

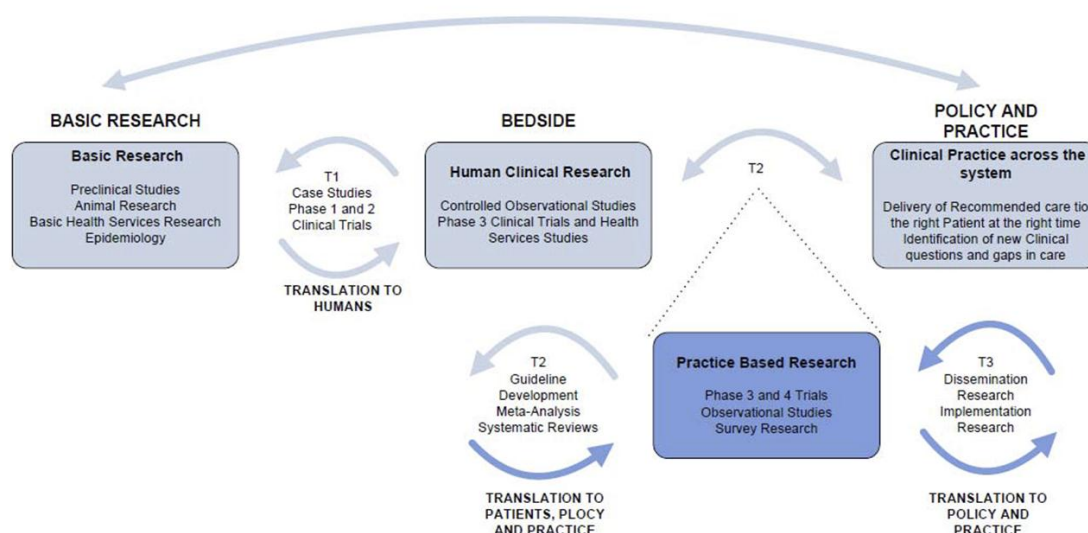
CANCER INSTITUTE NSW MODEL OF TRANSLATION

Figure 1 below is the agreed model of translational research for the Translational Cancer Research Centres and Units. This model focuses on the translation of basic research into clinical research as well as being applicable to the translation of population health and health services research informing programs and service delivery. T3 research is particularly significant for the Cancer Institute NSW because it focuses directly to improving the efficiency of services and the way programs are provided.

Figure 1 outlines /classifies the stages of translational research as:

- **T1**- developing treatments and interventions.
- **T2** - testing the efficacy and effectiveness of these treatments and interventions.
- **T3** - dissemination and implementation research for system-wide change.

Figure 1: Model of Translational Research



Westfall et al., (2007). Practice-based research – “blue highways” on NIH roadmap. JAMA, 297(4): 403-406 (adaptation). NSW Health and Medical Research Strategic Review 2012—page 4 (adaptation)

Detailed Translational Pipeline Definitions:

i. T1 - Translation to Humans

- Developing treatments and interventions
- The translation of basic research into research with humans. Basic research could cover a range of disciplines including: laboratory research, epidemiology, psychometrics, social science.
- The interface between basic research and the clinical setting, striving to find how new knowledge of disease mechanisms can be developed into clinically relevant understandings, and diagnostic and treatment regimes to be trialled in humans.
- Types of studies/activities – Observational studies, Case studies; Phase 1 and II clinical trials

ii. **T2 - Translation to Patients**

- Testing the efficacy and effectiveness of these treatments and interventions.
- The translation of new clinical science and knowledge into routine clinical practice and health decision making.¹
- The application of information and insights derived from basic, clinical and population health research to the provision of health services.²
- Translation of new clinically proven knowledge of disease processes, diagnostic or treatment techniques into routine clinical practice and health decision making.
- Types of studies/activities - Phase III clinical trials; observational studies; evidence synthesis and guidelines development.

iii. **T3 - Translation to Practice**

- Dissemination and implementation research for system-wide change².
- Moving evidence-based guidelines into health practice, through delivery, dissemination, and diffusion research.
- Practice based research, where the evidence from clinical trials on carefully selected patients is translated into guidelines for complex patients seen routinely in practice.
- Types of studies/activities - Dissemination research; implementation research; diffusion research, Phase IV clinical trials.

¹ Grimshaw et al, 2012

² Wills NSW Health and Medical Research Strategic Review