Submission to the Inquiry into skin cancer in Australia: Prof Adèle C Green

RECOMMENDATIONS

Term of Reference #1: awareness

RECOMMENDATION 1: Government investment must be shifted increasingly towards **evidence-based primary prevention** of skin cancer through community awareness campaigns about the harms of high sun exposure to pale-skinned Australians (especially-through sunburns) and how they can be prevented from occurring.

RECOMMENDATION 2: Facilitate targeted high-quality research to gain knowledge specifically about the determinants of and barriers to sun-aware, sun-protective behaviour at various stages through the life-course exposure and about the most effective interventions to achieve and maintain sun-aware behaviour outdoors.

Term of Reference #2: early diagnosis

RECOMMENDATION 3: Through Medicare, private medical/healthcare databases and pathology databases, continually **monitor and evaluate the beneficial outcomes against the negative outcomes** of initiatives to **enhance early diagnosis** to ensure that the former (decreased death rates from skin cancer) always outweigh the latter (increase in unnecessary treatment rates of non-malignant skin tumours and the over-diagnosis of 'malignant' skin tumours)

Term of Reference #3: management

- RECOMMENDATION 4: Given that nearly 50% of skin cancer patients develop multiple skin cancers over time, evidence-based best practice management must include **evidence-based primary prevention** of these subsequent skin cancers.

MAIN POINTS

'Skin cancer' is used to collectively refer to basal cell carcinoma (BCC), squamous cell carcinoma (SCC) and melanoma.

(Terminology note: 'keratinocyte cancer' is the term used in this submission to refer to BCC and SCC collectively rather than 'non-melanoma skin cancers' which defines the two commonest types of skin cancer by what they are not. The keratinocyte is the common skin cell of origin of BCC and SCC as distinct from the melanocyte, the cell of origin of melanomas.)

Term of Reference #1: awareness

It is scientifically established and accepted that solar ultraviolet (UV) radiation causes skin cancer **(International Agency for Research on Cancer 2012)**. Exposure to solar UV

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radiation is avoidable and the vast majority of skin cancers are therefore preventable. It is therefore illogical to seek to control skin cancer in Australia now and into the future through focussing on treatment and early diagnosis, when these procedures and costs can be rendered increasingly unnecessary over time by prevention of the disease.

-We have shown through Australian community-based intervention research that **evidence-based primary prevention** of skin cancer and its antecedent conditions by regular sunscreen application is not only feasible and achievable but economically viable (Green, Williams et al. 1999, Darlington, Williams et al. 2003, Green, Williams et al. 2011, Hirst, Gordon et al. 2012).

-There has been a cessation of rising incidence and a stabilising of rates of skin cancer in middle-aged people in this country, and in the youngest generations who have been exposed to SunSmart campaign messages from birth there has even been in a downturn in rates (Staples, Elwood et al. 2006, Baade, Green et al. 2011, Fransen, Karahalios et al. 2012)

-We have reviewed the evolution and outcomes of community awareness campaigns and policies in Australia and show they have been successful in raising awareness about the harms of high sun exposure to pale-skinned Australians and dangers of skin cancer (Iannacone and Green 2014). of skin cancer awareness campaigns in Australia but that they need continued investment to maintain their innovation, relevance and appeal.

- Multiple sunburns are one of the few causal factors common to all 3 major types of skin cancer, BCC, SCC and melanoma. There is evidence that not all parts of the community in Queensland are sufficiently aware of the dangers of sunburn in the long term: sunburn is still a public health problem among Queensland residents, especially those under 45 years of age (Green, Marquart et al. 2013). If the target of reducing sunburn rates in the young were set as an objective measure of raising skin cancer awareness it would be directly beneficial because it would result in primary prevention of skin cancer in the long term. It is appealing because it gives people a marker or a boundary limit for sun exposure: any skin redness or sunburn is harmful, so use the standard sun protection measures to avoid being sunburnt. Sun-safe habits reduce sunburn risk in Queenslanders, but advice must be integrated with health promotion messages regarding physical activity to reduce the skin cancer burden while maintaining active wellbeing. (Green, Marquart et al. 2013). Decreasing sunburns should again be the focus of renewed skin cancer awareness campaigns.

Term of Reference #2: early diagnosis

There are the negative outcomes to enhancing early diagnosis of melanoma namely the over-diagnosis of 'malignant' skin tumours (Welch, Woloshin et al. 2005) and this effect needs to monitored in concert with the benefits of saving lives eg through Medicare, private medical/healthcare databases and pathology databases as the excision of thousnands of false-positive skin cancers especially in low-risk groups like the young,

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adds enormously to the government's burden of treatment costs (Fransen, Karahalios et al. 2012).

Term of Reference #3: management

Given that a large proportion of skin cancer patients especially BCC patients (Richmond-Sinclair, Pandeya et al. 2009) and immunosuppressed patients develop multiple skin cancers over time (Grulich, van Leeuwen et al. 2007), evidence-based best practice management of affected patients must include **evidence-based primary prevention** of this burden of subsequent skin cancers

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