

**RESEARCH PROGRAM**

Research Project Details	
Title	Novel Surgical Options for Challenging Joint Injuries
Investigator(s)	Dr. Scott Timmermann, University of Calgary
Funding Period	July 2016 – August 2019
Budget	\$60,000
Issue/Rationale	<p>The repair of cartilage injuries has been an ongoing challenge in orthopaedics for years. Young patients who sustained damage to their joints were forced to endure the inevitable pain and loss of function that is experienced with the development of osteoarthritis. Patients with focal defects or full thickness lesions in their articular cartilage are considered surgical challenges as there is little if any data to suggest an optimal resurfacing strategy. These patients as a result are subject to ongoing, longstanding morbidity as they wait to reach an appropriate age to have a total joint replacement. The purpose of this project is to determine optimal treatments for patients suffering symptoms related to osteochondral injury.</p>
Objective(s)	<p>Our goal is to offer treatment options for this subset of patients, evaluate surgical efficacy, and track outcomes for these novel joint surgeries with the aim of getting injured, young Albertans back to pre-injury status in a cost-efficient and timely manner. For this project, we would develop three transplantation strategies for patients:</p> <ol style="list-style-type: none"> <li>1. osteochondral allograft transplant (fresh donor; biological option)</li> <li>2. deNovo® NT Natural Tissue Graft</li> <li>3. Arthrosurface® Alternative to Joint Replacement</li> </ol> <p>We will also have a non-surgical comparison group.</p>
Anticipated Results/ Impact	<p>Conducting research focused on establishing evidence and best practices for resurfacing strategies benefits and impacts WCB stakeholders, patients, and surgeons in the following ways:</p> <ol style="list-style-type: none"> <li>1. Offers treatment to patients who did not have a readily available option.</li> <li>2. Provides scientific and clinical evidence of optimal treatments strategy to researchers, physicians, surgeons and the entire health care team.</li> <li>3. Provides costing and possible evidence of cost-benefit for provincial health and insurance companies.</li> <li>4. Aims to lessen patients' time away from work, duty modifications and reduce disability claims..</li> </ol>
Keywords	Prospective controlled randomized interventional trial, osteochondral injury, joint injury, outcomes