

Graft site pain is common in patients after anterior cruciate ligament reconstruction (ACLR), especially with a patellar tendon autograft. Patients with graft site pain report less joint mobility and greater muscle weakness. These limitations are linked to decreased knee function and greater risk of reinjury. Patients who experience graft site pain display aberrant gait biomechanics and reduced confidence in their abilities compared to those who are pain free. The purpose of this study is to identify associations between graft site cross-sectional area and self-reported knee function in those 6 months post-ACLR. The methods of this study included patellar tendon ultrasound imaging to decipher cross-sectional area, open chain isokinetic quadriceps strength assessment, self-reported knee function surveys, and statistical analysis with Pearson product-moment correlations. All data was collected at the subjects' 6 month visit. The results showed weak positive correlations between self-reported knee function and graft site healing, but these results were not significant with a p value greater than 0.05. The results also showed a weak positive correlation between quadriceps strength and graft site healing, which was significant with a p value less than 0.05. No associations were found between graft site healing and self reported knee function 6 months after ACLR. There were weak positive correlations between graft site healing and self reported knee function but no significant results. Future research should include data on muscle strength, bilateral force exertion, and further imaging to assess any relationship between knee function and graft site healing.