

5-Year Patient-Reported Outcomes of Anterior Cruciate Ligament Bone–Patellar Tendon–Bone Graft Reconstruction Performed With Either Quadriceps, Hamstrings, or Bone–Patellar Tendon–Bone Autograft Tendon

Purpose

To report 5-year clinical patient-reported outcomes of pain, function, level-of-activity, and quality-of-life for anterior cruciate ligament (ACL) reconstruction performed with either a quadriceps, hamstrings, or bone–patellar tendon–bone (BTB) autograft tendon technique.

Methods

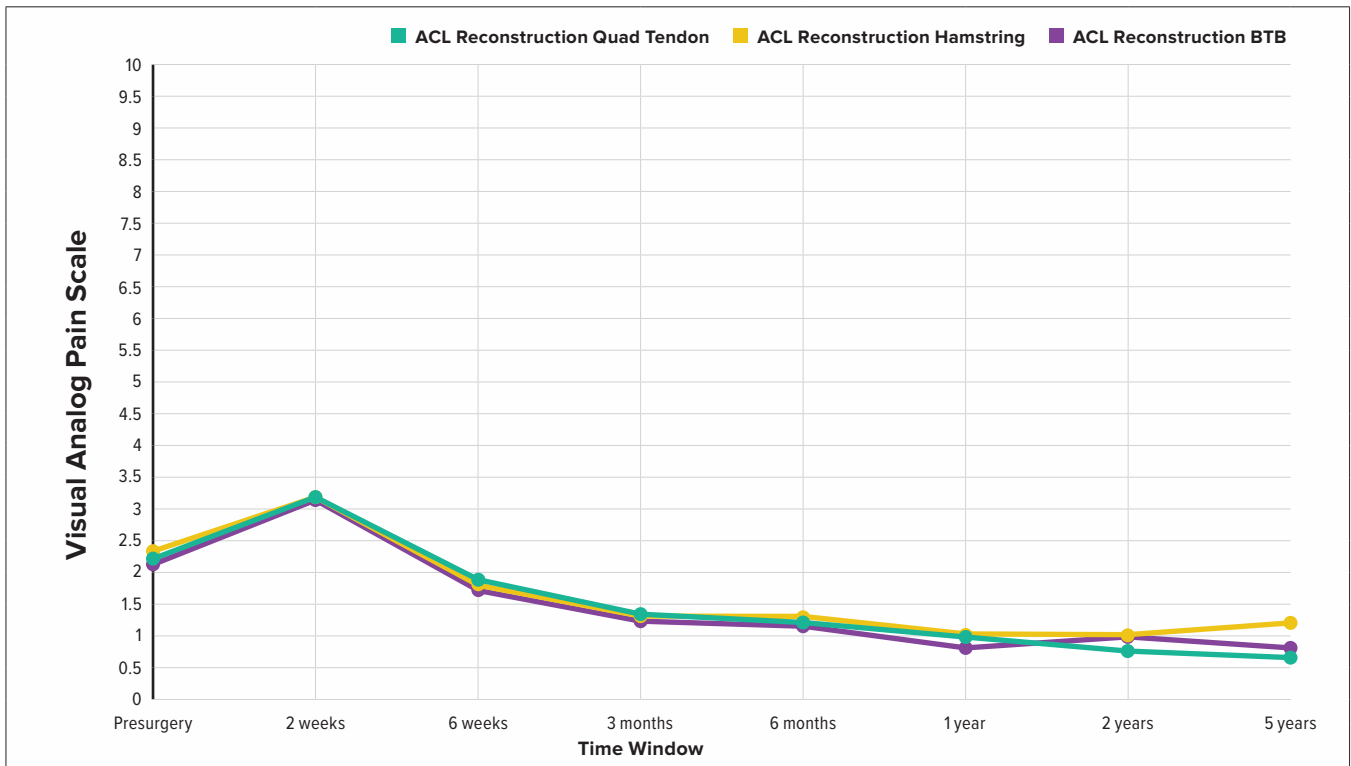
The inclusion criteria for this analysis were patients enrolled in the Surgical Outcomes System™ registry who underwent an ACL reconstruction performed using one of the following autograft tendons: quadriceps, hamstring, or patellar (BTB). Standard patient-reported outcomes questionnaires for VAS, SANE knee, and Marx activity were administered at standard time points postoperatively. Results were reported from presurgery out to 5 years postsurgery. The number of patients included per time point is shown to the right.

