# Flex Therapist CEUs

## ACL Repair Surgical Considerations

### Comparison of artificial graft versus autograft in anterior cruciate ligament reconstruction: a meta-analysis

**1. Which of the following is a well-recognized and widely used material for ACL reconstruction due to a good graft stability and a well return to high-level sports?**

A. Autograft
B. Allograft
C. Synthetic graft
D. None of the above

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**2. Reconstruction with _____ has the advantage of eliminating both the donor-site morbidity and disease transmission with fast rehabilitation.**

A. Autografts
B. Allografts
C. Synthetic grafts
D. None of the above

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**3. Which of the following has been reported as a major disadvantage of synthetic grafts?**

A. High graft failures
B. No so-called ligamentization
C. Severe synovitis
D. All of the above have been reported as major disadvantages of synthetic grafts

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**4. Long-term follow-up results documents that both the Leeds-Keio artificial ligament and the Ligament Augmentation Device are suitable as an ACL substitute.**

A. True
B. False

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**5. Which of the following caused effusions and reactive synovitis in the knee for provoking inflammatory reactions, and was found to delay maturation of autogenous graft?**

A. The Leeds-Keio artificial ligament
B. The Ligament Augmentation Device
C. The Ligament Advanced Reinforcement System artificial ligament

D. The polyglycolic acid Dacron graft

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**6. A past study with a minimum follow-up of 10 years showed almost half of the patients were subjectively not satisfied with the surgical results using:**

A. The Leeds-Keio artificial ligament
B. The Ligament Augmentation Device
C. The Ligament Advanced Reinforcement System artificial ligament
D. The polyglycolic acid Dacron graft

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**7. Several studies comparing the Ligament Advanced Reinforcement System artificial ligament with autografts showed a significant difference in:**

A. Knee laxity
B. The rate of complications
C. Both knee laxity and the rate of complications
D. Neither knee laxity nor the rate of complications

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**8. Which of the following complications occurred in the autograft group but not the synthetic graft group?**

A. Patellofemoral pain
B. Recurrent effusion
C. Extension loss
D. All of the above complications occurred in both the autograft group and the synthetic graft group

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**9. Which of the following was the most common complication in the reviewed studies?**

A. Infection
B. Patellofemoral pain
C. Recurrent effusion
D. Extension loss

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**10. The results of complications showed no significant difference between the synthetic grafts being placed in a non-anatomic but isometric location and the autografts being placed in an anatomic location.**

A. True
B. False

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**11. It has been suggested that _____ is the most important measurable index for the outcomes of ACL reconstruction.**

A. Patient satisfaction
B. Complication rate
C. Failure rate
D. Rehabilitation time

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**12. It is well recognized that a KT-1000 side-to-side difference of greater than 5 mm is defined as a clinical failure.**

A. True
B. False

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**13. This study concluded that which of the following was not recommended due to knee laxity?**

A. ACL reconstruction with allograft
B. ACL reconstruction with autograft
C. ACL reconstruction with early generation artificial graft
D. ACL reconstruction with new generation artificial graft

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## Double-bundle anterior cruciate ligament reconstruction improves tibial rotational instability: analysis of squatting motion using a 2D/3D registration technique

**14. Previous studies have reported that _____ in ACL-deficient knees causes the tibia to move anteriorly and rotate internally.**

A. Walking
B. Squatting
C. Climbing
D. All of the above

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**15. Double-bundle anterior cruciate ligament reconstruction is:**

A. A 2D/3D registration technique
B. More invasive than bone markers
C. Less accurate than surface markers
D. DB-ACLR is all of the above

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**16. DB-ACLR was found to control the:**

A. AP translation of the tibia
B. Internal rotation of the tibia
C. DB-ACLR was found to control both the AP translation of the tibia and the internal rotation of the tibia

D. DB-ACLR was found not to control the AP translation of the tibia or the internal rotation of the tibia

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**17. The 2D/3D registration technique using the cardan angle is accurate for out-of-plane but less accurate for in-plane.**

A. True
B. False

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**18. The results showed that the contact points of ACLD knees were significantly different from the contact points of the healthy side in the _____ direction.**

A. Longitudinal
B. Mediolateral
C. Anteroposterior
D. All of the above

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**19. The results showed that ACLD knees had instability in the _____ direction.**

A. Longitudinal
B. Mediolateral
C. Anteroposterior
D. All of the above

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**20. A 3D optoelectronic gait analysis reported a significant difference in tibial rotation angle during the _____ in ACLD knees compared to ACL reconstructed and control knees.**

A. Initial swing phase
B. Terminal swing phase
C. Loading response phase
D. Preswing phase

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**21. It was reported that there is a significant tibial internal rotation at a knee flexion angle of 15 degrees.**

A. True
B. False

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**22. The medial femoral condyle position after single-bundle anterior cruciate ligament reconstruction was posterior to that of the intact knee in flexion angles from 25 degrees to 60 degrees, indicating that the knee was overstabilized in the AP direction.**

A. True
B. False

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**23. The medial condyle contact position was significantly anterior at _____ months after single-bundle anterior cruciate ligament reconstruction.**

