



Media Release
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Predicting melanoma spread

A new online tool will allow doctors to predict how melanoma can spread around the body.

The tool, developed at the Maurice Wilkins Centre, allows doctors to select an area of the skin affected by melanoma and then identify the most likely route cancerous cells will use to move through the body should the melanoma spread beyond the skin.

The interactive tool was created by Wilkins Centre PhD student Hayley Reynolds, based at the Bioengineering Institute at The University of Auckland. The three-dimensional model uses data collected at the Sydney Melanoma Unit to predict where tumours may develop if the melanoma spreads so physicians can focus on these higher risk areas.

The results of the research were published in the September issue of leading medical journal *Lancet Oncology*.

"Melanoma is a potentially fatal disease, and is increasing in incidence with about 132,000 new cases diagnosed each year globally," says Ms Reynolds. "By analysing data from over 5,000 patients, we have mathematically calculated the routes melanoma cells can take around the body via the lymphatic system. By creating the 3D model, doctors can identify the lymph nodes where these cells are most likely to first appear and potentially stop the development of additional tumours at an early stage."

The research was funded by the Maurice Wilkins Centre for Molecular Biodiscovery, a New Zealand Centre of Research Excellence hosted by The University of Auckland, with support from the New Zealand Foundation for Research, Science and Technology and the Wellcome Trust. Hayley's PhD research is supervised by Maurice Wilkins Centre investigators Associate Professor Rod Dunbar of the University's School of Biological Sciences, and Dr Nicolas Smith of the Bioengineering Institute and University of Oxford.

The online tool can be found at <http://www.bioeng.auckland.ac.nz/melanoma>

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