Time Point	No. of Compliant Patients ACL Reconstruction With Quad Tendon/ Total No. of Patients	No. of Compliant Patients ACL Reconstruction With Hamstring/ Total No. of Patients	No. of Compliant Patients ACL Reconstruction With BTB/ Total No. of Patients
Presurgery	423/884	2007/4079	982/2305
3 months	513/840	2190/3945	1042/2229
6 months	451/793	1993/3817	884/2131
1 year	348/670	1851/3561	812/1959
2 years	204/437	1354/2735	676/1579
5 years	28/83	137/304	116/268

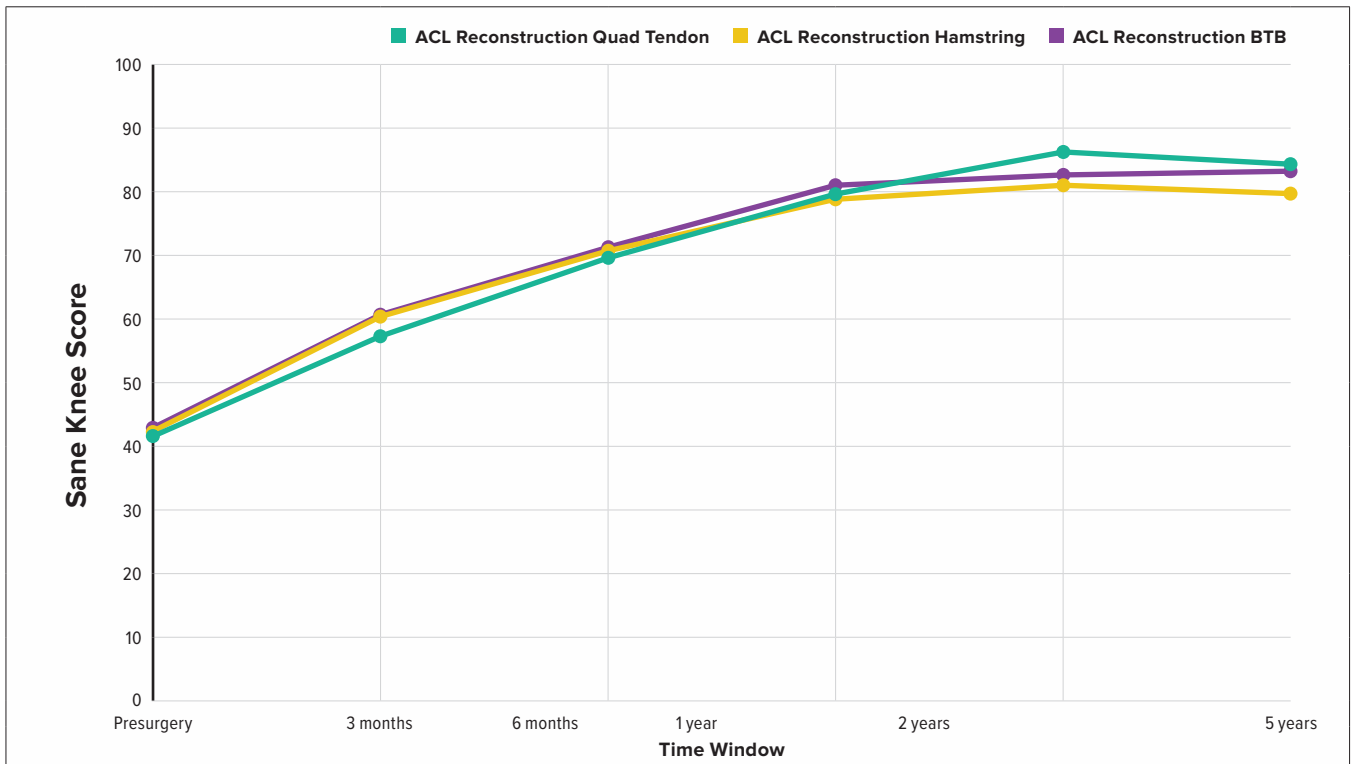
Trend Conclusion

Based on these results, there appears to be a similar trend in patient pain, function, and quality-of-life. Patients who underwent ACL reconstruction with autograft BTB and quad tendon experienced slightly lower pain, higher function, and further improved quality-of-life. However, no claims can be made on the potential of these results without further analysis to determine if there is statistical significance.

