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Spatially Enabling Australia and New Zealand

P4.405 | The National Cancer Atlas

Project Leader

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Research Team

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Project Participants

Universities/Academic: **Cancer Council Queensland, Queensland University of Technology**
Public sector: **Australian Institute of Health & Welfare, National Health Performance Authority**

Objectives

Develop, design and build a digital National Cancer Atlas that applies cutting-edge statistical spatial methods and novel data visualisation approaches to make spatial cancer screening, incidence and survival data available nationally.

Outcomes

- **Innovative spatial statistical models**
- **Reliable small-area estimates of cancer incidence and survival**
- **Digital National Cancer Atlas**

Why this Research is Important

Each year, more than 120 000 Australians are diagnosed with cancer (excluding common skin cancers).

Published evidence suggests the likelihood of being diagnosed with cancer and the outcome after diagnosis, may be influenced by where people live.

A National Cancer Atlas will build on this evidence by systematically examining how cancer-related outcomes vary across Australia.

The National Cancer Atlas

The National Cancer Atlas will be a web-based interactive visual platform to provide access to small area estimates of cancer related indicators across Australia.

Variation will be examined between small geographical areas. These areas are defined by the SA2 boundaries of the Australian Bureau of Statistics.

Models will explore the impact of area-based socio-demographic, administrative and environmental characteristics on the observed variation.

Statistical Models

Innovative statistical models will be developed to quantify the underlying estimates and the associated uncertainty in each area. The creation of code that allows fast computation of large complex dataset based on open source software will also be developed.

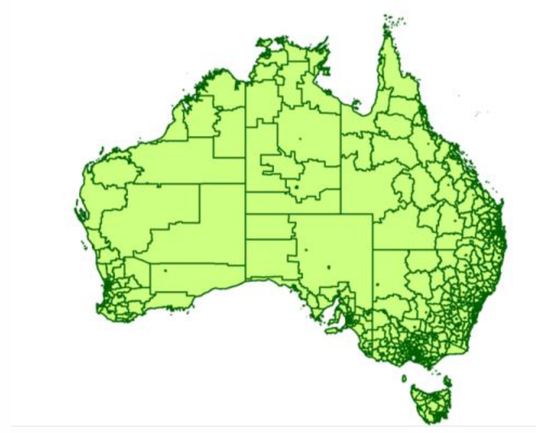
Spatial Data Products

A suite of data products will include point estimates and measures of uncertainty for cancer screening, incidence and survival for selected cancers.

Impact Opportunities

The National Cancer Atlas will:

- Inform health planners and government policy makers to prioritise resources, at both a state and national level, based on the best available evidence
- Identify spatial patterns of inequality in cancer-related outcomes that are not visible through broad ecological analyses
- Provide a strong and ongoing evidence base for advocacy efforts designed to reduce the impact of spatial inequalities across Australia
- Focus research efforts to understand why the observed geographical inequalities in cancer indicators exist and how to address these
- Allow health agencies and other end users to delve into meaningful levels of specificity through the developed spatial data products.



Australian Government Australian Institute of Health and Welfare

nhpa National Health Performance Authority

Cancer Council Queensland

QUT Queensland University of Technology

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