

The increasing incidence of melanoma: The role of MelNet

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Abstract. The incidence of melanoma in developed countries, including NZ, has increased dramatically over recent decades and at a faster rate than most other cancers. Although potentially fatal, optimal outcomes are obtained with early detection and adherence to evidence based treatment. To improve the outcomes of persons with locally advanced or disseminated melanoma, effective translational research is required. Following publication of the Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand, the Melanoma Network of NZ (MelNet) was established to reduce the incidence and impact of melanoma in NZ. MelNet provides a forum for professionals working in any area related to melanoma. This includes a website and biennial conferences. MelNet has ongoing projects to implement the guidelines.

Melanoma

Melanoma (previously called “malignant melanoma”) is a type of skin cancer, named for its usual dark melanin pigment. By contrast to the slow growth and indolent behaviour more common skin cancers, melanomas are frequently aggressive in their growth and may spread to the regional lymph nodes and to distant organs.

The majority of melanomas arise sporadically in skin exposed skin. Exposure to ultraviolet radiation is strongly implicated in the aetiology of melanoma. There is an association with BRAF mutations in sporadic melanoma. A small proportion has a familial pattern with mutations in genes including CDKN2A, P16INK4A and P14ARF.

Incidence of melanoma in NZ

NZ and Australia share the unenviable reputation for the highest melanoma incidence globally. The main points regarding incidence in NZ are:

- The incidence has increased greatly over the past 50 years but is showing signs of plateauing (~2,000 cases and ~300 deaths in NZ in 2004)
- Lifetime risk 1:13 for males, 1:18 for females
- Although predominantly a disease of the elderly, the rate rises steadily from early adulthood (most common cancer in males 25-40 years and females 15-25 years)
- The incidence in Maori and Pacific Peoples is very low.

A number of factors have been shown to correlate strongly with incidence. These include multiple naevi, previous melanoma, family history of melanoma, fair complexion, history of severe sunburn, older age and male gender.

Factors affecting outcome of melanoma

Several variables correlate strongly with prognosis. For primary melanoma (stage I/II), increasing Breslow

thickness (total vertical thickness of melanoma measured in mm), increasing mitotic count and the presence of ulceration indicate a worse prognosis. Accurate diagnosis at an early stage and adequate removal provides a high chance of cure.

For locally advanced (stage III) melanoma, increasing number of involved lymph nodes carries a worse prognosis. Translational research that leads to an effective adjuvant systemic therapy is urgently needed for this group.

Persons with disseminated melanoma (stage IV) are essentially incurable. The efficacy of recently developed BRAF inhibitors demonstrates the benefits of translational research and rational drug design., with clinical results indicating ~70% response of tumours with the E600 mutation.

Clinical Practice Guidelines

The publication in 2008 of clinical practice guidelines (abbreviation “the guidelines”) as a Trans Tasman project was a major achievement and represents the first international clinical melanoma guideline. The guideline development process involved collaboration between the Australian Cancer Network (ACN), the Cancer Council (Australia) and the New Zealand Guideline Group. Oversight of the NZ perspective was undertaken by the NZ Melanoma Reference Group, with membership including health professionals, Maori, Pacific, and consumers.

Within NZ, this availability of this evidence based guideline provides a template for service improvement mapping and for audit of management.

The Melanoma Network of NZ (MelNet)

MelNet was established in 2008 at the conclusion of the Melanoma Summit, which was the first attempt to bring together all workers interested in an area related to melanoma, and marked the launch of the guidelines. This includes scientists, health promoters, health professionals and policy makers in many disciplines. MelNet arose from the clear need for an umbrella organisation to represent, link and support these disparate groups.

MelNet has an executive for governance and is MelNet is supported by the Health Sponsorship Council (HSC) and the Melanoma Foundation of NZ.

The value of MelNet exceeds its immediate role to facilitate communication between diverse work areas, with a dedicated website (www.melanoma.org.nz/melnet), mailouts, biannual national meetings and a database of members. MelNet is also actively involved in implementing critical recommendations of the guidelines. MelNet identified the following topics as its initial projects:

- upskilling of dermoscopy
- tissue-banking melanoma specimens for translational research
- development of a national melanoma database

- improved patient communication.

MelNet is also a key partner in a MOH-sponsored project for an implementation plan for the guidelines. Important additional areas for implementation include compliance with the guideline regarding excision of primary melanomas and use of a standard synoptic pathology report.

Through its varied roles across the spectrum of melanoma biology and the continuum of care of New Zealanders with melanoma, MelNet is well placed to face the challenge of increasing numbers of melanoma diagnoses.

The next national MelNet meeting will be 11th March 2011 in Wellington.

Acknowledgements

Health Sponsorship Council (<http://www.hsc.org.nz/>)

Melanoma Foundation of NZ (www.melanoma.org.nz)

Reference

Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand. The Cancer Council Australia and Australian Cancer Network, Sydney and New Zealand Guideline Group, Wellington (2008)