Graduated ACL Tibial Guide for ACL Reconstruction Surgery
ACL Reconstruction

- Over 200,000 ACL injuries occur in the US annually and up to 150,000 of these undergo reconstruction.\(^1\)

- Median total societal cost of $32,276 per ACL reconstruction surgery.\(^2\)

- 10%-25% of ACL reconstruction surgeries will require some sort of revision surgery.\(^1,3,4\)

Tunnel malposition leads to graft failure

• Tunnel malposition is cited as the most common reason for graft failure.¹,²

• Independent femoral tunnel drilling technique was developed to uncouple the tibial and femoral tunnels and allow the surgeon to position tunnels independently of each other.
  – May lead to greater stability, but there is controversy over optimal tibial tunnel placement
  – Tibial tunnel placement as a percentage of the anterior-to-posterior distance across the tibia standardizes tunnel placement, but requires intraoperative fluoroscopy to optimize tunnel location
  – Intra-articular landmarks do not require fluoroscopy, but yield inconsistent tunnel location

• Clinical problem: There are currently no solutions available that enable surgeons to identify optimal tibial tunnel placement as a percentage of the anterior-to-posterior distance across the tibia without the use of intraoperative fluoroscopy or other imaging techniques.

Graduated Tibial Guide

- Efficiently and reliably visualize and measure optimal tibial tunnel location
  - Does not require fluoroscopy
- Reduce drilling inaccuracy with the use of a guide pin to mark the path of a bone tunnel
- Reduce risk of post-surgical complications including graft failure and revision surgery
Intellectual Property

UVA TechID: MILLERM-ACL (2015-126)
Title: Adjustable device for identifying a target location for a tibial tunnel and related method thereof
US patent application no. 15/838,565 filed December 12, 2017

Scientific Publications

A prospective evaluation of the anterior horn of the lateral meniscus as a landmark for tibial tunnel placement in anterior cruciate ligament (ACL) reconstruction
Werner BC, Burrus MT, Gwathmey FW, Miller MD