

**Developing System-level Policy Model for regenerative medicine and cell therapy in Oncology**

April 23rd, 2018 to October 31st, 2019

**Highlights**

- Findings will address knowledge gaps in policy makers in the context of reimbursement of CAR T-cell therapy
- Provide cancer researchers with necessary support to make informed economic decisions regarding the development of future CAR T-cell therapy
- Research will contribute important insights to both clinical researchers and policy makers to improve oncology care in the Canadian health care system

Biotherapeutics  
**1**

**CAR T-cell products**

Objectives  
**2**

targeted aim

**Use an innovative approach to establish a policy framework to support the decision-making process regarding the implementation and reimbursement of future CAR T-cell therapy.**

**Objective 1**  
 • Develop a framework for policy makers to reasonably estimate the cost-effectiveness for CAR T-cell therapy

**Objective 2**  
 • Identify the most important evidence areas that are necessary to facilitate the reimbursement process for researchers who are currently developing regenerative medicine

Project value

**\$100,000**  
**\$100,000**  
 from BioCanRx

Partners  
**1**

**CADTH** Evidence Driven.  
**ACMTS** Preuves à l'appui.  
 (In-Kind)

**About the project**

Chimeric antigen receptor T-cells, or CAR T-cells, have transformed oncology treatment, offering the potential to cure certain cancers. Although shown to be effective in selected populations, the high cost of CAR T cell therapy, along with substantial usage of health care resources (highly personalized therapy and significant monitoring required) may potentially restrict patient access to this type of treatment in the future. A framework must be established to estimate the cost-effectiveness of this therapy compared to the standard of care by taking into account the effectiveness, safety, affordability and resource constraints in the Canadian healthcare system.

Dr. Wong's team will use an innovative approach to establish a platform to support the decision-making process regarding reimbursement and implementation of CAR T-cell therapy in the future. Results of this research will provide an evidence-based evaluation of this therapy and its place in the health system, and serve as a foundation for clinical trial researchers and policy makers for improving oncology care.

Key investigators

**Project lead:**  
 Dr. William WL **Wong**  
**Key Investigators:**  
 Dr. Kelvin KW **Chan**

# Clinical, Social and Economic Impact Investigators



**Waterloo**  
 University of Waterloo School of Pharmacy  
 Dr. William WL Wong  
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**Ottawa**  
 Canadian Agency for Drugs and Technologies in Health (CADTH)  
 Adam Haynes

**Guelph**  
 University of Guelph  
 Dr. Zeny Feng

## Sub-Projects

**Sub-Project 1: Environmental Scan**

- Purpose: To provide an overview of the capacity of our health care system to support the implementation of CAR T cell therapy and to address challenges and barriers associated with implementation of regenerative medicines and the feasibility of implementation.

**Sub-Project 2: Mathematical Policy Model**

- Purpose: To project and predict 1) the system-level-cost-effectiveness and 2) the affordability of different CAR T-cell therapy strategies from the healthcare payer perspective.

**Sub-Project 3: EVPPI Analysis**

- Purpose: To identify the most important evidence areas essential to reimbursement decision.

## Key Milestones

**July 2018**

- After approval, recruitment and interviews with stakeholders will begin and last until December 2018

**January 2019 – March 2019**

- Data analysis completed within this timeframe

**April 2018: Project begins**

- Phase 1 and Phase 2 occur concurrently
- Phase 1: Requires ethics board approval (should be obtained within first 2-3 months)
- Implementation of model
- Requires 9-12 months
- After implementation, model is calibrated and validated
- Data collection

**June 2019**

- Completion date of phase
- Last phase of the project will begin once the model is finalized, and is expected to last for 3 months

The power to kill cancer lies within us.  
 Let's tell our bodies how.