A. 6
B. 12
C. 24
D. 36

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## Anterior cruciate ligament reconstruction with quadriceps tendon-patellar bone allograft: matched case control study

**24. ACL reconstruction with QTPB allografts showed good clinical outcomes and had no significant differences compared with QTPB autografts.**

A. True
B. False

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**25. Which of the following was larger for the QTPB allografts compared to BPTB allografts?**

A. The cross-sectional area
B. Ultimate load to failure
C. Stiffness
D. All of the above were larger for the QTPB allografts compared to BPTB allografts

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**26. Which of the following was higher for the QTPB allografts compared to achilles allografts?**

A. Displacement at maximum load
B. Stiffness
C. Strain at maximum stress
D. All of the above were higher for the QTPB allografts compared to achilles allografts

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**27. Several studies have reported allograft rerupture rates were lower than autograft after ACL reconstruction.**

A. True
B. False

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## Immediate post-operative pain in anterior cruciate ligament reconstruction surgery with bone patellar tendon bone graft versus hamstring graft

**28. In the present study, patients in the BPTB cohort showed higher mean pain scores across all the post-operative time intervals, except at:**

A. 6 hours
B. 12 hours
C. 24 hours
D. 36 hours

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**29. The success of ACL surgery depends upon post-operative rigorous rehabilitation.**

A. True
B. False

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**30. The role of surgical procedure is to:**

A. Help maintain the physical capabilities of the athlete
B. Help maintain the psychological capabilities of the athlete
C. Re-establish the physical structure of the ligament
D. All of the above are the roles of surgical procedure

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**31. Aggressive physiotherapy regime is not affected by the type of graft (BPTB or STG) being used for ACL reconstruction.**

A. True
B. False

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## Outcomes of simultaneous high tibial osteotomy and anterior cruciate ligament reconstruction in anterior cruciate ligament deficient knee with osteoarthritis

**32. For patients with concomitant varus deformity, ACL reconstruction may:**

A. Prevent the progression of medial compartmental osteoarthritis.
B. Restore the stability of the knee.
C. For patients with concomitant varus deformity, ACL reconstruction may prevent the progression of medial compartmental osteoarthritis and restore the stability of the knee.
D. ACL reconstruction cannot prevent the progression of medial compartmental osteoarthritis nor restore the stability of the knee.

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**33. Simultaneous ACL reconstruction and valgus HTO showed relatively poor clinical and radiological outcomes in ACL deficient knees with osteoarthritis.**

A. True
B. False

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**34. Contrary to the results of the study, graft insufficiency has been identified as the most common complication following combined surgery.**

A. True
B. False

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**35. Despite maintenance of the slope in all cases, this study observed graft insufficiency, indicating that a non-mechanical mechanism may be involved in preventing graft healing.**

A. True
B. False

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**36. The simultaneous open wedge HTO and ACL reconstruction should be undertaken with caution, as it is associated with:**

A. A high rate of laxity
B. The progression of osteoarthritis
C. Both a high rate of laxity and the progression of osteoarthritis
D. Neither a high rate of laxity nor the progression of osteoarthritis

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## Laser-guided transtibial technique improved single-bundle reconstruction of anterior cruciate ligament

**37. All of the following are advantages of traditional transtibial tunnel technique, except for:**

A. Fewer incisions
B. Ease to place graft
C. Anatomical position
D. All of the above are advantages of traditional transtibial tunnel technique

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**38. If the width of ACL footprint is less than _____, the double bundle cannot be conducted.**

A. 16 mm
B. 14 mm
C. 12 mm
D. 10 mm

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**39. The double-bundle technique cannot be applied to:**

A. Severe open bone contusion

B. Notch structure
C. Severe arthritis
D. The double-bundle technique cannot be applied to any of the above

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**40. Recent studies show that the thinner graft has a lower failure rate for ACL reconstruction.**

A. True
B. False

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## Single-bundle versus double-bundle autologous anterior cruciate ligament reconstruction: a meta-analysis of randomized controlled trials at 5-year minimum follow-up

**41. Theoretically, the anteromedial bundle may:**

A. Prevent an anterior tibial translation at higher flexion angles.
B. Restrain anterior tibial loads at lower flexion angles.
C. Restrain a combined rotatory load at lower flexion angles.
D. The anteromedial bundle may do all of the above.

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**42. The results of this analysis revealed that there was a significant difference in _____ between the DB and SB techniques in autologous ACL reconstruction.**

A. Knee stability
B. Clinical function
C. Graft rupture
D. None of the above

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**43. Tunnel widening may lead to all of the following, except:**

A. The inability of the implanted graft
B. Long-term joint laxity
C. Infection of implanted graft
D. Difficulty in revision surgery

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## Self-reported functional recovery after reconstruction versus repair in acute anterior cruciate ligament rupture (ROTOR): a randomized controlled clinical trial

**44. In a biomechanical study, it was demonstrated that, in contrast to static augmentation, dynamic augmentation is able to restore anterior-posterior stability of the knee directly**

**postoperative as well as after cyclic loading.**

A. True
B. False

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