

## **Biplanar High Tibial Osteotomy for Sagittal Malalignment in Revision ACL Reconstruction**

Charles Chun-Ting Lin<sup>1</sup>, Noah Kirschner, Bogdan Alex Matache, Brian John Mannino, Dylan T Lowe, Laith M Jazrawi<sup>2</sup>

<sup>1</sup>NYU Langone Health, Department of Orthopedic Surge, <sup>2</sup>Center For Musculoskeletal Care

### **Background**

Revision rates after primary anterior cruciate ligament (ACL) reconstruction range from 3% to 7%. In general, revision ACL reconstruction results in poorer outcomes compared with primary ACL reconstruction. Although various factors may contribute to failed ACL reconstruction, unrecognized deformity, such as coronal malalignment or sagittal malalignment (eg, increased posterior tibial slope), may be considerable contributors to recurrent ACL tears. Correction of malalignment via a high tibial osteotomy may help prevent recurrent ACL reconstruction failure.

### **Purpose**

This video includes an overview and case presentation and demonstrates biplanar high tibial osteotomy for sagittal malalignment during revision ACL reconstruction.

### **Methods**

The physical examination, diagnosis, and treatment options for sagittal malalignment in a patient in whom multiple ACL reconstruction procedures failed are discussed. The case presentation of a 32-year-old man in whom multiple ACL reconstruction procedures failed is discussed. The decision to pursue two-stage ACL reconstruction, with the first stage being high tibial osteotomy with bone tunnel grafting, was made.

### **Results**

Biplanar high tibial osteotomy for sagittal malalignment followed by revision ACL reconstruction was successfully performed in two stages. Postoperative clinical follow-up demonstrated healing of the high tibial osteotomy, reduced pain, and resolution of instability.

### **Conclusion**

Patients with recurrent ACL injury and coronal and sagittal malalignment can be safely treated via staged biplanar high tibial osteotomy and revision ACL reconstruction.