2019. **132**(1497): p. 46-54.
16. Dallas, S. and K. Kruse, *Public opinion on councils' role to provide shade in public places*, in *In Fact*. 2015, Health Promotion Agency Research and Evaluation Unit: Wellington.
17. Kruse, K., Walton D., & Reeder, AI. *Sun safety promotion in Territorial Authorities*. 2013, Health Promotion Agency Research and Evaluation Unit: Wellington.
18. Dono, J., et al., *The relationship between sun protection policies and practices in schools with primary-age students: the role of school demographics, policy comprehensiveness and SunSmart membership.* Health Education Research, 2014. **29**(1): p. 1-12.
19. Hunkin, H., K. Pollock, and R. Scupham, *The National SunSmart Schools Program: impact on sun protection policies and practices in Australian primary schools.* Health Promotion Journal of Australia, 2020. **31**(2): p. 251-257.
20. Parisi, A.V. and D.J. Turnbull, *Shade provision for UV minimization: a review.* Photochemistry and Photobiology,2014. **90**(3): p. 479-490.
21. Gage, R., et al., *Shade in playgrounds: findings from a nationwide survey and implications for urban health policy.* Journal of Public Health, 2019. **27**(5): p. 669-674.
22. Gage, R., et al., *Sun protection and shade availability in New Zealand's outdoor recreation spaces.* NZ Med J,2018. **131**(1484): p. 30-37.
23. Gage, R., et al., *Wellington playgrounds uncovered: an examination of solar ultraviolet radiation and shade protection in New Zealand.* Photochemistry and photobiology, 2018. **94**(2): p. 357-361.
24. Tabbakh, T., et al., *Implementation of the SunSmart program and population sun protection behaviour in Melbourne, Australia: Results from cross-sectional summer surveys from 1987 to 2017.* PLoS Med, 2019. **16**(10): p.e1002932.
25. Doran, C.M., et al., *Benefit cost analysis of three skin cancer public education mass-media campaigns implemented in New South Wales, Australia.* PLOS ONE, 2016. **11**(1): p. e0147665.
26. Te Hiringa Hauora/Health Promotion Agency, *Financial statements*. 2012, Te Hiringa Hauora/HPA: Wellington.
27. Ministry of Health Manatū Hauora. *Therapeutic products regulatory regime*. 2019; Available from: https://bit.ly/3u0Yr76.
28. Castles, B. *Why sunscreens should be regulated*. 2021; Available from: https://www.consumer.org.nz/articles/sunscreens/full-test-results.
29. Le Clair, M.Z. and M.G. Cockburn, *Tanning bed use and melanoma: establishing risk and improving prevention interventions.* Preventive Medicine Reports, 2016. **3**: p. 139-144.
30. Lim, H.W., et al., *Adverse effects of ultraviolet radiation from the use of indoor tanning equipment: Time to ban the tan.* Journal of the American Academy of Dermatology, 2011. **64**(5): p. 893-902.
31. El Ghissassi, F., et al., *A review of human carcinogens—part D: radiation.* The Lancet Oncology, 2009. **10**(8): p.751-752.

32. Boniol, M., et al., *Cutaneous melanoma attributable to sunbed use: systematic review and meta-analysis*. BMJ : British Medical Journal, 2012. **345**: p. e4757.
33. Gordon, L.G., et al., *What impact would effective solarium regulation have in Australia?* Medical Journal of Australia, 2008. **189**(7): p. 375.
34. Boniol, M., et al., *Corrections: Cutaneous melanoma attributable to sunbed use: systematic review and meta-analysis*. BMJ, 2012 [cited 2021; Available from: https://www.bmj.com/content/bmj/345/bmj.e8503.full.pdf.
35. Ministry of Health Manatū Hauora. *Sunbeds*. 2021; Available from: https://www.health.govt.nz/your-health/healthy-living/environmental-health/sunbeds.
36. Pawlak, M.T., et al., *Legislation restricting access to indoor tanning throughout the world*. Archives of Dermatology, 2012. **148**(9): p. 1006.
37. Gordon, L.G., et al., *Consequences of banning commercial solaria in 2016 in Australia.* Health Policy, 2020. **124**(6): p.665-670.
38. Health Research Council. *HRC Research Repository*. nd; Available from: https://www.hrc.govt.nz/resources/research-repository.
39. Royal Society Te Aparangi. *Awarded Marsden Fund Grants*. 2021; Available from: https://www.royalsociety.org.nz/what-we-do/funds-and-opportunities/marsden/awarded-grants/.