Can research involving NZ melanoma patient participation and extensive networking by researchers help reduce the melanoma burden in NZ?

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With the highest per capita rate of melanoma in the world in NZ, facilitating high quality melanoma research in NZ is of critical importance. Frequently, involvement of patients, tissue samples, and networking amongst researchers helps facilitate an inter-disciplinary approach to research that enhances research outcomes. I will discuss two projects where we have combined an extensive networking approach between NZ researchers, as well as the use of NZ melanoma patient material, and how this approach is leading to significantly enhanced outcomes. In the first example, we have collaborated in a network of NZ researchers to identify mutations in >500 melanomas in NZ patients, and we found a surprisingly high rate of *NRAS* mutations, as well as previously unrecognised, although relatively commonly occurring mutations in the *EPHB6* gene, encoding the ephrin type B receptor 6 protein, in NZ melanomas. These data suggest that melanomas in NZ patients do not necessarily conform to similar patterns of mutations as those in Europe or North America for instance. In the second example, we are collaborating with a network of NZ researchers to generate a comprehensive "omic" database associated with a well characterised large panel of between 50-100 NZM melanoma cell lines generated by Prof Bruce Baguley, derived from NZ melanoma patients. Included in this "omic" data are exomes, transcriptomes and methylomes, as well as characterisation of the cell lines by analysis of immune response, invasiveness, and also growth response and drug resistance profiles. These data will significantly enhance melanoma research efforts both nationally and internationally. In summary, a short-term goal might be to encourage NZ melanoma patient participation (including tissue samples) as well as networking by melanoma researchers, including researchers associated with translation of research into clinical practice in NZ. These approaches may enhance overall knowledge of the melanoma burden in NZ, which can be applied to reduce melanoma mortality rates.