



Translational Cancer Research

A term used to describe the process by which the results of research done in the laboratory are used to develop new ways to diagnose and treat disease

T0 research includes basic biomedical research, including preclinical and animal studies. This type of research does not include interventions with human subjects.

T1 research expedites the movement between basic research and patient-oriented research that leads to new or improved scientific understanding or standards of care. *Examples* of T1 research are drug development, pharmacogenomics, and some studies of disease mechanisms and research into new areas such as genetics, genomics, and proteomics. “Bench to bedside” research

T2 research facilitates the movement between patient-oriented research and population-based research that leads to better patient outcomes, the implementation of best practices, and improved health status in communities. *Examples* of T2 are clinical epidemiology, health services (outcomes) research, and the newly developing methodology of community-based participatory research. “Bedside to practice” research

T3 research promotes interaction between laboratory-based research and population-based research to stimulate a robust scientific understanding of human health and disease. *Examples* of T3 are emerging disciplines such as molecular and genetic epidemiology. T3 research highlights, for instance, how research in populations informs hypotheses that can be tested in basic science laboratories and how biomarkers in animal models can translate into population-based screening tools. “Dissemination and implementation” research.

T4 research focuses on population-level outcomes, including translation to communities, including impacting policy and public health outcomes. Research focused on outcomes and effectiveness in populations, including assessment of benefit to communities through public health policies and programs, as well as adoption of proven interventions’ best practices in communities (diffusion research), and cost-benefit analyses.

