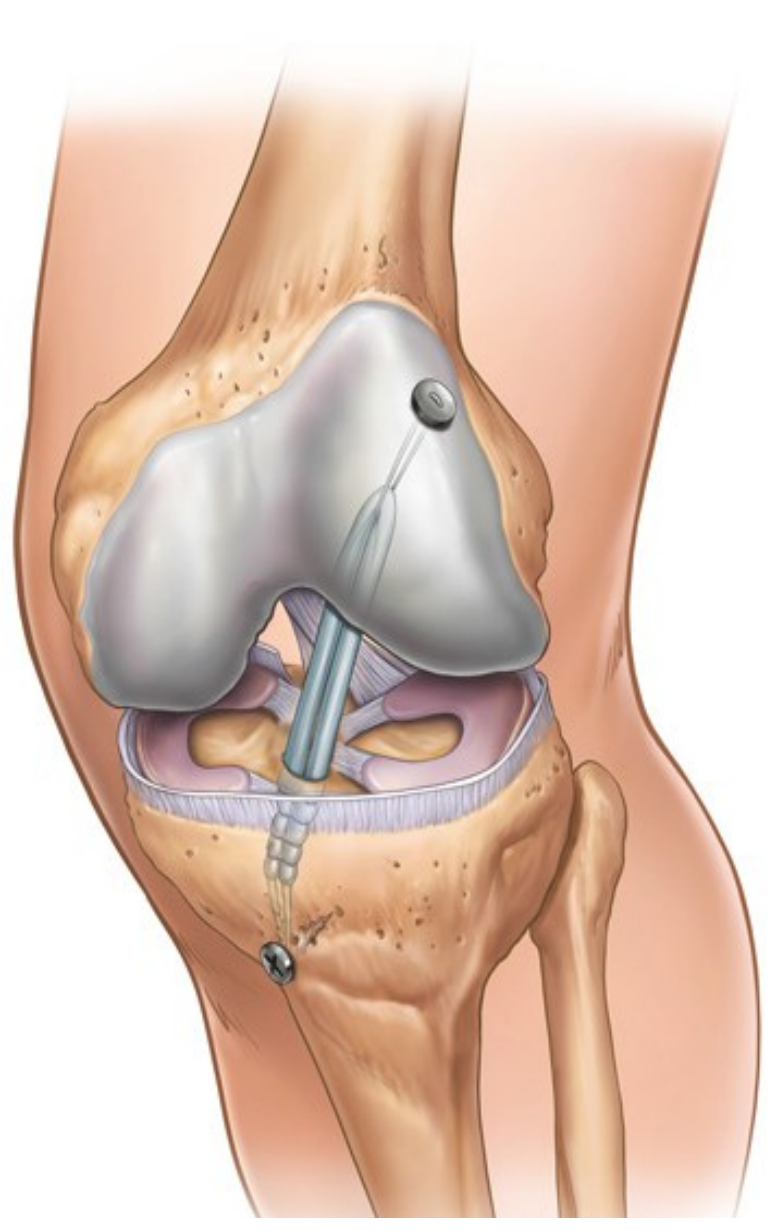


Next Generation ACLR Instruments

1 in 3000 Americans suffer ACL injuries every year, which amounts to approximately 100,000 injuries in the US annually¹.



After ACLR⁵

The anterior cruciate ligament (ACL) is a knee ligament that prevents excessive knee rotation and translation². ACL damage, a common sports injury, is repaired with a surgical reconstruction process (ACLR)³. However, the post-surgical failure rate—up to 10-15%⁴—is relatively high.

To lower this failure rate, there is a need for alternatives to existing surgical tools and procedures that will decrease the inconsistencies among surgeons and surgeries that may ultimately lead to failure.

Using a surgeon-oriented design method, we created a new tool to improve the surgical process for both surgeon and patient.

UNDERSTAND
The Problem

One pain point with many devices is that they require hands that the surgeon is already using. After attaching it to the leg, our device is **completely hands-free**.

IDEATE
in the
Problem Space

Surgeons question the need for certain important tool features. Our design process was **grounded in scientific literature** to provide justification.

DESIGN
and get
Feedback

Some tools have too many elements that require a surgeon's attention. Our device minimizes the number of features to **preserve the surgeon's focus**.



Many current tools are not ergonomic. We designed our device with **human constraints in mind** from the start.

BUILD
A Prototype

Some current tools are not intuitive to use. We extensively tested our device to make sure that its **operation is clear and simple**.

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