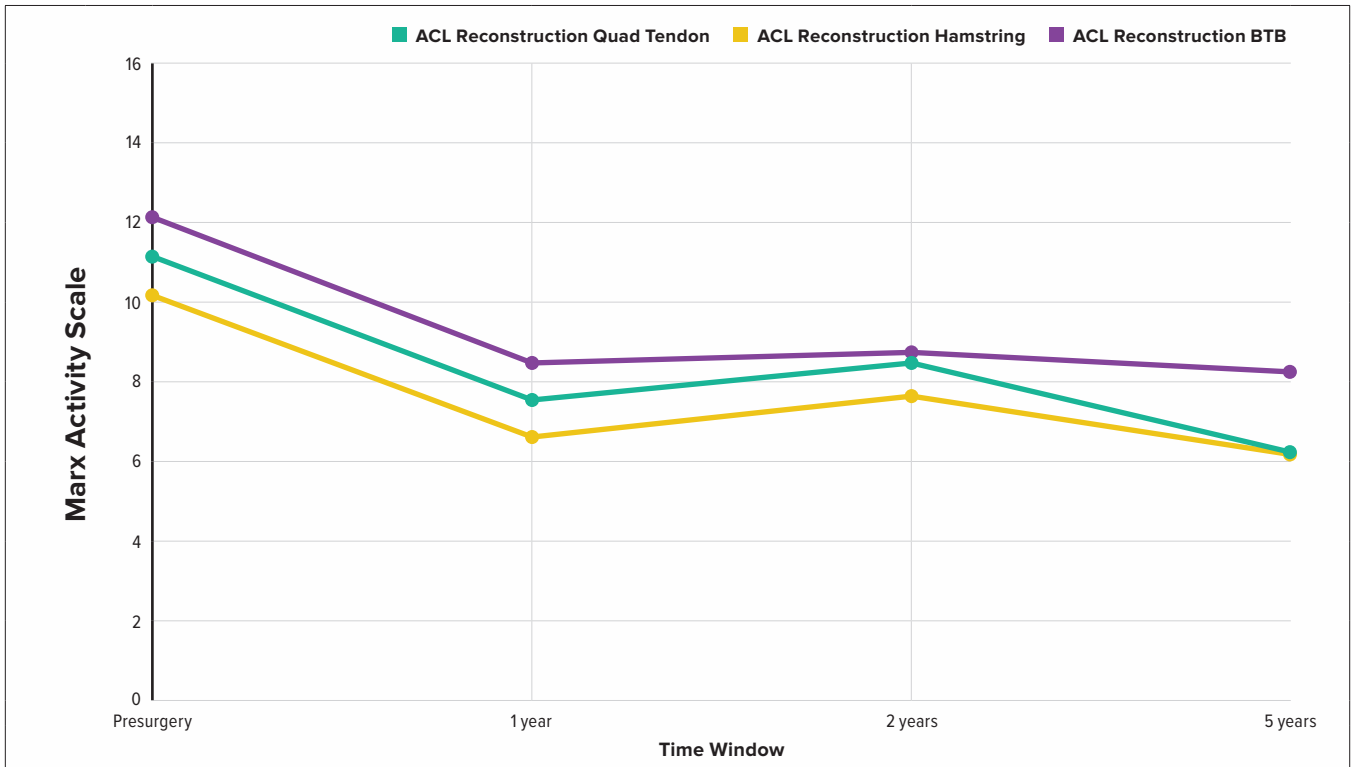
Results



VAS



Sane



Marx



Surgical Outcomes System

Time Point	Quad Tendon Avg ± STD VAS	Hamstring Tendon Avg ± STD VAS	BTB Avg ± STD VAS
Presurgery	2.3 ± 2.0	2.4 ± 2.1	2.2 ± 2.0
2 weeks	3.2 ± 2.0	3.2 ± 2.0	3.2 ± 1.9
6 weeks	1.8 ± 1.6	1.8 ± 1.6	1.7 ± 1.6
3 months	1.4 ± 1.5	1.4 ± 1.6	1.3 ± 1.5
6 months	1.2 ± 1.5	1.3 ± 1.6	1.1 ± 1.4
1 year	1.1 ± 1.7	1.2 ± 1.6	0.9 ± 1.4
2 years	0.7 ± 1.1	1.0 ± 1.6	1.0 ± 1.5
5 years	0.6 ± 1.3	1.2 ± 1.8	0.8 ± 1.4

Time Point	Quad Tendon Avg ± STD Sane	Hamstring Tendon Avg ± STD Sane	BTB Avg ± STD Sane
Presurgery	41.9 ± 23.7	42.6 ± 22.9	43.2 ± 24.0
3 months	56.5 ± 19.6	60.7 ± 18.7	60.9 ± 17.6
6 months	69.5 ± 17.3	71.2 ± 17.5	71.7 ± 16.9
1 year	79.5 ± 1.2	78.5 ± 17.9	82.0 ± 15.5
2 years	87.1 ± 12.9	81.9 ± 17.9	83.9 ± 16.3
5 years	85.6 ± 16.4	79.4 ± 20.7	84.1 ± 17.9

Time Point	Quad Tendon Avg ± STD Marx	Hamstring Tendon Avg ± STD Marx	BTB Avg ± STD Marx
Presurgery	10.6 ± 5.2	9.8 ± 5.4	11.5 ± 5.2
1 year	7.7 ± 5.3	6.9 ± 5.2	8.5 ± 5.6
2 years	8.4 ± 5.1	7.6 ± 5.1	8.8 ± 5.2
5 years	6.6 ± 4.6	6.5 ± 4.9	8.3 ± 5.1